

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 377/TT/2020**

**Coram:**

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

**Date of Order: 19.01.2022**

**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 the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** 125 MVAR Bus Reactor at 400/220 kV Sonapat Sub-station Extension; **Asset-II:** 125 MVAR Bus Reactor at 400/220 kV Jaipur (South) Sub-station Extension; **Asset-III:** 125 MVAR Bus Reactor at 400/220 kV Bassi Sub-station Extension; **Asset-IV:** 125 MVAR Bus Reactor at 400/220 kV Manesar Sub-station Extension; **Asset-V:** 125 MVAR Bus Reactor at 400/220 kV Panchkula Sub-station Extension; **Asset-VI:** 125 MVAR Bus Reactor at 400/220 kV Kaithal Sub-station Extension and **Asset-VII:** 125 MVAR Bus Reactor at 400/220 kV Kanpur Sub-station Extension under "Bus Reactors In Northern Region (Phase-II)" in Northern Region.

**And in the matter of:**

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

**....Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur-302005 (Rajasthan)

2. Ajmer Vidyut Vitran Nigam Limited,  
132 KV, GSS RVPNL Sub-Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302017 (Rajasthan)



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



Hudson Lines, Kingsway Camp,  
Delhi – 110009

14. Chandigarh Administration,  
Sector -9,  
Chandigarh

15. Uttarakhand Power Corporation Limited,  
Urja Bhawan, Kanwali Road,  
Dehradun (Uttarakhand)

16. North Central Railway,  
Allahabad (Uttar Pradesh)

17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110002

....Respondents

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

**For Respondents** : None

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee has filed the instant petition for truing-up of the transmission tariff for the period from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and tariff determination for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as “the transmission assets”) under “Bus Reactors in Northern Region (Phase-II)” (hereinafter referred to as “the transmission project”) in Northern Region:



**Asset-I:** 125 MVAR Bus Reactor at 400/220 kV Sonapat Sub-station Extension;

**Asset-II:** 125 MVAR Bus Reactor at 400/220 kV Jaipur (South) Sub-station Extension;

**Asset- III:** 125 MVAR Bus Reactor at 400/220 kV Bassi Sub-station Extension;

**Asset-IV:** 125 MVAR Bus Reactor at 400/220 kV Manesar Sub-station Extension;

**Asset-V:** 125 MVAR Bus Reactor at 400/220 kV Panchkula Sub-station Extension;

**Asset-VI:** 125 MVAR Bus Reactor at 400/220 kV Kaithal Sub-station Extension;

**Asset-VII:** 125 MVAR Bus Reactor at 400/220 kV Kanpur Sub-station Extension.

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 and 7.2 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 6.2 and 7.4 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 6.2 and 7.4 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 7.10 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”

### **Backdrop of the case**

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

a) The investment approval (IA) of the transmission project was accorded by Board of Directors of the Petitioner company vide Memorandum No. C/CP/BR in NR (Phase-II), dated 2.2.2015 with an estimated cost of ₹87.27 crores including Interest During Construction of ₹ 5.11 crores based on October 2014 price level. Further, approval of the revised cost estimate (RCE) of the transmission project was accorded by Board of Directors of the Petitioner company vide Memorandum No. C/CP/RCE/BR in NR (Phase-II) dated 29.8.2017 with an estimated cost of ₹103.04 crores (including Interest During Construction of ₹ 1.64 crore) based on April 2017 price level.

b) The scope of work covered under the transmission project is as follows:

#### **Sub-stations**

(i) Panchkula 400/ 220 kV (PowerGrid) Sub-station (Extension)

#### **400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

(ii) Sonapat 400/ 220 kV (PowerGrid) Sub-station (Extension)

#### **400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

(iii) Manesar 400/ 220 kV (PowerGrid) Sub-station (Extension)



**400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

- (iv) Kaithal 400/ 220 kV (PowerGrid) Sub-station (Extension)

**400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

- (v) Kanpur 400/ 220 kV (PowerGrid) Sub-station (Extension)

**400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

- (vi) Jaipur South 400/ 220 kV (PowerGrid) Sub-station (Extension)

**400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

- (vii) Bassi 400/ 220 kV (PowerGrid) Sub-station (Extension)

**400 kV**

Bus Reactor bays: 1 number

400 kV Bus Reactor: 1 number of 125 MVAR Bus Reactor

c) The entire scope of the work as per I.A. is complete and covered in the instant petition.

d) As per I.A. dated 2.2.2015, transmission assets were scheduled to be put into commercial operation within 30 months from the date of I.A. which works out to 1.8.2017. All the transmission assets except Asset-IV were put into commercial operation before 1.8.2017. The transmission tariff in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII for the period from COD to 31.3.2019 was allowed by the Commission vide order dated 8.12.2017 in Petition No. 57/TT/2017 whereas transmission tariff for Asset-IV was allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018.

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



5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. None of the Respondents have filed their reply in the matter.

6. The hearing in this matter was held on 31.8.2021 through video conference and the order was reserved. This order is issued considering the submissions made by the Petitioner in the petition, affidavit dated 13.1.2021 and additional information filed vide affidavit dated 26.8.2021.

7. Having heard the representatives of the Petitioner 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 for the transmission assets are as follows:

(₹ in lakh)

<b>Asset-I</b>			
<b>Particulars</b>	<b>2016-17 Pro-rata for 98 days</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	15.58	73.97	85.61
Interest on Loan	15.63	70.72	75.88
Return on Equity	16.71	80.06	93.31
Interest on Working Capital	1.95	8.38	9.15
O&M Expenses	17.28	66.51	68.71
<b>Total</b>	<b>67.15</b>	<b>299.64</b>	<b>332.66</b>



(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 Pro-rata for 90 days</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	8.68	46.31	53.01
Interest on Loan	8.51	43.62	46.69
Return on Equity	9.72	51.85	59.51
Interest on Working Capital	1.42	6.57	7.07
O&M Expenses	15.87	66.51	68.71
<b>Total</b>	<b>44.20</b>	<b>214.86</b>	<b>234.99</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 Pro-rata for 182 days</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	18.02	48.61	55.29
Interest on Loan	19.21	48.76	51.06
Return on Equity	20.17	54.43	62.07
Interest on Working Capital	2.93	6.79	7.27
O&M Expenses	32.10	66.51	68.71
<b>Total</b>	<b>92.43</b>	<b>225.10</b>	<b>244.40</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
Depreciation	46.03	99.79
Interest on Loan	44.33	91.16
Return on Equity	50.10	109.07
Interest on Working Capital	4.46	9.46
O&M Expenses	28.19	58.73
<b>Total</b>	<b>173.11</b>	<b>368.21</b>

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	16.52	49.25	57.07
Interest on Loan	15.89	44.77	48.36
Return on Equity	17.29	52.37	61.25
Interest on Working Capital	2.56	6.67	7.23
O&M Expenses	28.22	66.51	68.71
<b>Total</b>	<b>80.48</b>	<b>219.57</b>	<b>242.62</b>





(₹ in lakh)

Asset-VI			
Particulars	2016-17 (Pro-rata for 154 days)	2017-18	2018-19
Depreciation	13.70	41.13	49.54
Interest on Loan	14.24	40.03	44.80
Return on Equity	15.35	46.05	55.62
Interest on Working Capital	2.36	6.25	6.86
O&M Expenses	27.16	66.51	68.71
<b>Total</b>	<b>72.81</b>	<b>199.97</b>	<b>225.53</b>

(₹ in lakh)

Asset-VII			
Particulars	2016-17 (Pro-rata for 91 days)	2017-18	2018-19
Depreciation	9.30	52.98	65.90
Interest on Loan	9.27	50.04	58.50
Return on Equity	10.41	59.31	73.98
Interest on Working Capital	1.47	7.02	7.92
O&M Expenses	16.05	66.51	68.71
<b>Total</b>	<b>46.50</b>	<b>235.86</b>	<b>275.01</b>

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

(₹ in lakh)

Asset-I			
Particulars	2016-17 (Pro-rata for 98 days)	2017-18	2018-19
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	41.69	49.94	55.44
<b>Total</b>	<b>56.71</b>	<b>65.46</b>	<b>71.48</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>7.26</b>	<b>8.38</b>	<b>9.15</b>

(₹ in lakh)

Asset-II			
Particulars	2016-17 (Pro-rata for 90 days)	2017-18	2018-19
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	29.87	35.81	39.16
<b>Total</b>	<b>44.89</b>	<b>51.33</b>	<b>55.20</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>1.42</b>	<b>6.57</b>	<b>7.07</b>



(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	30.89	37.52	40.73
Total	45.91	53.04	56.77
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>2.93</b>	<b>6.79</b>	<b>7.27</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
Maintenance Spares	4.74	4.89
O&M Expenses	8.53	8.81
Receivables	58.18	61.37
Total	71.45	75.07
Rate of Interest (in %)	12.60	12.60
<b>Total</b>	<b>4.46</b>	<b>9.46</b>

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	30.60	36.60	40.44
Total	45.62	52.12	56.48
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>2.56</b>	<b>6.67</b>	<b>7.23</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	28.76	33.33	37.59
Total	43.78	48.85	53.63
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>2.36</b>	<b>6.25</b>	<b>6.86</b>



(₹ in lakh)

Asset-VII			
Particulars	2016-17 (Pro-rata for 91 days)	2017-18	2018-19
Maintenance Spares	5.36	5.54	5.73
O&M Expenses	9.66	9.98	10.31
Receivables	31.08	39.31	45.84
Total	46.10	54.83	61.88
Rate of Interest (in %)	12.80	12.80	12.80
<b>Total</b>	<b>1.47</b>	<b>7.02</b>	<b>7.92</b>

### Capital Cost

10. The Commission vide order dated 8.12.2017 in Petition No. 57/TT/2017 in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII and vide Order dated 19.12.2018 in Petition No. 159/TT/2018 in respect of Asset-IV has approved the following capital cost and ACE:

(₹ in lakh)

Asset	Apportioned approved cost as per FR	Apportioned approved Cost as per RCE	Admitted Cost (as on COD)	ACE			Admitted Cost (as on 31.3.2019)
				2016-17	2017-18	2018-19	
Asset-I	1439.21	1917.43	940.66	223.95	35.39	0.00	1200.00
Asset-II	1091.62	1162.95	553.66	226.74	350.65	0.00	1131.05
Asset-III	1060.55	1198.35	546.27	281.81	338.52	0.00	1166.60
Asset-IV	1876.95	2097.13	1580.13	0.00	385.72	3.44	1969.29
Asset-V	1105.59	1345.52	567.78	571.08	49.84	0.00	1188.70
Asset-VI	843.02	1116.6	584.57	357.98	105.88	52.84	1101.27
Asset-VII	1309.58	1466.02	614.24	176.66	404.88	0.00	1195.78
<b>Total</b>	<b>8726.52</b>	<b>10304.00</b>	<b>5387.31</b>	<b>1838.22</b>	<b>1670.88</b>	<b>56.28</b>	<b>8952.69</b>

### Cost Over-Run

11. The Commission vide order dated 8.12.2017 in Petition No. 57/TT/2017 had held as under:

*“19. Though the instant assets are of similar configuration, there is a significant difference in the cost of the 125 MVAR Reactor at Sonapat, Panchkula and Kanpur. The cost of Bus Reactors at Sonapat, Panchkula and Kanpur Sub-stations are substantially higher than the cost of Bus Reactors at other sub-stations. The Petitioner has submitted in Form 5-B, that it is mainly due to increase in cost of structure*



*switchyard at Sonapat and civil works at Kanpur. However, the Petitioner has not submitted the details of the same. The Petitioner is directed to submit the reasons for variation of structure switchyard at Sonapat, Panchkula and Civil work at Kanpur alongwith comparison of cost and justification. In view of this, the estimated completion cost of the Assets I, V and VII has been restricted to ₹1200 lakh each on provisional basis based on the average cost of Asset II, III, V and VI (rounded figure). The cost of these Bus Reactors shall be reviewed on the basis of the information submitted by the Petitioner at the time of truing-up.”*

12. In terms of the above, the Petitioner vide affidavit dated 26.8.2021 has submitted cost variation details with reference to Asset-I, Asset-V and Asset-VII.

13. The Petitioner has submitted that basic ex-work price for Reactors mentioned in contract is same. However, difference between the estimated completion cost of different assets is due to other requirements based on existing arrangement at sub-stations where they are installed. Termination items for reactors installed at different sub-stations are different on account of (i) type of layout arrangement i.e., D type or I-type layout; (ii) whether assets are terminated in existing diameter (one & half breaker scheme) or new diameter (one & half breaker scheme) is created. Based on the same, requirements of switchgears (i.e., circuit breakers, CTs, isolators, etc.) bus-work, erection hardware, structures, C&R cables, etc. vary at different sub-stations. The same is also incorporated in FR and RCE and, hence, apportioned cost of different assets/ reactors vary and are not the same. Further, the price variation of the items is based on prevailing market conditions and competition. The procurement is carried out under open competitive route by providing equal opportunity to all the eligible firms. The bid prices are invited for the complete scope of work on overall basis and the contracts are awarded to the qualified bidder, whose bid is determined as the lowest evaluated, techno-commercially responsive and, who is considered to have the capacity and capability to perform the contract based on the assessment, if



carried out. Thus, the differences in FR cost and awarded/actual is due to various market forces and the pricing strategies followed by bidder(s).

14. The Petitioner vide Auditor's Certificate dated 30.7.2019 has submitted the capital cost up to the date of commercial operation along with ACE up to 31.3.2019. The details of the approved apportioned capital cost, capital cost as on COD and ACE incurred up to 31.3.2019 as claimed by the Petitioner are as follows:

Asset	Apportioned approved cost as per FR	Apportioned approved Cost as per RCE	Admitted Cost as on COD	ACE			Cost as on 31.3.2019
				2016-17	2017-18	2018-19	
<b>Asset-I</b>	1439.21	1917.43	960.34	223.47	360.08	60.73	1604.62
<b>Asset-II</b>	1091.62	1162.95	561.40	226.74	187.70	60.25	1036.09
<b>Asset-III</b>	1060.55	1198.35	552.87	276.00	205.55	56.12	1090.54
<b>Asset-IV</b>	1876.95	2097.13	1686.26	0.00	218.64	28.27	1933.17
<b>Asset-V</b>	1105.59	1345.52	578.91	199.10	255.35	57.05	1090.41
<b>Asset-VI</b>	843.02	1116.6	594.19	61.30	265.46	52.55	973.50
<b>Asset-VII</b>	1309.58	1466.02	630.63	176.66	408.09	79.66	1295.04
<b>Total</b>	<b>8726.52</b>	<b>10304.00</b>	<b>5564.6</b>	<b>1163.27</b>	<b>1900.87</b>	<b>394.63</b>	<b>9023.37</b>

15. The Petitioner has claimed total capital cost of ₹9023.37 lakh for the transmission assets as on 31.3.2019.

16. We have considered the submissions of the Petitioner. The Petitioner has submitted that ex-work price of Asset-I, Asset-V and Asset-VII in contract is same as other reactors but their completion cost vary due to the requirements of switchgears (CBs, CT, Isolators, etc.) at different sub-stations. We accept the submissions of the Petitioner. The completion cost claimed by the Petitioner in respect of the



transmission assets is within the apportioned approved cost as per RCE. Therefore, there is no cost over-run.

### **Time Over-run**

17. The scheduled date of commercial operation (SCOD) of the transmission assets and the actual COD of the transmission assets are as follows:

<b>Particulars</b>	<b>SCOD</b>	<b>COD</b>	<b>Time over-run</b>
<b>Asset-I</b>	1.8.2017	24.12.2016	-
<b>Asset-II</b>	1.8.2017	1.1.2017	-
<b>Asset-III</b>	1.8.2017	1.10.2016	-
<b>Asset-IV</b>	1.8.2017	2.10.2017	62 days
<b>Asset-V</b>	1.8.2017	23.10.2016	-
<b>Asset-VI</b>	1.8.2017	29.10.2016	-
<b>Asset-VII</b>	1.8.2017	31.12.2016	-

18. The Commission vide order dated 19.12.2018 in Petition No. 159/TT/2018 did not condone the time overrun of 62 days in respect of Asset-IV.

### **Interest During Construction**

19. The Petitioner has claimed Interest During Construction (IDC) for the transmission assets and has submitted Auditor's Certificates in support of the same. The Petitioner has submitted computation of IDC along with the year-wise details of the IDC discharged.

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

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



(₹ in lakh)

Particulars	IDC claimed by Petitioner (as per Auditor Certificate)	Entitled IDC up to COD	IDC disallowed as on COD due to computation difference / time overrun not allowed	Un-discharged portion of entitled IDC as on COD	IDC allowed on cash basis as on COD
	A	B	C=A-B	D	E=B-D
Asset-I	26.69	26.50	0.19	19.47	7.03
Asset-II	7.74	7.73	0.01	7.73	0.00
Asset-III	6.60	6.51	0.09	6.51	0.00
Asset-IV	80.79	64.81	15.98	32.73	32.08
Asset-V	11.13	11.00	0.13	11.00	11.00
Asset-VI	9.62	9.51	0.11	9.51	0.00
Asset-VII	12.47	12.45	0.02	12.45	0.00

### **Incidental Expenditure During Construction (IEDC)**

22. The Petitioner has claimed IEDC for the transmission assets and submitted Auditors Certificate in support of the same. IEDC is allowed as claimed subject to adjustment as per non-condonation of time over-run. The details of claimed and allowed IEDC are as follows:

(₹ in lakh)

Particulars	IEDC claimed (as per Auditor Certificate)	IEDC disallowed (due to time over-run)	IEDC allowed (as on COD)
	1	2	3= (1-2)
Asset-I	35.27	0.00	35.27
Asset-II	17.76	0.00	17.76
Asset-III	16.08	0.00	16.08
Asset-IV	49.60	3.16	46.44
Asset-V	50.16	0.00	50.16
Asset-VI	42.57	0.00	42.57
Asset-VII	63.54	0.00	63.54

### **Initial Spares**

23. The Petitioner has claimed the following Initial Spares for the transmission assets and prayed to revise the Initial Spares allowed earlier in light of the judgement of the APTEL dated 14.9.2019 in Appeal No.74 of 2017. Initial Spares claimed by the Petitioner are as follows:



Particulars	Asset	Plant and Machinery Cost* (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Initial Spares allowable	Initial Spares Deducted (₹ in lakh)
Asset-I	Sub-station	1597.66	80.99	96.81	0.00
Asset-II	Sub-station	1029.59	78.51	60.71	1.98
Asset-III	Sub-station	1068.46	78.51	63.19	15.32
Asset-IV	Sub-station	1892.78	181.16	109.25	71.91
Asset-V	Sub-station	1029.12	88.60	60.03	28.57
Asset-VI	Sub-station	921.32	63.63	54.75	8.88
Asset-VII	Sub-station	1264.03	85.79	75.21	10.58

\* Excluding IDC/IEDC, Land cost and cost of civil works

24. The discharge of Initial Spares claimed by Petitioner are as follows:

Particulars	As on COD	(₹ in lakh)			
		2016-17	2017-18	2018-19	2019-20
Asset-I	0.00	0.00	80.99	0.00	0.00
Asset-II	27.93	0.00	50.58	0.00	0.00
Asset-III	4.73	56.93	16.85	0.00	0.00
Asset-IV	147.19	0.00	32.18	0.00	1.79
Asset-V	7.57	19.73	61.30	0.00	0.00
Asset-VI	31.56	0.00	32.08	0.00	0.00
Asset-VII	42.56	0.00	36.17	7.06	0.00

25. We have considered the submission of the Petitioner. The APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as under:

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

26. In terms of the above, Initial Spares are to be allowed as percentage of the project cost as a whole. As the entire transmission project was completed during 2014-19 tariff period, the overall project cost of the transmission assets is arrived at only when all the assets are combined while claiming the tariff for the 2019-24 tariff period. Therefore, the Initial Spares are allowed on the basis of the cost of the individual assets in the 2014-19 tariff period and the Initial Spares are allowed on the





basis of the overall project cost in the 2019-24 period (as discussed in the relevant portion of the instant order).

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

Particulars	Plant & machinery cost up to cut-off date (excluding IDC and IEDC as per Auditor certificate) (₹ in lakh) (A)	Initial Spares claimed (₹ in lakh) (B)	Ceiling Limit (in %) (C)	Allowable Initial Spares worked out  D = [(A-B)*C/(100-C)]	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Discharge of Initial Spares			
							Up to COD	During 2016-17	During 2017-18	During 2018-19
Asset-I	1542.66	80.99	6	93.30	0.00	80.99	0.00	0.00	80.99	0.00
Asset-II	1029.59	78.51	6	60.71	17.80	60.71	27.93	0.00	32.78	0.00
Asset-III	1067.86	78.51	6	63.15	15.36	63.15	4.73	56.93	1.49	0.00
Asset-IV	1892.78	181.16	5	90.09	91.07	90.09	90.09	0.00	0.00	0.00
Asset-V	1029.12	88.60	6	60.03	28.57	60.03	7.57	19.73	32.73	0.00
Asset-VI	921.31	63.63	6	54.75	8.88	54.75	31.56	0.00	23.19	0.00
Asset-VII	1219.03	85.79	6	72.33	13.46	72.33	42.56	0.00	29.77	0.00

### Capital Cost as on COD

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

Particulars	Capital Cost (as on 1.4.2014 or COD whichever is later as per Auditors' Certificate)	IDC as on COD Disallowed due to		IEDC disallowed (as on COD)	Excess Initial Spares (as on COD)	Capital Cost considered (as on 1.4.2014)
		Computation difference	Un-discharged			
	1	2	3	4	5	6=(1-2-3-4-5)
Asset-I	960.34	0.19	19.47	0.00	0.00	940.68
Asset-II	561.40	0.01	7.73	0.00	0.00	553.66
Asset-III	552.87	0.09	6.51	0.00	0.00	546.27
Asset-IV	1686.26	15.98	32.73	3.16	57.10	1577.28
Asset-V	578.91	0.13	11.00	0.00	0.00	567.78
Asset-VI	594.19	0.11	9.51	0.00	0.00	584.57
Asset-VII	630.63	0.02	12.45	0.00	0.00	618.16



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

29. The Commission vide order dated 8.12.2017 in Petition No. 57/TT/2017 in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII and vide order dated 19.12.2018 in Petition No. 159/TT/2018 in respect of Asset-IV has allowed ACE as follows:

(₹ in lakh)

Particulars	Additional Capital Expenditure		
	2016-17	2017-18	2018-19
Asset-I	223.95	35.39	0.00
Asset-II	226.74	350.65	0.00
Asset-III	281.81	338.52	0.00
Asset-IV	0.00	385.72	3.44
Asset-V	571.08	49.84	0.00
Asset-VI	357.98	105.88	52.84
Asset-VII	176.66	404.88	0.00

30. The Petitioner has claimed the following ACE in respect of the transmission assets and submitted Auditor's Certificate in support of its claim:

(₹ in lakh)

Particulars	Additional Capital Expenditure		
	2016-17	2017-18	2018-19
Asset-I	223.47	360.08	60.73
Asset-II	226.74	187.70	60.25
Asset-III	276.00	205.55	56.12
Asset-IV	0.00	218.64	28.27
Asset-V	199.10	255.35	57.05
Asset-VI	61.30	265.46	52.55
Asset-VII	176.66	408.09	79.66

31. Thus, ACE claimed includes the accrued IDC discharged during the 2014-19 tariff period. It is observed that the total estimated completion cost including ACE for the 2014-19 period is within the approved cost as per RCE.

32. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations as it is towards balance and retention payments and works



deferred for execution. The un-discharged IDC as on COD has been allowed as ACE.

The details of ACE allowed are as follows:

(₹ in lakh)

Asset-I	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	223.47	360.08	60.73
Add: IDC Discharged	0.48	18.99	0.00
<b>Total ACE allowed</b>	<b>223.95</b>	<b>379.07</b>	<b>60.73</b>

(₹ in lakh)

Asset-II	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	226.74	187.70	69.25
Add: IDC Discharged	0.00	7.73	0.00
Less: Excess Initial Spares	0.00	17.80	0.00
<b>Total ACE allowed</b>	<b>226.74</b>	<b>177.63</b>	<b>60.25</b>

(₹ in lakh)

Asset-III	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	276.00	205.55	56.12
Add: IDC Discharged	0.00	6.51	0.00
Less: Excess Initial Spares	0.00	15.36	0.00
<b>Total ACE allowed</b>	<b>276.00</b>	<b>196.70</b>	<b>56.12</b>

(₹ in lakh)

Asset-IV	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	0.00	218.64	28.27
Add: IDC Discharged	0.00	24.26	8.48
Less: Excess Initial Spares	0.00	32.18	0.00
<b>Total ACE allowed</b>	<b>0.00</b>	<b>210.72</b>	<b>36.75</b>



(₹ in lakh)

Asset-V	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	199.10	255.35	57.05
Add: IDC Discharged	0.00	11.00	0.00
Less: Excess Initial Spares	0.00	28.57	0.00
<b>Total ACE allowed</b>	<b>199.10</b>	<b>237.78</b>	<b>57.05</b>

(₹ in lakh)

Asset-VI	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	61.30	265.46	52.55
Add: IDC Discharged	0.00	9.51	0.00
Less: Excess Initial Spares	0.00	8.88	0.00
<b>Total ACE allowed</b>	<b>61.30</b>	<b>266.09</b>	<b>52.55</b>

(₹ in lakh)

Asset-VII	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	176.66	408.09	79.66
Add: IDC Discharged	0.00	12.45	0.00
Less: Excess Initial Spares	0.00	6.40	7.06
<b>Total ACE allowed</b>	<b>176.66</b>	<b>414.14</b>	<b>72.60</b>

### Capital Cost for the 2014-19 tariff period

33. Accordingly, the capital cost of the transmission assets considered for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Apportioned Approved Capital Cost as per RCE	Capital Cost on cash basis (as on COD)	Additional Capital Expenditure (ACE)			Total Capital Cost (as on 31.3.2019)
			2016-17	2017-18	2018-19	
Asset-I	1917.43	940.68	223.95	379.07	60.73	1604.43
Asset-II	1162.95	553.66	226.74	177.63	60.25	1018.28
Asset-III	1198.35	546.27	276.00	196.70	56.12	1075.09
Asset-IV	2097.13	1577.28	0.00	210.72	36.75	1824.75
Asset-V	1345.52	567.78	199.10	237.78	57.05	1061.71
Asset-VI	1116.6	584.57	61.30	266.09	52.55	964.51
Asset-VII	1466.02	618.16	176.66	414.14	72.60	1281.56



### **Debt-Equity Ratio**

34. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for Additional Capital Expenditure post COD. The debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during the 2014-19 period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on the date of commercial operation and as on 31.3.2019 are as follows:

Funding Asset-I	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	658.48	70.00	1123.10	70.00
Equity	282.20	30.00	481.33	30.00
Total	940.68	100.00	1604.43	100.00
Funding Asset-II	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	387.56	70.00	712.80	70.00
Equity	166.10	30.00	305.48	30.00
Total	553.66	100.00	1018.28	100.00
Funding Asset-III	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	382.39	70.00	752.56	70.00
Equity	163.88	30.00	322.53	30.00
Total	546.27	100.00	1075.09	100.00
Funding Asset-IV	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1104.10	70.00	1277.32	70.00
Equity	473.18	30.00	547.42	30.00
Total	1577.28	100.00	1824.74	100.00
Funding Asset-V	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	397.45	70.00	743.20	70.00
Equity	170.33	30.00	318.51	30.00
Total	567.78	100.00	1061.71	100.00



Funding Asset-VI	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	409.20	70.00	675.16	70.00
Equity	175.37	30.00	289.35	30.00
Total	584.57	100.00	964.51	100.00
Funding Asset-VII	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	432.71	70.00	897.09	70.00
Equity	185.45	30.00	384.47	30.00
Total	618.16	100.00	1281.56	100.00

### Depreciation

35. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-1. The depreciation for the 2014-19 period is trued-up for the transmission assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)			
Asset-I			
Particulars	2016-17 (Pro-rata for 98 days)	2017-18	2018-19
Opening Gross Block	940.68	1164.63	1543.70
Additional Capitalisation	223.95	379.07	60.73
Closing Gross Block	1164.63	1543.70	1604.43
Average Gross Block	1052.66	1354.17	1574.07
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24
Aggregated Depreciable Value	947.39	1218.75	1416.66
Remaining Aggregated Depreciable Value	932.47	1132.33	1247.13
<b>Depreciation during the year</b>	<b>14.92</b>	<b>71.50</b>	<b>83.11</b>



(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	553.66	780.40	958.03
Additional Capitalisation	226.74	177.63	60.25
Closing Gross Block	780.40	958.03	1018.28
Average Gross Block	667.03	869.22	988.16
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24
Aggregated Depreciable Value	600.33	782.29	889.34
Remaining Aggregated Depreciable Value	591.64	727.71	782.59
<b>Depreciation during the year</b>	<b>8.68</b>	<b>45.89</b>	<b>52.17</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	546.27	822.27	1018.97
Additional Capitalisation	276.00	196.70	56.12
Closing Gross Block	822.27	1018.97	1075.09
Average Gross Block	684.27	920.62	1047.03
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24
Aggregated Depreciable Value	615.84	828.56	942.33
Remaining Aggregated Depreciable Value	597.83	761.93	820.42
<b>Depreciation during the year</b>	<b>18.02</b>	<b>48.61</b>	<b>55.28</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
Opening Gross Block	1577.28	1788.00
Additional Capitalisation	210.72	36.75
Closing Gross Block	1788.00	1824.74
Average Gross Block	1682.64	1806.37
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25
Aggregated Depreciable Value	1514.38	1625.73
Remaining Aggregated Depreciable Value	1470.32	1486.30
<b>Depreciation during the year</b>	<b>44.06</b>	<b>95.38</b>



(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	567.78	766.88	1004.66
Additional Capitalisation	199.10	237.78	57.05
Closing Gross Block	766.88	1004.66	1061.71
Average Gross Block	667.33	885.77	1033.18
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	24	24	23
Aggregated Depreciable Value	600.60	797.19	929.86
Remaining Aggregated Depreciable Value	585.15	734.98	813.10
<b>Depreciation during the year</b>	<b>15.45</b>	<b>46.77</b>	<b>54.55</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	584.57	645.87	911.96
Additional Capitalisation	61.30	266.09	52.55
Closing Gross Block	645.87	911.96	964.51
Average Gross Block	615.22	778.92	938.24
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24
Aggregated Depreciable Value	553.70	701.02	844.41
Remaining Aggregated Depreciable Value	539.99	646.19	740.04
<b>Depreciation during the year</b>	<b>13.71</b>	<b>41.13</b>	<b>49.54</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	618.16	794.82	1208.96
Additional Capitalisation	176.66	414.14	72.60
Closing Gross Block	794.82	1208.96	1281.56
Average Gross Block	706.49	1001.89	1245.26
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24
Aggregated Depreciable Value	635.84	901.70	1120.73
Remaining Aggregated Depreciable Value	626.54	839.50	992.78
<b>Depreciation during the year</b>	<b>9.30</b>	<b>52.90</b>	<b>65.75</b>





36. The details of depreciation allowed in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in respect of Asset-IV vide Order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)				
Asset	Particulars	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	14.92	62.43	63.36
	As claimed in the instant petition	15.58	73.97	85.61
	Approved after truing up in the instant order	14.92	71.50	83.11
Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	8.68	50.46	59.72
	As claimed in the instant petition	8.68	46.31	53.01
	Approved after truing up in the instant order	8.68	45.89	52.17
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	18.09	52.66	61.60
	As claimed in the instant petition	18.02	48.61	55.29
	Approved after truing up in the instant order	18.02	48.61	55.28
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	46.42	103.89
	As claimed in the instant petition	0.00	46.03	99.79
	Approved after truing up in the instant order	0.00	44.06	95.38
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	19.75	61.45	62.76
	As claimed in the instant petition	16.52	49.25	57.07
	Approved after truing up in the instant order	15.45	46.77	54.55
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	17.01	52.56	56.75
	As claimed in the instant petition	13.70	41.13	49.54
	Approved after truing up in the instant order	13.71	41.13	49.54
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	9.25	52.45	63.14
	As claimed in the instant petition	9.30	52.98	65.90
	Approved after truing up in the instant order	9.30	52.90	65.75



### Interest on Loan (IoL)

37. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. The change in interest rate is due to floating rate of interest applicable for the project to be claimed/ adjusted over a period of 5 years directly from the beneficiaries. We have considered the submissions of the Petitioner and, accordingly, calculated IoL based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL has been worked out as detailed below:

- (i) Gross amount of loan, repayment of instalments and weighted average rate of interest on actual average loan have been considered as per the petition.
- (ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

38. The details of IoL calculated in respect of the transmission assets are as follows:

(₹ in lakh)

Asset-I			
Particulars	2016-17 (Pro-rata for 98 days)	2017-18	2018-19
Gross Normative Loan	658.48	815.24	1080.59
Cumulative Repayments upto Previous Year	0.00	14.92	86.42
Net Loan-Opening	658.48	800.32	994.17
Addition due to Additional Capitalization	156.77	265.35	42.51
Repayment during the year	14.92	71.50	83.11
Net Loan-Closing	800.32	994.17	953.57
Average Loan	729.40	897.24	973.87
Weighted Average Rate of Interest on Loan (in %)	7.987	7.898	7.825
<b>Interest on Loan</b>	<b>15.64</b>	<b>70.86</b>	<b>76.21</b>

(₹ in lakh)

Asset-II			
Particulars	2016-17 (Pro-rata for 90 days)	2017-18	2018-19
Gross Normative Loan	387.56	546.28	670.62
Cumulative Repayments upto Previous Year	0.00	8.68	54.58



Net Loan-Opening	387.56	537.60	616.04
Addition due to Additional Capitalization	158.72	124.34	42.18
Repayment during the year	8.68	45.89	52.17
Net Loan-Closing	537.60	616.04	606.04
Average Loan	462.58	576.82	611.04
Weighted Average Rate of Interest on Loan (in %)	7.457	7.493	7.515
<b>Interest on Loan</b>	<b>8.51</b>	<b>43.22</b>	<b>45.92</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	382.39	575.59	713.28
Cumulative Repayments upto Previous Year	0.00	18.02	66.62
Net Loan-Opening	382.39	557.57	646.66
Addition due to Additional Capitalization	193.20	137.69	39.28
Repayment during the year	18.02	48.61	55.28
Net Loan-Closing	557.57	646.66	630.66
Average Loan	469.98	602.11	638.66
Weighted Average Rate of Interest on Loan (in %)	8.197	8.097	7.993
<b>Interest on Loan</b>	<b>19.21</b>	<b>48.75</b>	<b>51.05</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
Gross Normative Loan	1104.10	1251.60
Cumulative Repayments upto Previous Year	0.00	44.06
Net Loan-Opening	1104.10	1207.54
Addition due to Additional Capitalization	147.50	25.72
Repayment during the year	44.06	95.38
Net Loan-Closing	1207.54	1137.89
Average Loan	1155.82	1172.71
Weighted Average Rate of Interest on Loan (in %)	7.619	7.646
<b>Interest on Loan</b>	<b>43.67</b>	<b>89.67</b>

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	397.45	536.82	703.26
Cumulative Repayments upto Previous Year	0.00	15.45	62.21
Net Loan-Opening	397.45	521.37	641.05
Addition due to Additional Capitalization	139.37	166.44	39.94
Repayment during the year	15.45	46.77	54.55
Net Loan-Closing	521.37	641.05	626.43
Average Loan	459.41	581.21	633.74



Weighted Average Rate of Interest on Loan (in %)	7.900	7.733	7.688
<b>Interest on Loan</b>	<b>15.91</b>	<b>44.94</b>	<b>48.72</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	409.20	452.11	638.37
Cumulative Repayments upto Previous Year	0.00	13.71	54.83
Net Loan-Opening	409.20	438.40	583.54
Addition due to Additional Capitalization	42.91	186.26	36.79
Repayment during the year	13.71	41.13	49.54
Net Loan-Closing	438.40	583.54	570.79
Average Loan	423.80	510.97	577.16
Weighted Average Rate of Interest on Loan (in %)	7.961	7.833	7.761
<b>Interest on Loan</b>	<b>14.24</b>	<b>40.03</b>	<b>44.80</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	432.71	556.37	846.27
Cumulative Repayments upto Previous Year	0.00	9.30	62.20
Net Loan-Opening	432.71	547.07	784.07
Addition due to Additional Capitalization	123.66	289.90	50.82
Repayment during the year	9.30	52.90	65.75
Net Loan-Closing	547.07	784.07	769.14
Average Loan	489.89	665.57	776.61
Weighted Average Rate of Interest on Loan (in %)	7.586	7.507	7.515
<b>Interest on Loan</b>	<b>9.27</b>	<b>49.97</b>	<b>58.36</b>

39. The details of IoL allowed for Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in respect of Asset-IV vide Order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

<b>Asset</b>	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	15.59	62.49	58.41
	As claimed in the instant petition	15.63	70.72	75.88
	Approved after truing up in the instant order	15.64	70.86	76.21



Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	8.51	47.22	52.24
	As claimed in the instant petition	8.51	43.62	46.69
	Approved after truing up in the instant order	8.51	43.22	45.92
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	18.76	52.10	56.99
	As claimed in the instant petition	19.21	48.76	51.06
	Approved after truing up in the instant order	19.21	48.75	51.05
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	46.51	98.43
	As claimed in the instant petition	0.00	44.33	91.16
	Approved after truing up in the instant order	0.00	43.67	89.67
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	20.65	61.27	57.68
	As claimed in the instant petition	15.89	44.77	48.36
	Approved after truing up in the instant order	15.91	44.94	48.72
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	17.69	52.08	52.15
	As claimed in the instant petition	14.24	40.03	44.80
	Approved after truing up in the instant order	14.24	40.03	44.80
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	9.21	49.76	56.07
	As claimed in the instant petition	9.27	50.04	58.50
	Approved after truing up in the instant order	9.27	49.97	58.36

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

40. The Petitioner has claimed RoE for the transmission assets in terms of Regulation 24 and Regulation 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



41. The Petitioner has prayed for claiming the differential tariff on account of the trued-up RoE based on effective rate calculated on completion of Income tax assessment/ re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of respective assessment orders, directly from the beneficiaries, on year-to-year basis as provided under the 2014 Tariff Regulations.

42. 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 as follows:

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

43. The same MAT rates as arrived at vide order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in respect of the transmission assets. Accordingly, RoE allowed for the transmission assets is as follows:

(₹ in lakh)			
Asset-I			
Particulars	2016-17 (Pro-rata for 98 days)	2017-18	2018-19
Opening Equity	282.20	349.39	463.11
Addition due to Additional Capitalization	67.19	113.72	18.22
Closing Equity	349.39	463.11	481.33
Average Equity	315.80	406.25	472.22
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>16.71</b>	<b>80.05</b>	<b>93.30</b>



(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	166.10	234.12	287.41
Addition due to Additional Capitalization	68.02	53.29	18.08
Closing Equity	234.12	287.41	305.48
Average Equity	200.11	260.76	296.45
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>9.72</b>	<b>51.38</b>	<b>58.57</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	163.88	246.68	305.69
Addition due to Additional Capitalization	82.80	59.01	16.84
Closing Equity	246.68	305.69	322.53
Average Equity	205.28	276.19	314.11
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>20.17</b>	<b>54.42</b>	<b>62.06</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
Opening Equity	473.18	536.40
Addition due to Additional Capitalization	63.21	11.02
Closing Equity	536.40	547.42
Average Equity	504.79	541.91
Return on Equity (Base Rate) (in %)	15.500	15.500
Tax Rate applicable (in %)	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>49.33</b>	<b>107.07</b>

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	170.33	230.06	301.40
Addition due to Additional Capitalization	59.73	71.33	17.12
Closing Equity	230.06	301.40	318.51



Average Equity	200.20	265.73	309.95
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>17.29</b>	<b>52.36</b>	<b>61.24</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	175.37	193.76	273.59
Addition due to Additional Capitalization	18.39	79.83	15.77
Closing Equity	193.76	273.59	289.35
Average Equity	184.57	233.67	281.47
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>15.34</b>	<b>46.05</b>	<b>55.61</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	185.45	238.45	362.69
Addition due to Additional Capitalization	53.00	124.24	21.78
Closing Equity	238.45	362.69	384.47
Average Equity	211.95	300.57	373.58
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
Tax Rate applicable (in %)	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>10.41</b>	<b>59.23</b>	<b>73.81</b>

44. The details of RoE allowed in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in respect of Asset-IV vide Order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

<b>Asset</b>	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	16.63	69.56	70.60
	As claimed in the instant petition	16.71	80.06	93.31
	Approved after truing up in the instant	16.71	80.05	93.30





	order			
Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	9.68	56.23	66.54
	As claimed in the instant petition	9.72	51.85	59.51
	Approved after truing up in the instant order	9.72	51.38	58.57
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	20.16	58.67	68.63
	As claimed in the instant petition	20.17	54.43	62.07
	Approved after truing up in the instant order	20.17	54.42	62.06
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	51.73	115.76
	As claimed in the instant petition	0.00	50.10	109.07
	Approved after truing up in the instant order	0.00	49.33	107.07
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	22.01	68.47	69.93
	As claimed in the instant petition	17.29	52.37	61.25
	Approved after truing up in the instant order	17.29	52.36	61.24
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	18.95	58.56	63.23
	As claimed in the instant petition	15.35	46.05	55.62
	Approved after truing up in the instant order	15.34	46.05	55.61
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	10.30	58.44	70.35
	As claimed in the instant petition	10.41	59.31	73.98
	Approved after truing up in the instant order	10.41	59.23	73.81

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

45. The O&M expenses as claimed by the Petitioner are within norms specified under the 2014 Tariff Regulations. The allowable O&M expenses are as follows:

(₹ in lakh)

<b>Asset-I</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 98 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
125 MVAR Bus Reactor at Sonapat:	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>
<b>Total O&amp;M Expenses</b>	<b>17.28</b>	<b>66.51</b>	<b>68.71</b>



(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
Jaipur: 125 MVAR Bus Reactor	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	64.37	66.51	68.71
<b>Total O&amp;M Expenses</b>	<b>15.87</b>	<b>66.51</b>	<b>68.71</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
125 MVAR Bus Reactor at Bassi:	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	64.37	66.51	68.71
<b>Total O&amp;M Expenses</b>	<b>32.10</b>	<b>66.51</b>	<b>68.71</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 191 days)</b>	<b>2018-19</b>
<b>Sub-station bays</b>		
125 MVAR Bus Reactor at Manesar:	1	1
<b>Norm (₹ lakh/bay)</b>		
400 kV (GIS)	56.84	58.73
<b>Total Sub-station O&amp;M</b>	56.84	58.73
<b>Total O&amp;M Expenses</b>	<b>28.19</b>	<b>58.73</b>

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
125 MVAR Bus Reactor at Panchkula:	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	64.37	66.51	68.71
<b>Total O&amp;M Expenses</b>	<b>28.22</b>	<b>66.51</b>	<b>68.71</b>



(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
125 MVAR Bus Reactor at Kaithal:	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	64.37	66.51	68.71
<b>Total O&amp;M Expenses</b>	<b>27.16</b>	<b>66.51</b>	<b>68.71</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Sub-station bays</b>			
Kanpur(GIS): 125 MVAR Bus Reactor	1	1	1
<b>Norm (₹ lakh/bay)</b>			
400 kV (AIS)	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	64.37	66.51	68.71
<b>Total O&amp;M Expenses</b>	<b>16.05</b>	<b>66.51</b>	<b>68.71</b>

46. The details of O&M Expenses allowed in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in respect of Asset-IV vide order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

<b>Asset</b>	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	17.28	66.51	68.71
	As claimed in the instant petition	17.28	66.51	68.71
	Approved after truing up in the instant order	17.28	66.51	68.71
Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	15.87	66.51	68.71
	As claimed in the instant petition	15.87	66.51	68.71
	Approved after truing up in the instant order	15.87	66.51	68.71
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	32.10	66.51	68.71



	As claimed in the instant petition	32.10	66.51	68.71
	Approved after truing up in the instant order	32.10	66.51	68.71
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	28.18	58.73
	As claimed in the instant petition	0.00	28.19	58.73
	Approved after truing up in the instant order	0.00	28.19	58.73
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	28.22	66.51	68.71
	As claimed in the instant petition	28.22	66.51	68.71
	Approved after truing up in the instant order	28.22	66.51	68.71
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	27.16	66.51	68.71
	As claimed in the instant petition	27.16	66.51	68.71
	Approved after truing up in the instant order	27.16	66.51	68.70
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	16.05	66.51	68.71
	As claimed in the instant petition	16.05	66.51	68.71
	Approved after truing up in the instant order	16.05	66.51	68.71

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

47. The Petitioner has claimed interest on working capital in terms of Regulation 28(1)(c) of the 2014 Tariff Regulations.

48. The Interest on Working Capital allowed for the transmission assets is as follows:

(₹ in lakh)			
Asset-I			
Particulars	2016-17 (Pro-rata for 98 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	41.27	49.54	55.07
Total	56.29	65.06	71.10
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>1.93</b>	<b>8.33</b>	<b>9.10</b>



(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	29.88	35.59	38.73
<b>Total</b>	<b>44.90</b>	<b>51.11</b>	<b>54.76</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>1.42</b>	<b>6.54</b>	<b>7.01</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	30.89	37.51	40.73
<b>Total</b>	<b>45.91</b>	<b>53.03</b>	<b>56.76</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>2.93</b>	<b>6.79</b>	<b>7.27</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 191 days)</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	4.74	4.89
Working Capital for Maintenance Spares (15% of O&M expenses)	8.53	8.81
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	57.01	60.02
<b>Total</b>	<b>70.27</b>	<b>73.73</b>
Rate of Interest on working capital (in %)	12.60	12.60
<b>Interest of Working Capital</b>	<b>4.39</b>	<b>9.29</b>



(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	30.19	36.20	40.07
<b>Total</b>	<b>45.21</b>	<b>51.72</b>	<b>56.10</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>2.54</b>	<b>6.62</b>	<b>7.18</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 Pro-rata for 154 days</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	28.76	33.33	37.59
<b>Total</b>	<b>43.78</b>	<b>48.85</b>	<b>53.62</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>2.36</b>	<b>6.25</b>	<b>6.86</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M expenses for One month)	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M expenses)	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	31.08	39.27	45.76
<b>Total</b>	<b>46.10</b>	<b>54.79</b>	<b>61.79</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of Working Capital</b>	<b>1.47</b>	<b>7.01</b>	<b>7.91</b>

49. The details of IWC allowed in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in



respect of Asset-IV vide order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

		(₹ in lakh)		
Asset	Particulars	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	1.93	7.72	7.79
	As claimed in the instant petition	1.95	8.38	9.15
	Approved after truing up in the instant order	1.93	8.33	9.10
Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	1.42	6.57	7.07
	As claimed in the instant petition	1.42	6.57	7.07
	Approved after truing up in the instant order	1.42	6.54	7.01
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	2.92	7.04	7.68
	As claimed in the instant petition	2.93	6.79	7.27
	Approved after truing up in the instant order	2.93	6.79	7.27
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	4.55	9.85
	As claimed in the instant petition	0.00	4.46	9.46
	Approved after truing up in the instant order	0.00	4.39	9.29
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	2.84	7.65	7.74
	As claimed in the instant petition	2.56	6.67	7.23
	Approved after truing up in the instant order	2.54	6.62	7.18
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	2.59	7.04	7.35
	As claimed in the instant petition	2.36	6.25	6.86
	Approved after truing up in the instant order	2.36	6.25	6.86
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	1.47	6.98	7.73
	As claimed in the instant petition	1.47	7.02	7.92
	Approved after truing up in the instant order	1.47	7.01	7.91

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

50. Accordingly, the annual fixed charges in respect of the transmission assets after truing-up for the 2014-19 tariff period are as follows:



(₹ in lakh)

<b>Asset-I</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 98 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	14.92	71.50	83.11
Interest on Loan	15.64	70.86	76.21
Return on Equity	16.71	80.05	93.30
O&M Expenses	17.28	66.51	68.71
Interest on Working Capital	1.93	8.33	9.10
<b>Total</b>	<b>66.49</b>	<b>297.25</b>	<b>330.43</b>

(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	8.68	45.89	52.17
Interest on Loan	8.51	43.22	45.92
Return on Equity	9.72	51.38	58.57
O&M Expenses	15.87	66.51	68.71
Interest on Working Capital	1.42	6.54	7.01
<b>Total</b>	<b>44.20</b>	<b>213.55</b>	<b>232.38</b>

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	18.02	48.61	55.28
Interest on Loan	19.21	48.75	51.05
Return on Equity	20.17	54.42	62.06
O&M Expenses	32.10	66.51	68.71
Interest on Working Capital	2.93	6.79	7.27
<b>Total</b>	<b>92.42</b>	<b>225.08</b>	<b>244.37</b>

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 191 days)</b>	<b>2018-19</b>
Depreciation	44.06	95.38
Interest on Loan	43.67	89.67
Return on Equity	49.33	107.07
O&M Expenses	28.19	58.73
Interest on Working Capital	4.39	9.29
<b>Total</b>	<b>169.63</b>	<b>360.14</b>





(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	15.45	46.77	54.55
Interest on Loan	15.91	44.94	48.72
Return on Equity	17.29	52.36	61.24
O&M Expenses	28.22	66.51	68.71
Interest on Working Capital	2.54	6.62	7.18
<b>Total</b>	<b>79.40</b>	<b>217.20</b>	<b>240.40</b>

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	13.71	41.13	49.54
Interest on Loan	14.24	40.03	44.80
Return on Equity	15.34	46.05	55.61
O&M Expenses	27.16	66.51	68.71
Interest on Working Capital	2.36	6.25	6.86
<b>Total</b>	<b>72.81</b>	<b>199.96</b>	<b>225.52</b>

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	9.30	52.90	65.75
Interest on Loan	9.27	49.97	58.36
Return on Equity	10.41	59.23	73.81
O&M Expenses	16.05	66.51	68.71
Interest on Working Capital	1.47	7.01	7.91
<b>Total</b>	<b>46.50</b>	<b>235.62</b>	<b>274.54</b>

51. The details of Annual Fixed Charges allowed in respect of Asset-I, Asset-II, Asset-III, Asset-V, Asset-VI and Asset-VII vide order dated 8.12.2017 in Petition No. 57/TT/2017 and in respect of Asset-IV vide Order dated 19.12.2018 in Petition No. 159/TT/2018, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

<b>Asset</b>	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	66.35	268.71	268.87



	As claimed in the instant petition	67.15	299.64	332.66
	Approved after truing up in the instant order	66.49	297.25	330.43
Asset- II	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	44.16	227.25	254.70
	As claimed in the instant petition	44.20	214.86	234.99
	Approved after truing up in the instant order	44.20	213.55	232.38
Asset- III	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	92.03	236.98	263.61
	As claimed in the instant petition	92.43	225.10	244.40
	Approved after truing up in the instant order	92.42	225.08	244.37
Asset- IV	Allowed vide order dated 19.12.2018 in Petition No. 159/TT/2018	0.00	177.39	386.66
	As claimed in the instant petition	0.00	173.11	368.21
	Approved after truing up in the instant order	0.00	169.63	360.14
Asset- V	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	93.47	265.35	266.82
	As claimed in the instant petition	80.48	219.57	242.62
	Approved after truing up in the instant order	79.40	217.20	240.40
Asset- VI	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	83.40	236.75	248.18
	As claimed in the instant petition	72.81	199.97	225.53
	Approved after truing up in the instant order	72.81	199.96	225.52
Asset-VII	Allowed vide order dated 8.12.2017 in Petition No. 57/TT/2017	46.28	234.14	266.00
	As claimed in the instant petition	46.50	235.86	275.01
	Approved after truing up in the instant order	46.50	235.62	274.54

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

52. The Petitioner has submitted tariff forms combining Asset-I to Asset-VII, wherein the COD has been achieved prior to 1.4.2019, as Combined Asset and claimed the following transmission charges in respect of the Combined Asset for the 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	482.40	487.89	487.89	487.89	485.65



Interest on Loan	398.65	366.29	328.97	291.64	253.33
Return on Equity	506.65	512.51	512.51	512.51	512.51
Interest on Working Capital	30.26	30.34	30.12	29.91	29.60
Operation and Maintenance Expenses	215.41	222.98	230.82	238.92	247.30
<b>Total</b>	<b>1633.37</b>	<b>1620.01</b>	<b>1590.31</b>	<b>1560.87</b>	<b>1528.39</b>

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	17.95	18.58	19.24	19.91	20.61
Maintenance Spares	32.31	33.45	34.62	35.84	37.10
Receivables	200.82	199.73	196.07	192.44	187.92
Total	251.08	251.76	249.93	248.19	245.63
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>30.26</b>	<b>30.34</b>	<b>30.12</b>	<b>29.91</b>	<b>29.60</b>

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

54. The Petitioner has claimed E-COD of the Combined Asset as 2.6.2018. Based on the trued-up admitted capital cost and actual COD of the transmission assets, E-COD has been worked out as follows:

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost (as on 31.3.2019)	Weight of the cost (in %)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-I	24-Dec-16	1604.43	18.17	282.00	51.24	29.1.2017
Asset-II	01-Jan-17	1018.28	11.53	274.00	31.60	
Asset-III	01-Oct-16	1075.09	12.17	366.00	44.56	
Asset-IV	02-Oct-17	1824.74	20.66	0.00	0.00	
Asset-V	23-Oct-16	1061.71	12.02	344.00	41.36	
Asset-VI	29-Oct-16	964.51	10.92	338.00	36.92	
Asset-VII	31-Dec-16	1281.56	14.51	275.00	39.91	

55. E-COD is used to determine the lapsed life of the project as a whole, which works out as (2) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).



### Weighted Average Life (WAL)

56. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL.

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

58. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 25 years as follows:

Admitted Capital Cost (as on 31.3.2019)				
Particulars	Combined Asset Cost (₹ in lakh) (1)	Life as per 2019 Regulation (Years) (2)	Weighted Cost (3)=(1)x(2)	Weighted Average Life of Asset (in years) (4)=(3)/(1)
Sub-station Equipment	8751.90	25	218797.46	
IT Equipment and Software	78.42	7	522.83	
<b>Total</b>	<b>8830.32</b>		<b>219320.28</b>	<b>(24.84 years rounded off to 25 years)</b>

59. 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 in the preceding paragraphs, the E- COD of the assets is 29.1.2017 and the lapsed life of the project



as a whole, works out as two (2) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E- COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 23 years.

### **Capital Cost**

60. Regulations 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.”

61. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets clubbed together is as follows:

								(₹ in lakh)
Element	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V	Asset-VI	Asset-VII	Capital Cost for Combined Asset (as on 31.3.2019)
Sub-Station Equipment	1578.84	1018.28	1075.09	1797.69	1035.93	964.51	1281.56	8751.90
IT Equipment and Software	25.59	0.00	0.00	27.05	25.77	0.00	0.00	78.42
<b>Total</b>	<b>1604.43</b>	<b>1018.28</b>	<b>1075.09</b>	<b>1824.74</b>	<b>1061.71</b>	<b>964.51</b>	<b>1281.56</b>	<b>8830.32</b>

62. The Petitioner has claimed capital cost of ₹8865.21 lakh as on 1.4.2019 in respect of the Combined Asset. Against the overall approved capital cost (as per RCE) of ₹10304.00 lakh, the estimated completion cost including ACE is ₹9095.73 lakh as on 31.3.2024. The capital cost of ₹8830.32 lakh as on 31.3.2019 as worked out in preceding paragraphs has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

### **Initial Spares**

63. As stated in earlier part of this order, Initial Spares are allowed for the 2014-19 period on the basis of the cost of individual assets. The transmission assets covered in the transmission project are combined during the 2019-24 tariff period and, hence,



the Initial Spares are now allowed on the basis of the overall project cost in terms of the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

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

Asset	P&M cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed during 2014-19 period (₹ in lakh)	Initial Spares allowed for Combined Asset (₹ in lakh)
Asset-I	1542.66	80.99	6	93.3	80.99	12.31
Asset-II	1029.59	78.51	6	60.71	60.71	
Asset-III	1067.86	78.51	6	63.15	63.15	
Asset-IV	1892.78	181.16	5	90.09	90.09	
Asset-V	1029.12	88.6	6	60.03	60.03	
Asset-VI	921.31	63.63	6	54.75	54.75	
Asset-VII	1219.03	85.79	6	72.33	72.33	
Total				510.18	497.87	

65. Thus, in terms of the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹ 12.31 lakh are considered as follows:

Asset	Total Capital Cost (as on 31.3.2019)	Additional Initial Spares (as per the APTEL's Judgment dated 14.09.2019)	Total Capital Cost (as on 1.4.2019)
Combined Asset	8830.32	12.31	8842.63

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

66. Regulation 24 of the 2019 Tariff Regulations provides as follows:

*"24. Additional Capitalization within the original scope and upto the cut-off date*

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

*(a) Undischarged liabilities recognized to be payable at a future date;*

*(b) Works deferred for execution;*

*(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*

*(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*

*(e) Change in law or compliance of any existing law; and*

*(f) Force Majeure events:*

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

*(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work*



along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.”

67. Regulation 25 of the 2019 Tariff Regulations provides as follows:

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

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

*(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*

*(b) Change in law or compliance of any existing law;*

*(c) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(d) Liability for works executed prior to the cut-off date;*

*(e) Force Majeure events;*

*(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*

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

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

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

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

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

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

68. The Petitioner has claimed ACE in respect of the transmission assets during 2019-24 in accordance with Regulations 24(1)(a), 24(1)(b) and 25(1)(d) of the 2019 Tariff Regulations as follows:

Asset	Apportioned approved Cost (as per FR)	Apportioned approved, Cost (as per RCE)	Capital Expenditure (as on 31.03.2019)	ACE		Capital Cost (as on 31.03.2024)
				2019-24	(as per auditor's certificate)	
				2019-20		
Asset-I	1439.21	1917.43	1604.62	55.00		1659.62
Asset-II	1091.62	1162.95	1034.11	19.00		1053.11
Asset-III	1060.55	1198.35	1075.22	0.60		1075.82
Asset-IV	1876.95	2097.13	1863.05	88.21		1951.26
Asset-V	1105.59	1345.52	1061.84	0.00		1061.84





Asset-VI	843.02	1116.6	964.62	0.00	964.62
Asset-VII	1309.58	1466.02	1284.46	45.00	1329.46

69. We have considered the submissions of the Petitioner. ACE claimed during 2019-20 towards balance and retention payments and unexecuted work is allowed under Regulations 24(1)(a), 24(1)(b) and 25(1)(d) of the 2019 Tariff Regulations which is subject to true-up. ACE allowed in respect of the Combined Asset is as follows:

		(₹ in lakh)
Particulars	Regulation	ACE (2019-24)
ACE to extent of Balance & Retention Payments and work deferred for execution before cut-off date/ after cut-off date,	Regulation 24(1) (a) and (b) and regulation 25(1) (d) of the 2019 Tariff Regulations	207.81

70. Keeping in view the Petitioner's submissions, the Commission has also deducted excess Initial Spares of ₹1.79 lakh from Asset-IV in ACE of 2019-20.

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

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

(₹ in lakh)		
Capital Cost (as on 1.4.2019)	ACE (2019-24)	Total Estimated Completion Cost (up to 31.3.2024)
8842.63	207.81	9050.44

72. Against the overall apportioned approved capital cost as per RCE of ₹10304.00 lakhs, the estimated project cost of the Combined Asset including Additional Capital Expenditure is ₹ 9050.44 lakhs which is within the approved cost. Therefore, there is no cost over-run as per the apportioned approved cost.

### **Debt-Equity Ratio**

73. Regulation 18 of the 2019 Tariff Regulations provides as follows:

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



than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

*Provided that:*

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

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

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

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

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

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

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

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

*(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination*



of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

74. The details of the debt-equity considered for the purpose of tariff for the 2019-24 tariff period are as follows:

(₹ in lakh)				
Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	6189.84	70.00	6335.31	70.00
Equity	2652.79	30.00	2715.13	30.00
Total	<b>8842.63</b>	100.00	<b>9050.44</b>	100.00

### **Depreciation**

75. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

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

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

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

*"(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."*



76. The weighted average rate of depreciation (WAROD) has been worked out at Annexure-2 after taking into account the depreciation rates of IT and non-IT 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 for the Combined Asset is as follows:

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Gross Block	8842.63	9050.44	9050.44	9050.44	9050.44
Addition during 2019-24 due to Projected Additional Capitalisation	207.81	0.00	0.00	0.00	0.00
Closing Gross Block	9050.44	9050.44	9050.44	9050.44	9050.44
Average Gross Block	8946.53	9050.44	9050.44	9050.44	9050.44
Weighted Average Rate of Depreciation (WAROD) (in %)	5.37	5.36	5.36	5.36	5.36
Balance Useful life at the beginning of the year (Year)	23	22	21	20	19
Aggregated Depreciable Value	8059.72	8153.24	8153.24	8153.24	8153.24
<b>Combined Depreciation during the year</b>	<b>480.00</b>	<b>485.49</b>	<b>485.49</b>	<b>485.49</b>	<b>485.49</b>
Remaining Aggregated Depreciable Value Total	6693.01	6301.04	5815.55	5330.07	4844.58

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

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

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

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

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

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered*



from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

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

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

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

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

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

78. The weighted average rate of IoL has been considered on the basis of the 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. In view of the above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL considered for the Combined Asset is as follows:

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Normative Loan	6189.84	6335.31	6335.31	6335.31	6335.31
Cumulative Repayments up to Previous Year	886.71	1366.71	1852.20	2337.69	2823.17
Net Loan-Opening	5303.13	4968.60	4483.11	3997.63	3512.14
Addition due to Additional Capitalization	145.47	0.00	0.00	0.00	0.00
Repayment during the year	480.00	485.49	485.49	485.49	485.49



Net Loan-Closing	4968.60	4483.11	3997.63	3512.14	3026.66
Average Loan	5135.86	4725.86	4240.37	3754.88	3269.40
Weighted Average Rate of Interest on Loan (in %)	7.746	7.737	7.747	7.759	7.743
<b>Interest on Loan</b>	<b>397.80</b>	<b>365.63</b>	<b>328.49</b>	<b>291.35</b>	<b>253.13</b>

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

79. 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 cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*

*Provided further that:*

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

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

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

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

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

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



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

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

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

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

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

#### **Illustration-**

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

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

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

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

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

(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.”

80. RoE considered for the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Equity	2652.79	2715.13	2715.13	2715.13	2715.13
Addition due to Additional Capitalization	62.34	0.00	0.00	0.00	0.00
Closing Equity	2715.13	2715.13	2715.13	2715.13	2715.13
Average Equity	2683.96	2715.13	2715.13	2715.13	2715.13
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	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
Return on Equity (Pre-tax)	<b>504.10</b>	<b>509.96</b>	<b>509.96</b>	<b>509.96</b>	<b>509.96</b>

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

81. Regulations 35(3) and 35(4) of the 2019 Tariff Regulations provide as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<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





Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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 bi-pole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bi-pole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bi-pole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bi-pole 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  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

82. The O&M expenses as claimed by the Petitioner are within norms specified under the 2019 Tariff Regulations. The allowable O&M expenses are as follows:

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station bays</b>					
Kaithal: 125 MVAR Bus Reactor Bay	1	1	1	1	1
Panchkula: 125 MVAR Bus Reactor Bay	1	1	1	1	1
Jaipur: 124 MVAR Bus Reactor Bay	1	1	1	1	1
Bassi: 125 MVAR Bus Reactor Bay	1	1	1	1	1
Sonepat: 125 MVAR Bus Reactor Bay	1	1	1	1	1
Kanpur : 125 MVAR Bus Reactor Bay	1	1	1	1	1
Manesar GIS: 125 MVAR Bus Reactor Bay	1	1	1	1	1
<b>Norm (₹ lakh/bay)</b>					
400 kV (GIS)	22.51	23.30	24.12	24.96	25.84
400 kV (AIS)	32.15	33.28	34.45	35.66	36.91
<b>Total Sub-station O&amp;M</b>					
<b>Total O&amp;M Expenses</b>					
	<b>215.41</b>	<b>222.98</b>	<b>230.82</b>	<b>238.92</b>	<b>247.30</b>

\* The Petitioner has not claimed any O&M towards PLCC.



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

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

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

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

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

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

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

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

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

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

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

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

84. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the bank rate as on 1.4.2019.

85. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50%



(SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest thereon allowed for the instant asset is as follows:

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M expenses for One month)	17.95	18.58	19.23	19.91	20.61
Working Capital for Maintenance Spares (15% of O&M expenses)	32.31	33.45	34.62	35.84	37.09
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	200.10	198.77	194.90	191.30	187.08
<b>Total</b>	<b>250.36</b>	<b>250.80</b>	<b>248.76</b>	<b>247.05</b>	<b>244.78</b>
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>Interest on working capital</b>	<b>30.17</b>	<b>28.21</b>	<b>26.12</b>	<b>25.94</b>	<b>25.70</b>

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

86. The various components of the annual fixed charges for the Combined Asset for the 2019-24 tariff period are summarized 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>
Depreciation	480.00	485.49	485.49	485.49	485.49
Interest on Loan	397.80	365.63	328.49	291.35	253.13
Return on Equity	504.10	509.96	509.96	509.96	509.96
Operation and Maintenance Expenses	215.41	222.98	230.82	238.92	247.30
Interest on Working Capital	30.17	28.21	26.12	25.94	25.70
<b>Total</b>	<b>1627.48</b>	<b>1612.26</b>	<b>1580.87</b>	<b>1551.66</b>	<b>1521.57</b>

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

87. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses.

88. 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**

89. The Petitioner shall be entitled to reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner shall also be entitled to RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

### **Good and Service Tax**

90. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondents 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.

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

### **Security Expenses**

92. The Petitioner has submitted that security expenses in respect of transmission assets/ Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

93. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it 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, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

### **Capital Spares**

94. 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**

95. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2) (b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the 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.

96. To summarise:

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



(₹ in lakh)

<b>Asset-I</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 98 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	66.49	297.25	330.43

(₹ in lakh)

<b>Asset-II</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 90 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	44.20	213.55	232.38

(₹ in lakh)

<b>Asset-III</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 182 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	92.42	225.08	244.37

(₹ in lakh)

<b>Asset-IV</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 181 days)</b>	<b>2018-19</b>
<b>AFC</b>	169.63	360.14

(₹ in lakh)

<b>Asset-V</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 160 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	79.40	217.20	240.40

(₹ in lakh)

<b>Asset-VI</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 154 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	72.81	199.96	225.52

(₹ in lakh)

<b>Asset-VII</b>			
<b>Particulars</b>	<b>2016-17 (Pro-rata for 91 days)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC</b>	46.50	235.62	274.54

b) Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period in the instant order are 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>
AFC for Combined Asset	1627.48	1612.26	1580.87	1551.66	1521.57



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

98. This order disposes of Petition No. 377/TT/2020 in terms of the above discussions and findings.

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

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

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





2014-19  
Asset-I  
(True-Up)

Annexure-I  
(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
<b>Sub Station</b>	915.61	223.94	378.56	60.73	1578.84	5.28	54.26	70.16	81.76
<b>IT Equipment &amp; Software</b>	25.08	0.01	0.51	0.00	25.59	5.28	1.32	1.34	1.35
<b>Total</b>	<b>940.68</b>	<b>223.95</b>	<b>379.07</b>	<b>60.73</b>	<b>1604.43</b>		<b>55.58</b>	<b>71.50</b>	<b>83.11</b>
<b>Weighted Average Rate of Depreciation (in %)</b>							5.28	5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>							<b>1052.66</b>	<b>1354.17</b>	<b>1574.07</b>



2014-19  
Asset-II  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19	
Sub Station	553.66	226.74	177.63	60.25	1018.28	5.28	35.22	45.89	52.17	
<b>Total</b>	<b>553.66</b>	<b>226.74</b>	<b>177.63</b>	<b>60.25</b>	<b>1018.28</b>		<b>35.22</b>	<b>45.89</b>	<b>52.17</b>	
<b>Weighted Average Rate of Depreciation (in %)</b>								<b>5.28</b>	<b>5.28</b>	<b>5.28</b>
<b>Average Gross Block (₹ in lakh)</b>								<b>667.03</b>	<b>869.22</b>	<b>988.16</b>



2014-19  
Asset-III  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19	
Sub Station	546.27	276.00	196.70	56.12	1075.09	5.28	36.13	48.61	55.28	
<b>Total</b>	<b>546.27</b>	<b>276.00</b>	<b>196.70</b>	<b>56.12</b>	<b>1075.09</b>		<b>36.13</b>	<b>48.61</b>	<b>55.28</b>	
<b>Weighted Average Rate of Depreciation (in %)</b>								5.28	5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>								<b>684.27</b>	<b>920.62</b>	<b>1047.03</b>



2014-19  
Asset-IV  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19		Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations	
		2017-18	2018-19			2017-18	2018-19
<b>Sub Station</b>	1550.94	210.24	36.51	1797.69	5.28	87.44	93.95
<b>IT Equipment &amp; Software</b>	26.34	0.48	0.23	27.05	5.28	1.40	1.42
<b>Total</b>	<b>1577.28</b>	<b>210.72</b>	<b>36.75</b>	<b>1824.74</b>		<b>88.84</b>	<b>95.38</b>
<b>Weighted Average Rate of Depreciation (in %)</b>						5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>						<b>1682.64</b>	<b>1806.37</b>



2014-19  
Asset-V  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19	
Sub Station	542.51	199.10	237.28	57.05	1035.93	5.28	33.90	45.42	53.19	
IT Equipment and software	25.27	0.00	0.50	0.00	25.77	5.28	1.33	1.35	1.36	
<b>Total</b>	<b>567.78</b>	<b>199.10</b>	<b>237.78</b>	<b>57.05</b>	<b>1061.71</b>		<b>35.24</b>	<b>46.77</b>	<b>54.55</b>	
<b>Weighted Average Rate of Depreciation (in %)</b>								5.28	5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>								<b>667.33</b>	<b>885.77</b>	<b>1033.18</b>



2014-19  
Asset-VI  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Sub Station	584.57	61.30	266.09	52.55	964.51	5.28	32.48	41.13	49.54
<b>Total</b>	<b>584.57</b>	<b>61.30</b>	<b>266.09</b>	<b>52.55</b>	<b>964.51</b>		<b>32.48</b>	<b>41.13</b>	<b>49.54</b>
<b>Weighted Average Rate of Depreciation (in %)</b>							5.28	5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>							<b>615.22</b>	<b>778.92</b>	<b>938.24</b>



2014-19  
Asset-VII  
(True-Up)

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19			Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Sub Station	618.16	176.66	414.14	72.60	1281.56	5.28	37.30	52.90	65.75
<b>Total</b>	<b>618.16</b>	<b>176.66</b>	<b>414.14</b>	<b>72.60</b>	<b>1281.56</b>		<b>37.30</b>	<b>52.90</b>	<b>65.75</b>
<b>Weighted Average Rate of Depreciation (in %)</b>							5.28	5.28	5.28
<b>Average Gross Block (₹ in lakh)</b>							<b>706.49</b>	<b>1001.89</b>	<b>1245.26</b>



2019-24  
Combined Asset –  
Determination

Annexure-II

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24	Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20			2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub Station</b>	8764.21	207.81	8972.02	5.28	468.24	473.72	473.72	473.72	473.72
<b>IT Equipment &amp; Software</b>	78.42	0.00	78.42	15.00	11.76	11.76	11.76	11.76	11.76
<b>Total</b>	<b>8842.63</b>	<b>207.81</b>	<b>9050.44</b>		<b>480.00</b>	<b>485.49</b>	<b>485.49</b>	<b>485.49</b>	<b>485.49</b>
<b>Weighted Average Rate of Depreciation (in %)</b>					5.37	5.36	5.36	5.36	5.36
<b>Average Gross Block (₹ in lakh)</b>					<b>8946.53</b>	<b>9050.44</b>	<b>9050.44</b>	<b>9050.44</b>	<b>9050.44</b>

