

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 709/TT/2020

Coram:

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

Date of Order: 30.11.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of 2014-19 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 transmission assets under "Transmission System for Phase-I Generation projects in Orissa- Part A" in Eastern Region.

And in the matter of:

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

....Petitioner

Vs.

1. GMR Kamalanga Energy Limited,
Skip House, 25/1, Museum Road,
Bangalore, Karnataka- 560025.
2. Monnet Power Company Limited,
Monnet Marg, Mandir Hasaud,
Raipur, Chattisgarh- 492101.
3. LancoBabandh Power Limited,
Plot No. 397, Phase-III, 2nd Floor,
Udyog Vihar, Gurgaon,
Haryana- 120016.
4. IND Barath Energy (Utkal) Limited,
Plot No. 30-A, Road No. 1,
Film Nagar, Jubilee Hills,
Hyderabad, Andhra Pradesh- 500033.



5. Navbharat Power Private Limited,
Navbharat Chambers, 6-3-1109/1,
3rd Floor, Left Wing, Rajbhawan Road,
Somajiguda, Hyderabad, Andhra Pradesh- 500082.
6. Jindal India Thermal Power Limited,
Plot No. 12, Sector- B, Pocket-1,
Local Shopping Complex,
Vasant Kunj, New Delhi- 110070.
7. Sterlite Energy Limited,
Sipcot Industrial Complex,
Tuticorin, Tamil Nadu- 628002.
8. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricity Board- BSEB),
Vidyut Bhavan, Bailey Road, Patna- 800 001.
9. West Bengal State Electricity Distribution Company Limited
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt lake city,
Calcutta- 700 054.
10. Grid Corporation of Orissa Limited,
Shahid Nagar, Bhubaneswar- 751 007.
11. Damodar Valley Corporation,
DVC Tower, Manikatala,
Civic Centre, VIP Road, Calcutta- 700 054.
12. Power Department,
Government of Sikkim, Gangtok- 737 101.
13. Jharkhand State Electricity Board,
In front of Mian Secretariat,
Doranda, Ranchi- 834002.

...Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents : Shri Manish Kumar Choudhary, Advocate, BSPHCL



ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for truing up of transmission tariff for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as the “transmission assets/Combined Asset”) under “Transmission System for Phase-I Generation Projects in Orissa- Part-A” in Eastern Region (hereinafter referred to as the “transmission project”).

Asset-1 (a):LILO of 400 kV S/C Meramundali-Jeypore line at Angul & associated bays at Angul Sub-station;

Asset-1 (b):One number 125 MVAR Reactor (1st) & associated bays at Angul Sub-station;

Asset-1 (c):One number 125 MVAR Reactor (2nd) & associated bays at Angul Sub-station;

Asset-1 (d): One number 125 MVAR Reactor (3rd) & associated bays at Angul Sub-station;

Asset-1 (e):LILO-I (Ckt-II) of Rourkela-Raigarh 400 kV D/C Line at Jharsuguda Sub-station;

Asset-1 (f): LILO-II (Ckt-I) of Rourkela-Raigarh 400 kV D/C Line at Jharsuguda Sub-station;

Asset-1 (g): One number 125 MVAR Reactor (1st) & associated bays at Jharsuguda Sub-station;

Asset-1 (h):One number 125 MVAR Reactor (2nd) & associated bays at Jharsuguda Sub-station;



Asset-2: 765 kV S/C Angul-Sundargarh (line-II) transmission line and its bays and with 1 number (3X80) MVAR line reactor & 1 number 80 MVAR spare reactor each at Angul & Sundargarh;

Asset-3: 01 number (3X80) MVAR line reactor (Line-II) each at Angul & Sundargarh;

Asset-4: 01 number (3X500) MVA Transformer (1st) along with 1 number 500 MVA Spare Transformer at Sundargarh;

Asset-5: 01 number (3X500) MVA Transformer (2nd) Transformer at Sundargarh;

Asset-6:01 number (3X500) MVA Transformer (1st) along with 1 number 500 MVA Spare Transformer at Angul;

Asset-7:01 number (3X500) MVA Transformer (2nd) Transformer at Angul;

Asset-8:01 number (3X80) MVAR Bus Reactor (1st) and its bay at Sundargarh;

Asset-9:01 number (3X80) MVAR Bus Reactor (2nd) and its bay at Sundargarh;

Asset-10:01 number (3X110) MVAR Reactor (1st) along with 1 number 110 MVAR spare reactor at Angul;

Asset-11:02 Numbers 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjayagarh Transmission Line;

Asset-12:765 kV S/C Angul-Sundargarh (line-I) transmission line and its bays and with 1number (3X80) MVAR line reactor & 1 number 80 MVAR spare reactor each at Angul & Sundargarh;

Asset-13:01 number (3X110) MVAR Bus Reactor (2nd) and associated bay at Angul;

Asset-14:01 number (3X500) MVA Transformer (3rd) Transformer and associated bay at Angul;

Asset-15:01 number (3X500) MVA Transformer (4th) Transformer and associated bay at Angul;

Asset-16:LILO of one Ckt of Talcher-Meramundali 400 kV D/C line at Angul Sub-station;



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

“1)Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9.1 and 10.0 above.

2)Approve the Completion cost and additional capitalization incurred during 2014-19.

3)Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019as per para 9.1 and 10.0 above for respective block.

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

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

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

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

8)Allow the petitioner to claimed initial spares project as whole.

9)Allow the petitioner to claimed IEDC as per actual expenditure.

10)Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.6 above.

11)Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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



Background

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

(a) The Investment Approval (IA) for the project was accorded by Board of Directors (BoD) of the Petitioner company, vide Memorandum No. C/CP/Orissa Ph-I IPPs (Part-A) dated 17.9.2010 in its 239th meeting held on 10.9.2010 at an estimated cost of ₹207486 lakh including an IDC of ₹12,820 lakh based on 1st Quarter 2010 price level.

(b) The Revised Cost Estimate-I (RCE-I) for the project was accorded by BoDs of the Petitioner Company vide letter dated 23.2.2015 for ₹234837 lakh including an IDC of ₹24472 lakh (based on 1st quarter, 2014 price level).

(c) Subsequently, Revised Cost Estimate-II (RCE-II) was approved by the BoD of the Petitioner vide Memorandum Ref. C/CP/PA1920-12-BE-RCE015 dated 31.3.2020 in its 375th meeting held on 28.3.2020 at an estimated cost of ₹243410 lakh including an IDC of ₹23466 lakh based on September, 2019 price level.

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

Transmission Lines:

- (i) Angul Pooling Station-Jharsuguda Pooling Station 765 kV 2x S/C (with intermittent D/C portion);
- (ii) LILO of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Pooling Station;
- (iii) LILO of Meramundali-Jeypore 400 kV S/C line at Angul Pooling Station;
- (iv) LILO of one ckt. of Talcher- Meramundali 400 kV D/C line at Angul Pooling Station

Sub-stations:

- (i) Establishment of 2x1500 MVA, 765/400 kV Pooling Station at Jharsuguda;
- (ii) Establishment of 4 x 1500 MVA, 765/400 kV Pooling Station at Angul (new)



Reactive Compensation

A. Bus Reactor:

Sl. No.	Sub-station	Bus Reactor (765 kV)	Bus Reactor (400 kV)
1	765/ 400 kV Jharsugada	2 x 240 MVAR	2 x 125 MVAR
2	765/ 400 kV Angul	2 x 330 MVAR	3 x 125 MVAR

B. Line Reactor:

Sl. No.	Sub-station	Bus Reactor (765 kV)	Bus Reactor (400 kV)
1	765 kV, 2xS/C Angul Pooling station- Jharsuguda Pooling Station	2 x 240 MVAR (switchable) On each circuit	240 MVAR (fixed) On each circuit

(e) As per IA dated 10.9.2010, the instant transmission assets was scheduled to be put into commercial operation within 30 months from the date of IA. Therefore, the scheduled date of commercial operation (SCOD) of the transmission assets was 10.3.2013.

(f) The details of date of commercial operation (COD) for the transmission assets and the earlier petitions in which the transmission assets were covered are as follows:

Nomenclature of the asset in the previous petition	Nomenclature of the asset in the current petition	Actual COD	Petition No.
Asset I: LILO of Meramundali-Jeypore 400 kV S/C line at Angul Sub-station	Asset-1(a): LILO of 400 kV S/C Meramundali-Jeypore line at Angul & associated bays at Angul Sub-station	1.4.2013	Covered under instant petition (covered under Petition No. 263/TT/2017 order dated 22.6.2018 & corrigendum dated 31.7.2018 in
Asset II: one number of 125 MVAR Reactor (1 st) and associated bays at Angul Substation	Asset-1(b): One number 125 MVAR Reactor (1st) & associated bays at AngulSub-station	1.11.2013	
Asset III: one number of 125 MVAR Reactor (2 nd) and associated bays at Angul Sub-station	Asset-1(c): One number 125 MVAR Reactor (2nd) & associated bays at AngulSub-station	1.6.2013	
Asset IV: one number of 125 MVAR Reactor (3 rd) and	Asset-1(d): One number 125 MVAR Reactor (3rd) &	1.5.2013	



associated bays at Angul Sub-station	associated bays at Angul Sub-station		Petition No. 263/TT/2017 (Sharing of transmission charges determined vide Order dated 21.2.2018 and corrigendum order dated 15.3.2018 in Petition No. 73/MP/2017)
Asset VI: LILO-I (Ckt.-III) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station	Asset-1(e): LILO – I (Ckt- II) of Rourkela-Raigarh 400 kV D/C Line at Jharsuguda Sub-station	1.4.2013	
Asset-VII: LILO-II (Ckt.-I) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station	Asset-1(f): LILO – II (Ckt- I) of Rourkela – Raigarh 400 kV D/C Line at Jharsuguda Sub-station	1.6.2013	
Asset-VIII: one number of 125 MVAR Reactor (1 st) and associated bays at Jharsuguda Sub-station	Asset-1(g): One number 125 MVAR Reactor (1st) & associated bays at Jharsuguda Sub-station	1.5.2013	
Asset-IX: one number of 125 MVAR Reactor (2nd) and associated bays at Jharsuguda Sub-station	Asset-1(h): One number 125 MVAR Reactor (2nd) & associated bays at Jharsuguda Sub-station	1.6.2013	
	<u>Effective COD approved for Combined Assets-1 is 25.4.2013</u>		
Asset-1A: 765 kV S/C Angul-Sundergarh (Line-II) transmission line and its bays and with 1 number (3x80) MVAR line reactor and 1 number 80 MVAR spare reactor each at Angul and Sundergarh	Asset-2: 765 kV S/C Angul-Sundargarh (line-II) transmission line and its bays and with 1 number (3X80) MVAR line reactor & 1 number 80 MVAR spare reactor each at Angul & Sundargarh	4.4.2015	Covered under instant petition (covered under Petition No. 246/TT/2014 vide order dated 19.12.2016 for 2014-19 tariff period)
Asset-1B: 1 number 3X80 MVAR line reactor of 765 kV S/C Angul-Sundergarh Line-II as Bus Reactor at Sundergarh Pooling station along with associated bays	Asset-3: 01 number (3X80) MVAR line reactor (Line-II) each at Angul & Sundargarh	4.4.2015	
Asset-II: 1 number (3x500) MVA Transformer (1 st) alongwith 1 number 500 MVA Spare Transformer at Sundergarh	Asset-4: 01 number (3X500) MVA Transformer (1st) along with 1 number 500 MVA Spare Transformer at Sundargarh.	3.11.2014	
Asset-III: 1 number (3x500) MVA Transformer (2 nd) Transformer at Sundergarh	Asset-5: 01 number (3X500) MVA Transformer (2nd) Transformer at Sundargarh	1.8.2014	
Asset-IV: 1 number (3x500) MVA Transformer (1 st) alongwith 1 number 500 MVA Spare Transformer at Angul	Asset-6: 01 number (3X500) MVA Transformer (1st) along with 1 number 500 MVA Spare Transformer at Angul	4.4.2015	
Asset-V: 1 number (3x500) MVA Transformer (2nd) Transformer at Angul,	Asset-7: 01 number (3X500) MVA Transformer (2nd) Transformer at Angul	4.5.2015	



Asset-VI: 1 number (3x80) MVAR Bus Reactor (1 st) and its bays at Sundergarh,	Asset-8: 01 number (3X80) MVAR Bus Reactor (1st) and its bays at Sundargarh	31.7.2014	Covered under instant petition (covered under Petition No. 252/TT/2015 vide order dated 25.4.2016 & Review Petition No. 39/RP/2016 vide order dated 19.12.2016 for 2014-19 tariff period)
Asset-VII: 1 number (3x80) MVAR Bus Reactor (2 nd) and its bays at Sundergarh	Asset-9: 01 number (3X80) MVAR Bus Reactor (2 nd) and its bays at Sundargarh	28.9.2014	
Asset-VIII: 1 number (3x110) MVAR Reactor (1 st) alongwith 1 number 110 MVAR spare reactor at Angul	Asset-10: 01 number (3X110) MVAR Reactor (1st) along with 1 number 110 MVAR spare reactor at Angul	4.4.2015	
Asset-IX: 2 numbers 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjaygarh Transmission Line	Asset-11: 02 Numbers 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjayagarh Transmission Line.	31.7.2014	
Asset I: 765 kV S/C Angul-Sundargarh (line-I) transmission line and its bays and with 1 number (anticipated) under (3X80) MVAR line reactor & 1 number 80 MVAR present spare reactor each at Angul & Sundargarh	Asset-12: 765 kV S/C Angul-Sundargarh (line-I) transmission line and its bays and with 1number (3X80) MVAR line reactor & 1 number 80 MVAR spare reactor each at Angul & Sundargarh	27.1.2016	
Asset II: 01 number (3X110) MVAR Bus Reactor (2 nd) and associated bay at Angul	Asset-13: 01 number (3X110) MVAR Bus Reactor (2 nd) and associated bay at Angul.	4.4.2015	
Asset III: 01 number (3X500) MVA Transformer (3 rd) Transformer and associated bay at Angul	Asset-14: 01 number (3X500) MVA Transformer (3 rd) Transformer and associated bay at Angul	27.1.2016	
Asset IV: 01 number (3X500) MVA Transformer (4 th) Transformer and associated bay at Angul	Asset-15: 01 number (3X500) MVA Transformer (4 th) Transformer and associated bay at Angul	4.4.2015	
Asset V: LILO of one Ckt of Talcher Meramundali 400 kV D/C line at Angul Sub-station	Asset-16: LILO of one Ckt of Talcher – Meramundali 400 kV D/C line at Angul Sub-station	1.4.2014	

(g) The transmission tariff in respect of Combined Asset-1(a) to Asset 1(h) from COD to 31.3.2014 was trued-up and transmission tariff for 2014-19 was allowed by the Commission vide order dated 22.6.2018 in Petition No. 263/TT/2017 and corrigendum order dated 31.7.2018 in Petition No. 263/TT/2017. The sharing of Transmission Charges of Asset 1(a) to Asset 1(h) was as per order dated 21.2.2018 and corrigendum order dated 15.3.2018 in Petition No. 73/MP/2017. The transmission tariff in respect of Asset-2 to Asset-11 from COD to 31.3.2019 was allowed by the Commission



vide Order dated 19.12.2016 in Petition No. 246/TT/2014. The transmission tariff in respect of Asset-12 to Asset-16 from COD to 31.3.2019 was allowed vide order dated 25.4.2016 in Petition No. 252/TT/2015 and vide order dated 19.12.2016 in Review Petition No. 39/RP/2016 in Petition No. 252/TT/2015.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (hereinafter referred to as "the Act"). No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Bihar State Power (Holding) Company Limited (BSPHCL) i.e. Respondent No. 8 has filed reply vide affidavit dated 20.7.2021 and has raised issues of MAT rate, grossed-up rate of Return on Equity (RoE), GST, floating rate of interest, filing fees and sharing of transmission charges. In response, the Petitioner has filed its rejoinder vide affidavit dated 29.7.2021.

6. BSPHCL has raised the issue of MAT rate and grossing up of RoE in this petition. BSPHCL has raised the same issue in other petitions earlier. The Commission in order dated 28.5.2021 in Petition No. 476/TT/2019 considered the submissions of BSPHCL gave clear findings rejecting the contention of BSPHCL. As BSPHCL has not challenged those findings, the same have attained finality. In view of this, the contention of BSPHCL pertaining to grossing up of RoE is rejected. The issues which are specific to the instant petition and not dealt by the Commission



earlier are considered in the relevant paragraphs of this order. The other issues raised by BSPHCL and the clarifications given by the Petitioner have been dealt in the relevant paragraphs of the order.

7. The hearing in this matter was held on 6.7.2021 through video conference and the order was reserved.

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

9. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 22.1.2020 and 1.7.2021, reply of BSPHCL vide affidavit dated 20.7.2021 and the Petitioner's rejoinder thereto vide affidavit dated 29.7.2021.

TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

10. The details of the transmission charges claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Combined Asset-1[Asset 1(a)- Asset 1(h)]					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1027.08	1099.16	1147.43	1173.02	1183.75
Interest on Loan	1269.48	1273.06	1244.51	1175.72	1095.04
Return on Equity	1480.06	1574.83	1638.56	1672.63	1691.37
O&M Expenses	125.64	130.86	134.10	135.27	135.50
Interest on Working Capital	700.82	724.10	748.15	773.00	798.59
Total	4603.08	4802.01	4912.75	4929.64	4904.25



(₹ in lakh)

Asset-2				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	3816.28	4165.76	4407.22	4436.55
Interest on Loan	4392.10	4382.77	4186.71	3822.34
Return on Equity	4274.88	4664.00	4934.34	4980.53
Interest on Working Capital	313.11	330.97	339.13	333.40
O&M Expenses	466.62	485.90	502.16	518.80
Total	13262.99	14029.40	14369.56	14091.62

(₹ in lakh)

Asset-3				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	171.84	190.94	200.31	200.31
Interest on Loan	187.91	193.10	184.86	167.62
Return on Equity	192.49	213.78	224.26	224.87
Interest on Working Capital	17.50	18.74	19.17	18.96
O&M Expenses	86.51	90.12	93.11	96.20
Total	656.25	706.68	721.71	707.96

(₹ in lakh)

Asset-4					
Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
Depreciation	88.48	286.27	362.59	388.00	407.69
Interest on Loan	99.06	306.53	361.90	350.75	336.85
Return on Equity	98.65	320.67	405.95	434.41	457.68
O&M Expenses	9.85	29.29	34.55	35.82	36.78
Interest on Working Capital	59.08	149.52	154.49	159.62	164.91
Total	355.12	1092.28	1319.48	1368.60	1403.91

(₹ in lakh)

Asset-5					
Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
Depreciation	128.82	238.86	290.26	312.85	329.81
Interest on Loan	131.50	231.62	264.40	261.35	251.79
Return on Equity	131.75	249.62	307.05	332.33	352.27
O&M Expenses	14.35	24.84	28.37	29.68	30.61
Interest on Working Capital	96.34	149.52	154.49	159.62	164.91



Total	502.76	894.46	1044.57	1095.83	1129.39
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(₹ in lakh)

Asset-6				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	255.07	306.30	335.65	367.68
Interest on Loan	285.59	314.14	311.36	313.91
Return on Equity	285.73	342.93	375.79	412.76
Interest on Working Capital	27.22	30.71	32.36	34.30
O&M Expenses	148.30	154.49	159.62	164.91
Total	1001.91	1148.57	1214.78	1293.56

(₹ in lakh)

Asset-7				
Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
Depreciation	196.66	260.48	289.82	311.31
Interest on Loan	216.80	266.28	272.38	268.63
Return on Equity	220.29	291.63	324.48	349.48
Interest on Working Capital	22.10	27.37	29.23	30.50
O&M Expenses	136.04	154.49	159.62	164.91
Total	791.89	1000.25	1075.53	1124.83

(₹ in lakh)

Asset-8					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Depreciation	87.16	157.70	170.41	182.82	195.99
Interest on Loan	99.49	169.04	169.42	165.15	161.94
Return on Equity	97.19	176.65	190.80	204.69	220.02
O&M Expenses	9.65	16.41	17.19	17.87	18.62
Interest on Working Capital	56.43	87.22	90.12	93.11	96.20
Total	349.92	607.02	637.94	663.64	692.77

(₹ in lakh)

Asset-9					
Particulars	2014-15 Pro-rata for 181 days	2015-16	2016-17	2017-18	2018-19
Depreciation	69.55	160.99	174.74	187.15	200.32
Interest on Loan	78.24	171.22	171.36	166.17	163.18
Return on Equity	77.56	180.34	195.65	209.54	224.88
O&M Expenses	7.55	16.62	17.45	18.10	18.86



Interest on Working Capital	42.79	87.22	90.12	93.11	96.20
Total	69.55	160.99	174.74	187.15	200.32

(₹ in lakh)

Asset-10					
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19	
Depreciation	175.22	194.96	217.39	241.25	
Interest on Loan	200.95	206.06	208.71	213.33	
Return on Equity	196.28	218.28	243.39	270.83	
O&M Expenses	17.95	19.23	20.56	22.01	
Interest on Working Capital	86.51	90.12	93.11	96.20	
Total	676.91	728.65	783.16	843.62	

(₹ in lakh)

Asset-11					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Depreciation	105.10	188.20	217.01	224.78	228.34
Interest on Loan	115.82	194.41	208.65	198.17	183.32
Return on Equity	117.19	210.81	242.96	251.66	256.34
O&M Expenses	14.02	23.30	25.35	25.82	26.00
Interest on Working Capital	112.87	174.44	180.24	186.22	192.40
Total	465.00	791.16	874.21	886.65	886.40

(₹ in lakh)

Asset-12					
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19	
Depreciation	528.16	3108.66	3190.85	3213.91	
Interest on Loan	612.43	3421.09	3205.95	2946.04	
Return on Equity	591.63	3480.46	3572.48	3607.97	
O&M Expenses	43.62	252.24	252.02	248.13	
Interest on Working Capital	67.92	395.00	408.21	421.72	
Total	1843.76	10657.45	10629.51	10437.77	

(₹ in lakh)

Asset-13					
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19	
Depreciation	163.44	191.92	207.02	223.55	
Interest on Loan	175.43	191.96	189.14	188.34	
Return on Equity	183.08	214.88	231.78	250.95	
Interest on Working Capital	16.79	18.76	19.60	20.57	

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O&M Expenses	86.51	90.12	93.11	96.20
Total	625.25	707.64	740.65	779.61

(₹ in lakh)

Asset-14				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Depreciation	41.25	264.33	295.26	316.74
Interest on Loan	47.72	288.74	294.40	290.24
Return on Equity	46.21	295.95	330.57	355.57
O&M Expenses	4.58	28.08	30.00	31.27
Interest on Working Capital	26.55	154.49	159.62	164.91
Total	166.31	1031.59	1109.85	1158.73

(₹ in lakh)

Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	221.49	267.23	296.58	318.07
Interest on Loan	234.99	262.23	267.00	263.41
Return on Equity	235.18	285.93	318.79	343.77
O&M Expenses	24.11	27.30	29.13	30.41
Interest on Working Capital	148.30	154.49	159.62	164.91
Total	864.07	997.18	1071.12	1120.57

(₹ in lakh)

Asset-16					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	188.52	211.10	215.24	216.46	217.15
Interest on Loan	192.11	202.40	189.09	171.84	153.76
Return on Equity	210.21	236.47	240.98	242.35	243.77
O&M Expenses	20.94	22.55	22.69	22.62	22.52
Interest on Working Capital	132.89	137.31	141.87	146.58	151.44
Total	744.67	809.83	809.87	799.85	788.64

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:

(₹ in lakh)

Combined Asset-1[Asset 1(a)- Asset 1(h)]					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	58.40	60.34	62.35	64.42	66.55
Maintenance Spares	105.12	108.62	112.22	115.95	119.79
Receivables	767.18	800.34	818.79	821.61	817.38



Total	930.70	969.30	993.36	1001.98	1003.72
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	125.64	130.86	134.10	135.27	135.50

(₹ in lakh)

Asset-2				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
O&M Expenses	39.21	40.49	41.85	43.23
Maintenance Spares	70.57	72.89	75.32	77.82
Receivables	2228.77	2338.23	2394.93	2348.60
Total	2338.55	2451.61	2512.10	2469.65
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	313.11	330.97	339.13	333.40

(₹ in lakh)

Asset-3				
Particulars	2015-16 Pro-rata for 363 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	110.28	117.78	120.29	117.99
Total	130.63	138.81	142.02	140.44
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	17.50	18.74	19.17	18.96

(₹ in lakh)

Asset-4					
Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
O&M Expenses	12.06	12.46	12.87	13.30	13.74
Maintenance Spares	21.71	22.43	23.17	23.94	24.74
Receivables	144.99	182.05	219.92	228.10	233.99
Total	178.76	216.94	255.96	265.34	272.47
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	9.85	29.29	34.55	35.82	36.78

(₹ in lakh)

Asset-5					
Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
O&M Expenses	12.06	12.46	12.87	13.30	13.74
Maintenance Spares	21.71	22.43	23.17	23.94	24.74
Receivables	125.87	149.08	174.10	182.64	188.23
Total	159.64	183.97	210.14	219.88	226.71

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Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	14.35	24.84	28.37	29.68	30.61

(₹ in lakh)

Asset-6				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
O&M Expenses	12.46	12.87	13.30	13.74
Maintenance Spares	22.43	23.17	23.94	24.74
Receivables	168.36	191.43	202.46	215.59
Total	203.25	227.47	239.70	254.07
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	27.22	30.71	32.36	34.30

(₹ in lakh)

Asset-7				
Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
O&M Expenses	12.46	12.87	13.30	13.74
Maintenance Spares	22.43	23.17	23.94	24.74
Receivables	145.06	166.71	179.26	187.47
Total	179.95	202.75	216.50	225.95
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	22.10	27.37	29.23	30.50

(₹ in lakh)

Asset-8					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
O&M Expenses	7.04	7.27	7.51	7.76	8.02
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	87.24	101.17	106.32	110.61	115.46
Total	106.94	121.52	127.35	132.34	137.91
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	9.65	16.41	17.19	17.87	18.62

(₹ in lakh)

Asset-9					
Particulars	2014-15 Pro-rata for 181 days	2015-16	2016-17	2017-18	2018-19
O&M Expenses	7.04	7.27	7.51	7.76	8.02
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	90.66	102.73	108.22	112.35	117.24
Total	110.36	123.08	129.25	134.08	139.69
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50



Total	7.55	16.62	17.45	18.10	18.86
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(₹ in lakh)

Asset-10				
Particulars	2015-16 Pro-rata for 363 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	113.75	121.44	130.53	140.60
Total	134.10	142.47	152.26	163.05
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	17.95	19.23	20.56	22.01

(₹ in lakh)

Asset-11					
Particulars	2014-15 Pro-rata for 244 days	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	115.93	131.86	145.70	147.78	147.73
Total	155.33	172.57	187.76	191.23	192.62
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	14.02	23.30	25.35	25.82	26.00

(₹ in lakh)

Asset-12				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
O&M Expenses	31.87	32.92	34.02	35.14
Maintenance Spares	57.37	59.25	61.23	63.26
Receivables	1730.30	1776.24	1771.59	1739.63
Total	1819.54	1868.41	1866.84	1838.03
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	43.62	252.24	252.02	248.13

(₹ in lakh)

Asset-13				
Particulars	2015-16 Pro-rata for 363 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	105.07	117.94	123.44	129.94
Total	125.42	138.97	145.17	152.39
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	16.79	18.76	19.60	20.57



(₹ in lakh)

Asset-14				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
O&M Expenses	12.46	12.87	13.30	13.74
Maintenance Spares	22.43	23.17	23.94	24.74
Receivables	156.08	171.93	184.98	193.12
Total	190.97	207.97	222.22	231.60
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	4.58	28.08	30.00	31.27

(₹ in lakh)

Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
O&M Expenses	12.46	12.87	13.30	13.74
Maintenance Spares	22.43	23.17	23.94	24.74
Receivables	145.20	166.20	178.52	186.76
Total	180.09	202.24	215.76	225.24
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Total	24.11	27.30	29.13	30.41

(₹ in lakh)

Asset-16					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	11.07	11.44	11.82	12.22	12.62
Maintenance Spares	19.93	20.60	21.28	21.99	22.72
Receivables	124.11	134.97	134.98	133.31	131.44
Total	155.11	167.01	168.08	167.52	166.78
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Total	20.94	22.55	22.69	22.62	22.52

Date of Commercial Operation (COD)

12. Asset-1(a) to Asset-1(h) are executed in 2009-14 tariff period. The Commission vide order dated 7.10.2015 in Petition No. 112/TT/2013 has already approved the COD of Asset-1(a) to Asset-1(h) as 1.4.2013, 1.11.2013, 1.6.2013, 1.5.2013, 1.4.2013, 1.6.2013, 1.5.2013, 1.6.2013 respectively.

13. The Commission vide order dated 19.12.2016 in Petition No.246/TT/2014 has approved COD of the Asset-2 to Asset-11 as 4.4.2015, 4.4.2015, 3.11.2014,



1.8.2014, 4.4.2015, 4.5.2015, 31.7.2014, 28.9.2014, 4.4.2015 and 31.7.2014 respectively.

14. The Commission vide order dated 25.4.2016 in Petition No. 252/TT/2015 provisionally approved the COD of Asset-12 to Asset-16.

15. The relevant portion of the order dated 25.4.2016 in Petition No. 252/TT/2015 is as follows:

“8. The petitioner has submitted CEA letters in support of the claim of commercial operation of the instant assets vide its affidavit dated 28.3.2016. However, the petitioner has not submitted RLDC certificates in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation. The COD of the instant assets is provisionally admitted and the petitioner is directed to submit the RLDC at the time of truing up or next revision of tariff. The provisionally admitted date of commercial operation of the instant assets is given hereunder:-

<i>Assets</i>	<i>Actual COD</i>
<i>Asset I</i>	<i>27.1.2016</i>
<i>Asset II</i>	<i>1.4.2015</i>
<i>Asset III</i>	<i>25.1.2016</i>
<i>Asset IV</i>	<i>1.4.2015</i>
<i>Asset V</i>	<i>1.4.2014</i>

”

16. In pursuance to the Commission’s direction, the Petitioner in the instant true-up petition has submitted the RLDC certificates dated 16.2.2016, 8.4.2016, 4.4.2016 and 8.4.2016 for Asset-12, Asset-13, Asset-14 and Asset-15 respectively. Further with respect to Asset-16, the Petitioner has submitted that the COD of Asset-16 was 1.4.2014 but it was charged in 2009-14 tariff period. As per the 2009 Tariff Regulations, COD of the asset can be decalred on the 1st day of the following next month. Thus, COD of Asset-16 was declared with effect from 1.4.2014. Further, in 2009-14 tariff period, there is no statue/ provision regarding the requirement of charging certificate of an asset from respective RLDC. Thus, the RLDC charging certificate for Asset-16 is not applicable and CEA certificate has already been



submitted.

17. We have considered the submission of the Petitioner. COD of Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 was provisionally admitted vide order dated 25.4.2016 in Petition No. 252/TT/2015. The Petitioner has claimed the following CODs of Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 in the instant petition:

Nomenclature in the Instant Petition	Nomenclature vide order dated 25.4.2016 in Petition No. 252/TT/2015	Approved vide order dated 25.4.2016 in Petition No. 252/TT/2015 (provisionally)	Claimed in the instant petition (actual)
Asset-12	Asset-I	27.1.2016	27.1.2016
Asset- 13	Asset- II	1.4.2015	4.4.2015
Asset-14	Asset-III	25.1.2016	27.1.2016
Asset-15	Asset-IV	1.4.2015	4.4.2015
Asset-16	Asset-V	1.4.2014	1.4.2014

18. Regulation 5(2) of the 2014 Tariff Regulation reads as follows:

“(2) Trial operation in relation to a transmission system or an element thereof shall mean successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power, and communication signal from sending end to receiving end and with requisite metering system, telemetry and protection system in service enclosing certificate to that effect from concerned Regional Load Dispatch Centre.”

19. Thus, from the perusal of the above regulation, it is clear that, for declaration of COD of a transmission system, successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power and communication signal from sending end to receiving end is required alongwith requisite metering system, telemetry and protection system in service and also certificate from concerned Regional Load Dispatch Centre.

20. We have considered the RLDC certificates submitted by the Petitioner for Asset-12, Asset-13, Asset-14 and Asset- 15 and observed the following:



Assets	Date and Time of Energization for commencement of successful trial run operation	Date and Time of completion of successful trial run operation
Asset-12	17:30 hrs of 25.1.2016	17:30 hrs of 26.1.2016
Asset- 13	21:00 hrs of 2.4.2015	21:00 hrs of 3.4.2015
Asset-14	12:43 hrs of 23.1.2016	12:43 hrs of 24.1.2016
Asset-15	21:00 hrs of 2.4.2015	21:00 hrs of 3.4.2015

21. Thus, based on above, COD approved for Asset-12, Asset-13, Asset-14 and Asset-15 in accordance with Regulation 5(2) of the 2014 Tariff Regulation is as follows:

Assets	Claimed in the instant petition (actual)	Allowed in the instant petition in accordance with Regulation 5(2) of the 2014 Tariff Regulations
Asset-12	27.1.2016	27.1.2016
Asset- 13	4.4.2015	4.4.2015
Asset-14	27.1.2016	27.1.2016
Asset-15	4.4.2015	4.4.2015

22. We have considered the submission of the Petitioner w.r.t. COD of Asset-16. COD for transmission system or element has been defined in the 2009 Tariff Regulation as follows:

“3(12)‘date of commercial operation’ or ‘COD’ means

...XXX

(c) in relation to the transmission system, the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful charging and trial operation:

Provided that the date shall be the first day of a calendar month and transmission charge for the element shall be payable and its availability shall be accounted for, from that date:

Provided further that in case an element of the transmission system is ready for regular service but is prevented from providing such service for reasons not attributable to the transmission licensee, its suppliers or contractors, the Commission may approve the date of commercial operation prior to the element coming into regular service.”

23. On perusal of the above regulation, it is clear that in case of transmission system or its element, its COD shall be the first day of a calendar month provided that element of transmission system is in regular service after successful charging



and trial operation. Thus, in view of the above, COD of Asset-16 is considered as 1.4.2014.

Capital Cost as on 1.4.2014

24. The details of the capital cost considered as on 1.4.2014 for Asset-1(a) to Asset-1(h) (Combined Asset-1) and capital cost as on COD for Asset-2 to Asset-16 and capital cost as on 31.3.2019 admitted vide corrigendum order dated 31.7.2018 in Petition No. 263/TT/2017 for Asset-1(a) to Asset-1(h), vide order dated 19.12.2016 in Petition No. 246/TT/2014 for Asset-2 to Asset-11 and vide order dated 25.4.2016 in Petition No. 252/TT/2015 and order dated 19.12.2016 in Review Petition No. 39/RP/2016 in 252/TT/2015 for Asset-12 to Asset-16 is as follows:

(₹ in lakh)

Asset	Apportioned approved cost as per FR	Apportioned approved cost as per RCE	Expenditure up to 31.3.14 (As claimed)	Expenditure up to 31.3.14 (As Allowed by CERC)	ACE 2014-2019 (as admitted)					Estimated Completion Cost as on 31.03.19 (as allowed by the Commission)
					14-15	14-15	16-17	17-18	18-19	
Asset-1(a)	5529.98	10585	7850.24	7850.24*	296.18	1241.18	574.35	412.56	-	10374.51
Asset-1(b)	864.09	1125	947.92	942.97*	109.86*	23.75	-	-	-	1076.58
Asset-1(c)	864.09	1160	1021.84	1003.09*	50.43	26.99	-	-	-	1080.51
Asset-1(d)	894.09	1131	990.34	990.34*	50.43	38.98	-	-	-	1079.75
Asset-1(e)	7218.07	9276	8212.74	8088.26*	497.12	60.16	48.95	234.3	-	8928.79
Asset-1(f)	3844.94	4016	3474.63	3472.02*	316.89	60.16	48.95	10.89	-	3908.91
Asset-1(g)	890.89	1139	942.34	941.62*	74.23	29.75	-	-	-	1045.6
Asset-1(h)	890.89	1139	971.76	952.10*	69.35	29.75	-	-	-	1051.2
Assets-1 (combined)	20967.04	29597	24411.81	24240.64	1464.49	1510.72	672.25	657.75	-	28545.85



(₹ in lakh)

Asset	Apportio ned approve d cost as per FR	Apportio ned approved cost as per RCE	Expendit ure up to COD(As claimed)	Expendit ure up to COD (As Allowed by CERC)	Add Cap 2014-2019 (as admitted by CERC)					Estimate d Comple tion Cost as on 31.03.19 (as allowed by CERC)
					14-15	14-15	16-17	17-18	18-19	
Asset-2	69494.95	77020	71925.8	70878.03*	-	2938.07	2200	-	-	76016.1
Asset-3	FR apportion ed cost common with Asset-2	3448	2970.36	2942.51*	-	209.58	90.02	-	-	3242.11
Asset-4	10954.43	7822	3954.63	3954.63*	300.42	975.34	200	-	-	7230.39
Asset-5	8551.49	6481	3250.23	3250.23*	221.8	917.14	1500	-	-	5889.17
Asset-6	10419.97	/ 7450.00	4345.73	4196.58*	-	881.58	1800	-	-	6878.16
Asset-7	8064.93	6110	3653.21	3517.50*	-	773.5	1338	-	-	5629.00
Asset-8	3602.06	3890	2131.99	2131.99*	674.62	367.93	355.92	-	-	3530.46
Asset-9	3602.06	3890	2388.12	2345.39*	500.52	223.84	500	-	-	3569.75
Asset-10	3393.12	4588	3155.37	3054.57*	-	443.13	800	-	-	4297.70
Asset-11	3116.37	4590	2856.96	2856.96*	241.43	410.3	584.44	-	-	4093.13
Asset-12	41113.97	60652.2	56168.86	55000.25*	-	817.78	3304.25	-	-	59122.28
Asset-13	2840.34	3657.1	2759.91	2655.13*	-	994.65	-	-	-	3649.78
Asset-14	8064.93	5876.99	4169.27	3807.72*	-	523.98	1257.9	-	-	5867.46
Asset-15	8064.93	5679.25	3569.6	3444.43*	-	2223.72	-	-	-	5668.15
Asset-16	3070.83	4095.2	3299.98	3211.07*	718.97	66.7	99.72	-	-	4089.46

25. The Petitioner has submitted the capital cost for the Combined Asset-1 [Asset-1(a) to Asset-1(h)] as on 31.3.2014 allowed vide order dated 31.7.2018 in corrigendum order dated 22.6.2018 in Petition No. 263/TT/2018 and capital cost as on 31.3.2014 along with Additional Capital Expenditure (ACE) up to 31.3.2019 for Asset-2 to Assset-16 as per Auditor's Certificate dated 31.7.2019. The details of the apportioned approved capital cost, capital cost as on COD and ACE incurred upto 31.3.2019 claimed by the Petitioner in the instant true up petition for the transmission assets are as follows:



(₹ in lakh)

Asset	Apportio ned approve d cost as per FR	Apportion ed approved cost as per RCE-I	Apportion ed approved cost as RCE-II	Expenditu re up to 31.03.2014 / COD	ACE 2014-2019					Estimated completi on cost as on 31.03.2019
					14-15	15-16	16-17	17-18	18-19	
Assets- 1 (combi ned)	20997.04	29597.00	28534.99	24240.64	1459.54	1510.72	672.25	480.65	0	28363.80
Asset- 2	69494.95	77020	84041.17	71925.8	0	2938.07	8066.49	1079.62	31.19	84041.17
Asset- 3	FR apportion ed cost common with Asset-2	3448	3793.7	3227.71	0	211.32	354.67	0	0	3793.7
Asset- 4	10954.43	7822	7891.85	3954.63	300.42	2333.38	557.52	405.06	340.84	7891.85
Asset- 5	8551.49	6481	6061.77	3250.23	221.8	1496.83	450.34	405.06	237.51	6061.77
Asset- 6	10419.97	7450	7277.83	4347.66	0	1190.28	526.31	585.34	628.24	7277.83
Asset- 7	8064.93	6110	6010.2	3653.21	0	1016.88	526.31	585.34	228.46	6010.2
Asset- 8	3602.06	3890	3787.06	2131.99	674.62	360.22	121.4	348.56	150.27	3787.06
Asset- 9	3602.06	3890	3869.09	2388.12	500.52	360.22	121.4	348.56	150.27	3869.09
Asset- 10	3393.12	4588	4644.34	3157.07	0	487.34	95.98	753.68	150.27	4644.34
Asset- 11	3116.37	4590	4324.7	2856.96	241.43	931.87	159.46	134.98	0	4324.7
Asset- 12	41113.97	60652	61999.5	56168.86	0	2384.35	1550.19	658.74	214.62	60976.77
Asset- 13	2840.34	3657.1	4433.47	2759.91	0	826.96	95.98	475.83	150.27	4308.95
Asset- 14	8064.93	5876.99	6558.98	4169.27	0	603.75	526.31	585.34	228.46	6113.13
Asset- 15	8064.93	5879.25	6068.56	3569.6	0	1004.12	526.31	585.34	228.46	5913.83
Asset- 16	3070.83	4095.2	4112.74	3299.98	630.06	136.23	20.52	25.95	0	4112.74
Total		235046.54	243409.95	195272.81	3786.96	17792.54	14371.44	7458.05	2524.24	241490.92

Cost Over-run

26. The details of capital cost of the transmission project approved by the BoD of the Petitioner Company are as follows:

IA dated 17.9.2010	₹207486 lakh including IDC of ₹12820.00 lakh
RCE-I 23.2.2015	₹234837 lakh including IDC of ₹24472 lakh
RCE-II 31.3.2020	₹243410 lakh including IDC of ₹23466 lakh



27. The Commission has already taken cognisance of FR cost and RCE-I allowed the capital cost of Combined Asset-1 [Asset-1(a) to Asset-1(h)], Asset-2 to Asset-16.

28. It is observed that the estimated completion cost of Combined Asset-1 [Asset-1(a) to Asset-1(h)] Asset-5, Asset-6, Asset-7, Asset-8, Asset-9, Asset-11 is within RCE-I cost.

29. The estimated completion cost of Asset-2, Asset-3, Asset-4, Asset-10, Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 as as on 31.3.2024 is increased by RCE- I as shown in the table below:-

(₹ in lakh)

Assets	Apportioned approved cost as per RCE-I	Estimated completion cost as on 31.03.2024	Cost Overrun w.r.t RCE-I	Apportioned approved cost as RCE-II
Assets-1 (combined)	29571	28534.97	(1036.03)	28534.99
Asset-2	77020	84041.17	7021.17	84041.17
Asset-3	3448	3793.7	345.7	3793.7
Asset-4	7822	7891.85	69.85	7891.85
Asset-5	6481	6061.77	(419.23)	6061.77
Asset-6	7450	7277.83	(172.17)	7277.83
Asset-7	6110	6010.2	(99.8)	6010.2
Asset-8	3890	3787.06	(102.94)	3787.06
Asset-9	3890	3869.09	(20.91)	3869.09
Asset-10	4588	4644.34	56.34	4644.34
Asset-11	4590	4324.7	(265.3)	4324.7
Asset-12	60652	61668.09	1016.09	61999.5
Asset-13	3657.1	4395.65	738.55	4433.47
Asset-14	5876.99	6431.01	554.02	6558.98
Asset-15	5879.25	6025.97	146.72	6068.56
Asset-16	4095.2	4112.74	17.54	4112.74

30. The estimated completion cost of Asset-2, Asset-3, Asset-4, Asset-10, Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 as as on 31.3.2024 is increased by



₹7021.17 lakh, ₹345.70 lakh, ₹69.85 lakh, ₹56.34 lakh, ₹1347.3 lakh, ₹776.37 lakh, ₹681.99 lakh, ₹389.31 lakh, ₹17.54 lakh respectively. Based on the estimated completion cost of Asset-2, Asset-3, Asset-4, Asset-10, Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16, the Petitioner has submitted RCE-II duly approved by the BoD in its 375th meeting held on 28.3.2020. As per RCE-II, the estimated completion of cost of Asset-2, Asset-3, Asset-4, Asset-10, Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 is within the RCE-II cost. We are of the view that this variation cost is approved by the competent authority i.e. the BoD of the Petitioner's company and the Petitioner has submitted the duly approved RCE-II. Hence, this cost variation in case of Asset-2, Asset-3, Asset-4, Asset-10, Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 is allowed.

31. The capital cost claimed by Petitioner including ACE in respect of the transmission assets is ₹241490.92 lakh as on 31.3.2019 which is within the RCE-II approved apportioned capital of ₹243409.95 lakh.

Time Over-run

32. As per IA, the scheduled COD of the transmission project is 30 months from the date of IA. IA was accorded on 10.9.2010. Accordingly, the scheduled date of commercial operation was 10.3.2013 against which the assets were executed as follows:

Assets	SCOD	COD	Time over-run condoned	Previous Orders Details
Asset-1 (a)	1.4.2013	1.4.2013	-	Order dated 22.6.2018 & Corrigendum dated 31.7.2018 in Petition No. 263/TT/2017 and Sharing of
Asset-1 (b)		1.11.2013	7 months	
Asset-1 (c)		1.6.2013	2 months	
Asset-1 (d)		1.5.2013	1 month	
Asset-1 (e)		1.4.2013	-	
Asset-1 (f)		1.6.2013	2 months	
Asset-1 (g)		1.5.2013	1 month	



Asset-1 (h)		1.6.2013	2 months	transmission charges determined vide order dated 21.2.2018 and corrigendum dated 15.3.2018 in 73/MP/2017
Asset-2		4.4.2015	24 months and 3 days	Order dated 19.12.2016 in Petition No. 246/TT/2014
Asset-3		4.4.2015	24 months and 3 days	
Asset-4		3.11.2014	19 months and 2 days	
Asset-5		1.8.2014	16 month	
Asset-6		4.4.2014	24 months and 3 days	
Asset-7		4.5.2014	25 months and 3 days	
Asset-8		31.7.2014	16 months	
Asset-9		28.9.2014	17 months and 27 days	
Asset-10		4.4.2015	24 months and 3 days	
Asset-11		31.7.2014	16 months	
Asset-12		27.1.2016	35 months	
Asset-13		4.4.2015	25 months	
Asset-14		27.1.2016	35 months	
Asset-15		4.4.2015	25 months	
Asset-16		1.4.2014	13 months	

33. The time over-run in case of Asset 1(b), Asset 1(c), Asset 1(d), Asset 1(f), Asset 1(g) and Asset 1(h) has already been condoned by the Commission vide order dated 7.10.2015 in Petition No. 112/TT/2013. The time over-run in case of Asset-2, Asset-3, Asset-4, Asset-5, Asset-6, Asset-7, Asset-8, Asset-9, Asset-10 and Asset 11 has been condoned by the Commission vide order dated 19.12.2016 in Petition No. 246/TT/2014. The time over-run in case of Asset-12, Asset-13, Asset-14, Asset-15 and Asset-16 has been condoned by the Commission vide order dated 25.4.2016 in Petition No. 252/TT/2015 and vide order dated 19.12.2016 in Review Petition No. 39/RP/2016.



Interest During Construction (“IDC”)

34. The Combined Asset-I [Asset-1(a) to Asset-1(h)] was put into commercial operation in 2009-14 period. The IDC was approved by the Commission vide order dated 22.6.2018 in Petition No. 263/TT/2017 and Corrigendum dated 31.7.2018 to order dated 22.6.2018 in Petition No. 263/TT/2017.

35. In respect of Asset-2 to Asset-16, the Petitioner has claimed IDC for the transmission assets and has submitted the Auditor’s Certificates dated 31.7.2019 in support of the same. The Petitioner has submitted the computation of IDC along with year-wise details of the IDC discharged.

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

37. Accordingly, based on the information furnished by the Petitioner, IDC considered for Asset-2 to Asset-16 are as follows:

Assets	IDC as per Auditor’s Certificate	IDC Admissible	IDC disallowed due to computational difference	IDC Discharged as on COD	IDC Undischarged as on COD	IDC Discharge During					
						2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
						A	B	C=A-B	D	E=B-D	F
Asset-2	7835.24	7835.24	0.00	6796.13	1039.11	0.00	1039.11	0.00	0.00	0.00	0.00
Asset-3	309.29	309.29	0.00	205.34	103.95	0.00	103.95	0.00	0.00	0.00	0.00
Asset-4	376.41	376.41	0.00	376.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-5	234.34	234.34	0.00	234.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-6	467.40	458.44	8.96	318.34	140.11	0.00	140.11	0.00	0.00	0.00	0.00



Assets	IDC as per Auditor's Certificate	IDC Admissible	IDC disallowed due to computational difference	IDC Discharged as on COD	IDC Undischarged as on COD	IDC Discharge During					
						2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
						A	B	C=A-B	D	E=B-D	F
Asset-7	400.14	400.14	0.00	264.33	135.81	0.00	135.81	0.00	0.00	0.00	0.00
Asset-8	155.79	155.79	0.00	155.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-9	217.70	217.70	0.00	178.35	39.35	0.00	39.35	0.00	0.00	0.00	0.00
Asset-10	339.37	339.37	0.00	229.99	109.38	0.00	109.38	0.00	0.00	0.00	0.00
Asset-11	197.33	197.33	0.00	197.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-12	10394.09	10394.09	0.00	9225.48	1168.61	0.00	264.36	904.25	0.00	0.00	0.00
Asset-13	295.61	295.61	0.00	190.83	104.78	0.00	104.78	0.00	0.00	0.00	0.00
Asset-14	564.15	564.15	0.00	480.46	83.69	0.00	23.98	59.71	0.00	0.00	0.00
Asset-15	382.34	382.34	0.00	257.17	125.17	0.00	125.17	0.00	0.00	0.00	0.00
Asset-16	207.36	207.36	0.00	118.45	88.91	88.91	0.00	0.00	0.00	0.00	0.00

Incidental Expenditure During Construction ("IEDC")

38. The Petitioner has claimed IEDC for the transmission assets and has submitted Auditor's Certificate in support of the same. The Petitioner has reclaimed the restricted IEDC as per the judgment of the APTEL dated 2.12.2019 in Appeal Nos. 95 of 2018 and 140 of 2018. IEDC has been allowed in light of the said judgment of the APTEL wherein the APTEL has held as follows:

"7.13 In view of the above, we are of the opinion that while carrying out the restriction of the IEDC, CERC is considering hard cost as on COD and not on actual detailed hard cost. This is considered to be against CERC's own philosophy that the project cost is up to the cut of date and they are looking at investment approval / revised cost estimate wherein the IEDC percentage is on total hard cost. As rightly submitted by the learned counsel for the Appellant that actual IEDC of the project / element has no correlation with hard cost of the project and practice of taking a percentage of hard cost of IEDC is just a rough / approximate estimation for the purpose of providing cost input for approval purposes. As such, restricting the actual IEDC, based on this percentage is neither in terms of Tariff Regulations nor technically correct."

39. We have considered the submissions of the Petitioner. The disallowed IEDC restricted to 5% of the hard cost in case of Combined Asset-1 [Asset-1(a) to Asset-1(h)] vide order dated 22.6.2018 in Petition No. 263/TT/2017 is allowed in



accordance to judgment of the APTEL dated 2.12.2019 in Appeals No. 95 of 2018 and 140 of 2018.

40. The disallowed IEDC of ₹161.97 lakh in case of the Combined Asset-1 [Asset-1(a) to Asset-1(h)] vide order dated 22.6.2018 in Petition No. 263/TT/2017 is added to the cost approved by the Commission as on 31.3.2014 for the Combined Asset-1 vide corrigendum order dated 31.7.2018 in in Petition No. 263/TT/2017. IEDC claimed and allowed for the Combined Asset-1 [Asset 1(a) - Asset 1(h)] vide order dated 22.6.2018 in Petition No. 263/TT/2017 is as follows:

(₹ in lakh)

Particulars	Claimed as per Auditor's Certificate (Hard Cost)	Claimed as per Auditor's Certificate (IEDC)	IEDC allowed subject to 5% of the Hard Cost	Disallowed
Asset-1(a)	8685.44	432.86	432.86	0.00
Asset-1(b)	995.43	32.49	32.49	0.00
Asset-1 (c)	993.58	68.43	49.68	18.75
Asset- 1(d)	1005.57	48.93	48.93	0.00
Asset-1 (e)	7758.08	510.74	387.90	122.84
Asset-1 (f)	3505.64	170.93	170.93	0.00
Asset-1 (g)	983.29	49.88	49.16	0.72
Asset-1 (h)	983.29	68.82	49.16	19.66

41. IEDC claimed by the Petitioner for Asset-2 to Asset-16 is as follows:

(₹ in lakh)

Particulars	IEDC claimed as per Auditor's Certificate
Asset-2	2548.05
Asset-3	80.05
Asset-4	113.22
Asset-5	86.85
Asset-6	151.62
Asset-7	127.11
Asset-8	54.71
Asset-9	74.83
Asset-10	110.39
Asset-11	73.70
Asset-12	1803.43
Asset-13	96.29
Asset-14	142.03



Asset-15	124.54
Asset-16	84.84

42. IEDC is allowed subject to adjustment as per condonation of time over run.

The details of claimed and allowed IEDC are as follows:

(₹ in lakh)

Particulars	IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run	IEDC allowed as on COD
	1	2	3=(1-2)
Asset-2	2548.05	0.00	2548.05
Asset-3	80.05	0.00	80.05
Asset-4	113.22	0.00	113.22
Asset-5	86.85	0.00	86.85
Asset-6	151.62	0.00	151.62
Asset-7	127.11	0.00	127.11
Asset-8	54.71	0.00	54.71
Asset-9	74.83	0.00	74.83
Asset-10	110.39	0.00	110.39
Asset-11	73.70	0.00	73.70
Asset-12	1803.43	0.00	1803.43
Asset-13	96.29	0.00	96.29
Asset-14	142.03	0.00	142.03
Asset-15	124.54	0.00	124.54
Asset-16	84.84	0.00	84.84

Initial Spares

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

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

Asset	Capital cost (A)		Spares limit (B)		Spares claimed (C)		Spares permissible D = [(A-C)*B/(100-B)]	
	Transmission line	Sub-station (excluding Land cost)	TL	SS	TL	SS	TL	SS
2009-14 Period								
Asset-1a	1400.07	3252.15	0.75%	2.50%	10.52	82.59	8.32	31.16
Asset-1b	0.00	1076.58	0.75%	2.50%	0.00	27.34	0.00	10.28
Asset-1c	0.00	1080.51	0.75%	2.50%	0.00	27.36	0.00	13.64
Asset-1d	0.00	1079.75	0.75%	2.50%	0.00	27.42	0.00	10.28
Asset-1e	3205.03	2726.85	0.75%	2.50%	24.06	69.16	20.96	29.52
Asset-1f	2621.25	1290.27	0.75%	2.50%	19.66	32.66	20.18	16.42



Asset	Capital cost (A)		Spares limit (B)		Spares claimed (C)		Spares permissible D = [(A-C)*B / (100-B)]	
Asset-1g	0.00	1045.61	0.75%	2.50%	0.00	26.46	0.00	13.64
Asset-1h	0.00	1051.21	0.75%	2.50%	0.00	26.60	0.00	13.64
2014-19 Tariff Period								
Asset-2	68793.09	4377.84	1%	4%	690.08	174.25	475.21	195.76
Asset-3	0.00	3404.36	1%	4%	0.00	141.85	0.00	0
Asset-4	0.00	7402.22	1%	4%	0.00	299.41	0.00	216.44
Asset-5	0.00	5740.58	1%	4%	0.00	231.50	0.00	184.66
Asset-6	0.00	6636.58	1%	4%	0.00	276.52	0.00	0
Asset-7	0.00	5469.19	1%	4%	0.00	227.88	0.00	0
Asset-8	0.00	3576.56	1%	4%	0.00	144.04	0.00	119.58
Asset-9	0.00	3576.56	1%	4%	0.00	144.04	0.00	119.58
Asset-10	0.00	4182.41	1%	4%	0.00	174.27	0.00	0
Asset-11	0.00	4053.67	1%	4%	0.00	168.83	0.00	1.75
Asset-12	43481.3	5679.6	1%	4%	435.14	228.01	402	207.4
Asset-13	0.00	3993.11	1%	4%	0.00	162.74	0.00	87.3
Asset-14	0.00	5711.07	1%	4%	0.00	233.73	0.00	101.56
Asset-15	0.00	5505.33	1%	4%	0.00	225.16	0.00	101.56
Asset-16	2626.13	1194.41	1%	4%	26.32	49.32	20.78	10.8
Total	122126.87	83106.42			1205.77	3201.14	947.45	1484.97
		Surplus spares {D-C}	258.32	1716.17				

45. We have considered the submissions of the Petitioner. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling limit on overall project cost. The APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as follows:

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

46. Accordingly, Initial Spares are allowed as percentage of the project cost as a whole. The assets covered under the transmission project have been put into commercial operation in 2009-14 tariff period and 2014-19 tariff period. The transmission project as per I.A. was completed during 2014-19 tariff period and the overall project cost of the transmission assets is arrived only when all the transmission assets are combined while claiming the tariff for 2019-24 tariff period. Therefore, Initial Spares are allowed on the basis of the cost of the individual



transmission assets in 2009-14 tariff period and 2014-19 tariff period and the Initial Spares are allowed on the basis of the overall project cost in 2019-24 tariff period (as discussed in the relevant portion of the instant order).

47. Initial Spares for Asset 1(a), Asset 1(b), Asset 1(c), Asset 1(d), Asset 1(e), Asset 1(f), Asset 1(g) and Asset 1(h) which are executed during 2009-14 tariff period have already been determined by Commission vide order dated 22.6.2018 in Petition No. 263/TT/2017 in accordance with Regulation 8 of 2009 Tariff Regulations.

48. The Initial Spares allowed by the Commission for Asset-2 to Asset-16 is as follows:

Sub-stations:

Assets	Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Asset-2	4377.84	195.76	4.00	174.25	174.25
Asset-3	3404.36	0.00	4.00	141.85	0.00
Asset-4	6656.32	216.44	4.00	277.35	216.44
Asset-5	5098.01	184.66	4.00	204.72	184.66
Asset-6	6030.57	0.00	4.00	251.27	0.00
Asset-7	5254.49	0.00	4.00	218.94	0.00
Asset-8	3077.73	119.58	4.00	123.26	119.58
Asset-9	3077.73	119.58	4.00	123.26	119.58
Asset-10	4044.31	0.00	4.00	168.51	0.00
Asset-11	3918.69	1.75	4.00	163.21	1.75
Asset-12	5679.60	207.40	4.00	228.01	207.40
Asset-13	3766.78	87.30	4.00	153.31	87.30
Asset-14	5406.95	101.56	4.00	221.06	101.56
Asset-15	5178.49	101.56	4.00	211.54	101.56
Asset-16	1194.41	10.80	4.00	49.32	10.80

Transmission Line:



Assets	Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Asset-2	68793.09	475.21	1.00	690.08	475.21
Asset-12	43481.30	402.0	1.00	435.14	402.00
Asset-16	2626.13	20.78	1.00	26.32	20.78

Capital Cost allowed as on COD

49. Combined Asset-1 [Asset-1(a)- Asset-1(h)] have CODs in 2009-14 period. The trued up capital cost as on 31.3.2014 for the Combined Asset-1 [Asset-1(a) to Asset-1(h)] as approved by the Commission vide corrigendum order dated 31.7.2018 in Petition No. 263/TT/2017 and order dated 22.6.2018 in Petition No. 263/TT/2017 has been considered as on 31.3.2014. Further, the disallowed IEDC in case of the Combined Asset-1 [Asset-1(a) to Asset-1(h)] vide order dated 22.6.2018 in Petition No. 263/TT/2017 has been added to the capital cost as on 31.3.2014 which has been considered as capital cost as on 1.4.2014.

50. The capital cost considered as on 1.4.2014 for the Combined Asset-1 [Asset-1(a) - Asset-1(h)] is as follows:

Capital Cost as on 1.4.2014 approved vide Corrigendum order dated 31.7.2018 in in Petition No. 263/TT/2017	Disallowed IEDC vide Order 22.6.2018 in Petition No. 263/TT/2017	Capital Cost as on 1.4.2014
24240.64	161.97	24402.61

51. Capital Cost in case of Asset-2 to Asset-16 as on COD have been considered as per Auditor's Certificate submitted by the Petitioner.



52. Accordingly, capital cost allowed in respect for Asset-2 to Asset-16 is as follows:

Assets	Capital Cost as on COD as per Auditor's Certificate	Less: IDC as on COD due to		IEDC disallowed due to time over-run	Excess Initial Spares	Capital Cost as on COD (on cash basis)
		IDC Disallowed	Un-discharged IDC			
Asset – 2	71925.80	0.00	1039.11	0.00	21.51	70865.18
Asset – 3	3227.71	0.00	103.95	0.00	0.00	3123.76
Asset – 4	3954.63	0.00	0.00	0.00	0.00	3954.63
Asset – 5	3250.23	0.00	0.00	0.00	0.00	3250.23
Asset – 6	4347.66	8.96	140.11	0.00	0.00	4198.60
Asset – 7	3653.21	0.00	135.81	0.00	0.00	3517.40
Asset – 8	2131.99	0.00	0.00	0.00	0.00	2131.99
Asset – 9	2388.12	0.00	39.35	0.00	0.00	2348.77
Asset – 10	3157.07	0.00	109.38	0.00	0.00	3047.69
Asset – 11	2856.96	0.00	0.00	0.00	0.00	2856.96
Asset – 12	56168.86	0.00	1168.61	0.00	0.00	55000.25
Asset – 13	2759.91	0.00	104.78	0.00	0.00	2655.13
Asset – 14	4169.27	0.00	83.69	0.00	0.00	4085.58
Asset – 15	3569.60	0.00	125.17	0.00	0.00	3444.43
Asset – 16	3299.98	0.00	88.91	0.00	0.00	3211.07

Additional Capital Expenditure (“ACE”)

53. The Commission allowed ACE in case of the Combined Asset-1 [Asset-1(a) to Asset-1(h)] vide order dated 22.6.2018 in Petition No. 263/TT/2017, in case of Asset-2 to Asset-11 vide order dated 19.12.2016 in Petition No. 246/TT/2014 and in case of Asset-12 to Asset-16 vide order dated 25.4.2016 in Petition No. 252/TT/2015 and the same is as follows:

Assets	ACE 2014-2019				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-1[Asset-1(a) to Asset-1(h)]	1464.49	1510.72	672.25	657.75	0.00
Asset-2	0.00	2938.07	2200.00	0.00	0.00
Asset-3	0.00	209.58	90.02	0.00	0.00
Asset-4	300.42	975.34	200.00	0.00	0.00
Asset-5	221.80	917.14	1500.00	0.00	0.00



Asset-6	0.00	881.58	1800.00	0.00	0.00
Asset-7	0.00	773.50	1338.00	0.00	0.00
Asset-8	674.62	367.93	355.92	0.00	0.00
Asset-9	500.52	223.84	500.00	0.00	0.00
Asset-10	0.00	443.13	800.00	0.00	0.00
Asset-11	241.43	410.30	584.44	0.00	0.00
Asset-12	0.00	817.78	3304.25	0.00	0.00
Asset-13	0.00	994.65	0.00	0.00	0.00
Asset-14	0.00	523.98	1257.90	0.00	0.00
Asset-15	0.00	2223.72	0.00	0.00	0.00
Asset-16	718.97	66.70	99.72	0.00	0.00

54. The Petitioner has submitted that ACE incurred in respect of the transmission assets on account of un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within cut-off date and after cut-off date. ACE has been claimed under Regulations 14(1)(i) and 14(1)(ii) and 14(3)(v) of the 2014 Tariff Regulations. The Petitioner has claimed the following ACE for the transmission assets covered in the instant petition and has submitted the Auditor's Certificates in support of the same:

(₹ in lakh)

Assets	ACE 2014-2019				
	(As per Auditor's Certificate)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-1 [(Asset- 1 (a) to Asset-1 (h)]	1459.54	1510.72	672.25	480.65	0
Asset-2	-	2938.07	8066.49	1079.62	31.19
Asset-3	-	211.32	354.67	-	-
Asset-4	300.42	2333.38	557.52	405.06	340.84
Asset-5	221.80	1496.83	450.34	405.06	237.51
Asset-6	-	1190.28	526.31	585.34	628.24
Asset-7	-	1016.88	526.31	585.34	228.46
Asset-8	674.62	360.22	121.40	348.56	150.27
Asset-9	500.52	360.22	121.40	348.56	150.27
Asset-10	-	487.34	95.98	753.68	150.27
Asset-11	241.43	931.87	159.46	134.98	-
Asset-12	-	2384.35	1550.19	658.74	214.62
Asset-13	-	826.96	95.98	475.83	150.27
Asset-14	-	603.75	526.31	585.34	228.46
Asset-15	-	1004.12	526.31	585.34	228.46
Asset-16	630.06	136.23	20.52	25.95	-



55. We have considered the submissions of the Petitioner. The undischarged IDCs on COD has been allowed as ACE during the year of discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i), Regulation 14(1)(ii) and Regulation 14(3)(V) of the 2014 Tariff Regulations towards balance and retention payments and works deferred for execution. The undischarged IDC as on COD has been allowed as ACE. The details of ACE allowed are as follows:

(₹ in lakh)

Combined Asset-1 (Asset-1(a) to Asset-1(h))	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	1459.54	1510.72	672.25	480.65	0.00
Add: IDC Discharged	4.95*	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	1464.49	1510.72	672.25	480.65	0.00

*As approved vide Corrigendum dated 31.7.2018 to Order dated 22.6.2018 in Petition No. 263/TT/2017.

(₹ in lakh)

Asset-2	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	2938.07	8066.49	1079.62	31.19
Add: IDC Discharged	1039.11	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	3977.18	8066.49	1079.62	31.19

(₹ in lakh)

Asset-3	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	211.32	354.67	0.00	0.00
Add: IDC Discharged	103.95	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00



Total ACE allowed	315.27	354.67	0.00	0.00
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(₹ in lakh)

Asset-4	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	300.42	2333.38	557.52	405.06	340.84
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	300.42	2333.38	557.52	405.06	340.84

(₹ in lakh)

Asset-5	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	221.80	1496.83	450.34	405.06	237.51
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	221.80	1496.83	450.34	405.06	237.51

(₹ in lakh)

Asset-6	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	1190.28	526.31	585.34	628.24
Add: IDC Discharged	140.11	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	1330.39	526.31	585.34	628.24

(₹ in lakh)

Asset-7	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	1016.88	526.31	585.34	228.46
Add: IDC Discharged	135.81	0.00	0.00	0.00



Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	1152.69	526.31	585.34	228.46

(₹ in lakh)

Asset-8	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	674.42	360.22	121.40	348.56	150.27
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	674.42	364.58	121.40	348.56	150.27

(₹ in lakh)

Asset-9	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	500.52	360.22	121.40	348.56	150.27
Add: IDC Discharged	0.00	39.35	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	500.52	399.57	121.40	348.56	150.27

(₹ in lakh)

Asset-10	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	487.34	95.98	753.68	150.27
Add: IDC Discharged	109.38	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	596.72	95.98	753.68	150.27



(₹ in lakh)

Asset-11	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	241.43	931.87	159.46	134.98	0.00
Add: IDC Discharged	0.00	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	241.43	931.87	159.46	134.98	0.00

(₹ in lakh)

Asset-12	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	2384.35	1550.19	658.75	214.62
Add: IDC Discharged	264.36	904.25	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	2648.71	2454.44	658.75	214.62

(₹ in lakh)

Asset-13	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	826.96	95.98	475.83	150.27
Add: IDC Discharged	104.78	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	931.74	95.98	475.83	150.27

(₹ in lakh)

Asset-14	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	603.75	526.31	585.34	228.46
Add: IDC Discharged	23.98	59.71	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	627.73	586.02	585.34	228.46



(₹ in lakh)

Asset-15	ACE			
	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	1004.12	526.31	585.34	228.46
Add: IDC Discharged	125.17	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00
Total ACE allowed	1129.29	526.31	585.34	228.46

(₹ in lakh)

Asset-16	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	630.06	136.23	20.52	25.95	0.00
Add: IDC Discharged	88.91	0.00	0.00	0.00	0.00
Add: Un-discharged Initial Spares allowed as ACE	0.00	0.00	0.00	0.00	0.00
Total ACE allowed	718.97	136.23	20.52	25.95	0.00

Capital Cost for 2014-19 tariff period

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

(₹ in lakh)

Particulars	Apportioned Approved Capital Cost as per RCE-II	Capital Cost as on COD on cash basis	ACE					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-1 [Asset-1(a) - Asset 1(h)]	28534.99	24402.61	1464.49	1510.72	672.25	480.65	0.00	28530.72
Asset-2	84041.17	70865.18	0.00	3977.18	8066.49	1079.62	31.19	84019.66
Asset-3	3793.70	3123.76	0.00	315.27	354.67	0.00	0.00	3793.70
Asset-4	7891.85	3954.63	300.42	2333.38	557.52	405.06	340.84	7891.85
Asset-5	6061.77	3250.23	221.80	1496.83	450.34	405.06	237.51	6061.77
Asset-6	7277.83	4198.60	0.00	1330.39	526.31	585.34	628.24	7268.87
Asset-7	6010.20	3517.40	0.00	1152.69	526.31	585.34	228.46	6010.20
Asset-8	3787.06	2131.99	674.62	360.22	121.40	348.56	150.27	3787.06

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Asset-9	3869.09	2348.77	500.52	399.57	121.40	348.56	150.27	3869.09
Asset-10	4644.34	3047.69	0.00	596.72	95.98	753.68	150.27	4644.34
Asset-11	4324.70	2856.96	241.43	931.87	159.46	134.98	0.00	4324.70
Asset-12	61999.50	55000.25	0.00	2648.71	2454.44	658.75	214.62	60976.77
Asset-13	4433.47	2655.13	0.00	931.74	95.98	475.83	150.27	4308.95
Asset-14	6558.98	4085.58	0.00	627.73	586.02	585.34	228.46	6113.13
Asset-15	6068.56	3444.43	0.00	1129.29	526.31	585.34	228.46	5913.83
Asset-16	4112.74	3211.07	718.97	136.23	20.52	25.95	0.00	4112.74

Debt-Equity Ratio

57. The Petitioner has claimed debt-equity ratio of 70:30 as on COD / 1.4.2014 and for ACE post COD. Debt-equity ratio of 70:30 has been considered for capital cost as on COD / 1.4.2014 and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and 31.3.2019 are as follows:

Combined Asset-1 (a) -Asset 1(h)	Amount as on COD or 1.4.2014, whichever is later (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	17081.83	70.00	19971.55	70.00
Equity	7320.78	30.00	8559.17	30.00
Total	24402.61	100.00	28530.72	100.00
Asset-2	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	49605.63	70.00	58813.76	70.00
Equity	21259.56	30.00	25205.90	30.00
Total	70865.18	100.00	84019.66	100.00
Asset-3	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2186.63	70.00	2655.59	70.00
Equity	937.13	30.00	1138.11	30.00
Total	3123.76	100.00	3793.70	100.00
Asset-4	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2768.24	70.00	5524.30	70.00
Equity	1186.39	30.00	2367.55	30.00
Total	3954.63	100.00	7891.85	100.00
Asset -5	Amount as on COD	(in %)	Amount as on 31.3.2019	(in %)



	(₹ in lakh)		(₹ in lakh)	
Debt	2275.16	70.00	4243.24	70.00
Equity	975.07	30.00	1818.53	30.00
Total	3250.23	100.00	6061.77	100.00
Asset -6	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2939.03	70.00	5088.23	70.00
Equity	1259.57	30.00	2180.64	30.00
Total	4198.60	100.00	7268.87	100.00
Asset -7	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2462.18	70.00	4207.15	70.00
Equity	1055.22	30.00	1803.05	30.00
Total	3517.40	100.00	6010.20	100.00
Asset -8	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1492.39	70.00	2650.94	70.00
Equity	639.60	30.00	1136.12	30.00
Total	2131.99	100.00	3787.06	100.00
Asset -9	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1644.14	70.00	2708.37	70.00
Equity	704.63	30.00	1160.72	30.00
Total	2348.77	100.00	3869.09	100.00
Asset -10	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2133.38	70.00	3251.05	70.00
Equity	914.31	30.00	1393.29	30.00
Total	3047.69	100.00	4644.34	100.00
Asset -11	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1999.88	70.00	3027.30	70.00
Equity	857.08	30.00	1297.40	30.00
Total	2856.96	100.00	4324.70	100.00
Asset -12	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	38500.18	70.00	42683.75	70.00
Equity	16500.07	30.00	18293.02	30.00
Total	55000.25	100.00	60976.77	100.00
Asset -13	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1858.59	70.00	3016.27	70.00
Equity	796.54	30.00	1292.68	30.00



Total	2655.13	100.00	4308.95	100.00
Asset –14	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2859.91	70.00	4279.21	70.00
Equity	1225.67	30.00	1833.92	30.00
Total	4085.58	100.00	6113.13	100.00
Asset –15	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2411.10	70.00	4139.69	70.00
Equity	1033.33	30.00	1774.14	30.00
Total	3444.43	100.00	5913.83	100.00
Asset –16	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2247.78	70.00	2878.96	70.00
Equity	963.29	30.00	1233.79	30.00
Total	3211.07	100.00	4112.74	100.00

Depreciation

58. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed in previous orders. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier nor made any specific prayer for allowing higher depreciation in the instant petition. It is observed that in previous orders, depreciation for IT equipment was allowed @5.28%. The Petitioner now at the time of truing-up of the tariff of 2014-19 period has segregated the IT equipment cost from the Sub-station cost and has considered depreciation rate for IT Equipment @15% and the salvage value for IT Equipment is NIL as per the 2014 Tariff Regulations. A similar issue had come up in some earlier petitions filed by the Petitioner. In this regard, the Commission vide order dated 9.5.2020 in Petition No. 19/TT/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 apart 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 upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the substation upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations."

59. In line with the above decision in order dated 9.5.2020 in Petition No. 19/TT/2020, depreciation has been considered for IT Equipment @5.28% as part of the Sub-station upto 31.3.2019 while truing up the capital expenditure for 2014-19 period. However, for 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 of the 2019 Tariff Regulations. The Gross Block during 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-I. WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19tariff period is as follows:



(₹ in lakh)

Combined Asset-1 [(Asset- 1(a)- Asset-1 (h))]						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	24402.61	25867.10	27377.82	28050.07	28530.72
B	Addition during the year 2014-19	1464.49	1510.72	672.25	480.65	0.00
C	Closing Gross Block (A+B)	25867.10	27377.82	28050.07	28530.72	28530.72
D	Average Gross Block (A+C)/2	25134.86	26622.46	27713.95	28290.40	28530.72
E	Depreciable value (D*90%)	19064.83	20403.68	21386.01	21904.82	22121.11
F	Weighted average rate of Depreciation (WAROD) (in %)	4.09	4.13	4.14	4.15	4.15
G	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
H	Balance useful life at the beginning of the year (Year)	24.00	23.00	22.00	21.00	20.00
I	Cumulative Depreciation at the beginning of the year	669.06	1695.91	2794.85	3942.05	5114.85
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	18395.77	18707.76	18591.16	17962.76	17006.26
K	Depreciation during the year	1026.85	1098.93	1147.21	1172.79	1183.52
L	Cumulative Depreciation at the end of the year (I+K)	1695.91	2794.85	3942.05	5114.85	6298.37
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	17368.92	17608.83	17443.96	16789.97	15822.74

(₹ in lakh)

Asset-2					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	70865.18	74842.36	82908.85	83988.47
B	Addition during the year 2014-19	3977.18	8066.49	1079.62	31.19
C	Closing Gross Block (A+B)	74842.36	82908.85	83988.47	84019.66
D	Average Gross Block (A+C)/2	72853.77	78875.61	83448.66	84004.07
E	Depreciable value (D*90%)	65568.40	70988.05	75103.80	75603.66
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	35.00	35.00	34.00	33.00
I	Cumulative Depreciation at the beginning of the year	0.00	3815.15	7979.78	12385.87



Asset-2					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	65568.40	67172.90	67124.02	63217.79
K	Depreciation during the year	3815.15	4164.63	4406.09	4435.41
L	Cumulative Depreciation at the end of the year (I+K)	3815.15	7979.78	12385.87	16821.29
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	61753.25	63008.27	62717.93	58782.38

(₹ in lakh)

Asset-3					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	3123.76	3439.03	3793.70	3793.70
B	Addition during the year 2014-19	315.27	354.67	0.00	0.00
C	Closing Gross Block (A+B)	3439.03	3793.70	3793.70	3793.70
D	Average Gross Block (A+C)/2	3281.40	3616.37	3793.70	3793.70
E	Depreciable value (D*90%)	3281.40	3616.37	3793.70	3793.70
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00
I	Cumulative Depreciation at the beginning of the year	0.00	171.84	362.78	563.09
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2953.26	3082.89	3051.55	2851.24
K	Depreciation during the year	171.84	190.94	200.31	200.31
L	Cumulative Depreciation at the end of the year (I+K)	171.84	362.78	563.09	763.40
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2781.42	2891.95	2851.24	2650.93



(₹ in lakh)

Asset-4						
	Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	3954.63	4255.05	6588.43	7145.95	7551.01
B	Addition during the year 2014-19	300.42	2333.38	557.52	405.06	340.84
C	Closing Gross Block (A+B)	4255.05	6588.43	7145.95	7551.01	7891.85
D	Average Gross Block (A+C)/2	4104.84	5421.74	6867.19	7348.48	7721.43
E	Depreciable value (D*90%)	4104.84	5421.74	6867.19	7348.48	7721.43
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00	22.00
I	Cumulative Depreciation at the beginning of the year	0.00	88.48	374.74	737.33	1125.33
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3694.36	4791.09	5805.73	5876.30	5823.96
K	Depreciation during the year	88.48	286.27	362.59	388.00	407.69
L	Cumulative Depreciation at the end of the year (I+K)	88.48	374.74	737.33	1125.33	1533.02
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3605.88	4504.82	5443.14	5488.30	5416.26

(₹ in lakh)

Asset-5						
	Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	3250.23	3472.03	4968.86	5419.20	5824.26
B	Addition during the year 2014-19	221.80	1496.83	450.34	405.06	237.51
C	Closing Gross Block (A+B)	3472.03	4968.86	5419.20	5824.26	6061.77
D	Average Gross Block (A+C)/2	3361.13	4220.45	5194.03	5621.73	5943.02
E	Depreciable value (D*90%)	3025.02	3798.40	4674.63	5059.56	5348.71
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00	21.00
I	Cumulative Depreciation at the beginning of the year	0.00	118.15	340.99	615.23	912.06



Asset-5						
	Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3025.02	3680.25	4333.64	4444.32	4436.65
K	Depreciation during the year	118.15	222.84	274.24	296.83	313.79
L	Cumulative Depreciation at the end of the year (I+K)	118.15	340.99	615.23	912.06	1225.85
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2906.87	3457.41	4059.39	4147.50	4122.86

(₹ in lakh)

Asset-6					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	4198.60	5528.98	6055.29	6640.63
B	Addition during the year 2014-19	1330.39	526.31	585.34	628.24
C	Closing Gross Block (A+B)	5528.98	6055.29	6640.63	7268.87
D	Average Gross Block (A+C)/2	4863.79	5792.14	6347.96	6954.75
E	Depreciable value (D*90%)	4377.41	5212.92	5713.17	6259.28
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00
I	Cumulative Depreciation at the beginning of the year	0.00	254.70	560.53	895.70
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	4377.41	4958.22	5152.64	5363.58
K	Depreciation during the year	254.70	305.82	335.17	367.21
L	Cumulative Depreciation at the end of the year (I+K)	254.70	560.53	895.70	1262.91
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	4122.71	4652.40	4817.47	4996.37



(₹ in lakh)

Asset-7					
	Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
A	Opening Gross Block	3517.40	4670.09	5196.40	5781.74
B	Addition during the year 2014-19	1152.69	526.31	585.34	228.46
C	Closing Gross Block (A+B)	4670.09	5196.40	5781.74	6010.20
D	Average Gross Block (A+C)/2	4093.75	4933.25	5489.07	5895.97
E	Depreciable value (D*90%)	3684.37	4439.92	4940.16	5306.37
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00
I	Cumulative Depreciation at the beginning of the year	0.00	196.66	457.14	746.96
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3684.37	4243.26	4483.03	4559.41
K	Depreciation during the year	196.66	260.48	289.82	311.31
L	Cumulative Depreciation at the end of the year (I+K)	196.66	457.14	746.96	1058.27
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3487.71	3982.78	4193.20	4248.11

(₹ in lakh)

Asset-8						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	2131.99	2806.61	3166.83	3288.23	3636.79
B	Addition during the year 2014-19	674.62	360.22	121.40	348.56	150.27
C	Closing Gross Block (A+B)	2806.61	3166.83	3288.23	3636.79	3787.06
D	Average Gross Block (A+C)/2	2469.30	2986.72	3227.53	3462.51	3711.93
E	Depreciable value (D*90%)	2222.37	2688.05	2904.78	3116.26	3340.73
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00	22.00



Asset-8						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
I	Cumulative Depreciation at the beginning of the year	0.00	87.16	244.86	415.27	598.09
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2222.37	2600.89	2659.92	2700.99	2742.64
K	Depreciation during the year	87.16	157.70	170.41	182.82	195.99
L	Cumulative Depreciation at the end of the year (I+K)	87.16	244.86	415.27	598.09	794.08
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2135.21	2443.19	2489.51	2518.17	2546.65

(₹ in lakh)

Asset-9						
	Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	2348.77	2849.29	3248.86	3370.26	3718.82
B	Addition during the year 2014-19	500.52	399.57	121.40	348.56	150.27
C	Closing Gross Block (A+B)	2849.29	3248.86	3370.26	3718.82	3869.09
D	Average Gross Block (A+C)/2	2599.03	3049.08	3309.56	3544.54	3793.96
E	Depreciable value (D*90%)	2339.13	2744.17	2978.60	3190.09	3414.56
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00	22.00
I	Cumulative Depreciation at the beginning of the year	0.00	69.55	230.55	405.29	592.44
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2339.13	2674.61	2748.06	2784.80	2822.12
K	Depreciation during the year	69.55	160.99	174.74	187.15	200.32
L	Cumulative Depreciation at the end of the year (I+K)	69.55	230.55	405.29	592.44	792.76
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2269.57	2513.62	2573.31	2597.64	2621.80



(₹ in lakh)

Asset-10					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	3047.69	3644.41	3740.39	4494.07
B	Addition during the year 2014-19	596.72	95.98	753.68	150.27
C	Closing Gross Block (A+B)	3644.41	3740.39	4494.07	4644.34
D	Average Gross Block (A+C)/2	3346.05	3692.40	4117.23	4569.21
E	Depreciable value (D*90%)	3011.45	3323.16	3705.51	4112.28
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00
I	Cumulative Depreciation at the beginning of the year	0.00	175.22	370.18	587.57
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3011.45	3147.94	3335.32	3524.71
K	Depreciation during the year	175.22	194.96	217.39	241.25
L	Cumulative Depreciation at the end of the year (I+K)	175.22	370.18	587.57	828.83
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2836.22	2952.98	3117.94	3283.46

(₹ in lakh)

Asset-11						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	2856.96	3098.39	4030.26	4189.72	4324.70
B	Addition during the year 2014-19	241.43	931.87	159.46	134.98	0.00
C	Closing Gross Block (A+B)	3098.39	4030.26	4189.72	4324.70	4324.70
D	Average Gross Block (A+C)/2	2977.68	3564.33	4109.99	4257.21	4324.70
E	Depreciable value (D*90%)	2856.96	3098.39	4030.26	4189.72	4324.70
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00	22.00
I	Cumulative Depreciation at the beginning of the year	0.00	105.10	293.30	510.31	735.09



Asset-11						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2679.91	3102.79	3405.69	3321.18	3157.14
K	Depreciation during the year	105.10	188.20	217.01	224.78	228.34
L	Cumulative Depreciation at the end of the year (I+K)	105.10	293.30	510.31	735.09	963.43
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2574.81	2914.59	3188.69	3096.40	2928.80

(₹ in lakh)

Asset-12					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Opening Gross Block	55000.25	57648.96	60103.40	60762.15
B	Addition during the year 2014-19	2648.71	2454.44	658.75	214.62
C	Closing Gross Block (A+B)	57648.96	60103.40	60762.15	60976.77
D	Average Gross Block (A+C)/2	56324.61	58876.18	60432.78	60869.46
E	Depreciable value (D*90%)	50692.14	52988.56	54389.50	54782.51
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	34.00	34.00	33.00	32.00
I	Cumulative Depreciation at the beginning of the year	0.00	528.16	3636.82	6827.67
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	50692.14	52460.40	50752.68	47954.84
K	Depreciation during the year	528.16	3108.66	3190.85	3213.91
L	Cumulative Depreciation at the end of the year (I+K)	528.16	3636.82	6827.67	10041.58
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	50163.99	49351.74	47561.83	44740.94



(₹ in lakh)

Asset-13					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	2655.13	3586.87	3682.85	4158.68
B	Addition during the year 2014-19	931.74	95.98	475.83	150.27
C	Closing Gross Block (A+B)	3586.87	3682.85	4158.68	4308.95
D	Average Gross Block (A+C)/2	3121.00	3634.86	3920.77	4233.82
E	Depreciable value (D*90%)	2808.90	3271.38	3528.69	3810.43
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00
I	Cumulative Depreciation at the beginning of the year	0.00	163.44	355.36	562.38
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	2808.90	3107.94	3173.33	3248.06
K	Depreciation during the year	163.44	191.92	207.02	223.55
L	Cumulative Depreciation at the end of the year (I+K)	163.44	355.36	562.38	785.92
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	2645.46	2916.02	2966.31	3024.51

(₹ in lakh)

Asset-14					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Opening Gross Block	4085.58	4713.31	5299.33	5884.67
B	Addition during the year 2014-19	627.73	586.02	585.34	228.46
C	Closing Gross Block (A+B)	4713.31	5299.33	5884.67	6113.13
D	Average Gross Block (A+C)/2	4399.44	5006.32	5592.00	5998.90
E	Depreciable value (D*90%)	3959.50	4505.68	5032.80	5399.01
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	24.00	23.00

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Asset-14					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
I	Cumulative Depreciation at the beginning of the year	0.00	0.00	41.25	305.59
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	0.00	3959.50	4464.43	4727.21
K	Depreciation during the year	41.25	264.33	295.26	316.74
L	Cumulative Depreciation at the end of the year (I+K)	41.25	305.59	600.84	917.59
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3918.24	4200.10	4431.95	4481.42

(₹ in lakh)

Asset-15					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Gross Block	3444.43	4573.72	5100.03	5685.37
B	Addition during the year 2014-19	1129.29	526.31	585.34	228.46
C	Closing Gross Block (A+B)	4573.72	5100.03	5685.37	5913.83
D	Average Gross Block (A+C)/2	4009.08	4836.88	5392.70	5799.60
E	Depreciable value (D*90%)	3608.17	4353.19	4853.43	5219.64
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
H	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00
I	Cumulative Depreciation at the beginning of the year	0.00	209.94	465.33	750.07
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3608.17	4143.25	4388.10	4469.58
K	Depreciation during the year	209.94	255.39	284.73	306.22
L	Cumulative Depreciation at the end of the year (I+K)	209.94	465.33	750.07	1056.29
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3398.23	3887.86	4103.37	4163.36

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(₹ in lakh)

Asset-16						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	3211.07	3930.04	4066.27	4086.79	4112.74
B	Addition during the year 2014-19	718.97	136.23	20.52	25.95	0.00
C	Closing Gross Block (A+B)	3930.04	4066.27	4086.79	4112.74	4112.74
D	Average Gross Block (A+C)/2	3570.56	3998.16	4076.53	4099.77	4112.74
E	Depreciable value (D*90%)	3213.50	3598.34	3668.88	3689.79	3701.47
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
H	Balance useful life at the beginning of the year (Year)	33.00	32.00	31.00	30.00	29.00
I	Cumulative Depreciation at the beginning of the year	0.00	188.53	399.63	614.87	831.34
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	3213.50	3409.81	3269.25	3074.92	2870.13
K	Depreciation during the year	188.53	211.10	215.24	216.47	217.15
L	Cumulative Depreciation at the end of the year (I+K)	188.53	399.63	614.87	831.34	1048.49
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3024.97	3198.71	3054.01	2858.45	2652.98

Interest on Loan (“IoL”)

60. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

The details of IoL allowed are as follows:



(₹ in lakh)

Combined Asset-1 [Asset-1 (a)- Asset-1(h)]						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	17081.83	18106.98	19164.50	19635.09	19971.55
B	Cumulative Repayments up to Previous Year	669.06	1695.91	2794.85	3942.05	5114.85
C	Net Loan-Opening (A-B)	16412.77	16411.06	16369.65	15693.03	14856.70
D	Addition due to ACE	1025.15	1057.52	470.59	336.46	0.00
E	Repayment during the year	1026.85	1098.93	1147.21	1172.79	1183.52
F	Net Loan-Closing(C+D-E)	16411.06	16369.65	15693.03	14856.70	13673.18
G	Average Loan (A+F)/2	16411.91	16390.36	16031.34	15274.87	14264.94
H	Weighted Average Rate of Interest on Loan (in %)	7.785	7.818	7.815	7.751	7.734
I	Interest on Loan (GxH)	1277.68	1281.32	1252.78	1183.94	1103.27

(₹ in lakh)

Asset-2					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	49605.63	52389.65	58036.20	58791.93
B	Cumulative Repayments up to Previous Year	0.00	3815.15	7979.78	12385.87
C	Net Loan-Opening (A-B)	49605.63	48574.51	50056.42	46406.06
D	Addition due to ACE	2784.03	5646.54	755.73	21.83
E	Repayment during the year	3815.15	4164.63	4406.09	4435.41
F	Net Loan-Closing(C+D-E)	48574.51	50056.42	46406.06	41992.48
G	Average Loan (A+F)/2	49090.07	49315.46	48231.24	44199.27
H	Weighted Average Rate of Interest on Loan (in %)	9.018	8.885	8.678	8.646
I	Interest on Loan (GxH)	4390.79	4381.60	4185.63	3821.37

(₹ in lakh)

Asset-3					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2186.63	2407.32	2655.59	2655.59



Asset-3					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
B	Cumulative Repayments up to Previous Year	0.00	171.84	362.78	563.09
C	Net Loan-Opening (A-B)	2186.63	2235.48	2292.81	2092.50
D	Addition due to ACE	220.69	248.27	0.00	0.00
E	Repayment during the year	171.84	190.94	200.31	200.31
F	Net Loan-Closing(C+D-E)	2235.48	2292.81	2092.50	1892.19
G	Average Loan (A+F)/2	2211.06	2264.15	2192.66	1992.35
H	Weighted Average Rate of Interest on Loan (in %)	8.569	8.528	8.431	8.413
I	Interest on Loan (GxH)	187.91	193.09	184.86	167.62

(₹ in lakh)

Asset-4						
	Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	2768.24	2978.54	4611.91	5002.17	5285.71
B	Cumulative Repayments up to Previous Year	0.00	88.48	374.74	737.33	1125.33
C	Net Loan-Opening (A-B)	2768.24	2890.06	4237.16	4264.84	4160.38
D	Addition due to ACE	210.29	1633.37	390.26	283.54	238.59
E	Repayment during the year	88.48	286.27	362.59	388.00	407.69
F	Net Loan-Closing(C+D-E)	2890.06	4237.16	4264.84	4160.38	3991.28
G	Average Loan (A+F)/2	2829.15	3563.61	4251.00	4212.61	4075.83
H	Weighted Average Rate of Interest on Loan (in %)	8.577	8.602	8.513	8.326	8.264
I	Interest on Loan (GxH)	99.06	306.53	361.90	350.76	336.85

(₹ in lakh)

Asset-5						
	Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	2275.16	2430.42	3478.20	3793.44	4076.98
B	Cumulative Repayments up to Previous Year	0.00	118.15	340.99	615.23	912.06
C	Net Loan-Opening (A-B)	2275.16	2312.27	3137.21	3178.21	3164.92
D	Addition due to ACE	155.26	1047.78	315.24	283.54	166.26
E	Repayment during the year	118.15	222.84	274.24	296.83	313.79
F	Net Loan-Closing(C+D-E)	2312.27	3137.21	3178.21	3164.92	3017.39



Asset-5						
	Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
G	Average Loan (A+F)/2	2293.72	2724.74	3157.71	3171.57	3091.16
H	Weighted Average Rate of Interest on Loan (in %)	8.6314	8.5592	8.4662	8.3742	8.3251
I	Interest on Loan (GxH)	131.81	233.22	267.34	265.59	257.34

(₹ in lakh)

Asset-6					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2939.03	3870.30	4238.72	4648.46
B	Cumulative Repayments up to Previous Year	0.00	254.70	560.53	895.70
C	Net Loan-Opening (A-B)	2939.03	3615.60	3678.19	3752.76
D	Addition due to ACE	931.27	368.42	409.74	439.77
E	Repayment during the year	254.70	305.82	335.17	367.21
F	Net Loan-Closing(C+D-E)	3615.60	3678.19	3752.76	3825.32
G	Average Loan (A+F)/2	3277.31	3646.89	3715.48	3789.04
H	Weighted Average Rate of Interest on Loan (in %)	8.7733	8.6005	8.3683	8.2744
I	Interest on Loan (GxH)	285.17	313.65	310.92	313.52

(₹ in lakh)

Asset-7					
	Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2462.18	3269.07	3637.49	4047.23
B	Cumulative Repayments up to Previous Year	0.00	196.66	457.14	746.96
C	Net Loan-Opening (A-B)	2462.18	3072.41	3180.35	3300.27
D	Addition due to ACE	806.89	368.42	409.74	159.92
E	Repayment during the year	196.66	260.48	289.82	311.31
F	Net Loan-Closing(C+D-E)	3072.41	3180.35	3300.27	3148.89
G	Average Loan (A+F)/2	2767.29	3126.38	3240.31	3224.58
H	Weighted Average Rate of Interest on Loan (in %)	8.610	8.517	8.406	8.331
I	Interest on Loan (GxH)	216.79	266.28	272.38	268.63



(₹ in lakh)

Asset-8						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	1492.39	1964.63	2216.78	2301.76	2545.75
B	Cumulative Repayments up to Previous Year	0.00	87.16	244.86	415.27	598.09
C	Net Loan-Opening (A-B)	1492.39	1877.47	1971.92	1886.49	1947.66
D	Addition due to ACE	472.23	252.15	84.98	243.99	105.19
E	Repayment during the year	87.16	157.70	170.41	182.82	195.99
F	Net Loan-Closing(C+D-E)	1877.47	1971.92	1886.49	1947.66	1856.86
G	Average Loan (A+F)/2	1684.93	1924.70	1929.21	1917.08	1902.26
H	Weighted Average Rate of Interest on Loan (in %)	8.833	8.783	8.782	8.614	8.513
I	Interest on Loan (GxH)	99.49	169.04	169.42	165.15	161.95

(₹ in lakh)

Asset-9						
	Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	1644.14	1994.50	2274.20	2359.18	2603.18
B	Cumulative Repayments up to Previous Year	0.00	69.55	230.55	405.29	592.44
C	Net Loan-Opening (A-B)	1644.14	1924.95	2043.66	1953.89	2010.73
D	Addition due to ACE	350.36	279.70	84.98	243.99	105.19
E	Repayment during the year	69.55	160.99	174.74	187.15	200.32
F	Net Loan-Closing(C+D-E)	1924.95	2043.66	1953.89	2010.73	1915.60
G	Average Loan (A+F)/2	1784.54	1984.30	1998.78	1982.31	1963.17
H	Weighted Average Rate of Interest on Loan (in %)	8.650	8.629	8.573	8.383	8.312
I	Interest on Loan (GxH)	78.24	171.22	171.36	166.17	163.18

(₹ in lakh)

Asset-10					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2133.38	2551.09	2618.28	3145.86
B	Cumulative Repayments up to Previous Year	0.00	175.22	370.18	587.57
C	Net Loan-Opening (A-B)	2133.38	2375.87	2248.10	2558.29
D	Addition due to ACE	417.71	67.19	527.58	105.19
E	Repayment during the year	175.22	194.96	217.39	241.25
F	Net Loan-Closing(C+D-E)	2375.87	2248.10	2558.29	2422.23

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Asset-10					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
G	Average Loan (A+F)/2	2254.63	2311.99	2403.20	2490.26
H	Weighted Average Rate of Interest on Loan (in %)	8.986	8.913	8.685	8.566
I	Interest on Loan (GxH)	200.94	206.06	208.71	213.33

(₹ in lakh)

Asset-11						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	1999.88	2168.88	2821.19	2932.81	3027.30
B	Cumulative Repayments up to Previous Year	0.00	105.10	293.30	510.31	735.09
C	Net Loan-Opening (A-B)	1999.88	2063.78	2527.89	2422.51	2292.22
D	Addition due to ACE	169.00	652.31	111.62	94.49	0.00
E	Repayment during the year	105.10	188.20	217.01	224.78	228.34
F	Net Loan-Closing(C+D-E)	2063.78	2527.89	2422.51	2292.22	2063.87
G	Average Loan (A+F)/2	2031.83	2295.84	2475.20	2357.36	2178.05
H	Weighted Average Rate of Interest on Loan (in %)	8.527	8.468	8.430	8.406	8.417
I	Interest on Loan (GxH)	115.82	194.41	208.65	198.17	183.32

(₹ in lakh)

Asset-12					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	38500.18	40354.28	42072.39	42533.52
B	Cumulative Repayments up to Previous Year	0.00	528.16	3636.82	6827.67
C	Net Loan-Opening (A-B)	38500.18	39826.12	38435.57	35705.85
D	Addition due to ACE	1854.10	1718.11	461.13	150.23
E	Repayment during the year	528.16	3108.66	3190.85	3213.91
F	Net Loan-Closing(C+D-E)	39826.12	38435.57	35705.85	32642.18
G	Average Loan (A+F)/2	39163.15	39130.85	37070.71	34174.01
H	Weighted Average Rate of Interest on Loan (in %)	8.805	8.743	8.648	8.621
I	Interest on Loan (GxH)	612.42	3421.08	3205.96	2946.03



(₹ in lakh)

Asset-13					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	1858.59	2510.81	2578.00	2911.08
B	Cumulative Repayments up to Previous Year	0.00	163.44	355.36	562.38
C	Net Loan-Opening (A-B)	1858.59	2347.37	2222.64	2348.71
D	Addition due to ACE	652.22	67.19	333.08	105.19
E	Repayment during the year	163.44	191.92	207.02	223.55
F	Net Loan-Closing(C+D-E)	2347.37	2222.64	2348.71	2230.35
G	Average Loan (A+F)/2	2102.98	2285.01	2285.68	2289.53
H	Weighted Average Rate of Interest on Loan (in %)	8.411	8.401	8.275	8.226
I	Interest on Loan (GxH)	175.43	191.96	189.14	188.34

(₹ in lakh)

Asset-14					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2859.91	3299.33	3709.55	4119.29
B	Cumulative Repayments up to Previous Year	0.00	41.25	305.59	600.84
C	Net Loan-Opening (A-B)	2859.91	3258.07	3403.96	3518.44
D	Addition due to ACE	439.42	410.22	409.74	159.92
E	Repayment during the year	41.25	264.33	295.26	316.74
F	Net Loan-Closing(C+D-E)	3258.07	3403.96	3518.44	3361.62
G	Average Loan (A+F)/2	3058.99	3331.02	3461.20	3440.03
H	Weighted Average Rate of Interest on Loan (in %)	8.784	8.668	8.506	8.437
I	Interest on Loan (GxH)	47.72	288.74	294.40	290.24

(₹ in lakh)

Asset-15					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Gross Normative Loan	2411.10	3201.61	3570.03	3979.77
B	Cumulative Repayments up to Previous Year	0.00	209.94	465.33	750.07
C	Net Loan-Opening (A-B)	2411.10	2991.66	3104.69	3229.70
D	Addition due to ACE	790.50	368.42	409.74	159.92
E	Repayment during the year	209.94	255.39	284.73	306.22
F	Net Loan-Closing(C+D-E)	2991.66	3104.69	3229.70	3083.40
G	Average Loan (A+F)/2	2701.38	3048.18	3167.20	3156.55

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Asset-15					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
H	Weighted Average Rate of Interest on Loan (in %)	8.790	8.652	8.509	8.455
I	Interest on Loan (GxH)	235.49	263.74	269.49	266.89

(₹ in lakh)

Asset-16						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	2247.78	2751.06	2846.42	2860.79	2878.96
B	Cumulative Repayments up to Previous Year	0.00	188.53	399.63	614.87	831.34
C	Net Loan-Opening (A-B)	2247.78	2562.53	2446.79	2245.92	2047.62
D	Addition due to ACE	503.28	95.36	14.36	18.17	0.00
E	Repayment during the year	188.53	211.10	215.24	216.47	217.15
F	Net Loan-Closing(C+D-E)	2562.53	2446.79	2245.92	2047.62	1830.47
G	Average Loan (A+F)/2	2405.16	2504.66	2346.35	2146.77	1939.04
H	Weighted Average Rate of Interest on Loan (in %)	7.987	8.081	8.059	8.005	7.929
I	Interest on Loan (GxH)	192.11	202.40	189.08	171.84	153.75

Return on Equity ("RoE")

61. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are 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 (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.625
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

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



Year	Notified MAT rates (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

63. MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same is as follows:

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

64. Accordingly, RoE allowed for the transmission assets is as follows:

(₹ in lakh)

Combined Asset-1 [Asset-(a)- Asset 1(h)]						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	7320.78	7760.12	8213.32	8414.98	8559.17
B	Addition due to ACE	439.34	453.20	201.66	144.19	0.00
C	Closing Equity (A+B)	7760.12	8213.32	8414.98	8559.17	8559.17
D	Average Equity (A+B)/2	7540.45	7986.72	8314.15	8487.08	8559.17
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	1478.68	1573.78	1638.30	1672.38	1691.12



(₹ in lakh)

Asset-2					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	21259.56	22452.71	24872.66	25196.54
B	Addition due to ACE	1193.15	2419.95	323.89	9.36
C	Closing Equity (A+B)	22452.71	24872.66	25196.54	25205.90
D	Average Equity (A+B)/2	21856.13	23662.68	25034.60	25201.22
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	4271.45	4662.73	4933.07	4979.26

(₹ in lakh)

Asset-3					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	937.13	1031.71	1138.11	1138.11
B	Addition due to ACE	94.58	106.40	0.00	0.00
C	Closing Equity (A+B)	1031.71	1138.11	1138.11	1138.11
D	Average Equity (A+B)/2	984.42	1084.91	1138.11	1138.11
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	192.39	213.78	224.26	224.87

(₹ in lakh)

Asset-4						
	Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	1186.39	1276.52	1976.53	2143.78	2265.30
B	Addition due to ACE	90.13	700.01	167.26	121.52	102.25
C	Closing Equity (A+B)	1276.52	1976.53	2143.78	2265.30	2367.55
D	Average Equity (A+B)/2	1231.45	1626.52	2060.15	2204.54	2316.42
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758

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Asset-4						
	Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
H	Return on Equity (Pre-tax)	98.58	320.51	405.95	434.40	457.68

(₹ in lakh)

Asset-5						
	Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	975.07	1041.61	1490.66	1625.76	1747.28
B	Addition due to ACE	66.54	449.05	135.10	121.52	71.25
C	Closing Equity (A+B)	1041.61	1490.66	1625.76	1747.28	1818.53
D	Average Equity (A+B)/2	1008.34	1266.13	1558.21	1686.52	1782.90
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	131.64	249.49	307.04	332.33	352.27

(₹ in lakh)

Asset-6					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	1259.57	1658.68	1816.57	1992.17
B	Addition due to ACE	399.11	157.89	175.60	188.47
C	Closing Equity (A+B)	1658.68	1816.57	1992.17	2180.64
D	Average Equity (A+B)/2	1459.13	1737.63	1904.37	2086.41
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	285.16	342.40	375.26	412.23

(₹ in lakh)

Asset-7					
	Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
A	Opening Equity	1055.22	1401.02	1558.91	1734.51

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Asset-7					
	Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
B	Addition due to ACE	345.80	157.89	175.60	68.54
C	Closing Equity (A+B)	1401.02	1558.91	1734.51	1803.05
D	Average Equity (A+B)/2	1228.12	1479.97	1646.71	1768.78
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	220.18	291.63	324.48	349.48

(₹ in lakh)

Asset-8						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	639.60	841.98	950.05	986.47	1091.04
B	Addition due to ACE	202.39	108.07	36.42	104.57	45.08
C	Closing Equity (A+B)	841.98	950.05	986.47	1091.04	1136.12
D	Average Equity (A+B)/2	740.79	896.02	968.26	1038.75	1113.58
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	97.11	176.56	190.80	204.69	220.02

(₹ in lakh)

Asset-9						
	Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	704.63	854.79	974.66	1011.08	1115.64
B	Addition due to ACE	150.16	119.87	36.42	104.57	45.08
C	Closing Equity (A+B)	854.79	974.66	1011.08	1115.64	1160.72
D	Average Equity (A+B)/2	779.71	914.72	992.87	1063.36	1138.18
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758



Asset-9						
	Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
H	Return on Equity (Pre-tax)	77.50	180.25	195.64	209.54	224.88

(₹ in lakh)

Asset-10					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	914.31	1093.32	1122.11	1348.21
B	Addition due to ACE	179.01	28.79	226.10	45.08
C	Closing Equity (A+B)	1093.32	1122.11	1348.21	1393.29
D	Average Equity (A+B)/2	1003.81	1107.71	1235.16	1370.75
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705
H	Return on Equity (Pre-tax)	196.18	218.27	243.39	270.83

(₹ in lakh)

Asset-11						
	Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	857.08	929.51	1209.07	1256.91	1297.40
B	Addition due to ACE	72.43	279.56	47.84	40.49	0.00
C	Closing Equity (A+B)	929.51	1209.07	1256.91	1297.40	1297.40
D	Average Equity(A+B)/2	893.29	1069.29	1232.99	1277.15	1297.40
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	117.10	210.70	242.96	251.66	256.34



(₹ in lakh)

Asset-12					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Opening Equity	16500.07	17294.68	18031.01	18228.63
B	Addition due to ACE	794.61	736.33	197.62	64.39
C	Closing Equity (A+B)	17294.68	18031.01	18228.63	18293.02
D	Average Equity (A+B)/2	16897.38	17662.85	18129.82	18260.82
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705
H	Return on Equity (Pre-tax)	591.33	3480.46	3572.48	3607.97

(₹ in lakh)

Asset-13					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	796.54	1076.06	1104.85	1247.60
B	Addition due to ACE	279.52	28.79	142.75	45.08
C	Closing Equity (A+B)	1076.06	1104.85	1247.60	1292.68
D	Average Equity (A+B)/2	936.30	1090.45	1176.22	1270.14
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	182.99	214.87	231.77	250.95

(₹ in lakh)

Asset-14					
	Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
A	Opening Equity	1225.67	1413.98	1589.78	1765.38
B	Addition due to ACE	188.31	175.80	175.60	68.54
C	Closing Equity (A+B)	1413.98	1589.78	1765.38	1833.92
D	Average Equity (A+B)/2	1319.82	1501.88	1677.58	1799.65
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705
H	Return on Equity (Pre-tax)	46.19	295.95	330.57	355.57



(₹ in lakh)

Asset-15					
	Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
A	Opening Equity	1033.33	1372.12	1530.01	1705.61
B	Addition due to ACE	338.79	157.89	175.60	68.54
C	Closing Equity (A+B)	1372.12	1530.01	1705.61	1774.14
D	Average Equity (A+B)/2	1202.72	1451.06	1617.81	1739.88
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705
H	Return on Equity (Pre-tax)	235.05	285.93	318.79	343.76

(₹ in lakh)

Asset-16						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	963.29	1178.98	1219.85	1226.01	1233.79
B	Addition due to ACE	215.69	40.87	6.16	7.78	0.00
C	Closing Equity (A+B)	1178.98	1219.85	1226.01	1233.79	1233.79
D	Average Equity (A+B)/2	1071.14	1199.41	1222.93	1229.90	1233.79
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (Pre-tax)	210.05	236.34	240.98	242.35	243.77

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

65. O&M Expenses claimed by the Petitioner are as follows:

(₹ in lakh)

Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-1 [Asset-1(a) - Asset-1(h)]					
Transmission lines:					
(i) LILO of 400 kV S/C Meramundali-Jeypore line at Angul(0.326 km)	700.82	724.10	748.15	773.00	798.59
(ii) LILO of 400 kV S/C Meramundali-Jeypore at Angul (8.130 km)					
(iii) LILO-III of 400 kV D/C Rourkela-Raigarh Transmission Line at Jharsuguda (22.378 km)					



(iv) LILO-I of 400 kV D/C Rourkela-Raigarh Transmission Line at Jharsuguda (22.378 km) Sub-station: 1 No. 400 kV Meramundali bay, 1 No. 400 kV Jeypore bay, 1 Number 400 kV each Bus Reactor-I, II, III bay at Angul Sub-station, 1 Number 400 kV Rourkela-I & II bay, 1 Number 400 kV Raigarh-I & II bay, 1 Number 400 kV each Bus Reactor-I & II bay at Sundergarh.					
Asset-2 (i) 765 kV S/C Angula-Sundergarh line (196.080 km), 765 kV D/C Angul-Sundergarh line (78.270 km), 2 Numbers of 765 kV line bays, 1 Number of 765 kV, 240 MVAR SLR bay at Angul	0.00	466.62	485.90	502.16	518.80
Asset-3 1 Number 765 kV Line Reator 9 Charged as Bus Reactor) bay	0.00	86.51	90.12	93.11	96.20
Asset-4 1 Number 765 kV ICT-1 bay at Jharsuguda, 1 Number 400 kV ICT-1 bay at Jharsuguda.	59.08	149.52	154.49	159.62	164.91
Asset-5 1 Number 765 kV ICT-II bay at Jharsuguda, 1 Number 400 kV ICT-II bay at Jharsuguda.	96.34	149.52	154.49	159.62	164.91
Asset-6 1 Number 765 kV ICT-1 bay at Angul, 1 Number 400 kV ICT-1 bay at Angul.	0.00	148.30	154.99	159.62	164.91
Asset-7 1 Number 765 kV ICT-2 bay at Angul, 1 Number 400 kV ICT-2 bay at Angul.	0.00	136.04	154.49	159.62	164.91
Asset-8: 01 number (3X80) MVAR Bus Reactor (1st) and its bay at Sundargarh	132.89	137.31	141.87	146.58	151.44
Asset-9: 01 number (3X80) MVAR Bus Reactor (2nd) and its bay at Sundargarh	42.79	87.22	90.12	93.11	96.20
Asset-10: 01 number (3X110) MVAR Reactor (1st) along with 1 number 110 MVAR spare reactor at Angul.	0.00	86.51	90.12	93.11	96.20
Asset-11: 02 Numbers 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjayagarh Transmission Line.	112.87	174.44	180.24	186.22	192.40
Asset-12: 765 kV S/C Angul-Sundargarh (line-I) transmission line and its bays and with 1 number (3X80) MVAR line reactor & 1 number 80 MVAR spare reactor each at Angul & Sundargarh	0.00	67.92	395.00	408.21	421.72
Asset-13: 01 number (3X110) MVAR Bus Reactor (2nd) and associated bay at Angul.	0.00	86.51	90.12	93.11	96.20
Asset-14: 01 number (3X500) MVA Transformer (3rd) Transformer and associated bay at Angul	0.00	26.55	154.49	159.62	164.91



Asset-15: 01 number (3X500) MVA Transformer (4th) Transformer and associated bay at Angul	0.00	148.30	154.49	159.62	164.91
Asset-16: LILO of one Ckt of Talcher – Meramundali 400 kV D/C line at Angul Sub-station	132.89	137.31	141.87	146.58	151.44

66. The Petitioner in the instant petition has submitted that in Petition No. 246/TT/2014, it has inadvertently missed to claim O&M Expenses for one 765 kV bay corresponding to 240 MVAR line reactor (Switchable) at Angul with respect to Asset-2 and Asset-12. Further, the Petitioner, in the instant petition has claimed the D/C portion of the transmission line which is common to Asset-2 and Asset-12, as part of Asset-2.

67. We have considered the details of O&M Expenses claimed by the Petitioner for the transmission assets and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for the purpose of tariff and the same are as follows:

(₹ in lakh)

Combined Asset 1 [Asset-1(a)- Asset-1 (h)]					
Transmission Line					
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length km	
1	LILO of 400 kV S/C Meramundali-Jeypore at Angul	Single Circuit	2	0.326	
2	LILO of 400 kV S/C Meramundali-Jeypore at Angul	Double Circuit	2	8.130	
3	LILO-III of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double Circuit	2	22.378	
4	LILO-I of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double Circuit	2	22.378	
Particulars					
Transmission lines (km)	2014-15	2015-16	2016-17	2017-18	2018-19
Single circuit with twin conductor (km)	0.326	0.326	0.326	0.326	0.326
Double circuit with twin conductor (km)	52.886	52.886	52.886	52.886	52.886
Norm (₹ lakh/km)					



Single Circuit (Bundled conductor with four or more sub-conductors)	0.40	0.42	0.43	0.45	0.46
Double Circuit (Bundled conductor with four or more sub-conductors)	0.71	0.73	0.76	0.78	0.81
Total Transmission Line O&M Expenses (A)	37.52	38.80	40.07	41.40	42.78
Sub-station					
Sl. No.	400 kV Sub-station bay				
1	Angul:Meramundali Bay				
2	Angul:Jeypore Bay				
3	Angul:Bus Reactor-I Bay				
4	Angul:Bus Reactor-II Bay				
5	Angul:Bus Reactor-III Bay				
6	Jharsuguda/Sundargarh:400 kV Rourkela -I Bay				
7	Jharsuguda/Sundargarh:400 kV Raigarh -I Bay				
8	Jharsuguda/Sundargarh:400 kV Raigarh -II Bay				
9	Jharsuguda/Sundargarh:400 kV Rourekla -II Bay				
10	Jharsuguda/Sundargarh:Bus Reactor-I Bay				
11	Jharsuguda/Sundargarh:Bus Reactor-II Bay				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
400 kV	11	11	11	11	11
Norms (₹ lakh/bay)					
400 kV Sub-station	60.30	62.30	64.37	66.51	68.71
Total Sub-station O&M Expenses (B)	663.30	685.30	708.07	731.61	755.81
Total O&M Expenses Calculated C= (A)+(B)	700.82	724.10	748.14	773.01	798.59
O&M Expenses claimed	700.82	724.10	748.15	773.00	798.59
O&M Expenses Allowed	700.82	724.10	748.14	773.01	798.59

(₹ in lakh)

Asset - 2					
Transmission Lines					
Srl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length km	
1	Angul Sundergrah Line	Single circuit	4	196.080	
2	Angul Sundergrah Line	Double circuit	4	78.270	
Particulars					
		2015-16	2016-17	2017-18	2018-19
Transmission lines (km)					
Single circuit with four sub-conductors (km)		196.080	196.080	196.080	196.080



Double circuit with four sub-conductors (km)	78.27	78.27	78.27	78.27
Norm (₹ lakh/km)				
Single Circuit (Bundled conductor with four or more sub-conductors)	0.63	0.65	0.67	0.69
Double Circuit (Bundled conductor with four or more sub-conductors)	1.097	1.133	1.171	1.210
Total Transmission Line O&M Expenses(A)	208.80	215.54	222.83	230.20
Sub-station				
Sl. No.	765 kV Sub-station bay			
1	Angul:Angul Sundergrah Line-II Bay			
2	Jharsuguda/Sundargarh:Angul Sundergrah Line-II Bay			
3	Angul:240 MVAR Switchable Line Reactor For Line-II			
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
765 kV	2	2	2	2
Norms (₹ lakh/bay)				
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses (B)	261.66	270.36	279.33	288.60
Total O&M Expenses Calculated C= (A)+(B)	466.61	485.90	502.16	518.80
O&M Expenses Claimed	466.62	485.90	502.16	518.80
O&M Expenses Allowed	466.61	485.90	502.16	518.80

(₹ in lakh)

Asset-3				
Sub-station				
Sl. No.	765 kV Sub-station bay			
1	Jharsuguda/Sundargarh:3X80 MVAR Line Reactor (Charged As Bus Reactor) For Line-II			
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
765 kV	1	1	1	1
Norms (₹ lakh/bay)				
765 kV Sub-station	87.22	90.12	93.11	96.20



Total Sub-station O&M Expenses	87.22	90.12	93.11	96.20
Total O&M Expenses calculated	86.51	90.12	93.11	96.20
O&M Expenses claimed	86.51	90.12	93.11	96.20
O&M Expenses Allowed	86.51	90.12	93.11	96.20

(₹ in lakh)

Asset-4					
Sub-station					
Sl. No.	400 kV Substation bay				
1	Jharsuguda/Sundargarh:ICT-I at Sundargarh 400 kV Bay				
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:ICT-I at Sundargarh 765 kV Bay				
Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
400 kV	1	1	1	1	1
765 kV	1	1	1	1	1
Norms (₹ lakh/bay)					
400 kV Sub-station	60.30	62.30	64.37	66.51	68.71
765 kV Sub-station	84.42	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	144.72	149.52	154.49	159.62	164.91
Total O&M Expenses	59.08	149.52	154.49	159.62	164.91
O&M Expenses claimed	59.08	149.52	154.49	159.62	164.91
O&M Expenses Allowed	59.08	149.52	154.49	159.62	164.91

(₹ in lakh)

Asset - 5					
Sub-station					
Sl. No.	400 kV Sub-station bay				
1	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 400 kV Bay				
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 765 kV Bay				
Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					



400 kV	1	1	1	1	1
765 kV	1	1	1	1	1
Norms (₹ lakh/bay)					
400 kV Sub-station	60.30	62.30	64.37	66.51	68.71
765 kV Sub-station	84.42	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	144.72	149.52	154.49	159.62	164.91
Total O&M Expenses calculated	96.35	149.52	154.49	159.62	164.91
O&M Expenses claimed	96.34	149.52	154.49	159.62	164.91
O&M Expenses allowed	96.34	149.52	154.49	159.62	164.91

(₹ in lakh)

Asset - 6				
Sub-station				
Sl. No.	400 kV Sub-station bay			
1	Angul:3X500 MVA ICT-I Angul 400 kV Bay			
Sl. No.	765 kV Sub-station bay			
1	Angul:3X500 MVA ICT-I Angul 765 kV Bay			
Particulars	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
400 kV	1	1	1	1
765 kV	1	1	1	1
Norms (₹ lakh/bay)				
400 kV Sub-station	62.30	64.37	66.51	68.71
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	149.52	154.49	159.62	164.91
Total O&M Expenses calculated	148.29	154.49	159.62	164.91
O&M Expenses claimed	148.30	154.49	159.62	164.91
O&M Expenses allowed	148.29	154.49	159.62	164.91

(₹ in lakh)

Asset-7				
Sub-station				
Sl. No.	400 kV Sub-station bay			
1	Angul:3X500 MVA Transformer (2nd) 400 kV Bay			
Sl. No.	765 kV Sub-station bay			
1	Angul:3X500 MVA Transformer (2nd) 765 kV Bay			
Particulars	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
400 kV	1	1	1	1



765 kV	1	1	1	1
Norms (₹ lakh/bay)				
400 kV Sub-station	62.30	64.37	66.51	68.71
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	149.52	154.49	159.62	164.91
Total O&M Expenses calculated	136.04	154.49	159.62	164.91
O&M Expenses claimed	136.04	154.49	159.62	164.91
O&M Expenses allowed	136.04	154.49	159.62	164.91

(₹ in lakh)

Asset-8					
Sub-station					
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:3X80 MVAR Bus Reactor (1st) Bay				
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
765 kV	1	1	1	1	1
Norms (₹ lakh/bay)					
765 kV Sub-station	84.42	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	84.42	87.22	90.12	93.11	96.20
Total O&M Expenses calculated	56.43	87.22	90.12	93.11	96.20
O&M Expenses claimed	56.43	87.22	90.12	93.11	96.20
O&M Expenses allowed	56.43	87.22	90.12	93.11	96.20

(₹ in lakh)

Asset-9					
Sub-station					
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:3X110 MVAR Bus Reactor (02nd) at Jharsuguda				
Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
765 kV	1	1	1	1	1
Norms (₹ lakh/bay)					
765 kV Sub-station	84.42	87.22	90.12	93.11	96.20

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Total Sub-station O&M	84.42	87.22	90.12	93.11	96.20
Total O&M Expenses calculated	42.79	87.22	90.12	93.11	96.20
O&M Expenses claimed	42.79	87.22	90.12	93.11	96.20
O&M Expenses allowed	42.79	87.22	90.12	93.11	96.20

(₹ in lakh)

Asset - 10					
Sub-station					
Srl. No.	765 kV Sub-station bay				
1	Angul:3X110 MVAR Bus Reactor (1st) at Angul				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19	
Sub-station (Number of bays)					
765 kV	1	1	1	1	
Norms (₹ lakh/bay)					
765 kV Sub-station	87.22	90.12	93.11	96.20	
Total Sub-station O&M Expenses	87.22	90.12	93.11	96.20	
Total O&M Expenses calculated	86.51	90.12	93.11	96.20	
O&M Expenses claimed	86.51	90.12	93.11	96.20	
O&M Expenses allowed	86.51	90.12	93.11	96.20	

(₹ in lakh)

Asset - 11					
Sub-station					
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:02 Numbers of 765 kV Bays at Sundergrah-Dharmjaygrah				
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
765 kV	2	2	2	2	2
Norms (₹ lakh/bay)					
765 kV Sub-station	84.42	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	168.84	174.44	180.24	186.22	192.40
Total O&M Expenses calculated	112.87	174.44	180.24	186.22	192.40



O&M Expenses claimed	112.87	174.44	180.24	186.22	192.40
O&M Expenses allowed	112.87	174.44	180.24	186.22	192.40

(₹ in lakh)

Asset - 12					
Transmission Lines					
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length km	
1	Angul Jharsugura Line-I	Single circuit	4	192.650	
Particulars		2015-16	2016-17	2017-18	2018-19
Transmission lines (km)					
Single circuit with four sub-conductors (km)		388.73	388.73	388.73	388.73
Norm (₹ lakh/km)					
Single Circuit (Bundled conductor with four or more sub-conductors)		0.63	0.65	0.67	0.69
Total Transmission Line O&M Expenses (A)		120.79	124.64	128.88	133.12
Sub-station					
Sl. No.	765 kV Sub-station bay				
1	Jharsuguda/Sundargarh:765 kV Line Bay at Jharsuguda				
2	Angul:240 MVAR Switchable Line Reactor at Angul for Line-I				
3	Angul:240 MVAR Switchable Line Reactor at Angul for Line-I				
Particulars		2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
765 kV		3	3	3	3
Norms (₹ lakh/bay)					
765 kV Sub-station		87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses (B)		261.66	270.36	279.33	288.60
Total O&M Expenses calculated C= (A)+(B)		67.92	395.00	408.21	421.72
O&M Expenses claimed		67.92	395.00	408.21	421.72
O&M Expenses Allowed		67.92	395.00	408.21	421.72



(₹ in lakh)

Asset-13				
Sub-station				
Sl. No.	765 kV Sub-station bay			
1	Angul:3X110 MVAR Bus Reactor (02nd) at Angul			
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
765 kV	1	1	1	1
Norms (₹ lakh/bay)				
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	87.22	90.12	93.11	96.20
Total O&M Expenses calculated	86.51	90.12	93.11	96.20
O&M Expenses claimed	86.51	90.12	93.11	96.20
O&M Expenses allowed	86.51	90.12	93.11	96.20

(₹ in lakh)

Asset-14				
Sub-station				
Sl. No.	400 kV Sub-station bay			
1	Angul:1 Number (3X500) MVA Transformer (3rd) 400 kV Bay			
Sl. No.	765 kV Sub-station bay			
1	Angul:1 Number (3X500) MVA Transformer (3rd) 765 kV Bay			
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
400 kV	1	1	1	1
765 kV	1	1	1	1
Norms (₹ lakh/bay)				
400 kV Sub-station	62.30	64.37	66.51	68.71
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	149.52	154.49	159.62	164.91
Total O&M Expenses calculated	26.55	154.49	159.62	164.91
O&M Expenses claimed	26.55	154.49	159.62	164.91
O&M Expenses Allowed	26.55	154.49	159.62	164.91



(₹ in lakh)

Asset-15				
Sub-station				
Sl. No.	400 kV Sub-station bay			
1	Angul:400 kV Bay			
Sl. No.	765 kV Sub-station bay			
1	Angul:765 kV ICT Bay			
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Sub-station (Number of bays)				
400 kV	1	1	1	1
765 kV	1	1	1	1
Norms (₹ lakh/bay)				
400 kV Sub-station	62.30	64.37	66.51	68.71
765 kV Sub-station	87.22	90.12	93.11	96.20
Total Sub-station O&M Expenses	149.52	154.49	159.62	164.91
Total O&M Expenses calculated	148.29	154.49	159.62	164.91
O&M Expenses claimed	148.30	154.49	159.62	164.91
O&M Expenses allowed	148.29	154.49	159.62	164.91

(₹ in lakh)

Asset-16					
Transmission Lines					
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length km	
1	LILO of 400 kV D/C Line Angul	Double circuit	2	17.390	
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission lines (km)					
Double circuit with Two conductors (km)	17.390	17.390	17.390	17.390	17.390
Norm (₹ lakh/km)					
Double Circuit (Twin & Triple Conductor)	0.71	0.73	0.76	0.78	0.81
Total Transmission Line O&M Expenses (A)	12.29	12.71	13.13	13.56	14.02
Sub-station					



Sl. No.	400 kV Sub-station bay				
1	Angul:400 kV Line Bays for LILO Line				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station (Number of bays)					
400 kV	2	2	2	2	2
Norms (₹ lakh/bay)					
400 kV Sub-station	60.30	62.30	64.37	66.51	68.71
Total Sub-station O&M Expenses (B)	120.60	124.60	128.74	133.02	137.42
Total O&M Expenses calculated C= (A)+(B)	132.89	137.31	141.87	146.58	151.44
O&M Expenses claimed	132.89	137.31	141.87	146.58	151.44
O&M Expenses allowed	132.89	137.31	141.87	146.58	151.44

Interest on Working Capital (“IWC”)

68. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:

i. Working capital for Maintenance Spares :

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

ii. Working capital for O & M Expenses :

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

iii. Working capital for Receivables:

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

iv. Rate of interest on working capital :

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

69. The trued-up IWC allowed for the transmission assets is as follows:



(₹ in lakh)

Combined Asset 1 [Asset-1(a)- Asset 1 (h)]					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	58.40	60.34	62.34	64.42	66.55
Working Capital for Maintenance Spares (15% for O&M Expenses)	105.12	108.61	112.22	115.95	119.79
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	768.31	801.52	820.12	822.93	818.70
Total Working Capital	931.83	970.48	994.69	1003.30	1005.03
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	125.80	131.01	134.28	135.44	135.68

(₹ in lakh)

Asset-2				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	39.21	40.49	41.85	43.23
Working Capital for Maintenance Spares (15% for O&M Expenses)	70.57	72.89	75.32	77.82
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	2227.76	2337.63	2394.33	2348.03
Total Working Capital	2337.53	2451.00	2511.51	2469.08
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	312.98	330.89	339.05	333.33

(₹ in lakh)

Asset-3				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	7.27	7.51	7.76	8.02
Working Capital for Maintenance Spares (15% for O&M Expenses)	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to	110.26	117.78	120.29	117.99



Asset-3				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
two months of annual transmission charges)				
Total Working Capital	130.61	138.81	142.01	140.44
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	17.49	18.74	19.17	18.96

(₹ in lakh)

Asset-4					
Particulars	2014-15 Pro-rata for 149 days	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	12.06	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	21.71	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	144.96	182.02	219.91	228.10	233.98
Total Working Capital	178.72	216.91	255.96	265.34	272.46
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	9.85	29.28	34.55	35.82	36.78

(₹ in lakh)

Asset-5					
Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	12.06	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	21.71	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	123.18	146.59	171.86	180.63	186.45
Total Working Capital	156.95	181.48	207.91	217.87	224.92
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	14.11	24.50	28.07	29.41	30.36



(₹ in lakh)

Asset-6				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	168.13	191.17	202.22	215.36
Total Working Capital	203.02	227.22	239.46	253.84
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	27.18	30.67	32.33	34.27

(₹ in lakh)

Asset-7				
Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	145.04	166.71	179.26	187.47
Total Working Capital	179.93	202.76	216.50	225.95
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	22.10	27.37	29.23	30.50

(₹ in lakh)

Asset-8					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	7.04	7.27	7.51	7.76	8.02
Working Capital for Maintenance Spares (15% for O&M Expenses)	12.66	13.08	13.52	13.97	14.43

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Working Capital for Receivables (Equivalent to two months of annual transmission charges)	87.22	101.15	106.32	110.60	115.46
Total Working Capital	106.92	121.51	127.35	132.33	137.91
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	9.65	16.40	17.19	17.86	18.62

(₹ in lakh)

Asset-9					
Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	7.04	7.27	7.51	7.76	8.02
Working Capital for Maintenance Spares (15% for O&M Expenses)	12.66	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	90.63	102.71	108.22	112.34	117.24
Total Working Capital	110.33	123.07	129.25	134.07	139.69
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	7.55	16.61	17.45	18.10	18.86

(₹ in lakh)

Asset-10				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	7.33	7.51	7.76	8.02
Working Capital for Maintenance Spares (15% for O&M Expenses)	13.19	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	113.74	121.44	130.52	140.60
Total Working Capital	134.26	142.47	152.25	163.05
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	17.98	19.23	20.55	22.01



(₹ in lakh)

Asset-11					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	14.07	14.54	15.02	15.52	16.03
Working Capital for Maintenance Spares (15% for O&M Expenses)	25.33	26.17	27.04	27.93	28.86
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	115.91	131.84	145.70	147.77	147.74
Total Working Capital	155.30	172.54	187.76	191.23	192.63
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	14.02	23.29	25.35	25.82	26.00

(₹ in lakh)

Asset-12				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	31.87	32.92	34.02	35.14
Working Capital for Maintenance Spares (15% for O&M Expenses)	57.37	59.25	61.23	63.26
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	1730.00	1776.24	1771.59	1739.63
Total Working Capital	1819.24	1868.41	1866.84	1838.03
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	43.62	252.24	252.02	248.13

(₹ in lakh)

Asset-13				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	7.27	7.51	7.76	8.02
Working Capital for Maintenance Spares (15% for O&M Expenses)	13.08	13.52	13.97	14.43



Asset-13				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for Receivables (Equivalent to two months of transmission charges)	105.05	117.94	123.44	129.93
Total Working Capital	125.40	138.97	145.17	152.38
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	16.79	18.76	19.60	20.57

(₹ in lakh)

Asset-14				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	156.06	171.93	184.97	193.12
Total Working Capital	190.95	207.98	222.22	231.60
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
Interest of Working Capital	4.58	28.08	30.00	31.27

(₹ in lakh)

Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for onemonth)	12.46	12.87	13.30	13.74
Working Capital for Maintenance Spares (15% for O&M Expenses)	22.43	23.17	23.94	24.74
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	143.28	164.44	176.93	185.33
Total Working Capital	178.17	200.48	214.17	223.81
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50

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Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Interest of Working Capital	23.86	27.07	28.91	30.21

(₹ in lakh)

Asset-16					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	11.07	11.44	11.82	12.22	12.62
Working Capital for Maintenance Spares (15% for O&M Expenses)	19.93	20.60	21.28	21.99	22.72
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	124.09	134.95	134.98	133.31	131.44
Total Working Capital	155.09	166.99	168.08	167.51	166.77
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	20.94	22.54	22.69	22.61	22.51

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

Combined Asset 1 [Asset-1(a)- Asset 1(h)]					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1026.85	1098.93	1147.21	1172.79	1183.52
Interest on Loan	1277.68	1281.32	1252.78	1183.94	1103.27
Return on Equity	1478.68	1573.78	1638.30	1672.38	1691.12
O&M Expenses	700.82	724.10	748.14	773.01	798.59
Interest on Working Capital	125.80	131.01	134.28	135.44	135.68
Total	4609.83	4809.14	4920.71	4937.56	4912.18

(₹ in lakh)

Asset-2				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	3815.15	4164.63	4406.09	4435.41
Interest on Loan	4390.79	4381.60	4185.63	3821.37
Return on Equity	4271.45	4662.73	4933.07	4979.26
O&M Expenses	466.61	485.90	502.16	518.80
Interest on Working Capital	312.98	330.89	339.05	333.33
Total	13256.98	14025.75	14366.00	14088.17



(₹ in lakh)

Asset-3				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	171.84	190.94	200.31	200.31
Interest on Loan	187.91	193.09	184.86	167.62
Return on Equity	192.39	213.78	224.26	224.87
O&M Expenses	86.51	90.12	93.11	96.20
Interest on Working Capital	17.49	18.74	19.17	18.96
Total	656.14	706.67	721.71	707.96

(₹ in lakh)

Asset-4					
Particulars	2014-15 Pro-rata For 149 days	2015-16	2016-17	2017-18	2018-19
Depreciation	88.48	286.27	362.59	388.00	407.69
Interest on Loan	99.06	306.53	361.90	350.76	336.85
Return on Equity	98.58	320.51	405.95	434.40	457.68
O&M Expenses	59.08	149.52	154.49	159.62	164.91
Interest on Working Capital	9.85	29.28	34.55	35.82	36.78
Total	355.04	1092.11	1319.48	1368.60	1403.91

(₹ in lakh)

Asset-5					
Particulars	2014-15 Pro-rata for 243 days	2015-16	2016-17	2017-18	2018-19
Depreciation	118.15	222.84	274.24	296.83	313.79
Interest on Loan	131.81	233.22	267.34	265.59	257.34
Return on Equity	131.64	249.49	307.04	332.33	352.27
O&M Expenses	96.35	149.52	154.49	159.62	164.91
Interest on Working Capital	14.11	24.50	28.07	29.41	30.36
Total	492.06	879.57	1031.18	1083.78	1118.67

(₹ in lakh)

Asset-6				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	254.70	305.82	335.17	367.21
Interest on Loan	285.17	313.65	310.92	313.52
Return on Equity	285.16	342.40	375.26	412.23
O&M Expenses	148.29	154.49	159.62	164.91
Interest on Working Capital	27.18	30.67	32.33	34.27
Total	1000.50	1147.03	1213.30	1292.14



(₹ in lakh)

Asset-7				
Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
Depreciation	196.66	260.48	289.82	311.31
Interest on Loan	216.79	266.28	272.38	268.63
Return on Equity	220.18	291.63	324.48	349.48
O&M Expenses	136.04	154.49	159.62	164.91
Interest on Working Capital	22.10	27.37	29.23	30.50
Total	791.77	1000.25	1075.53	1124.83

(₹ in lakh)

Asset-8					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Depreciation	87.16	157.70	170.41	182.82	195.99
Interest on Loan	99.49	169.04	169.42	165.15	161.95
Return on Equity	97.11	176.56	190.80	204.69	220.02
O&M Expenses	56.43	87.22	90.12	93.11	96.20
Interest on Working Capital	9.65	16.40	17.19	17.86	18.62
Total	349.84	606.92	637.94	663.63	692.78

(₹ in lakh)

Asset-9					
Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
Depreciation	69.55	160.99	174.74	187.15	200.32
Interest on Loan	78.24	171.22	171.36	166.17	163.18
Return on Equity	77.50	180.25	195.64	209.54	224.88
O&M Expenses	42.79	87.22	90.12	93.11	96.20
Interest on Working Capital	7.55	16.61	17.45	18.10	18.86
Total	275.63	616.29	649.31	674.07	703.44

(₹ in lakh)

Asset-10				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	175.22	194.96	217.39	241.25
Interest on Loan	200.94	206.06	208.71	213.33
Return on Equity	196.18	218.27	243.39	270.83
O&M Expenses	86.51	90.12	93.11	96.20
Interest on Working Capital	17.98	19.23	20.55	22.01
Total	676.83	728.64	783.15	843.62

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(₹ in lakh)

Asset-11					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
Depreciation	105.10	188.20	217.01	224.78	228.34
Interest on Loan	115.82	194.41	208.65	198.17	183.32
Return on Equity	117.10	210.70	242.96	251.66	256.34
O&M Expenses	112.87	174.44	180.24	186.22	192.40
Interest on Working Capital	14.02	23.29	25.35	25.82	26.00
Total	464.91	791.04	874.21	886.65	886.4

(₹ in lakh)

Asset-12				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Depreciation	528.16	3108.66	3190.85	3213.91
Interest on Loan	612.42	3421.08	3205.96	2946.03
Return on Equity	591.33	3480.46	3572.48	3607.97
O&M Expenses	67.92	395.00	408.21	421.72
Interest on Working Capital	43.62	252.24	252.02	248.13
Total	1843.45	10657.44	10629.52	10437.76

(₹ in lakh)

Asset-13				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	163.44	191.92	207.02	223.55
Interest on Loan	175.43	191.96	189.14	188.34
Return on Equity	182.99	214.87	231.77	250.95
O&M Expenses	86.51	90.12	93.11	96.20
Interest on Working Capital	16.79	18.76	19.60	20.57
Total	625.16	707.63	740.64	779.61

(₹ in lakh)

Asset-14				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
Depreciation	41.25	264.33	295.26	316.74
Interest on Loan	47.72	288.74	294.40	290.24
Return on Equity	46.19	295.95	330.57	355.57
O&M Expenses	26.55	154.49	159.62	164.91
Interest on Working Capital	4.58	28.08	30.00	31.27
Total	166.29	1031.59	1109.85	1158.73



(₹ in lakh)

Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
Depreciation	209.94	255.39	284.73	306.22
Interest on Loan	235.49	263.74	269.49	266.89
Return on Equity	235.05	285.93	318.79	343.76
O&M Expenses	148.29	154.49	159.62	164.91
Interest on Working Capital	23.86	27.07	28.91	30.21
Total	852.63	986.62	1061.54	1111.99

(₹ in lakh)

Asset-16					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	188.53	211.10	215.24	216.47	217.15
Interest on Loan	192.11	202.40	189.08	171.84	153.75
Return on Equity	210.05	236.34	240.98	242.35	243.77
O & M Expenses	132.89	137.31	141.87	146.58	151.44
Interest on Working Capital	20.94	22.54	22.69	22.61	22.51
Total	744.52	809.69	809.86	799.85	788.62

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

71. The Petitioner has submitted the tariff forms combining all the assets into single asset, namely, Combined Asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, tariff for the Combined Asset has been worked out for 2019-24 tariff period.

72. The Petitioner has claimed the following transmission charges for the Combined Asset for 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	12496.61	12528.50	12498.15	12485.51	12485.51
Interest on Loan	9510.47	8465.54	7408.95	6424.66	5420.32
Return on Equity	13650.73	13684.76	13684.76	13684.76	13684.76
Interest on Working Capital	812.74	809.37	803.10	798.68	792.63
O&M Expenses	6345.15	6565.72	6797.81	7041.22	7287.28
Total	42815.70	42053.89	41192.77	40434.83	39670.50

73. The Petitioner has claimed the following IWC for the Combined Asset for 2019-24 tariff period:



Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	528.76	547.14	566.48	586.77	607.27
Maintenance Spares	951.77	984.86	1019.67	1056.18	1093.09
Receivables	5264.23	5184.73	5078.56	4985.12	4877.52
Total	6744.76	6716.73	6664.71	6628.07	6577.88
Rate of Interest	12.05%	12.05%	12.05%	12.05%	12.05%
Interest on Working Capital	812.74	809.37	803.10	798.68	792.63

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

74. The Petitioner has claimed E-COD of the Combined Asset as 6.3.2015. Based on the trued-up admitted capital cost and actual COD of all the assets, E-COD has been worked out as follows:

Computation of E-COD					
Assets	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (in %)	No. of Days from last COD	Weighted Days
Combined Asset-1	25.4.2013	28530.72	11.81	1007	118.90
Asset-2	4.4.2015	84019.66	34.77	298	103.62
Asset-3	4.4.2015	3793.70	1.57	298	4.68
Asset-4	3.11.2014	7891.85	3.27	450	14.70
Asset-5	1.8.2014	6061.77	2.51	544	13.65
Asset-6	4.4.2015	7268.87	3.01	298	8.96
Asset-7	4.5.2015	6010.20	2.49	268	6.67
Asset-8	31.7.2014	3787.06	1.57	545	8.54
Asset-9	28.9.2014	3869.09	1.60	486	7.78
Asset-10	4.4.2015	4644.34	1.92	298	5.73
Asset-11	31.7.2014	4324.70	1.79	545	9.75
Asset-12	27.1.2016	60976.77	25.24	0	0.00
Asset-13	4.4.2015	4308.95	1.78	298	5.31
Asset-14	27.1.2016	6113.13	2.53	0	0.00
Asset-15	4.4.2015	5913.83	2.45	298	7.29
Asset-16	1.4.2014	4112.74	1.70	666	11.34
Total		241627.39	100.00		326.93
E-COD (Latest COD – Total weighted Days) 6.3.2015					

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

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

77. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and the irrespective of life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 31 years as follows:

Admitted Capital Cost (Excluding land) as on 31.3.2019				
Particulars	Combined Asset Cost (₹ in lakh) (1)	Life in Years (2)	Weighted Cost (3)=(1) x (2) (₹ in lakh) (3)	Weighted Avg. Life of Asset (in years) (4)=(3)/(1)
Building	1325.96	25	33149.00	
Transmission Line	143640.01	35	5027400.19	
Sub-Station Equipment	87777.68	25	2194442.10	
PLCC	53.39	15	800.85	
IT equipment	286.61	6.67	1910.72	
Total	233083.65		7257702.86	31.14 years, rounded off to 31 years

78. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the Combined Asset is



6.3.2015 and the lapsed life of the project as a whole, works out as four years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E- COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 31 years.

Capital Cost

79. 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 Asset-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 tried 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 Asset-forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Asset-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 asset.

- (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.”

80. The trued-up capital cost as on 31.3.2019 for Combined Assets-1 to Asset-16 has been considered as capital cost as on 31.3.2019 for the Combined Asset. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets are clubbed together and the capital cost has been considered as capital cost for the Combined Asset as on 31.3.2019 as follows:

(₹ in lakh)						
Particulars	Combined Asset 1[Asset-1(a)- Asset 1(h)]	Asset-2	Asset-3	Asset-4	Asset-5	Asset-6
Freehold Land	3951.71	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	1325.96	0.00	0.00	0.00	0.00	0.00
Transmission Line	7299.20	78968.40	0.00	0.00	0.00	0.00
Sub-Station Equipment	11308.43	5051.27	3793.70	7891.85	5897.00	7268.87
PLCC	53.39	0.00	0.00	0.00	0.00	0.00
Leasehold Land	4592.03	0.00	0.00	0.00	0.00	0.00
IT Equipment and Software	0.00	0.00	0.00	0.00	164.77	0.00
Total	28530.72	84019.66	3793.70	7891.85	6061.77	7268.87

(₹ in lakh)						
Particulars	Asset-7	Asset-8	Asset-9	Asset-10	Asset-11	Asset-12
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	54525.26
Sub-Station Equipment	6010.20	3787.06	3869.09	4644.34	4324.70	6451.51
PLCC	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00



IT Equipment and Software	0.00	0.00	0.00	0.00	0.00	0.00
Total	6010.20	3787.06	3869.09	4644.34	4324.70	60976.77

(₹ in lakh)

Particulars	Asset-13	Asset-14	Asset-15	Asset-16	Total Capital Cost as on 31.3.2019
Freehold Land	0.00	0.00	0.00	0.00	3951.71
Building & Other Civil Works	0.00	0.00	0.00	0.00	1325.96
Transmission Line	0.00	0.00	0.00	2847.15	143640.01
Sub-Station Equipment	4308.95	6113.13	5792.00	1265.59	87777.68
PLCC	0.00	0.00	0.00	0.00	53.39
Leasehold Land	0.00	0.00	0.00	0.00	4592.03
IT Equipment and Software	0.00	0.00	121.84	0.00	286.61
Total	4308.95	6113.13	5913.83	4112.74	241627.39

81. The trued-up capital cost of ₹241627.39 lakh for 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

82. As stated earlier in this order, Initial Spares are allowed for 2009-14 and 2014-19 period on the basis of the cost of individual assets. The assets covered in the transmission project are combined during 2019-24 tariff period and, hence, the Initial Spares are allowed on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

83. Accordingly, Initial Spares allowed in 2019-24 tariff period are as follows:



Sub-stations :

Assets	Capital Cost/ Plant & Machinery Cost as on cut-off date (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Norms as per 2009/2014 Tariff Regulations (in %)	Initial Spares allowable as per 2009/2014 Tariff Regulations	Initial Spares Allowed during 2009-14/ 2014-19 period (₹ in lakh)	Initial Spares allowed on Combined Asset (₹ in lakh)
Asset 1(a)	1998.09	31.16	2.50%	50.43	31.16	
Asset 1 (b)	995.34	10.28	2.50%	25.26	10.28	
Asset 1 (c)	993.58	13.64	2.50%	25.13	13.64	
Asset 1 (d)	1005.57	10.28	2.50%	25.52	10.28	
Asset 1(e)	2270.29	29.52	2.50%	57.46	29.52	
asset 1 (f)	1220.32	16.42	2.50%	30.87	16.42	
Asset 1(g)	983.29	13.64	2.50%	24.86	13.64	
Asset 1 (h)	983.29	13.64	2.50%	24.86	13.64	
Asset-2	4377.84	195.76	4.00%	174.25	174.25	
Asset-3	3404.36	0.00	4.00%	141.85	0.00	
Asset-4	6656.32	216.44	4.00%	277.35	216.44	
Asset-5	5098.01	184.66	4.00%	204.72	184.66	
Asset-6	6030.57	0.00	4.00%	251.27	0.00	
Asset-7	5254.49	0.00	4.00%	218.94	0.00	21.51
Asset-8	3077.73	119.58	4.00%	123.26	119.58	
Asset-9	3077.73	119.58	4.00%	123.26	119.58	
Asset-10	4044.31	0.00	4.00%	168.51	0.00	
Asset-11	3918.69	1.75	4.00%	163.21	1.75	
Asset-12	5679.6	207.4	4.00%	228.01	207.4	
Asset-13	3766.78	87.3	4.00%	153.31	87.3	
Asset-14	5406.95	101.56	4.00%	221.06	101.56	
Asset-15	5178.49	101.56	4.00%	211.54	101.56	
Asset-16	1194.41	10.8	4.00%	49.32	10.8	
Total		1484.97		2974.35	1463.46	

*Additional Initial Spares of ₹21.51 lakh (₹1484.97-₹1463.46 lakh) are allowed for Sub-station.



Transmission Line:

Assets	Capital Cost/ P&M Cost as on cut-off date (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Norms as per 2009/ 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2009/2014 Tariff Regulations	Initial Spares Allowed during 2009-14/ 2014-19 period (₹ in lakh)	Initial Spares allowed on Combined Asset (₹ in lakh)
Asset 1(a)	1313.73	8.32	0.75%	9.86	8.32	4.25
Asset 1(e)	2576.76	20.96	0.75%	19.31	19.31	
Asset 1 (f)	2345.17	20.18	0.75%	17.57	17.57	
Asset-2	68793.09	475.2	1.00%	690.08	475.21	
Asset-12	43481.3	402	1.00%	435.14	402	
Asset-16	2626.13	20.78	1.00%	26.32	20.78	
Total		947.44		1198.28	943.19	

*Additional Initial Spares of ₹4.25 lakh (₹947.44-₹943.19) lakh are allowed for the Transmission Line.

84. Accordingly, the capital cost allowed as on 1.4.2019 is as follows:

(₹ in lakh)		
Capital Cost as on 31.3.2019	Initial Spares allowed as per APTEL's Judgement	Capital Cost as on 1.4.2019
241627.39	25.76	241653.14

Additional Capital Expenditure ("ACE")

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

"24. Additional Capitalization within the original scope and up to the cut-off date:

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

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

(b) Works deferred for execution;

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

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

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



(f) *Force Majeure events:*

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

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

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

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

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

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

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”*

86. The Petitioner has claimed projected ACE for 2019-24 period on account of liability for works executed prior to the cut-off date. The details of the projected ACE in respect of Asset-12 to Asset-15 are as follows:



(₹ in lakh)

Assets	ACE (As per Auditor's Certificate)
	2019-20
Asset-12	691.32
Asset-13	86.70
Asset-14	317.88
Asset-15	112.14

87. We have considered the submissions of the Petitioner. ACE claimed is allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations. ACE allowed is as follows:

(₹ in lakh)

Assets	Regulations	ACE (As per Auditor's Certificate)
		2019-20
Asset-12 to Asset-15 (Now part of Combined Asset)	Regulation 25(1)(d) of the 2019 Tariff Regulations	1208.04
	Total	1208.04

Capital Cost considered for 2019-24 tariff period

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

(₹ in lakh)

Assets	Capital Cost as on 1.4.2019	Admitted ACE	Capital Cost as on 31.3.2024
		2019-20	
Combined Asset	241653.14	1208.04	242861.18

Debt-Equity Ratio

89. Regulations 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.”



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

Funding of Combined Asset	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	169157.20	70.00	170002.83	70.00
Equity	72495.94	30.00	72858.36	30.00
Total	241653.14	100.00	242861.18	100.00

Depreciation

91. Regulation 33 of the 2019 Tariff Regulations provide as follows:

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

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

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

(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 Asset-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 asset.

(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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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.”

92. We have considered the submissions of the Petitioner. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. 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 is as follows:

(₹ in lakh)

Combined Asset						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	241653.14	242861.18	242861.18	242861.18	242861.18
B	Addition during the year 2019-24 due to projected ACE	1208.04	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	242861.18	242861.18	242861.18	242861.18	242861.18
D	Average Gross Block (A+C)/2	242257.16	242861.18	242861.18	242861.18	242861.18
E	Average Gross Block (90% depreciable assets)	238018.85	238622.87	238622.87	238622.87	238622.87
F	Average Gross Block (100% depreciable assets)	286.61	286.61	286.61	286.61	286.61
G	Depreciable value (excluding IT equipment and software) (E*90%)	214216.96	214760.58	214760.58	214760.58	214760.58
H	Depreciable value of IT equipment and software	286.61	286.61	286.61	286.61	286.61
I	Total Depreciable Value (G+H)	214503.57	215047.19	215047.19	215047.19	215047.19
J	Weighted average rate of Depreciation (WAROD) (in %)	5.16	5.16	5.16	5.16	5.16
K	Lapsed useful life at the beginning of the year (Year)	4.00	5.00	6.00	7.00	8.00
L	Balance useful life at the beginning of the year (Year)	27.00	26.00	25.00	24.00	23.00
M	Depreciation during the year (D*J)	12496.14	12528.03	12528.03	12528.03	12528.03
N	Aggregate Cumulative Depreciation at the end of the year	58688.20	71216.23	83744.26	96272.29	108800.32
O	Remaining Aggregate Depreciable Value at the end of the year (I-N)	155815.37	143830.95	131302.92	118774.89	106246.86



Interest on Loan (“IoL”)

93. 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 asset, 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”.*

94. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in



interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period shall be adjusted at the time of true up.

95. BSPHCL has submitted that the 2019 Tariff Regulations do not permit change in interest rate due to floating rate of interest. In response, the Petitioner has submitted that IoL for 2019-24 tariff period has been calculated on the basis of interest rate prevailing as on 1.4.2019 for respective loans and change in interest rates due to floating rate of interest applicable, if any, needs to be adjusted over the tariff period, directly from the beneficiaries.

96. We have considered the submissions of the Petitioner and BSPHCL. 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. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is follows:

(₹ in lakh)						
Combined Asset						
	Particular	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	169157.20	170002.83	170002.83	170002.83	170002.83
B	Cumulative Repayments upto Previous Year	46192.06	58688.20	71216.23	83744.26	96272.29
C	Net Loan-Opening (A-B)	122965.14	111314.63	98786.60	86258.57	73730.54
D	Addition due to ACE	845.63	0.00	0.00	0.00	0.00
E	Repayment during the year	12496.14	12528.03	12528.03	12528.03	12528.03
F	Net Loan-Closing (C+D-E)	111314.63	98786.60	86258.57	73730.54	61202.51
G	Average Loan (C+F)/2	117139.88	105050.61	92522.58	79994.55	67466.52
H	Weighted Average Rate of Interest on Loan (in %)	8.447	8.423	8.420	8.510	8.602
I	Interest on Loan (G*H)	9894.69	8848.73	7790.77	6807.46	5803.61

Return on Equity ("RoE")

97. 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.”

98. The Petitioner has submitted that MAT rate is applicable to it. We have considered the submissions of the Petitioner. MAT rate applicable in 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 under Regulation 30 of the 2019 Tariff Regulations is as follows:

		(₹ in lakh)				
		Combined Asset				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	72495.94	72858.36	72858.36	72858.36	72858.36
B	Addition due to Additional Capitalization	362.41	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	72858.36	72858.36	72858.36	72858.36	72858.36
D	Average Equity (A+C)/2	72677.15	72858.36	72858.36	72858.36	72858.36
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax) (D*G)	13650.22	13684.26	13684.26	13684.26	13684.26

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

99. Regulation 35(3)(a) and Regulation 34(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 combined 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 years.

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

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

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

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

100. O&M Expenses claimed by the Petitioner for the Combined Asset for 2019-24 period are as follows:

(₹ in lakh)				
Combined Asset				
Transmission Lines				
Srl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length Km
1	LILO of 400 kV S/C Meramundali-Jeypore at Angul	Single circuit	2	0.326
2	LILO of 400 kV S/C Meramundali-Jeypore at Angul	Double circuit	2	8.130



3	LILO-III of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double circuit	2		22.378	
4	LILO-I of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double circuit	2		22.378	
5	Angul Sundergrah Line	Single circuit	4		196.080	
6	Angul Sundergrah Line	Double circuit	4		78.270	
7	Angul Jharsugura Line-I	Single circuit	4		192.650	
8	LILO of 400 kV D/C Line Angul	Double circuit	2		17.390	
Particulars						
		2019-20	2020-21	2021-22	2022-23	2023-24
Transmission lines (km)						
Single circuit with Two conductors (km)		0.326	0.326	0.326	0.326	0.326
Double circuit with Two conductors (km)		70.276	70.276	70.276	70.276	70.276
Single circuit with four sub-conductors (km)		388.73	388.73	388.73	388.73	388.73
Double circuit with four sub-conductors (km)		78.27	78.27	78.27	78.27	78.27
Norm (₹ lakh/km)						
Single Circuit (Twin & Triple Conductor)		0.503	0.521	0.539	0.558	0.578
Double Circuit (Twin & Triple Conductor)		0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four or more sub-conductors)		0.755	0.781	0.809	0.837	0.867
Double Circuit (Bundled conductor with four or more sub-conductors)		1.322	1.368	1.416	1.466	1.517
Total Transmission Line O&M Expenses (A)		459.04	474.93	491.82	508.94	527.00
Sub-station						
Sl. No.	400 kV Sub-station bay					
1	Angul:Meramundali Bay					
2	Angul:Jeypore Bay					
3	Angul:Bus Reactor-I Bay					
4	Angul:Bus Reactor-II Bay					
5	Angul:Bus Reactor-III Bay					
6	Jharsuguda/Sundargarh:400 kV Rourkela -I Bay					
7	Jharsuguda/Sundargarh:400 kV Raigarh-I Bay					
8	Jharsuguda/Sundargarh:400 kV Raigarh-II Bay					
9	Jharsuguda/Sundargarh:400 kV Rourekla-II Bay					
10	Jharsuguda/Sundargarh:Bus Reactor-I Bay					
11	Jharsuguda/Sundargarh:Bus Reactor-II Bay					
12	Jharsuguda/Sundargarh:ICT-Iat Sundargarh 400 kV Bay					
13	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 400 kV Bay					
14	Angul:3X500 MVA ICT-I Angul 400 kV Bay					
15	Angul:3X500 MVA Transformer (2nd) 400 kV Bay					



16	Angul:1 Number (3X500) MVA Transformer (3rd) 400 kV Bay				
17	Angul:400 kV Bay				
18	Angul:400 kV Line Bays for LILO Line				
Sl. No.	765 kV Sub-station bay				
1	Angul:Angul Sundergrah Line-II Bay				
2	Jharsuguda/Sundargarh:Angul Sundergrah Line-II Bay				
3	Angul:240 MVAR Switchable Line Reactorfor Line-II				
4	Jharsuguda/Sundargarh:3X80 MVAR Line Reactor (Charged as Bus Reactor) for Line-II				
5	Jharsuguda/Sundargarh:ICT-I at Sundargarh 765 kV Bay				
6	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 765 kV Bay				
7	Angul:3X500 MVA ICT-I Angul 765 kV Bay				
8	Angul:3X500 MVA Transformer (2nd)765 kV Bay				
9	Jharsuguda/Sundargarh:3X80 MVAR Bus Reactor (1st) Bay				
10	Jharsuguda/Sundargarh:3X110 MVAR Bus Reactor (02nd) at Jharsuguda				
11	Angul:3X110 MVAR Bus Reactor (1st) at Angul				
12	Jharsuguda/Sundargarh:02 Numbers of 765 kV Bays at Sundergrah-Dharmjaygrah				
13	Angul:765 kV Line Bay at Angul				
14	Jharsuguda/Sundargarh:765 kV Line Bay at Jharsuguda				
15	Angul:240 MVAR Switchable Line Reactor at Angul for Line-I				
16	Angul:3X110 MVAR Bus Reactor (02nd) at Angul				
17	Angul:1 Number (3X500) MVA Transformer (3rd) 765 kV Bay				
18	Angul:765 kV ICT Bay				
Sl. No.	765 kV Sub-station ICT				
1	Jharsuguda/Sundargarh:Jharsugudha ICT-I				
2	Jharsuguda/Sundargarh:3X 500 MVA ICT -II at Jharsuguda				
3	Angul:3X500 MVA ICT-I Angul				
4	Angul:3X500 MVA ICT-II at Angul				
5	Angul:3X500 MVA ICT (3rd) at Angul				
6	Angul:3X500 MVA ICT-(4th) at Angul				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station (Number of bays)					
400 kV	19	19	19	19	19
765 kV	19	19	19	19	19
765 kV ICT (MVA)	18*500 MVA	18*500 MVA	18*500 MVA	18*500 MVA	18*500 MVA
Norms (₹ lakh/bay)					
400 kV Sub-station	32.15	33.28	34.45	35.66	36.91
765 kV Sub-station	22.51	23.30	24.12	24.96	25.84
765 kV Sub-station ICT	0.358	0.371	0.384	0.398	0.411
Total Sub-station O&M Expenses (B)	5885.04	6089.72	6304.92	6531.21	6759.21
Communication System					
PLCC (₹ in lakh)	53.39	53.39	53.39	53.39	53.39
Norms (in %)	2	2	2	2	2
Total Communication System (C)	1.07	1.07	1.07	1.07	1.07



Total O&M Expenses D=(A)+(B)+(C)	6345.15	6565.72	6797.81	7041.22	7287.28
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101. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and 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 and 2019 Tariff Regulations and the norms for sub-station has 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.

102. O&M Expenses allowed for Combined Asset are as follows:

(₹ in lakh)

Combined Asset Transmission Lines				
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length Km
1	LILO of 400 kV S/C Meramundali-Jeypore At Angul	Single circuit	2	0.326
2	LILO of 400 kV S/C Meramundali-Jeypore At Angul	Double circuit	2	8.130
3	LILO-III of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double circuit	2	22.378
4	LILO-I of 400 kV D/C Rourkela Raigrah Transmission Line at Jharsugura	Double circuit	2	22.378
5	Angul Sundergrah Line	Single circuit	4	196.080
6	Angul Sundergrah Line	Double circuit	4	78.270
7	Angul Jharsugura Line-I	Single circuit	4	192.650
8	LILO of 400 kV D/C Line Angul	Double circuit	2	17.390



Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
Transmission lines (km)						
Single circuit with Two conductors (km)		0.326	0.326	0.326	0.326	0.326
Double circuit with Two conductors (km)		70.276	70.276	70.276	70.276	70.276
Single circuit with four sub-conductors (km)		388.73	388.73	388.73	388.73	388.73
Double circuit with four sub-conductors (km)		78.27	78.27	78.27	78.27	78.27
Norm (₹ lakh/km)						
Single Circuit (Twin & Triple Conductor)		0.503	0.521	0.539	0.558	0.578
Double Circuit (Twin & Triple Conductor)		0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four or more sub-conductors)		0.755	0.781	0.809	0.837	0.867
Double Circuit (Bundled conductor with four or more sub-conductors)		1.322	1.368	1.416	1.466	1.517
Total Transmission Line O&M Expenses (A)		459.04	474.93	491.82	508.94	527.00
Sub-station						
Sl. No.	400 kV Sub-station bay					
1	Angul:Meramundali Bay					
2	Angul:Jeypore Bay					
3	Angul:Bus Reactor-I Bay					
4	Angul:Bus Reactor-II Bay					
5	Angul:Bus Reactor-III Bay					
6	Jharsuguda/Sundargarh:400 kV Rourkela-I Bay					
7	Jharsuguda/Sundargarh:400 kV Raigarh-I Bay					
8	Jharsuguda/Sundargarh:400 kV Raigarh-II Bay					
9	Jharsuguda/Sundargarh:400 kV Rourekla-II Bay					
10	Jharsuguda/Sundargarh:Bus Reactor-I Bay					
11	Jharsuguda/Sundargarh:Bus Reactor-II Bay					
12	Jharsuguda/Sundargarh:ICT-I at Sundargarh 400 kV Bay					
13	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 400 kV Bay					
14	Angul:3X500 MVA ICT-I Angul 400 kV Bay					
15	Angul:3X500 MVA Transformer (2nd) 400 kV Bay					
16	Angul:1 Number (3X500) MVA Transformer (3rd) 400 kV Bay					
17	Angul:400 kV Bay					
18	Angul:400 kV Line Bays for LILO Line					
Sl. No.	765 kV Sub-station bay					
1	Angul:Angul Sundergrah Line-II Bay					
2	Jharsuguda/Sundargarh:Angul Sundergrah Line-II Bay					
3	Angul:240 MVAR Switchable Line Reactor for Line-II					
4	Jharsuguda/Sundargarh:3X80 MVAR Line Reactor (Charged As Bus Reactor) for Line-II					
5	Jharsuguda/Sundargarh:ICT-I at Sundargarh 765 kV Bay					
6	Jharsuguda/Sundargarh:3X500 MVA Tranformer (2nd) 765 kV Bay					
7	Angul:3X500 MVA ICT-I Angul 765 kV Bay					



8	Angul:3X500 MVA Transformer (2nd) 765 kV Bay				
9	Jharsuguda/Sundargarh:3X80 MVAR Bus Reactor (1st) Bay				
10	Jharsuguda/Sundargarh:3X110 MVAR Bus Reactor (02nd) at Jharsuguda				
11	Angul:3X110 MVAR Bus Reactor (1st) at Angul				
12	Jharsuguda/Sundargarh:02 Numbersof 765 kV Bays at Sundergrah-Dharmjaygrah				
13	Angul:765 kV Line Bay at Angul				
14	Jharsuguda/Sundargarh:765 kV Line Bay at Jharsuguda				
15	Angul:240 MVAR Switchable Line Reactor AtAngul for Line-I				
16	Angul:3X110 MVAR Bus Reactor (02nd) at Angul				
17	Angul:1 Number (3X500)MVA Transformer (3rd) 765 kV Bay				
18	Angul:765 kV ICT Bay				
Sl. No.	765 kV Sub-station ICT				
1	Jharsuguda/Sundargarh:Jharsugudha ICT-I				
2	Jharsuguda/Sundargarh:3X 500 MVA ICT -II at Jharsuguda				
3	Angul:3X500 MVA ICT-I Angul				
4	Angul:3X500 MVA ICT-II AT Angul				
5	Angul:3X500 MVA ICT (3rd) at Angul				
6	Angul:3X500 MVA ICT-(4th) at Angul				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station (Number of bays)					
400 kV	19	19	19	19	19
765 kV	19	19	19	19	19
765 kV ICT (18*500 MVA)	18*500 MVA	18500 MVA	18500 MVA	18500 MVA	18500 MVA
Norms (₹ lakh/bay)					
400 kV Sub-station	32.15	33.28	34.45	35.66	36.91
765 kV Sub-station	22.51	23.30	24.12	24.96	25.84
765 kV Sub-station ICT	0.358	0.371	0.384	0.398	0.411
Total Sub-station O&M Expenses (B)	5885.04	6089.72	6304.92	6531.21	6759.21
Total O&M Expenses calculated D= (A)+(B)	6344.08	6564.65	6796.74	7040.15	7286.21
O&M Expenses claimed	6345.15	6565.72	6797.81	7041.22	7287.28
O&M Expenses Allowed	6344.08	6564.65	6796.74	7040.15	7286.21

Interest on Working Capital (“IWC”)

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

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

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

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



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

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

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

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

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

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

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

104. The Petitioner has submitted that it has computed the 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 IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24 onwards. The components of the working capital and interest allowed thereon are as follows:

		(₹ in lakh)				
		Combined Asset				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses	528.67	547.05	566.40	586.68	607.18



	(O&M Expenses for one month)					
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	951.61	984.70	1019.51	1056.02	1092.93
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	5311.92	5225.66	5116.88	5025.21	4917.66
D	Total of Working Capital	6792.20	6757.41	6702.79	6667.91	6617.78
E	Rate of Interest for Working Capital (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest of working capital	818.46	760.21	703.79	700.13	694.87

Annual Fixed Charges for 2019-24 Tariff Period

105. The transmission charges allowed for 2019-24 tariff period are as follows:

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	12496.14	12528.03	12528.03	12528.03	12528.03
Interest on Loan	9894.69	8848.73	7790.77	6807.46	5803.61
Return on Equity	13650.22	13684.26	13684.26	13684.26	13684.26
O&M Expenses	6344.08	6564.65	6796.75	7040.16	7286.21
Interest on Working Capital	818.46	760.21	703.79	700.13	694.87
Total	43203.59	42385.88	41503.60	40760.04	39996.98

Filing Fee and Publication Expenses

106. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses in terms of Regulation 70(1) of the 2019 Tariff Regulations. BSPHCL has submitted that grant of filing fee and expenses incurred are upon the discretion of the Commission and need not necessarily be allowed in all cases. In response, the Petitioner has submitted that it has requested for reimbursement of expenditure by the beneficiaries towards petition filing fee and publication expense, in terms of Regulation 70(1) of the 2019 Tariff Regulations. The Petitioner has further submitted that the Commission vide order dated 28.3.2016 in Petition No.



137/TT/2015 has allowed the recovery of petition filing fee and publication of notices from the beneficiaries on pro rata basis.

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

Licence Fee and RLDC Fees and Charges

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

Goods and Services Tax

109. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. BSPHCL has objected to the prayer of GST contending that the same is premature. In response, the Petitioner reiterated its submission.

110. We have considered the submission of the Petitioner and BSPHCL. GST is not levied on transmission service at present. Therefore, we are of the view that Petitioner's prayer is premature.



Security Expenses

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

112. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

113. 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

114. BSPHCL has submitted that it has been held on different occasions that the present consumers cannot and should not be burdened for the past charges.

115. In response, the Petitioner has submitted that the transmission assets have been executed in 2009-14 and 2014-19 tariff periods and there are no past charges that may lead to burdening of the consumers.



116. The Petitioner has submitted that in case of the Combined Asset-1 [Asset-1(a) to 1(h)] which is covered under Petition No. 263/TT/2017, the transmission charges for 2014-19 period shall be shared as follows:

(a) Petition No. 73/MP/2017 was filed against the sharing of transmission charges as approved by the Commission in order dated 7.10.2015 in Petition No. 112/TT/2013 for assets (08 nos.) associated with Orissa Part-A project for 2009-14 tariff period. Subsequently, the Commission issued order dated 21.2.2018 (alongwith corrigendum dated 15.3.2018) in Petition No. 73/MP/2017, wherein the following mechanism for sharing of transmission charges was approved:

"20. Transmission tariff was approved in Petition No. 112/TT/2013 for the following assets under the Transmission System:-

<i>Assets</i>	<i>Actual COD</i>
<i>Asset I: LILO of Meramundali-Jaypore 400kV S/C line at Angul S/s</i>	<i>1.4.2013</i>
<i>Asset II: One no. of 125 MVAR Reactor (1st) & associated bays at Angul S/s</i>	<i>1.11.2013</i>
<i>Asset III: One no. of 125 MVAR Reactor (2nd) & associated bays at Angul S/s</i>	<i>1.6.2013</i>
<i>Asset IV: One no. of 125 MVAR Reactor (3rd) & associated bays at Angul S/s</i>	<i>1.5.2013</i>
<i>Asset VI: LILO-I (ckt-III) of Rourkela-Raigarh 400kV D/C line at Jharsuguda S/s</i>	<i>1.4.2013</i>
<i>Asset VII: LILO-II (ckt-I) of Rourkela-Raigarh 400kV D/C line at Jharsuguda S/s</i>	<i>1.6.2013</i>
<i>Asset VIII: One no. of 125 MVAR Reactor (1st) & associated bays at Jharsuguda S/s</i>	<i>1.5.2013</i>
<i>Asset IX: One no. of 125 MVAR Reactor (2nd) & associated bays at Jharsuguda S/s</i>	<i>1.6.2013</i>

24.

(c) We are of the view that the transmission tariff in respect of Asset-I, II, III and IV shall be borne by JITPL and GMRKEL till 1.6.2014 and 21.12.2014 in the ratio their operationalized LTA post which their share of transmission charges for Asset-I, II, III and IV shall be completely included in PoC mechanism for sharing of transmission charges.



(d) The charges recovered, if any, from balance generators/defaulting generator connected/to be connected at Angul pooling station till their dedicated line is commissioned shall be adjusted to JITPL & GMRKEL accordingly.

25., both IBEUL and Vedanta Ltd have commissioned their dedicated transmission lines on 12.5.2017 and 6.11.2017 respectively. It can be seen that the connecting 765 kV line i.e. 765kV Jharsuguda-Dharamjaygarh line was commissioned on 31.7.2014. Hence, we are of the view that transmission tariff in respect of Asset-VI, VII, VIII and IX shall be borne by Vedanta and IBEUL in proportion to their LTA till 31.7.2014, post which Asset-VI, VII, VIII and IX shall be included in PoC mechanism for sharing of transmission charge.”

117. We have considered the submissions of the Petitioner and BSPHCL. The transmission charges approved for the transmission in the instant order shall be as follows:

Combined Asset-1 [(Asset- 1(a) to Asset-1(h)]

(a) In view of the decision of the Commission vide order dated 21.2.2018 in Petition No. 73/MP/2017 along with I.A. No. 75, 76, 77 and 78 of 2017 and corrigendum order dated 21.2.2018 in Petition No. 73/MP/2017, Asset-I, II, III and IV shall be borne by JITPL and GMRKEL till 1.6.2014 and 21.12.2014 in the ratio their operationalized LTA post which their share of transmission charges for Asset-I, II, III and IV shall be completely included in PoC pool for sharing of transmission charges.

(b) For assets at Jharsuguda Sub-station (i.e. Asset-1(e) to Asset-1(h)), the sharing of charges for Asset-1(e) to Asset-1(h) at Jharsuguda will be borne by IBEUL and Vedanta (in ratio of their LTA) till 31.7.2014 (execution of 765 kV D/C Jharsududa-Dhramajaygarh line) i.e. from 1.4.2013 to 31.7.2014. Thereafter, the transmission charges shall be included in PoC pool and shall be shared as provided under Regulation 43 of the 2014 Tariff Regulations and recovered as provided in the 2010 Sharing Regulations.



(c) The transmission charges of Asset-2 to Asset-11 and Asset-12 to Asset-16 shall be included in PoC Pool.

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

119. To summarise:

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

(₹ in lakh)

Combined Asset [Asset-1(a)- Asset 1(h)]					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Total	4609.83	4809.14	4920.71	4937.56	4912.18

(₹ in lakh)

Asset-2				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	13256.98	14025.75	14366.00	14088.17



(₹ in lakh)

Asset-3				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	656.14	706.67	721.71	707.96

(₹ in lakh)

Asset-4					
Particulars	2014-15 Pro-rata For 149 days	2015-16	2016-17	2017-18	2018-19
AFC	355.04	1092.11	1319.48	1368.60	1403.91

(₹ in lakh)

Asset-5					
Particulars	2014-15 Pro-rata for 234 days	2015-16	2016-17	2017-18	2018-19
AFC	492.06	879.57	1031.18	1083.78	1118.67

(₹ in lakh)

Asset-6				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	1000.50	1147.03	1213.30	1292.14

(₹ in lakh)

Asset-7				
Particulars	2015-16 Pro-rata for 333 days	2016-17	2017-18	2018-19
AFC	791.77	1000.25	1075.53	1124.83

(₹ in lakh)

Asset-8					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
AFC	349.84	606.92	637.94	663.63	692.78

(₹ in lakh)

Asset-9					
Particulars	2014-15 Pro-rata for 185 days	2015-16	2016-17	2017-18	2018-19
AFC	275.63	616.29	649.31	674.07	703.44

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(₹ in lakh)

Asset-10				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	676.83	728.64	783.15	843.62

(₹ in lakh)

Asset-11					
Particulars	2014-15 Pro-rata for 244 days	2015-16	2016-17	2017-18	2018-19
AFC	464.91	791.04	874.21	886.65	886.4

(₹ in lakh)

Asset-12				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
AFC	1843.45	10657.44	10629.52	10437.76

(₹ in lakh)

Asset-13				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	625.16	707.63	740.64	779.61

(₹ in lakh)

Asset-14				
Particulars	2015-16 Pro-rata for 65 days	2016-17	2017-18	2018-19
AFC	166.29	1031.59	1109.85	1158.73

(₹ in lakh)

Asset-15				
Particulars	2015-16 Pro-rata for 363 days	2016-17	2017-18	2018-19
AFC	852.63	986.62	1061.54	1111.99

(₹ in lakh)

Asset-16					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	744.52	809.69	809.86	799.85	788.62



(b) AFC allowed for the Combined Asset for 2019-24 tariff period in this order is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Total	43203.59	42385.88	41503.60	40760.04	39996.98

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

121. This order disposes of Petition No. 709/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



2014-19
Combined Asset-1

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	3951.71	0.00	0.00	0.00	0.00	0.00	3951.71	0.00%	0.00	0.00	0.00	0.00	0.00
Building	556.28	0.00	345.66	297.85	126.17	0.00	1325.96	3.34%	18.58	24.35	35.10	42.18	44.29
Transmission Line	6922.99	205.38	112.10	0.00	58.73	0.00	7299.20	5.28%	370.96	379.34	382.30	383.85	385.40
Sub Station	8723.19	1259.08	731.91	374.40	219.85	0.00	11308.43	5.28%	493.82	546.39	575.59	591.28	597.09
PLCC	53.36	0.03	0.00	0.00	0.00	0.00	53.39	6.33%	3.38	3.38	3.38	3.38	3.38
Leasehold Land	4195.08	0.00	321.05	0.00	75.90	0.00	4592.03	3.34%	140.12	145.48	150.84	152.11	153.37
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	24402.61	1464.49	1510.72	672.25	480.65	0.00	28530.72		1026.85	1098.93	1147.21	1172.79	1183.52
Weighted Average Rate of Depreciation (in %)									4.09%	4.13%	4.14%	4.15%	4.15%
Average Gross Block (₹ in lakh)									25134.86	26622.46	27713.95	28290.40	28530.72



2014-19

Asset-2

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	68394.91	2692.70	6769.98	1079.62	31.19	78968.40	5.28%	3682.34	3932.15	4139.38	4168.71
Sub Station	2470.28	1284.48	1296.51	0.00	0.00	5051.27	5.28%	164.34	232.48	266.71	266.71
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	70865.18	3977.18	8066.49	1079.62	31.19	84019.66		3846.68	4164.63	4406.09	4435.41
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								72853.77	78875.61	83448.66	84004.07



2014-19

Asset-3

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	3123.76	315.27	354.67	0.00	0.00	3793.70	5.28%	173.26	190.94	200.31	200.31
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	3123.76	315.27	354.67	0.00	0.00	3793.70		173.26	190.94	200.31	200.31
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								3281.40	3616.37	3793.70	3793.70



2014-19

Annexure-I

Asset-4

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	3954.63	300.42	2333.38	557.52	405.06	340.84	7891.85	5.28%	216.74	286.27	362.59	388.00	407.69
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	3954.63	300.42	2333.38	557.52	405.06	340.84	7891.85		216.74	286.27	362.59	388.00	407.69
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									4104.84	5421.74	6867.19	7348.48	7721.43



2014-19

Annexure-I

Asset-5

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	3085.46	221.80	1496.83	450.34	405.06	237.51	5897.00	5.28%	168.77	214.14	265.54	288.13	305.09
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	164.77	0.00	0.00	0.00	0.00	0.00	164.77	5.28%	8.70	8.70	8.70	8.70	8.70
Total	3250.23	221.80	1496.83	450.34	405.06	237.51	6061.77		177.47	222.84	274.24	296.83	313.79
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									3361.13	4220.45	5194.03	5621.73	5943.02



2014-19
Asset-6

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	4198.60	1330.39	526.31	585.34	628.24	7268.87	5.28%	256.81	305.82	335.17	367.21
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	4198.60	1330.39	526.31	585.34	628.24	7268.87		256.81	305.82	335.17	367.21
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								4863.79	5792.14	6347.96	6954.75



2014-19

Asset-7

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	3517.40	1152.69	526.31	585.34	228.46	6010.20	5.28%	216.15	260.48	289.82	311.31
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	3517.40	1152.69	526.31	585.34	228.46	6010.20		216.15	260.48	289.82	311.31
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								4093.75	4933.25	5489.07	5895.97



2014-19

Annexure-I

Asset-8

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	2131.99	674.62	360.22	121.40	348.56	150.27	3787.06	5.28%	130.38	157.70	170.41	182.82	195.99
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	2131.99	674.62	360.22	121.40	348.56	150.27	3787.06		130.38	157.70	170.41	182.82	195.99
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									2469.30	2986.72	3227.53	3462.51	3711.93



2014-19

Annexure-I

Asset-9

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	2348.77	500.52	399.57	121.40	348.56	150.27	3869.09	5.28%	137.23	160.99	174.74	187.15	200.32
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	2348.77	500.52	399.57	121.40	348.56	150.27	3869.09		137.23	160.99	174.74	187.15	200.32
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									2599.03	3049.08	3309.56	3544.54	3793.96



2014-19

Annexure-I

Asset-10

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	3047.69	596.72	95.98	753.68	150.27	4644.34	5.28%	176.67	194.96	217.39	241.25
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	3047.69	596.72	95.98	753.68	150.27	4644.34		176.67	194.96	217.39	241.25
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								3346.05	3692.40	4117.23	4569.21



2014-19

Annexure-I

Asset-11

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	2856.96	241.43	931.87	159.46	134.98	0.00	4324.70	5.28%	157.22	188.20	217.01	224.78	228.34
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	2856.96	241.43	931.87	159.46	134.98	0.00	4324.70		157.22	188.20	217.01	224.78	228.34
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									2977.68	3564.33	4109.99	4257.21	4324.70



2014-19

Asset-12

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	49291.90	2613.39	2209.25	196.10	214.62	54525.26	5.28%	2671.61	2798.92	2862.42	2873.27
Sub Station	5708.35	35.32	245.19	462.65	0.00	6451.51	5.28%	302.33	309.74	328.43	340.64
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	55000.25	2648.71	2454.44	658.75	214.62	60976.77		2973.94	3108.66	3190.85	3213.91
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								56324.61	58876.18	60432.78	60869.46



2014-19

Asset-13

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	2655.13	931.74	95.98	475.83	150.27	4308.95	5.28%	164.79	191.92	207.02	223.55
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Total	2655.13	931.74	95.98	475.83	150.27	4308.95		164.79	191.92	207.02	223.55
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								3121.00	3634.86	3920.77	4233.82



2014-19

Asset-14

Annexure-I

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in%)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	4085.58	627.73	586.02	585.34	228.46	6113.13	5.28%	232.29	264.33	295.26	316.74
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	
Total	4085.58	627.73	586.02	585.34	228.46	6113.13		232.29	264.33	295.26	316.74
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								4399.44	5006.32	5592.00	5998.90



2014-19

Annexure-I

Asset-15

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19				Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00
Sub Station	3326.87	1125.02	526.31	585.34	228.46	5792.00	5.28%	205.36	248.95	278.30	299.79
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00
IT Equipment & Software	117.57	4.27	0.00	0.00	0.00	121.84	5.28%	6.32	6.43	6.43	6.43
Total	3444.43	1129.29	526.31	585.34	228.46	5913.83		211.68	255.39	284.73	306.22
Weighted Average Rate of Depreciation (in %)								5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)								4009.08	4836.88	5392.70	5799.60



2014-19

Annexure-I

Asset-16

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19					Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	2447.16	374.04	0.00	0.00	25.95	0.00	2847.15	5.28%	139.08	148.96	148.96	149.64	150.33
Sub Station	763.91	344.93	136.23	20.52	0.00	0.00	1265.59	5.28%	49.44	62.14	66.28	66.82	66.82
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	3211.07	718.97	136.23	20.52	25.95	0.00	4112.74		188.53	211.10	215.24	216.47	217.15
Weighted Average Rate of Depreciation (in %)									5.28%	5.28%	5.28%	5.28%	5.28%
Average Gross Block (₹ in lakh)									3570.56	3998.16	4076.53	4099.77	4112.74



2019-24

Annexure-II

Combined Asset

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24					Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24			2014-15	2015-16	2016-17	2017-18	2018-19
Land	3951.71	0.00	0.00	0.00	0.00	0.00	3951.71	0.00%	0.00	0.00	0.00	0.00	0.00
Building	1325.96	0.00	0.00	0.00	0.00	0.00	1325.96	3.34%	44.29	44.29	44.29	44.29	44.29
Transmission Line	143644.26	0.00	0.00	0.00	0.00	0.00	143644.26	5.28%	7584.42	7584.42	7584.42	7584.42	7584.42
Sub Station	87799.19	1208.04	0.00	0.00	0.00	0.00	89007.23	5.28%	4667.69	4699.58	4699.58	4699.58	4699.58
PLCC	53.39	0.00	0.00	0.00	0.00	0.00	53.39	6.33%	3.38	3.38	3.38	3.38	3.38
Leasehold Land	4592.03	0.00	0.00	0.00	0.00	0.00	4592.03	3.34%	153.37	153.37	153.37	153.37	153.37
IT Equipment & Software	286.61	0.00	0.00	0.00	0.00	0.00	286.61	15.00%	42.99	42.99	42.99	42.99	42.99
Total	241653.14	1208.04	0.00	0.00	0.00	0.00	242861.18		12496.14	12528.03	12528.03	12528.03	12528.03
Weighted Average Rate of Depreciation (in %)									5.16%	5.16%	5.16%	5.16%	5.16%
Average Gross Block (₹ in lakh)									242257.16	242861.18	242861.18	242861.18	242861.18

