

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 88/TT/2020**

**Coram:**

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

**Date of Order: 22.04.2022**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Asset-A:** Combined Asset for Part of 400 kV Double Circuit (D/C) Vapi-Navi Mumbai Transmission Line (T/L) (from Vapi Gantry till 1<sup>st</sup> M/C point at Loc. AP-18) along with bay at Vapi and 220 kV D/C Vapi-Khadoli Transmission line along with associated Bays, **Asset-B:** 400 kV D/C Vapi-Navi Mumbai Transmission Line, WR1 portion from AP 18 to AP 38 (Part of 400 kV D/C Vapi-Navi Mumbai Transmission Line), **Asset-C1:** Part of 400 kV D/C Navsari-Boisar T/L from AP 18 to AP 38/0 through LILO point of 400 kV D/C Navsari-Boisar at Magarwada GIS (23 B/0) (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus) & Part of 400 kV D/C Vapi-Kudus T/L from AP 38/0 to AP 44 and **Asset-C2:** Part of 400 kV D/C Vapi-Kudus T/L from 104/0 to Kudus (MSETCL) Sub-station and associated bays at Kudus (MSETCL) Sub-station under Western Region System Strengthening Scheme-V in Western Region.

**And in the matter of:**

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

**.....Petitioner**

**Versus**

1. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008.



3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452008.
4. Maharashtra State Electricity Distribution Company Limited,  
Hongkong Bank Building, 3<sup>rd</sup> Floor, M. G. Road, Fort,  
Mumbai-400 001.
5. Maharashtra State Electricity Transmission Company Limited,  
Prakashganga, 6<sup>th</sup> Floor, Plot No. C-19, E-Block,  
Bandra Kurla Complex, Bandra (East),  
Mumbai-400051.
6. Gujarat Urja Vikas Nigam Limited,  
Sardar Patel Vidyut Bhawan,  
Race Course Road,  
Vadodara-390007.
7. Electricity Department,  
Government of Goa, Vidyut Bhawan, Panaji,  
Near Mandvi Hotel,  
Goa-403001.
8. Electricity Department,  
Administration of Daman & Diu,  
Daman-396210.
9. DNH Power Distribution Corporation Limited,  
Vidyut Bhawan, 66 kV Road, Near Secretariat, Amla,  
Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,  
State Load Despatch Building, Dangania,  
Raipur-492013.
11. Chhattisgarh State Power Distribution Company Limited,  
P. O. Sunder Nagar, Dangania,  
Raipur, Chhattisgarh-492013.

.....Respondents

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

**For Respondents** : Shri Anindya Khare, MPPMCL



## ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for true-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the “the 2014 Tariff Regulations”) and for determination of transmission tariff for 2019-24 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 the following assets covered under Western Region System Strengthening Scheme-V in Western Region (hereinafter referred to as “the transmission project”):

**Asset A:** Combined Asset for Part of 400 kV Double Circuit (D/C) Vapi-Navi Mumbai Transmission Line (T/L) (from Vapi Gantry till 1<sup>st</sup> M/C point at Loc. AP-18) along with bay at Vapi and 220 kV Double Circuit (D/C) Vapi-Khadoli Transmission line along with associated bays;

**Asset B:** 400 kV D/C Vapi-Navi Mumbai Transmission Line, WR1 portion from AP 18 to AP 38 (Part of 400 kV D/C Vapi-Navi Mumbai Transmission Line);

**Asset C1:** Part of 400 kV D/C Navsari-Boisar T/L from AP 18 to AP 38/0 through LILO point of 400 kV D/C Navsari-Boisar at Magarwada GIS (23 B/0) (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus) & Part of 400 kV D/C Vapi-Kudus T/L from AP 38/0 to AP 44; and

**Asset-C2:** Part of 400 kV D/C Vapi-Kudus T/L from 104/0 to Kudus (MSETCL) Sub-station and associated bays at Kudus (MSETCL) Sub-station.

2. The transmission assets have been referred to as Asset-A, Asset-B, Asset-C1 and Asset-C2 in the 2014-19 tariff period. The Petitioner has combined Asset-A, Asset-B, Asset-C1 and Asset-C2 into single Combined Asset in the



2019-24 tariff period. Accordingly, the transmission assets are referred to as Combined Asset in the 2019-24 tariff period.

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

- “1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9.1 and 10.1 above.
- 2) Hon’ble commission is requested to consider the disallowed IEDC in order dated 06.08.2019 in Petition No. 236/TT/2018 as the entire delay has been condoned.
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.1 and 10.1 above for respective block.
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.
- 7) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.7 above.
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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



4. **Backdrop of the case**

- a) Investment Approval (IA) for implementation of the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum Ref: C/CP/WRSSS-V dated 26.12.2007 in its 203<sup>rd</sup> meeting held on 30.11.2007 at an estimated cost of ₹47769 lakh including IDC of ₹3497 lakh based on 3<sup>rd</sup> quarter price level.
- b) The Revised Cost Estimate-I (RCE-I) of the project was approved by the Board of Directors of the Petitioner vide Memorandum Ref: C/CP/RCE/WRSS-V dated 1.11.2012 in 277<sup>th</sup> meeting held on 26.9.2012 at an estimated cost of ₹72181 lakh including IDC of ₹9162 lakh based on April, 2012 price level.
- c) Subsequently, Revised Cost Estimate-II (RCE-II) was approved by the Board of the Directors of the Petitioner vide Memorandum Ref: C/CP/RCE/RCE-II WRSS-V dated 20.1.2016 in its 324<sup>th</sup> meeting held on 12.1.2016 at an estimated cost of ₹73848 lakh including IDC of ₹5287 lakh based on June, 2015 price level.
- d) The Petitioner vide affidavit dated 14.7.2021 has furnished Revised Cost Estimate-III (REC-III) at ₹82734 lakh including IDC of ₹215.35 lakh which has been approved by Board of Directors of Petitioner Company vide Memorandum No. PA-1920-12-0JI-RCE010 dated 12.3.2020.
- e) The scope of work covered under “Western Region System Strengthening Scheme-V” scheme is as follows:



### **Transmission Line:**

- i. Vapi-Kudus (MSETCL) 400 kV D/C line
- ii. LILO of Lonikhand (MSETCL) – Kalwa (MSETCL) 400 kV S/C line at Navi Mumbai
- iii. Vapi- Khadoli (UT of DNH) 220 kV D/C line

### **Sub-stations:**

- i. 400/ 220 kV, 2x315 MVA New Sub-station (GIS) at Navi Mumbai\*
- ii. Extension of 400/ 220 kV Vapi Sub-station
- iii. Extension of 220/ 66 kV Khadoli (UT of DNH) Sub-station
- iv. Extension of 400/ 220 kV Kudus (MSETCL) Sub-station\*

\*2 Numbers 400 kV GIS bays surplus available, due to termination of 400 kV D/C Vapi Navi-Mumbai line at Kudus (MSETCL) Sub-station instead of Navi Mumbai (originally envisaged) shall be utilized in future.

- f) The transmission assets covered in the instant project have been put into commercial operation in three tariff periods, i.e. in 2009-14, 2014-19 and 2019-24 tariff periods. The tariff for the transmission assets were approved in different petitions and the details are as follows:

Asset	Asset	COD	Remarks
A	Combined Asset for Part of 400 kV D/C Vapi-Navi Mumbai TL (from Vapi Gantry till 1st M/C point at Loc. AP-18) along with bay at Vapi (DOCO 01.04.2013) and 220 kV D/C Vapi – Khadoli Transmission Line along with associated Bays (COD: 1.10.10)	1.4.2013 & 1.10.2010	Commission's truing up order dated 9.10.2018 in Petition No. 193/TT/2017.  Covered in instant petition.
B	400kV D/C Vapi-Navi Mumbai Transmission Line, WR1 portion from AP18 to AP38 (Part of 400 kV D/C Vapi-Navi Mumbai Transmission Line)	1.4.2014	Commission's order dated 22.3.2016 in Petition No. 412/TT/2014.  Covered in instant petition.
C1	Part of 400 kV D/C Navsari-Boisar Transmission Line from AP 18 to AP 38/0 through LILO point of 400 kV D/C Navsari-Boisar at Magarwada GIS (23B/0) (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus) & Part of 400 kV D/C	1.3.2015	Commission's order dated 6.8.2019 in Petition No. 236/TT/2018.



	Vapi-Kudus Transmission Line from AP 38/0 to AP 44		Covered in instant petition.
C2	Part of 400 kV D/C Vapi-Kudus Transmission Line from 104/0 to Kudus (MSETCL) S/S and associated bays at Kudus (MSETCL) Sub-station	31.12.2017	
	Remaining Assets	Declared under commercial operation during 2019-24.	
	LILO of Lonikhand (MSETCL)-Kalwa (MSETCL) 400 kV S/C line at Navi Mumbai	13.5.2019	Petition No. 180/TT/2021.
	400/220 kV, 2x315 MVA New sub-station (GIS) at Navi Mumbai		

- g) As per IA dated 26.12.2007, transmission assets were scheduled to be put into commercial operation within 33 months from the date of IA, i.e. by 25.9.2010. There is time over-run of 30 months, 42 months, 53 months and 6 days (1618 days) and 87 months and 6 days (2654 days) in case of Combined Asset-A, Asset-B, Asset-C1 and asset-C2. The time over-run in case of the transmission assets has already settled by the Commission in the earlier orders.
- h) Truing-up of tariff of 2009-14 period and tariff of 2014-19 period in respect of Asset-A was allowed by the Commission vide order dated 9.10.2018 in Petition No. 193/TT/2017. Transmission tariff of Asset-B was allowed from COD to 31.3.2019 vide order dated 22.3.2016 in Petition No. 412/TT/2014. Transmission tariff of Asset-C1 and Asset-C2 from their respective CODs as 1.3.2015 and 31.12.2017 to 31.3.2019 was approved vide order dated 6.8.2019 in Petition No. 236/TT/2018. There was time over-run of 53 months and 6 days (1618 days) and 87 months and 6 days (2654 days) in execution of Asset-C1 and C-2 respectively and the same was condoned by the Commission vide order dated 6.8.2019.

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

6. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or objections have been received from the general public in response to the aforesaid notices published in the newspapers. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 1, has filed its reply vide affidavit dated 13.2.2020 and has raised the issues of effective Income Tax rates for grossing up of Return on Equity (RoE) during the 2014-19 period, Additional Capital Expenditure (ACE) during 2014-19 period and Initial Spares. The Petitioner vide affidavit dated 8.6.2021 has filed rejoinder to the reply of MPPMCL.

7. It has been placed before us that MPPMCL has been raising the issue of RoE in other petitions as well despite clear findings of the Commission. The contentions of MPPMCL on the issue of RoE have been rejected by the Commission in other petitions including Petition No. 326/TT/2020 vide order dated 21.9.2021. As MPPMCL has not challenged the findings, the same have attained finality. Accordingly, the issue of RoE raised by MPPMCL is rejected. Other issues raised by MPPMCL and clarifications thereto given by the Petitioner have been dealt in the relevant paragraphs of this present order. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant paragraphs of this order.





8. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 24.12.2019, 15.6.2021 and 14.7.2021, reply of MPPMCL filed vide affidavit dated 13.2.2020 and rejoinder affidavit dated 8.6.2021 to the reply filed by MPPMCL.

9. Hearing in this matter was held on 10.9.2021 through video conference and order was reserved. Having heard the representatives of the Petitioner and MPPMCL and having perused the materials on record, we proceed to dispose of the petition.

**Truing up of Annual Fixed Charges for 2014-19 Tariff Period**

10. The details of the trued-up transmission charges claimed by the Petitioner for the transmission assets are as follows:

(₹ in lakh)

<b>Asset A</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	326.04	329.93	329.93	329.93	329.93
Interest on Loan	305.16	280.48	251.34	222.19	193.04
Return on Equity	361.08	367.09	366.90	366.90	367.89
Interest on Working Capital	39.75	39.97	39.87	39.80	39.77
O&M Expenses	306.00	316.16	326.68	337.49	348.72
<b>Total</b>	<b>1338.03</b>	<b>1333.63</b>	<b>1314.72</b>	<b>1296.31</b>	<b>1279.35</b>

(₹ in lakh)

<b>Asset- B</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	482.12	503.96	508.17	508.31	508.31
Interest on Loan	565.47	543.17	498.20	444.96	397.01
Return on Equity	537.59	564.52	568.95	569.10	570.63
Interest on Working Capital	37.22	37.85	37.04	35.85	34.81
O&M Expenses	13.22	13.67	14.12	14.59	15.07
<b>Total</b>	<b>1635.62</b>	<b>1663.17</b>	<b>1626.48</b>	<b>1572.81</b>	<b>1525.83</b>



(₹ in lakh)

Asset- C1					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	12.21	145.60	147.76	148.08	148.08
Interest on Loan	14.44	164.93	153.87	140.62	127.05
Return on Equity	13.61	163.10	165.43	165.79	166.23
Interest on Working Capital	1.03	12.13	12.02	11.77	11.51
O&M Expenses	1.82	22.19	22.91	23.67	24.46
<b>Total</b>	<b>43.11</b>	<b>507.95</b>	<b>501.99</b>	<b>489.93</b>	<b>477.33</b>

(₹ in lakh)

Asset- C2		
Particulars	2017-18 (Pro-rata for 91 days)	2018-19
Depreciation	243.76	1062.54
Interest on Loan	268.03	1116.47
Return on Equity	272.92	1192.82
Interest on Working Capital	18.79	80.44
O&M Expenses	38.02	157.57
<b>Total</b>	<b>841.52</b>	<b>3609.84</b>

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

(₹ in lakh)

Asset- A					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	25.50	26.35	27.22	28.12	29.06
O&M Expenses	45.90	47.42	49.00	50.62	52.31
Receivables	223.01	222.27	219.12	216.05	213.23
Total	294.41	296.04	295.34	294.79	294.60
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>39.75</b>	<b>39.97</b>	<b>39.87</b>	<b>39.80</b>	<b>39.77</b>

(₹ in lakh)

Asset- B					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1.10	1.14	1.18	1.22	1.26
O&M Expenses	1.98	2.05	2.12	2.19	2.26
Receivables	272.60	277.20	271.08	262.14	254.31
Total	275.68	280.39	274.38	265.55	257.83
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total</b>	<b>37.22</b>	<b>37.85</b>	<b>37.04</b>	<b>35.85</b>	<b>34.81</b>



(₹ in lakh)

Asset- C1					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1.79	1.85	1.91	1.97	2.04
O&M Expenses	3.22	3.33	3.44	3.55	3.67
Receivables	84.60	84.66	83.66	81.66	79.56
Total	89.61	89.84	89.01	87.18	85.27
Rate of Interest (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total</b>	<b>1.03</b>	<b>12.13</b>	<b>12.02</b>	<b>11.77</b>	<b>11.51</b>

(₹ in lakh)

Asset- C2		
Particulars	2017-18 (Pro-rata for 91 days)	2018-19
Maintenance Spares	12.71	13.13
O&M Expenses	22.88	23.64
Receivables	562.56	601.64
Total	598.15	638.41
Rate of Interest (in %)	12.60	12.60
<b>Total</b>	<b>18.79</b>	<b>80.44</b>

### Capital Cost

12. The Commission vide order dated 9.10.2018 in Petition No. 193/TT/2017 in respect of Asset-A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in respect of Asset-B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in respect of Assets-C1 and Asset-C2 has approved the following capital cost and ACE which are as follows:

Asset	Apportioned approved cost as per REC-II	Admitted Capital Cost up to COD	ACE					Total cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
A	7025.9	5962.61	147.14	0.00	0.00	0.00	0.00	6109.75
B	9627.02	8794.53	832.49	0.00	0.00	0.00	0.00	9627.02
C1	2850	2722.6	0.00	69.91	12.00	4.67	0.00	2809.18
C2	18948	17565.2	0.00	0.00	0.00	328.59	632.66	18526.45

13. Based on the Auditor's Certificates dated 13.10.2014 and 8.3.2017 for Asset- A, dated 2.8.2019 for Asset-B, Asset C-1 and Asset C-2, details of the



respective capital cost upto COD and as on 31.3.2019 (including actual ACE during 2014-19 period) claimed by the Petitioner are as follows:

Assets	Apportioned Approved Cost as per RCE-II	Capital Cost up to COD	ACE					Total cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
A	7025.90	6281.91	147.14	0.00	0.00	0.00	0.00	6429.05
B	9627.02	8794.53	673.05	154.2	5.25	0.00	0.00	9627.03
C1	2850.00	2765.97	0.00	26.54	12.00	0.00	0.00	2804.51
C2	18948.00	17991.47	0.00	0.00	0.00	1786.77	1142.83	20921.07
	<b>38450.92</b>	<b>35833.88</b>	<b>820.19</b>	<b>180.74</b>	<b>17.25</b>	<b>1786.77</b>	<b>1142.83</b>	<b>39781.66</b>

14. The Petitioner has claimed total capital cost of ₹39781.66 lakh for the transmission assets as on 31.3.2019.

### **Cost Over-run**

15. The estimated completion cost of Combined Asset-A, Asset-B and Asset-C1 is within RCE-II. However, completion cost of Asset-C2 is more than the RCE-II by approximately ₹1973.07 lakh.

16. The Petitioner vide affidavit dated 14.7.2021 has submitted RCE-III approved by its Board of Directors. The details of the capital cost of the transmission project as approved by the Board of Directors of the Petitioner are as follows:

Date	Project cost
Investment Approval (IA) 26.12.2007	₹47769 lakh including IDC of ₹3497 lakh
Revised Cost Estimate-I (RCE-I) 26.9.2012	₹72181 lakh including IDC of ₹9162 lakh
Revised Cost Estimate-II (RCE-II) 12.1.2016	₹73848 lakh including IDC of ₹15287 lakh
Revised cost estimate-III (RCE-III) 12.3.2020	₹82734 lakh including IDC of ₹21535 lakh

17. We have considered the submissions of the Petitioner. The Petitioner has estimated the transmission project cost based on RCE-II as ₹73848 lakh including IDC of ₹15287 lakh. Based on this arrangement, the Petitioner has re-



apportioned the cost of Asset-C2 as ₹18948 lakh and the Petitioner has submitted that the estimated completion cost of Asset-C2 is ₹18912.38 lakh. The Petitioner in the instant true up petition has submitted that the estimated completion cost of Asset-C2 as on 31.3.2019 is ₹20921.07 lakh and the estimated completion cost of Asset-C2 as on 31.3.2024 is ₹21703.74 lakh. On comparison of apportioned approved cost of Asset-C2 in RCE-II as ₹18948 lakh and apportioned cost of Asset-C2 as submitted by the Petitioner in RCE-III is ₹22200.66 lakh, there is variation in cost of Asset-C2 of ₹3252.66 lakh (i.e. ₹22200.66 lakh - ₹18948 lakh = ₹3252.66 lakh). The Petitioner has not submitted any justification for increase of about ₹3252.66 lakh in case of Asset-C2. It is further observed that the RCE-III submitted by the Petitioner has been approved by its Board of Directors on 12.3.2020 which is almost three years after the COD of Asset-C2. The Petitioner is henceforward directed to ensure that in all future petitions wherever the cost of asset increases beyond the FR cost, in that event, Revised Cost Estimate shall be required to be submitted prior to COD of the asset and not after the COD of the asset. Further, after COD of the asset, the Petitioner shall invariably furnish actual cost incurred duly approved by the competent authority. In such cases, the Petitioner is directed to place on record valid justification and documentary evidence with reference to cost variation along with the petition. Further, after COD of the asset, the Petitioner shall invariably furnish actual cost incurred duly approved by the competent authority. In such cases, the Petitioner is directed to place on record valid justification and documentary evidence with reference to cost variation along with the petition.



18. As the Petitioner has not given detailed justification of cost over-run in case of Asset-C2, the completion cost of Asset-C2 is restricted to the RCE-II apportioned approved cost.

### **Time Over-run**

19. As per IA dated 26.12.2007, transmission assets were scheduled to be put into commercial operation within 33 months from the date of IA. Accordingly, the scheduled COD of the transmission assets was 25.9.2010. The Commission vide order dated 9.10.2015 in Petition No. 60/TT/2013 did not condone delay of 18 months i.e. from October, 2010 to March, 2012 in execution of part of Asset-A i.e. part of 400 kV D/C Vapi-Navi Mumbai T/L (from Vapi Gantry till 1st M/C point at location AP-18) along with bay at Vapi while delay of 12 months i.e. from April, 2012 to March, 2013 was condoned. The Commission, however, condoned entire time over-run of 42 months in respect of Asset-B vide order dated 22.3.2016 in Petition No. 412/TT/2014. Entire time over-run of 1618 days and 2654 days in respect of Asset-C1 and Asset-C2 respectively was condoned vide order dated 6.8.2019 in Petition No. 236/TT/2018.

### **Interest During Construction**

20. The Petitioner has claimed Interest During Construction (IDC) for the transmission assets and has submitted Auditor's Certificates in support of the same. With respect to Asset-B, the Petitioner vide affidavit dated 14.7.2021 has submitted that entire IDC has been discharged as on COD. However, the Petitioner has not submitted computation of IDC in support of its claim. The Commission has considered IDC for Asset-B as considered vide order dated 22.3.2016 in Petition No. 412/TT/2014. However, the Petitioner is directed to



provide computations of IDC along with year-wise details of IDC discharged in all future petitions without fail, failing which the Commission would be constrained to consider and approve IDC as deemed appropriate.

21. With respect to Asset-C1 and Asset-C2, allowable IDC has been worked out considering the information submitted by the Petitioner for individual assets separately on cash basis. The loan details submitted in Form 9C for 2014-19 tariff period and IDC computation sheet have been considered for the purpose of IDC calculation on cash and on accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

22. Accordingly, based on the information filed by the Petitioner, IDC considered in respect of the transmission assets is as follows:

(₹ in lakh)					
Assets	IDC claimed by Petitioner (as per Auditor's Certificates)	Entitled IDC up to scheduled COD	IDC disallowed as on scheduled COD due to computational difference	Un-discharged portion of entitled IDC as on scheduled COD	IDC allowed on cash basis as on scheduled COD
	A	B	C=(A-B)	D	E=(B-D)
Asset-B	2411.23	2411.23	0.00	0.00	2411.23
Asset-C1	583.93	583.89	0.04	43.11	540.77
Asset-C2	4804.79	4804.79	0.00	275.40	4529.39

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

23. The Petitioner has claimed IEDC for Asset-B, Asset-C1 and Asset-C2 and has also submitted Auditor's Certificates in support of the same. The Commission vide order 6.8.2019 in Petition No. 236/TT/2018 had restricted IEDC of Asset-C2 to the percentage of hard cost indicated in the abstract cost estimate. The Petitioner vide affidavit dated 6.10.2021 has submitted that it has filed an Appeal before the Appellate Tribunal for Electricity (APTEL) bearing Appeal No. 355 of 2019 against the Commission's order 6.8.2019 in Petition No. 236/TT/2018 seeking relief



against IEDC restricted by the Commission. The APTEL vide judgment dated 1.10.2021 disposed of the said Appeal, directing the Commission to reconsider the issue relating to IEDC in view of its observations in judgment dated 2.12.2019 in Appeal No. 95 and Appeal No. 140 of 2018; judgment dated 9.3.2021 in Appeal No. 63 of 2020; judgment dated 22.4.2021 in Appeal No. 55 of 2020; judgment dated 13.9.2021 in Appeal No. 445 of 2019, Appeal No. 188 of 2020 and Appeal No. 224 of 2021. The aforementioned information was brought on record by the Petitioner vide affidavit dated 6.10.2021. IEDC allowed by the Commission in respect of Asset-A vide order dated 9.10.2018 in Petition No. 193/TT/2017 is ₹286.97 lakh. IEDC claimed by the Petitioner with respect to Asset-B, Asset-C1 and Asset-C2 is ₹731.02 lakh, ₹188.79 lakh and ₹1475.08 lakh respectively.

24. The balance scope of the transmission project i.e. asset 400/220 kV New GIS Sub-station at Navi Mumbai and LILO of Lonikhand (MSEB)-Kalwa (MSEB) 400 kV S/C Line at Navi Mumbai has been put under commercial operation on 13.5.2019. Further, the Petitioner has filed Petition No. 180/TT/2021 (Diary No. 325/2020) in respect of the said balance portion of the transmission project. In Petition No. 180/TT/2021, the Petitioner through Auditor's Certificate dated 3.8.2019 has claimed IEDC of ₹3592.18 lakh. The total IEDC claimed by the Petitioner for all the transmission assets covered under the transmission project is ₹6274.04 lakh. IEDC for the transmission project as a whole as indicated in RCE-II is ₹4751 lakh. The Commission has allowed entire IEDC in respect of Asset-C2. Further, IEDC in respect of balance scope of the transmission project i.e. asset 400/220 kV New GIS Sub-station at Navi Mumbai and LILO of Lonikh and (MSEB)-Kalwa (MSEB) 400 kV S/C Line at Navi Mumbai will be considered in





accordance with the APTEL's above said judgements. Accordingly, the details of claimed and allowed IEDC are as follows:

Assets	IEDC claimed as per Auditor's Certificates	IEDC dis-allowed due to time over-run	IEDC allowed as on COD
	1	2	3 = (1-2)
Asset- B	731.02	0.00	731.02
Asset- C1	188.79	0.00	188.79
Asset-C2	1475.08	0.00	1475.08

### **Initial Spares**

25. Regulation 13(d) of the 2014 Tariff Regulations provides as follows:

*“Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to 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%*

*.....”*

26. The Petitioner has claimed the Initial Spares and prayed to revise the Initial Spares allowed earlier in terms of the APTEL judgment dated 14.9.2019 in Appeal No. 74 of 2017. In the instant petition, the Petitioner has not claimed any Initial Spares for Asset-B and Asset-C1. The Initial Spares claimed by the Petitioner are as follows:

Asset	Particulars	Estimated Completion Cost (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Initial Spares allowable (₹ in lakh)	Initial Spares deducted (₹ in lakh)
Asset-C2	Transmission Line	13867.88	110.00	138.97	0.00

27. MPPMCL has submitted that Initial Spares claimed by the Petitioner are beyond the ceiling in respect of sub-station and, therefore, excess Initial Spares claimed are required to be disallowed. The Petitioner has claimed excess expenditure in terms of APTEL judgment dated 14.9.2018 in Appeal No. 74/2017.



Further, the transmission line and sub-stations are different identities and if their clubbing is allowed, the identity of individual elements will be lost. MPPMCL has prayed that ceiling of Initial Spares should be applied asset-wise instead of clubbing the same and disallow the excess Initial Spares claimed by the Petitioner.

28. In response, the Petitioner has reiterated its submissions with regard to Initial Spares as already pleaded in the petition.

29. We have considered the submissions of the Petitioner and MPPMCL. The APTEL in its judgment dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling limits on the overall project cost. The relevant portion of the said judgment is extracted as follows:

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

30. In view of above, Initial Spares are to be allowed as percentage of the project cost as a whole. However, in the present case, entire scope of the transmission project has not been combined as on 31.3.2019. The overall project cost of the assets is arrived at only when all the assets are combined. Therefore, excess Initial Spares are disallowed in the instant order and the Petitioner can claim excess Initial Spares when all the assets are combined.

31. The details of the Initial Spares allowed for Asset-C2 for 2014-19 tariff period are as follows:



Asset	Plant & machinery cost up to cut-off date (excluding IDC and IEDC as per Auditor's Certificate) (₹ in lakh) (A)	Initial Spares claimed (₹ in lakh) (B)	Ceiling Limit (in %) (C)	Allowable Initial Spares worked out	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
				D = [(A-B)*C/(100-C)]		
Asset-C2	13867.88	110.00	1	138.97	-	110.00

### Capital Cost as on COD

32. Accordingly, the details of the capital cost of the transmission assets as on COD approved after adjustment of IDC, IEDC and Initial Spares is as follows:

Assets	Capital cost as on 1.4.2014 or COD whichever is later as per Auditor's Certificate	Less: IDC as on COD due to		Less: IEDC disallowed as on COD	Un-discharged Initial Spares	Capital cost considered as on 1.4.2014/COD whichever is later
		Computational difference	Un-discharged			
Asset A	5962.61	0.00	0.00	0.00	0.00	5962.61
Asset B	8794.53	0.00	0.00	0.00	0.00	8794.53
Asset C1	2765.97	0.04	43.11	0.00	0.00	2722.81
Asset C2	17991.47	0.00	275.40	0.00	7.70	17708.38

### Additional Capital Expenditure (ACE)

33. The Commission vide order dated 9.10.2018 in Petition No. 193/TT/2017 in respect of Asset-A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in respect of Asset-B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in respect of Asset-C1 and Asset-C2 approved ACE for the transmission assets covered in the instant petition which are as follows:

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	147.14	0.00	0.00	0.00	0.00
Asset-B	832.49	0.00	0.00	0.00	0.00
Asset-C1	0.00	26.54	12.00	4.67	0.00
Asset-C2	0.00	0.00	0.00	210.89	467.27

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



(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	147.14	0.00	0.00	0.00	0.00
Asset-B	673.05	154.2	5.25	0.00	0.00
Asset-C1	0.00	0.00	12	0.00	0.00
Asset-C2	0.00	0.00	0.00	1786.77	1142.83

35. MPPMCL has submitted that ACE of ₹328.59 lakh and ₹632.66 lakh has been admitted by the Commission in respect of Asset-C2 in 2017-18 and 2018-19 respectively. However, the Petitioner is claiming an amount of ₹1786.77 lakh and ₹1142.83 lakh in 2017-18 and 2018-19 respectively in this petition. RCE-II has been sanctioned amounting to ₹38450.92 lakh which shows that the total cost as on 31.3.2019 as claimed by the Petitioner has once again exceeded. The Petitioner has not supported the reasons for increase with proper documents and justification.

36. MPPMCL has submitted that excess amount over and above RCE-II may be disallowed and the Petitioner may be held liable to bear the burden of its inefficiency. In response, the Petitioner has submitted that the ACE incurred in the instant assets is on account of undischarged liabilities towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and a copy of RCE-III and the Auditor's certificate has been submitted in support of the same.

37. We have considered the submissions of the Petitioner and MPPMCL. The ACE claimed includes the accrued IDC discharged during the 2014-19 tariff period. We have considered RCE-II and restricted the capital cost of Asset-C2 to the apportioned approved cost as per RCE-II.



38. The ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations as it is towards Balance and Retention payments and works deferred for execution. The undischarged IDC as on COD has been allowed as ACE. The details of ACE allowed are as follows:

(₹ in lakh)

Asset-A	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of balance & retention payments and work deferred for execution/ACE to the extent of unexecuted work	147.14	0.00	0.00	0.00	0.00
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
<b>Total ACE allowed</b>	<b>147.14</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

Asset- B	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of balance & retention payments and work deferred for execution/ ACE to the extent of unexecuted work	673.05	154.20	5.24	0.00	0.00
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
<b>Total ACE allowed</b>	<b>673.05</b>	<b>154.20</b>	<b>5.24</b>	<b>0.00</b>	<b>0.00</b>

(₹ in lakh)

Asset- C1	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of balance & retention payments and work deferred for execution/ACE to the extent of unexecuted work	0.00	26.54	12.00	0.00	0.00
Add: IDC Discharged	0.00	43.11	0.00	0.00	0.00
<b>Total ACE allowed</b>	<b>0.00</b>	<b>69.65</b>	<b>12.00</b>	<b>0.00</b>	<b>0.00</b>



(₹ in lakh)

Asset- C2	ACE	
	2017-18 Pro-rata for 91 days	2018-19
ACE to the extent of balance & retention payments and work deferred for execution/ ACE to the extent of unexecuted work	956.52	0.00
Add: IDC Discharged	110.00	165.40
Add: Initial Spares Discharged	7.70	0.00
<b>Total ACE allowed</b>	<b>1074.22</b>	<b>165.40</b>

\*ACE with respect to Asset-C2 during 2017-18 and 2018-19 has been restricted to its RCE-II apportioned approved cost.

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

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

Asset	Apportioned Approved Cost as per RCE-II	Capital Cost as on COD on cash basis	ACE					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset- A	7025.90	5962.61	147.14	0.00	0.00	0.00	0.00	6109.75
Asset -B	9627.02	8794.53	673.05	154.20	5.24	0.00	0.00	9627.02
Asset- C1	2850.00	2722.81	0.00	69.65	12.00	0.00	0.00	2804.47
Asset -C2	18948.00	17708.38	0.00	0.00	0.00	1074.22	165.40	18948.00

40. As stated above, the capital cost of Asset-C2 has been restricted to the RCE-II apportioned approved cost.

### **Debt-Equity Ratio**

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



<b>Asset-A</b>				
<b>Particulars</b>	<b>As on COD</b>		<b>As on 31.3.2019</b>	
	<b>Amount</b>	<b>(in %)</b>	<b>Amount</b>	<b>(in %)</b>
	<b>(₹ in lakh)</b>		<b>(₹ in lakh)</b>	
Debt	4173.83	70.00	4276.83	70.00
Equity	1788.78	30.00	1832.92	30.00
<b>Total</b>	<b>5962.61</b>	<b>100.00</b>	<b>6109.75</b>	<b>100.00</b>
<b>Asset-B</b>				
Debt	6156.17	70.00	6738.92	70.00
Equity	2638.36	30.00	2888.10	30.00
<b>Total</b>	<b>8794.53</b>	<b>100.00</b>	<b>9627.02</b>	<b>100.00</b>
<b>Asset-C1</b>				
Debt	1905.97	70.00	<b>1963.13</b>	70.00
Equity	816.84	30.00	841.34	30.00
<b>Total</b>	<b>2722.81</b>	<b>100.00</b>	<b>2804.47</b>	<b>100.00</b>
<b>Asset-C2</b>				
Debt	12395.87	70.00	13263.60	70.00
Equity	5312.51	30.00	5684.40	30.00
<b>Total</b>	<b>17708.38</b>	<b>100.00</b>	<b>18948.00</b>	<b>100.00</b>

### Depreciation

42. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations after considering capital expenditure as on 1.4.2014 and approved ACE during 2014-19 tariff period. The Gross Block during 2014-19 tariff period with respect to the transmission assets has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD given at Annexure-I has been worked out after considering the depreciation rates of assets as specified in the 2014 Tariff Regulations and the details of the trued-up depreciation allowed for the transmission assets during 2014-19 tariff period is as follows:

<b>Asset-A</b>						
<b>(₹ in lakh)</b>						
<b>Particulars</b>		<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Gross Block	5962.61	6109.75	6109.75	6109.75	6109.75
B	Addition during the year 2014-19	147.14	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	6109.75	6109.75	6109.75	6109.75	6109.75
D	Average Gross Block [(A+C)/2]	6036.18	6109.75	6109.75	6109.75	6109.75
E	Depreciable value(D*90%)	5432.56	5498.78	5498.78	5498.78	5498.78
F	Weighted Average Rate of	5.32	5.32	5.32	5.32	5.32



	Depreciation (WAROD) (in %)					
G	Lapsed useful life at the beginning of the year (Year)	2.00	3.00	4.00	5.00	6.00
H	Balance useful life at the beginning of the year (Year)	29.00	28.00	27.00	26.00	25.00
I	Cumulative Depreciation at the beginning of the year	672.59	993.49	1318.26	1643.04	1967.82
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	4759.97	4505.29	4180.51	3855.73	3530.95
K	<b>Depreciation during the year</b>	<b>320.90</b>	<b>324.78</b>	<b>324.78</b>	<b>324.78</b>	<b>324.78</b>
L	Cumulative Depreciation at the end of the year (I+K)	993.49	1318.26	1643.04	1967.82	2292.60
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	4439.08	4180.51	3855.73	3530.95	3206.17

(₹ in lakh)

		Asset-B				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	8794.53	9467.58	9621.78	9627.02	9627.02
B	Addition during the year 2014-19	673.05	154.20	5.24	0.00	0.00
C	Closing Gross Block (A+B)	9467.58	9621.78	9627.02	9627.02	9627.02
D	Average Gross Block [(A+C)/2]	9131.06	9544.68	9624.40	9627.02	9627.02
E	Depreciable value(D*90%)	8217.95	8590.21	8661.96	8664.32	8664.32
F	Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
H	Balance useful life at the beginning of the year (Year)	35.00	34.00	33.00	32.00	31.00
I	Cumulative Depreciation at the beginning of the year	0.00	482.12	986.08	1494.25	2002.55
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	8217.95	8108.09	7675.88	7170.07	6661.76
K	<b>Depreciation during the year</b>	<b>482.12</b>	<b>503.96</b>	<b>508.17</b>	<b>508.31</b>	<b>508.31</b>
L	Cumulative Depreciation at the end of the year (I+K)	482.12	986.08	1494.25	2002.55	2510.86
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	7735.83	7604.13	7167.71	6661.76	6153.46

(₹ in lakh)

		Asset-C1				
Particulars		2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	2722.81	2722.81	2792.47	2804.47	2804.47
B	Addition during the year 2014-19	0.00	69.65	12.00	0.00	0.00
C	Closing Gross Block (A+B)	2722.81	2792.47	2804.47	2804.47	2804.47
D	Average Gross Block [(A+C)/2]	2722.81	2757.64	2798.47	2804.47	2804.47





E	Depreciable value(D*90%)	2450.53	2481.88	2518.62	2524.02	2524.02
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	35.00	35.00	34.00	33.00	32.00
I	Cumulative Depreciation at the beginning of the year	0.00	12.21	157.81	305.57	453.65
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2450.53	2469.67	2360.81	2218.45	2070.37
K	<b>Depreciation during the year</b>	<b>12.21</b>	<b>145.60</b>	<b>147.76</b>	<b>148.08</b>	<b>148.08</b>
L	Cumulative Depreciation at the end of the year (I+K)	12.21	157.81	305.57	453.65	601.72
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2438.32	2324.06	2213.05	2070.37	1922.30

(₹ in lakh)

Asset-C2		2017-18 (Pro-rata for 91 days)	2018-19
Particulars			
A	Opening Gross Block	17708.38	18782.60
B	Addition during the year 2014-19	1074.22	165.40
C	Closing Gross Block (A+B)	18782.60	18948.00
D	Average Gross Block [(A+C)/2]	18245.49	18865.30
E	Depreciable value(D*90%)	16420.94	16978.77
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00
H	Balance useful life at the beginning of the year (Year)	34.00	34.00
I	Cumulative Depreciation at the beginning of the year	0.00	240.18
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	16420.94	16738.59
K	<b>Depreciation during the year</b>	<b>240.18</b>	<b>996.09</b>
L	Cumulative Depreciation at the end of the year (I+K)	240.18	1236.27
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	16180.76	15742.50

43. Depreciation allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in case of Asset B and vide order dated 6.8.2019 in Petition No.



236/TT/2018 in case of Asset-C1 and Asset-C2, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset -A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017	320.92	324.80	324.80	324.80	324.80
	Claimed by the Petitioner in the instant petition	326.04	329.93	329.93	329.93	329.93
	Approved after true-up in this order	320.90	324.78	324.78	324.78	324.78
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	486.33	508.31	508.31	508.31	508.31
	Claimed by the Petitioner in the instant petition	482.12	503.96	508.17	508.31	508.31
	Approved after true-up in this order	482.12	503.96	508.17	508.31	508.31
Asset-C1	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	12.21	145.60	147.76	148.20	148.32
	Claimed by the Petitioner in the instant petition	12.21	145.60	147.76	148.08	148.08
	Approved after true-up in this order	12.21	145.60	147.76	148.08	148.08
Asset C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	233.39	961.49
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	243.76	1062.54
	Approved after true-up in this order	0.00	0.00	0.00	240.18	996.09

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

44. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans.



45. IoL has been calculated based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL approved in respect of the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

<b>Asset-A</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	4173.83	4276.83	4276.83	4276.83	4276.83
Cumulative Repayments up to Previous Year	672.59	993.49	1318.26	1643.04	1967.82
Net Loan-Opening	3501.24	3283.34	2958.56	2633.78	2309.00
Addition due to ACE	103.00	0.00	0.00	0.00	0.00
Repayment during the year	320.90	324.78	324.78	324.78	324.78
Net Loan-Closing	3283.34	2958.56	2633.78	2309.00	1984.22
Average Loan	3392.29	3120.95	2796.17	2471.39	2146.61
Weighted Average Rate of Interest on Loan (in %)	8.8261	8.8174	8.8158	8.8130	8.8096
<b>Interest on Loan</b>	<b>299.41</b>	<b>275.19</b>	<b>246.51</b>	<b>217.80</b>	<b>189.11</b>

(₹ in lakh)

<b>Asset-B</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	6156.17	6627.31	6735.25	6738.92	6738.92
Cumulative Repayments upto Previous Year	0.00	482.12	986.08	1494.25	2002.55
Net Loan-Opening	6156.17	6145.19	5749.17	5244.68	4736.37
Addition due to ACE	471.14	107.94	3.67	0.00	0.00
Repayment during the year	482.12	503.96	508.17	508.31	508.31
Net Loan-Closing	6145.19	5749.17	5244.68	4736.37	4228.06
Average Loan	6150.68	5947.18	5496.92	4990.52	4482.22
Weighted Average Rate of Interest on Loan (in %)	9.1936	9.1333	9.0632	8.9160	8.8573
<b>Interest on Loan</b>	<b>565.47</b>	<b>543.18</b>	<b>498.20</b>	<b>444.95</b>	<b>397.00</b>

(₹ in lakh)

<b>Asset- C1</b>					
<b>Particulars</b>	<b>2014-15 (Pro-rata for 31 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	1905.97	1905.97	1954.73	1963.13	1963.13
Cumulative Repayments upto Previous Year	0.00	12.21	157.81	305.57	453.65
Net Loan-Opening	1905.97	1893.76	1796.91	1657.55	1509.48
Addition due to ACE	0.00	48.76	8.40	0.00	0.00
Repayment during the year	12.21	145.60	147.76	148.08	148.08
Net Loan-Closing	1893.76	1796.91	1657.55	1509.48	1361.40
Average Loan	1899.86	1845.34	1727.23	1583.52	1435.44
Weighted Average Rate of Interest on Loan (in %)	8.953	8.938	8.908	8.880	8.851
<b>Interest on Loan</b>	<b>14.45</b>	<b>164.94</b>	<b>153.87</b>	<b>140.62</b>	<b>127.05</b>



(₹ in lakh)

Asset-C2		
Particulars	2017-18 (Pro-rata for 91 days)	2018-19
Gross Normative Loan	12395.87	13147.82
Cumulative Repayments up to Previous Year	0.00	240.18
Net Loan-Opening	12395.87	12907.64
Addition due to ACE	751.95	115.78
Repayment during the year	240.18	996.09
Net Loan-Closing	12907.64	12027.33
Average Loan	12651.75	12467.49
Weighted Average Rate of Interest on Loan (in %)	8.373	8.387
<b>Interest on Loan</b>	<b>264.10</b>	<b>1045.68</b>

46. IoL allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset-A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in case of Asset-B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in case of Asset-C1 and Asset C2, claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017	299.40	275.17	246.49	217.78	189.08
	Claimed by the Petitioner in the instant petition	305.16	280.48	251.34	222.19	193.04
	Approved after true-up in this order	299.41	275.19	246.51	217.80	189.11
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	570.40	552.10	505.55	458.67	411.89
	Claimed by the Petitioner in the instant petition	565.47	543.17	498.20	444.96	397.01
	Approved after true-up in this order	565.47	543.18	498.20	444.95	397.00
Asset -C1	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	14.44	164.99	154.00	140.89	127.45
	Claimed by the Petitioner in the instant petition	14.44	164.93	153.87	140.62	127.05



	Approved after true-up in this order	14.45	164.94	153.87	140.62	127.05
Asset -C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	264.45	1035.27
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	268.03	1116.47
	Approved after true-up in this order	0.00	0.00	0.00	264.10	1045.68

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

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

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

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

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

49. MAT rates as allowed vide order dated 27.4.2020 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 are as follows:

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

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

51. Accordingly, the trued-up RoE allowed for the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

Asset-A					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	1788.78	1832.92	1832.92	1832.92	1832.92
Addition due to ACE	44.14	0.00	0.00	0.00	0.00
Closing Equity	1832.92	1832.92	1832.92	1832.92	1832.92
Average Equity	1810.85	1832.92	1832.92	1832.92	1832.92
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>355.11</b>	<b>361.18</b>	<b>361.18</b>	<b>361.18</b>	<b>362.15</b>

(₹ in lakh)

Asset-B					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2638.36	2840.27	2886.53	2888.10	2888.10
Addition due to ACE	201.91	46.26	1.57	0.00	0.00
Closing Equity	2840.27	2886.53	2888.10	2888.10	2888.10
Average Equity	2739.31	2863.40	2887.31	2888.10	2888.10
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549



Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>537.18</b>	<b>564.23</b>	<b>568.94</b>	<b>569.10</b>	<b>570.63</b>

(₹ in lakh)

Asset- C1					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	816.84	816.84	837.74	841.34	841.34
Addition due to ACE	0.00	20.90	3.60	0.00	0.00
Closing Equity	816.84	837.74	841.34	841.34	841.34
Average Equity	816.84	827.29	839.54	841.34	841.34
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>13.60</b>	<b>163.02</b>	<b>165.43</b>	<b>165.79</b>	<b>166.23</b>

(₹ in lakh)

Asset- C2		
Particulars	2017-18 (Pro-rata for 91 days)	2018-19
Opening Equity	5312.51	5634.78
Addition due to Additional Capitalization	322.27	49.62
Closing Equity	5634.78	5684.40
Average Equity	5473.65	5659.59
Return on Equity (Base Rate) (in %)	15.500	15.500
Tax Rate applicable (in %)	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>268.91</b>	<b>1118.22</b>

52. RoE allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset-A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in case of Asset-B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in case of Asset-C1 and Asset-C2, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017	355.13	359.45	359.45	359.45	359.45
	Claimed by the Petitioner in the instant petition	361.08	367.09	366.90	366.90	367.89



	Approved after true-up in this order	355.11	361.18	361.18	361.18	362.15
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	541.88	566.37	566.37	566.37	566.37
	Claimed by the Petitioner in the instant petition	537.59	564.52	568.95	569.10	570.63
	Approved after true-up in this order	537.18	564.23	568.94	569.10	570.63
Asset-C1	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	13.60	162.23	164.64	165.13	165.26
	Claimed by the Petitioner in the instant petition	13.61	163.10	165.43	165.79	166.23
	Approved after true-up in this order	13.60	163.02	165.43	165.79	166.23
Asset-C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	260.04	1071.30
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	272.92	1192.82
	Approved after true-up in this order	0.00	0.00	0.00	268.91	1118.22

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

53. O&M Expenses claimed by the Petitioner for various elements of the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)

<b>Asset-A</b>			
<b>Transmission lines</b>			
<b>Name of Line</b>	<b>Single Circuit/ Double Circuit</b>	<b>Number of Sub- Conductors</b>	<b>Line Length (in km)</b>
220 kV Vapi-Khadoli Line	Double Circuit	1	28.549
Part of 400 kV D/C Vapi-Navi Mumbai TL (from Vapi Gantry till 1 <sup>st</sup> M/C Point at LOC AP-18)	Double Circuit	2	11.195
<b>220 kV Sub-station bay</b>			
Vapi-Khadoli Line			
<b>400 kV Sub-station bay</b>			
Vapi- Navi Mumbai Line			
<b>O&amp;M Expenses</b>			





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station</b>					
220 kV					
Number of bays	4	4	4	4	4
400 kV					
Number of bays	2	2	2	2	2
<b>Transmission lines</b>					
D/C Single Conductor (km)	28.549	28.549	28.549	28.549	28.549
D/C Twin/Triple Conductor (km)	11.195	11.195	11.195	11.195	11.195
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>306.01</b>	<b>316.16</b>	<b>326.68</b>	<b>337.49</b>	<b>348.72</b>

(₹ in lakh)

<b>Asset-B</b>					
<b>Transmission line</b>					
Name of Line	Single Circuit/ Double Circuit	Number of Sub- Conductors		Line Length (in km)	
400 kV Vapi-Navi Mumbai Transmission Line, WR 1 portion from AP 18 to AP 38	Double Circuit	2		18.7	
<b>O&amp;M Expenses</b>					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
D/C Twin/Triple Conductor (km)	18.7	18.7	18.7	18.7	18.7
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>13.22</b>	<b>13.67</b>	<b>14.12</b>	<b>14.59</b>	<b>15.07</b>

(₹ in lakh)

<b>Asset-C1</b>					
<b>Transmission line</b>					
Name of Line	Single Circuit/ Double Circuit	Number of Sub- Conductors		Line Length (in km)	
Part of 400 kV D/C Vapi-Kudus TL AP 38/ 0 to AP 44 and 400 kV D/C Navsari-Boisar TL AP 18 to AP 38 on M/C	Double Circuit	2		30.35	
<b>O&amp;M Expenses</b>					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
D/C Twin/Triple Conductor (km)	30.35	30.35	30.35	30.35	30.35
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>1.82</b>	<b>22.19</b>	<b>22.91</b>	<b>23.67</b>	<b>24.46</b>

(₹ in lakh)

<b>Asset-C2</b>					
<b>Transmission line</b>					
Name of Line	Single Circuit/ Double Circuit	Number of Sub- conductors		Line Length (in km)	
Part of 400 kV D/C Vapi- Kudus	Double Circuit	2		25	



T/L from 104/0 to Kudus (MSETCL) Sub-station			
<b>400 kV Sub-station bay</b>			
Vapi-Kudus TL			
<b>O&amp;M Expenses</b>			
<b>Particulars</b>	<b>2017-18 (Pro-rata for 91 days)</b>		<b>2018-19</b>
<b>Sub-station</b>			
4000 kV			
Number of bays	2		2
<b>Transmission line</b>			
D/C Twin/Triple Conductor (km)	25		25
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>38.03</b>		<b>157.57</b>

54. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission project and the said norms specified for the elements covered under the transmission assets are as follows:

<b>Asset-A</b>						
<b>Element</b>	<b>UoM</b>	<b>Norms for 2014-15</b>	<b>Norms for 2015-16</b>	<b>Norms for 2016-17</b>	<b>Norms for 2017-18</b>	<b>Norms for 2018-19</b>
400 kV Sub-station	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
220 kV Sub-station	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10
D/C Twin/Triple Conductor	₹ lakh/km	0.71	0.73	0.76	0.78	0.81
D/C single Conductor	₹ lakh/km	0.30	0.31	0.32	0.33	0.35

<b>Asset-B</b>						
<b>Element</b>	<b>UoM</b>	<b>Norms for 2014-15</b>	<b>Norms for 2015-16</b>	<b>Norms for 2016-17</b>	<b>Norms for 2017-18</b>	<b>Norms for 2018-19</b>
D/C Twin/Triple Conductor	₹ lakh/km	0.707	0.731	0.755	0.780	0.806

<b>Asset-C1</b>						
<b>Element</b>	<b>UoM</b>	<b>Norms for 2014-15</b>	<b>Norms for 2015-16</b>	<b>Norms for 2016-17</b>	<b>Norms for 2017-18</b>	<b>Norms for 2018-19</b>
D/C Twin/Triple Conductor	₹ lakh/km	0.707	0.731	0.755	0.780	0.806

<b>Asset-C2</b>			
<b>Element</b>	<b>UoM</b>	<b>Norms for 2017-18</b>	<b>Norms for 2018-19</b>
400 kV Sub-station	₹ lakh/bay	66.51	68.71
D/C Twin/Triple Conductor	₹ lakh/km	0.780	0.806



55. We have considered the submissions of the Petitioner. The O&M Expenses approved for various elements of the transmission assets under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)

<b>Asset-A</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
2 Numbers of 400 kV sub-station bays	120.60	124.60	128.74	133.02	137.42
4 Numbers of 220 kV sub-station bays	168.84	174.44	180.24	186.20	192.40
11.195 km D/C Twin/Triple Conductor transmission line	7.91	8.18	8.45	8.73	9.02
28.549 km D/C Single Conductor transmission line	8.65	8.94	9.25	9.54	9.88
<b>Total</b>	<b>306.01</b>	<b>316.16</b>	<b>326.68</b>	<b>337.49</b>	<b>348.72</b>

(₹ in lakh)

<b>Asset-B</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
18.7 km D/C Twin/Triple Conductor transmission line	13.22	13.67	14.12	14.59	15.07
<b>Total</b>	<b>13.22</b>	<b>13.67</b>	<b>14.12</b>	<b>14.59</b>	<b>15.07</b>

(₹ in lakh)

<b>Asset-C1</b>					
<b>Particulars</b>	<b>2014-15 (Pro-rata for 31 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
30.35 km D/C Twin/Triple Conductor transmission line	21.46	22.19	22.91	23.67	24.46
<b>Total</b>	<b>1.82</b>	<b>22.19</b>	<b>22.91</b>	<b>23.67</b>	<b>24.46</b>

(₹ in lakh)

<b>Asset C2</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 91 days)</b>	<b>2018-19</b>
2 Numbers of 400 kV Sub-station bays	133.02	137.42
25 km D/C Twin/Triple Conductor transmission line	19.50	20.15
<b>Total</b>	<b>38.03</b>	<b>157.57</b>

56. O&M Expenses allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset-A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in case of Asset-B and vide order dated 6.8.2019 in Petition No.



236/TT/2018 in case of Asset-C1 and Asset-C2, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)						
Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017.	306.01	316.16	326.68	337.49	348.72
	Claimed by the Petitioner in the instant petition.	306.00	316.16	326.68	337.49	348.72
	Approved after true-up in this order.	306.01	316.16	326.68	337.49	348.72
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	13.22	13.67	14.12	14.59	15.07
	Claimed by the Petitioner in the instant petition	13.22	13.67	14.12	14.59	15.07
	Approved after true-up in this order	13.22	13.67	14.12	14.59	15.07
Asset-C1	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	1.82	22.18	22.91	23.67	24.46
	As claimed by the Petitioner	1.82	22.19	22.91	23.67	24.46
	Approved after Truing Up	1.82	22.19	22.91	23.67	24.46
Asset-C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	38.02	157.57
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	38.02	157.57
	Approved after true-up in this order	0.00	0.00	0.00	38.03	157.57

### **Interest on Working Capital**

57. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC approved for the transmission assets is as follows:



(₹ in lakh)

Asset-A					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	25.50	26.35	27.22	28.12	29.06
Working Capital for Maintenance Spares (15% for O&M)	45.90	47.42	49.00	50.62	52.31
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	220.13	219.48	216.44	213.45	210.70
<b>Total Working Capital</b>	<b>291.53</b>	<b>293.25</b>	<b>292.67</b>	<b>292.20</b>	<b>292.07</b>
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of Working Capital</b>	<b>39.36</b>	<b>39.59</b>	<b>39.51</b>	<b>39.45</b>	<b>39.43</b>

(₹ in lakh)

Asset-B					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	1.10	1.14	1.18	1.22	1.26
Working Capital for Maintenance Spares (15% for O&M)	1.98	2.05	2.12	2.19	2.26
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	272.53	277.15	271.08	262.13	254.30
<b>Total Working Capital</b>	<b>275.62</b>	<b>280.34</b>	<b>274.37</b>	<b>265.54</b>	<b>257.82</b>
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of Working Capital</b>	<b>37.21</b>	<b>37.85</b>	<b>37.04</b>	<b>35.85</b>	<b>34.81</b>

(₹ in lakh)

Asset- C1					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	1.79	1.85	1.91	1.97	2.04
Working Capital for Maintenance Spares (15% for O&M)	3.22	3.33	3.44	3.55	3.67
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	84.60	84.64	83.66	81.65	79.55
<b>Total Working Capital</b>	<b>89.60</b>	<b>89.82</b>	<b>89.01</b>	<b>87.18</b>	<b>85.26</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of Working Capital</b>	<b>1.03</b>	<b>12.13</b>	<b>12.02</b>	<b>11.77</b>	<b>11.51</b>



(₹ in lakh)

<b>Asset-C2</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 91 days)</b>	<b>2018-19</b>
Working Capital for O&M Expenses (O&M Expenses for one month)	12.71	13.13
Working Capital for Maintenance Spares (15% of O&M Expenses)	22.88	23.64
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	554.69	565.58
<b>Total Working Capital</b>	<b>590.28</b>	<b>602.34</b>
Rate of Interest on Working Capital (in %)	12.60	12.60
<b>Interest of Working Capital</b>	<b>18.54</b>	<b>75.90</b>

58. IWC allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset A, vide order dated 22.3.2016 in Petition No. 412/TT/2014 in case of Asset-B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in case of Asset-C1 and Asset-C2, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

<b>Assets</b>	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017	39.36	39.55	39.47	39.41	39.37
	Claimed by the Petitioner in the instant petition	39.75	39.97	39.87	39.80	39.77
	Approved after true-up in this order	39.36	39.59	39.51	39.45	39.43
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	37.53	38.20	37.15	36.10	35.05
	Claimed by the Petitioner in the instant petition	37.22	37.85	37.04	35.85	34.81
	Approved after true-up in this order	37.21	37.85	37.04	35.85	34.81
Asset-C1	Allowed vide order dated 6.8.2019 in Petition No.	1.03	12.11	12.00	11.76	11.50



	236/TT/2018					
	Claimed by the Petitioner in the instant petition	1.03	12.13	12.02	11.77	11.51
	Approved after true-up in this order	1.03	12.13	12.02	11.77	11.51
Asset-C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	18.21	73.92
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	18.79	80.44
	Approved after true-up in this order	0.00	0.00	0.00	18.54	75.90

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

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

(₹ in lakh)

<b>Asset-A</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	320.90	324.78	324.78	324.78	324.78
Interest on Loan	299.41	275.19	246.51	217.80	189.11
Return on Equity	355.11	361.18	361.18	361.18	362.15
O&M Expenses	306.01	316.16	326.68	337.49	348.72
Interest on Working Capital	39.36	39.59	39.51	39.45	39.43
<b>Total</b>	<b>1320.77</b>	<b>1316.89</b>	<b>1298.66</b>	<b>1280.70</b>	<b>1264.19</b>

(₹ in lakh)

<b>Asset-B</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	482.12	503.96	508.17	508.31	508.31
Interest on Loan	565.47	543.18	498.20	444.95	397.00
Return on Equity	537.18	564.23	568.94	569.10	570.63
O&M Expenses	13.22	13.67	14.12	14.59	15.07
Interest on Working Capital	37.21	37.85	37.04	35.85	34.81
<b>Total</b>	<b>1635.20</b>	<b>1662.88</b>	<b>1626.47</b>	<b>1572.79</b>	<b>1525.82</b>



(₹ in lakh)

Asset-C1					
Particulars	2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	12.21	145.60	147.76	148.08	148.08
Interest on Loan	14.45	164.94	153.87	140.62	127.05
Return on Equity	13.60	163.02	165.43	165.79	166.23
O&M Expenses	1.82	22.19	22.91	23.67	24.46
Interest on Working Capital	1.03	12.13	12.02	11.77	11.51
<b>Total</b>	<b>43.11</b>	<b>507.87</b>	<b>501.99</b>	<b>489.92</b>	<b>477.33</b>

(₹ in lakh)

Asset-C2		
Particulars	2017-18 (Pro-rata for 91 days)	2018-19
Depreciation	240.18	996.09
Interest on Loan	264.10	1045.68
Return on Equity	268.91	1118.22
O&M Expenses	38.03	157.57
Interest on Working Capital	18.54	75.90
<b>Total</b>	<b>829.75</b>	<b>3393.45</b>

60. Accordingly, Annual Transmission Charges allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017 in case of Asset A, vide order dated 22.3.2016 in Petition No.412/TT/2014 in case of Asset B and vide order dated 6.8.2019 in Petition No. 236/TT/2018 in case of Asset-C1 and Asset- C2, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Allowed vide order dated 9.10.2018 in Petition No. 193/TT/2017	1320.82	1315.13	1296.89	1278.93	1261.42
	Claimed by the Petitioner in the instant petition	1338.03	1333.63	1314.72	1296.31	1279.35
	Approved after true-up in this order	1320.77	1316.89	1298.66	1280.70	1264.19
Asset-B	Allowed vide order dated 22.3.2016 in Petition No. 412/TT/2014	1649.36	1678.65	1631.50	1584.04	1536.69
	Claimed by the Petitioner in the instant petition	1635.62	1663.17	1626.48	1572.81	1525.83





	Approved after true-up in this order	1635.20	1662.88	1626.47	1572.79	1525.82
Asset-C1	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	43.10	507.11	501.31	489.65	476.99
	Claimed by the Petitioner in the instant petition	43.11	507.95	501.99	489.93	477.33
	Approved after true-up in this order	43.11	507.87	501.99	489.92	477.33
Asset-C2	Allowed vide order dated 6.8.2019 in Petition No. 236/TT/2018	0.00	0.00	0.00	814.11	3299.55
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	841.52	3609.84
	Approved after true-up in this order	0.00	0.00	0.00	829.75	3393.45

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

61. The Petitioner has submitted combined tariff forms for Combined Asset-A, Asset-B, Asset-C1 and Asset-C2. Accordingly, as provided under Regulation 8(1) of the 2019 Tariff Regulations, single tariff for Combined Asset has been worked out for 2019-24 tariff period in the succeeding paragraphs.

62. The details of the transmission charges claimed by the Petitioner in respect of Combined Asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2104.06	2124.72	2124.72	2124.72	2124.72
Interest on Loan	1718.89	1556.28	1369.83	1183.13	995.99
Return on Equity	2242.98	2265.03	2265.03	2265.03	2265.03
Interest on Working Capital	104.68	103.60	101.27	98.96	96.41
O&M Expenses	308.73	319.45	330.51	341.96	353.78
<b>Total</b>	<b>6479.34</b>	<b>6369.08</b>	<b>6191.36</b>	<b>6013.80</b>	<b>5835.93</b>

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



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	25.73	26.62	27.54	28.50	29.48
Maintenance Spares	46.31	47.92	49.58	51.29	53.07
Receivables	796.64	785.23	763.32	741.43	717.53
<b>Total Working Capital</b>	<b>868.68</b>	<b>859.77</b>	<b>840.44</b>	<b>821.22</b>	<b>800.08</b>
Rate of Interest on Working capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	104.68	103.60	101.27	98.96	96.41

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

64. The Petitioner has claimed E-COD of Combined Asset as 4.12.2015. Based on the trued-up capital cost and COD of the individual assets, E-COD has been worked out as follows:

Assets	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weightage of cost (in %)	Number of days from last COD	Weighted days	E-COD (Latest COD-Total Weighted Days)
Asset-A	30.11.2011	6109.75	16.30	2223.00	362.29	31.10.2015
Asset-B	1.4.2014	9627.02	25.68	1370.00	351.81	
Asset-C1	1.3.2015	2804.47	7.48	1036.00	77.50	
Asset- C2	31.12.2017	18948.00	50.54	0.00	0.00	

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

### **Weighted Average Life (WAL)**

66. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life (WAL).

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

68. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff



Regulations. Accordingly, WAL of Combined Asset has been worked out as 34 years and the same is as follows:

Particulars	Capital Cost (as on 31.3.2019) (₹ in lakh) (1)	Life (in years) (2)	Weighted Cost (₹ in lakh) (3) = [(1)x(2)]	WAL (in years) (4) = [(3)/(1)]
Transmission Line	33097.98	35	1158429.25	
Sub-station Equipment	4183.18	25	104579.39	
PLCC	208.08	15	3121.22	
<b>Total</b>	<b>37489.24</b>		<b>1266129.86</b>	<b>33.77 (rounded off to 34 years)</b>

69. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of Combined Asset is 29.1.2017 and the lapsed life of the transmission project as a whole works out as 3 (three) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 31 years.

### **Capital Cost**

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

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

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

- (a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
- (d) Interest during construction and incidental expenditure during construction as



- computed in accordance with these regulations;
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;
  - (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
  - (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
  - (h) Adjustment of revenue earned by the transmission licensee by using the 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.”*

71. The Petitioner has submitted that capital cost of ₹40189.66 lakh including ACE of ₹782.67 lakh projected in 2019-20 with respect to Asset-C2 has been considered for computation of tariff of 2019-24 period.

72. We have considered the submissions of the Petitioner. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 in this order for the transmission assets has been clubbed together and the resultant capital cost for Combined Asset as on 1.4.2019 is as follows:



(₹ in lakh)

Element	Asset-A	Asset-B	Asset-C1	Asset-C2	Capital Cost for Combined Asset (as on 31.3.2019)
Transmission Line	3724.47	9627.02	2804.47	16942.02	33097.98
Sub-station Equipment	2177.20	0.00	0.00	2005.98	4183.18
PLCC	208.08	0.00	0.00	0.00	208.08
<b>Total</b>	<b>6109.75</b>	<b>9627.02</b>	<b>2804.47</b>	<b>18948.00</b>	<b>37489.24</b>

### **Additional Capital Expenditure**

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

**“24. Additional Capitalisation within the original scope and upto the cut-off date**

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

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

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

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

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

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

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;
- (b) Change in law or compliance of any existing law;



- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) *Raising of ash dyke as a part of ash disposal system.*

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

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

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

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

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

74. The Petitioner has submitted that ACE incurred with respect to Asset-C2 is on account of un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. ACE in 2019-20 has been claimed under Regulation 25(1)(f) of the 2019 Tariff Regulations. The details of ACE claimed are as follows:

(₹ in lakh)

Apportioned Approved Cost (as per RCE-II)	Capital Expenditure (as on 31.3.2019)	ACE 2019-24	Capital Cost (as on 31.3.2024)
		2019-20 (as per Auditor's Certificate)	
38450.92	37489.25	782.67	38271.92

75. MPPMCL has submitted that an amount of ₹782.67 lakh has been projected for actual ACE for Asset-C2 for 2019-20. The proposal is not supported by proper details, documents and justification. In view of above, MPPMCL has prayed that the said claim may be allowed at the time of truing up on submission



of details as per actual expenditure. The Petitioner has not given any categorical reply to the submission of the MPPMCL.

76. We have considered the submissions of the Petitioner and MPPMCL. The Petitioner has claimed ACE of ₹782.67 lakh with respect to Asset-C2 in 2019-20. Since the cost of Asset-C2 as on 31.3.2019 has been restricted to RCE-II apportioned approved cost, ACE of ₹782.67 lakh with respect to Asset-C2 in 2019-20 is disallowed.

### **Capital Cost considered for 2019-24 Tariff Period**

77. In view of above, the capital cost of Combined Asset considered for 2019-24 tariff period subject to truing-up is as follows:

(₹ in lakh)		
Capital Cost (as on 1.4.2019)	ACE (2019-24)	Total Estimated Completion Cost (as on 31.3.2024)
37489.24	0.00	37489.24

### **Debt-Equity Ratio**

78. 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.”

79. Debt-equity ratio considered in respect of the Combined Asset for the purpose of determination of tariff for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)			
	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	26242.48	70.00	26242.48	70.00
Equity	11246.76	30.00	11246.76	30.00
<b>Total</b>	<b>37489.24</b>	<b>100.00</b>	<b>37489.24</b>	<b>100.00</b>

### Depreciation

80. 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.”

81. Weighted Average Rate of Depreciation has been worked out and given at Annexure-II considering the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for Combined Asset is as follows:

		(₹ in lakh)				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	37489.24	37489.24	37489.24	37489.24	37489.24
B	Addition during the year 2014-19	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	37489.24	37489.24	37489.24	37489.24	37489.24
D	Average Gross Block [(A+C)/2]	37489.24	37489.24	37489.24	37489.24	37489.24
E	Depreciable value (D*90%)	33740.31	33740.31	33740.31	33740.31	33740.31
F	Weighted average rate of	5.29	5.29	5.29	5.29	5.29



	Depreciation (WAROD) (in %)					
G	Lapsed useful life at the beginning of the year (Year)	3.00	4.00	5.00	6.00	7.00
H	Balance useful life at the beginning of the year (Year)	31.00	30.00	29.00	28.00	27.00
I	Cumulative Depreciation at the beginning of the year	6641.46	8623.07	10604.69	12586.31	14567.92
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	27098.86	25117.24	23135.62	21154.01	19172.39
K	<b>Depreciation during the year</b>	<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>
L	Cumulative Depreciation at the end of the year (I+K)	8623.07	10604.69	12586.31	14567.92	16549.54
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	25117.24	23135.62	21154.01	19172.39	17190.77

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

82. 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.”

83. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the Combined Asset is follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	201-22	2022-23	2023-24
Gross Normative Loan	26242.48	26242.48	26242.48	26242.48	26242.48
Cumulative Repayments upto Previous Year	6641.46	8623.07	10604.69	12586.31	14567.92
Net Loan-Opening	19601.02	17619.40	15637.79	13656.17	11674.55
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1981.62	1981.62	1981.62	1981.62	1981.62
Net Loan-Closing	17619.40	15637.79	13656.17	11674.55	9692.94
Average Loan	18610.21	16628.59	14646.98	12665.36	10683.74
Weighted Average Rate of Interest on Loan (in %)	8.562	8.534	8.502	8.459	8.397
<b>Interest on Loan</b>	<b>1593.40</b>	<b>1419.15</b>	<b>1245.36</b>	<b>1071.41</b>	<b>897.11</b>

### **Return on Equity**

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

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

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



storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

*Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 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.”

85. 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 for Combined Asset for 2019-24 tariff period is as follows:



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	11246.76	11246.76	11246.76	11246.76	11246.76
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	11246.76	11246.76	11246.76	11246.76	11246.76
Average Equity	11246.76	11246.76	11246.76	11246.76	11246.76
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity (Pre-tax)</b>	<b>2112.37</b>	<b>2112.37</b>	<b>2112.37</b>	<b>2112.37</b>	<b>2112.37</b>

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

86. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide that:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (Rs 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 (Rs 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 (Rs Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-	1.322	1.368	1.416	1.466	1.517





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

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

Provided further that:

- (i) the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- (ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- (iii) the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);



(iv) the O&M expenses of  $\pm 800$  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

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

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

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

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

**“35(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.”

87. O&M Expenses claimed by the Petitioner for various elements of the

Combined Asset-A for 2019-24 tariff period are as follows:

(₹ in lakh)

Transmission lines			
Name of Line	Single Circuit/ Double Circuit	Number of Sub- Conductors	Line Length (in km)
400 kV Vapi-Navi Mumbai Transmission Line, WR 1 portion from AP 18 to AP 38	Double Circuit	2	18.7
220 kV Vapi Khadoli Line	Double Circuit	1	28.549
Part of 400 kV D/C Vapi-Navi Mumbai TL (from Vapi Gantry till 1 <sup>st</sup> M/C Point at LOC AP-18)	Double Circuit	2	11.195
Part of 400 kV D/C Vapi- Kudus TL AP 38/ 0 to AP 44 & 400 kV D/C Navsari-Boisar TL AP 18 to AP 38 on M/C	Double Circuit	2	30.35
Part of 400 kV D/C Vapi- Kudus T/L from 104/0 to Kudus (MSETCL) Sub-station	Double Circuit	2	25



<b>220 kV Sub-station bay</b>					
Vapi Khadoli Line					
<b>400 kV Sub-station bay</b>					
Vapi Navi Mumbai Line					
Vapi-Kudus TL					
<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>Sub-station</b>					
220 kV					
Number of bays	4	4	4	4	4
400 kV					
Number of bays	4	4	4	4	4
<b>Transmission lines</b>					
D/C Single Conductor (km)	28.549	28.549	28.549	28.549	28.549
D/C Twin/Triple Conductor (km)	85.245	85.245	85.245	85.245	85.245
<b>PLCC</b>					
Original project cost (₹ in lakh)	211.46	211.46	211.46	211.46	211.46
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>308.73</b>	<b>319.46</b>	<b>330.51</b>	<b>341.96</b>	<b>353.77</b>

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

89. The O&M Expenses approved for various elements of Combined Asset as per the norms specified in the 2019 Tariff Regulations are as follows:



Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
4 Numbers of 400 kV sub-station bays	128.60	133.12	137.80	142.64	147.64
4 Numbers of 220 kV sub-station bays	90.04	93.20	96.48	99.84	103.36
85.245 km D/C Twin/Triple Conductor transmission line	75.10	77.74	80.47	83.28	86.18
28.549 km D/C Single Conductor transmission line	10.76	11.16	11.53	11.96	12.36
<b>Total</b>	<b>304.50</b>	<b>315.23</b>	<b>326.29</b>	<b>337.73</b>	<b>349.54</b>

### **Interest on Working Capital**

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

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

.....

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

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

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

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

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

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

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

“3. 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;”



91. The Petitioner has submitted that it has computed IWC for 2019-24 period considering SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 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 it has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points).

92. We have considered the submissions of the Petitioner. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and the components of the working capital and interest allowed thereon for Combined Asset-A for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	25.38	26.27	27.19	28.14	29.13
Working Capital for Maintenance Spares (15% of O&M Expenses)	45.68	47.28	48.94	50.66	52.43
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	748.85	729.71	708.66	688.40	666.29
<b>Total Working Capital</b>	<b>819.91</b>	<b>803.26</b>	<b>784.79</b>	<b>767.20</b>	<b>747.85</b>
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>Interest of Working Capital</b>	<b>98.80</b>	<b>90.37</b>	<b>82.40</b>	<b>80.56</b>	<b>78.52</b>

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

93. The transmission charges of Combined Asset for 2019-24 tariff period are as follows:



(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	1981.62	1981.62	1981.62	1981.62	1981.62
Interest on Loan	1593.40	1419.15	1245.36	1071.41	897.11
Return on Equity	2112.37	2112.37	2112.37	2112.37	2112.37
O&M Expenses	304.50	315.23	326.29	337.73	349.54
Interest on Working Capital	98.80	90.37	82.40	80.56	78.52
<b>Total</b>	<b>6090.68</b>	<b>5918.72</b>	<b>5748.03</b>	<b>5583.67</b>	<b>5419.16</b>

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

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

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

95. 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 RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

### **Good and Service Tax**

96. 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.



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

### **Security Expenses**

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

99. 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 Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

### **Capital Spares**

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

### **Sharing of Transmission Charges**

101. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing



Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be governed in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

102. To summarise:

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

(₹ in lakh)

Asset-A				
2014-15	2015-16	2016-17	2017-18	2018-19
1320.77	1316.89	1298.66	1280.70	1264.19

(₹ in lakh)

Asset -B				
2014-15	2015-16	2016-17	2017-18	2018-19
1635.20	1662.88	1626.47	1572.79	1525.82

(₹ in lakh)

Asset-C1				
2014-15 (Pro-rata for 31 days)	2015-16	2016-17	2017-18	2018-19
43.11	507.87	501.99	489.92	477.33

(₹ in lakh)

Asset-C2	
2017-18 (Pro-rata for 91 days)	2018-19
829.75	3393.45

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

(₹ in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
6090.68	5918.72	5748.03	5583.67	5419.16





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

104. This order disposes of Petition No. 88/TT/2020 in terms of the above discussions and findings.

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

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

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



Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per the 2014 Tariff Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	3577.33	147.14	0.00	0.00	0.00	0.00	3724.47	5.28	192.77	196.65	196.65	196.65	196.65
Sub Station	2177.20	0.00	0.00	0.00	0.00	0.00	2177.20	5.28	114.96	114.96	114.96	114.96	114.96
PLCC	208.08	0.00	0.00	0.00	0.00	0.00	208.08	6.33	13.17	13.17	13.17	13.17	13.17
<b>Total</b>	<b>5962.61</b>	<b>147.14</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6109.75</b>		<b>320.90</b>	<b>324.78</b>	<b>324.78</b>	<b>324.78</b>	<b>324.78</b>
Weighted Average Rate of Depreciation (in %)									5.32	5.32	5.32	5.32	5.32
Average Gross Block (₹ in lakh)									<b>6036.18</b>	<b>6109.75</b>	<b>6109.75</b>	<b>6109.75</b>	<b>6109.75</b>



## Asset B

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per the 2014 Tariff Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	8794.53	673.05	154.20	5.24	0.00	0.00	9627.02	5.28	482.12	503.96	508.17	508.31	508.31
<b>Total</b>	<b>8794.53</b>	<b>673.05</b>	<b>154.20</b>	<b>5.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9627.02</b>		<b>482.12</b>	<b>503.96</b>	<b>508.17</b>	<b>508.31</b>	<b>508.31</b>
Weighted Average Rate of Depreciation (in %)									5.28	5.28	5.28	5.28	5.28
Average Gross Block (₹ in lakh)									<b>9131.06</b>	<b>9544.68</b>	<b>9624.40</b>	<b>9627.02</b>	<b>9627.02</b>



## Asset C1

(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per the 2014 Tariff Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	2722.81	0.00	69.65	12.00	0.00	0.00	2804.47	5.28	143.76	145.60	147.76	148.08	148.08
<b>Total</b>	<b>2722.81</b>	<b>0.00</b>	<b>69.65</b>	<b>12.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2804.47</b>		<b>143.76</b>	<b>145.60</b>	<b>147.76</b>	<b>148.08</b>	<b>148.08</b>
Weighted Average Rate of Depreciation (in %)									5.28	5.28	5.28	5.28	5.28
Average Gross Block (₹ in lakh)									<b>2722.81</b>	<b>2757.64</b>	<b>2798.47</b>	<b>2804.47</b>	<b>2804.47</b>



## Asset C2

(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19		Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per the 2014 Tariff Regulations	
		2017-18	2018-19			2017-18	2018-19
Transmission Line	15733.96	1061.10	146.96	16942.02	5.28	858.77	890.66
Sub Station	1974.42	13.12	18.44	2005.98	5.28	104.60	105.43
<b>Total</b>	<b>17708.38</b>	<b>1074.22</b>	<b>165.40</b>	<b>18948.00</b>		<b>963.36</b>	<b>996.09</b>
Weighted Average Rate of Depreciation (in %)						5.28	5.28
Average Gross Block (₹ in lakh)						18245.49	18865.30



**Combined  
Asset A**

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24					Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line	33097.98	0.00	0.00	0.00	0.00	0.00	33097.98	5.28	1747.57	1747.57	1747.57	1747.57	1747.57
Sub-station	4183.18	0.00	0.00	0.00	0.00	0.00	4183.18	5.28	220.87	220.87	220.87	220.87	220.87
PLCC	208.08	0.00	0.00	0.00	0.00	0.00	208.08	6.33	13.17	13.17	13.17	13.17	13.17
<b>Total</b>	<b>37489.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>37489.24</b>		<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>	<b>1981.62</b>
Weighted Average Rate of Depreciation (in %)									5.29	5.29	5.29	5.29	5.29
Average Gross Block (₹ in lakh)									<b>37489.24</b>	<b>37489.24</b>	<b>37489.24</b>	<b>37489.24</b>	<b>37489.24</b>

