

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 349/TT/2020

Coram:

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

Date of order: 22.08.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of the Combined Asset consisting of **Asset-A:**400 kV Vadodra-Pirana transmission line along with associated bays at Pirana Sub-station (for direct inter connection with 400 kV D/C Vadodra-Asoj transmission line under interim contingency scheme), **Asset-B1:**765 kV Indore-Vadodara transmission line (for direct inter-connection with 400 kV D/C Vadodara-Asoj transmission line) by-passing Vadodara Pooling Sub-station under Interim contingency scheme, **Asset-B2:**Extension of bays at 765/400 kV Indore Sub-station including Switchable Line Reactor (3*80 MVAR, 765 kV) at Indore (initially charged as Bus Reactor under Interim Contingency Scheme till readiness of 765 kV S/C Indore-Vadodara transmission line), **Asset-C1:**765/400 kV ICT 1 at Vadodara GIS, 765 kV bay at Vadodara GIS along with 240 MVAR Line Reactor at Vadodara – Indore line, 400 kV GIS bay at Vadodara for Vadodara-Pirana Circuit–2, **Asset-C2:** 765/400 kV ICT 2 at Vadodara GIS, **Asset-C3:** 400 kV GIS bay at Vadodara for Vadodara Pirana Circuit 2 and **Asset-C4:** 240 MVAR Bus Reactor with spare unit at Vadodara GIS under “Transmission System for IPP Generation Projects in Madhya Pradesh and Chhattisgarh in the Western Region”.

And in the matter of:

Power Grid Corporation of India Limited,
SAUDAMINI, Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana).

.....Petitioner

Vs.

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, 3rd Floor,
M.G. Road, Fort, Mumbai-400001.
5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th 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.

...Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Ms. Anshul Garg, PGCIL

For Respondents : None



ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing 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 2014 Tariff Regulations”) and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of 2019-24 tariff period in respect of the following transmission assets(hereinafter referred to as “the transmission asset/ Combined Asset”)under “Transmission System for IPP Generation Projects in Madhya Pradesh and Chhattisgarh(hereinafter referred to as “the transmission project”) in the Western Region”:

Asset-A: 400 kV Vadodra-Pirana transmission line along with associated bays at Pirana Sub-station (for direct inter connection with 400 kV D/C Vadodra-Asoj transmission line under interim contingency scheme),

Asset-B1: 765 kV Indore Vadodara transmission line (for direct inter-connection with 400 kV D/C Vadodara- Asoj transmission line) by-passing Vadodara Pooling Sub-station under Interim contingency scheme,

Asset-B2: Extension of bays at 765/400 kV Indore Sub-station including Switchable Line Reactor (3X80 MVAR, 765 kV) at Indore (initially charged as Bus Reactor under Interim Contingency Scheme till readiness of 765 kV S/C Indore-Vadodara transmission line),

Asset-C1: 765/400 kV ICT 1 at Vadodara GIS, 765 kV bay at Vadodara GIS along with 240 MVAR Line Reactor at Vadodara–Indore line, 400 kV GIS bay at Vadodara for Vadodara Pirana Circuit–2,



Asset-C2: 765/400 kV ICT 2 at Vadodara GIS,

Asset-C3: 400 kV GIS bay at Vadodara for Vadodara Pirana Circuit-2 and

Asset-C4: 240 MVAR Bus Reactor with spare unit at Vadodara GIS.

(Asset-A, Asset-B1, Asset-B2, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 have been combined as on 1.4.2019 and have been referred to as "Combined Asset" in 2019-24 tariff period.)

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

- “1) Allow the add-cap for 2014-19 and 2019-24 tariff block as claimed as per Para 6 and 8 above.*
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 7 and 8 above.*
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 8 and 9 above for respective block.*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.7 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 time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

a) The Investment Approval (IA) in respect of the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/IPP/MP-CH dated 2.9.2011 for ₹1360634 lakh including IDC of ₹6477 lakh (based on 2nd Quarter, 2011 price level). The Revised Cost Estimates (RCE) in respect of the transmission project has been approved and accorded by the Board of Directors of the Petitioner vide their letter no. C/CP/RCE MP-CH dated 9.12.2014 at an estimated cost of ₹160638 lakh including an IDC of ₹11371 lakh based on June, 2014 price level.

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

Transmission Line:

- (i) Vadodara-Pirana 400 kV D/C (Quad) line
- (ii) Indore-Vadodara 765 kV S/C line

Sub-stations:

- (i) Establishment of 765/400 kV, 2x1500 MVA GIS Sub-station at Vadodara
- (ii) Extension of 765/400 kV Indore Sub-station
- (iii) Extension of 400 kV Pirana Sub-station

c) The complete scope of work as per IA is covered in the instant Petition.

d) The actual/anticipated Commercial Operation Date (COD) was approved in respect of Asset-A vide order dated 8.7.2016 in Petition No. 289/TT/2013, in respect of Asset-B1 and Asset-B2 vide order dated 21.3.2016 in Petition



No.142/TT/2014 and in respect of Asset-C1, Asset-C2, Asset-C3 and Asset-C4 vide order dated 30.3.2016 in Petition No. 140/TT/2015 and the details of time over-run in respect of the transmission assets are as follows:

Assets in instant petition	Previous Order	Assets nomenclature in previous Petition	COD	Time over-run	Delay condoned/not condoned
Asset-A	Order dated 8.7.2016 in Petition No. 289/TT/2013	Asset	1.4.2014	121 days	Condoned
Asset-B1	Order dated 21.3.2016 in Petition No. 142/TT/2014	Asset-I	5.5.2014	155 days	Time over-run of 62 days was not condoned
Asset-B2		Asset-II	1.4.2014	121 days	Condoned
Asset-C1	Order dated 30.3.2016 in Petition No. 140/TT/2015	Asset-I(A)	8.6.2015	18 months	Condoned
Asset-C2		Asset-I(B)	22.6.2015	18 months	Condoned
Asset-C3		Asset-I(C)	29.6.2015	18 months	Condoned
Asset-C4		Asset-I(D)	1.10.2015	22 months	Condoned

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 1, vide affidavit dated 5.6.2020 has filed its reply and has raised the issues of grossing up Return on Equity (RoE) with effective tax rates and Effects of CGST. The Petitioner vide affidavit dated 4.11.2020 has filed its rejoinder to the reply of MPPMCL.



6. It is observed that MPPMCL has been raising the issue of grossing up of RoE in the instant petition and other petitions earlier. The contentions of MPPMCL on the issue of RoE has been considered and rejected by the Commission vide its order dated 21.9.2021 in Petition No. 326/TT/2020. As MPPMCL has not challenged the findings, the same have attained finality. Accordingly, the objections regarding RoE raised by MPPMCL are not being considered in the instant order. Other issues raised by MPPMCL and clarifications thereto given by the Petitioner have been dealt in the relevant paragraphs of this order.

7. The hearing in this matter was held on 11.2.2022 through video conference and the order was reserved.

8. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 23.1.2020, 27.11.2020, 17.6.2021, 3.1.2022 and 25.2.2022, MPPMCL's reply vide affidavit dated 5.6.2020 and the Petitioner's rejoinder to the reply of MPPMCL's vide affidavit dated 4.11.2020.

9. Having heard the representatives of the Petitioner and having perused the material 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 in respect of the transmission assets are as follows:

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1875.58	1993.63	2003.27	2003.49	2003.49
Interest on Loan	2121.89	2084.61	1914.56	1730.55	1552.55
Return on Equity	2087.56	2228.97	2238.43	2238.68	2244.70

Page 7 of 99



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	266.95	275.78	284.89	294.40	304.17
Interest on Working Capital	154.81	160.41	157.44	153.74	150.33
Total	6506.79	6743.40	6598.59	6420.86	6255.24

Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	2827.71	3318.59	3343.40	3361.68	3368.23
Interest on Loan	3253.14	3511.26	3218.43	2900.12	2602.01
Return on Equity	3152.74	3716.95	3742.83	3763.30	3780.76
O&M Expenses	188.96	215.54	222.45	229.99	237.57
Interest on Working Capital	222.98	254.67	249.48	243.46	237.57
Total	9645.53	11017.01	10776.59	10498.55	10226.14

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	165.29	199.26	209.07	211.34	211.58
Interest on Loan	188.56	208.43	199.78	181.16	162.08
Return on Equity	181.08	219.78	230.65	233.19	234.09
O&M Expenses	168.84	174.44	180.24	186.22	192.40
Interest on Working Capital	21.64	24.08	24.68	24.69	24.62
Total	725.41	825.99	844.42	836.60	824.77

Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Depreciation	822.73	1211.09	1342.61	1408.84
Interest on Loan	1105.73	1464.54	1487.40	1443.03
Return on Equity	1068.47	1523.33	1687.55	1778.35
O&M Expenses	228.76	290.28	299.90	309.86
Interest on Working Capital	81.62	112.69	120.55	123.70
Total	3307.31	4601.93	4938.01	5063.78

Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Depreciation	340.18	509.44	547.17	574.80
Interest on Loan	398.46	556.02	537.78	514.26
Return on Equity	381.06	570.37	612.61	645.27
O&M Expenses	109.00	145.14	149.95	154.93
Interest on Working Capital	31.80	45.67	47.36	48.48
Total	1260.50	1826.64	1894.87	1937.74



Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Depreciation	49.81	75.23	81.68	84.00
Interest on Loan	57.66	80.63	78.47	73.30
Return on Equity	55.79	84.23	91.45	94.30
O&M Expenses	40.30	55.02	56.84	58.73
Interest on Working Capital	5.99	8.57	8.93	9.04
Total	209.55	303.68	317.37	319.37

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Depreciation	114.05	264.15	294.55	300.70
Interest on Loan	131.52	287.86	292.86	271.99
Return on Equity	127.76	295.74	329.77	337.57
O&M Expenses	43.61	90.12	93.11	96.20
Interest on Working Capital	11.01	24.49	26.26	26.27
Total	427.95	962.36	1036.55	1032.73

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

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	22.25	22.98	23.74	24.53	25.35
Maintenance Spares	40.04	41.37	42.73	44.16	45.63
Receivables	1084.47	1123.90	1099.77	1070.14	1042.54
Total Working Capital	1146.76	1188.25	1166.24	1138.83	1113.52
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	154.81	160.41	157.44	153.74	150.33

Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	17.36	17.96	18.54	19.17	19.80
Maintenance Spares	31.26	32.33	33.37	34.50	35.64
Receivables	1772.72	1836.17	1796.10	1749.76	1704.36
Total Working Capital	1821.34	1886.46	1848.01	1803.43	1759.80

Page 9 of 99



Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	222.98	254.67	249.48	243.46	237.57

Asset-B2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	14.07	14.54	15.02	15.52	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	120.00	137.67	140.74	139.43	137.46
Total Working Capital	160.30	178.38	182.80	182.88	182.35
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	21.64	24.08	24.68	24.69	24.62

Asset-C1

(₹ in lakh)					
Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19	
O&M Expenses	23.41	24.19	24.99	25.82	
Maintenance Spares	42.14	43.54	44.99	46.48	
Receivables	677.00	766.99	823.00	843.96	
Total Working Capital	742.55	834.72	892.98	916.26	
Rate of Interest (in %)	13.50	13.50	13.50	13.50	
Interest on Working Capital	81.62	112.69	120.55	123.70	

Asset-C2

(₹ in lakh)					
Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19	
O&M Expenses	11.71	12.10	12.50	12.91	
Maintenance Spares	21.07	21.77	22.49	23.24	
Receivables	270.74	304.44	315.81	322.96	
Total Working Capital	303.52	338.31	350.80	359.11	
Rate of Interest (in%)	13.50	13.50	13.50	13.50	
Interest on Working Capital	31.80	45.67	47.36	48.48	

Asset-C3

(₹ in lakh)					
Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19	
O&M Expenses	4.44	4.59	4.74	4.89	
Maintenance Spares	7.99	8.25	8.53	8.81	
Receivables	46.15	50.61	52.90	53.23	
Total Working Capital	58.58	63.45	66.17	66.93	
Rate of Interest (in %)	13.50	13.50	13.50	13.50	
Interest on Working Capital	5.99	8.57	8.93	9.04	



Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
O&M Expenses	7.27	7.51	7.76	8.02
Maintenance Spares	13.08	13.52	13.97	14.43
Receivables	142.65	160.39	172.76	172.12
Total Working Capital	163.00	181.42	194.49	194.57
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	11.01	24.49	26.26	26.27

Date of commercial operation (COD)

12. The Commission vide order dated 8.7.2016 in Petition No. 289/TT/2013 has approved the COD of Asset-A as 1.4.2014 and directed the Petitioner to submit the actual COD of the asset alongwith RLDC Certificate for charging of asset and CEA Certificate under Regulation 43 of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 regarding declaration of COD at the time of truing-up.

13. The Petitioner in the instant petition has claimed the actual COD of Asset-A as 1.4.2014. In support of the actual COD of Asset-A, the Petitioner has submitted the self-declaration COD letter dated 1.4.2014, RLDC charging certificate for Asset-A dated 3.5.2016, CEA Energisation Certificate dated 27.2.2014 approving the energisation under Regulation 43 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010.

14. We have considered the above submissions of the Petitioner. Taking into consideration the RLDC Charging Certificate of completion of trial run, CEA Energisation Certificate and self-declaration COD Certificate, COD of Asset-A is approved as 1.4.2014.



15. The Commission *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 has already approved the COD of Asset-B1 and Asset-B2 as 5.5.2014 and 1.4.2014 respectively. The Commission *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 had also approved the COD of Asset-C1, Asset-C2, Asset-C3 and Asset-C4 as 8.6.2015, 22.6.2015, 29.6.2015 and 1.10.2015 respectively. Accordingly, COD of the transmission assets considered in this order are as follows:

Assets	Actual COD
Asset-A	1.4.2014
Asset-B1	5.5.2014
Asset-B2	1.4.2014
Asset-C1	8.6.2015
Asset-C2	22.6.2015
Asset-C3	29.6.2015
Asset-C4	1.10.2015

Capital Cost

16. The Commission *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 allowed the capital cost as on COD for Asset-A and projected ACE for the 2014-19 period. The Commission *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 allowed the capital cost as on COD in respect of Asset-B1 and Asset-B2 and projected ACE for 2014-19 period. The Commission *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 allowed the capital cost as on COD in respect of Asset-C1, Asset-C2, Asset-C3 and Asset-C4 and projected ACE for 2014-19 period. The details of the capital cost as allowed by the Commission in the aforesaid orders are as follows:



(₹ in lakh)

Assets	Capital Cost allowed as on COD	ACE allowed					Capital Cost allowed as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-A	33352.28	1016.62	332.43	0.00	0.00	0.00	34701.33
Asset-B1	55036.64	3594.00	2651.35	0.00	0.00	0.00	61281.99
Asset-B2	2570.56	1386.61	489.18	0.00	0.00	0.00	4446.35
Asset-C1	20052.62		4768.58	4805.37	1093.22	10667.17	30719.79
Asset-C2	7151.65		1181.83	2532.68	1079.52	4794.03	11945.68
Asset-C3	1140.78		210.41	271.86	135.90	618.17	1758.95
Asset-C4	4126.88		814.93	388.76	131.68	1335.37	5462.05

17. The apportioned approved capital cost, capital cost as on COD and actual ACE during 2014-19 tariff period claimed by the Petitioner vide Auditor's Certificate are as follows:

(₹ in lakh)

Assets	Apportioned approved Capital Cost (RCE-II)	Capital Cost as on COD as per Auditor's Certificate	ACE Claimed					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-A	38047.45	33786.88	3724.69	350.04	8.33	0.00	0.00	37869.94
Asset-B1	64206.60	56707.53	6175.54	486.35	453.11	239.30	8.55	64070.38
Asset-B2	4102.02	2616.44	956.69	285.65	85.97	0.00	9.11	3953.86
Asset-C1	30714.92	20714.92		3618.73	2880.50	2672.21	238.40	30124.76
Asset-C2	11016.06	7488.46		2021.13	339.04	1028.73	17.90	10895.26
Asset-C3	1721.48	1166.99		179.83	156.15	87.93	0.00	1590.90
Asset-C4	5807.43	4405.26		238.36	818.34	233.15	0.00	5695.11

18. The Petitioner has further submitted that the Commission vide order dated 8.7.2016 in Petition No. 289/TT/2013 had disallowed IDC to the tune of ₹434.60 lakh in respect of Asset-A on account of non-submission of details of IDC discharged after COD and reduced it from the capital cost as on COD. The Commission vide order dated



21.3.2016 in Petition No. 142/TT/2014 had also disallowed IDC and IEDC to the tune of ₹280.46 lakh and ₹1.07 lakh respectively for Asset-B1 on account of non-condonation of time over-run of 62 days, from the capital cost as on COD. Capital cost as on COD and actual ACE during 2014-19 period claimed by the Petitioner after deducting the excess Initial Spares and adjusting IDC and IEDC on cash discharge basis are as follows:

Assets	Approved apportioned capital cost (FR)	Capital Cost as on COD	ACE claimed					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-A	33933.39	33403.44	4108.13	350.04	8.33	0.00	0.00	37869.94
Asset-B1	53987.15	55499.22	7102.31	486.35	453.11	239.30	8.55	63788.84
Asset-B2	3516.07	2578.02	995.11	285.65	85.97	0.00	9.11	3953.86
Asset-C1	28188.25	20047.96	0.00	4279.09	2886.07	2672.21	238.40	30123.73
Asset-C2	10452.45	7157.77	0.00	2290.66	400.20	1028.73	17.90	10895.26
Asset-C3	1510.93	1146.00	0.00	200.82	156.15	87.93	0.00	1590.90
Asset-C4	5045.77	4096.50	0.00	447.16	918.30	233.15	0.00	5695.11

Cost Over-run

19. In response to Commission's query regarding change in apportionment of cost as per RCE vis-à-vis furnished in Petition No. 140/TT/2015, the Petitioner vide affidavit dated 27.11.2020 has submitted that the Contract Package is awarded at the sub-station/ transmission line/ project level and payment for the work executed is made as per the package details on the project level. Therefore, while filing the petition for tariff determination during 2014-19, the allocation of contingency and common packages cost considered in RCE-I was included in the apportionment of few element rather than all. However, the contingency amount mentioned in RCE has been apportioned among all elements mentioned in the instant petition based on the actual cost booking. Accordingly, RCE apportionment cost is revised.



20. The Petitioner has further submitted the details of RCE-I as follows:

(₹ in lakh)

Assets	Approved apporportioned capital cost (FR)	Approved apporportioned capital cost (RCE-I)	Revised apporportioned approved capital cost (RCE-I)
Asset-A	33933.39	38911.84	38911.84
Asset-B1	53987.15	61975.56	65725.56
Asset-B2	3516.07	4446.35	4446.35
Asset-C1	28188.25	34564.27	31334.27
Asset-C2	10452.45	13220.62	11890.62
Asset-C3	1510.93	1997.85	1997.85
Asset-C4	5045.77	5221.14	6331.14
Total	136633.59	160637.63	160637.63

21. However, the Petitioner vide affidavit dated 3.1.2022 has submitted RCE-II and submitted that initially while filing the petition, RCE-I cost was re-apportioned in Asset-B1, Asset-C1 and Asset-C4 due to re-allocation of contingency and common packages cost considered in RCE-I. Subsequently, RCE-II of subject project has been approved vide Memorandum No. C/CP/PA2122-09-0AC-RCE007 dated 30.11.2021 at an estimated cost of ₹ 155616 lakh including IDC of ₹11935 lakh (based on June, 2021 price level).

22. The Petitioner has further submitted the following details of capital cost as per F.R., RCE-I and RCE-II:

(₹ in lakh)

Assets	Approved apporportioned capital cost (FR)	Approved apporportioned capital cost (RCE-I)	Approved apporportioned capital cost (RCE-II)	Total Capital Cost as on 31.3.2019
Asset-A	33933.39	38911.84	38047.45	37869.94
Asset-B1	53987.15	61975.56	64206.60	63788.84
Asset-B2	3516.07	4446.35	4102.02	3953.86
Asset-C1	28188.85	34564.27	30714.92	30123.73
Asset-C2	10452.45	13220.62	11016.06	10895.26
Asset-C3	1510.93	1997.85	1721.48	1590.90



Assets	Approved apportioned capital cost (FR)	Approved apportioned capital cost (RCE-I)	Approved apportioned capital cost (RCE-II)	Total Capital Cost as on 31.3.2019
Asset-C4	5044.75	5521.14	5807.43	5695.11
Total	136633.59	160637.63	155615.96	153917.64

23. The Petitioner has further submitted that there is no cost over-run as per RCE-II and prayed to allow the capital cost as claimed in the instant petition considering RCE-II.

24. During the hearing held on 11.2.2022, the Petitioner was directed to clarify who is the competent authority to approve RCE-II. In response, representative of the Petitioner, submitted that since the project cost is more than ₹1000 crore, the project has been approved as per the delegation of powers. The Petitioner was directed to mention as to who is the competent authority to approve the transmission project, RCE-I, RCE-II, etc. in all future cases. The Petitioner was further directed to submit the details of competent authority to approve an amount under delegations of powers.

25. In response, the Petitioner vide affidavit dated 25.2.2022 has submitted that office Order No. 103/2020 dated 12.12.2020 regarding delegation of power has approved the following:

“(iv) For Projects/Schemes with original approved project cost above Rs.1000 crore, any upward variation in cost of Projects/Schemes upto 10% of the originally approved cost estimate with or without time over run in the transmission project, after excluding increase within originally approved project time cycle due to change in statutory levies, foreign exchange rate variation, price escalation as per the terms of the contract, compensation for right-of-way (RoW) including towards diminution in the value of land, crop, tree, hut and forest etc., shall be approved by a Committee of Directors constituted for the purpose by the Board of Directors. Any such upward variation in cost of Projects/Schemes by more than 10% of the originally approved cost estimate shall be approved by the Board of Directors.”



26. The Petitioner has further submitted that there is downward variation of cost in transmission project. Therefore, in 126thCoIPmeeting held on 9.11.2021, it was noted that wherever there is downward variation in the cost of the transmission project vis-a-vis already approved project cost, such cases need not be approved again by CoIP/ Board, and thus the power to approved ownward variation vest with CMD, including any variation in apportionment of cost to different elements. Therefore, RCE-II of subject project has been approved by CMD of the Petitioner.

27. The Petitioner has submitted a copy of office Order No. 103/2020 dated 12.12.2020 and MoM of 126thCoIPmeeting held on 9.11.2021 vide affidavit dated 25.2.2022 in the petition.

28. The Petitioner has further submitted the following reasons for cost variation for Asset-B1 and Asset-C4:

Asset-B1- (increase of ₹2095 lakh)

- i. **Crop compensation-** In RCE-I, there was a provision of ₹5525 lakh for crop compensation. However, based on actual expenditure incurred and balance anticipated expenditure, an amount of ₹7654 lakh has incurred/ likely to be incurred under the head resulting in an increase of ₹2129 lakh in cost of the project. The Petitioner has further submitted that as per previous policies only tree and crop compensation was paid to the landowner on which transmission line is being constructed and the same was considered in FR. However, revised guidelines for payment of compensation towards damages in regard to RoW for the transmission lines were issued by Ministry of Power (MoP) vide letter dated 15.10.2015 i.e. after the issuance of RCE-I dated 9.12.2014. Asper the revised guidelines, in addition to the compensation towards normal crop and tree damages, following compensation was also to be paid to the land owner:



“ (i) Compensation @ 85% of land value as determined by District Magistrate or any other authority based on Circle rate/ Guideline value/ Stamp Act rates for tower base area (between four legs) impacted severely due to installation of tower/pylon structure.

(ii) Compensation towards diminution of land value in the width of RoW Corridor due to laying of transmission line and imposing certain restriction would be decided by the States as per categorization/type of land in different places of States, subject to a maximum of 15% of land value as determined based on Circle rate/ Guideline value/ Stamp Act rates.”

Due to these guidelines, the cost of preliminary works has increased by approximately ₹445 lakh from the approved cost.

- ii. **Transmission line materials-** The line length and type of various types of towers and foundations in the approved DPR were estimated on the basis of walk-over/preliminary survey. Further, in approved RCE-I, the same was envisaged on the basis of detailed survey and executed/ likely to be executed quantities of the project. As per project requirement, final amendments, and site local conditions, there has been a price variation of ₹1650lakh in the tower package and conductor package of Asset-B1.

Asset-C4

- i. In the original petition, the cost was envisaged on the basis of detailed survey and the executed/ likely to be executed quantities of the project. As per project requirement, final amendments, and site local conditions, there has been a variation of ₹173 lakh in the sub-station package of Asset-C4.

29. We have considered the submission of the Petitioner. The estimated completion cost of the transmission is more than the FR apportioned approved cost. The Petitioner has submitted the RCE-I duly approved by the Board of Directors of the Petitioner company. As compared with RCE-I cost, the estimated completion cost of Asset-B1 and Asset-C4 is more by ₹1813.28 lakh and ₹650.36 lakh and the estimated completion cost of remaining assets i.e. Asset-A, Asset-B2, Asset-C1, Asset-C2, and Asset-C3 is within RCE-1 cost. The main reasons for cost variation of Asset-B1 and Asset-C4 are due to



crop compensation and price variation towards tower package and conductor package. The Petitioner has submitted that if the cost variation is downward side, the power to approve the downward variation vests with CMD. In the instant case, apportioned approved cost as per RCE-I is ₹160637.63 lakh whereas the estimated completion cost of the transmission project is ₹153917.64 lakh, thus, the total project cost is reduced by ₹6647.37 lakh. This downward variation of cost is further approved by the Competent Authority viz. CMD of the Petitioner Company and the Petitioner has submitted duly approved RCE-II. As the Petitioner has submitted the duly approved RCE-II, this downward variation is allowed.

Time over-run

30. As per IA dated 2.9.2011, the scheduled date of commercial operation (SCOD) of the transmission assets was 1.12.2013. However, the transmission assets were put into commercial operation as follows:

Assets	SCOD	Actual COD	Time over-run	Time Over-run Condoned
Asset-A	1.12.2013	1.4.2014	121 days	Condoned
Asset-B1		5.5.2014	155 days	Time over-run of 62 days was not Condoned
Asset-B2		1.4.2014	121 days	Condoned
Asset-C1		8.6.2015	18 months	Condoned
Asset-C2		22.6.2015	18 months	Condoned
Asset-C3		29.6.2015	18 months	Condoned
Asset-C4		1.10.2015	22 months	Condoned

31. With respect to Asset-A, the Commission vide order dated 8.7.2016 in Petition No. 289/TT/2013 had already condoned the entire delay of 121 days. With respect to Asset-B1, out of the delay of 155 days, the Commission vide order dated 21.3.2016 in Petition No. 142/TT/2014 had not condoned the delay of 62 days and for Asset-B2, the



entire delay of 121 days was condoned. With respect to Asset-C1, Asset-C2, Asset-C3 and Asset-C4, the Commission vide order dated 30.3.2016 in Petition No. 140/TT/2015 had condoned the delay of 18-22 months.

Interest During Construction (“IDC”) and Incidental Expenditure During Construction (“IEDC”)

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

(₹ in lakh)

Assets	IDC as per Auditor Certificate	IDC Discharged upto COD	IDC discharged during the year			Total IDC
			2014-15	2015-16	2016-17	
Asset-A	2190.63	1807.19	383.44	0.00	0.00	2190.63
Asset-B1	4419.52	3211.21	1208.31	0.00	0.00	4419.52
Asset-B2	297.36	258.94	38.42	0.00	0.00	297.36
Asset-C1	1376.89	709.93		660.36	6.60	1376.89
Asset-C2	543.72	213.03		269.53	61.16	543.72
Asset-C3	93.88	72.90		20.99	0.00	93.88
Asset-C4	309.03	0.27		208.80	99.96	309.03

33. The Petitioner has submitted IDC computation statement which contains the name of loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as mismatch in loan amount between IDC statement and Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:



(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC disallowed due to time over-run not condoned	IDC disallowed due to computational error	IDC allowed	IDC discharged upto COD	IDC un-discharged as on codCOD	IDC discharged during the year		
							2014-15	2015-16	2016-17
1	2	3	4	5=2-3-4	6	7	8	9	10
Asset-A	2190.63	0.00	0.00	2190.63	1802.73	387.90	387.90	0.00	0.00
Asset-B1	4419.52	320.93	0.00	4098.59	3050.19	1048.40	1048.40	0.00	0.00
Asset-B2	297.36	0.00	0.00	297.36	258.94	38.42	38.42	0.00	0.00
Asset-C1	1376.89	0.00	1.19	1375.70	708.15	667.54		660.36	7.18
Asset-C2	543.72	0.00	80.00	463.72	213.03	250.69		250.69	0.00
Asset-C3	93.88	0.00	6.37	87.51	69.64	17.87		17.87	0.00
Asset-C4	309.03	0.00	88.14	220.89	0.00	220.89		208.80	12.09

34. The Petitioner has claimed IEDC in respect of the transmission assets as per the Auditor's Certificate and has also considered IEDC disallowed due to time over-run not condoned. The Petitioner has submitted that IEDC mentioned in the Auditor's Certificate is on cash basis and has been paid upto COD.

35. IEDC considered as on COD for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IEDC as per Auditor's Certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-B1	16.93	1.08	15.85
Asset-B2	7.34	-	7.34
Asset-C1	321.55	-	321.55
Asset-C2	136.55	-	136.55
Asset-C3	22.81	-	22.81
Asset-C4	79.53	-	79.53

Initial Spares

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

“(d) Transmission System



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

37. Initial Spares claimed by the Petitioner are as follows:

Assets	Particulars	Plant and Machinery Cost (excluding IDC and IEDC, land cost and cost of civil works (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Initial spares as % of Capital Cost (in %)	Ceiling as per Regulation (in %)
Asset-A	Sub-station	866.88	22.9	2.55	6.00
	Transmission line	34811.81	320.28	0.92	1.00
Asset-B1	Sub-station	36.47	0.00	0.00	6.00
	Transmission line	59597.46	10.00	0.02	1.00
Asset-B2	Sub-station	3649.16	103.00	2.73	6.00
Asset-C1	Sub-station	22894.28	1132.00	4.89	6.00
Asset-C2	Sub-station	10214.99	563.00	5.48	6.00
Asset-C3	Sub-station	1474.21	82.11	5.54	6.00
Asset-C4	Sub-station	5306.55	253.67	4.72	6.00

38. We have considered the submissions of the Petitioner. The Petitioner has claimed Initial Spares for Asset-C1, Asset-C2, Asset-C3 and Asset-C4 considering them as brown field sub-station at 6.00%. However, as per the submissions made by the Petitioner, *vide* affidavit dated 27.11.2020, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 are GIS. Accordingly, Initial Spares are allowed @ 5% as they are GIS. Further, Initial Spares are allowed for the 2014-19 tariff period on the basis of the individual capital cost of the assets and the same is allowed for the 2019-24 tariff period on the basis of the capital cost of the project as per the APTEL’s judgement dated 14.9.2019 in Appeal No. 74 of 2017. The Initial Spares allowed for the transmission assets as per the norms in the 2014 Tariff Regulations is as follows:



Assets	Particulars	Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) upto cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per the 2014 Tariff Regulations (in %)	Initial Spares allowable (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	D= (A-B)* C/(100-C)	E-B	
Asset-A	Transmission Line	34811.81	320.28	1.00%	348.40	0.00	320.28
	Sub-station (Brownfield)	866.88	22.90	6.00%	53.87	0.00	22.90
Asset B1	Transmission Line	59597.46	10.00	1.00%	601.89	0.00	10.00
Asset-B2	Sub-station (Brownfield)	3649.16	103.00	6.00%	226.35	0.00	103.00
Asset-C1	Sub-station (Brownfield GIS)	22894.28	1132.00	5.00%	1145.38	0.00	1132.00
Asset-C2	Sub-station (Brownfield GIS)	10214.99	563.00	5.00%	508.00	55.00	508.00
Asset-C3	Sub-station (Brownfield GIS)	1474.21	82.11	5.00%	73.27	8.84	73.27
Asset-C4	Sub-station (Brownfield GIS)	5306.55	253.67	5.00%	265.94	0.00	253.67

39. The Petitioner has submitted the details of discharge of Initial Spares. The Petitioner has submitted that actual capital cost discharged against Initial Spares is included in the capital cost shown in Auditor's Certificate for respective years i.e. Initial Spares discharged up to COD is included in capital cost as on COD and the cost discharged towards Initial Spares in subsequent period is added in ACE. Accordingly, excess Initial Spares with respect to Asset-C2 and Asset-C3 are reduced from ACE as follows:

Assets	Initial Spares Disallowed (₹ in lakh)		
	2016-17	2017-18	Total
Asset-C2	-	55.00	55.00
Asset-C3	0.58	8.26	8.84



Capital Cost as on COD

40. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The details of the capital cost now approved as on COD after adjustment of IDC, IEDC and Initial Spares are as follows:

(₹ in lakh)

Assets	Capital Cost claimed as on COD as per Auditors Certificate (A)	Un-discharged IDC (B)	IDC Disallowed due to time over-run (C)	IDC Disallowed due to computational error (D)	IEDC Disallowed due to time over-run (E)	Capital Cost allowed as on COD (E) = (A-B-C-D-E-F)
Asset-A	33786.88	387.90	0.00	0.00	0.00	33398.98
Asset-B1	56707.53	1048.40	320.93	0.00	1.08	55337.13
Asset-B2	2616.44	38.42	0.00	0.00	0.00	2578.02
Asset-C1	20714.92	667.54	0.00	1.19	0.00	20046.18
Asset-C2	7488.46	250.69	0.00	80.00	0.00	7157.77
Asset-C3	1166.99	17.87	0.00	6.37	0.00	1142.75
Asset-C4	4405.26	220.89	0.00	88.14	0.00	4096.23

Additional Capital Expenditure (“ACE”)

41. The Commission had allowed ACE in respect of the transmission assets for 2014-19 period *vide* order dated 8.7.2016 in Petition No. 289/TT/2013, order dated 21.3.2016 in Petition No. 142/TT/2014 and order dated 30.3.2016 in Petition No. 140/TT/2015 as per Regulation 14(1)(i) of the 2014 Tariff Regulations. The details of ACE allowed earlier by the Commission in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	ACE allowed				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	1016.62	332.43	0.00	0.00	0.00
Asset-B1	3594.00	2651.35	0.00	0.00	0.00
Asset-B2	1386.61	489.18	0.00	0.00	0.00
Asset-C1		4768.58	4805.37	1093.22	10667.17
Asset-C2		1181.83	2532.68	1079.52	4794.03
Asset-C3		210.41	271.86	135.90	618.17
Asset-C4		814.93	388.76	131.68	1335.37



42. Against this, the Petitioner has claimed the following ACE for Asset-A, Asset-B1, Asset-B2, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 upto the cut-off date in accordance with Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations:

Asset-A

(₹ in lakh)

Particulars	Regulations	ACE claimed				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	950.48	119.98	8.33	0.00	0.00
Addition in Gross block	14(1)(ii)	2774.21	230.06	0.00	0.00	0.00
IDC Discharged after COD	14(1)(i)	383.44	0.00	0.00	0.00	0.00
Total ACE		4108.13	350.04	8.33	0.00	0.00

Asset-B1

(₹ in lakh)

Particulars	Regulations	ACE claimed				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	1693.59	284.86	238.52	168.63	8.55
Addition in Gross block	14(1)(ii)	4481.95	201.49	214.59	70.67	0.00
IDC Discharged after COD	14(1)(i)	926.77	0.00	0.00	0.00	0.00
Total ACE		7102.31	486.35	453.11	239.30	8.55

Asset-B2

(₹ in lakh)

Particulars	Regulations	ACE claimed				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	437.92	191.97	66.14	0.00	9.11
Addition in Gross block	14(1)(ii)	518.77	93.68	19.83	0.00	0.00
IDC Discharged after COD	14(1)(i)	38.42	0.00	0.00	0.00	0.00
Total ACE		995.11	285.65	85.97	0.00	9.11



Asset-C1

(₹ in lakh)

Particulars	Regulations	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	169.14	582.33	421.76	107.16
Addition in Gross block	14(1)(ii)	3449.59	2298.17	2250.45	131.24
IDC Discharged after COD	14(1)(i)	660.36	5.57	0.00	0.00
Total ACE		4279.09	2886.07	2672.21	238.40

Asset-C2

(₹ in lakh)

Particulars	Regulations	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	356.21	120.61	199.29	17.90
Addition in Gross block	14(1)(ii)	1664.92	218.43	829.44	0.00
IDC Discharged after COD	14(1)(i)	269.53	61.16	0.00	0.00
Total ACE		2290.66	400.20	1028.73	17.90

Asset-C3

(₹ in lakh)

Particulars	Regulations	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	63.05	28.76	31.71	0.00
Addition in Gross block	14(1)(ii)	116.78	127.39	56.22	0.00
IDC Discharged after COD	14(1)(i)	20.99	0.00	0.00	0.00
Total ACE		200.82	156.15	87.93	0.00

Asset-C4

(₹ in lakh)

Particulars	Regulations	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	100.31	244.07	92.53	0.00
Addition in Gross block	14(1)(ii)	138.05	574.27	140.62	0.00
IDC Discharged after	14(1)(i)	208.80	99.96	0.00	0.00



(₹ in lakh)

Particulars	Regulations	ACE claimed			
		2015-16	2016-17	2017-18	2018-19
COD					
Total ACE		447.16	918.30	233.15	0.00

43. The Petitioner has further submitted the package-wise details of ACE claimed for Asset-A, Asset-B1, Asset-B2, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 vide affidavit dated 27.11.2020.

44. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner is allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. The un-discharged IDC and Initial Spares as on COD have been allowed as ACE during the year of its discharge. The allowed ACE is summarized as follows:

Asset-A

(₹ in lakh)

Particulars	Regulation	ACE approved				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	950.48	119.98	8.33	0.00	0.00
Addition in Gross block	14(1)(ii)	2774.21	230.06	0.00	0.00	0.00
IDC Discharged after COD	14(1)(i)	387.90	0.00	0.00	0.00	0.00
Total ACE		4112.59	350.04	8.33	0.00	0.00

Asset-B1

(₹ in lakh)

Particulars	Regulation	ACE approved				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	1693.59	284.86	238.52	168.63	8.55
Addition in Gross block	14(1)(ii)	4481.95	201.49	214.59	70.67	0.00
IDC Discharged after COD	14(1)(i)	1048.40	0.00	0.00	0.00	0.00
Total ACE		7223.94	486.35	453.11	239.30	8.55



Asset-B2

(₹ in lakh)

Particulars	Regulation	ACE approved				
		2014-15	2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	437.92	191.97	66.14	0.00	9.11
Addition in Gross block	14(1)(ii)	518.77	93.68	19.83	0.00	0.00
IDC Discharged after COD	14(1)(i)	38.42	0.00	0.00	0.00	0.00
Total ACE		995.11	285.65	85.97	0.00	9.11

Asset-C1

(₹ in lakh)

Particulars	Regulation	ACE approved			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	169.14	582.33	421.76	107.16
Addition in Gross block	14(1)(ii)	3449.59	2298.17	2250.45	131.24
IDC Discharged after COD	14(1)(i)	660.36	7.18	0.00	0.00
Total ACE		4279.09	2887.68	2672.21	238.40

Asset-C2

(₹ in lakh)

Particulars	Regulation	ACE approved			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	356.21	120.61	199.29	17.90
Addition in Gross block	14(1)(ii)	1664.92	218.43	829.44	0.00
IDC Discharged after COD	14(1)(i)	250.69	0.00	0.00	0.00
Less: Excess Initial Spares		0.00	0.00	55.00	0.00
Total ACE		2271.82	339.04	973.73	17.90

Asset-C3

(₹ in lakh)

Particulars	Regulation	ACE approved			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	63.05	28.76	31.71	0.00
Addition in Gross block	14(1)(ii)	116.78	127.39	56.22	0.00
IDC Discharged after COD	14(1)(i)	17.87	0.00	0.00	0.00



Particulars	Regulation	ACE approved			
		2015-16	2016-17	2017-18	2018-19
Less: Excess Initial Spares		0.00	0.58	8.26	0.00
Total ACE		197.70	155.57	79.67	0.00

Asset-C4

(₹ in lakh)

Particulars	Regulation	ACE approved			
		2015-16	2016-17	2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	100.31	244.07	92.53	0.00
Addition in Gross block	14(1)(ii)	138.05	574.27	140.62	0.00
IDC Discharged after COD	14(1)(i)	208.80	12.09	0.00	0.00
Total ACE		447.16	830.43	233.15	0.00

45. Accordingly, capital cost considered for truing up of transmission tariff for 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	Capital cost as on COD	ACE allowed					Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-A	33398.98	4112.59	350.04	8.33	0.00	0.00	37869.94
Asset-B1	55337.13	7223.94	486.35	453.11	239.30	8.55	63748.37
Asset-B2	2578.02	995.11	285.65	85.97	0.00	9.11	3953.86
Asset-C1	20046.18		4279.09	2887.68	2672.21	238.40	30123.57
Asset-C2	7157.77		2271.82	339.04	973.73	17.90	10760.26
Asset-C3	1142.75		197.70	155.57	79.67	0.00	1575.69
Asset-C4	4096.23		447.16	830.43	233.15	0.00	5606.97
Total	123757.06	12331.64	8317.81	4760.14	4198.06	273.96	153638.67

Debt-Equity Ratio

46. The Petitioner has claimed debt-equity ratio of 70:30 as on COD with respect to the transmission assets. Debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity as on COD and as on 31.3.2019 for Asset-A, Asset-B1, Asset-B2, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 considered for the purpose of tariff of 2014-19 period are as follows:



Asset-A1

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	23379.28	70.00	26508.96	70.00
Equity	10019.69	30.00	11360.98	30.00
Total	33398.98	100.00	37869.94	100.00

Asset-B1

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	38735.99	70.00	44623.86	70.00
Equity	16601.14	30.00	19124.51	30.00
Total	55337.13	100.00	63748.37	100.00

Asset-B2

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1804.61	70.00	2767.70	70.00
Equity	773.41	30.00	1186.16	30.00
Total	2578.02	100.00	3953.86	100.00

Asset-C1

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	14032.33	70.00	21086.50	70.00
Equity	6013.85	30.00	9037.07	30.00
Total	20046.18	100.00	30123.57	100.00

Asset-C2

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	5010.44	70.00	7532.18	70.00
Equity	2147.33	30.00	3228.08	30.00
Total	7157.77	100.00	10760.26	100.00

Asset-C3

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	799.92	70.00	1102.99	70.00
Equity	342.82	30.00	472.71	30.00
Total	1142.75	100.00	1575.69	100.00



Asset-C4

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2867.36	70.00	3924.88	70.00
Equity	1228.87	30.00	1682.09	30.00
Total	4096.23	100.00	5606.97	100.00

Depreciation

47. The Petitioner has claimed depreciation under Regulation 27 of the 2014 Tariff Regulations. The Petitioner's claim towards depreciation in respect of the transmission assets was found to be higher than the depreciation allowed for the transmission assets vide order dated 8.7.2016 in Petition No. 289/TT/2013, order dated 21.3.2016 in Petition No. 142/TT/2014 and order dated 30.3.2016 in Petition No. 140/TT/2015. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in orders nor made any specific prayer for allowing higher depreciation in this petition. Similar issue had come up in Petition No. 19/TT/2020, wherein the Commission vide order dated 9.5.2020 has held as follows:

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



apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations."

48. In line with the above decision, depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for 2014-19 period for the instant transmission assets. The gross block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) (as placed in Annexure-I, Annexure-II, Annexure-III, Annexure-IV, Annexure-V, Annexure-VI and Annexure-VII for Asset-A, Asset-B1, Asset-B2, Asset-C1, Asset-C2, Asset-C3 and Asset-C4 respectively). WAROD has been worked out considering the depreciation rates of transmission assets as prescribed in the 2014 Tariff Regulations. Asset-wise trued up depreciation allowed is as follows:

(₹ in lakh)

Asset-A						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	33398.98	37511.57	37861.61	37869.94	37869.94
B	ACE	4112.59	350.04	8.33	0.00	0.00
C	Closing Gross Block (A+B)	37511.57	37861.61	37869.94	37869.94	37869.94
D	Average Gross Block (A+C)/2	35455.27	37686.59	37865.78	37869.94	37869.94
E	Freehold land	0.62	0.62	0.62	0.62	0.62
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	35.00	35.00	34.00	33.00	32.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00	3.00
I	Aggregate Depreciable Value	31909.19	33917.37	34078.64	34082.39	34082.39
J	Combined Depreciation during the year	1872.47	1990.48	2000.13	2000.35	2000.35
K	Aggregate Cumulative Depreciation	1872.47	3862.95	5863.09	7863.44	9863.79



L	Remaining Depreciable Value (I-K)	30036.72	30054.42	28215.55	26218.95	24218.59
---	-----------------------------------	----------	----------	----------	----------	----------

(₹ in lakh)

Asset-B1						
	Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	55337.13	62561.06	63047.41	63500.52	63739.82
B	ACE	7223.94	486.35	453.11	239.30	8.55
C	Closing Gross Block (A+B)	62561.06	63047.41	63500.52	63739.82	63748.37
D	Average Gross Block (A+C)/2	58949.10	62804.24	63273.97	63620.17	63744.10
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	35.00	35.00	34.00	33.00	32.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00	3.00
I	Aggregate Depreciable Value	53054.19	56523.82	56946.57	57258.16	57369.69
J	Combined Depreciation during the year	2822.86	3316.45	3341.27	3359.55	3366.09
K	Aggregate Cumulative Depreciation	2822.86	6139.31	9480.58	12840.13	16206.22
L	Remaining Depreciable Value (I-K)	50231.33	50384.50	47465.99	44418.03	41163.47

(₹ in lakh)

Asset-B2						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	2578.02	3573.13	3858.78	3944.75	3944.75
B	ACE	995.11	285.65	85.97	0.00	9.11
C	Closing Gross Block (A+B)	3573.13	3858.78	3944.75	3944.75	3953.86
D	Average Gross Block (A+C)/2	3075.58	3715.96	3901.77	3944.75	3949.31
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	25.00	25.00	24.00	23.00	22.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00	3.00
I	Aggregate Depreciable Value	2768.02	3344.36	3511.59	3550.28	3554.37
J	Combined Depreciation during the year	162.39	196.20	206.01	208.28	208.52
K	Aggregate Cumulative Depreciation	162.39	358.59	564.61	772.89	981.41

Page 33 of 99



L	Remaining Depreciable Value (I-K)	2605.63	2985.77	2946.98	2777.39	2572.96
---	-----------------------------------	---------	---------	---------	---------	---------

(₹ in lakh)

Asset-C1					
	Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	20046.18	24325.27	27212.96	29885.17
B	ACE	4279.09	2887.68	2672.21	238.40
C	Closing Gross Block (A+B)	24325.27	27212.96	29885.17	30123.57
D	Average Gross Block (A+C)/2	22185.73	25769.12	28549.06	30004.37
E	Freehold land	3243.94	3243.94	3348.00	3488.24
F	Weighted Average Rate of Depreciation (in %)	4.46	4.53	4.54	4.54
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00
I	Aggregate Depreciable Value	17047.61	20272.66	22680.96	23864.51
J	Combined Depreciation during the year	805.49	1166.74	1296.18	1362.41
K	Aggregate Cumulative Depreciation	805.49	1972.23	3268.41	4630.82
L	Remaining Depreciable Value (I-K)	16242.12	18300.43	19412.55	19233.69

(₹ in lakh)

Asset-C2					
	Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	7157.77	9429.59	9768.63	10742.36
B	ACE	2271.82	339.04	973.73	17.90
C	Closing Gross Block (A+B)	9429.59	9768.63	10742.36	10760.26
D	Average Gross Block (A+C)/2	8293.68	9599.11	10255.49	10751.31
E	Freehold land	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00
I	Aggregate Depreciable Value	7464.31	8639.20	9229.94	9676.18
J	Combined Depreciation during the year	339.80	506.83	541.49	567.67
K	Aggregate Cumulative Depreciation	339.80	846.63	1388.12	1955.79
L	Remaining Depreciable Value (I-K)	7124.52	7792.57	7841.83	7720.39



(₹ in lakh)

Asset-C3					
	Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	1142.75	1340.45	1496.02	1575.69
B	ACE	197.70	155.57	79.67	0.00
C	Closing Gross Block (A+B)	1340.45	1496.02	1575.69	1575.69
D	Average Gross Block (A+C)/2	1241.60	1418.24	1535.86	1575.69
E	Freehold land	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00
I	Aggregate Depreciable Value	1117.44	1276.41	1382.27	1418.12
J	Combined Depreciation during the year	49.62	74.88	81.09	83.20
K	Aggregate Cumulative Depreciation	49.62	124.50	205.59	288.79
L	Remaining Depreciable Value (I-K)	1067.83	1151.92	1176.68	1129.34

(₹ in lakh)

Asset-C4					
	Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	4096.23	4543.39	5373.82	5606.97
B	ACE	447.16	830.43	233.15	0.00
C	Closing Gross Block (A+B)	4543.39	5373.82	5606.97	5606.97
D	Average Gross Block (A+C)/2	4319.81	4958.61	5490.40	5606.97
E	Freehold land	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Lapsed life at the beginning of the year	0.00	0.00	1.00	2.00
I	Aggregate Depreciable Value	3887.83	4462.75	4941.36	5046.28
J	Combined Depreciation during the year	114.04	261.81	289.89	296.05
K	Aggregate Cumulative Depreciation	114.04	375.86	665.75	961.80
L	Remaining Depreciable Value (I-K)	3773.79	4086.89	4275.61	4084.48

49. The details of depreciation approved vide order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, vide order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and vide order dated 30.3.2016 in Petition No. 140/TT/2015 for



Asset-C1, Asset-C2, Asset-C3 and Asset-C4, depreciation claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	1788.43	1824.27	1833.10	1833.10	1833.10
Claimed by the Petitioner in the instant petition	1875.58	1993.63	2003.27	2003.49	2003.49
Allowed after true-up in this order	1872.47	1990.48	2000.13	2000.35	2000.35

Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	2721.77	3166.55	3236.58	3236.58	3236.58
Claimed by the Petitioner in the instant petition	2827.71	3318.59	3343.40	3361.68	3368.23
Allowed after true-up in this order	2822.86	3316.45	3341.27	3359.55	3366.09

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	172.33	221.85	234.77	234.77	234.77
Claimed by the Petitioner in the instant petition	165.29	199.26	209.07	211.34	211.58
Allowed after true-up in this order	162.39	196.20	206.01	208.28	208.52

Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	815.81	1227.81	1356.94	1383.62
Claimed by the Petitioner in the instant petition	822.73	1211.09	1342.61	1408.84
Allowed after true-up in this order	805.49	1166.74	1296.18	1362.41



Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	317.22	506.87	602.23	630.73
Claimed by the Petitioner in the instant petition	340.18	509.44	547.17	574.80
Allowed after true-up in this order	339.80	506.83	541.49	567.67

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	49.79	78.52	89.28	92.87
Claimed by the Petitioner in the instant petition	49.81	75.23	81.68	84.00
Allowed after true-up in this order	49.62	74.88	81.09	83.20

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	119.70	271.18	284.92	288.40
Claimed by the Petitioner in the instant petition	114.05	264.15	294.55	300.70
Allowed after true-up in this order	114.04	261.81	289.89	296.05

Interest on Loan (“IoL”)

50. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets is as follows:



(₹ in lakh)

	Particulars	Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	23379.28	26258.10	26503.13	26508.96	26508.96
B	Cumulative Repayments upto Previous Year	0.00	1872.47	3862.95	5863.09	7863.44
C	Net Loan-Opening (A-B)	23379.28	24385.63	22640.17	20645.87	18645.52
D	Additions	2878.81	245.03	5.83	0.00	0.00
E	Repayment during the year	1872.47	1990.48	2000.13	2000.35	2000.35
F	Net Loan-Closing (C+D-E)	24385.63	22640.17	20645.87	18645.52	16645.16
G	Average Loan (C+F)/2	23882.46	23512.90	21643.02	19645.69	17645.34
H	Weighted Average Rate of Interest on Loan (in %)	8.8847	8.8676	8.8493	8.8137	8.8057
I	Interest on Loan (G*H)	2121.89	2085.03	1915.25	1731.51	1553.79

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	38735.99	43792.74	44133.19	44450.37	44617.88
B	Cumulative Repayments upto Previous Year	0.00	2822.86	6139.31	9480.58	12840.13
C	Net Loan-Opening (A-B)	38735.99	40969.88	37993.88	34969.79	31777.75
D	Additions	5056.75	340.45	317.18	167.51	5.99
E	Repayment during the year	2822.86	3316.45	3341.27	3359.55	3366.09
F	Net Loan-Closing (C+D-E)	40969.88	37993.88	34969.79	31777.75	28417.65
G	Average Loan (C+F)/2	39852.94	39481.88	36481.83	33373.77	30097.70
H	Weighted Average Rate of Interest on Loan (in %)	8.9859	8.8883	8.8171	8.6851	8.6406
I	Interest on Loan (G*H)	3247.54	3509.25	3216.63	2898.54	2600.63

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	1804.61	2501.19	2701.15	2761.33	2761.33
B	Cumulative Repayments upto Previous Year	0.00	162.39	358.59	564.61	772.89
C	Net Loan-Opening (A-B)	1804.61	2338.80	2342.55	2196.72	1988.44
D	Additions	696.58	199.96	60.18	0.00	6.38
E	Repayment during the year	162.39	196.20	206.01	208.28	208.52
F	Net Loan-Closing (C+D-E)	2338.80	2342.55	2196.72	1988.44	1786.29
G	Average Loan (C+F)/2	2071.71	2340.68	2269.64	2092.58	1887.36
H	Weighted Average Rate of Interest on Loan (in %)	9.1079	8.9217	8.8316	8.7011	8.6498

Page 38 of 99



	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
I	Interest on Loan (G*H)	188.69	208.83	200.44	182.08	163.25

(₹ in lakh)

	Particulars	Asset-C1			
		2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	14032.33	17027.69	19049.07	20919.62
B	Cumulative Repayments upto Previous Year	0.00	805.49	1972.23	3268.41
C	Net Loan-Opening (A-B)	14032.33	16222.20	17076.84	17651.20
D	Additions	2995.36	2021.38	1870.55	166.88
E	Repayment during the year	805.49	1166.74	1296.18	1362.41
F	Net Loan-Closing (C+D-E)	16222.20	17076.84	17651.20	16455.68
G	Average Loan (C+F)/2	15127.26	16649.52	17364.02	17053.44
H	Weighted Average Rate of Interest on Loan (in %)	8.9819	8.8166	8.6076	8.5270
I	Interest on Loan (G*H)	1106.27	1467.92	1494.62	1454.15

(₹ in lakh)

	Particulars	Asset-C2			
		2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	5010.44	6600.71	6838.04	7519.65
B	Cumulative Repayments upto Previous Year	0.00	339.80	846.63	1388.12
C	Net Loan-Opening (A-B)	5010.44	6260.92	5991.41	6131.53
D	Additions	1590.27	237.33	681.61	12.53
E	Repayment during the year	339.80	506.83	541.49	567.67
F	Net Loan-Closing (C+D-E)	6260.92	5991.41	6131.53	5576.39
G	Average Loan (C+F)/2	5635.68	6126.16	6061.47	5853.96
H	Weighted Average Rate of Interest on Loan (in %)	9.1015	9.0276	8.7717	8.6630
I	Interest on Loan (G*H)	398.01	553.04	531.69	507.13

(₹ in lakh)

	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	799.92	938.32	1047.22	1102.99
B	Cumulative Repayments upto Previous Year	0.00	49.62	124.50	205.59

Page 39 of 99



	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
C	Net Loan-Opening (A-B)	799.92	888.70	922.72	897.39
D	Additions	138.39	108.90	55.77	0.00
E	Repayment during the year	49.62	74.88	81.09	83.20
F	Net Loan-Closing (C+D-E)	888.70	922.72	897.39	814.20
G	Average Loan (C+F)/2	844.31	905.71	910.06	855.80
H	Weighted Average Rate of Interest on Loan (in %)	8.9881	8.8599	8.5577	8.4753
I	Interest on Loan (G*H)	57.43	80.25	77.88	72.53

(₹ in lakh)

	Particulars	Asset-C4			
		2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	2867.36	3180.37	3761.68	3924.88
B	Cumulative Repayments upto Previous Year	0.00	114.04	375.86	665.75
C	Net Loan-Opening (A-B)	2867.36	3066.33	3385.82	3259.13
D	Additions	313.01	581.30	163.21	0.00
E	Repayment during the year	114.04	261.81	289.89	296.05
F	Net Loan-Closing (C+D-E)	3066.33	3385.82	3259.13	2963.08
G	Average Loan (C+F)/2	2966.85	3226.07	3322.48	3111.11
H	Weighted Average Rate of Interest on Loan (in %)	8.8654	8.8413	8.6657	8.5979
I	Interest on Loan (G*H)	131.51	285.23	287.91	267.49

51. The details of IoL approved *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 for Asset-C1, Asset-C2, Asset-C3 and Asset-C4, IoL claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:



Asset-A**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	2027.93	1909.00	1755.43	1591.21	1428.96
Claimed by the Petitioner in the instant petition	2121.89	2084.61	1914.56	1730.55	1552.55
Allowed after true-up in this order	2121.89	2085.03	1915.25	1731.51	1553.79

Asset-B1**(₹ in lakh)**

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	3152.45	3407.35	3198.23	2901.11	2609.13
Claimed by the Petitioner in the instant petition	3253.14	3511.26	3218.43	2900.12	2602.01
Allowed after true-up in this order	3247.54	3509.25	3216.63	2898.54	2600.63

Asset-B2**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	204.02	246.67	241.26	219.27	197.42
Claimed by the Petitioner in the instant petition	188.56	208.43	199.78	181.16	162.08
Allowed after true-up in this order	188.69	208.83	200.44	182.08	163.25

Asset-C1**(₹ in lakh)**

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	1130.52	1599.98	1670.79	1583.43
Claimed by the Petitioner in the instant petition	1105.73	1464.54	1487.40	1443.03
Allowed after true-up in this order	1106.27	1467.92	1494.62	1454.15



Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	379.06	570.96	636.86	614.72
Claimed by the Petitioner in the instant petition	398.46	556.02	537.78	514.26
Allowed after true-up in this order	398.01	553.04	531.69	507.13

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	57.54	85.42	90.75	86.96
Claimed by the Petitioner in the instant petition	57.66	80.63	78.47	73.30
Allowed after true-up in this order	57.43	80.25	77.88	72.53

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	141.66	303.87	295.15	273.45
Claimed by the Petitioner in the instant petition	131.52	287.86	292.86	271.99
Allowed after true-up in this order	131.51	285.23	287.91	267.49

Return on Equity (“RoE”)

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



Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)](in %)
2014-15	21.018	19.624
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

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

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
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

53. MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for trueing up of the tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations:

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

54. The Petitioner has claimed RoE for 2014-19 tariff period after grossing up the RoE@15.50% with effective tax rates (based on MAT rates) each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is trueed up on the basis of MAT rates applicable in the respective years and as allowed in respect of the transmission assets as follows:



(₹ in lakh)

	Particulars	Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	10019.69	11253.47	11358.48	11360.98	11360.98
B	Additions	1233.78	105.01	2.50	0.00	0.00
C	Closing Equity (A+B)	11253.47	11358.48	11360.98	11360.98	11360.98
D	Average Equity (A+C)/2	10636.58	11305.98	11359.73	11360.98	11360.98
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	2085.83	2227.84	2238.44	2238.68	2244.70

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	16601.14	18768.32	18914.22	19050.16	19121.95
B	Additions	2167.18	145.91	135.93	71.79	2.57
C	Closing Equity (A+B)	18768.32	18914.22	19050.16	19121.95	19124.51
D	Average Equity (A+C)/2	17684.73	18841.27	18982.19	19086.05	19123.23
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	3144.93	3712.67	3740.44	3760.91	3778.37

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	773.41	1071.94	1157.63	1183.43	1183.43
B	Additions	298.53	85.70	25.79	0.00	2.73
C	Closing Equity (A+B)	1071.94	1157.63	1183.43	1183.43	1186.16
D	Average Equity (A+C)/2	922.67	1114.79	1170.53	1183.43	1184.79
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	180.94	219.67	230.65	233.19	234.09



(₹ in lakh)

	Particulars	Asset-C1			
		2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	6013.85	7297.58	8163.89	8965.55
B	Additions	1283.73	866.31	801.66	71.52
C	Closing Equity (A+B)	7297.58	8163.89	8965.55	9037.07
D	Average Equity (A+C)/2	6655.72	7730.73	8564.72	9001.31
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	1067.84	1523.34	1687.68	1778.48

(₹ in lakh)

	Particulars	Asset-C2			
		2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	2147.33	2828.88	2930.59	3222.71
B	Additions	681.55	101.71	292.12	5.37
C	Closing Equity (A+B)	2828.88	2930.59	3222.71	3228.08
D	Average Equity (A+C)/2	2488.10	2879.73	3076.65	3225.39
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	380.44	567.45	606.25	637.27

(₹ in lakh)

	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	342.82	402.14	448.81	472.71
B	Additions	59.31	46.67	23.90	0.00
C	Closing Equity (A+B)	402.14	448.81	472.71	472.71
D	Average Equity (A+C)/2	372.48	425.47	460.76	472.71
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500



	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	55.55	83.84	90.79	93.40

(₹ in lakh)

	Particulars	Asset-C4			
		2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	1228.87	1363.02	1612.15	1682.09
B	Additions	134.15	249.13	69.95	0.00
C	Closing Equity (A+B)	1363.02	1612.15	1682.09	1682.09
D	Average Equity (A+C)/2	1295.94	1487.58	1647.12	1682.09
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	127.68	293.13	324.56	332.35

55. The details of RoE approved *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 for Asset-C1, Asset-C2, Asset-C3 and Asset-C4, RoE claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	1992.02	2031.70	2041.48	2041.48	2041.48
Claimed by the Petitioner in the instant petition	2087.56	2228.97	2238.43	2238.68	2244.70
Allowed after true-up in this order	2085.83	2227.84	2238.44	2238.68	2244.70



Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	3032.07	3527.23	3605.22	3605.22	3605.22
Claimed by the Petitioner in the instant petition	3152.74	3716.95	3742.83	3763.30	3780.76
Allowed after true-up in this order	3144.93	3712.67	3740.44	3760.91	3778.37

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	192.01	247.19	261.58	261.58	261.58
Claimed by the Petitioner in the instant petition	181.08	219.78	230.65	233.19	234.09
Allowed after true-up in this order	180.94	219.67	230.65	233.19	234.09

Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	1079.96	1609.38	1783.73	1816.04
Claimed by the Petitioner in the instant petition	1068.47	1523.33	1687.55	1778.35
Allowed after true-up in this order	1067.84	1523.34	1687.68	1778.48

Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	355.16	567.51	674.28	706.19
Claimed by the Petitioner in the instant petition	381.06	570.37	612.61	645.27
Allowed after true-up in this order	380.44	567.45	606.25	637.27



Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	55.75	87.91	99.97	103.98
Claimed by the Petitioner in the instant petition	55.79	84.23	91.45	94.30
Allowed after true-up in this order	55.55	83.84	90.79	93.40

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	134.02	303.62	319.00	322.90
Claimed by the Petitioner in the instant petition	127.76	295.74	329.77	337.57
Allowed after true-up in this order	127.68	293.13	324.56	332.35

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

56. O&M Expenses claimed by the Petitioner in respect of the transmission assets are as follows:

Particulars	Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 400 kV D/C (QUAD) Vadodra-Pirana Transmission line (4 Sub-conductors) (122.949 km)					
(ii) 400 kV (QUAD) Vadodra-Pirana Transmission line (D/C Transmission line on M/C Towers) (4 Sub-conductors) (8.470 km)					
D/C Bundled (4 or more Sub-Conductor (km)	122.949	122.949	122.949	122.949	122.949
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Multi Circuit Bundled with 4 or more Conductor (km)	8.470	8.470	8.470	8.470	8.470
Norms (₹ lakh/km)	1.863	1.925	1.989	2.055	2.123
400 kV bays of:					
(i) Pirana: Bay Extension at Pirana for Vadodara 1 & 2[2number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	266.95	275.78	284.89	294.40	304.17



Particulars	Asset-B1				
	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 765 kV S/C Indore-Vadodara Transmission line (4 Sub-conductors) (291.109km)					
(ii) 765 kV D/C Indore-Vadodara Transmission line (4 Sub-conductors) (30.094km)					
S/C Bundled (4 or more Sub-Conductor (km))	291.109	291.109	291.109	291.109	291.109
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C Bundled (4 or more Sub-Conductor (km))	30.094	30.094	30.094	30.094	30.094
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	188.96	215.54	222.45	229.99	237.57

Particulars	Asset-B2				
	2014-15	2015-16	2016-17	2017-18	2018-19
765 kV bays of:					
(i) Indore:Vadodara Bay[1 Number of bay(s)]					
(ii) Indore: 3*80 MVAR Switchable Line Reactor [1number of bay(s)]					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	168.84	174.44	180.24	186.22	192.40

Particulars	Asset-C1			
	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(i) Vadodara:ICT 1 Bay[1number of bay(s)]				
(ii) Vadodara:Indore Bay[1number of bay(s)]				
400 kV GIS bays of:				
(i) Vadodara:ICT 1 Bay[1 Number of bay(s)]				
(ii) Vadodara:Pirana Bay Circuit-II [1number of bay(s)]				
765 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV GIS Bays	2	2	2	2
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	228.76	290.28	299.90	309.86

Particulars	Asset-C2			
	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(i) Vadodara:1500 MVA ICT-2 765 kV Bay [1number of bay(s)]				
400 kV GIS bays of:				



Particulars	Asset-C2			
	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
(ii) Vadodara:1500 MVA ICT-2 400 kV Bay [1number of bay(s)]				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV GIS Bays	1	1	1	1
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	109.00	145.14	149.95	154.93

Particulars	Asset-C3			
	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
400 kV GIS bays of:				
(i) Vadodara: 400 kV Pirana Bay (Circuit-1) [1number of bay(s)]				
400 kV GIS Bays	1	1	1	1
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	40.30	55.02	56.84	58.73

Particulars	Asset-C4			
	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(i) Vadodara:765 kV Bus Reactor Bay[1number of bay(s)]				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	43.61	90.12	93.11	96.20

57. We have considered the submissions of the Petitioner. O&M Expenses allowed in respect of the transmission assets as per norms specified in the 2014 Tariff Regulations are as follows:

Particulars	Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(iii) 400 kV D/C (QUAD) Vadodra-Pirana Transmission line (4 Sub-conductors) (122.949km)					
(iv) 400 kV (QUAD) Vadodra-Pirana Transmission line (D/C Transmission line on M/C Towers) (4 Sub-conductors) (8.470 km)					
D/C Bundled (4 or more Sub-Conductor (km))	122.949	122.949	122.949	122.949	122.949
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21



Particulars	Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Multi Circuit Bundled with 4 or more Conductor (km)	8.470	8.470	8.470	8.470	8.470
Norms (₹ lakh/km)	1.863	1.925	1.989	2.055	2.123
400 kV bays of:					
(ii) Pirana: Bay Extension at Pirana for Vadodara 1 & 2 [2 number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	266.95	275.78	284.89	294.40	304.17

Particulars	Asset-B1				
	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(iii) 765 kV S/C Indore-Vadodara Transmission line (4 Sub-conductors) (291.109km)					
(iv) 765 kV D/C Indore-Vadodara Transmission line (4 Sub-conductors) (30.094km)					
D/C Bundled (4 or more Sub-Conductor (km))	291.109	291.109	291.109	291.109	291.109
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
S/C Bundled (4 or more Sub-Conductor (km))	30.094	30.094	30.094	30.094	30.094
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expense (₹ in lakh)	188.96	215.54	222.44	229.99	237.57

Particulars	Asset-B2				
	2014-15	2015-16	2016-17	2017-18	2018-19
765 kV bays of:					
(iii) Indore:Vadodara Bay [1 number of bay(s)]					
(iv) Indore: 3*80 MVAR Switchable Line Reactor [1 number of bay(s)]					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	168.84	174.44	180.24	186.22	192.40

Particulars	Asset-C1			
	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(iii) Vadodara:ICT 1 Bay [1 number of bay(s)]				
(iv) Vadodara:Indore Bay [1 number of bay(s)]				
400 kV GIS bays of:				
(iii) Vadodara:ICT 1 Bay [1 number of bay(s)]				
(iv) Vadodara:Pirana Bay Circuit-II [1 number of bay(s)]				



Particulars	Asset-C1			
	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
765 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV GIS Bays	2	2	2	2
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	228.74	290.28	299.90	309.86

Particulars	Asset-C2			
	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(iii) Vadodara:1500 MVA ICT-2 765 kV Bay [1 number of bay(s)]				
400 kV GIS bays of:				
(iv) Vadodara:1500 MVA ICT-2 400 kV Bay [1 number of bay(s)]				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV GIS Bays	1	1	1	1
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	109.00	145.14	149.95	154.93

Particulars	Asset-C3			
	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
400 kV GIS bays of:				
(ii) Vadodara: 400 kV Pirana Bay (Circuit-1) [1 number of bay(s)]				
400 kV GIS Bays	1	1	1	1
Norms (₹ lakh/Bay)	53.25	55.02	56.84	58.73
Total O&M Expense (₹ in lakh)	40.30	55.02	56.84	58.73

Particulars	Asset-C4			
	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
765 kV GIS bays of:				
(ii) Vadodara:765 kV Bus Reactor Bay [1 number of bay(s)]				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	43.61	90.12	93.11	96.20



58. The details of O&M Expenses approved *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 for Asset-C1, Asset-C2, Asset-C3 and Asset-C4, O&M Expenses claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	261.04	269.67	278.57	287.87	297.44
Claimed by the Petitioner in the instant petition	266.95	275.78	284.89	294.40	304.17
Allowed after true-up in this order	266.95	275.78	284.89	294.40	304.17

Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	188.96	215.54	222.44	229.99	237.57
Claimed by the Petitioner in the instant petition	188.96	215.54	222.45	229.99	237.57
Allowed after true-up in this order	188.96	215.54	222.44	229.99	237.57

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	168.84	174.44	180.24	186.22	192.40
Claimed by the Petitioner in the instant petition	168.84	174.44	180.24	186.22	192.40
Allowed after true-up in this order	168.84	174.44	180.24	186.22	192.40



Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	243.48	308.98	319.24	329.82
Claimed by the Petitioner in the instant petition	228.76	290.28	299.90	309.86
Allowed after true-up in this order	228.74	290.28	299.90	309.86

Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	116.02	154.49	159.62	164.91
Claimed by the Petitioner in the instant petition	109.00	145.14	149.95	154.93
Allowed after true-up in this order	109.00	145.14	149.95	154.93

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	47.15	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	40.30	55.02	56.84	58.73
Allowed after true-up in this order	40.30	55.02	56.84	58.73

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	43.61	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	43.61	90.12	93.11	96.20
Allowed after true-up in this order	43.61	90.12	93.11	96.20



Interest on Working Capital (“IWC”)

59. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the details are as follows:

(₹ in lakh)

	Particulars	Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (one month of O&M Expenses)	22.25	22.98	23.74	24.53	25.35
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	40.04	41.37	42.73	44.16	45.63
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	1083.64	1123.24	1099.35	1069.77	1042.22
D	Total Working Capital (A+B+C)	1145.93	1187.59	1165.82	1138.47	1113.19
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	154.70	160.32	157.39	153.69	150.28

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (one month of O&M Expenses)	17.36	17.96	18.54	19.17	19.80
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	31.26	32.33	33.37	34.50	35.64
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	1769.29	1834.73	1795.02	1748.72	1703.35
D	Total Working Capital (A+B+C)	1817.91	1885.02	1846.92	1802.38	1758.78
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	222.56	254.48	249.33	243.32	237.44

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (one month of O&M Expenses)	14.07	14.54	15.02	15.52	16.03



	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	25.33	26.17	27.04	27.93	28.86
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	120.40	137.19	140.33	139.07	137.14
D	Total Working Capital (A+B+C)	159.80	177.90	182.38	182.52	182.03
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	21.57	24.02	24.62	24.64	24.57

(₹ in lakh)

	Particulars	Asset-C1			
		2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (one month of O&M Expenses)	23.41	24.19	24.99	25.82
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	42.14	43.54	44.99	46.48
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	673.37	760.00	816.34	837.96
D	Total Working Capital (A+B+C)	738.92	827.74	886.32	910.26
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	81.22	111.74	119.65	122.89

(₹ in lakh)

	Particulars	Asset-C2			
		2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (one month of O&M Expenses)	11.71	12.10	12.50	12.91
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	21.07	21.77	22.49	23.24
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	270.42	302.99	312.72	319.16
D	Total Working Capital (A+B+C)	303.20	336.86	347.71	355.31
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	31.76	45.48	46.94	47.97



(₹ in lakh)

	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (one month of O&M Expenses)	4.44	4.59	4.74	4.89
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	7.99	8.25	8.53	8.81
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	46.00	50.42	52.58	52.81
D	Total Working Capital (A+B+C)	58.42	63.26	65.85	66.51
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	5.97	8.54	8.89	8.98

(₹ in lakh)

	Particulars	Asset-C4			
		2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (one month of O&M Expenses)	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	142.62	159.10	170.23	169.67
D	Total Working Capital (A+B+C)	162.97	180.13	191.96	192.12
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	11.00	24.32	25.91	25.94

60. The details of IWC approved *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 for Asset-C1, Asset-C2, Asset-C3 and Asset-C4, IWC claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:



Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	148.12	147.59	144.98	141.71	138.51
Claimed by the Petitioner in the instant petition	154.81	160.41	157.44	153.74	150.33
Allowed after true-up in this order	154.70	160.32	157.39	153.69	150.28

Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	215.44	244.41	243.39	236.97	230.66
Claimed by the Petitioner in the instant petition	222.98	254.67	249.48	243.46	237.57
Allowed after true-up in this order	222.56	254.48	249.33	243.32	237.44

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	22.41	26.11	26.94	26.76	26.6
Claimed by the Petitioner in the instant petition	21.64	24.08	24.68	24.69	24.62
Allowed after true-up in this order	21.57	24.02	24.62	24.64	24.57

Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	83.11	119.20	128.39	128.32
Claimed by the Petitioner in the instant petition	81.62	112.69	120.55	123.70
Allowed after true-up in this order	81.22	111.74	119.65	122.89



Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	30.61	46.41	52.86	54.03
Claimed by the Petitioner in the instant petition	31.80	45.67	47.36	48.48
Allowed after true-up in this order	31.76	45.48	46.94	47.97

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	6.36	9.35	10.12	10.33
Claimed by the Petitioner in the instant petition	5.99	8.57	8.93	9.04
Allowed after true-up in this order	5.97	8.54	8.89	8.98

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	11.51	25.20	25.84	25.68
Claimed by the Petitioner in the instant petition	11.01	24.49	26.26	26.27
Allowed after true-up in this order	11.00	24.32	25.91	25.94

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

	Particulars	Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	1872.47	1990.48	2000.13	2000.35	2000.35
B	Interest on Loan	2121.89	2085.03	1915.25	1731.51	1553.79

Page 59 of 99



C	Return on Equity	2085.83	2227.84	2238.44	2238.68	2244.70
D	O&M Expenses	266.95	275.78	284.89	294.40	304.17
E	Interest on Working Capital	154.70	160.32	157.39	153.69	150.28
F	Total (A+B+C+D+E)	6501.84	6739.45	6596.10	6418.63	6253.29

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	2822.86	3316.45	3341.27	3359.55	3366.09
B	Interest on Loan	3247.54	3509.25	3216.63	2898.54	2600.63
C	Return on Equity	3144.93	3712.67	3740.44	3760.91	3778.37
D	O&M Expenses	188.96	215.54	222.44	229.99	237.57
E	Interest on Working Capital	222.56	254.48	249.33	243.32	237.44
F	Total (A+B+C+D+E)	9626.85	11008.39	10770.11	10492.31	10220.10

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	162.39	196.20	206.01	208.28	208.52
B	Interest on Loan	188.69	208.83	200.44	182.08	163.25
C	Return on Equity	180.94	219.67	230.65	233.19	234.09
D	O&M Expenses	168.84	174.44	180.24	186.22	192.40
E	Interest on Working Capital	21.57	24.02	24.62	24.64	24.57
F	Total (A+B+C+D+E)	722.43	823.16	841.96	834.41	822.83

(₹ in lakh)

	Particulars	Asset-C1			
		2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	805.49	1166.74	1296.18	1362.41
B	Interest on Loan	1106.27	1467.92	1494.62	1454.15
C	Return on Equity	1067.84	1523.34	1687.68	1778.48
D	O&M Expenses	228.74	290.28	299.90	309.86
E	Interest on Working Capital	81.22	111.74	119.65	122.89
F	Total (A+B+C+D+E)	3289.56	4560.02	4898.03	5027.79



(₹ in lakh)

	Particulars	Asset-C2			
		2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	339.80	506.83	541.49	567.67
B	Interest on Loan	398.01	553.04	531.69	507.13
C	Return on Equity	380.44	567.45	606.25	637.27
D	O&M Expenses	109.00	145.14	149.95	154.93
E	Interest on Working Capital	31.76	45.48	46.94	47.97
F	Total (A+B+C+D+E)	1259.01	1817.94	1876.32	1914.97

(₹ in lakh)

	Particulars	Asset-C3			
		2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	49.62	74.88	81.09	83.20
B	Interest on Loan	57.43	80.25	77.88	72.53
C	Return on Equity	55.55	83.84	90.79	93.40
D	O&M Expenses	40.30	55.02	56.84	58.73
E	Interest on Working Capital	5.97	8.54	8.89	8.98
F	Total (A+B+C+D+E)	208.87	302.53	315.49	316.84

(₹ in lakh)

	Particulars	Asset-C4			
		2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	114.04	261.81	289.89	296.05
B	Interest on Loan	131.51	285.23	287.91	267.49
C	Return on Equity	127.68	293.13	324.56	332.35
D	O&M Expenses	43.61	90.12	93.11	96.20
E	Interest on Working Capital	11.00	24.32	25.91	25.94
F	Total (A+B+C+D+E)	427.84	954.61	1021.38	1018.03

62. The details of AFC approved *vide* order dated 8.7.2016 in Petition No. 289/TT/2013 for Asset-A, *vide* order dated 21.3.2016 in Petition No. 142/TT/2014 for Asset-B1 and Asset-B2 and *vide* order dated 30.3.2016 in Petition No. 140/TT/2015 for Asset-C1, Asset-C2, Asset-C3 and Asset-C4, AFC claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:



Asset-A**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 8.7.2016 in Petition No.289/TT/2013	6217.54	6182.24	6053.56	5895.38	5739.49
Claimed by the Petitioner in the instant petition	6506.79	6743.40	6598.59	6420.86	6255.24
Allowed after true-up in this order	6501.84	6739.45	6596.10	6418.63	6253.29

Asset-B1**(₹ in lakh)**

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	9310.69	10561.08	10505.86	10209.87	9919.17
Claimed by the Petitioner in the instant petition	9645.53	11017.01	10776.59	10498.55	10226.14
Allowed after true-up in this order	9626.85	11008.39	10770.11	10492.31	10220.10

Asset-B2**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 142/TT/2014	759.61	916.26	944.78	928.59	912.77
Claimed by the Petitioner in the instant petition	725.41	825.99	844.42	836.60	824.77
Allowed after true-up in this order	722.43	823.16	841.96	834.41	822.83

Asset-C1**(₹ in lakh)**

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	3352.87	4865.36	5259.08	5241.23
Claimed by the Petitioner in the instant petition	3307.31	4601.93	4938.01	5063.78
Allowed after true-up in this order	3289.56	4560.02	4898.03	5027.79



Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	1198.07	1846.24	2125.85	2170.58
Claimed by the Petitioner in the instant petition	1260.50	1826.64	1894.87	1937.74
Allowed after true-up in this order	1259.01	1817.94	1876.32	1914.97

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	216.59	325.58	356.63	362.85
Claimed by the Petitioner in the instant petition	209.55	303.68	317.37	319.37
Allowed after true-up in this order	208.87	302.53	315.49	316.84

Asset-C4

(₹ in lakh)

Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 30.3.2016 in Petition No. 140/TT/2015	450.50	994.00	1018.02	1006.62
Claimed by the Petitioner in the instant petition	427.95	962.36	1036.55	1032.73
Allowed after true-up in this order	427.84	954.61	1021.38	1018.03

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

63. The Petitioner has combined the transmission assets covered in the transmission project into Combined Asset and has filed a consolidated petition claiming tariff for the Combined Asset as a whole for 2019-24 tariff period as provided in Regulation 8(1) of the 2019 Tariff Regulations.

64. The Petitioner has claimed the following transmission charges for 2019-24 tariff period in respect of the Combined Asset:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	7957.25	7958.78	7958.78	7889.87	7877.59
Interest on Loan	5952.09	5261.17	4574.96	3883.30	3190.00
Return on Equity	8674.52	8676.54	8676.54	8676.54	8676.54
O&M Expenses	2290.95	2370.30	2453.95	2541.42	2629.72
Interest on Working Capital	439.46	433.60	426.90	419.24	411.54
Total	25314.27	24700.39	24091.13	23410.37	22785.39

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	190.91	197.53	204.50	211.79	219.18
Maintenance Spares	343.64	355.55	368.09	381.21	394.52
Receivables	3112.41	3045.25	2970.14	2886.21	2801.54
Total Working Capital	3646.96	3598.33	3542.73	3479.21	3415.24
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	439.46	433.60	426.90	419.24	411.54

Effective Date of Commercial Operation (“E-COD”)

66. The Petitioner has claimed that E-COD of the Combined Asset works out to be 3.9.2014. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, E-COD has been worked out as follows:

Assets	Capital Cost as on 31.3.2019 (₹ in lakh)	COD	Number of days from last COD	Weightage of Cost (in %)	Weighted days	E-COD (latest COD – weighted days)
Asset-A	37869.94	1.4.2014	548.00	24.65	135.07	2.9.2014
Asset-B1	63748.37	5.5.2014	514.00	41.49	213.27	
Asset-B2	3953.86	1.4.2014	548.00	2.57	14.10	
Asset-C1	30123.57	8.6.2015	115.00	19.61	22.55	
Asset-C2	10760.26	22.6.2015	101.00	7.00	7.07	
Asset-C3	1575.69	29.6.2015	94.00	1.03	0.96	
Asset-C4	5606.97	1.10.2015	0.00	3.65	0.00	
Total	153638.67			1.00	393.03	



67. E-COD is used to determine the lapsed life of the project as a whole which works out as 4 (four) 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”) of the Assets

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

69. 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. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of all the transmission assets put into commercial operation during 2014-19 period has been worked out as 32 years 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)	Weighted Average Life of Asset (in years) (4) = (3)/(1)
Building Civil Works & Colony	2096.16	25	52404.10	31.6196 (rounded off to 32 years)
Transmission Line	100651.50	35	3522802.50	
Sub Station	46534.62	25	1163365.62	
PLCC	290.04	15	4350.57	
IT Equipment (Including Software)	541.29	6.67	3608.60	
Total	150113.62		4746531.38	



70. 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 above, E-COD of the Combined Asset is 3.9.2014 and the lapsed life of the project as a whole works out as 4 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 28 years.

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*



- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

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

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

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

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

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



(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

72. The Petitioner has claimed the capital cost of individual assets which has been added to arrive at the capital cost claimed during 2019-24 period for the Combined Asset as follows:

(₹ in lakh)

Assets	Capital Cost claimed as on 31.3.2019	ACE Claimed in 2019-20	Estimated Completion Cost
Combined Asset	153917.64	71.59	153989.23

73. 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, substation and PLCC) as admitted by the Commission as on 31.3.2019 in respect of the transmission assets are clubbed together and the capital cost has been considered as capital cost for the Combined Asset as on 1.4.2019 as follows:

(₹ in lakh)

Elements	Asset-A	Asset-B1	Asset-B2	Asset-C1	Asset-C2	Asset-C3	Asset-C4	Capital cost for Combined Asset as on 31.3.2019
Freehold Land	0.62	0.00	0.00	3524.43	0.00	0.00	0.00	3525.05
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	2096.16	0.00	0.00	0.00	2096.16
Transmission Line	36941.37	63710.13	0.00	0.00	0.00	0.00	0.00	100651.50
Sub Station	814.40	0.00	3922.48	23854.82	10760.26	1575.69	5606.97	46534.62



Elements	Asset-A	Asset-B1	Asset-B2	Asset-C1	Asset-C2	Asset-C3	Asset-C4	Capital cost for Combined Asset as on 31.3.2019
PLCC	81.25	38.24	0.00	170.54	0.00	0.00	0.00	290.04
IT Equipment (Incl. Software)	32.30	0.00	31.38	477.61	0.00	0.00	0.00	541.29
Total	37869.94	63748.37	3953.86	30123.57	10760.26	1575.69	5606.97	153638.67

74. The trued-up capital cost of ₹153638.67lakh in respect of the Combined Asset is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

Initial Spares

75. As stated above in this order, Initial Spares are allowed for 2014-19 period on the basis of the cost of the individual assets. The assets covered under the transmission assets are combined and the overall project cost is arrived at in 2019-24 tariff period and, therefore, Initial Spares are allowed during 2019-24 tariff period on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. Accordingly, Initial Spares allowed for 2019-24 tariff period are as follows:

(₹ in lakh)						
Assets	Capital Cost/P&M cost considered as on cut-off date	Initial spares claimed	Norms as per the 2014 Tariff Regulations	Allowable Initial spares	Initial Spares allowed in 2014-19	Initial Spares allowed on Combined Asset
	A	B	C	$D=(A-B)*C/(100-C)$	E	F= D-E
Asset-C1	22894.28	1132.00	5.00%	1145.38	1132.00	25.65
Asset-C2	10214.99	563.00	5.00%	508.00	508.00	
Asset-C3	1474.21	82.11	5.00%	73.27	73.27	
Asset-C4	5306.55	253.67	5.00%	265.94	253.67	
Combined Asset (C1+C2+C3+C4)	39890.03	2030.78	5.00%	1992.59	1966.94	



76. Thus, in compliance with APTEL’s judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹25.65 lakh for sub-station of the Combined Asset are being allowed as part of the combined capital cost as on 1.4.2019 is as follows:

(₹ in lakh)			
Assets	Total Capital Cost as on 31.3.2019 (A)	Additional Initial Spares allowed (B)	Total Capital Cost as on 1.4.2019 (C)=(A)+(B)
Combined Asset	153638.67	25.65	153664.32

Additional Capital Expenditure (“ACE”)

77. Regulation 25(1) of the 2019 Tariff Regulations provides as follows:

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

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

- (a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- (g) *Raising of ash dyke as a part of ash disposal system.”*

78. The Petitioner has claimed ACE of ₹71.59 lakh in 2019-24 tariff period under Regulations 25(1)(a) of the 2019 Tariff Regulations on account of undischarged liability towards final payment after the cut-off date for works executed prior to the cut-off date/ works differed for execution. The same is as follows:

(₹ in lakh)	
Asset	ACE Claimed
Asset-C1	71.59
Total	71.59



79. The Petitioner vide affidavit dated 27.11.2020 has submitted the package wise break-up of ACE incurred during 2019-24 as follows:

Assets	FY	Amount (₹ in lakh)	Party	Particulars
Asset-C1	2019-20	34.88	JV of NHVS & EMC	4292-4293-4294 SS Pkg
		36.71	Civil Work	Various Agencies
Total		71.59		

80. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner towards Asset-C1 has been allowed under Regulation 25(1)(a) of the 2019 Tariff Regulations, as it is towards undischarged liabilities discharged after the cut-off date for works executed prior to the cut-off date. The total capital expenditure as on 31.3.2024 is within the apportioned approved cost of ₹155615.96lakh. Accordingly, ACE for 2019-20 and the capital cost as on 31.3.2024 in respect of the Combined Assets considered is as follows:

(₹ in lakh)		
Capital Cost admitted as on 1.4.2019 (A)	ACE allowed for 2019-20 (B)	Capital Cost allowed as on 31.3.2024 (C)=(A)+(B)
153664.32	71.59	153735.91

81. Therefore, capital cost of ₹153664.32 lakh as on 1.4.2019 and ₹153735.91 lakh as on 31.3.2024 has been considered for the purpose of determination of transmission tariff for 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations.

Debt-Equity ratio

82. 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.”

83. Debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period as per Regulation 18(3) of the 2019 Tariff Regulations. Debt-equity ratio considered for the Combined Asset for 2019-24 tariff period is as follows:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	107565.02	70.00	107615.13	70.00
Equity	46099.30	30.00	46120.78	30.00
Total	153664.32	100.00	153735.91	100.00

Depreciation

84. 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 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

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

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

(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.”

85. The IT equipment has been considered as part of the Gross Block and depreciated using WAROD (as placed at Annexure-VIII). WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as NIL, i.e. IT asset has been considered as 100 per cent depreciable. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the Combined asset is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	153664.32	153735.91	153735.91	153735.91	153735.91
B	ACE	71.59	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	153735.91	153735.91	153735.91	153735.91	153735.91
E	Average Gross Block (A+C)/2	153700.12	153735.91	153735.91	153735.91	153735.91
D	Freehold Land	3525.05	3525.05	3525.05	3525.05	3525.05
F	Weighted average rate of Depreciation (WAROD) (%)	5.17	5.17	5.17	5.17	5.17
G	Balance useful life of the asset (Year)	28	27	26	25	24
H	Aggregate Depreciable Value	135211.69	135243.90	135243.90	135243.90	135243.90
I	Depreciation during the year	7943.88	7945.42	7945.42	7945.42	7945.42
J	Cumulative Depreciation	42832.50	50777.92	58723.34	66668.76	74614.18



K	Remaining Depreciable Value (H-J)	92379.19	84465.99	76520.57	68575.15	60629.73
---	-----------------------------------	----------	----------	----------	----------	----------

Interest on Loan (“IoL”)

86. 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.”*



87. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period may be adjusted.

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

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	107565.02	107615.13	107615.13	107615.13	107615.13
B	Cumulative Repayments upto Previous Year	34888.62	42832.50	50777.92	58723.34	66668.76
C	Net Loan-Opening (A-B)	72676.40	64782.63	56837.21	48891.79	40946.37
D	Additions	50.11	0.00	0.00	0.00	0.00
E	Repayment during the year	7943.88	7945.42	7945.42	7945.42	7945.42
F	Net Loan-Closing (C+D-E)	64782.63	56837.21	48891.79	40946.37	33000.95
G	Average Loan (C+F)/2	68729.52	60809.92	52864.50	44919.08	36973.66
H	Weighted Average Rate of Interest on Loan (in %)	8.6673	8.6618	8.6678	8.6571	8.6279
I	Interest on Loan (G*H)	5957.00	5267.22	4582.20	3888.70	3190.04

Return on Equity (“RoE”)

89. 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 cut-off 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.”

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



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	46099.30	46120.78	46120.78	46120.78	46120.78
B	Additions	21.48	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	46120.78	46120.78	46120.78	46120.78	46120.78
D	Average Equity (A+C)/2	46110.04	46120.78	46120.78	46120.78	46120.78
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	8660.39	8662.40	8662.40	8662.40	8662.40

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

91. O&M Expenses claimed by the Petitioner for various elements included in the Combined Asset for 2019-24 tariff period are as follows:

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(i) 400 kV D/C (QUAD) Vadodra-Pirana Transmission line (4 Sub-conductors) (122.949km)					
(ii) 400 kV (QUAD) Vadodra-Pirana Transmission line (D/C Transmission line on M/C Towers) (4 Sub-conductors) (8.470 km)					
(iii) 765 kV S/C Indore-Vadodara Transmission line (4 Sub-conductors) (291.109km)					
(iv) 765 kV D/C Indore-Vadodara Transmission line (4 Sub-conductors) (30.094km)					
S/C Bundled (4 or more Sub-Conductor (km))	291.109	291.109	291.109	291.109	291.109
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C Bundled Conductor with four or more sub conductors (km)	153.043	153.043	153.043	153.043	153.043
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Multi Circuit Bundled with 4 or more Conductor (km)	8.47	8.47	8.47	8.47	8.47
Norms (₹ lakh/km)	2.319	2.401	2.485	2.572	2.662
765 kV bays of:					
(i) Indore:Vadodara Bay[1number of bay(s)]					
(ii) Indore: 3*80 MVAR Switchable Line Reactor [1number of bay(s)]					
765 kV GIS bays of:					
(i) Vadodara:ICT 1 Bay[1number of bay(s)]					
(ii) Vadodara:Indore Bay[1number of bay(s)]					
(iii) Vadodara:1500 MVA ICT-2 765 kV Bay [1 number of bay(s)]					
(iv) Vadodara:765 kV Bus Reactor Bay [1 number of bay(s)]					
400 kV bays of:					
(i) Pirana: Bay Extension at Pirana for Vadodara 1 & 2[2number of bay(s)]					
400 kV GIS bays of:					
(i) Vadodara:ICT 1 Bay [1 number of bay(s)]					



(ii) Vadodara:Pirana Bay Circuit-II [1 number of bay(s)]					
(iii) Vadodara:1500 MVA ICT-2 400 kV Bay [1number of bay(s)]					
(iv) Vadodara: 400 kV Pirana Bay(Circuit-1) [1number of bay(s)]					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
765 kV GIS Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	31.507	32.62	33.761	34.951	36.176
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
400 kV GIS Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
Transformers:					
765 kV					
(i) Vadodara:ICT (1500MVA) x 1					
(ii) Vadodara:765/400 KV ICT 2 (1500MVA) x 1					
765 kV (MVA)	3000	3000	3000	3000	3000
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
PLCC (@ 2% of capital cost)					
Capital cost for PLCC	290.06	290.06	290.06	290.06	290.06
Total O&M Expense (₹ in lakh)	2290.95	2370.30	2453.95	2541.42	2629.72

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

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
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
Norms for Transformers (₹ Lakh per MVA)					
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
Norms for AC and HVDC lines (₹ Lakh per km)					
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-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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



(3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;

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

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

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

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

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

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

93. We have considered the submission of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication



system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

94. O&M Expenses have been worked out in respect of the Combined Asset in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulations and the same are as follows:

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(v) 400 kV D/C (QUAD) Vadodra-Pirana Transmission line (4 Sub-conductors) (122.949km)					
(vi) 400 kV (QUAD) Vadodra-Pirana Transmission line (D/C Transmission line on M/C Towers) (4 Sub-conductors) (8.470 km)					
(vii) 765 kV S/C Indore-Vadodara Transmission line (4 Sub-conductors) (291.109km)					
(viii) 765 kV D/C Indore-Vadodara Transmission line (4 Sub-conductors) (30.094km)					
S/C Bundled (4 or more Sub-Conductor (km))	291.109	291.109	291.109	291.109	291.109
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total	219.79	227.36	235.51	243.66	252.39
D/C Bundled Conductor with four or more sub-conductors (km)	153.043	153.043	153.043	153.043	153.043
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Total	202.32	209.36	216.71	224.36	232.17
Multi Circuit Bundled with 4 or more Conductor (km)	8.47	8.47	8.47	8.47	8.47
Norms (₹ lakh/km)	2.319	2.401	2.485	2.572	2.662
Total	19.64	20.34	21.05	21.78	22.55
765 kV bays of:					
(iii) Indore:Vadodara Bay [1number of bay(s)]					
(iv) Indore: 3*80 MVAR Switchable Line Reactor [1number of bay(s)]					
765 kV GIS bays of:					
(v) Vadodara:ICT 1 Bay [1number of bay(s)]					
(vi) Vadodara:Indore Bay [1number of bay(s)]					
(vii) Vadodara:1500 MVA ICT-2 765 kV Bay [1 number of bay(s)]					
(viii) Vadodara:765 kV Bus Reactor Bay [1 number of bay(s)]					
400 kV bays of:					
(ii) Pirana: Bay Extension at Pirana for Vadodara 1 & 2[2number of bay(s)]					
400 kV GIS bays of:					
(v) Vadodara:ICT 1 Bay [1 number of bay(s)]					
(vi) Vadodara:Pirana Bay Circuit-II [1 number of bay(s)]					
(vii) Vadodara:1500 MVA ICT-2 400 kV Bay [1number of bay(s)]					
(viii) Vadodara: 400 kV Pirana Bay(Circuit-1) [1number of bay(s)]					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
Total	90.02	93.20	96.46	99.86	103.36
765 kV GIS Bays	4	4	4	4	4



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Norms (₹ lakh/Bay)	31.507	32.62	33.761	34.951	36.176
Total	126.03	130.48	135.04	139.80	144.70
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	64.30	66.56	68.90	71.32	73.82
400 kV GIS Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
Total	90.02	93.18	96.46	99.85	103.35
Transformers:					
765 kV					
(iii) Vadodara:ICT (1500MVA) x 1					
(iv) Vadodara:765/400 KV ICT 2 (1500MVA) x 1					
765 kV (MVA)	3000	3000	3000	3000	3000
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
Total	1473.00	1524.00	1578.00	1635.00	1692.00
Total O&M Expense (₹ in lakh)	2285.12	2364.48	2448.13	2535.64	2624.34

Interest on Working Capital (“IWC”)

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

“34. Interest on Working Capital: (1) 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.** - In these regulations, unless the context otherwise requires:-

‘**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;”

96. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O & M Expenses (O&M Expenses for one month)	190.43	197.04	204.01	211.30	218.69
B	Working Capital for Maintenance Spares (15 % of O&M Expenses)	342.77	354.67	367.22	380.35	393.65
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/annual transmission charges)	3108.84	3038.23	2960.00	2884.58	2800.89
D	Total Working Capital (A+B+C)	3642.04	3589.94	3531.23	3476.23	3413.24
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	438.87	403.87	370.78	365.00	358.39

Annual Fixed Charges of 2019-24 Tariff Period

97. The transmission charges allowed 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	
Depreciation	7943.88	7945.42	7945.42	7945.42	7945.42	



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Loan	5957.00	5267.22	4582.20	3888.70	3190.04
Return on Equity	8660.39	8662.40	8662.40	8662.40	8662.40
O&M Expenses	2285.12	2364.48	2448.13	2535.64	2624.34
Interest on Working Capital	438.87	403.87	370.78	365.00	358.39
Total	25285.26	24643.39	24008.93	23397.16	22780.59

Filing Fee and Publication Expenses

98. The Petitioner has prayed for reimbursement of fees paid by it for filing the petition and publication expenses in terms of Regulation 70(1) of the 2019 Tariff Regulations.

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

License Fee and RLDC Fees and Charges

100. The Petitioner has prayed for reimbursement of licence fee and RLDC fees and charges in terms of 2019 Tariff Regulations.

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

Goods and Services Tax

102. 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.

103. MPPMCL has submitted that the demand of the Petitioner is premature and need not to be considered at this juncture. In response, the Petitioner has reiterated its submission.

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

Security Expenses

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

106. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period considering the 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. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.



Capital Spares

107. 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

108. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 (2010 Sharing Regulations). However, after repeal of the 2010 Sharing Regulations, with effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (the 2020 Sharing Regulations). Accordingly, the liabilities of the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of the Sharing Regulations and shall be recovered from the concerned DICs through Bill under Regulation 15(2)(b) of the 2020 Sharing Regulations. The billing, collection and disbursement of transmission charges approved in this order for subsequent period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

109. To summarise:

- a. The trued-up Annual Fixed Charges (AFC) allowed for 2014-19 tariff period are as follows:

Asset-A

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	6501.84	6739.45	6596.10	6418.63	6253.29



Asset-B1

(₹ in lakh)

Particulars	2014-15 (pro-rata 331 days)	2015-16	2016-17	2017-18	2018-19
AFC	9626.85	11008.39	10770.11	10492.31	10220.10

Asset-B2

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	722.43	823.16	841.96	834.41	822.83

Asset-C1

(₹ in lakh)

Particulars	2015-16 (pro-rata 298 days)	2016-17	2017-18	2018-19
AFC	3289.56	4560.02	4898.03	5027.79

Asset-C2

(₹ in lakh)

Particulars	2015-16 (pro-rata 284 days)	2016-17	2017-18	2018-19
AFC	1259.01	1817.94	1876.32	1914.97

Asset-C3

(₹ in lakh)

Particulars	2015-16 (pro-rata 277 days)	2016-17	2017-18	2018-19
AFC	208.87	302.53	315.49	316.84

Asset-C4

(₹ in lakh)

Particulars	2015-16 (183 days)	2016-17	2017-18	2018-19
AFC	427.84	954.61	1021.38	1018.03

b. AFC allowed in respect of the Combined Asset for 2019-24 tariff period in this order are:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	25285.26	24643.39	24008.93	23397.16	22780.59



110. Annexure-I to Annexure-VIII given hereinafter form part of the order.

111. This order disposes of Petition No. 349/TT/2020 in terms of above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(I.S. Jha)
Member

sd/-
(Arun Goyal)
Member



Asset-A

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)					
		2014-15	2015-16	2016-17	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Land - Freehold	0.62	-	-	-	-	0.62	-	-	-	-	-	-	-
Transmission Line	32620.59	4006.61	305.84	8.33	4320.78	36941.37	5.28%	1828.14	1941.99	1950.28	1950.50	1950.50	
Sub Station	704.54	102.18	7.68	-	109.86	814.40	5.28%	39.90	42.80	43.00	43.00	43.00	
PLCC	44.22	0.51	36.52	-	37.03	81.25	6.33%	2.82	3.99	5.14	5.14	5.14	
IT Equipment (Incl. Software)	29.01	3.29	-	-	3.29	32.30	5.28%	1.62	1.71	1.71	1.71	1.71	
Total	33398.98	4112.59	350.04	8.33	4470.96	37869.94		1872.47	1990.48	2000.13	2000.35	2000.35	
								Average Gross Block (₹ in lakh)	35455.27	37686.59	37865.78	37869.94	37869.94
								Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.28%



Asset-B1

2014-19	Admitted Capital Cost as on 1.4.2014/CO D (₹ in lakh)	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	55313.83	7211.49	483.85	453.11	239.30	8.55	8396.30	63710.13	5.28%	3110.95	3314.11	3338.85	3357.13	3363.67
PLCC	23.30	12.44	2.50	-	-	-	14.94	38.24	6.33%	1.87	2.34	2.42	2.42	2.42
Total	55337.13	7223.94	486.35	453.11	239.30	8.55	8411.25	63748.37		3112.82	3316.45	3341.27	3359.55	3366.09
Average Gross Block (₹ in lakh)										58949.10	62804.24	63273.97	63620.17	63744.10
Weighted Average Rate of Depreciation (in %)										5.28%	5.28%	5.28%	5.28%	5.28%



Asset-B2

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)					
		2014-15	2015-16	2016-17	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Capital Expenditure														
Sub Station	2549.79	991.96	285.65	85.97	9.11	1372.69	3922.48	5.28%	160.82	194.55	204.36	206.63	206.87	
IT Equipment (Incl. Software)	28.23	3.15	-	-	-	3.15	31.38	5.28%	1.57	1.66	1.66	1.66	1.66	
Total	2578.02	995.11	285.65	85.97	9.11	1375.84	3953.86		162.39	196.20	206.01	208.28	208.52	
									Average Gross Block (₹ in lakh)	3075.58	3715.96	3901.77	3944.75	3949.31
									Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.28%



Asset-C1

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19	
Land - Freehold	3243.94	-	-	208.11	72.38	280.49	3524.43	-	-	-	-	-	
Building Civil Works & Colony	509.15	216.87	1033.48	209.87	126.80	1587.02	2096.16	3.34%	20.63	41.51	62.27	67.89	
Sub Station	16203.10	3589.26	1779.26	2243.98	39.22	7651.72	23854.82	5.28%	950.28	1092.01	1198.22	1258.50	
PLCC	90.00	39.08	31.22	10.25	-	80.55	170.54	6.33%	6.93	9.16	10.47	10.80	
IT Equipment (Incl. Software)	-	433.88	43.73	-	-	477.61	477.61	5.28%	11.45	24.06	25.22	25.22	
Total	20046.18	4279.09	2887.68	2672.21	238.40	10077.38	30123.57	Total	989.30	1166.74	1296.18	1362.41	
									Average Gross Block (₹ in lakh)	22185.73	25769.12	28549.06	30004.37
									Weighted Average Rate of Depreciation (in %)	4.46%	4.53%	4.54%	4.54%



Asset-C2

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2015-16	2016-17	2017- 18	2018-19	Total			2015-16	2016-17	2017-18	2018-19	
Sub Station	7157.77	2271.82	339.04	973.73	17.90	3602.49	10760.26	5.28%	437.91	506.83	541.49	567.67	
Total	7157.77	2271.82	339.04	973.73	17.90	3602.49	10760.26	Total	437.91	506.83	541.49	567.67	
									Average Gross Block (₹ in lakh)	8293.68	9599.11	10255.49	10751.31
									Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%



Asset-C3

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	1142.75	197.70	155.57	79.67	432.94	1575.69	5.28%	65.56	74.88	81.09	83.20
Total	1142.75	197.70	155.57	79.67	432.94	1575.69	Total	65.56	74.88	81.09	83.20
Average Gross Block (₹ in lakh)								1241.60	1418.24	1535.86	1575.69
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%



Asset-C4

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017- 18	Total			2015-16 (183 days)	2016-17	2017-18	2018-19
Sub Station	4096.23	447.16	830.43	233.15	1510.74	5606.97	5.28%	228.09	261.81	289.89	296.05
Total	4096.23	447.16	830.43	233.15	1510.74	5606.97	Total	228.09	261.81	289.89	296.05
Average Gross Block (₹ in lakh)								4319.81	4958.61	5490.40	5606.97
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%



Combined Asset

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	3525.05	-	-	3525.05	-	-	-	-	-	-
Building Civil Works & Colony	2096.16	36.71	36.71	2132.87	3.34%	70.62	71.24	71.24	71.24	71.24
Transmission Line	100651.50	0.00	0.00	100651.50	5.28%	5314.40	5314.40	5314.40	5314.40	5314.40
Sub Station	46560.28	34.88	34.88	46595.16	5.28%	2459.30	2460.22	2460.22	2460.22	2460.22
PLCC	290.04	-	0.00	290.04	6.33%	18.36	18.36	18.36	18.36	18.36
IT Equipment (Incl. Software)	541.29	0.00	0.00	541.29	15.00%	81.19	81.19	81.19	81.19	81.19
Total	153664.32	71.59	71.59	153735.91		7943.88	7945.41	7945.41	7945.41	7945.41
Average Gross Block (₹ in lakh)						153700.12	153735.91	153735.91	153735.91	153735.91
Weighted Average Rate of Depreciation (in %)						5.17%	5.17%	5.17%	5.17%	5.17%

