

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 299/TT/2022**

**Coram:**

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

**Date of order : 22.05.2023**

**In the matter of:**

Approval under Sub-section (4) of Section 28 & 79(1)(d) of Electricity Act, 2003 and Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of fees and charges for 2014-19 tariff period and for determination of fees and charges for the 2019-24 tariff period in respect of Transmission Assets (5 Nos.) under “Fibre Optic Communication System (847.124 km) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave Links” in the Southern Region.

**And**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of Assets (3 Nos.) under “Fibre Optic Communication System (847.124 km) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave Links” in the Southern Region.

**And in the matter of:**

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

**.....Petitioner**

**Versus**

1. Karnataka Power Transmission Corporation Limited (KPTCL),  
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Limited (APTRANSCO),  
Vidyut Soudha, Hyderabad-500082.
3. Kerala State Electricity Board (KSEB),



Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695004.

4. Tamil Nadu Generation and Distribution Corporation Limited,  
(Formerly Tamilnadu Electricity Board-TNEB),  
NPKRR Maaligai, 800, Anna Salai, Chennai-600002.
5. Electricity Department,  
Government of Pondicherry, Pondicherry-605001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam, Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517501,  
Chittoor District, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana limited (TSSPDCL),  
Corporate Office, Mint Compound,  
Hyderabad-500063, Telangana.
9. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL),  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal-506004, Telangana.
10. Bangalore Electricity Supply Company Limited (BESCOM),  
Corporate Office, K.R.Circle,  
Bangalore-560001, Karnataka.
11. Gulbarga Electricity Supply Company Limited (GESCOM),  
Station Main Road, Gulbarga, Karnataka.
12. Hubli Electricity Supply Company Limited (HESCOM),  
Navanagar, PB Road, Hubli, Karnataka.
13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Limited (CESC),  
927,L J Avenue,  
Ground Floor, New Kantharaj Urs Road,  
Saraswathipuram Mysore-570009, Karnataka.
15. Electricity Department,  
Government of Goa,  
Vidyuti Bhawan, Panaji, Goa-403001.



16. Transmission Corporation of Telangana Limited,  
Vidhyut Sudha, Khairatabad,  
Hyderabad-500082.

17. Tamil Nadu Transmission Corporation,  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600002.

...Respondent(s)

**For Petitioner:** Shri S.S. Raju, PGCIL  
Shri Zafrul Hasan, PGCIL  
Shri Angaru Naresh Kumar, PGCIL  
Shri Ashish Alankar, PGCIL  
Ms. Ashita Chauhan, PGCIL  
Shri Pankaj Sharma, PGCIL

**For Respondent:** None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”) for truing up of fees and charges for the period from 1.4.2014 to 31.3.2019 and for determination of fees and charges for the 2019-24 tariff period in respect of **Asset-1:** 384.474 km of Fiber Optic Communication System in lieu of existing Microwave (State Sector), **Asset-2:** 31.80 km of Fiber Optic Communication System in lieu of existing Microwave (State Sector) **Asset-3:** 906.04 km of Fiber Optic Communication System in lieu of existing Microwave (Central Sector) **Asset-4:** 168.46 km of Fiber Optic Communication System in lieu of existing microwave (Central Sector) and **Asset-5:** 3.26 km of Fiber Optic Communication System in lieu of existing microwave (State Sector) under the scheme “Fibre Optic Communication System (847.124 km) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave Links” in the Southern Region and for truing up of transmission tariff for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff for 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff)



Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of **Asset-6:** 19.50 km Optic Fiber under TSTRANSCO Sector (Erstwhile APTRANSCO) (State Sector), **Asset-7:** 0.697 km Optic Fiber under KSEBL Sector (State Sector), **Asset-8:** 39.006 km Optic Fibre for Neelamangla-Yelahanka (Central Sector) under “Fibre Optic Communication System (847.124 km) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave Links” (hereinafter referred to as “transmission project”) in the Southern Region.

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

- “1) Approve the actual Additional Capitalisation expenditure incurred during 2014-19 tariff block.*
- 2) Approve the trued up Fee and Charges (Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5) & Transmission Tariff (Asset-6 to Asset-8) for 2014-19 block and Fee and Charges & transmission tariff for 2019-24 block for the assets covered under this petition.*
- 3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon’ble Commission as provided in Tariff Regulations, 2014 and Tariff Regulations, 2019*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*
- 5) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 7) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*
- 8) Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*



- 9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

### **Background**

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

- a. The Investment Approval (IA) for the transmission project was accorded by Board of Directors (BoD) of the Petitioner in its 248th meeting held on 8.2.2011 at an estimated cost of ₹4509 lakh including IDC of ₹264 lakh based on 3rd Quarter, 2010 price level (notified vide Memorandum No. C/CP/Fibre Optic in Southern Region dated 15.2.2011). The scheduled completion time of the project was 30 months from the date of IA i.e. by 8.8.2013.
- b. The broad scope of works is given as follows:
  - (i) Installation of OPGW Fibre Optic cable on the existing EHV transmission line of POWERGRID and constituents, the estimated length of such cable is approximately 1575 km.
  - (ii) Installation of approximately 120 km underground Fiber Optic to provide last mile connectivity to the control room where transmission line connectivity is not available. It is also envisaged that portion of the network which involves installation of the underground cable would be provided with radio based communication which operates in free band to back up the underground cable link of the network. Five number of radio links are proposed.
  - (iii) The terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology to be installed in the sub-stations of constituents and POWERGRID. The transmission project also involves installation of primary multiplexers at the new wide band nodes. To



monitor the network, "Network Management System" (NMS) would also be required.

- c. The Unified Load Despatch and Communication (ULDC) Scheme in the Southern Region was put under commercial operation w.e.f. 1.7.2002. The Commission vide order dated 27.1.2009 in Petition No.143/2005 and order dated 18.3.2011 in Petition No.36/2010 had approved the charges for the tariff period 2004-09 for the expenditure incurred up to 31.3.2009.
- d. The Petitioner had filed Miscellaneous Petition under sub-section (4) of Section 28 of Electricity Act, 2003 and Regulations 44 ("Power to Relax") of the CERC (Terms and Conditions of Tariff) Regulations, 2009 for fixation of Tariff norms for recovery of cost of the assets ("Communication System" and "SLDC System") to be retained/ to be installed by the Petitioner after formation of POSOCO for the tariff period 2009-14, vide Petition No. 68/2010. The Commission, vide paragraph 21 of the order dated 8.12.2011 in Petition No. 68/2010 granted liberty to the Petitioner to approach the Commission for determination of tariff for Fibre Optic Network being installed in lieu of microwave links for each of the regions separately.
- e. Accordingly, as per the directives of the Commission in order dated 8.12.2011 in Petition No. 68/2010 and considering the Judgment dated 11.11.2011 delivered by the Appellate Tribunal for Electricity (APTEL) in Appeal No. 21 of 2010 filed by Haryana Vidyut Prasaran Nigam Limited (HVPNL), the Petitioner filed Petition No. 60/TT/2012 under sub-section (4) of Section 28 of the Electricity Act, 2003 for Unified Load Despatch and Communication Scheme (POWERGRID portion i.e. Communication System portion and SLDC System retained by the Petitioner after formation of POSOCO) in the Southern Region for the 2009-14 period.
- f. Accordingly for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5, the Petitioner had filed Petition No. 181/TT/2013 and 487/TT/2014 for the determination of transmission tariff for the period 2009-14.
- g. The Commission vide order dated 22.2.2019 in Petition No. 169/TT/2018 trued-up Fees and Charges for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for



2009-14 tariff period and determined fees and charges for the period 2014-19 tariff block for Fibre Optic Communication System in lieu of Existing Unified Load Dispatch and Communication (ULDC) Microwave Links in Southern Region.

- h. The Commission vide order dated 29.7.2016 in Petition No. 255/TT/2015 approved the transmission tariff for Asset-6 and Asset-7 from COD to 31.3.2019. Further, the Commission vide order dated 13.2.2021 in Petition No. 143/TT/2019 approved the transmission tariff for Asset-8 from COD to 31.3.2019. Accordingly, the previous orders of the assets covered in the instant petition are as follows:

Sector	Actual COD	Petition No.
<b>Asset-1-</b> 384.474 km of Fiber Optic Communication System in lieu of existing Microwave (State Sector)	1.2.2013	Transmission tariff for 2014-19 was determined vide order dated 22.2.2019 in Petition No. 169/TT/2018
<b>Asset-2-</b> 31.80 km of Fiber Optic Communication System in lieu of existing Microwave (State Sector)	1.4.2013	
<b>Asset-3-</b> 906.04 km of Fiber Optic Communication System in lieu of existing Microwave (Central Sector)	1.4.2013	
<b>Asset-4-</b> 168.46 km of Fiber Optic Communication System in lieu of existing microwave (Central Sector)	1.1.2014	
<b>Asset-5-</b> 3.26 km of Fiber Optic Communication System in lieu of existing microwave (State Sector)	1.1.2014	
<b>Asset-6-</b> 19.50 km Optic Fiber under TSTRANSCO Sector (Erstwhile APTRANSCO) (State Sector)	1.6.2015	Transmission tariff for 2014-19 was determined vide order dated 29.7.2016 in Petition No. 255/TT/2015
<b>Asset-7-</b> 0.697 km Optic Fiber under KSEBL Sector (State Sector)	1.6.2015	
<b>Asset-8-</b> 39.006 km Optic Fibre for Neelamangla-Yelahanka (Central Sector)	28.3.2018	Transmission tariff for 2014-19 was determined vide order dated 13.2.2021 in Petition No. 143/TT/2019

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

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



general public in response to the aforesaid notice published in the newspapers by the Petitioner. None of the Respondents have filed any reply in the matter.

6. This order is issued considering the submissions made by the Petitioner vide affidavits dated 17.12.2021 and 16.8.2022.

7. The hearing in this matter was held on 1.12.2022 and the order was reserved.

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

**Truing Up of Annual Fees and Charges and Annual Fixed Charges for the 2014-19 Tariff Period**

9. As per the directions of the Commission vide order dated 8.12.2011 in Petition No. 68/2010, the scope of the 2014 Tariff Regulations has been widened to include the communication system used for inter-State transmission of electricity. However, as per proviso (iii) of Regulation 6(1) of the 2014 Tariff Regulations, the tariff of the existing communication system forming part of the transmission system is to be determined as per the methodology followed prior to 1.4.2014. The said proviso (iii) of Regulation 6(1) of the 2014 Tariff Regulations provides as follows:

*“(iii) the tariff of the existing communication system forming part of transmission system shall be as per the methodology followed by the Commission prior to 1.4.2014.”*

10. Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 were put into commercial operation before 1.4.2014. Accordingly, as provided in proviso (iii) of Regulation 6(1) of the 2014 Tariff Regulations, we continue to allow levelised tariff for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No. 68/2010. The transmission tariff for Asset-6,





Asset-7 and Asset-8 for the 2014-19 tariff period is determined as per 2014 Tariff Regulations.

11. The details of the annual fees and charges claimed by the Petitioner in respect of the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 and the details of the transmission charges claimed by the Petitioner in respect of the Asset-6, Asset-7, Asset-8 for the 2014-19 tariff period are as follows:

(₹ in lakh)

<b>Asset-1</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges	99.57	99.57	103.45	103.47	103.48
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.29	2.29	2.38	2.38	2.38
<b>Total</b>	<b>101.87</b>	<b>101.87</b>	<b>105.84</b>	<b>105.85</b>	<b>105.87</b>

(₹ in lakh)

<b>Asset-2</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges	75.17	75.26	78.18	78.19	78.21
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.73	1.73	1.80	1.80	1.80
<b>Total</b>	<b>76.90</b>	<b>76.99</b>	<b>79.99</b>	<b>80.00</b>	<b>80.01</b>

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges	238.57	239.46	233.13	211.19	216.19
O&M Expenses	17.18	2.17	4.62	28.30	26.28
Interest on Working Capital	6.44	5.63	5.62	6.42	6.43
<b>Total</b>	<b>262.19</b>	<b>247.26</b>	<b>243.37</b>	<b>245.91</b>	<b>248.90</b>

(₹ in lakh)

<b>Asset-4</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges	44.09	44.27	48.88	40.18	40.18
O&M Expenses	3.34	2.85	0.99	5.34	4.95
Interest on Working Capital	1.20	1.17	1.18	1.22	1.20
<b>Total</b>	<b>48.63</b>	<b>48.29</b>	<b>51.05</b>	<b>46.73</b>	<b>46.32</b>

(₹ in lakh)

<b>Asset-5</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charges	14.57	14.95	17.63	17.63	17.63
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.34	0.35	0.41	0.41	0.41



<b>Total</b>	<b>14.91</b>	<b>15.29</b>	<b>18.03</b>	<b>18.03</b>	<b>18.03</b>
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(₹ in lakh)

Particulars	Asset-6			
	2015-16 (pro-rata for 305 days)	2016-17	2017-18	2018-19
Depreciation	2.78	3.37	3.37	3.37
Interest on Loan	2.85	3.15	2.83	2.50
Return on Equity	2.59	3.15	3.15	3.15
O&M Expenses	0.00	0.00	0.00	0.00
Interest on Working Capital	0.19	0.22	0.22	0.21
<b>Total</b>	<b>8.41</b>	<b>9.89</b>	<b>9.57</b>	<b>9.23</b>

(₹ in lakh)

Particulars	Asset-7			
	2015-16 (pro-rata for 305 days)	2016-17	2017-18	2018-19
Depreciation	0.05	0.06	0.06	0.06
Interest on Loan	0.05	0.06	0.05	0.04
Return on Equity	0.04	0.06	0.06	0.06
O&M Expenses	0.00	0.00	0.00	0.00
Interest on Working Capital	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.14</b>	<b>0.18</b>	<b>0.17</b>	<b>0.16</b>

(₹ in lakh)

Particulars	Asset-8	
	2017-18 (pro-rata for 4 days)	2018-19
Depreciation	0.07	6.09
Interest on Loan	0.06	5.58
Return on Equity	0.06	5.70
O&M Expenses	0.24	1.86
Interest on Working Capital	0.00	0.47
<b>Total</b>	<b>0.43</b>	<b>19.70</b>

12. The details of the IWC claimed by the Petitioner for the transmission assets is as follows:



(₹ in lakh)

Asset-1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	16.97	16.97	17.63	17.63	17.64
<b>Total Working Capital</b>	<b>16.97</b>	<b>16.97</b>	<b>17.63</b>	<b>17.63</b>	<b>17.64</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>2.29</b>	<b>2.29</b>	<b>2.38</b>	<b>2.38</b>	<b>2.38</b>

(₹ in lakh)

Asset-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	12.82	12.84	13.34	13.34	13.34
<b>Total Working Capital</b>	<b>12.82</b>	<b>12.84</b>	<b>13.34</b>	<b>13.34</b>	<b>13.34</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>1.73</b>	<b>1.73</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>

(₹ in lakh)

Asset-3					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses	2.58	0.33	0.69	4.25	3.94
Working Capital for Maintenance Spares	1.43	0.18	0.39	2.36	2.19
Working Capital for Receivables	43.70	41.21	40.56	40.99	41.50
<b>Total Working Capital</b>	<b>47.71</b>	<b>41.72</b>	<b>41.64</b>	<b>47.60</b>	<b>47.63</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>6.44</b>	<b>5.63</b>	<b>5.62</b>	<b>6.42</b>	<b>6.43</b>

(₹ in lakh)

Asset-4					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses	0.50	0.43	0.15	0.80	0.74
Working Capital for Maintenance Spares	0.28	0.24	0.08	0.45	0.41
Working Capital for Receivables	8.11	8.05	8.51	7.80	7.73
<b>Total Working Capital</b>	<b>8.89</b>	<b>8.72</b>	<b>8.74</b>	<b>9.05</b>	<b>8.88</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>1.20</b>	<b>1.17</b>	<b>1.18</b>	<b>1.22</b>	<b>1.20</b>



(₹ in lakh)

Asset-5					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	2.48	2.54	3.00	3.00	3.00
<b>Total Working Capital</b>	<b>2.48</b>	<b>2.54</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>0.34</b>	<b>0.35</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>

(₹ in lakh)

Particulars	Asset-6			
	2015-16 (pro-rata for 305 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	1.68	1.65	1.60	1.54
<b>Total Working Capital</b>	<b>1.68</b>	<b>1.65</b>	<b>1.60</b>	<b>1.54</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.19</b>	<b>0.22</b>	<b>0.22</b>	<b>0.21</b>

(₹ in lakh)

Particulars	Asset-7			
	2015-16 (pro-rata for 305 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	0.03	0.03	0.03	0.03
<b>Total Working Capital</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



(₹ in lakh)

Particulars	Asset-8	
	2017-18 (pro-rata for 4 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.16
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.28
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	2.95	3.28
<b>Total Working Capital</b>	<b>2.95</b>	<b>3.72</b>
Rate of Interest (in %)	12.60	12.20
<b>Interest on Working Capital</b>	<b>0.00</b>	<b>0.47</b>

### Capital Cost

13. The capital cost of the transmission project has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The details of capital cost as on 1.4.2014 approved vide order dated 22.2.2019 in Petition No.169/TT/2018 with respect to Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5, vide order dated 29.7.2016 in Petition No. 255/TT/2015 with respect to Asset-6 and Asset-7 and vide order dated 13.2.2021 in Petition No. 143/TT/2019 with respect to Asset-8 are as follows:

(₹ in lakh)

Asset-1		
Particulars	Funding	State Portion
Gross Capital Cost as on 1.4.2014	Loan	501.82
	Equity	215.06
	<b>Total</b>	<b>716.88</b>
Recovered Gross capital cost as on 1.4.2014	Loan	16.50
	Equity	4.03
	<b>Total</b>	<b>20.53</b>
Opening Net Capital Cost	Loan	485.32
	Equity	211.03
	<b>Total</b>	<b>696.35</b>

(₹ in lakh)

Asset-2		
Particulars	Funding	State Portion
Gross Capital Cost as on 1.4.2014	Loan	378.41
	Equity	162.17
	<b>Total</b>	<b>540.58</b>



<b>Asset-2</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Recovered Gross capital cost as on 1.4.2014	Loan	10.20
	Equity	2.48
	<b>Total</b>	<b>12.68</b>
Opening Net Capital Cost	Loan	368.21
	Equity	159.69
	<b>Total</b>	<b>527.90</b>

(₹ in lakh)

<b>Asset-3</b>		
<b>Particulars</b>	<b>Funding</b>	<b>Central Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	1196.88
	Equity	512.95
	<b>Total</b>	<b>1709.83</b>
Recovered Gross capital cost as on 1.4.2014	Loan	31.05
	Equity	7.60
	<b>Total</b>	<b>38.65</b>
Opening Net Capital Cost	Loan	1165.83
	Equity	505.35
	<b>Total</b>	<b>1671.18</b>

(₹ in lakh)

<b>Asset-4</b>		
<b>Particulars</b>	<b>Funding</b>	<b>Central Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	225.71
	Equity	96.73
	<b>Total</b>	<b>322.44</b>
Recovered Gross capital cost as on 1.4.2014	Loan	1.48
	Equity	0.34
	<b>Total</b>	<b>1.82</b>
Opening Net Capital Cost	Loan	224.23
	Equity	96.39
	<b>Total</b>	<b>320.62</b>

(₹ in lakh)

<b>Asset-5</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	74.82
	Equity	32.06
	<b>Total</b>	<b>106.89</b>
Recovered Gross capital cost as on 1.4.2014	Loan	0.54
	Equity	0.12
	<b>Total</b>	<b>0.66</b>



Opening Net Capital Cost	Loan	74.29
	Equity	31.94
	<b>Total</b>	<b>106.23</b>

(₹ in lakh)

Assets	FR apportioned approved cost	Admitted capital cost as on 1.4.2014
<b>Asset-6</b>	77.82	52.04
<b>Asset-7</b>	10.18	0.78
<b>Asset-8</b>	103.00	94.82

14. The capital cost considered by the Commission vide order dated 22.2.2019 in Petition No. 169/TT/2018 with respect to Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 has been considered as trued-up opening capital cost as on 1.4.2014. The Petitioner has also submitted Auditor's Certificate dated 6.9.2016 and 29.12.2017 in respect of the capital cost including additional capitalization of Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 and the same has been allowed in this order. The trued-up opening capital cost as on 1.4.2014 for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 are as follows:

(₹ in lakh)

Asset-1		
Particulars	Funding	Central Portion
Gross Capital Cost as on 1.4.2014	Loan	501.82
	Equity	215.06
	<b>Total</b>	<b>716.88</b>
Recovered Gross capital cost as on 1.4.2014	Loan	16.50
	Equity	4.03
	<b>Total</b>	<b>20.53</b>
Opening Net Capital Cost	Loan	485.32
	Equity	211.03
	<b>Total</b>	<b>696.35</b>

(₹ in lakh)

Asset-2		
Particulars	Funding	State Portion
Gross Capital Cost as on 1.4.2014	Loan	378.41
	Equity	162.17
	<b>Total</b>	<b>540.58</b>
Recovered Gross capital cost as on	Loan	10.20



<b>Asset-2</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
1.4.2014	Equity	2.48
	<b>Total</b>	<b>12.68</b>
	Loan	368.21
Opening Net Capital Cost	Equity	159.69
	<b>Total</b>	<b>527.90</b>

(₹ in lakh)

<b>Asset-3</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	1196.88
	Equity	512.95
	<b>Total</b>	<b>1709.83</b>
Recovered Gross capital cost as on 1.4.2014	Loan	31.05
	Equity	7.60
	<b>Total</b>	<b>38.65</b>
Opening Net Capital Cost	Loan	1165.83
	Equity	505.35
	<b>Total</b>	<b>1671.18</b>

(₹ in lakh)

<b>Asset-4</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	225.71
	Equity	96.73
	<b>Total</b>	<b>322.44</b>
Recovered Gross capital cost as on 1.4.2014	Loan	1.48
	Equity	0.34
	<b>Total</b>	<b>1.82</b>
Opening Net Capital Cost	Loan	224.23
	Equity	96.39
	<b>Total</b>	<b>320.62</b>

(₹ in lakh)

<b>Asset-5</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2014	Loan	74.82
	Equity	32.06
	<b>Total</b>	<b>106.88</b>
Recovered Gross capital cost as on 1.4.2014	Loan	0.54
	Equity	0.12
	<b>Total</b>	<b>0.66</b>
Opening Net Capital Cost	Loan	74.28
	Equity	32.06
	<b>Total</b>	<b>106.88</b>





15. The Petitioner vide Auditor's Certificate dated 27.3.2019 and 12.6.2018 has submitted capital cost as on COD and additional capitalization thereafter in respect of Asset-6, Asset-7 and Asset-8 are as follows:

(₹ in lakh)

Assets	FR apportioned approved cost	Actual capital cost as on 31.3.2014	Actual ACE				Total cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-6	77.82	57.96	1.16	0.00	0.00	0.00	59.12
Asset-7	10.18	0.98	0.19	0.00	0.00	0.00	1.17
Asset-8	103.00	97.55				0.00	97.55

### Time Over-run

16. There is no time over-run in case of Asset-1, Asset-2 and Asset-3. However, there is time over-run in case of Asset-4, Asset-5, Asset-6, Asset-7 and Asset-8.

17. As per IA dated 8.2.2011, the transmission project was scheduled to be commissioned within 30 months from the date of IA i.e. 8.8.2013. However, the transmission assets under the scope of the transmission project were put into commercial operation as follows:

Assets	SCOD	Actual COD	Time over-run	Time over-run condoned/not condoned
Asset-1	8.8.2013	1.2.2013	NIL	-
Asset-2		1.4.2013	NIL	-
Asset-3		1.4.2013	NIL	-
Asset-4		1.1.2014	146 days	Not Condoned
Asset-5		1.1.2014	146 days	Not Condoned
Asset-6		1.6.2015	662 days	Not Condoned
Asset-7		1.6.2015	662 days	Not Condoned
Asset-8		28.3.2018	1693 days	Condoned

18. Asset-4 and Asset-5 were put into commercial operation in the 2009-14 tariff period. There was a time over-run of 146 days in respect of Asset-4 and Asset-5. The time over-run was not condoned in order dated 31.5.2016 in Petition No. 487/TT/2014 and the capital cost as on COD for Asset-4 and Asset-5 was approved.



19. Asset-6, Asset-7 and Asset-8 were put into commercial operation during 2014-19 period, there is a time over-run of 662 days, 662 days and 1693 days respectively. The time over-run in case of Asset-6 and Asset-7 was not condoned in order dated 29.7.2016 in Petition No. 255/TT/2015 . The Commission has condoned the time over-run of 1693 days in respect of Asset-8 vide order dated 13.2.2021 in Petition No. 143/TT/2019.

### **Cost over-run**

20. The Petitioner has submitted that the total apportioned approved cost as per FR is ₹4211.18 lakh and the estimated completion cost is ₹3454.44 lakh. Thus, there is no cost over-run in case of the transmission assets.

### **Interest During Construction (IDC) / Incidental Expenditure During Construction (IEDC)**

21. The Petitioner has claimed IDC for the following transmission assets covered in the instant petition and has submitted the statement showing IDC claim, discharge of IDC liability as on COD as follows:

(₹ in lakh)						
Assets	IDC as per Auditor Certificate	IDC discharged upto COD	IDC discharged during 2015-16	IDC discharged during 2016-17	IDC discharged during 2017-18	IDC discharged during 2018-19
Asset-6	4.94	3.91	1.00	0.03	0.00	0.00
Asset-7	0.10	0.06	0.02	0.02	0.00	0.00
Asset-8	18.27	15.53			0.00	2.74

22. The Petitioner has submitted IDC computation statement which contains name of the loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in IDC statement. Further, loan amount as on COD has been mentioned in Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-



9C. IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per Auditor Certificate	IDC Discharged upto COD	IDC disallowed due to time over-run not condoned	IDC discharged during 2015-16	IDC discharged during 2016-17	IDC discharged during 2017-18	IDC discharged during 2018-19
Asset-6	4.94	0.00	4.94	0.00	0.00	0.00	0.00
Asset-7	0.10	0.00	0.10	0.00	0.00	0.00	0.00
Asset-8	18.27	15.53	0.07			0.00	2.67

23. The Petitioner has claimed IEDC for following transmission assets covered in the instant petition as given below:

(₹ in lakh)

Assets	IEDC as per Auditor Certificate
Asset-6	1.63
Asset-7	0.10
Asset-8	4.51

24. The Petitioner vide order dated 29.7.2016 in Petition No. 255/TT/2015, had claimed IEDC of ₹1.63 lakh and ₹0.10 lakh in case of Asset-6 and Asset-7. Vide said petition, the Petitioner had submitted the details of actual discharge of IEDC as follows:

Assets	IEDC upto SCOD (14.8.2013)	IEDC from SCOD (14.8.2013) to actual COD (1.6.2015)	Total IEDC claimed
Asset-6	0.65	0.98	1.63
Asset-7	0.00	0.10	0.10

25. In view of the above, the IEDC of ₹0.98 lakh and ₹0.10 lakh for Asset-6 and Asset-7 respectively are shown under the period of time over-run which has not been condoned (i.e. the period from SCOD to actual COD). Thus, the IEDC amounting ₹0.98 lakh and ₹0.10 lakh has been disallowed from the capital cost as on COD of Asset -6 and Asset-7 respectively.



26. We have considered the submissions of the Petitioner. The IEDC claimed and considered as on the COD and IEDC disallowed for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IEDC as per Auditor Certificate	IEDC Disallowed due to time over-run not condoned	IEDC Allowed
<b>Asset-6</b>	1.63	0.98	0.65
<b>Asset-7</b>	0.10	0.10	0.00
<b>Asset-8</b>	4.51	0.00	4.51

**Initial Spares**

27. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:

“(d) Transmission System

(i) Transmission line	-	1.00%
(ii) Transmission Sub-station (Green Field)	-	4.00%
(iii) Transmission Sub-station (Brown Field)	-	6.00%
(iv) Series Compensation devices and HVDC Station	-	4.00
(v) Gas Insulated Sub-station (GIS)	-	5.00%
(vi) Communication System	-	3.5%”

28. The Initial Spares claimed by the Petitioner are as follows:

Assets	Particulars	Plant and Machinery Cost (excluding IDC/IEDC, Land cost and cost of civil works)	Initial Spares Claimed	Initial Spares as (in %) of Capital Cost	Ceiling as per Regulation (in %)
<b>Asset-6</b>	Fibre Optic Communication System	52.04	0.01	0.0002%	3.5%
<b>Asset-7</b>	Fibre Optic Communication System	0.78	0.00	0.00%	3.5%
<b>Asset-8</b>	Fibre Optic Communication System	94.81	0.00	0.00%	3.5%

29. We have considered the submissions of Petitioner. The Initial Spares in respect of the transmission assets are allowed as per respective percentage of the plant and



machinery cost as on the cut-off date on individual basis. Initial Spares allowed in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Particulars	Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) upto cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per the 2014 Tariff Regulations	Initial Spares allowable (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	$D = (A - B) * C / (100 - C)$	E - B	
Asset-6	Fibre Optic Communication System	52.04	0.01	3.5%	1.89	NIL	0.01
Asset-7	Fibre Optic Communication System	0.78	0.00	3.5%	0.03	NIL	0.00
Asset-8	Fibre Optic Communication System	94.81	0.00	3.5%	3.44	NIL	0.00

30. The details of the capital cost now approved as on the COD after adjustment of IDC, IEDC and Initial Spares, if any, are as follows:

(₹ in lakh)

Assetd	Capital cost claimed as on COD/2014 (Auditor Certificate) (A)	IDC disallowed (B)	Excess initial spares disallowed (C)	IEDC disallowed(D)	Undischarged IDC as on COD (E)	Capital cost approved as on COD (F=A-B-C-D-E)
Asset-6	57.96	4.94	0.00	0.98	0.00	52.04
Asset-7	0.98	0.10	0.00	0.10	0.00	0.78
Asset-8	97.55	0.07	0.00	0.00	2.67	94.81

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

31. The Commission vide order dated 22.2.2019 in Petition No. 169/TT/2018 with respect to Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5, vide order dated 29.7.2016 in Petition No. 255/TT/2015 with respect to Asset-6 and Asset-7 and vide order dated



13.2.2021 in Petition No. 143/TT/2019 with respect to Asset-8 allowed the following ACE for the 2014-19 tariff period:

(₹ in lakh)

Assets	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	0.10	26.23	0.00	0.00	0.00
Asset-2	0.64	19.89	0.00	0.00	0.00
Asset-3	6.07	36.36	-137.76	31.84	0.00
Asset-4	1.31	32.33	-57.35	0.00	0.00
Asset-5	2.72	18.80	0.00	0.00	0.00
Asset-6		3.53	0.00	0.00	0.00
Asset-7		2.56	0.00	0.00	0.00
Asset-8					2.66

32. The Petitioner has claimed the following ACE in the instant petition based on the Auditor's Certificates dated 6.9.2016, 23.4.2015, 29.12.2017 and 27.3.2019 :

(₹ in lakh)

Assets	Actual ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	0.10	26.23	0.00	0.00	0.00
Asset-2	0.64	19.89	0.00	0.00	0.00
Asset-3	6.07	-38.71	-137.76	31.84	0.00
Asset-4	1.31	32.33	-57.35	0.00	0.00
Asset-5	2.72	18.80	0.00	0.00	0.00
Asset-6		1.16	0.00	0.00	0.00
Asset-7		0.19	0.00	0.00	0.00
Asset-8				0.00	0.00

33. The ACE claimed during 2014-15 and 2015-16 in case of Asset-1, Asset-2, Asset-3, Asset-5, Asset-6 and Asset-7 and ACE during 2014-15, 2015-16 and 2016-17 in case of Asset-4 are before the cut-off date and is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations. The ACE claimed during 2016-17 and 2017-18 in case of Asset-3 is after cut-off date and is covered under clause 14(3)(v) of the 2014 Tariff Regulations. Accordingly, ACE allowed for 2014-19 tariff period is as follows:



(₹ in lakh)

Assets	Actual ACE (including IDC discharge)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	0.10	26.23	0.00	0.00	0.00
Asset-2	0.64	19.89	0.00	0.00	0.00
Asset-3	6.07	-38.71	-137.76	31.84	0.00
Asset-4	1.31	32.33	-57.35	0.00	0.00
Asset-5	2.72	18.80	0.00	0.00	0.00

(₹ in lakh)

Asset-6					
Particulars	Regulation	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	1.16	0.00	0.00	0.00
Accrual IDC	14(1)(i)	0.00	0.00	0.00	0.00
<b>Total ACE</b>		<b>1.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

Asset-7					
Particulars	Regulation	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	0.19	0.00	0.00	0.00
Accrual IDC	14(1)(i)	0.00	0.00	0.00	0.00
<b>Total ACE</b>		<b>0.19</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

Asset-8			
Particulars	Regulation	ACE claimed	
		2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	0.00	0.00
Accrual IDC	14(1)(i)	0.00	2.67
<b>Total ACE</b>		<b>0.00</b>	<b>2.67</b>

34. Accordingly, the capital cost considered for truing up of transmission tariff for the transmission assets for the 2014-19 tariff period are as follows:



(₹ in lakh)

Assets	Capital Cost allowed as on COD	ACE allowed					Total Capital Cost allowed as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	716.88	0.10	26.23	0.00	0.00	0.00	743.21
Asset-2	540.58	0.64	19.89	0.00	0.00	0.00	561.11
Asset-3	1709.83	6.07	-38.71	-137.76	31.84	0.00	1571.27
Asset-4	322.44	1.31	32.33	-57.35	0.00	0.00	298.73
Asset-5	106.88	2.72	18.80	0.00	0.00	0.00	128.41
Asset-6	52.04		1.16	0.00	0.00	0.00	53.20
Asset-7	0.78		0.19	0.00	0.00	0.00	0.97
Asset-8	94.81				0.00	2.67	97.48

### Debt-Equity Ratio

35. The following debt-equity ratio has been considered for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 as on 1.4.2014:

(₹ in lakh)

Asset-1		
Particulars	Capital	Central Portion
Capital Cost as on 1.4.2014	Loan	501.82
	Equity	215.06
	<b>Total</b>	<b>716.88</b>
Debt-Equity Ratio	Loan	70.00
	Equity	30.00
	<b>Total</b>	<b>100.00</b>

(₹ in lakh)

Asset-2		
Particulars	Capital	Central Portion
Capital Cost as on 1.4.2014	Loan	378.41
	Equity	162.17
	<b>Total</b>	<b>540.58</b>
Debt-Equity Ratio	Loan	70.00
	Equity	30.00
	<b>Total</b>	<b>100.00</b>

(₹ in lakh)

Asset-3		
Particulars	Capital	Central Portion
Capital Cost as on 1.4.2014	Loan	1196.88
	Equity	512.95
	<b>Total</b>	<b>1709.83</b>





Debt-Equity Ratio	Loan	70.00
	Equity	30.00
	<b>Total</b>	<b>100.00</b>

(₹ in lakh)

Asset-4		
Particulars	Capital	Central Portion
Capital Cost as on 1.4.2014	Loan	225.71
	Equity	96.73
	<b>Total</b>	<b>322.44</b>
Debt-Equity Ratio	Loan	70.00
	Equity	30.00
	<b>Total</b>	<b>100.00</b>

(₹ in lakh)

Asset-5		
Particulars	Capital	Central Portion
Capital Cost as on 1.4.2014	Loan	74.82
	Equity	32.06
	<b>Total</b>	<b>106.88</b>
Debt-Equity Ratio	Loan	70.00
	Equity	30.00
	<b>Total</b>	<b>100.00</b>

36. The debt-equity ratio for Asset-6, Asset-7 and Asset-8 has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 is considered. Accordingly, the debt-equity ratio for the period ending on 31.3.2014, considered for the purpose of determination of tariff of the 2014-19 tariff period has been considered for the purpose of truing up of the tariff of the transmission assets for the 2014-19 tariff period as follows:

Asset-6						
Funding	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	36.43	70.00	0.81	70.00	37.24	70.00
Equity	15.61	30.00	0.35	30.00	15.96	30.00



<b>Total</b>	<b>52.04</b>	<b>100.00</b>	<b>1.16</b>	<b>100.00</b>	<b>53.20</b>	<b>100.00</b>
<b>Asset-7</b>						
<b>Funding</b>	<b>Capital Cost as on COD</b>	<b>(in %)</b>	<b>ACE 2014-19</b>	<b>(in %)</b>	<b>Capital Cost as on 31.3.2019</b>	<b>(in %)</b>
	<b>(₹ in lakh)</b>		<b>(₹ in lakh)</b>		<b>(₹ in lakh)</b>	
Debt	0.55	70.00	0.13	70.00	0.68	70.00
Equity	0.23	30.00	0.06	30.00	0.29	30.00
<b>Total</b>	<b>0.78</b>	<b>100.00</b>	<b>0.19</b>	<b>100.00</b>	<b>0.97</b>	<b>100.00</b>
<b>Asset-8</b>						
<b>Funding</b>	<b>Capital Cost as on COD</b>	<b>(in %)</b>	<b>ACE 2014-19</b>	<b>(in %)</b>	<b>Capital Cost as on 31.3.2019</b>	<b>(in %)</b>
	<b>(₹ in lakh)</b>		<b>(₹ in lakh)</b>		<b>(₹ in lakh)</b>	
Debt	66.37	70.00	1.87	70.00	68.24	70.00
Equity	28.44	30.00	0.80	30.00	29.24	30.00
<b>Total</b>	<b>94.81</b>	<b>100.00</b>	<b>2.67</b>	<b>100.00</b>	<b>97.48</b>	<b>100.00</b>

### **Rates for recovery of Capital**

#### **Capital recovery for loan**

37. The Petitioner has neither submitted the details of loans applied nor the calculations of the weighted average rate of interest. Hence, in the absence of the required information, we have not been able to calculate the year-wise weighted average rate of interest for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5. However, the claimed weighted average rate of interest has been applied for calculating the capital recovery factor for loan.

#### **Capital Recovery for Equity**

38. The methodology as used for true-up calculation for the 2009-14 period, allowed vide order dated 15.7.2016 in Petition No. 19/TT/2015, has been considered for Capital Recovery of Equity. Hence, post-tax RoE of 15.50%, without grossing up has been applied for calculating the capital recovery factor for equity.



### Monthly Capital Recovery Charges

39. The monthly Capital Recovery Factors for loan has been worked out using the following relationship:

$$\text{Recovery Factor} = \frac{i * (1+i)^n}{(1+i)^n - 1} \quad n=\text{period and } i=\text{rate}$$

40. The COD of the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 in the ULDC scheme was 1.2.2013, 1.4.2013, 1.4.2013, 1.1.2014 and 1.1.2014 respectively. The Commission had allowed the recovery of deemed loan, corresponding to 2009-14 tariff period and subsequent ACE, based on the weighted average rate of interest using capital recovery factor for loan for 15 years.

41. Accordingly, the monthly recovery factors for loan for the transmission assets are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-1- State Portion</b>	0.010697	0.011113	0.011611	0.012213	0.012947

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-2- State Portion</b>	0.010645	0.011049	0.011532	0.012112	0.012820

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-3- Central Portion</b>	0.010685	0.011089	0.011569	0.012148	0.012853

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-4- Central Portion</b>	0.010106	0.010469	0.010896	0.011404	0.012015

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-5- State Portion</b>	0.010106	0.010469	0.010896	0.011404	0.012015

42. Similarly, the monthly recovery factors for equity for the transmission assets are as follows :



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-1- State Portion</b>	0.014658	0.014994	0.015407	0.015918	0.016559

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-2- State Portion</b>	0.014608	0.014933	0.015332	0.015825	0.016441

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-3- Central Portion</b>	0.014608	0.014933	0.015332	0.015825	0.016441

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-4- Central Portion</b>	0.014402	0.014683	0.015026	0.015445	0.015966

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-5- State Portion</b>	0.014402	0.014683	0.015026	0.015445	0.015966

43. Based on the above recovery factors, monthly capital recovery charges for the transmission assets are worked out as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-1- State Portion</b>	5.19	5.19	5.41	5.41	5.41

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-2- State Portion</b>	3.92	3.92	4.09	4.09	4.09

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-3- Central Portion</b>	12.46	12.50	12.19	11.02	11.31

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-4- Central Portion</b>	2.27	2.28	2.52	2.06	2.06

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-5- State Portion</b>	0.75	0.77	0.91	0.91	0.91

44. Similarly, the monthly capital recovery charges for equity for the transmission assets are worked out as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-1- State Portion</b>	3.09	3.09	3.21	3.21	3.21

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-2- State Portion</b>	2.33	2.34	2.43	2.43	2.43

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-3- Central Portion</b>	7.38	7.41	7.23	6.58	6.73

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-4- Central Portion</b>	1.39	1.39	1.54	1.27	1.27

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset-5- State Portion</b>	0.46	0.47	0.56	0.56	0.56

45. Accordingly, the following recovery of capital during 2014-19 period has been worked out:

(₹ in lakh)

Asset-1		
Particulars	Capital	State Portion
Capital Cost Recovered during 2014-19	Loan	113.13
	Equity	33.89
	<b>Total</b>	<b>147.02</b>

(₹ in lakh)

Asset-2		
Particulars	Capital	State Portion
Capital Cost Recovered during 2014-19	Loan	84.02
	Equity	24.93
	<b>Total</b>	<b>108.96</b>

(₹ in lakh)

Asset-3		
Particulars	Capital	Central Portion
Capital Cost Recovered during 2014-19	Loan	244.78
	Equity	72.79
	<b>Total</b>	<b>317.57</b>



(₹ in lakh)

Asset-4		
Particulars	Capital	Central Portion
Capital Cost Recovered during 2014-19	Loan	45.85
	Equity	12.62
	<b>Total</b>	<b>58.47</b>

(₹ in lakh)

Asset-5		
Particulars	Capital	State Portion
Capital Cost Recovered during 2014-19	Loan	17.72
	Equity	4.90
	<b>Total</b>	<b>22.62</b>

### Depreciation

46. The depreciation for Asset-6, Asset-7, Asset-8 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). WAROD at Annexure-XI, Annexure-XII and Annexure-XIII has been worked out after considering the depreciation rates of transmission assets as specified in the 2014 Tariff Regulations and depreciation allowed during the 2014-19 tariff period is as follows:

(₹ in lakh)

Asset-6					
	Particulars	2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	52.04	53.20	53.20	53.20
B	Additional Capitalisation	1.16	0.00	0.00	0.00
C	Closing Gross Block (A+B)	53.20	53.20	53.20	53.20
D	Average Gross Block (A+C)/2	52.62	53.20	53.20	53.20
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33	6.33	6.33
F	Aggregate Depreciable Value	15	15	14	13
G	Balance useful life of the asset (Year)	0	0	1	2
H	Elapsed life (Year)	47.36	47.88	47.88	47.88
I	<b>Depreciation during the year</b>	<b>2.78</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>
J	Aggregate Cumulative depreciation	2.78	6.14	9.51	12.88
K	Remaining Depreciable Value (F-J)	44.58	41.74	38.37	35.00



(₹ in lakh)

Asset-7					
	Particulars	2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	0.78	0.97	0.97	0.97
B	Additional Capitalisation	0.19	0.00	0.00	0.00
C	Closing Gross Block (A+B)	0.97	0.97	0.97	0.97
D	Average Gross Block (A+C)/2	0.88	0.97	0.97	0.97
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33	6.33	6.33
F	Aggregate Depreciable Value	15	15	14	13
G	Balance useful life of the asset (Year)	0	0	1	2
H	Elapsed life (Year)	0.79	0.87	0.87	0.87
I	<b>Depreciation during the year</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>
J	Aggregate Cumulative depreciation	0.05	0.11	0.17	0.23
K	Remaining Depreciable Value (F-J)	0.74	0.77	0.70	0.64

(₹ in lakh)

Asset-8			
	Particulars	2017-18 (Pro-rata for 4 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	94.81	94.81
B	Additional Capitalisation	0.00	2.67
C	Closing Gross Block (A+B)	94.81	97.48
D	Average Gross Block (A+C)/2	94.81	96.15
E	Weighted Average Rate of Depreciation (%)	6.33	6.33
F	Aggregate Depreciable Value	85.33	86.53
G	Balance useful life of the asset (Year)	15	15
H	Elapsed life (Year)	0	0
I	<b>Depreciation during the year</b>	<b>0.07</b>	<b>6.09</b>
J	Aggregate Cumulative depreciation	0.07	6.15
K	Remaining Depreciable Value (F-J)	85.26	80.38

**Interest on Loan (IoL)**

47. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest.

48. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed for Asset-6, Asset-7, Asset-8 is as follows:



(₹ in lakh)

	Particulars	Asset-6			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	36.43	37.24	37.24	37.24
B	Cumulative Repayments upto Previous Year	0.00	2.78	6.14	9.51
C	Net Loan-Opening (A-B)	36.43	34.46	31.10	27.73
D	Additions	0.81	0.00	0.00	0.00
E	Repayment during the year	2.78	3.37	3.37	3.37
F	Net Loan-Closing (C+D-E)	34.46	31.10	27.73	24.36
G	Average Loan (C+F)/2	35.45	32.78	29.41	26.05
H	Weighted Average Rate of Interest on Loan (in %)	9.6335	9.6174	9.6160	9.6128
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>2.85</b>	<b>3.15</b>	<b>2.83</b>	<b>2.50</b>

(₹ in lakh)

	Particulars	Asset-7			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	0.55	0.68	0.68	0.68
B	Cumulative Repayments upto Previous Year	0.00	0.05	0.11	0.17
C	Net Loan-Opening (A-B)	0.55	0.63	0.57	0.51
D	Additions	0.13	0.00	0.00	0.00
E	Repayment during the year	0.05	0.06	0.06	0.06
F	Net Loan-Closing (C+D-E)	0.63	0.57	0.51	0.45
G	Average Loan (C+F)/2	0.59	0.60	0.54	0.48
H	Weighted Average Rate of Interest on Loan (in %)	9.4915	9.3632	9.3523	9.3277
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>0.05</b>	<b>0.06</b>	<b>0.05</b>	<b>0.04</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata for 4 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	66.37	66.37
B	Cumulative Repayments upto Previous Year	0.00	0.07
C	Net Loan-Opening (A-B)	66.37	66.30
D	Additions	0.00	1.87
E	Repayment during the year	0.07	6.09
F	Net Loan-Closing (C+D-E)	66.30	62.08
G	Average Loan (C+F)/2	66.33	64.19
H	Weighted Average Rate of Interest on Loan (in %)	8.7133	8.6829
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>0.06</b>	<b>5.57</b>





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

49. The Petitioner has claimed RoE for the transmission assets in accordance with Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

<b>Year</b>	<b>Claimed effective tax rate (in %)</b>	<b>Grossed up ROE [(Base Rate)/(1-t)] (in %)</b>
2014-15	21.018	19.625
2015-16	21.382	19.715
2016-17	21.338	19.705
2017-18	21.337	19.705
2018-19	21.549	19.758

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

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess) (in %)</b>	<b>Effective tax (in %)</b>
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

51. The same MAT rates as considered in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations, which is as follows:

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess) (in %)</b>	<b>Effective tax (in %)</b>	<b>Grossed-up ROE [(Base Rate)/(1-t)] (in %)</b>
2014-15	20.961	20.961	19.611
2015-16	21.342	21.342	19.705
2016-17	21.342	21.342	19.705
2017-18	21.342	21.342	19.705
2018-19	21.549	21.549	19.758



52. Trued-up RoE is allowed on the basis of the MAT rate applicable in the respective years for the 2014-19 tariff period and it is as follows:

(₹ in lakh)

	Particulars	Asset-6			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	15.61	15.96	15.96	15.96
B	Additions	0.35	0.00	0.00	0.00
C	Closing Equity (A+B)	15.96	15.96	15.96	15.96
D	Average Equity (A+C)/2	15.79	15.96	15.96	15.96
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>2.59</b>	<b>3.14</b>	<b>3.14</b>	<b>3.15</b>

(₹ in lakh)

	Particulars	Asset-7			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	0.23	0.29	0.29	0.29
B	Additions	0.06	0.00	0.00	0.00
C	Closing Equity (A+B)	0.29	0.29	0.29	0.29
D	Average Equity (A+C)/2	0.26	0.29	0.29	0.29
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>0.04</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata for 4 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	28.44	28.44
B	Additions	0.00	0.80
C	Closing Equity (A+B)	28.44	29.24
D	Average Equity (A+C)/2	28.44	28.84
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758



	Particulars	Asset-8	
		2017-18 (Pro-rata for 4 days)	2018-19
H	Return on Equity (D*G)	0.06	5.70

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

53. The Petitioner has claimed O&M Expenses for Central Sector portion of Asset-3, Asset-4 and Asset-8 and no O&M Expenses are claimed for Asset-1, Asset-2, Asset-5, Asset-6 and Asset-7 which are State Sector assets.

54. The details of O&M Expenses allowed by the Commission for Asset-3 and Asset-4 vide order dated 22.2.2019 in Petition No. 169/TT/2018 and for Asset-8 vide order dated 13.2.2021 in Petition No. 143/TT/2019 are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-3	13.74	1.78	2.42	2.50	2.58
Asset-4	2.67	2.34	0.56	0.58	0.60
Asset-8				0.07	1.36

55. The O&M Expenses claimed in instant petition as per actuals are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-3	17.18	2.17	4.62	28.30	26.28
Asset-4	3.34	2.85	0.99	5.34	4.95
Asset-8				0.24	1.86

56. The applicable norms for the communication assets as per the 2014 Tariff Regulations are as follows:

*“29(4)(c) Transmission System (c) The operation and maintenance expenses of communication system forming part of inter-state transmission system shall be derived on the basis of the actual O&M expenses for the period of 2008-09 to 2012-13 based on audited accounts excluding abnormal variations if any after prudence check by the Commission. The normalized O&M expenses after prudence check, for the years 2008-09 to 2012-13 shall be escalated at the rate of 3.02% for computing base year expenses for FY 2012-13, 2013- 14 and at the rate of 3.32% for escalation from 2014-15 onwards.”*



57. We have considered the submissions of the Petitioner. The Petitioner has claimed expenditure towards self-insurance, petition filing charges and advertisement and publicity charges as expenses under O&M Expenses.

58. As regards the self-insurance, the Commission vide order dated 29.7.2016 in Petition No. 275/TT/2015 considered the Petitioner's claim towards self-insurance and disallowed the same. The relevant portion of the said order is as follows:

*"45. The petitioner was directed vide ROP dated 22.3.2016, to submit the actual O&M Expenses year wise along with details. In response, petitioner vide affidavit dated 29.6.2016 has submitted that actual O&M Expenses for 2014-15 towards Asset-I and II are ₹5.75 lakh and ₹4.46 lakh respectively. Break up of O&M Expenses has also been provided vide Auditor's Certificate dated 15.6.2016. The petitioner has claimed self-insurance reserve as expenses under O&M Expenses which is not allowable as expenses....."*

59. As regards the petition filing charges and advertisement and publicity charges, the Commission in order dated 26.4.2022 in Petition No. 272/TT/2020 considered the Petitioner's claim towards petition filing charges and advertisement and publicity charges and disallowed the same. The relevant portion of the said order is as follows:

*"31. Further, the Petitioner has also claimed the petition filing charges as part of the O&M Expenses, which has to be claimed directly from the beneficiaries, therefore, the same is not allowable under O&M Expenses and accordingly has been disallowed.  
32. The Petitioner has also claimed the Advertisement & Publicity charges as part of the O&M Expenses, which is not allowable as O&M Expenses and therefore has been disallowed."*

60. In line with above orders, the expenditure is not allowable for self-insurance, petition filing charges and advertisement and publicity charges as expenses under O&M Expenses. Therefore, the proportionate share self-insurance reserve, entertainment, advertisement and publicity, brokerage and commission and out of pocket expenses pertaining to communication assets covered in the instant petition have been disallowed.



61. Accordingly, the O&M Expenses are allowed for the 2014-19 tariff period for Asset-3, Asset-4 and Asset-8 as per the Auditor's Certificate after deducting the disallowances are as follows:

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M Expenses claimed by the Petitioner	17.18	2.17	4.62	28.30	26.28
Less: Self Insurance	1.41	0.18	0.38	2.33	2.16
Less: Advertisement	0.36	0.04	0.10	0.59	0.54
Less: Cerc Petition & Other Charges	0.01	0.00	0.00	0.02	0.02
<b>O&amp;M Expenses Allowed</b>	<b>15.39</b>	<b>1.94</b>	<b>4.14</b>	<b>25.36</b>	<b>23.55</b>
<b>Asset-4</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M Expenses claimed by the Petitioner	3.34	2.85	0.99	5.34	4.95
Less: Self Insurance	0.28	0.23	0.08	0.44	0.41
Less: Advertisement	0.07	0.06	0.02	0.11	0.10
Less: Cerc Petition & Other Charges	0.00	0.00	0.00	0.00	0.00
<b>O&amp;M Expenses Allowed</b>	<b>2.99</b>	<b>2.55</b>	<b>0.89</b>	<b>4.79</b>	<b>4.44</b>
<b>Asset-8</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M Expenses claimed by the Petitioner	-	-	-	0.24	1.86
Less: Self Insurance	-	-	-	0.02	0.15
Less: Advertisement	-	-	-	0.00	0.04
Less: Cerc Petition & Other Charges	-	-	-	0.00	0.00
<b>Total O&amp;M Expenses Allowed</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.22</b>	<b>1.67</b>

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

62. The Petitioner is entitled to IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working claimed and the Petitioner's entitlement to interest thereon are as follows:

- (i) **Receivables:** The receivables have been worked out on the basis of 2 months of annual transmission charges.
- (ii) **Maintenance Spares:** Maintenance spares have been worked out based on 15% per annum of Operation and Maintenance Expenses.
- (iii) **O&M Expenses:** O&M Expenses have been considered for one month of the allowed O&M Expenses.



- (iv) **Rate of Interest on Working Capital:** Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

63. The Petitioner has claimed O&M Expenses for the Central Portion and, accordingly, O&M Expenses for 1 month, Maintenance spares @15% of O&M Expenses, receivables for two months and SBI Base Rate as on 1.4.2014 i.e. 10.00% Plus 350 bps (13.50%), SBI Base Rate as on 1.4.2015 i.e. 10.00% Plus 350 bps (13.50%) and SBI Base Rate as on 1.4.2018 i.e. 8.70% Plus 350 bps (12.20%) have been considered as the rate of interest on working capital for the Central Portion only.

64. The following trued-up IWC has been allowed for the Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6, Asset-7 and Asset-8:

(₹ in lakh)

<b>Asset-1</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	16.95	16.95	17.64	17.64	17.65
<b>Total Working Capital</b>	<b>16.95</b>	<b>16.95</b>	<b>17.64</b>	<b>17.64</b>	<b>17.65</b>
Rate of Interest on working capital (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>2.29</b>	<b>2.29</b>	<b>2.38</b>	<b>2.38</b>	<b>2.38</b>

(₹ in lakh)

<b>Asset-2</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	12.79	12.81	13.33	13.33	13.33



<b>Asset-2</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
(equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)					
<b>Total Working Capital</b>	<b>12.79</b>	<b>12.81</b>	<b>13.33</b>	<b>13.33</b>	<b>13.33</b>
Rate of Interest on working capital (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>1.73</b>	<b>1.73</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	1.28	0.16	0.34	2.11	1.96
Working Capital for Maintenance Spares (15% of O&M Expenses)	2.31	0.29	0.62	3.80	3.53
Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	43.30	41.08	40.47	40.47	41.06
<b>Total Working Capital</b>	<b>46.89</b>	<b>41.54</b>	<b>41.43</b>	<b>46.38</b>	<b>46.55</b>
Rate of Interest on working capital (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>6.33</b>	<b>5.61</b>	<b>5.59</b>	<b>6.26</b>	<b>6.28</b>

(₹ in lakh)

<b>Asset-4</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.25	0.21	0.07	0.40	0.41
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.45	0.38	0.13	0.72	0.74
Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	8.00	7.96	8.47	7.67	7.70
<b>Total Working Capital</b>	<b>8.70</b>	<b>8.55</b>	<b>8.67</b>	<b>8.79</b>	<b>8.86</b>
Rate of Interest on working capital (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>1.17</b>	<b>1.15</b>	<b>1.17</b>	<b>1.19</b>	<b>1.20</b>



(₹ in lakh)

Asset-5					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	2.48	2.54	3.01	3.01	3.01
<b>Total Working Capital</b>	<b>2.48</b>	<b>2.54</b>	<b>3.01</b>	<b>3.01</b>	<b>3.01</b>
Rate of Interest on working capital (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>0.33</b>	<b>0.34</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>

(₹ in lakh)

Particulars		Asset-6			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	1.68	1.65	1.59	1.54
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>1.68</b>	<b>1.65</b>	<b>1.59</b>	<b>1.54</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>0.19</b>	<b>0.22</b>	<b>0.22</b>	<b>0.21</b>

(₹ in lakh)

Particulars		Asset-7			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	0.03	0.03	0.03	0.03





	Particulars	Asset-7			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata for 4 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.02	0.14
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.03	0.25
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	6.30	3.25
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>6.35</b>	<b>3.64</b>
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>0.01</b>	<b>0.46</b>

**Trued-up Annual Fees and Charges for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for the 2014-19 Tariff Period**

65. The annual fees and charges trued-up for the 2014-19 tariff period in respect of Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6, Asset-7 and Asset-8 (calculated at Annexure I, Annexure III, Annexure V, Annexure VII, Annexure IX, Annexure XI, Annexure XII and Annexure XIII) are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges	99.41	99.43	103.46	103.48	103.51
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.29	2.29	2.38	2.38	2.38
<b>Total</b>	<b>101.70</b>	<b>101.72</b>	<b>105.84</b>	<b>105.87</b>	<b>105.89</b>



(₹ in lakh)

Asset-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges	75.03	75.12	78.15	78.17	78.18
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.73	1.73	1.80	1.80	1.80
<b>Total</b>	<b>76.75</b>	<b>76.85</b>	<b>79.95</b>	<b>79.96</b>	<b>79.98</b>

(₹ in lakh)

Asset 3					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges	238.06	238.96	233.07	211.19	216.53
O&M Expenses	15.39	1.94	4.14	25.36	23.55
Interest on Working Capital	6.33	5.61	5.59	6.26	6.28
<b>Total</b>	<b>259.79</b>	<b>246.51</b>	<b>242.80</b>	<b>242.81</b>	<b>246.36</b>

(₹ in lakh)

Asset-4					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges	43.85	44.04	48.74	40.06	40.06
O&M Expenses	2.99	2.55	0.89	4.79	4.95
Interest on Working Capital	1.17	1.15	1.17	1.19	1.20
<b>Total</b>	<b>48.02</b>	<b>47.74</b>	<b>50.80</b>	<b>46.04</b>	<b>46.21</b>

(₹ in lakh)

Asset-5					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charges	14.53	14.91	17.65	17.65	17.65
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.33	0.34	0.41	0.41	0.41
<b>Total</b>	<b>14.86</b>	<b>15.25</b>	<b>18.06</b>	<b>18.06</b>	<b>18.06</b>

### **Trued-up Annual Fixed Charges for for Asset-6, Asset-7 and Asset-8 for the 2014-19 Tariff Period**

66. The trued-up AFC in respect of Asset-6, Asset-7 and Asset-8 for the 2014-19 tariff period is summarised as follows:

(₹ in lakh)

	Particulars	Asset-6			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>				
A	Depreciation	2.78	3.37	3.37	3.37
B	Interest on Loan	2.85	3.15	2.83	2.50



C	Return on Equity	2.59	3.14	3.14	3.15
D	Interest on Working Capital	0.00	0.00	0.00	0.00
E	O&M Expenses	0.19	0.22	0.22	0.21
F	<b>Total (A+B+C+D+E)</b>	<b>8.40</b>	<b>9.89</b>	<b>9.56</b>	<b>9.23</b>

(₹ in lakh)

	Particulars	Asset-7			
		2015-16 (Pro-rata for 305 days)	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>				
A	Depreciation	0.05	0.06	0.06	0.06
B	Interest on Loan	0.05	0.06	0.05	0.04
C	Return on Equity	0.04	0.06	0.06	0.06
D	Interest on Working Capital	0.00	0.00	0.00	0.00
E	O&M Expenses	0.00	0.00	0.00	0.00
F	<b>Total (A+B+C+D+E)</b>	<b>0.14</b>	<b>0.18</b>	<b>0.17</b>	<b>0.17</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata for 4 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	0.07	6.09
B	Interest on Loan	0.06	5.57
C	Return on Equity	0.06	5.70
D	Interest on Working Capital	0.01	0.46
E	O&M Expenses	0.22	1.67
F	<b>Total (A+B+C+D+E)</b>	<b>0.41</b>	<b>19.48</b>

#### **Determination of Annual Fees and Charges for the 2019-24 Tariff Period for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5**

67. As stated above, Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 were put into commercial operation on 1.2.2013, 1.4.2013, 1.4.2013, 1.1.2014 and 1.1.2014 respectively and as per Regulation 8(1)(iii) of the 2019 Tariff Regulations the fees and charges for 2019-24 tariff period have to be determined as per the methodology adopted prior to 1.4.2014. Accordingly, levelized tariff has been allowed for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for the 2019-24 period. The transmission tariff for Asset-6, Asset-7 and Asset-8 for the 2019-24 tariff period is as per 2019 Tariff Regulations.



68. The Petitioner has claimed the following annual fees and charges for the 2019-24 tariff period for the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5:

(₹ in lakh)

<b>Asset-1</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	103.51	103.51	103.51	103.51	103.51
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.56	1.56	1.56	1.56	1.56
<b>Total</b>	<b>105.07</b>	<b>105.07</b>	<b>105.07</b>	<b>105.07</b>	<b>105.07</b>

(₹ in lakh)

<b>Asset-2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	78.21	78.21	78.21	78.21	78.21
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.18	1.18	1.18	1.18	1.18
<b>Total</b>	<b>79.38</b>	<b>79.39</b>	<b>79.39</b>	<b>79.39</b>	<b>79.38</b>

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	216.27	216.27	216.27	216.27	216.27
O&M Expenses	31.43	31.43	31.43	31.43	31.43
Interest on Working Capital	4.62	4.63	4.63	4.63	4.62
<b>Total</b>	<b>252.32</b>	<b>252.33</b>	<b>252.33</b>	<b>252.33</b>	<b>252.32</b>

(₹ in lakh)

<b>Asset-4</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	40.15	40.15	40.15	40.15	40.15
O&M Expenses	5.97	5.97	5.97	5.97	5.97
Interest on Working Capital	0.86	0.87	0.87	0.87	0.87
<b>Total</b>	<b>46.98</b>	<b>46.99</b>	<b>46.99</b>	<b>46.99</b>	<b>46.99</b>

(₹ in lakh)

<b>Asset-5</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	17.62	17.62	17.62	17.62	17.62
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.27	0.27	0.27	0.27	0.27



Asset-5					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Total</b>	<b>17.89</b>	<b>17.89</b>	<b>17.89</b>	<b>17.89</b>	<b>17.89</b>

69. The details of the IWC claimed by the Petitioner for the 2019-24 period for the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 are as follows:

(₹ in lakh)

Asset-1					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	12.92	12.95	12.95	12.95	12.92
<b>Total Working Capital</b>	<b>12.92</b>	<b>12.95</b>	<b>12.95</b>	<b>12.95</b>	<b>12.92</b>
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1.56</b>	<b>1.56</b>	<b>1.56</b>	<b>1.56</b>	<b>1.56</b>

(₹ in lakh)

Asset-2					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	9.76	9.79	9.79	9.79	9.76
<b>Total Working Capital</b>	<b>9.76</b>	<b>9.79</b>	<b>9.79</b>	<b>9.79</b>	<b>9.76</b>
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1.18</b>	<b>1.18</b>	<b>1.18</b>	<b>1.18</b>	<b>1.18</b>

(₹ in lakh)

Asset-3					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses	4.71	4.71	4.71	4.71	4.71
Working Capital for Maintenance Spares	2.62	2.62	2.62	2.62	2.62
Working Capital for Receivables	31.02	31.11	31.11	31.11	31.02
<b>Total Working Capital</b>	<b>38.36</b>	<b>38.44</b>	<b>38.44</b>	<b>38.44</b>	<b>38.36</b>
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>4.62</b>	<b>4.63</b>	<b>4.63</b>	<b>4.63</b>	<b>4.62</b>



(₹ in lakh)

<b>Asset-4</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	0.90	0.90	0.90	0.90	0.90
Working Capital for Maintenance Spares	0.50	0.50	0.50	0.50	0.50
Working Capital for Receivables	5.78	5.79	5.79	5.79	5.78
<b>Total Working Capital</b>	<b>7.17</b>	<b>7.19</b>	<b>7.19</b>	<b>7.19</b>	<b>7.17</b>
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.86</b>	<b>0.87</b>	<b>0.87</b>	<b>0.87</b>	<b>0.87</b>

(₹ in lakh)

<b>Asset-5</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	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	2.20	2.21	2.21	2.21	2.20
<b>Total Working Capital</b>	<b>2.20</b>	<b>2.21</b>	<b>2.21</b>	<b>2.21</b>	<b>2.20</b>
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>

70. The COD of the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 was 1.2.2013, 1.4.2013, 1.4.2013, 1.1.2014 and 1.1.2014 respectively. Hence, the total capital cost has to be recovered during 2024-29 tariff period after completion of 15 years of useful life of the assets.

### **Capital Cost**

71. The net capital cost as trued-up and allowed in this order for 2014-19 tariff period has been considered as on 1.4.2019 for the purpose of determination of fees and charges for the instant asset. The Petitioner has not claimed any ACE during 2019-24 tariff period. Accordingly, the capital cost considered for determining fees and charges for 2019-24 tariff period is as follows:



(₹ in lakh)

<b>Asset-1</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2019	Loan	520.25
	Equity	222.96
	<b>Total</b>	<b>743.21</b>
Capital Cost Recovered up to 31.3.2019	Loan	129.63
	Equity	37.92
	<b>Total</b>	<b>167.55</b>
Net Capital Cost as on 31.3.2019	Loan	417.95
	Equity	194.16
	<b>Total</b>	<b>612.11</b>

(₹ in lakh)

<b>Asset-2</b>		
<b>Particulars</b>	<b>Funding</b>	<b>State Portion</b>
Gross Capital Cost as on 1.4.2019	Loan	392.78
	Equity	168.33
	<b>Total</b>	<b>561.11</b>
Capital Cost Recovered up to 31.3.2019	Loan	94.22
	Equity	27.41
	<b>Total</b>	<b>121.64</b>
Net Capital Cost as on 31.3.2019	Loan	298.56
	Equity	140.92
	<b>Total</b>	<b>439.48</b>

(₹ in lakh)

<b>Asset-3</b>		
<b>Particulars</b>	<b>Funding</b>	<b>Central Portion</b>
Gross Capital Cost as on 1.4.2019	Loan	1099.89
	Equity	471.38
	<b>Total</b>	<b>1571.27</b>
Capital Cost Recovered up to 31.3.2019	Loan	275.83
	Equity	80.39
	<b>Total</b>	<b>356.22</b>
Net Capital Cost as on 31.3.2019	Loan	824.06
	Equity	390.99
	<b>Total</b>	<b>1215.05</b>

(₹ in lakh)

<b>Asset-4</b>		
<b>Particulars</b>	<b>Funding</b>	<b>Central Portion</b>
Gross Capital Cost as on 1.4.2019	Loan	209.11
	Equity	89.62
	<b>Total</b>	<b>298.73</b>
	Loan	47.33



Capital Cost Recovered up to 31.3.2019	Equity	12.96
	<b>Total</b>	<b>60.29</b>
Net Capital Cost as on 31.3.2019	Loan	161.78
	Equity	76.66
	<b>Total</b>	<b>238.44</b>

(₹ in lakh)

Asset-5		
Particulars	Funding	State Portion
Gross Capital Cost as on 1.4.2019	Loan	89.89
	Equity	38.52
	<b>Total</b>	<b>128.41</b>
Capital Cost Recovered up to 31.3.2019	Loan	18.26
	Equity	5.02
	<b>Total</b>	<b>23.28</b>
Net Capital Cost as on 31.3.2019	Loan	71.63
	Equity	33.50
	<b>Total</b>	<b>105.13</b>

### **Rates for Recovery of loan and equity**

72. The Capital Recovery Factor for loan in respect of the transmission assets has been calculated by applying weighted average rate of interest claimed by the Petitioner. The rates considered on annual basis, have been converted to monthly rates and are as follows:

Monthly Recovery Factor for loan					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	0.013849	0.015000	0.016505	0.018545	0.021454
Asset-2	0.013694	0.014798	0.016233	0.018167	0.020896
Asset-3	0.013696	0.014800	0.016235	0.018169	0.020898
Asset-4	0.012787	0.013715	0.014896	0.016442	0.018543
Asset-5	0.012731	0.013660	0.014842	0.016388	0.018491

73. The Capital Recovery Factor for equity has been considered on the same basis as allowed by the Commission on post-tax return on equity of 15.50%. Thus, the rates considered on annual basis, have been converted to monthly rates and are as follows:

Monthly Recovery Factor for Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	0.017374	0.018433	0.019844	0.021790	0.024605
Asset-2	0.017224	0.018236	0.019578	0.021417	0.024053





Asset-3	0.017224	0.018236	0.019578	0.021417	0.024053
Asset-4	0.016619	0.017452	0.018536	0.019983	0.021985
Asset-5	0.016619	0.017452	0.018536	0.019983	0.021985

74. In view of above, the amount of monthly capital recovery charges for loan and equity for instant asset on account of Central portion have been considered by using respective Capital Recovery Factors and are as follows:

(₹ in lakh)

Monthly capital recovery charges for loan					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	5.41	5.41	5.41	5.41	5.41
Asset-2	4.09	4.09	4.09	4.09	4.09
Asset-3	11.29	11.29	11.29	11.29	11.29
Asset-4	2.07	2.07	2.07	2.07	2.07
Asset-5	0.91	0.91	0.91	0.91	0.91

(₹ in lakh)

Monthly capital recovery charges for equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	3.21	3.21	3.21	3.21	3.21
Asset-2	2.43	2.43	2.43	2.43	2.43
Asset-3	6.73	6.73	6.73	6.73	6.73
Asset-4	1.27	1.27	1.27	1.27	1.27
Asset-5	0.56	0.56	0.56	0.56	0.56

75. Accordingly, the recovery of capital during 2019-24 has been worked out. The date of commercial operation of instant assets were 2012-13 to 2013-14, hence, the instant asset shall complete 15 years during 2027-28 to 2028-29. Further, in line with order dated 8.12.2011 in Petition No. 68/TT/2010, the total capital cost in respect of Communication System will be fully recovered during 2028-29.

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

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



<b>Asset-3</b>					
<b>O&amp;M Expenses</b>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Gross Capital Cost (2% of ₹1571.27 lakh)</b>	31.43	31.43	31.43	31.43	31.43
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>

<b>Asset-4</b>					
<b>O&amp;M Expenses</b>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Gross Capital Cost (2% of ₹298.73 lakh)</b>	5.97	5.97	5.97	5.97	5.97
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>

77. The O&M norms under Regulation 35(3)(a) of the 2019 Tariff Regulations are as follows:

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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289



<i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>	1.322	1.368	1.416	1.466	1.517
<i>Double Circuit (Twin &amp; Triple Conductor)</i>	0.881	0.912	0.944	0.977	1.011
<i>Double Circuit (Single Conductor)</i>	0.377	0.391	0.404	0.419	0.433
<i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>	2.319	2.401	2.485	2.572	2.662
<i>Multi Circuit (Twin &amp; Triple Conductor)</i>	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

*Provided further that:*

*i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*

*ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double*



Circuit quad AC line;

iii. the O&M expenses of  $\pm 500$  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  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);

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

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

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

(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.”

78. We have considered the submissions of the Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and the same are as follows:

(₹ in lakh)					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Asset-3 Communication System</b>					
Loan – Central Portion	1099.89	1099.89	1099.89	1099.89	1099.89
Equity – Central Portion	471.38	471.38	471.38	471.38	471.38
<b>Gross Capital Cost – Central Portion</b>	<b>1571.27</b>	<b>1571.27</b>	<b>1571.27</b>	<b>1571.27</b>	<b>1571.27</b>
Norm (2% of the capital cost)	31.43	31.43	31.43	31.43	31.43



Details	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Total O&amp;M Expenses</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>	<b>31.43</b>

(₹ in lakh)

Details	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Asset-4 Communication System</b>					
Loan – Central Portion	209.11	209.11	209.11	209.11	209.11
Equity – Central Portion	89.62	89.62	89.62	89.62	89.62
<b>Gross Capital Cost – Central Portion</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>
Norm (2% of the capital cost)	5.97	5.97	5.97	5.97	5.97
<b>Total O&amp;M Expenses</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>

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

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

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

*(1)...*

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

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

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

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

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

*“3. Definitions ...*

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



80. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%.

81. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) 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 2020-2021 and from 2021-22 onwards as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed are as follows:

(₹ in lakh)

<b>Asset-1</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)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	12.92	12.94	12.93	12.93	12.89
<b>Total Working Capital</b>	<b>12.92</b>	<b>12.94</b>	<b>12.93</b>	<b>12.93</b>	<b>12.89</b>
Rate of Interest on working capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>1.56</b>	<b>1.46</b>	<b>1.36</b>	<b>1.36</b>	<b>1.35</b>

(₹ in lakh)

<b>Asset-2</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)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	9.76	9.77	9.77	9.77	9.74



<b>Asset-2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Total Working Capital</b>	<b>9.76</b>	<b>9.77</b>	<b>9.77</b>	<b>9.77</b>	<b>9.74</b>
Rate of Interest on working capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>1.18</b>	<b>1.10</b>	<b>1.03</b>	<b>1.03</b>	<b>1.02</b>

(₹ in lakh)

<b>Asset-3</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)	2.62	2.62	2.62	2.62	2.62
Working Capital for Maintenance Spares (15% of O&M Expenses)	4.71	4.71	4.71	4.71	4.71
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	31.02	31.07	31.03	31.03	30.95
<b>Total Working Capital</b>	<b>38.35</b>	<b>38.40</b>	<b>38.36</b>	<b>38.36</b>	<b>38.28</b>
Rate of Interest on working capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>4.62</b>	<b>4.32</b>	<b>4.03</b>	<b>4.03</b>	<b>4.02</b>

(₹ in lakh)

<b>Asset-4</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)	0.50	0.50	0.50	0.50	0.50
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.90	0.90	0.90	0.90	0.90
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	5.77	5.78	5.77	5.77	5.76
<b>Total Working Capital</b>	<b>7.17</b>	<b>7.18</b>	<b>7.17</b>	<b>7.17</b>	<b>7.15</b>
Rate of Interest on working capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>0.86</b>	<b>0.81</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>

(₹ in lakh)

<b>Asset-5</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)	0.00	0.00	0.00	0.00	0.00



<b>Asset-5</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 Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	2.20	2.20	2.20	2.20	2.20
<b>Total Working Capital</b>	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>
Rate of Interest on working capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Interest on Working Capital</b>	<b>0.27</b>	<b>0.25</b>	<b>0.23</b>	<b>0.23</b>	<b>0.23</b>

### **Annual Fees and Charges for the 2019-24 Tariff Period**

82. The annual fees and charges allowed for the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for the 2019-24 tariff period are summarised as follows:

(₹ in lakh)

<b>Asset-1</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	103.50	103.50	103.50	103.50	103.50
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.56	1.46	1.36	1.36	1.35
<b>Total</b>	<b>105.05</b>	<b>104.95</b>	<b>104.85</b>	<b>104.85</b>	<b>104.85</b>

(₹ in lakh)

<b>Asset-2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	78.19	78.19	78.19	78.19	78.19
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.18	1.10	1.03	1.03	1.02
<b>Total</b>	<b>79.36</b>	<b>79.29</b>	<b>79.21</b>	<b>79.21</b>	<b>79.21</b>

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	216.25	216.25	216.25	216.25	216.25
O & M Expenses	31.43	31.43	31.43	31.43	31.43
Interest on Working Capital	4.62	4.32	4.03	4.03	4.02
<b>Total</b>	<b>252.29</b>	<b>251.99</b>	<b>251.70</b>	<b>251.70</b>	<b>251.69</b>





(₹ in lakh)

<b>Asset-4</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	40.11	40.11	40.11	40.11	40.11
O & M Expenses	5.97	5.97	5.97	5.97	5.97
Interest on Working Capital	0.86	0.81	0.75	0.75	0.75
<b>Total</b>	<b>46.95</b>	<b>46.89</b>	<b>46.84</b>	<b>46.84</b>	<b>46.84</b>

(₹ in lakh)

<b>Asset-5</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charges	17.62	17.62	17.62	17.62	17.62
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.27	0.25	0.23	0.23	0.23
<b>Total</b>	<b>17.89</b>	<b>17.87</b>	<b>17.85</b>	<b>17.85</b>	<b>17.85</b>

83. The working of tariff for the 2019-24 period is at Annexure-II, Annexure-IV, Annexure-VI, Annexure-VIII and Annexure-X.

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

84. The Petitioner has submitted that Asset-6, Asset-7 and Asset-8 were put into commercial operation in the 2014-19 tariff period, wherein Asset-6 and Asset-7 are under State Sector while Asset-8 is under Central sector.

85. The Petitioner has claimed the following transmission charges for the 2019-24 tariff period for Asset-6, Asset-7 and Asset-8:

(₹ in lakh)

<b>Asset-6</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	3.37	3.37	3.37	3.37	3.37
Interest on Loan	2.18	1.86	1.53	1.21	0.88
Return on Equity	3.00	3.00	3.00	3.00	3.00
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.13	0.12	0.12	0.11	0.11
<b>Total</b>	<b>8.68</b>	<b>8.35</b>	<b>8.02</b>	<b>7.69</b>	<b>7.36</b>



(₹ in lakh)

Asset-7					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.06	0.06	0.06	0.06	0.06
Interest on Loan	0.04	0.03	0.03	0.02	0.02
Return on Equity	0.05	0.05	0.05	0.05	0.05
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.15</b>	<b>0.14</b>	<b>0.14</b>	<b>0.13</b>	<b>0.13</b>

(₹ in lakh)

Asset-8					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	6.17	6.17	6.17	6.17	6.17
Interest on Loan	5.10	4.56	4.01	3.47	2.92
Return on Equity	5.50	5.50	5.50	5.50	5.50
O&M Expenses	1.95	1.95	1.95	1.95	1.95
Interest on Working Capital	0.34	0.33	0.32	0.31	0.30
<b>Total</b>	<b>19.06</b>	<b>18.51</b>	<b>17.95</b>	<b>17.40</b>	<b>16.84</b>

86. The details of the IWC claimed by the Petitioner for the 2019-24 period are as follows:

(₹ in lakh)

Asset-6					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	1.07	1.03	0.99	0.95	0.90
<b>Total Working Capital</b>	<b>1.07</b>	<b>1.03</b>	<b>0.99</b>	<b>0.95</b>	<b>0.90</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.13</b>	<b>0.12</b>	<b>0.12</b>	<b>0.11</b>	<b>0.11</b>

(₹ in lakh)

Asset-7					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables	0.02	0.02	0.02	0.02	0.02



<b>Asset-7</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
(Equivalent to 45 days of annual transmission charges)					
<b>Total Working Capital</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

<b>Asset-8</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.16	0.16	0.16	0.16	0.16
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.29	0.29	0.29	0.29	0.29
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	2.34	2.28	2.21	2.15	2.07
<b>Total Working Capital</b>	<b>2.79</b>	<b>2.73</b>	<b>2.66</b>	<b>2.60</b>	<b>2.52</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.34</b>	<b>0.33</b>	<b>0.32</b>	<b>0.31</b>	<b>0.30</b>

### **Capital Cost**

87. Regulation 19 of the 2019 Tariff Regulations provide as follows:

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to*



*the date of commercial operation as specified under Regulation 7 of these regulations;*

- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly 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.*

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

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

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

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) De-capitalised Assets after the date of commercial operation on account of*



replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

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

88. The details of capital cost claimed by Petitioner for Asset-6, Asset-7 and Asset-8 as on 31.3.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Assets	FR apportioned approved cost	Actual capital cost as on 31.3.2019	Actual ACE	Total cost as on 31.3.2024
			2019-24	
Asset-6	77.82	53.20	0.00	53.20
Asset-7	10.18	0.97	0.00	0.97
Asset-8	103.00	97.48	0.00	97.48

89. The Petitioner has not claimed/ projected any ACE during 2019-24 period.

90. We have considered the submissions made by the Petitioner. The capital cost of Asset-6, Asset-7 and Asset-8 considered for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	Capital Cost as on 1.4.2019	ACE 2019-24	Capital Cost as on 31.3.2024
		2019-24	
Asset-6	53.20	0.00	53.20
Asset-7	0.97	0.00	0.97
Asset-8	97.48	0.00	97.48



## **Debt-Equity ratio**

91. 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.”

92. The debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period as per Regulation 18(3) of the 2019 Tariff Regulations. The debt-equity considered for the 2019-24 tariff period for Asset-6, Asset-7 and Asset-8 is as follows:

Asset-6				
Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	37.24	70.00	37.24	70.00
Equity	15.96	30.00	15.96	30.00
<b>Total</b>	<b>53.20</b>	<b>100.00</b>	<b>53.20</b>	<b>100.00</b>

Asset-7				
Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	0.68	70.00	0.68	70.00
Equity	0.29	30.00	0.29	30.00
<b>Total</b>	<b>0.97</b>	<b>100.00</b>	<b>0.97</b>	<b>100.00</b>

Asset-8				
Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	68.24	70.00	68.24	70.00
Equity	29.24	30.00	29.24	30.00
<b>Total</b>	<b>97.48</b>	<b>100.00</b>	<b>97.48</b>	<b>100.00</b>

### Depreciation

93. Regulation 33 of the 2019 Tariff Regulations provides as follows:

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



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

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

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

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

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

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

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

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

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

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

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

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





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

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

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

- a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or
- c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

94. WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as specified in the 2019 Tariff Regulations and the same has been placed at Annexure-XIV, Annexure- XV, Annexure-XVI. 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 transmission assets is as follows:

(₹ in lakh)

		<b>Asset-6</b>				
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Depreciation</b>					
A	Opening Gross Block	53.20	53.20	53.20	53.20	53.20
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	53.20	53.20	53.20	53.20	53.20
D	Average Gross Block (A+C)/2	53.20	53.20	53.20	53.20	53.20
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life of the asset (Year)	12	11	10	9	8
G	Elapsed life at the beginning of the year (Year)	3	4	5	6	7
H	Aggregate Depreciable Value	47.88	47.88	47.88	47.88	47.88



I	<b>Depreciation during the year</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>
J	Cumulative Depreciation	16.25	19.62	22.99	26.36	29.73
K	Remaining Depreciable Value (H-J)	31.63	28.26	24.89	21.52	18.15

(₹ in lakh)

<b>Asset-7</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Depreciation</b>					
A	Opening Gross Block	0.97	0.97	0.97	0.97	0.97
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	0.97	0.97	0.97	0.97	0.97
D	Average Gross Block (A+C)/2	0.97	0.97	0.97	0.97	0.97
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life of the asset (Year)	12	11	10	9	8
G	Elapsed life at the beginning of the year (Year)	3	4	5	6	7
H	Aggregate Depreciable Value	0.87	0.87	0.87	0.87	0.87
I	<b>Depreciation during the year</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>
J	Cumulative Depreciation	0.29	0.35	0.41	0.47	0.53
K	Remaining Depreciable Value (H-J)	0.58	0.52	0.46	0.40	0.34

(₹ in lakh)

<b>Asset-8</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Depreciation</b>					
A	Opening Gross Block	97.48	97.48	97.48	97.48	97.48
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	97.48	97.48	97.48	97.48	97.48
D	Average Gross Block (A+C)/2	97.48	97.48	97.48	97.48	97.48
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life of the asset (Year)	14	13	12	11	10
G	Elapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregate Depreciable Value	87.73	87.73	87.73	87.73	87.73
I	<b>Depreciation during the year</b>	<b>6.17</b>	<b>6.17</b>	<b>6.17</b>	<b>6.17</b>	<b>6.17</b>
J	Cumulative Depreciation	12.32	18.49	24.66	30.83	37.00
K	Remaining Depreciable Value (H-J)	75.41	69.24	63.07	56.90	50.73

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

95. 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.”

96. 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 may be adjusted.

97. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, will be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the 2019-24 tariff period is as follows:

(₹ in lakh)

		Asset-6				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	37.24	37.24	37.24	37.24	37.24
B	Cumulative Repayments upto Previous Year	12.88	16.25	19.62	22.99	26.36
C	Net Loan-Opening (A-B)	24.36	20.99	17.62	14.25	10.88



Asset-6						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	3.37	3.37	3.37	3.37	3.37
F	Net Loan-Closing (C+D-E)	20.99	17.62	14.25	10.88	7.51
G	Average Loan (C+F)/2	22.68	19.31	15.94	12.57	9.20
H	Weighted Average Rate of Interest on Loan (in %)	9.6157	9.6193	9.6153	9.6100	9.6030
I	<b>Interest on Loan (G*H)</b>	<b>2.18</b>	<b>1.86</b>	<b>1.53</b>	<b>1.21</b>	<b>0.88</b>

(₹ in lakh)

Asset-7						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	0.68	0.68	0.68	0.68	0.68
B	Cumulative Repayments upto Previous Year	0.23	0.29	0.35	0.41	0.47
C	Net Loan-Opening (A-B)	0.45	0.39	0.33	0.27	0.21
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	0.06	0.06	0.06	0.06	0.06
F	Net Loan-Closing (C+D-E)	0.39	0.33	0.27	0.21	0.15
G	Average Loan (C+F)/2	0.42	0.36	0.30	0.24	0.18
H	Weighted Average Rate of Interest on Loan (in %)	9.3636	9.3542	9.3409	9.3077	9.2353
I	<b>Interest on Loan (G*H)</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>

(₹ in lakh)

Asset-8						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	68.24	68.24	68.24	68.24	68.24
B	Cumulative Repayments upto Previous Year	6.15	12.32	18.49	24.66	30.83
C	Net Loan-Opening (A-B)	62.09	55.92	49.75	43.58	37.41
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	6.17	6.17	6.17	6.17	6.17
F	Net Loan-Closing (C+D-E)	55.92	49.75	43.58	37.41	31.24
G	Average Loan (C+F)/2	59.00	52.83	46.66	40.49	34.32
H	Weighted Average Rate of Interest on Loan (in %)	8.6400	8.6151	8.5855	8.5497	8.5056
I	<b>Interest on Loan (G*H)</b>	<b>5.10</b>	<b>4.55</b>	<b>4.01</b>	<b>3.46</b>	<b>2.92</b>

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

98. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides 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 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*

*Provided further that:*

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. in case of a thermal generating station, with effect from 1.4.2020:*
  - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
  - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

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

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



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

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

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

**Illustration-**

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

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

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

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

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

99. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which will be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed is as follows:



(₹ in lakh)

Asset-6						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	15.96	15.96	15.96	15.96	15.96
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	15.96	15.96	15.96	15.96	15.96
D	Average Equity (A+C)/2	15.96	15.96	15.96	15.96	15.96
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>

(₹ in lakh)

Asset-7						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	0.29	0.29	0.29	0.29	0.29
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	0.29	0.29	0.29	0.29	0.29
D	Average Equity (A+C)/2	0.29	0.29	0.29	0.29	0.29
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>

(₹ in lakh)

Asset-8						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	29.24	29.24	29.24	29.24	29.24
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	29.24	29.24	29.24	29.24	29.24
D	Average Equity (A+C)/2	29.24	29.24	29.24	29.24	29.24
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>5.49</b>	<b>5.49</b>	<b>5.49</b>	<b>5.49</b>	<b>5.49</b>

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

100. The Petitioner has submitted that no O&M Expenses are claimed for Asset-6 and Asset-7 as they are State Sector assets. The Petitioner has claimed O&M Expenses for Asset-8 under Central Portion at 2% of the original project cost subject to actual expenditure at the time of truing-up. The original project cost for Asset-8 is ₹97.55 lakh.



101. The O&M Expenses claimed by the Petitioner for Asset-8 for the 2019-24 period are as follows:

(₹ in lakh)

Particulars	Asset-8				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Normative O&amp;M</b>					
Communication System	1.95	1.95	1.95	1.95	1.95
<b>Total Normative O&amp;M</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>

102. The Regulation 35(4) of the 2019 Tariff Regulations provides as follows:

*“(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.”*

103. We have considered the submissions of the Petitioner. The Petitioner is directed to submit actual O&M Expenses in respect of Asset-8 duly certified by the Auditor at the time of truing up of tariff of 2019-24 period. The O&M Expenses allowed in respect of Asset-8 are as follows:

(₹ in lakh)

Particulars	Asset-8				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Normative O&amp;M</b>					
Communication System	1.95	1.95	1.95	1.95	1.95
<b>Total Normative O&amp;M</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>	<b>1.95</b>

**Interest on Working Capital (IWC)**

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

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

.....

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

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

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

*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 1<sup>st</sup> April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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

“3. **Definitions.** - 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;”

105. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) 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 from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed is as follows:

(₹ in lakh)						
<b>Asset-6</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	1.07	1.03	0.99	0.95	0.90
<b>D</b>	<b>Total Working Capital</b>	<b>1.07</b>	<b>1.03</b>	<b>0.99</b>	<b>0.95</b>	<b>0.90</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital</b>	<b>0.13</b>	<b>0.12</b>	<b>0.10</b>	<b>0.10</b>	<b>0.09</b>



(₹ in lakh)

		<b>Asset-7</b>				
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	0.02	0.02	0.02	0.02	0.02
<b>D</b>	<b>Total Working Capital</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

		<b>Asset-8</b>				
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.16	0.16	0.16	0.16	0.16
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.29	0.29	0.29	0.29	0.29
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	2.34	2.28	2.21	2.14	2.07
<b>D</b>	<b>Total Working Capital</b>	<b>2.80</b>	<b>2.73</b>	<b>2.66</b>	<b>2.59</b>	<b>2.52</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital</b>	<b>0.34</b>	<b>0.31</b>	<b>0.28</b>	<b>0.27</b>	<b>0.26</b>

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

106. The transmission charges allowed for the 2019-24 tariff period are summarised as follows:

(₹ in lakh)

		<b>Asset-6</b>				
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Annual Transmission Charges</b>					
A	Depreciation	3.37	3.37	3.37	3.37	3.37
B	Interest on Loan	2.18	1.86	1.53	1.21	0.88
C	Return on Equity	3.00	3.00	3.00	3.00	3.00
D	O&M Expenses	0.00	0.00	0.00	0.00	0.00
E	Interest on Working Capital	0.13	0.12	0.10	0.10	0.09
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>8.68</b>	<b>8.35</b>	<b>8.00</b>	<b>7.68</b>	<b>7.34</b>



(₹ in lakh)

<b>Asset-7</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Annual Transmission Charges</b>					
A	Depreciation	0.06	0.06	0.06	0.06	0.06
B	Interest on Loan	0.04	0.03	0.03	0.02	0.02
C	Return on Equity	0.05	0.05	0.05	0.05	0.05
D	O&M Expenses	0.00	0.00	0.00	0.00	0.00
E	Interest on Working Capital	0.00	0.00	0.00	0.00	0.00
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>0.15</b>	<b>0.14</b>	<b>0.14</b>	<b>0.13</b>	<b>0.13</b>

(₹ in lakh)

<b>Asset-8</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Annual Transmission Charges</b>					
A	Depreciation	6.17	6.17	6.17	6.17	6.17
B	Interest on Loan	5.10	4.55	4.01	3.46	2.92
C	Return on Equity	5.49	5.49	5.49	5.49	5.49
D	O&M Expenses	1.95	1.95	1.95	1.95	1.95
E	Interest on Working Capital	0.34	0.31	0.28	0.27	0.26
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>19.05</b>	<b>18.47</b>	<b>17.90</b>	<b>17.34</b>	<b>16.80</b>

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

107. The Petitioner has prayed reimbursement of fee paid by it for filing the Petition and publication expenses.

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

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

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



### **Goods and Services Tax**

110. 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 Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government / Statutory authorities, the same may be allowed to be recovered from the beneficiaries

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

### **Security Expenses**

112. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition, and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

113. 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 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

### **Capital Spares**

114. 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 Fees and Charges and Sharing of Transmission Charges**

115. The fee and charges approved for 2014-19 tariff period in this order for Asset-3 and Asset-4 and transmission charges of Asset-8, which are under the Central Sector shall be shared by the beneficiaries or the long term transmission customers in accordance with Regulation 43(2) of the 2014 Tariff Regulations. The Fee and Charges approved for 2014-19 tariff period for Asset-1, Asset-2 and Asset-5 and transmission charges of Asset-6 and Asset-7 under the State Sector shall be shared by the respective States as provided under the proviso to Regulation 43(2) of the 2014 Tariff Regulations.

116. The fee and charges approved in this order for the 2019-24 tariff period for Asset-3 and Asset-4 and transmission charges of Asset-8 under the Central Sector shall be shared by the beneficiaries and long term transmission customers as per applicable Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations. The fee and charges approved for Asset-1, Asset-2 and Asset-5 and transmission charges of Asset-6 and Asset-7 under the State Sector shall be shared by the respective States as provided under the proviso to Regulation 57(2) of the 2019 Tariff Regulations.

117. To summarise:

- (a) The trued-up Annual Fees and Charges approved for the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for the 2014-19 tariff period are:

(₹ in lakh)

Asset-1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fees & Charges	101.70	101.72	105.84	105.87	105.89

(₹ in lakh)

Asset-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fees & Charges	76.75	76.85	79.95	79.96	79.98



(₹ in lakh)

Asset-3					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fees & Charges	259.79	246.51	242.80	242.81	246.36

(₹ in lakh)

Asset-4					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fees & Charges	48.02	47.74	50.80	46.04	46.21

(₹ in lakh)

Asset-5					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fees & Charges	14.86	15.25	18.06	18.06	18.06

- (b) The Annual Fees and Charges allowed for the Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 for the 2019-24 tariff period are:

(₹ in lakh)

Asset-1					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fees & Charges	105.05	104.95	104.85	104.85	104.85

(₹ in lakh)

Asset-2					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fees & Charges	79.36	79.29	79.21	79.21	79.21

(₹ in lakh)

Asset-3					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fees & Charges	252.29	251.99	251.70	251.70	251.69

(₹ in lakh)

Asset-4					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fees & Charges	46.95	46.89	46.84	46.84	46.84

(₹ in lakh)

Asset-5					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fees & Charges	17.89	17.87	17.85	17.85	17.85



(c) The trued-up AFC approved for the 2014-19 tariff period is as follows:

	(₹ in lakh)			
<b>Assets</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-6	8.40	9.89	9.56	9.23
Asset-7	0.14	0.18	0.17	0.17
Asset-8			0.41	19.48

(d) AFC allowed for the 2019-24 tariff period is as follows:

	(₹ in lakh)				
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Asset-6	8.68	8.35	8.00	7.68	7.34
Asset-7	0.15	0.14	0.14	0.13	0.13
Asset-8	19.05	18.47	17.90	17.34	16.80

118. The annexures given hereinafter form part of this order.

119. This order disposes of Petition No. 299/TT/2022 in terms of the above discussion and findings.

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

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

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



**Asset-1****(₹ in lakh)**

<b>Particulars</b>	<b>Additional Capital Expenditure</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Capital Cost	716.88	716.98	743.21	743.21	743.21
Opening Gross Notional Loan	501.82	501.89	520.25	520.25	520.25
Opening Gross Equity	215.06	215.09	222.96	222.96	222.96
Recovered Gross Capital Cost (As on 1st April)	20.53	43.45	68.91	98.36	131.10
Recovered Gross Notional Loan	16.50	34.68	54.62	77.37	102.30
Recovered Gross Equity	4.03	8.77	14.29	20.99	28.80
Opn.Net Capital Cost	696.35	673.53	674.30	644.85	612.11
Opn. Net Notional Loan	485.32	467.21	465.63	442.88	417.95
Opn. Net Equity	211.03	206.32	208.67	201.97	194.16
Recovered Capital Cost (During the Year)	22.92	25.46	29.45	32.75	36.44
Recocered Notional Loan	18.18	19.94	22.75	24.93	27.33
Recovered Equity	4.74	5.53	6.70	7.81	9.11
Cl. Net Capital Cost	673.43	648.07	644.85	612.11	575.66





Cl. Net Notional Loan	467.14	447.27	442.88	417.95	390.62
Cl. Net Equity	206.29	200.80	201.97	194.16	185.04
Additional Capital Cost	0.10	26.23	0.00	0.00	0.00
Additional Notional Loan	0.07	18.36	0.00	0.00	0.00
Additional Equity	0.03	7.87	0.00	0.00	0.00
Years	13.83	12.83	11.83	10.83	9.83
Months	166.00	154.00	142.00	130.00	118.00
Weighted Average Rare of Interest p.a.	9.2461%	9.2461%	9.2507%	9.2604%	9.2706%
Weighted Average Rare of Interest p.m.	0.7705%	0.7705%	0.7709%	0.7717%	0.7726%
Monthly Recovery Factors - Loan	0.010697	0.011113	0.011611	0.012213	0.012947
Monthly Capital Recovery Charge - Loan	5.19	5.19	5.41	5.41	5.41
Annual Capital Recovery Charge - Loan	62.30	62.30	64.88	64.91	64.93
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors - Equity	0.014658	0.014994	0.015407	0.015918	0.016559
Monthly Capital Recovery Charge - Equity	3.09	3.09	3.21	3.21	3.21
Annual Capital Recovery Charge - Equity	37.12	37.12	38.58	38.58	38.58
Monthly Capital Recovery Charge - Total	8.28	8.29	8.62	8.62	8.63
Annual Capital Recovery Charge - Total	99.41	99.43	103.46	103.49	103.51



<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	16.95	16.95	17.64	17.64	17.65
<b>Total</b>	<b>16.95</b>	<b>16.95</b>	<b>17.64</b>	<b>17.64</b>	<b>17.65</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working Capital (Annualized)	2.29	2.29	2.38	2.38	2.38
<b>Fee &amp; Charges (2014-19) (Applicable)</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	62.30	62.30	64.88	64.91	64.93
Annual Capital Recovery Charge - Equity	37.12	37.12	38.58	38.58	38.58
<b>Annual Capital Recovery Charge - Total</b>	<b>99.41</b>	<b>99.43</b>	<b>103.46</b>	<b>103.48</b>	<b>103.51</b>
O&M Expenses (as admitted in instant order)	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.29	2.29	2.38	2.38	2.38
<b>Total Fee &amp; Charges (Annualized)</b>	<b>101.70</b>	<b>101.72</b>	<b>105.84</b>	<b>105.87</b>	<b>105.89</b>



**Annexure-II****Asset-1**

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Capital Cost	743.21	743.21	743.21	743.21	743.21
Opening Gross Notional Loan	520.25	520.25	520.25	520.25	520.25
Opening Gross Equity	222.96	222.96	222.96	222.96	222.96
Recovered Gross Capital Cost (As on 1st April)	167.55	208.16	253.44	303.97	360.39
Recovered Gross Notional Loan	129.63	159.61	192.49	228.55	268.09
Recovered Gross Equity	37.92	48.55	60.95	75.42	92.30
Opn.Net Capital Cost	575.66	535.05	489.77	439.24	382.82
Opn. Net Notional Loan	390.62	360.64	327.76	291.70	252.16
Opn. Net Equity	185.04	174.41	162.01	147.54	130.67



Recovered Capital Cost (During the Year)	<b>40.61</b>	<b>45.28</b>	<b>50.53</b>	<b>56.42</b>	<b>63.05</b>
Recocered Notional Loan	29.98	32.88	36.06	39.54	43.37
Recovered Equity	10.63	12.40	14.47	16.88	19.69
Cl. Net Capital Cost	<b>535.05</b>	<b>489.77</b>	<b>439.24</b>	<b>382.82</b>	<b>319.77</b>
Cl. Net Notional Loan	360.64	327.76	291.70	252.16	208.79
Cl. Net Equity	174.41	162.01	147.54	130.67	110.98
Additional Capital Cost	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years	8.83	7.83	6.83	5.83	4.83
Months	106.00	94.00	82.00	70.00	58.00
Weighted Average Rare of Interest p.a.	9.2640%	9.2640%	9.2640%	9.2640%	9.2640%
Weighted Average Rare of Interest p.m.	0.7720%	0.7720%	0.7720%	0.7720%	0.7720%
Monthly Recovery Factors -Loan	0.013849	0.015000	0.016505	0.018545	0.021454
Monthly Capital Recovery Charge - Loan	5.41	5.41	5.41	5.41	5.41



Annual Capital Recovery Charge - Loan	<b>64.92</b>	<b>64.92</b>	<b>64.92</b>	<b>64.92</b>	<b>64.92</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.017374	0.018433	0.019844	0.021790	0.024605
Monthly Capital Recovery Charge - Equity	3.21	3.21	3.21	3.21	3.21
Annual Capital Recovery Charge - Equity	<b>38.58</b>	<b>38.58</b>	<b>38.58</b>	<b>38.58</b>	<b>38.58</b>
Monthly Capital Recovery Charge - Total	8.62	8.62	8.62	8.62	8.62
Annual Capital Recovery Charge - Total	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
Receivables (45 days)	12.92	12.94	12.93	12.93	12.89
<b>Total</b>	<b>12.92</b>	<b>12.94</b>	<b>12.93</b>	<b>12.93</b>	<b>12.89</b>
Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%



Total Interest on Working Capital (Annualized)	1.56	1.46	1.36	1.36	1.35
<b>Fee &amp; Charges (2019-24) (Applicable)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge - Loan	64.92	64.92	64.92	64.92	64.92
Annual Capital Recovery Charge - Equity	38.58	38.58	38.58	38.58	38.58
Annual Capital Recovery Charge - Total	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>	<b>103.50</b>
O&M Expenses (2% of the Gross Capital Cost)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Interest on Working Capital	1.56	1.46	1.36	1.36	1.35
<b>Total Fee &amp; Charges (Annualized)</b>	<b>105.05</b>	<b>104.95</b>	<b>104.85</b>	<b>104.85</b>	<b>104.85</b>



Asset-2

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	540.58	541.22	561.11	561.11	561.11
Opening Gross Notional Loan	378.41	378.86	392.78	392.78	392.78
Opening Gross Equity	162.17	162.36	168.33	168.33	168.33
Recovered Gross Capital Cost (As on 1st April)	12.68	29.64	48.52	70.34	94.62
Recovered Gross Notional Loan	10.20	23.68	38.49	55.39	73.91
Recovered Gross Equity	2.48	5.96	10.03	14.96	20.71
Opn.Net Capital Cost	527.90	511.58	512.59	490.77	466.49
Opn. Net Notional Loan	368.21	355.17	354.29	337.39	318.87
Opn. Net Equity	159.69	156.40	158.30	153.37	147.62
Recovered Capital Cost (During the Year)	16.96	18.87	21.83	24.27	27.02
Recocered Notional Loan	13.48	14.81	16.90	18.53	20.31
Recovered Equity	3.48	4.07	4.93	5.75	6.71
Cl. Net Capital Cost	510.94	492.70	490.77	466.49	439.74



Cl. Net Notional Loan	354.73	340.37	337.39	318.87	298.82
Cl. Net Equity	156.21	152.33	153.37	147.62	140.92
Additional Capital Cost	0.64	19.89	0.00	0.00	0.00
Additional Notional Loan	0.45	13.92	0.00	0.00	0.00
Additional Equity	0.19	5.97	0.00	0.00	0.00
Years	14.00	13.00	12.00	11.00	10.00
Months	168.00	156.00	144.00	132.00	120.00
Weighted Average Rare of Interest p.a.	9.2647%	9.2647%	9.2676%	9.2737%	9.2802%
Weighted Average Rare of Interest p.m.	0.7721%	0.7721%	0.7723%	0.7728%	0.7734%
Monthly Recovery Factors - Loan	0.010645	0.011049	0.011532	0.012112	0.012820
Monthly Capital Recovery Charge - Loan	3.92	3.92	4.09	4.09	4.09
Annual Capital Recovery Charge - Loan	47.03	47.09	49.03	49.04	49.05
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors - Equity	0.014608	0.014933	0.015332	0.015825	0.016441
Monthly Capital Recovery Charge - Equity	2.33	2.34	2.43	2.43	2.43
Annual Capital Recovery Charge - Equity	27.99	28.03	29.13	29.13	29.13
Monthly Capital Recovery Charge - Total	6.25	6.26	6.51	6.51	6.51
Annual Capital Recovery Charge - Total	75.03	75.12	78.15	78.17	78.18





<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	12.79	12.81	13.33	13.33	13.33
Total	12.79	12.81	13.33	13.33	13.33
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.73</b>	<b>1.73</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>					
Particulars	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	47.03	47.09	49.03	49.04	49.05
Annual Capital Recovery Charge - Equity	27.99	28.03	29.13	29.13	29.13
<b>Annual Capital Recovery Charge - Total</b>	<b>75.03</b>	<b>75.12</b>	<b>78.15</b>	<b>78.17</b>	<b>78.18</b>
O&M Expenses (as admitted in instant order)	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.73	1.73	1.80	1.80	1.80
<b>Total Fee &amp; Charges (Annualized)</b>	<b>76.75</b>	<b>76.85</b>	<b>79.95</b>	<b>79.96</b>	<b>79.98</b>



**Annexure-IV****Asset-2**

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Capital Cost	561.11	561.11	561.11	561.11	561.11
Opening Gross Notional Loan	392.78	392.78	392.78	392.78	392.78
Opening Gross Equity	168.33	168.33	168.33	168.33	168.33
Recovered Gross Capital Cost (As on 1st April)	121.63	151.73	185.29	222.74	264.55
Recovered Gross Notional Loan	94.22	116.50	140.93	167.73	197.13
Recovered Gross Equity	27.41	35.24	44.36	55.01	67.43
Opn.Net Capital Cost	439.48	409.38	375.82	338.37	296.56
Opn. Net Notional Loan	298.56	276.28	251.85	225.05	195.65
Opn. Net Equity	140.92	133.10	123.97	113.32	100.91



Recovered Capital Cost (During the Year)	<b>30.10</b>	<b>33.56</b>	<b>37.45</b>	<b>41.82</b>	<b>46.73</b>
Recocered Notional Loan	22.28	24.43	26.80	29.40	32.25
Recovered Equity	7.82	9.13	10.65	12.42	14.49
Cl. Net Capital Cost	<b>409.38</b>	<b>375.82</b>	<b>338.37</b>	<b>296.56</b>	<b>249.82</b>
Cl. Net Notional Loan	276.28	251.85	225.05	195.65	163.40
Cl. Net Equity	133.10	123.97	113.32	100.91	86.42
Additional Capital Cost	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years	9.00	8.00	7.00	6.00	5.00
Months	108.00	96.00	84.00	72.00	60.00
Weighted Average Rare of Interest p.a.	9.2838%	9.2838%	9.2838%	9.2838%	9.2838%
Weighted Average Rare of Interest p.m.	0.7737%	0.7737%	0.7737%	0.7737%	0.7737%
Monthly Recovery Factors -Loan	0.013694	0.014798	0.016233	0.018167	0.020896



Monthly Capital Recovery Charge - Loan	4.09	4.09	4.09	4.09	4.09
Annual Capital Recovery Charge - Loan	<b>49.06</b>	<b>49.06</b>	<b>49.06</b>	<b>49.06</b>	<b>49.06</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.017224	0.018236	0.019578	0.021417	0.024053
Monthly Capital Recovery Charge - Equity	2.43	2.43	2.43	2.43	2.43
Annual Capital Recovery Charge - Equity	<b>29.13</b>	<b>29.13</b>	<b>29.13</b>	<b>29.13</b>	<b>29.13</b>
Monthly Capital Recovery Charge - Total	6.52	6.52	6.52	6.52	6.52
Annual Capital Recovery Charge - Total	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00



Receivables (45 days)	9.76	9.77	9.77	9.77	9.74
<b>Total</b>	<b>9.76</b>	<b>9.77</b>	<b>9.77</b>	<b>9.77</b>	<b>9.74</b>
Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.18</b>	<b>1.10</b>	<b>1.03</b>	<b>1.03</b>	<b>1.02</b>
<b>Fee &amp; Charges (2019-24) (Applicable)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge - Loan	49.06	49.06	49.06	49.06	49.06
Annual Capital Recovery Charge - Equity	29.13	29.13	29.13	29.13	29.13
Annual Capital Recovery Charge - Total	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>	<b>78.19</b>
O&M Expenses (2% of the Gross Capital Cost)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Interest on Working Capital	<b>1.18</b>	<b>1.10</b>	<b>1.03</b>	<b>1.03</b>	<b>1.02</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>79.36</b>	<b>79.29</b>	<b>79.21</b>	<b>79.21</b>	<b>79.21</b>



## Asset-3

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	1709.83	1715.90	1677.19	1539.43	1571.27
Opening Gross Notional Loan	1196.88	1201.13	1174.03	1077.60	1099.89
Opening Gross Equity	512.95	514.77	503.16	461.83	471.38
Recovered Gross Capital Cost (As on 1st April)	38.65	92.13	151.81	216.53	281.74
Recovered Gross Notional Loan	31.05	73.51	120.29	170.33	219.96
Recovered Gross Equity	7.60	18.62	31.52	46.20	61.78
Opn.Net Capital Cost	1671.18	1623.77	1525.38	1322.90	1289.53
Opn. Net Notional Loan	1165.83	1127.62	1053.74	907.27	879.93
Opn. Net Equity	505.35	496.15	471.64	415.63	409.60
Recovered Capital Cost (During the Year)	53.48	59.67	64.72	65.21	74.48
Recocered Notional Loan	42.46	46.77	50.04	49.63	55.87
Recovered Equity	11.02	12.90	14.68	15.58	18.61
Cl. Net Capital Cost	1617.70	1564.09	1460.66	1257.69	1215.05
Cl. Net Notional Loan	1123.37	1080.84	1003.70	857.64	824.06
Cl. Net Equity	494.33	483.25	456.96	400.05	390.99
Additional Capital Cost	6.07	-38.71	-137.76	31.84	0.00



Additional Notional Loan	4.25	-27.10	-96.43	22.29	0.00
Additional Equity	1.82	-11.61	-41.33	9.55	0.00
Years	14.00	13.00	12.00	11.00	10.00
Months	168.00	156.00	144.00	132.00	120.00
Weighted Average Rare of Interest p.a.	9.3326%	9.3326%	9.3342%	9.3376%	9.3410%
Weighted Average Rare of Interest p.m.	0.7777%	0.7777%	0.7779%	0.7781%	0.7784%
Monthly Recovery Factors - Loan	0.010685	0.011089	0.011569	0.012148	0.012853
Monthly Capital Recovery Charge - Loan	12.46	12.50	12.19	11.02	11.31
Annual Capital Recovery Charge - Loan	<b>149.48</b>	<b>150.04</b>	<b>146.29</b>	<b>132.26</b>	<b>135.72</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors - Equity	0.014608	0.014933	0.015332	0.015825	0.016441
Monthly Capital Recovery Charge - Equity	7.38	7.41	7.23	6.58	6.73
Annual Capital Recovery Charge - Equity	<b>88.58</b>	<b>88.91</b>	<b>86.77</b>	<b>78.93</b>	<b>80.81</b>
Monthly Capital Recovery Charge - Total	19.84	19.91	19.42	17.60	18.04
Annual Capital Recovery Charge - Total	<b>238.06</b>	<b>238.95</b>	<b>233.07</b>	<b>211.19</b>	<b>216.53</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	2.31	0.29	0.62	3.80	3.53
O&M Expenses (1 Month)	1.28	0.16	0.34	2.11	1.96
Receivables (2 months)	43.30	41.08	40.47	40.47	41.06



Total	<b>46.89</b>	<b>41.54</b>	<b>41.43</b>	<b>46.38</b>	<b>46.55</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>6.33</b>	<b>5.61</b>	<b>5.59</b>	<b>6.26</b>	<b>6.28</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	149.48	150.04	146.29	132.26	135.72
Annual Capital Recovery Charge - Equity	88.58	88.91	86.77	78.93	80.81
<b>Annual Capital Recovery Charge - Total</b>	<b>238.06</b>	<b>238.95</b>	<b>233.07</b>	<b>211.19</b>	<b>216.53</b>
O&M Expenses (as admitted in instant order)	<b>15.39</b>	<b>1.94</b>	<b>4.14</b>	<b>25.36</b>	<b>23.55</b>
Interest on Working Capital	<b>6.33</b>	<b>5.61</b>	<b>5.59</b>	<b>6.26</b>	<b>6.28</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>259.79</b>	<b>246.51</b>	<b>242.80</b>	<b>242.81</b>	<b>246.36</b>





**Annexure-VI****Asset-3**

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Capital Cost - Central Portion	1571.27	1571.27	1571.27	1571.27	1571.27
Opening Gross Notional Loan	1099.89	1099.89	1099.89	1099.89	1099.89
Opening Gross Equity	471.38	471.38	471.38	471.38	471.38
Recovered Gross Capital Cost (As on 1st April)	356.22	439.40	532.15	635.65	751.24
Recovered Gross Notional Loan	275.83	337.30	404.73	478.70	559.84
Recovered Gross Equity	80.39	102.10	127.42	156.95	191.41
Opn.Net Capital Cost	1215.05	1131.87	1039.12	935.62	820.03
Opn. Net Notional Loan	824.06	762.59	695.16	621.19	540.05
Opn. Net Equity	390.99	369.29	343.96	314.43	279.97
Recovered Capital Cost (During the Year)	83.18	92.75	103.50	115.59	129.19
Recovered Notional Loan	61.47	67.43	73.97	81.14	89.00
Recovered Equity	21.71	25.32	29.54	34.45	40.19
Cl. Net Capital Cost	1131.87	1039.12	935.62	820.03	690.83
Cl. Net Notional Loan	762.59	695.16	621.19	540.05	451.05
Cl. Net Equity	369.29	343.96	314.43	279.97	239.78



Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years	9.00	8.00	7.00	6.00	5.00
Months	108.00	96.00	84.00	72.00	60.00
Weighted Average Rate of Interest p.a.	9.2877%	9.2877%	9.2877%	9.2877%	9.2877%
Weighted Average Rate of Interest p.m.	0.7740%	0.7740%	0.7740%	0.7740%	0.7740%
Monthly Recovery Factors -Loan	0.013696	0.014800	0.016235	0.018169	0.020898
Monthly Capital Recovery Charge - Loan	11.29	11.29	11.29	11.29	11.29
Annual Capital Recovery Charge - Loan	<b>135.43</b>	<b>135.43</b>	<b>135.43</b>	<b>135.43</b>	<b>135.43</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.017224	0.018236	0.019578	0.021417	0.024053
Monthly Capital Recovery Charge - Equity	6.73	6.73	6.73	6.73	6.73
Annual Capital Recovery Charge - Equity	<b>80.81</b>	<b>80.81</b>	<b>80.81</b>	<b>80.81</b>	<b>80.81</b>
Monthly Capital Recovery Charge - Total	18.02	18.02	18.02	18.02	18.02
Annual Capital Recovery Charge - Total	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (1 Month)	2.62	2.62	2.62	2.62	2.62
Maintenance Spares (15% of O&M)	4.71	4.71	4.71	4.71	4.71
Receivables (45 days)	31.02	31.07	31.03	31.03	30.95
Total	<b>38.35</b>	<b>38.40</b>	<b>38.36</b>	<b>38.36</b>	<b>38.28</b>
Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>4.62</b>	<b>4.32</b>	<b>4.03</b>	<b>4.03</b>	<b>4.02</b>
<b>Fee &amp; Charges (2019-24) (Applicable)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge - Loan	135.43	135.43	135.43	135.43	135.43
Annual Capital Recovery Charge - Equity	80.81	80.81	80.81	80.81	80.81
Annual Capital Recovery Charge - Total	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>	<b>216.25</b>



O&M Expenses (2% of the Gross Capital Cost)	31.43	31.43	31.43	31.43	31.43
Interest on Working Capital	4.62	4.32	4.03	4.03	4.02
<b>Total Fee &amp; Charges (Annualized)</b>	<b>252.29</b>	<b>251.99</b>	<b>251.70</b>	<b>251.70</b>	<b>251.69</b>



## Asset-4

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Opening Gross Capital Cost</b>	<b>322.44</b>	<b>323.75</b>	<b>356.08</b>	<b>298.73</b>	<b>298.73</b>
Opening Gross Notional Loan	225.71	226.63	249.26	209.11	209.11
Opening Gross Equity	96.73	97.13	106.82	89.62	89.62
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>1.82</b>	<b>11.43</b>	<b>22.11</b>	<b>35.21</b>	<b>47.10</b>
Recovered Gross Notional Loan	1.48	9.25	17.77	28.07	37.28
Recovered Gross Equity	0.34	2.18	4.35	7.13	9.82
<b>Opn.Net Capital Cost</b>	<b>320.62</b>	<b>312.32</b>	<b>333.97</b>	<b>263.52</b>	<b>251.63</b>
Opn. Net Notional Loan	224.23	217.37	231.49	181.04	171.83
Opn. Net Equity	96.39	94.94	102.48	82.49	79.80
<b>Recovered Capital Cost (During the Year)</b>	<b>9.62</b>	<b>10.68</b>	<b>13.09</b>	<b>11.90</b>	<b>13.19</b>
Recocered Notional Loan	7.77	8.52	10.31	9.21	10.05
Recovered Equity	1.85	2.16	2.79	2.69	3.14
<b>Cl. Net Capital Cost</b>	<b>311.01</b>	<b>301.64</b>	<b>320.87</b>	<b>251.63</b>	<b>238.44</b>
Cl. Net Notional Loan	216.46	208.86	221.18	171.83	161.78
Cl. Net Equity	94.55	92.78	99.69	79.80	76.66



<b>Additional Capital Cost</b>	<b>1.31</b>	<b>32.33</b>	<b>-57.35</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.92	22.63	-40.15	0.00	0.00
Additional Equity	0.39	9.70	-17.21	0.00	0.00
Years	14.75	13.75	12.75	11.75	10.75
Months	177.00	165.00	153.00	141.00	129.00
Weighted Average Rate of Interest p.a.	8.8000%	8.8000%	8.8000%	8.8000%	8.8000%
Weighted Average Rate of Interest p.m.	0.7333%	0.7333%	0.7333%	0.7333%	0.7333%
Monthly Recovery Factors - Loan	0.010106	0.010469	0.010896	0.011404	0.012015
Monthly Capital Recovery Charge - Loan	2.27	2.28	2.52	2.06	2.06
<b>Annual Capital Recovery Charge - Loan</b>	<b>27.19</b>	<b>27.31</b>	<b>30.27</b>	<b>24.77</b>	<b>24.77</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors - Equity	0.014402	0.014683	0.015026	0.015445	0.015966
Monthly Capital Recovery Charge - Equity	1.39	1.39	1.54	1.27	1.27
<b>Annual Capital Recovery Charge - Equity</b>	<b>16.66</b>	<b>16.73</b>	<b>18.48</b>	<b>15.29</b>	<b>15.29</b>
Monthly Capital Recovery Charge - Total	3.65	3.67	4.06	3.34	3.34
<b>Annual Capital Recovery Charge - Total</b>	<b>43.85</b>	<b>44.04</b>	<b>48.74</b>	<b>40.06</b>	<b>40.06</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.45	0.38	0.13	0.72	0.74



O&M Expenses (1 Month)	0.25	0.21	0.07	0.40	0.41
Receivables (2 months)	8.00	7.96	8.47	7.67	7.70
<b>Total</b>	<b>8.70</b>	<b>8.55</b>	<b>8.67</b>	<b>8.79</b>	<b>8.86</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>1.17</b>	<b>1.15</b>	<b>1.17</b>	<b>1.19</b>	<b>1.20</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	27.19	27.31	30.27	24.77	24.77
Annual Capital Recovery Charge - Equity	16.66	16.73	18.48	15.29	15.29
<b>Annual Capital Recovery Charge - Total</b>	<b>43.85</b>	<b>44.04</b>	<b>48.74</b>	<b>40.06</b>	<b>40.06</b>
<b>O&amp;M Expenses (as admitted in instant order)</b>	<b>2.99</b>	<b>2.55</b>	<b>0.89</b>	<b>4.79</b>	<b>4.95</b>
<b>Interest on Working Capital</b>	<b>1.17</b>	<b>1.15</b>	<b>1.17</b>	<b>1.19</b>	<b>1.20</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>48.02</b>	<b>47.74</b>	<b>50.80</b>	<b>46.04</b>	<b>46.21</b>



**Annexure-VIII**

(₹ in lakh)

**Asset-4**

Particulars	Additional Capital Expenditure				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Opening Gross Capital Cost - Central Portion</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>	<b>298.73</b>
Opening Gross Notional Loan	209.11	209.11	209.11	209.11	209.11
Opening Gross Equity	89.62	89.62	89.62	89.62	89.62
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>60.29</b>	<b>74.89</b>	<b>91.12</b>	<b>109.15</b>	<b>129.22</b>
Recovered Gross Notional Loan	47.33	58.28	70.23	83.29	97.55
Recovered Gross Equity	12.96	16.62	20.88	25.86	31.67
<b>Opn.Net Capital Cost</b>	<b>238.44</b>	<b>223.84</b>	<b>207.61</b>	<b>189.58</b>	<b>169.51</b>
Opn. Net Notional Loan	161.78	150.83	138.88	125.82	111.56
Opn. Net Equity	76.66	73.00	68.74	63.76	57.95
<b>Recovered Capital Cost (During the Year)</b>	<b>14.60</b>	<b>16.22</b>	<b>18.04</b>	<b>20.07</b>	<b>22.35</b>
Recovered Notional Loan	10.95	11.95	13.06	14.26	15.57
Recovered Equity	3.66	4.27	4.98	5.81	6.77
<b>Cl. Net Capital Cost</b>	<b>223.84</b>	<b>207.61</b>	<b>189.58</b>	<b>169.51</b>	<b>147.16</b>



Cl. Net Notional Loan	150.83	138.88	125.82	111.56	95.99
Cl. Net Equity	73.00	68.74	63.76	57.95	51.18
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years	9.75	8.75	7.75	6.75	5.75
Months	117.00	105.00	93.00	81.00	69.00
Weighted Average Rate of Interest p.a.	8.8488%	8.8488%	8.8488%	8.8488%	8.8488%
Weighted Average Rate of Interest p.m.	0.7374%	0.7374%	0.7374%	0.7374%	0.7374%
Monthly Recovery Factors -Loan	0.012787	0.013715	0.014896	0.016442	0.018543
Monthly Capital Recovery Charge - Loan	2.07	2.07	2.07	2.07	2.07
<b>Annual Capital Recovery Charge - Loan</b>	<b>24.82</b>	<b>24.82</b>	<b>24.82</b>	<b>24.82</b>	<b>24.82</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.016619	0.017452	0.018536	0.019983	0.021985
Monthly Capital Recovery Charge - Equity	1.27	1.27	1.27	1.27	1.27
<b>Annual Capital Recovery Charge - Equity</b>	<b>15.29</b>	<b>15.29</b>	<b>15.29</b>	<b>15.29</b>	<b>15.29</b>
Monthly Capital Recovery Charge - Total	3.34	3.34	3.34	3.34	3.34
<b>Annual Capital Recovery Charge - Total</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (1 Month)	0.50	0.50	0.50	0.50	0.50
Maintenance Spares (15% of O&M)	0.90	0.90	0.90	0.90	0.90
Receivables (45 days)	5.77	5.78	5.77	5.77	5.76
<b>Total</b>	<b>7.17</b>	<b>7.18</b>	<b>7.17</b>	<b>7.17</b>	<b>7.15</b>
Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>0.86</b>	<b>0.81</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>
<b>Fee &amp; Charges (2019-24) (Applicable)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>





Annual Capital Recovery Charge - Loan	24.82	24.82	24.82	24.82	24.82
Annual Capital Recovery Charge - Equity	15.29	15.29	15.29	15.29	15.29
<b>Annual Capital Recovery Charge - Total</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>	<b>40.11</b>
<b>O&amp;M Expenses (2% of the Gross Capital Cost)</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>	<b>5.97</b>
<b>Interest on Working Capital</b>	<b>0.86</b>	<b>0.81</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>46.95</b>	<b>46.89</b>	<b>46.84</b>	<b>46.84</b>	<b>46.84</b>



## Asset-5

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Opening Gross Capital Cost</b>	<b>106.89</b>	<b>109.61</b>	<b>128.41</b>	<b>128.41</b>	<b>128.41</b>
Opening Gross Notional Loan	74.83	76.73	89.89	89.89	89.89
Opening Gross Equity	32.06	32.88	38.52	38.52	38.52
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>0.66</b>	<b>3.85</b>	<b>7.46</b>	<b>12.21</b>	<b>17.46</b>
Recovered Gross Notional Loan	0.54	3.11	6.00	9.73	13.81
Recovered Gross Equity	0.12	0.73	1.47	2.47	3.65
<b>Opn.Net Capital Cost</b>	<b>106.23</b>	<b>105.76</b>	<b>120.95</b>	<b>116.20</b>	<b>110.95</b>
Opn. Net Notional Loan	74.29	73.62	83.89	80.16	76.08
Opn. Net Equity	31.94	32.14	37.05	36.04	34.87
<b>Recovered Capital Cost (During the Year)</b>	<b>3.19</b>	<b>3.62</b>	<b>4.74</b>	<b>5.25</b>	<b>5.82</b>
Recocered Notional Loan	2.57	2.88	3.73	4.08	4.45
Recovered Equity	0.61	0.73	1.01	1.17	1.37



<b>Cl. Net Capital Cost</b>	<b>103.04</b>	<b>102.15</b>	<b>116.20</b>	<b>110.95</b>	<b>105.13</b>
Cl. Net Notional Loan	71.72	70.73	80.16	76.08	71.63
Cl. Net Equity	31.33	31.41	36.04	34.87	33.50
<b>Additional Capital Cost</b>	<b>2.72</b>	<b>18.80</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	1.90	13.16	0.00	0.00	0.00
Additional Equity	0.82	5.64	0.00	0.00	0.00
Years	14.75	13.75	12.75	11.75	10.75
Months	177.00	165.00	153.00	141.00	129.00
Weighted Average Rare of Interest p.a.	8.8000%	8.8000%	8.8000%	8.8000%	8.8000%
Weighted Average Rare of Interest p.m.	0.7333%	0.7333%	0.7333%	0.7333%	0.7333%
Monthly Recovery Factors - Loan	0.010106	0.010469	0.010896	0.011404	0.012015
Monthly Capital Recovery Charge - Loan	0.75	0.77	0.91	0.91	0.91
<b>Annual Capital Recovery Charge - Loan</b>	<b>9.01</b>	<b>9.25</b>	<b>10.97</b>	<b>10.97</b>	<b>10.97</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors - Equity	0.014402	0.014683	0.015026	0.015445	0.015966
Monthly Capital Recovery Charge - Equity	0.46	0.47	0.56	0.56	0.56
<b>Annual Capital Recovery Charge - Equity</b>	<b>5.52</b>	<b>5.66</b>	<b>6.68</b>	<b>6.68</b>	<b>6.68</b>
Monthly Capital Recovery Charge - Total	1.21	1.24	1.47	1.47	1.47
<b>Annual Capital Recovery Charge - Total</b>	<b>14.53</b>	<b>14.91</b>	<b>17.65</b>	<b>17.65</b>	<b>17.65</b>



<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	2.48	2.54	3.01	3.01	3.01
<b>Total</b>	<b>2.48</b>	<b>2.54</b>	<b>3.01</b>	<b>3.01</b>	<b>3.01</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>0.33</b>	<b>0.34</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	9.01	9.25	10.97	10.97	10.97
Annual Capital Recovery Charge - Equity	5.52	5.66	6.68	6.68	6.68
<b>Annual Capital Recovery Charge - Total</b>	<b>14.53</b>	<b>14.91</b>	<b>17.65</b>	<b>17.65</b>	<b>17.65</b>
<b>O&amp;M Expenses (as admitted in instant order)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>0.33</b>	<b>0.34</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>14.86</b>	<b>15.26</b>	<b>18.06</b>	<b>18.06</b>	<b>18.06</b>



**Annexure-X**

(₹ in lakh)

**Asset-5**

Particulars	Additional Capital Expenditure				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Capital Cost - Central Portion	128.41	128.41	128.41	128.41	128.41
Opening Gross Notional Loan	89.89	89.89	89.89	89.89	89.89
Grant In Aid	38.52	38.52	38.52	38.52	38.52
Recovered Gross Capital Cost (As on 1st April)	23.28	29.75	36.93	44.91	53.77
Recovered Gross Notional Loan	18.26	23.13	28.45	34.25	40.58
Recovered Gross Equity	5.02	6.62	8.48	10.66	13.20
Opn.Net Capital Cost	105.13	98.66	91.48	83.50	74.64
Opn. Net Notional Loan	71.63	66.76	61.44	55.64	49.32
Opn. Net Equity	33.50	31.90	30.04	27.86	25.32



Recovered Capital Cost (During the Year)	<b>6.47</b>	<b>7.18</b>	<b>7.98</b>	<b>8.87</b>	<b>9.86</b>
Recocered Notional Loan	4.87	5.32	5.80	6.33	6.90
Recovered Equity	1.60	1.86	2.18	2.54	2.96
Cl. Net Capital Cost	<b>98.66</b>	<b>91.48</b>	<b>83.50</b>	<b>74.64</b>	<b>64.77</b>
Cl. Net Notional Loan	66.76	61.44	55.64	49.32	42.41
Cl. Net Equity	31.90	30.04	27.86	25.32	22.36
Additional Capital Cost	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years	9.75	8.75	7.75	6.75	5.75
Months	117.00	105.00	93.00	81.00	69.00
Weighted Average Rare of Interest p.a.	8.7430%	8.7430%	8.7430%	8.7430%	8.7430%
Weighted Average Rare of Interest p.m.	0.7286%	0.7286%	0.7286%	0.7286%	0.7286%
Monthly Recovery Factors -Loan	0.012731	0.013660	0.014842	0.016388	0.018491
Monthly Capital Recovery Charge - Loan	0.91	0.91	0.91	0.91	0.91



Annual Capital Recovery Charge - Loan	<b>10.94</b>	<b>10.94</b>	<b>10.94</b>	<b>10.94</b>	<b>10.94</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.016619	0.017452	0.018536	0.019983	0.021985
Monthly Capital Recovery Charge - Equity	0.56	0.56	0.56	0.56	0.56
Annual Capital Recovery Charge - Equity	<b>6.68</b>	<b>6.68</b>	<b>6.68</b>	<b>6.68</b>	<b>6.68</b>
Monthly Capital Recovery Charge - Total	1.47	1.47	1.47	1.47	1.47
Annual Capital Recovery Charge - Total	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>
<b>Interest on Working Capital</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
Receivables (45 days)	2.20	2.20	2.20	2.20	2.20
Total	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>	<b>2.20</b>



Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>0.27</b>	<b>0.25</b>	<b>0.23</b>	<b>0.23</b>	<b>0.23</b>
<b>Fee &amp; Charges (2019-24) (Applicable)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge - Loan	10.94	10.94	10.94	10.94	10.94
Annual Capital Recovery Charge - Equity	6.68	6.68	6.68	6.68	6.68
Annual Capital Recovery Charge - Total	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>	<b>17.62</b>
O&M Expenses (2% of the Gross Capital Cost)	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.27	0.25	0.23	0.23	0.23
<b>Total Fee &amp; Charges (Annualized)</b>	<b>17.89</b>	<b>17.87</b>	<b>17.85</b>	<b>17.85</b>	<b>17.85</b>





**Asset-6**

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2015- 16	2016- 17	2017- 18	Total			2015-16	2016-17	2017-18	2018-19
PLCC	52.04	1.16	-	-	1.16	53.20	6.33%	2.78	3.37	3.37	3.37
<b>Total</b>	<b>52.04</b>	<b>1.16</b>	<b>-</b>	<b>-</b>	<b>1.16</b>	<b>53.20</b>	<b>Total</b>	<b>2.78</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>
<b>Average Gross Block (₹ in lakh)</b>								<b>52.62</b>	<b>53.20</b>	<b>53.20</b>	<b>53.20</b>
<b>Weighted Average Rate of Depreciation</b>								<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>



**Asset-7**

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017- 18	Total			2015-16	2016-17	2017-18	2018-19
PLCC	0.78	0.19	-	-	0.19	0.97	6.33%	0.05	0.06	0.06	0.06
<b>Total</b>	<b>0.78</b>	<b>0.19</b>	<b>-</b>	<b>-</b>	<b>0.19</b>	<b>0.97</b>	<b>Total</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>
<b>Average Gross Block (₹ in lakh)</b>								<b>0.88</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>
<b>Weighted Average Rate of Depreciation</b>								<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>



**Asset-8**

2014-19		ACE (₹ in lakh)				Depreciation as per Regulations		
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2017-18	2018-19
PLCC	94.81	0.00	2.67	2.67	97.48	6.33%	6.00	6.09
<b>Total</b>	<b>94.81</b>	<b>0.00</b>	<b>2.67</b>	<b>2.67</b>	<b>97.48</b>	<b>Total</b>	<b>6.00</b>	<b>6.09</b>
						<b>Average Gross Block (₹ in lakh)</b>	<b>94.81</b>	<b>96.15</b>
						<b>Weighted Average Rate of Depreciation</b>	<b>6.33%</b>	<b>6.33%</b>



## Asset-6

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
PLCC	53.20	-	0.00	53.20	6.33%	3.37	3.37	3.37	3.37	3.37
<b>Total</b>	<b>53.20</b>	<b>-</b>	<b>-</b>	<b>53.20</b>		<b>3.37</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>	<b>3.37</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>53.20</b>	<b>53.20</b>	<b>53.20</b>	<b>53.20</b>	<b>53.20</b>
<b>Weighted Average Rate of Depreciation</b>						<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>



## Asset-7

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019- 20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
PLCC	0.97	-	0.00	0.97	6.33%	0.06	0.06	0.06	0.06	0.06
<b>Total</b>	<b>0.97</b>	<b>-</b>	<b>-</b>	<b>0.97</b>		<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>0.97</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>
<b>Weighted Average Rate of Depreciation</b>						<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>



**Asset-8**

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
PLCC	97.48	-	0.00	97.48	6.33%	6.17	6.17	6.17	6.17	6.17
<b>Total</b>	<b>97.48</b>	<b>-</b>	<b>-</b>	<b>97.48</b>		<b>6.17</b>	<b>6.17</b>	<b>6.17</b>	<b>6.17</b>	<b>6.17</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>97.48</b>	<b>97.48</b>	<b>97.48</b>	<b>97.48</b>	<b>97.48</b>
<b>Weighted Average Rate of Depreciation</b>						<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>	<b>6.33%</b>

