

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 7/TT/2021

Coram:

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

Date of order: 21.02.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of the assets under "Transmission System of Vindhyachal-IV & Rihand-III (1000 MW) Generation Project.

And in the matter of:

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

.....Petitioner

Vs.

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur, Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore-452008.
4. Maharashtra State Electricity Distribution Company Limited,



Hongkong Bank Building, 3rd Floor,
M.G. Road, Fort, Mumbai-400001.

5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East),
Mumbai-400051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007.
7. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,
Administration of Daman & Diu,
Daman-396210.
9. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T. Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,
Office of the Executive Director (C&P),
State Load Despatch Building, Dangania,
Raipur-492013.
11. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492013.
12. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg, Jaipur – 302005.
13. Ajmer Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
14. Jaipur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
15. Jodhpur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor), Ajmer Road,



Heerapura, Jaipur.

16. Himachal Pradesh State Electricity Board,
Vidyut Bhawan,
Kumar House Complex Building II,
Shimla-171004.
17. Punjab State Electricity Board,
The Mall, Patiala-147001.
18. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134109.
19. Power Development Department,
Government of Jammu & Kashmir
Mini Secretariat, Jammu.
20. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001.
21. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
22. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
23. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
24. North Delhi Power Limited,
Power Trading & Load Dispatch Group,
Cennet Building, Adjacent To 66/11 kV Pitampura-3
Grid Building, Near PP Jewellers,
Pitampura, New Delhi – 110034.
25. Chandigarh Administration,
Sector -9, Chandigarh.
26. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road, Dehradun.



27. North Central Railway,
Allahabad.

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

...Respondent(s)

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

For Respondent: Shri Anindya Khare, MPPMCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for trueing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for 2019-24 tariff period in respect of the following assets under “Transmission System of Vindhyachal-IV and Rihand - III (1000 MW) Generation Project (hereinafter referred to as “the transmission project”):

Combined (i)

Asset-A 400 kV D/C (Quad) Vindhyachal IV-Vindhyachal Pooling Station (Bypassing Vindhyachal Pooling Station) Transmission Line

(ii) 400 kV D/C (Twin) Sasan-Vindhyachal Pooling Transmission Line

(iii) 400 kV 1X63 MVAR Bus Reactor along with associated 400 kV bays at Satna Sub-station

(iv) 400 kV D/C Quad Bassi-Jaipur (RPVNL) line along with associated bays at Bassi Sub-station



- (v) 765 kV S/C Satna-Gwalior Line-1 with associated bays at Satna Sub-station and line reactor
- (vi) 3X80 MVAR 765 kV line reactor along with associated bays at Gwalior Sub-station for Satna-Gwalior Line-I
- (vii) 3X80 MVAR 765 kV Line reactor along with associated bays at Gwalior Sub-station (for 765 kV S/C Gwalior-Jaipur Ckt-I)

Asset-B1	One Ckt of Rihand III-Vindhyachal Pooling Station 765 kV D/C Transmission Line
Asset-B2	3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhychal Pooling Station – Satna Ckt # 1
Asset-B3	3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhychal Pooling Station – Satna Ckt # 2
Asset-B4	765 kV S/C Gwalior-Jaipur (RVPN) Ckt#1 Transmission Line and Bay Extension at 765/400 kV Phagi (RVPN-Jaipur) Sub-station {765 kV Gwalior Bay along with Line Reactor charged as Bus Reactor under Interim Contingency on 1.3.2014 to be used as Line Reactor at Gwalior along with Bays}
Asset-B5	765/400 kV Vindhychal Pooling Station (New) including 1500 MVA ICT II along with associated bays at Vindhychal Pooling Station & 765 S/C Vindhychal Pooling Station - Satna Ckt 1 Transmission Line with Bays at Vindhychal Pooling Station along with 3*80 MVAR Switchable Line Reactor & associated line bays at Vindhychal Pooling Station for one ckt of 400 kV D/C Sasan-Vindhychal Pooling Station Transmission Line & 765 kV S/C Sasan-Vindhychal Pooling Station Transmission Line along with associated bays at Reliance Sasan
Asset-B6	765 kV, 240 MVAR Bus Reactor #2 at with bay Satna Sub-station
Asset-B7	1500 MVA ICT- 1 with one spare unit along with associated bays at Vindhychal Pooling Station
Asset-B8	765 kV S/C Vindhychal - Satna ckt-2, with Line Reactor (3*80 MVAR) & 1 spare unit along with Bays at Vindhychal Pooling Station
Asset-B9	765 kV 240 MVAR Bus Reactor (3*80) with Bays at Vindhychal Pooling Station
Asset-B10	400 kV Bays at Vindhychal Pooling Station for 400 kV D/C Vindhychal Pooling Station -Sasan Ckt #2 Transmission Line and 400 kV D/C Vindhychal Pooling Station-Vindhychal IV Transmission Line



Asset-B11	400 kV bay at Vindhyachal Pooling Station for 400 kV Vindhyachal IV Vindhyachal Pooling Station ckt-I Transmission Line
Asset-B12	400 KV bay (1 No.) at Vindhyachal PS for Ckt-I of 765 kV D/C Rihand-III-Vindhyachal PS Transmission Line
Asset-B13	400 kV 63 MVAR Bus Reactor along with Bays at Vindhyachal Pooling Station
Asset-B14	2nd Ckt of Rihand III- Vindhyachal Pooling Station 765 kV D/C Line and associated bay at Vindhyachal Pooling Station
Asset-C1	765 kV S/C Satna-Gwalior ckt. 2 Transmission Line along with associated bays at both ends and 765 kV, 240 MVAR Switchable Line Reactor at Satna end
Asset-C2	765 kV, 240 MVAR Switchable Line Reactor at Gwalior end
Asset-D	400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RVPNL) line at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station

The above referred assets have been collectively termed as "transmission assets" in 2014-19 tariff period. The transmission assets have been combined on 1.4.2019, and as such they have been collectively referred to as "Combined Asset" in 2019-24 tariff period."

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

"1) Allow the addcap for 2014-19 and 2019-24 tariff block as claimed as per Para 5 and 7 above.

2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 5 and 6 above.

3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 5 and 6 above for respective block.

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



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

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

7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 6.6 above.

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

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

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

Background

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

- a. The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/Vin-IV & Rih-III dated 17.3.2010 at an estimated cost of ₹467299 lakh including IDC of ₹29779 lakh (based on 3rd Quarter, 2009 price level). The Board of Directors of the Petitioner's Company in its 329th meeting dated 26.5.2016 vide Memorandum No. C/CP/RCE/Vin-IV & Rih-III approved the Revised Cost Estimates (RCE) at an estimated cost of ₹453121 lakh including IDC of ₹41998 lakh based on December, 2015 price level. RCE-II of the transmission project was accorded by the Competent Authority vide Memorandum No. C/CP/PA2122-08-0Y-RCE005 dated 22.11.2021 at an estimated cost of ₹435602 lakh including IDC of ₹41445 lakh based on March, 2021 price level.



- b. The scope of work under the transmission project is as follows:

Part-I: Generation specific transmission system

A: Rihand III for NR only

Transmission Line: Rihand-III — Vindhyachal Pooling station 765 kV D/C line (initially to be operated at 400 kV)

(As per IA, the above line was to be implemented as Rihand-III — Vindhyachal Pooling station, 2xS/C 765 kV. To minimize RoW constraint, instead of 2xS/C, 1xD/C line was agreed during the 32nd Standing Committee of Western Region held on 13.5.2011)

Sub-station: 765/400 kV Vindhyachal Pooling station (Extension)

B: Vindhyachal IV: for WR only

Transmission Line: Vindhyachal-IV-Vindhyachal Pooling Station 400 kV D/C (Quad) line

Sub-station: 765/400 kV Vindhyachal Pooling Station (Extension)

Part-II: Common System for both WR and NR

Transmission Line

- i. Vindhyachal Pooling Station-Satna 765 kV 2xS/C line
- ii. Satna-Gwalior 765 kV 2xS/C line
- iii. Sasan-Vindhyachal Pooling Station 765 kV S/C line
- iv. Sasan-Vindhyachal Pooling Station 400 kV D/C line

Sub-station

- i. Establishment of new 765/400 kV, 2x1500 MVA Sub-station at Vindhyachal Pooling Station
- ii. Extension of 765/400 kV Satna Sub-Station
- iii. Extension of 765/400 kV Gwalior Sub-Station
- iv. Extension of 765/400 kV Sasan Sub-Station

Part-III: NR strengthening in regional pool

Transmission Line

- i. Gwalior—Jaipur(RVPN) 765 kV S/C line
- ii. Bassi—Jaipur (RVPN) 400 kV D/C (Quad) line



Sub-station

- i. Extension of 765/400 kV Gwalior Sub-station
- ii. Extension of 765/400 kV Jaipur (RVPN) Sub-station
- iii. Extension of 765/400 kV Bassi Sub-station

- c. As per the IA, the transmission project was to be executed within 32 months from the date of IA. The details of scheduled date of commercial operation (SCOD), date of commercial operation (COD) and time over-run of the transmission assets and the petitions wherein the transmission assets are covered are as follows:

Assets	Asset's Nomenclature in previous petition	Description of Asset	SCOD	COD	Time ove-run
Order dated 5.9.2018 in Petition No. 9/TT/2018					
Combined Asset-A	Asset-A	400 kV D/C (Quad) Vindhychal IV-Vindhychal Pooling Station (Bypassing Vindhychal Pooling Station) Transmission Line	1.12.2012	1.1.2013	1 month (condoned)
	Asset-B	400 kV D/C (Twin) Sasan – Vindhychal Pooling Transmission Line	1.12.2012	1.1.2013	1 month (condoned)
	Asset-C	400 kV 1X63 MVAR Bus Reactor along with associated 400 kV bays at Satna Sub-station	1.12.2012	1.4.2013	4 months (condoned)
	Asset-D	400 kV D/C Quad Bassi-Jaipur (RPVNL) line along with associated bays at Bassi Sub-station	1.12.2012	1.1.2014	13 months (5 months not condoned)
	Asset-E	765 kV S/C Satna-Gwalior Line-1 with associated bays at Satna Sub-station and line reactor	1.12.2012	1.3.2014	15 months (condoned)
	Asset-F	3X80 MVAR 765 kV line reactor along with associated bays at Gwalior Sub-station for Satna-Gwalior Line-I	1.12.2012	1.1.2014	13 months (condoned)
	Asset-G	3X80 MVAR 765 kV Line reactor along with associated bays at Gwalior Sub-station (for 765 kV S/C Gwalior-Jaipur Ckt-I)	1.12.2012	1.3.2014	15 months (condoned)
Order dated 31.5.2016 in Petition No. 71/TT/2015					
Asset-B1	Asset-1	One Ckt of Rihand III-Vindychal Pooling Station 765 kV D/C Transmission Line	1.12.2012	6.7.2014	19 months (condoned)
Asset-B2	Asset-2	3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhychal Pooling Station – Satna Ckt # 1	1.12.2012	13.11.2014	23 months (condoned)
Asset-B3	Asset-3	3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhychal Pooling Station – Satna Ckt # 2	1.12.2012	14.1.2015	25 months (condoned)
Asset-B4	Asset-4	765 kV S/C Gwalior-Jaipur (RVPN) Ckt#1 Transmission Line and Bay Extension at 765/400 kV Phagi (RVPN-Jaipur) Sub-station {765 kV Gwalior Bay along with Line	1.12.2012	14.8.2015	32 months (condoned)



		Reactor charged as Bus Reactor under Interim Contingency on 1.3.2014 to be used as Line Reactor at Gwalior along with Bays}			
Asset-B5	Asset-5(i)	765/400 kV Vindhyachal Pooling Station (New) including 1500 MVA ICT II along with associated bays at Vindhyachal Pooling Station and 765 S/C Vindhyachal Pooling Station - Satna Ckt 1 Transmission Line with Bays at Vindhyachal Pooling Station along with 3*80 MVAR Switchable Line Reactor & associated line bays at Vindhyachal Pooling Station for one ckt of 400 kV D/C Sasan-Vindhyachal Pooling Station Transmission Line & 765 kV S/C Sasan-Vindhyachal Pooling Station Transmission Line along with associated bays at Reliance Sasan.	1.12.2012	2.4.2015	28 months (condoned)
Asset-B6	Asset-5(ii)	765 kV, 240 MVAR Bus Reactor #2 at with bay Satna Sub-station	1.12.2012	25.6.2015	31 months (condoned)
Asset-B7	Asset-5(iii)	1500 MVA ICT- 1 with one spare unit along with associated bays at Vindhyachal Pooling Station	1.12.2012	4.7.2015	31 months (condoned)
Asset-B8	Asset-5(iv)	765 kV S/C Vindhyachal - Satna ckt-2, with Line Reactor (3*80 MVAR) & 1 spare unit along with Bays at Vindhyachal Pooling Station	1.12.2012	11.8.2015	32 months (condoned)
Asset-B9	Asset-5(v)	765 kV 240 MVAR Bus Reactor (3*80) with Bays at Vindhyachal Pooling Station	1.12.2012	24.8.2015	33 months (condoned)
Asset-B10	Asset-5(vi)	400 kV Bays at Vindhyachal Pooling Station for 400 kV D/C Vindhyachal Pooling Station-Sasan Ckt #2 Transmission Line and 400 kV D/C Vindhyachal Pooling Station Vindhyachal IV Transmission Line	1.12.2012	31.8.2015	33 months (condoned)
Asset-B11	Asset-5(vii)	400 kV bay at Vindhyachal Pooling Station for 400 kV Vindhyachal IV Vindhyachal Pooling Station ckt-I Transmission Line	1.12.2012	21.10.2015	35 months (condoned)
Asset-B12	Asset-5(viii)	400 KV bay (1 number) at Vindhyachal PS for Ckt-I of 765 KV D/C Rihand-III-Vindhyachal PS Transmission Line	1.12.2012	6.11.2015	35 months (condoned)
Asset-B13	Asset-5(ix)	400 kV 63 MVAR Bus Reactor along with Bays at Vindhyachal Pooling Station	1.12.2012	21.3.2016	40 months (condoned)
Asset-B14	Asset-6	2nd Ckt of Rihand III- Vindhyachal Pooling Station 765 kV D/C Line and associated bay at Vindhyachal Pooling Station	1.12.2012	15.10.2015	34 months (condoned)
Order dated 23.5.2016 in Petition No. 201/TT/2014					
Asset-C1	Asset I(A)	765 kV S/C Satna-Gwalior ckt. 2 Transmission Line along with associated bays at both ends and 765 kV, 240 MVAR Switchable Line Reactor at Satna end.	1.12.2012	6.8.2014	20 months (condoned)
Asset-C2	Asset I(B)	765 kV, 240 MVAR Switchable Line Reactor at Gwalior end.	1.12.2012	30.9.2014	21 months (condoned)
Order dated 13.11.2017 in Petition No. 204/TT/2016					
Asset-D	Asset-1	400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RVPNL) line at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station.	16.11.2012	4.1.2015	25 months and 18 days) (17 months and 14 days not condoned)



- d. Complete scope of the work as per IA is covered in the instant petition.
- e. Tariff for 2014-19 period for Combined Asset-A was determined vide order dated 5.9.2018 in Petition No. 9/TT/2018; for Asset-B1 to Asset-B14 vide order dated 31.5.2016 in Petition No. 71/TT/2015; for Asset-C1 and Asset-C2 vide order dated 23.5.2016 in Petition No. 201/TT/2014 and for Asset-D vide order dated 13.11.2017 in Petition No. 204/TT/2016.
4. The Respondents are distribution licensees and power departments which are procuring transmission service from the Petitioner, mainly beneficiaries of the Western Region.
5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. M.P. Power Management Company Limited (MPPMCL), Respondent No.1, has filed its reply *vide* affidavit dated 8.2.2021 and has raised the issues of grossing up of RoE, Initial Spares, Additional Capital Expenditure (ACE) after the cut-off date and effect of CGST. UP Power Corporation Limited (UPPCL), Respondent No. 20, has filed its reply *vide* affidavit dated 9.11.2021 and has raised the issues of capital cost, effect of GST, Interest on Loan (IoL) for 2019-24 period and Security Expenses. The Petitioner *vide* affidavits dated 26.10.2021 and 4.7.2022 has filed its rejoinder to the reply of MPPMCL and UPPCL respectively.



6. It is observed that MPPMCL has raised the issue of grossing up of RoE in other petitions as well. The Commission has already considered the submissions of MPPMCL regarding grossing up of RoE and clear findings have been given rejecting the contentions of MPPMCL vide order dated 21.9.2021 in Petition No. 326/TT/2020. As MPPMCL did not challenge the said findings of the Commission in Petition No. 326/TT/2020, the same has attained finality. Accordingly, the issue of RoE raised by MPPMCL is rejected. Other issues raised by the MPPMCL and UPPCL and clarifications thereto given by the Petitioner are considered in the relevant portions of this order.

7. This order is issued considering the submission made by the Petitioner in the petition vide affidavit dated 28.1.2020 and affidavits dated 30.7.2021, 28.12.2021 and 15.7.2022, reply filed by MPPCL and UPPCL vide affidavits dated 8.2.2021 and 9.11.2021 and the Petitioner's rejoinders to the reply of MPPMCL and UPPCL vide affidavits dated 26.10.2021 and 4.7.2022 respectively.

8. Hearing in this matter was held on 1.8.2022 through video conference and order was reserved. Having heard the representatives of the Petitioner, Respondents and after perusal of the materials on record, we proceed to dispose of the petition.

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

9. The details of the trued up transmission charges claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:



(₹ in lakh)

Particulars	Combined Asset-A				
	2014-15 (Pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	4835.90	4996.08	5116.18	5189.31	5192.33
Interest on Loan	4778.40	4607.66	4419.50	4090.49	3668.38
Return on Equity	5385.39	5588.94	5720.18	5801.90	5820.89
O&M Expenses	977.21	1009.91	1043.15	1078.00	1113.69
Interest on Working Capital	399.24	405.49	408.78	406.70	399.46
Total	16376.14	16608.08	16707.79	16566.40	16194.75

(₹ in lakh)

Particulars	Asset-B1				
	2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	645.79	930.91	941.06	947.93	954.79
Interest on Loan	566.77	800.06	797.03	752.40	701.05
Return on Equity	720.09	1042.78	1053.61	1061.30	1071.86
O&M Expenses	29.03	40.76	42.06	43.49	44.92
Interest on Working Capital	46.09	66.10	66.58	65.97	65.27
Total	2007.77	2880.61	2900.34	2871.09	2837.89

(₹ in lakh)

Particulars	Asset-B2				
	2014-15 (pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	36.38	103.59	125.53	140.08	140.08
Interest on Loan	36.01	102.06	120.75	124.01	111.66
Return on Equity	39.42	113.02	137.38	153.53	153.94
O&M Expenses	32.15	87.22	90.12	93.11	96.20
Interest on Working Capital	4.35	12.15	13.81	14.76	14.65
Total	148.31	418.04	487.59	525.49	516.53

(₹ in lakh)

Particulars	Asset-B3				
	2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	27.34	136.73	155.31	177.56	187.96
Interest on Loan	31.83	152.54	159.61	165.79	159.36



Particulars	Asset-B3				
	2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
Return on Equity	29.83	150.02	170.58	195.34	207.54
O&M Expenses	17.81	87.22	90.12	93.11	96.20
Interest on Working Capital	3.03	14.93	16.15	17.54	18.09
Total	109.84	541.44	591.77	649.34	669.15

(₹ in lakh)

Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
Depreciation	2075.26	3396.20	3445.94	3446.87
Interest on Loan	1970.46	3123.92	2900.72	2668.61
Return on Equity	2323.98	3801.32	3857.01	3868.42
O&M Expenses	173.90	284.43	294.03	303.73
Interest on Working Capital	156.22	253.29	251.11	246.59
Total	6699.82	10859.16	10748.81	10534.22

(₹ in lakh)

Particulars	Asset-B5			
	2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
Depreciation	4339.98	4730.13	4956.20	5010.57
Interest on Loan	5114.94	5260.99	5098.39	4714.16
Return on Equity	5287.44	5736.69	6003.37	6082.88
O&M Expenses	788.58	816.91	844.05	872.08
Interest on Working Capital	382.90	407.15	416.25	412.03
Total	15913.84	16951.87	17318.26	17091.72

(₹ in lakh)

Particulars	Asset-B6			
	2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
Depreciation	86.05	136.98	162.39	166.50
Interest on Loan	100.96	147.63	160.42	149.72
Return on Equity	96.39	153.36	181.81	186.92
O&M Expenses	66.96	90.12	93.11	96.20
Interest on Working Capital	10.23	15.06	16.76	16.90
Total	360.59	543.15	614.49	616.24



(₹ in lakh)

Particulars	Asset-B7			
	2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
Depreciation	211.25	343.59	371.85	380.63
Interest on Loan	239.99	362.68	359.58	335.40
Return on Equity	236.64	384.68	416.32	427.30
O&M Expenses	111.12	154.49	159.62	164.91
Interest on Working Capital	21.98	33.64	35.24	35.43
Total	820.98	1279.08	1342.61	1343.67

(₹ in lakh)

Particulars	Asset-B8			
	2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
Depreciation	1713.54	2854.13	2951.44	2986.23
Interest on Loan	1952.94	3038.98	2880.51	2655.11
Return on Equity	1917.33	3191.98	3300.83	3348.74
O&M Expenses	201.75	326.00	336.81	348.01
Interest on Working Capital	139.67	227.13	228.82	226.16
Total	5925.23	9638.22	9698.41	9564.25

(₹ in lakh)

Particulars	Asset-B9			
	2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
Depreciation	77.99	162.13	190.46	197.02
Interest on Loan	90.30	173.60	184.18	173.32
Return on Equity	87.36	181.52	213.24	221.18
O&M Expenses	52.67	90.12	93.11	96.20
Interest on Working Capital	8.79	16.88	18.68	18.93
Total	317.11	624.25	699.67	706.65

(₹ in lakh)

Particulars	Asset-B10			
	2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
Depreciation	36.46	71.57	78.24	78.24
Interest on Loan	40.36	72.01	67.66	59.79
Return on Equity	37.41	73.96	81.20	81.42



Particulars	Asset-B10			
	2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
O&M Expenses	72.86	128.74	133.02	137.42
Interest on Working Capital	6.65	12.12	12.58	12.64
Total	193.74	358.40	372.70	369.51

(₹ in lakh)

Particulars	Asset-B11			
	2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
Depreciation	12.16	28.32	28.58	28.58
Interest on Loan	13.16	28.29	24.33	21.43
Return on Equity	12.43	28.90	29.09	29.17
O&M Expenses	27.75	64.37	66.51	68.71
Interest on Working Capital	2.40	5.52	5.56	5.62
Total	67.90	155.40	154.07	153.51

(₹ in lakh)

Particulars	Asset-B12			
	2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
Depreciation	11.41	29.90	30.85	30.85
Interest on Loan	12.43	30.38	27.35	24.29
Return on Equity	11.70	30.68	31.63	31.72
O&M Expenses	25.02	64.37	66.51	68.71
Interest on Working Capital	2.20	5.65	5.74	5.80
Total	62.76	160.98	162.08	161.37

(₹ in lakh)

Particulars	Asset-B13			
	2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
Depreciation	0.98	38.47	43.15	44.52
Interest on Loan	1.19	43.69	42.93	40.04
Return on Equity	1.10	43.07	48.31	49.98
O&M Expenses	1.87	64.37	66.51	68.71
Interest on Working Capital	0.18	6.44	6.77	6.89
Total	5.32	196.04	207.67	210.14



(₹ in lakh)

Particulars	Asset-B14			
	2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
Depreciation	97.63	213.88	216.54	217.90
Interest on Loan	116.89	238.56	211.17	190.44
Return on Equity	109.09	238.82	241.80	243.98
O&M Expenses	47.59	106.43	110.00	113.63
Interest on Working Capital	10.08	21.79	21.49	21.29
Total	381.28	819.48	801.00	787.24

(₹ in lakh)

Particulars	Asset-C1				
	2014-15 (Pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	1567.83	2452.67	2523.24	2581.19	2597.78
Interest on Loan	1522.40	2264.57	2209.44	2084.60	1904.49
Return on Equity	1752.51	2755.31	2839.02	2908.99	2936.19
O&M Expenses	283.82	449.97	464.67	480.25	496.13
Interest on Working Capital	127.15	196.86	199.95	200.89	198.63
Total	5253.71	8119.38	8236.32	8255.92	8133.22

(₹ in lakh)

Particulars	Asset-C2				
	2014-15 (Pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	89.59	188.65	198.10	206.86	206.86
Interest on Loan	107.00	212.29	203.93	194.03	175.11
Return on Equity	99.44	210.33	220.76	230.57	231.19
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	6.81	14.07	14.34	14.54	14.11
Total	302.84	625.34	637.13	646.00	627.27

(₹ in lakh)

Particulars	Asset-D				
	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	46.55	195.31	195.31	195.31	195.31
Interest on Loan	61.98	237.90	209.88	175.25	153.12
Return on Equity	51.91	218.78	218.67	218.67	219.26
O&M Expenses	28.74	124.60	128.74	133.02	137.42



Particulars	Asset-D				
	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	5.28	21.89	21.47	20.91	20.66
Total	194.46	798.48	774.07	743.16	725.77

10. The details of the trued up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Combined Asset-A				
	2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for Expenses (O&M Expenses for one month)	81.43	84.16	86.93	89.83	92.81
Working Capital for Maintenance Spares (15% of O&M Expenses)	146.58	151.49	156.47	161.70	167.05
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	2729.36	2766.01	2784.63	2761.07	2699.13
Total Working Capital	2957.37	3003.66	3028.03	3012.60	2958.99
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	399.24	405.49	408.78	406.70	399.46

(₹ in lakh)

Particulars	Asset-B1				
	2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	3.28	3.40	3.51	3.62	3.74
Working Capital for Maintenance Spares (15% of O&M Expenses)	5.91	6.11	6.31	6.52	6.74
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	454.05	480.10	483.39	478.52	472.98
Total Working Capital	463.24	489.61	493.21	488.66	483.46
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	46.09	66.10	66.58	65.97	65.27



(₹ in lakh)

Particulars	Asset-B2				
	2014-15 (Pro-rata 139 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% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	64.98	69.23	81.27	87.58	86.09
Total Working Capital	84.61	90.03	102.30	109.31	108.54
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.35	12.15	13.81	14.76	14.65

(₹ in lakh)

Particulars	Asset-B3				
	2014-15 (Pro-rata 77 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% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	86.78	90.24	98.63	108.22	111.53
Total Working Capital	106.48	110.59	119.66	129.95	133.98
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	3.03	14.93	16.15	17.54	18.09

(₹ in lakh)

Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	22.96	23.70	24.50	25.31
Working Capital for Maintenance Spares (15% of O&M Expenses)	41.33	42.67	44.10	45.56
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	1769.22	1809.86	1860.07	1826.57
Total Working Capital	1833.51	1876.22	1860.07	1826.57



Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	156.22	253.29	251.11	246.59

(₹ in lakh)

Particulars	Asset-B5			
	2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	65.89	68.08	70.34	72.67
Working Capital for Maintenance Spares (15% of O&M Expenses)	118.61	122.54	126.61	130.81
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	2659.57	2825.31	2886.38	2848.52
Total Working Capital	2844.07	3015.93	3083.33	3052.10
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	382.90	407.15	416.25	412.03

(₹ in lakh)

Particulars	Asset-B6			
	2015-16 (pro-rata 281 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% of O&M Expenses)	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	78.28	90.53	102.42	102.71
Total Working Capital	98.63	111.56	124.15	125.16
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	10.23	15.06	16.76	16.90

(₹ in lakh)

Particulars	Asset-B7			
	2015-16 (pro-rata 272 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% of O&M Expenses)	22.43	23.17	23.94	24.74



Particulars	Asset-B7			
	2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	184.12	213.18	223.77	223.94
Total Working Capital	219.01	249.22	261.01	262.42
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	21.98	33.64	35.24	35.43

(₹ in lakh)

Particulars	Asset-B8			
	2015-16 (pro-rata- 234 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	26.30	27.17	28.07	29.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	47.34	48.90	50.52	52.20
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	1544.61	1606.37	1616.40	1594.04
Total Working Capital	1618.25	1682.44	1694.99	1675.24
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	139.67	227.13	228.82	226.16

(₹ in lakh)

Particulars	Asset-B9			
	2015-16 (pro-rata- 221 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% of O&M Expenses)	13.08	13.52	13.97	14.43
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	87.53	104.04	116.61	117.78
Total Working Capital	107.88	125.07	138.34	140.23
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	8.79	16.88	18.68	18.93



(₹ in lakh)

Particulars	Asset-B10			
	2015-16 (pro-rata- 214 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	10.38	10.73	11.09	11.45
Working Capital for Maintenance Spares (15% of O&M Expenses)	18.69	19.31	19.95	20.61
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	55.23	59.73	62.12	61.59
Total Working Capital	84.30	89.77	93.16	93.65
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	6.65	12.12	12.58	12.64

(₹ in lakh)

Particulars	Asset-B11			
	2015-16 (pro-rata- 163 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	25.41	25.90	25.66	25.59
Total Working Capital	39.95	40.92	41.20	41.63
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	2.40	5.52	5.56	5.62

(₹ in lakh)

Particulars	Asset-B12			
	2015-16 (pro-rata- 147 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	26.05	26.83	27.02	26.90
Total Working Capital	40.59	41.85	42.54	42.94
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	2.20	5.65	5.74	5.80



(₹ in lakh)

Particulars	Asset-B13			
	2015-16 (pro-rata- 11 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	29.49	31.54	32.43	32.91
Total Working Capital	44.03	46.56	47.95	48.94
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.18	6.44	6.77	6.89

(₹ in lakh)

Particulars	Asset-B14			
	2015-16 (pro-rata- 169 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	8.59	8.87	9.17	9.47
Working Capital for Maintenance Spares (15% of O&M Expenses)	15.46	15.96	16.50	17.04
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	137.62	136.58	133.50	131.21
Total Working Capital	161.67	161.41	159.17	157.72
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	10.08	21.79	21.49	21.29

(₹ in lakh)

Particulars	Asset-C1				
	2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	36.27	37.50	38.72	40.02	41.34
Working Capital for Maintenance Spares (15% of O&M Expenses)	65.29	67.50	69.70	72.04	74.42
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	875.99	1352.58	1372.32	1375.60	1355.19
Total Working Capital	977.55	1457.58	1480.74	1487.66	1470.95
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	131.97	196.77	199.90	200.83	198.58



(₹ in lakh)

Particulars	Asset-C2				
	2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	50.43	104.06	106.06	107.55	104.44
Total Working Capital	50.43	104.06	106.06	107.55	104.44
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	6.81	14.05	14.32	14.52	14.10

(₹ in lakh)

Particulars	Asset-D				
	2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	10.05	10.38	10.73	11.09	11.45
Working Capital for Maintenance Spares (15% of O&M Expenses)	18.09	18.69	19.31	19.95	20.61
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	31.55	127.58	123.76	118.90	116.18
Total Working Capital	59.69	156.65	153.80	149.94	148.25
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	8.06	21.15	20.76	20.24	20.01

Capital Cost

11. The details of the capital cost considered as on 1.4.2014/COD and capital cost as on 31.3.2019 admitted vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset-C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D) is as follows:



(₹ in lakh)

Assets	FR Appportioned approved cost	RCE-I Appportioned approved cost)	Admitted cost as on 31.3.2014/ COD*	Admitted ACE				Total cost as on 31.3.2019*
				2014-15	2015-16	2016-17	2017-18	
Combined Asset-A	124059.99	102170.34	89390.31	4084.46	1885.41	3226.39		98586.57
Asset-B1	23732.38	18426.9	15753.03	1587.20				17340.23
Asset-B2	5886.15	2857.13	1745.35	25.98	641.95	184.42		2597.7
Asset-B3	6757.2	3836.76	2395.34	13.44	815.55	223.49		3447.82
Asset-B4	56843.05	70644.34	61764.64		3090.34	457.39		65312.37
Asset-B5	89689.17	112345.84	85726.58		7161.86	2488.54	369.35	95746.33
Asset-B6	5022.85	3361.17	2054.42		605.88	229.60	35.41	2925.31
Asset-B7	12063.25	7287.53	4628.57		1179.85	594.16	197.60	6600.18
Asset-B8	52300.04	57299.59	48747.19		4824.19	1474.89		55046.27
Asset-B9	6598.27	3765.16	2227.98		663.37	548.24	144.00	3583.59
Asset-B10	1655	1469.74	1006.84		231.05	98.98		1336.87
Asset-B11	521.08	507.14	452.97		21.85	12.82		487.64
Asset-B12	1341.48	549.41	479.98		43.1	7.13		530.21
Asset-B13	3128.62	952.23	594.33		45.56	168.4	19.8	828.09
Asset-B14	4328.26	4319.05	3726.25		68.04	68.86		3863.15
Asset-C1	70076.79	53511.55	45063.17	1167.23	703.47	3467.99	538.71	50940.57
Asset-C2	6204.74	5123.31	3193.56	350.07	24.94	325.68	169.88	4064.13
Asset-D	3030.81	4693.82	3699.09			575.98		4275.07

*After adjustment of accrued IDC discharged after COD

12. The Petitioner in the instant true-up petition has submitted the following capital cost in respect of the transmission assets for true-up of tariff for 2014-19 period:

(₹ in lakh)

Assets	FR Appportioned Approved Cost	RCE-I Appportioned Approved Cost	RCE-II Appportioned Approved Cost	Actual cost as on 31.3.2014/ COD	Actual ACE					Total cost as on 31.3.2019
					2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-A	124059.99	102170.34	102052.62	89478.38	4075.34	1885.41	2650.79	114.10		98204.02
# Asset-B1	23732.38	18426.9	18357.25	16126.57	1312.17	384.41		260.04		18083.19
Asset-B2	5886.15	2857.13	2801.8	1747.49	24.42	278.77	546.44			2597.12
Asset-B3	6757.2	3836.76	3674.48	2405.57	13.44	245.04	443.18	394.25		3501.48
Asset-B4	56843.05	70644.34	66228.54	62202.74*		1386.10	1639.63	35.02		65263.49
# Asset-B5	89689.17	112345.84	103160.68	88387.45		5171.78	6967.09	2055.71	82.12	102664.15
Asset-B6	5022.85	3361.17	3312.7	2159.30**		32.70	805.60	155.88		3153.48
# Asset-B7	12063.25	7287.53	7408.66	4721.19**		1423.18	731.83	332.79		7208.99



Assets	FR Apportioned Approved Cost	RCE-I Apportioned Approved Cost	RCE-II Apportioned Approved Cost	Actual cost as on 31.3.2014/ COD	Actual ACE					Total cost as on 31.3.2019
					2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-B8	52300.04	57299.59	56911.92	50115.04**		2633.88	2588.02	1000.98	316.26	56654.18
Asset-B9	6598.27	3765.16	3906.49	2265.88**		404.50	812.42	248.69		3731.49
Asset-B10	1655	1469.74	1567.90	1046.25**		84.95	242.45			1373.65
Asset-B11	521.08	507.14	672.53	459.77**		26.88	5.54			492.19
Asset-B12	1341.48	549.41	691.22	485.01**		20.63	29.45			535.09
Asset-B13	3128.62	952.23	1224.65	685.68		45.56	85.99		51.97	869.20
# Asset-B14	4328.26	4319.05	4381.65	4010.23**		25.56	28.76	51.67		4116.22
Asset-C1	70076.79	53511.55	50020.21	45541.90	692.12	703.47	2175.71	191.67	462.27	49767.14
Asset-C2	6204.74	5123.31	4156.00	3349.51	194.12	24.94	331.82			3900.39
Asset-D	3030.81	4693.82	5072.66	3858.87						3858.87

*At the time of preparation of Auditor's Certificate for Petition No. 71/TT/2015, expenditure from 1.4.2015 to 13.8.2015 (COD- 14.8.2015) remained unaudited. However, the latest certificate being used in the current true-up petition is based on audited expenditure for the said duration. This has resulted into some minor variation in COD cost for Asset B5 of the instant petition.

** In the funding of the assets, proposed loan was deployed without reflecting actual loan deployment. The actual funding and loan deployment for these assets are provided presently. Thus, there is change in IDC and COD cost. It is submitted to consider the actual loan deployed and allow tariff accordingly.

Apportioned approved cost as per RCE has been re-apportioned in few Assets due to re-allocation of contingency and common packages cost considered in RCE.

Cost over-run

13. **With respect to capital cost as on COD and cost overrun , the respondent UPPCL has submitted the following:**

The Petitioner in the instant petition has sought to revise the capital cost as on 1.4.2014/COD approved by the Commission in the previous orders. However, no reasons for revision in the capital cost have been mentioned in respect of transmission assets viz. Combined Asset-A, Asset-B1 to Asset-B3, Asset-B5, Asset-C1, Asset-C2 and Asset-D.

(a) Capital Cost of Combined Asset-A

- (i) UPPCL has submitted that the Commission vide order dated 5.9.2018 in Petition No. 9/TT/2018, allowed the capital cost of Combined Asset-A as on



1.4.2014 as ₹89390.31 lakh which was closing capital cost as on 31.3.2014. Thus, this capital cost has achieved the finality. However, the Petitioner at para 5.8 of the instant petition has changed the opening capital cost as on 1.4.2014 to ₹89478.38 lakh without any reason. Since the instant petition is true-up for 2014-19 tariff period and, *inter alia*, meant for true-up of ACE for 2014-19 period. The Commission should not allow such upward revision in the opening capital cost as on 1.4.2014, as it tantamounts to re-opening of tariff for 2009-14 period by reason of the fact that closing capital cost as on 31.3.2014 is the opening capital cost for 1.4.2014. The Commission may consider ₹89390.31 lakh as opening capital cost for 2014-19 tariff period in respect of Combined Asset-A and disallow the prayer of the Petitioner for upward revision in the capital cost amounting to ₹89478.38 lakh as on 1.4.2014. UPPCL has further submitted that the Commission vide order dated 5.9.2018 in Petition No. 9/TT/2018 with respect to Assets A-G, now Combined Asset-A in the instant petition, noticed some gaps while allowing ACE and observed that the Petitioner should submit the required clarifications/details in the instant true-up petition. UPPCL has also submitted that the Petitioner has failed to comply with the directions of the Commission in the instant true-up petition by submitting the item-wise replies. Therefore, the Commission may reject the prayer of the Petitioner for ACE claimed in the instant petition.

(b) Capital cost of Asset-B1 to B-14

(ii) UPPCL has submitted that the Commission vide order dated 31.5.2016 in Petition No. 71/TT/2015, allowed capital cost as on COD and ACE, subject to



true-up, for 2014-19 tariff period in respect of 14 number of transmission assets. Therefore, except ACE for 2014-19 tariff period, capital cost as on respective CODs of all the 14 transmission assets achieved finality, leaving no scope for revision insofar as capital cost as on COD is concerned. UPCL has requested the Commission to disallow such upward revision in the opening capital cost for 2014-19 tariff period as the same has achieved finality vide order dated 31.5.2016 in Petition No. 71/TT/2015.

(c) Capital Cost of Asset-C1 and C2

(iii) UPPCL has submitted that there has been upward revision in the opening capital cost in respect of Asset-C1 and Asset-C2 covered in the instant petition. UPPCL has requested to disallow such upward revision in the capital cost as on COD of the assets except ACE as the capital cost as on COD has achieved finality as per the Commission's order dated 23.5.2016 in Petition No. 201/TT/2014.

(d) Capital cost of Asset-D

(iv) UPPCL has submitted that the capital cost of Asset-D as on COD has attained finality vide order dated 13.11.2017 in Petition No. 204/TT/2016, which was based on the Auditor's Certificate. Thus, except for true-up of ACE for 2014-19 period, the Commission should not allow the Petitioner to alter the capital cost of Asset-D as on COD.

14. UPPCL has further submitted that true-up of tariff has to be done as per Regulation 8(1) of the 2014 Tariff Regulations. With regard to Asset- B-1, Asset-B-5,



Asset-B-7 and Asset-B-14, it is stated that apportioned approved cost as per RCE has been re-apportioned in few assets due to re-allocation of contingency and common packages cost considered in RCE. The Petitioner may be directed to submit the statement of re-apportionment done in totality so that it is known on which assets there is increase and on which there is reduction. UPPCL has further submitted that it may be worthwhile to examine whether 'allocation of contingency and common package costs' needs to be done on the basis of current admitted cost as there is significant variation between RCE cost and admitted amount?

15. In response, the Petitioner with respect to Combined Asset-A has submitted that against the admitted cost of ₹89390.31 lakh as on 31.3.2014, the Petitioner has claimed ₹89391.19 lakh. There is minor variation of ₹0.88 lakh which is due to disallowed IDC on account of computational difference. The details of foreign loans have been submitted vide affidavit dated 30.7.2021. The Petitioner has requested to allow the IDC restricted on account on computational difference. Further, individual assets under Combined Asset-A were executed in 2009-14 tariff period and were combined in true-up Petition No. 9/TT/2018 as per the 2014 Tariff Regulations for computation of tariff for 2014-19 tariff period. Therefore, combined Form-7 and Form-4A have been submitted for Combined Asset-A as per the 2014 Tariff Regulations. The admissibility of ACE incurred after the COD and up to the cut-off date has to be dealt in accordance with Regulations 14(i) and Regulation 14(ii) of the 2014 Tariff Regulations. Admissibility of ACE incurred after the cut-off date has to be dealt in accordance with Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations. The Petitioner has submitted that element-wise break-up of cost (Form-



5) claimed for each asset in the present petition has already been submitted vide affidavit dated 30.7.2021. Further, package-wise details of the cost claimed has also been submitted vide affidavit dated 30.7.2021.

16. The Petitioner vide affidavit dated 15.7.2022 has submitted comparison of RCE-II with RCE-I. After comparison, it is observed that of RCE-II cost of ₹435601.96 lakh is lesser than the RCE-I approved cost of ₹453121.01 lakh. The details of comparison between RCE-I and RCE-II is as follows:

(₹ in lakh)				
Particulars	Approved DPR Cost (3Q, 2009) (A)	Approved RCE-I (December, 2015 PL) (B)	RCE-II (March, 2021 PL) (C)	Variation (RCE-II to RCE-I) (C) – (B)
Cost (excl. IEDC/IDC/FERV)	406933	403970	386949	(-) 17022
IEDC	30587	5159	2720	(-) 2439
IDC	29779	41998	41445	(-) 553
FERV due to foreign currency loan re-valuation	000	1994	4488	2494
Total	467299	453121	435602	(-) 17519 {(-) 3.87 %}

17. The variation in cost is on account of the following factors:

Sl. No.	Variation on account of:	Variation in RCE-II from approved RCE-I	
		(₹ in lakh)	(in %)
(i)	Price Variation (RCE-I to RCE-II)	660	0.15 %
(ii)	Variation in Quantities of Approved Items	(-) 7765	(-) 1.71 %
(iii)	Variation in Taxes & Duties	(-) 5465	(-) 1.21 %
(iv)	Land and Compensation	(-) 4452	(-) 0.98 %
	Sub total (i) to (iv)	(-) 17022	(-) 3.76 %
(v)	FERV due to foreign currency loan re-valuation	2494	0.55 %
(vi)	Other Reasons (IEDC and IDC)		
A	IEDC (incl. Contingencies)	(-) 2439	(-) 0.54 %
B	IDC	(-) 553	(-) 0.12 %
	Sub- Total (vi)	(-) 2992	(-) 0.66 %
	GRAND TOTAL (i) to (vi)	(-) 17519	(-) 3.87 %



18. There is decrease of ₹17519 lakh (-3.87 %) from the approved RCE-I cost of ₹453121 lakh. The reasons for head wise variation in cost estimate submitted by the Petitioner are as follows:

(i) Price Variation (Net increase of ₹660 lakh: 0.15 %)

Based on the actual/ anticipated expenditure incurred, there has been a minor increase in the cost of the project by ₹660 lakh on this account which works out to 0.15% of the approved RCE-I cost. The Petitioner has submitted that variation is due to price variation amount kept in RCE-II vis-à-vis provision of price variation envisaged as per RCE-I.

(ii) Variation in quantity of approved items (Net decrease of ₹7765 lakh:(-) 1.71 %)

19. The details of net variation of ₹7765 lakh is as follows:

- a) In RCE-I, the type of towers and foundation was on the basis of detailed survey and then executed/likely to be executed quantities of the project. Now, in the RCE-II, as per the transmission project requirements, final amendments and site conditions, there is decrease amounting to ₹5495 lakh due to change in quantities of the transmission line.
- b) There are changes in the quantities of civil works/erection in the various sub-station items as per actual executed quantities which has resulted in net decrease of about ₹856 lakh.
- c) Further, there was a lump sum provision of ₹2892 lakh in RCE-I under the head of Special T&P. However, actual expenditure under this head as per RCE-II is about ₹1477 lakh. Accordingly, there is decrease of ₹1415 lakh under the head Special T&P.

20. Major heads of variations are as follows:



(₹ in lakh)

Description	Amount
Tower Steel (Supply and Erection)	(-) 1522
Conductor and Insulator	(-) 2578
Concreting and Reinforcement in Transmission Line	(-) 866
Civil Works/Erection in Sub-stations	(-) 856
Special T&P	(-) 1415

(iii) Variation in Taxes & Duties (Net decrease of ₹5465 lakh: (-) 1.21 %)

Based on actual/anticipated expenditure incurred, there is decrease in the cost of the transmission project by ₹5465 lakh which works out to (-)1.21 % of the approved RCE-I cost, on account of variation in the estimated taxes and duties envisaged as per RCE-I vis-à-vis actual taxes and duties considered in RCE-II.

(iv) Land and Compensation (Net decrease of ₹4452 lakh: (-) 0.98 %)

In RCE-I, there was a provision of ₹37977 lakh under this head. However, based on actual/ anticipated expenditure incurred, an amount of ₹33525 lakh is incurred towards land and compensation which has resulted in decrease of ₹4452 lakh in the cost of the transmission project. Head-wise details of decrease in the cost of land and compensation is as follows:

(₹ in lakh)

Description	As per RCE-I	As per RCE-II	Remarks
i) Land Cost and R&R Compensation for sub-station	7541	7541	Based on actual expenditure incurred under the head.
ii) Compensation towards Crop, Tree, PTCC, Railway, NHAI etc.	17083	14416	Based on actual expenditure incurred under the head.
iii) Compensation towards Forest	13354	11568	Based on actual expenditure incurred under the head.
Total	37977	33525	

(v) Foreign Exchange Rate Variation (Net increase of ₹2494 lakh: 0.55 %)

The transmission project involves ECB funding from International Finance Corporation (IFC) and also from foreign bonds along with domestic sources. Accordingly, there is



increase in liability on account of FERV of ₹2494 lakh in RCE-II due to foreign currency loan re-valuation.

(vi) Variation in IDC and IEDC (Net decrease of ₹2992 lakh: (-) 0.66 %)

Total IDC and IEDC under the transmission project has decreased by ₹2992 lakh as compared to the approved RCE-I which works out to (-) 0.66 % of the approved RCE-I as per the following break-up:

Decrease in IEDC

IEDC including contingencies for the transmission project in approved RCE-I was estimated to be ₹5159 lakh whereas in the RCE-II, on the basis of actual expenditure incurred, IEDC works out to ₹2720 lakh. Thus, IEDC under the transmission project has decreased by ₹2439 lakh.

Decrease in IDC

IDC for the transmission project as per approved RCE-I was estimated to be ₹41998 lakh whereas based on the actual funds flow, IDC for the transmission project in the RCE-II works out to ₹41445 lakh which has resulted in decrease of ₹553 lakh.

21. The main reason for decrease in IDC is attributable to decrease in the project cost (exclusive IEDC/ IDC/ FERV) from ₹403970 lakh in RCE-I to ₹386949 lakh in RCE-II.

Reasons for cost over-run of Assets

22. The Petitioner has submitted that there is cost over-run in the case of Asset-B7 and Asset-B14 with respect to approved cost as per RCE-I. The reasons of cost over-run are as follows:



Asset B7- 1500 MVA ICT- 1 with one spare unit along with associated bays at Vindhyachal Pooling Station

23. Against the approved cost of ₹7162.53 lakh in RCE-I, the total estimated cost of Asset-B7 is ₹7208.99 lakh. Therefore, there is minor cost over-run of ₹46.46 lakh with respect to RCE-I.

24. In original petition, cost was envisaged on the basis of executed/likely to be executed quantities of the transmission project whereas the estimated completion cost is based on final amendments and site requirements due to which there is a variation of ₹46.46 lakh in the sub-station package of Asset-B7. The said variation between estimated completion cost claimed in instant true-up petition vis-à-vis estimated completion cost as per RCE is attributable to final amendments and payments made to various vendors based on reconciliation/ amendments in awarded contracts.

Asset-B1 and Asset-B 14 1st and 2nd Ckt of Rihand III-Vindhyachal Pooling Station 765 kV D/C Line and associated bay at Vindhyachal Pooling Station

25. Against the approved cost of ₹21675.32 lakh in RCE-I, the total estimated cost of Asset-B1 and Asset-B14 is ₹22199.41 lakh. Therefore, there is cost over-run of ₹524.09 lakh with respect to RCE-I.

(i) Increase in IDC

The Petitioner has submitted that at the time of preparation of Auditor's Certificate dated 20.11.2015 used in Petition No. 71/TT/2015, expenditure from 1.4.2015 to 14.10.2015 (COD-15.10.2015) was un-audited. Therefore, in the funding of Asset-B14, proposed loan was deployed without reflecting actual loan deployment. The actual funding and loan deployment for the asset is provided in the present true-up petition. Thus, there is change in IDC and consequential change in COD cost. This has resulted in variation of ₹283.97 lakh in COD cost



with respect to Asset-B14 in the instant petition. The Petitioner has submitted to consider the actual loan deployed and allow the tariff accordingly.

(ii) Transmission line materials

The Petitioner has submitted that line length and various types of towers and foundations in approved RCE-I were envisaged on the basis of detailed survey and executed/ likely to be executed quantities of the transmission project. In the instant petition, as per project requirements, final amendments in contracts and site conditions, there is net variation of ₹240.12 lakh in the tower package and conductor package of with respect to the approved cost as per RCE-I.

26. The Petitioner has submitted that there is no cost over-run against overall costs of the assets with respect to RCE-II and as such the entire cost claimed in the present petition may be allowed.

27. We have considered the submissions made by the Petitioner and UPPCL. UPPCL has contended that the Petitioner's prayer for revision of the capital cost of Combined Asset-A may be rejected as no reasons are given by the Petitioner. In response, the Petitioner has submitted that the marginal variation of ₹0.88 lakh is due to disallowed IDC on account of computational difference. The errors in computation of IDC in case of Combined Asset-A and some other assets and due to time over-run in case of Asset-D are disallowed as detailed in paragraph 33 of this order.

28. The details of the capital cost of the transmission project approved by the Board of Directors of the Petitioner are as follows:

Approval Date	Project cost
Investment Approval (IA) 17.3.2010	₹467299 lakh including IDC of ₹29779.00 lakh
Revised Cost Estimate-I (RCE-I) 26.5.2016	₹453121.00 lakh including IDC of ₹41998.00 lakh
Revised Cost Estimate-I (RCE-II) 22.11.2021	₹435602.00 lakh including IDC of ₹41445.00 lakh



29. The estimated completion cost of Combined Asset-A, Asset-B1, Asset-B2, Asset-B3, Asset-B6, Asset-B7, Asset-B9, Asset-B10, Asset-B11, Asset-B12, Asset-B13, Asset-B14, Asset-C1 and Asset-C2 is more than the FR apportioned approved cost. The Petitioner has submitted RCE-I approved by its Board of Directors. As compared to RCE-I, there is minor cost over-run with respect to the estimated completion cost. The estimated completion cost of the transmission assets i.e. Combined Asset-A, Asset-B1, Asset-B2, Asset-B3, Asset-B4, Asset-B5, Asset-B6, Asset-B8, Asset-B9, Asset-B10, Asset-B11, Asset-B12, Asset-B13, Asset-C1, Asset-C2 and Asset-D is within RCE-I. The reasons for cost variation of Asset-B7 is due to final amendments and payments made to various vendors based on reconciliation/amendments in awarded contracts and Asset-B14 is due to actual loan deployment and variation in the tower package and conductor package. In the instant case, apportioned approved cost as per RCE-I is ₹453121.00 lakh whereas the estimated completion cost of the transmission project is ₹427500.34 lakh. Thus, the total project cost is reduced by ₹25620.66 lakh. This downward variation of cost is further approved by the Competent Authority i.e. CMD of the Petitioner and the Petitioner has submitted duly approved RCE-II. As the Petitioner has submitted approved RCE-II, this downward variation is allowed. It is further observed that the total project cost of the transmission assets as on 31.3.2019 of the transmission assets is within the RCE-II cost. Thus, minor cost-run individual assets/ elements is allowed.



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

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

(₹ in lakh)					
Assets	IDC as per Auditor's Certificate	IDC Discharged upto COD	IDC discharged during 2014-15	IDC discharged during 2015-16	IDC discharged during 2016-17
Combined Asset-A	7482.36	7395.16	87.20		
Asset-B1	2098.03	1724.49	373.54		
Asset-B2	167.14	165.00	1.58	0.58	
Asset-B3	331.28	321.05		10.23	
Asset-B4	6789.35	6789.35		0.00	0.00
Asset-B5	9982.38	7321.51		2660.87	
Asset-B6	351.94	247.26		103.57	1.11
Asset-B7	515.93	423.64		86.45	5.84
Asset-B8	6616.37	5254.80		1268.45	93.52
Asset-B9	397.72	365.85		19.92	11.95
Asset-B10	191.40	180.43		8.45	2.52
Asset-B11	76.12	74.07		1.08	0.97
Asset-B12	78.70	75.66		0.20	2.84
Asset-B13	197.39	106.04			91.35
Asset-B14	755.34	718.36		16.72	20.26
Asset-C1	4159.13	3684.02	475.11		
Asset-C2	564.25	408.30	155.95		
Asset-D	200.92	200.92			

31. The Petitioner has submitted IDC computation statement which contains name of the loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in IDC statement. Further, loan amount as on COD has been mentioned in Form-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as mismatch in loan amount between IDC



statement and Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C.

32. In case of Asset-B4, there were many discrepancies between the IDC statement, Auditor's Certificate and Form-6 and Form-9C. IDC for Asset-B4 has been computed based on the information available in the Auditor's Certificate and Form-9C.

33. IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter with respect to the transmission assets for the purpose of determination of tariff is as follows:

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC disallowed due to computational difference	IDC disallowed due to time over-run not condoned	IDC Allowed
Combined Asset-A	7452.01	0.00	0.00	7452.01
Asset-B1	2098.03	0.00	0.00	2098.03
Asset-B2	167.14	0.00	0.00	167.14
Asset-B3	331.28	0.00	0.00	331.28
Asset-B4	6789.35	0.00	0.00	6789.35
Asset-B5	9982.38	0.00	0.00	9982.38
Asset-B6	351.94	0.41	0.00	351.53
Asset-B7	515.93	0.36	0.00	515.57
Asset-B8	6616.37	14.50	0.00	6601.87
Asset-B9	397.72	0.10	0.00	397.62
Asset-B10	191.40	0.25	0.00	191.15
Asset-B11	76.12	0.00	0.00	76.12
Asset-B12	78.70	0.00	0.00	78.70
Asset-B13	197.39	81.46	0.00	115.93
Asset-B14	755.34	0.00	0.00	755.34
Asset-C1	4159.13	0.00	0.00	4159.13
Asset-C2	564.25	14.15	0.00	550.10
Asset-D	200.92	0.00	142.64	58.28

34. The details of IDC allowed in respect of the transmission assets is as follows:



(₹ in lakh)

Assets	IDC allowed in this order	IDC discharged upto COD	IDC discharged during 2014-15	IDC discharged during 2015-16	IDC discharged during 2016-17
Combined Asset-A	7452.01	7278.98	173.03		
Asset-B1	2098.03	1724.49	373.54		
Asset-B2	167.14	165.00	1.58	0.56	
Asset-B3	331.28	321.05		10.23	
Asset-B4	6789.35	6789.35		0.00	0.00
Asset-B5	9982.38	7321.51		2660.87	
Asset-B6	351.53	247.06		103.57	0.91
Asset-B7	515.57	423.59		86.45	5.53
Asset-B8	6601.87	5252.81		1268.45	80.61
Asset-B9	397.62	365.85		19.92	11.85
Asset-B10	191.15	180.16		8.45	2.53
Asset-B11	76.12	74.07		1.08	0.97
Asset-B12	78.70	75.66		0.20	2.84
Asset-B13	115.93	106.04			9.89
Asset-B14	755.34	718.36		16.72	20.26
Asset-C1	4159.13	3684.02	475.11		
Asset-C2	550.10	398.64	151.46		
Asset-D	58.28	58.28			

35. The Petitioner has claimed the following IEDC for the transmission assets in the instant petition:

(₹ in lakh)

Assets	IEDC as per Auditor's Certificate	IEDC Discharged upto COD
Combined Asset-A	2488.95	2488.95
Asset-B1	354.96	354.96
Asset-B2	24.83	24.83
Asset-B3	30.36	30.36
Asset-B4	739.96	739.96
Asset-B5	572.34	572.34
Asset-B6	36.27	36.27
Asset-B7	41.58	41.58
Asset-B8	346.31	346.31
Asset-B9	39.56	39.56
Asset-B10	15.93	15.93
Asset-B11	7.24	7.24
Asset-B12	7.74	7.74



Assets	IEDC as per Auditor's Certificate	IEDC Discharged upto COD
Asset-B13	55.48	55.48
Asset-B14	200.66	200.66
Asset-C1	39.76	39.76
Asset-C2	41.07	41.07
Asset-D	60.50	60.50

36. We have considered the submissions of the Petitioner. IEDC claimed and considered as on COD and IEDC disallowed for the purpose of tariff determination with respect to the transmission assets is as follows:

(₹ in lakh)			
Assets	IEDC as per Auditor's Certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed
Combined Asset-A	2488.95	0.00	2488.95
Asset-B1	354.96	0.00	354.96
Asset-B2	24.83	0.00	24.83
Asset-B3	30.36	0.00	30.36
Asset-B4	739.96	0.00	739.96
Asset-B5	572.34	0.00	572.34
Asset-B6	36.27	0.00	36.27
Asset-B7	41.58	0.00	41.58
Asset-B8	346.31	0.00	346.31
Asset-B9	39.56	0.00	39.56
Asset-B10	15.93	0.00	15.93
Asset-B11	7.24	0.00	7.24
Asset-B12	7.74	0.00	7.74
Asset-B13	55.48	0.00	55.48
Asset-B14	200.66	0.00	200.66
Asset-C1	39.76	0.00	39.76
Asset-C2	41.07	0.00	41.07
Asset-D	60.50	18.83	41.67

Initial Spares

37. Regulation 8(iv) of the 2009 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of the original capital cost, subject to the following ceiling norms:



“(iv) Transmission System

- (a) Transmission line - 0.75%
- (b) Transmission Sub-station - 2.5%
- (c) Series Compensation devices and HVDC station - 3.5%

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

“(d) Transmission System

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

39. Initial Spares in respect of the transmission assets claimed by the Petitioner are as follows:

(₹ in lakh)					
Assets	Parts	Estimated completion cost (A)	Ceiling (C)	Initial spares claimed (B)	Allowable initial spares* $D = [(A-B)*C / (100-C)]$
Assets executed in 2009-14	Transmission Line	86004.37	0.75	519.63	645.98
	Sub-station	12087.56	2.50	239.16	303.81
Assets executed in 2014-19	Transmission Line	219707.02	1.00	1998.01	2199.08
	Sub-station	48324.75	6.00	2143.74	2782.67
Total	Transmission Line			2517.64	2845.06
	Sub-station			2382.90	3086.48

40. The Petitioner has submitted that Initial Spares have been claimed on the basis of project as a whole in line with APTEL’s judgment in Appeal 74 of 2017 wherein it was opined that Initial Spares have to be calculated on overall project basis instead of individual asset basis. Accordingly, disallowed Initial Spares of ₹3.62 lakh in Petition No. 201/TT/2014 for Asset-C1 has been added in the capital cost upto 31.3.2014 as mentioned in the Auditor’s certificate.



41. MPPMCL has submitted that the Petitioner has claimed disallowed Initial Spares of ₹3.63 lakh in Petition No. 201/TT/2014 referring APTEL's judgement in Appeal 74 of 2017, in which APTEL opined that Initial Spares have to be calculated on overall project basis instead of individual asset basis. According to MPPMCL, the judgment of the APTEL was in a different case and as such it cannot be made applicable to the present case. Therefore, the already disallowed spares of ₹3.63 lakh should not be allowed.

42. In response, the Petitioner has reiterated its submissions as made in the petition. Since, the total Initial Spares are within the limit for the transmission project, the Petitioner has requested to allow the entire amount of Initial Spares as claimed in the petition.

43. We have considered the submissions of the Petitioner and MPPMCL. In terms of the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling on overall project cost. Accordingly, Initial Spares are allowed on the basis of the overall project cost in 2019-24 tariff period when all the transmission assets are combined and the overall project cost is arrived at. However, as Asset-A to Asset-G (nomenclature as per Petition No. 9/TT/2018) have been combined as Combined Asset-A (nomenclature in the instant petition) as on 1.4.2014, Initial Spares have been allowed on combined cost of Asset-A to Asset-G. Initial Spares allowed for the transmission assets are as follows:



Assets executed during 2009-14 tariff period

Asset	Particulars	Capital Cost upto cut-off date	Initial Spares as claimed	Ceiling % as per the 2009 Tariff Regulations	Ceiling amount as per Regulations	Excess spares
Combined Asset-A	Transmission Line	86004.37	519.63	0.75%	645.98	Nil
	Sub-station	12087.56	322.16	2.50%	301.68	Nil

Assets executed during 2014-19 tariff period

(₹ in lakh)

Assets	Elements	Plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works for the purpose of Initial Spares)	Apportioned initial spares claimed	Ceiling as per 2014 Tariff Regulations (in %)	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Asset-B1	Transmission Line	15370.16	139.33	1	153.85	Nil	139.33
Asset-B2	Sub-station	2405.15	144.34	6	144.31	0.03	144.31
Asset-B3	Sub-station	3139.85	185.17	6	188.60	Nil	185.17
Asset-B4	Transmission Line	53085.18	498.00	1	531.18	Nil	498.00
	Sub-station	3846.20	3.00	6	245.31	Nil	3.00
Asset-B5	Transmission Line	66987.38	547.05	1	671.11	Nil	547.05
	Sub-station	16015.62	570.71	6	985.85	Nil	570.71
Asset-B6	Sub-station	2765.27	152.00	6	166.80	Nil	152.00
Asset-B7	Sub-station	6651.48	240.00	4	267.15	Nil	240.00
Asset-B8	Transmission Line	44809.54	410.00	1	448.48	Nil	410.00
	Sub-station	4565.70	176.00	4	182.90	Nil	176.00
Asset-B9	Sub-station	3294.21	126.00	4	132.01	Nil	126.00
Asset-B10	Sub-station	1166.32	46.00	4	46.68	Nil	46.00
Asset-B11	Sub-station	408.33	16.00		16.37	Nil	16.00
Asset-B12	Sub-station	448.65	18.00	4	17.94	0.06	17.94
Asset-B13	Sub-station	616.33	23.01	4	24.72	Nil	23.01
Asset-B14	Sub-station	446.02	18.00	4	17.83	0.17	17.83
Asset-C1	Transmission Line	39454.76	403.63	1	394.46	9.17	394.46
	Sub-station	2886.09	230.51	6	169.51	61.00	169.51
Asset-C2	Sub-station	2963.25	195.00	6	176.70	18.30	176.70

44. The details of the capital cost approved in respect of the transmission assets as on COD after adjustment of IDC, IEDC and Initial Spares are as follows:



(₹ in lakh)

Assets	Capital Cost claimed as on COD/2014 (Auditor's Certificate) (A)	IDC disallowed (B)	Excess Initial Spares Disallowed (C)	IEDC disallowed(D)	Undischarged IDC as on COD (E)	Capital cost approved as on COD (F=A-B-C-D-E)
Combined Asset-A*	89478.39	0.00	20.48	0.00	173.03	89284.82
Asset-B1	16126.57	0.00	0.00	0.00	373.54	15753.03
Asset-B2	1747.49	0.00	0.03	0.00	2.14	1745.32
Asset-B3	2405.57	0.00	0.00	0.00	10.23	2395.34
Asset-B4	62202.74	0.00	0.00	0.00	0.00	62202.74
Asset-B5	88387.45	0.00	0.00	0.00	2660.87	85726.58
Asset-B6	2159.30	0.41	0.00	0.00	104.48	2054.42
Asset-B7	4721.19	0.36	0.00	0.00	91.98	4628.85
Asset-B8	50115.04	14.50	0.00	0.00	1349.06	48751.48
Asset-B9	2265.88	0.10	0.00	0.00	31.87	2233.91
Asset-B10	1046.25	0.25	0.00	0.00	10.98	1035.01
Asset-B11	459.77	0.00	0.00	0.00	2.05	457.72
Asset-B12	485.01	0.00	0.06	0.00	3.04	481.91
Asset-B13	685.68	81.46	0.00	0.00	9.89	594.33
Asset-B14	4010.23	0.00	0.17	0.00	36.98	3973.08
Asset-C1	45541.90	0.00	70.18	0.00	475.11	44996.61
Asset-C2	3349.51	14.15	18.30	0.00	151.46	3165.60
Asset-D	3858.87	142.64	0.00	18.83	0.00	3697.40

**For Combined Asset-A, cost as on 31.3.2014 is considered and for remaining assets cost as on COD is considered.*

Additional Capital Expenditure ("ACE")

45. The Commission vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Asset B1 to B14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset-C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D) allowed ACE in respect of the transmission assets for 2014-19 tariff period which is as follows:

(₹ in lakh)

Assets	Admitted ACE			
	2014-15	2015-16	2016-17	2017-18
Combined Asset-A	4084.46	1885.41	3226.39	
Asset-B1	1587.20			
Asset-B2	25.98	641.95	184.42	



Assets	Admitted ACE			
	2014-15	2015-16	2016-17	2017-18
Asset-B3	13.44	815.55	223.49	
Asset-B4		3090.34	457.39	
Asset-B5		7161.86	2488.54	369.35
Asset-B6		605.88	229.60	35.41
Asset-B7		1179.85	594.16	197.60
Asset-B8		4824.19	1474.89	
Asset-B9		663.37	548.24	144.00
Asset-B10		231.05	98.98	
Asset-B11		21.85	12.82	
Asset-B12		43.1	7.13	
Asset-B13		45.56	168.4	19.8
Asset-B14		68.04	68.86	
Asset-C1	1167.23	703.47	3467.99	538.71
Asset-C2	350.07	24.94	325.68	169.88
Asset-D			575.98	

46. The Petitioner has claimed the following ACE in respect of the transmission assets based on actual expenditure:

(₹ in lakh)

Assets	Actual ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A	4075.34	1885.41	2650.79	114.10	
B1	1312.17	384.41		260.04	
B2	24.42	278.77	546.44		
B3	13.44	245.04	443.18	394.25	
B4		1386.10	1639.63	35.02	
B5		5171.78	6967.09	2055.71	82.12
B6		32.70	805.60	155.88	
B7		1423.18	731.83	332.79	
B8		2633.88	2588.02	1000.98	316.26
B9		404.50	812.42	248.69	
B10		84.95	242.45		
B11		26.88	5.54		
B12		20.63	29.45		
B13		45.56	95.88		51.97



Assets	Actual ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
B14		25.56	28.76	51.67	
C1	692.12	703.47	2175.71	191.67	462.27
C2	194.12	24.94	331.82		
D					

47. The cut-off dates of the transmission assets are as follows:

Assets	Description	COD	Cut-off date
Combined Asset-A	400 kV D/C (Quad) Vindhyachal IV- Vindhyachal Pooling Station (Bypassing Vindhyachal Pooling Station) Transmission Line	1.1.2013	31.3.2016
	400 kV D/C (Twin) Sasan – Vindhyachal Pooling Transmission Line	1.1.2013	31.3.2016
	400 kV 1X63 MVAR Bus Reactor along with associated 400 kV bays at Satna Sub-station	1.4.2013	31.3.2016
	400 kV D/C Quad Bassi-Jaipur (RPVNL) line along with associated bays at Bassi Sub-station	1.1.2014	31.3.2017
	765 kV S/C Satna-Gwalior Line-1 with associated bays at Satna Sub-stations and line reactor	1.3.2014	31.3.2017
	3X80 MVAR 765 kV Line reactor along with associated bays at Gwalior Sub-station for Satna-Gwalior Line-I	1.1.2014	31.3.2017
	3X80 MVAR 765 kV Line reactor along with associated bays at Gwalior Sub-station (for 765 kV S/C Gwalior-Jaipur Ckt-I)	1.3.2014	31.3.2017
Asset-B1	One Ckt of Rihand III- Vindhyachal Pooling Station 765 kV D/C Line	6.7.2014	31.3.2017
Asset-B2	*3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhyachal Pooling Station – Satna Ckt # 1	13.11.2014	31.3.2017
Asset-B3	*3x80 MVAR Line Reactor with Line Bay commissioned as Bus Reactor at Satna Sub-station for 765 kV S/C Vindhyachal Pooling Station – Satna Ckt # 2	14.1.2015	31.3.2018
Asset-B4	765 kV S/C Gwalior-Jaipur (RVPN) Ckt #1 Transmission Line and Bay Extension at 765/400 kV Phagi (RVPN-Jaipur) Sub-station (765 kV Gwalior Bay along with Line Reactor charged as Bus Reactor under Interim Contingency on 1.3.2014 to be used as Line Reactor at Gwalior along with Bays)	14.8.2015	31.3.2018
Asset-B5	765/400 kV Vindhyachal Pooling Station (New) including 1500 MVA ICT II along with associated bays at Vindhyachal Pooling Station & 765 S/C Vindhyachal Pooling Station - Satna Ckt 1 Transmission Line with Bays at Vindhyachal Pooling Station along with 3*80 MVAR Switchable Line Reactor & associated line bays at Vindhyachal Pooling Station for one ckt of 400 kV D/C Sasan-Vindhyachal Pooling Station Transmission Line & 765 kV S/C Sasan	2.4.2015	31.3.2018



Assets	Description	COD	Cut-off date
	Vindhyachal Pooling Station Transmission Line along with associated bays at Reliance Sasan.		
Asset-B6	765 kV, 240 MVAR Bus Reactor #2 with bay Satna Sub-station	25.6.2015	31.3.2018
Asset-B7	1500 MVA ICT- 1 with one spare unit along with associated bays at Vindhyachal Pooling Station	4.7.2015	31.3.2018
Asset-B8	765 kV S/C Vindhyachal - Satna ckt-2, with Line Reactor (3*80 MVAR) & 1 spare unit along with Bays at Vindhyachal Pooling Station	11.8.2015	31.3.2018
Asset-B9	765 kV 240 MVAR Bus Reactor (3*80) with Bays at Vindhyachal Pooling Station	24.8.2015	31.3.2018
Asset-B10	400 kV Bays at Vindhyachal Pooling Station for 400 kV D/C Vindhyachal Pooling Station -Sasan Ckt #2 Transmission Line and 400 kV D/C Vindhyachal Pooling Station - Vindhyachal IV Transmission Line	31.8.2015	31.3.2018
Asset-B11	400 kV bay at Vindhyachal Pooling Station for 400 kV Vindhyachal IV-Vindhyachal Pooling Station ckt-I Transmission Line	21.10.2015	31.3.2018
Asset-B12	400 kV bay (1 number) at Vindhyachal Pooling Station for Ckt-I of 765 kV D/C Rihand-III-Vindhyachal Pooling Station Transmission Line	6.11.2015	31.3.2018
Asset-B13	400 kV 63 MVAR Bus Reactor along with Bays at Vindhyachal Pooling Station	21.3.2016	31.3.2019
Asset-B14	2nd Ckt of Rihand III- Vindhyachal Pooling Station 765 kV D/C Line and associated bay at Vindhyachal Pooling Station	15.10.2015	31.3.2018
Asset-C1	765 kV S/C Satna – Gwalior ckt. 2 Transmission Line along with associated bays at both ends and 765 kV, 240 MVAR Switchable Line Reactor at Satna end	6.8.2014	31.3.2017
Asset-C2	765 kV, 240 MVAR Switchable Line Reactor at Gwalior end	30.9.2014	31.3.2017
Asset-D	400 kV line bays-I & II (404 & 405) for D/C (Quad) Bassi-Jaipur (Phagi-RVPNL) line at 765/400 kV Jaipur (Phagi-RVPNL) Sub-station	4.1.2015	31.3.2018

48. The details of ACE incurred in respect of the transmission assets after the cut-off date is as follows:

Asset- A: In case of Asset A, ACE of ₹114.10 lakh has been claimed after the cut-off date as balance payment under Regulation 14(3)(v) of the 2014 Tariff Regulations.



Asset-B1: In case of Asset B1, ACE of ₹260.04 lakh has been claimed after the cut-off date as balance payment under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

Asset-B5: In case of Asset B5, ACE of ₹82.12 lakh has been claimed after the cut-off date as balance payment under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

Asset-B8: In case of Asset B8, ACE of ₹316.26 lakh has been claimed after the cut-off date as balance payment under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

Asset-C1: In case of Asset C1, ACE of ₹191.67 lakh in the year 2017-18 and ₹462.27 lakh in the year 2018-19 has been claimed after the cut-off date under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

49. The description of ACE is as follows:

(₹ in lakh)			
Assets	Party	2017-18	2018-19
Asset-B1	KEC International Limited	260.04	
	Total	260.04	
Asset-B5	Crop Comp	2.86	
	Tree Compensation	0.74	
	Inabena Bharat Pvt. Ltd.	43.87	
	Ramesh Enterprises	16.21	
	Retention money pertaining to Civil works	18.43	
	Total	82.12	
Asset-B8	Tree Compensation	0.10	
	WR2-Otv-Baroda	1.00	
	GE T&D India Limited	75.66	
	Alstom Grid Sas	158.53	
	ASEA Brown Boveri Ltd.	80.96	
	Total	316.26	
Asset-C1	Cons Permanent Road Jhakhi Satna Sub-station	5.41	
	Swastik Housing & Construction	37.99	
	Tree Cutting Bill, Tree Compensation and Crop Compensation	10.88	
	EMC Ltd.	115.94	5.00
	Larsen And Toubro Limited	21.44	



	Raja Construction		25.99
	TBEA Energy (India) Pvt. Ltd.		145.09
	TBEA Shenyang Transformer Group Co. Ltd.		286.18
	Total	191.67	462.27

50. The Petitioner has submitted that ACE has been claimed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and ACE incurred after the cut-off date has been claimed under Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations in respect of the transmission assets.

51. MPPMCL has submitted that the Petitioner has claimed ACE after the cut-off date for Combined Asset-A, Asset-B1, Asset-B5, Asset-B8 and Asset-C1 under Regulation 14 of the 2014 Tariff Regulations as balance payment. The Petitioner has not given any details of such undischarged liability, reasons for withholding the payment and release of payments etc. MPPMCL has further submitted that ACE projected to be implemented during 2019-20 and 2020-21 is claimed as per Regulation 25(1)(d) of the 2019 Tariff Regulations. The details of same have not been provided by the Petitioner. In absence of these essential documents, it is not possible to scrutinize the claim of the Petitioner in a proper way and has requested to do the prudence check of same.

52. In response, the Petitioner has submitted that admissibility of ACE incurred after COD and up to the cut-off date is to be dealt in accordance with Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and the admissibility of ACE incurred after the cut-off date is to be dealt in accordance with Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations. The Petitioner has



submitted that the element-wise break-up of cost (Form-5) claimed for each asset has been already submitted vide affidavit dated 30.7.2021. The Petitioner has further submitted that package-wise details of the cost claimed has also been furnished vide affidavit dated 30.7.2021 and has requested to allow the same as claimed.

53. We have considered the submissions of the Petitioner and MPPMCL. ACE claimed towards balance and retentions payments and unexecuted works within the cut-off date has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and ACE incurred after the cut-off date has been allowed for liability for works executed prior to the cut-off date under Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations. ACE allowed in respect of the transmission assets for 2014-19 period is as follows:

(₹ in lakh)

Asset	Year	ACE	Regulations
Combined Asset-A	2014-15	4248.83*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	1885.41	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	2560.79	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	114.40	Regulation 14(3)(v) of the 2014 Tariff Regulations

*including IDC of 173.03 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B1	2014-15	1685.71*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	384.41	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	0.00	
	2017-18	260.04	Regulation 14(2)(iv) of the 2014 Tariff Regulations

*including IDC of 373.54 lakh



(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B2	2014-15	26.00*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	279.33#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	546.44	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 1.58 lakh

#including IDC of 0.58 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B3	2014-15	13.44	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	255.27*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	443.18	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	394.25	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 10.23 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B4	2015-16	2245.59	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	1849.34	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	35.02	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B5	2015-16	7832.65	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	6967.09*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	2055.71	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2018-19	82.12	Regulation 14(2)(iv) of the 2014 Tariff Regulations

*including IDC of 2660.87 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B6	2015-16	136.27*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	806.51#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	155.88	Regulation 14(1)(i) and Regulation



Asset	Year	ACE	Regulations
			14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 103.57 lakh

#including IDC of 0.91 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B7	2015-16	1509.63*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	737.92#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	332.79	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 86.45 lakh

#including IDC of 5.53 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B8	2015-16	3902.23*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	2668.63#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	1000.98	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2018-19	316.26	Regulation 14(2)(iv) of the 2014 Tariff Regulations

*including IDC of 1268.45 lakh

#including IDC of 80.61 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B9	2015-16	424.42*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	824.37#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	248.69	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 19.92 lakh

#including IDC of 11.95 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B10	2015-16	93.40*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	244.98#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 8.45 lakh

#including IDC of 2.53 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B11	2015-16	27.96*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations



Asset	Year	ACE	Regulations
	2016-17	6.51#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

**including IDC of 1.08 lakh*

#including IDC of 0.97 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B12	2015-16	20.83*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	32.29#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

**including IDC of 0.20 lakh*

#including IDC of 0.58 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B13	2015-16	45.56	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	95.88*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	0.00	
	2018-19	51.97	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

**including IDC of 9.89 lakh*

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-B14	2015-16	42.28*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	49.02#	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	51.67	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

**including IDC of 16.72 lakh*

#including IDC of 20.26 lakh

(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-C1	2014-15	1167.23*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	703.47	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	2175.71	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2017-18	191.67	Regulation 14(2)(iv) of the 2014 Tariff Regulations
	2018-19	462.27	Regulation 14(2)(iv) of the 2014 Tariff Regulations

**including IDC of 475.11 lakh*



(₹ in lakh)

Asset	Year	ACE	Regulations
Asset-C2	2014-15	345.58*	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2015-16	24.94	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2016-17	331.82	Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations

*including IDC of 151.46 lakh

54. Capital cost allowed in respect of the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	FR AppORTIONED approved cost	RCE-I AppORTIONED approved cost	RCE-II AppORTIONED approved cost	Actual cost as on 31.3.2014/ COD	Actual ACE					Total cost as on 31.3.2019
					2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-A	124059.99	102170.34	102052.62	89284.82	4248.43	1885.41	2650.79	114.10	0.00	98183.55
Asset- B1	23732.38	18426.9	18357.25	15753.03	1685.71	384.41	0.00	260.04	0.00	18083.19
Asset- B2	5886.15	2857.13	2801.8	1745.32	26.00	279.33	546.44	0.00	0.00	2597.09
Asset- B3	6757.2	3836.76	3674.48	2395.34	13.44	255.27	443.18	394.25	0.00	3,501.48
Asset- B4	56843.05	70644.34	66228.54	62202.74	0.00	1386.10	1639.63	35.02	0.00	65263.49
Asset- B5	89689.17	112345.84	103160.68	85726.58	0.00	7832.65	6967.09	2055.71	82.12	102664.15
Asset- B6	5022.85	3361.17	3312.7	2054.42	0.00	136.27	806.51	155.88	0.00	3153.07
Asset- B7	12063.25	7287.53	7408.66	4628.85	0.00	1509.63	737.36	332.79	0.00	7208.63
Asset- B8	52300.04	57299.59	56911.92	48751.48	0.00	3902.33	2668.63	1000.98	316.26	56639.68
Asset- B9	6598.27	3765.16	3906.49	2233.91	0.00	424.42	824.37	248.69	0.00	3731.39
Asset- B10	1655	1469.74	1567.90	1035.01	0.00	93.40	244.98	0.00	0.00	1373.40
Asset- B11	521.08	507.14	672.53	457.72	0.00	27.96	6.51	0.00	0.00	492.19
Asset- B12	1341.48	549.41	691.22	481.91	0.00	20.83	32.29	0.00	0.00	535.03
Asset- B13	3128.62	952.23	1224.65	594.33	0.00	45.56	95.88	0.00	51.97	787.84
Asset- B14	4328.26	4319.05	4381.65	3973.08	0.00	42.28	49.02	51.67	0.00	4116.05
Asset- C1	70076.79	53511.55	50020.21	44996.61	1167.23	703.47	2175.71	191.67	462.27	49696.96
Asset- C2	6204.74	5123.31	4156.00	3165.60	345.58	24.94	331.82	0.00	0.00	3867.94
Asset- D	3030.81	4693.82	5072.66	3697.40	0.00	0.00	0.00	0.00	0.00	3697.40

55. The capital cost of the transmission assets as on 31.3.2019 is within the apportioned approved RCE-II cost.



Debt-Equity Ratio

56. Debt-equity ratio has been allowed in respect of the transmission assets in accordance with Regulation 19(3) of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on 1.4.2014 and 31.3.2019 are as follows:

Combined Asset-A						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	62499.37	70.00	6229.11	70.00	68728.48	70.00
Equity	26785.45	30.00	2669.62	30.00	29455.06	30.00
Total	89284.82	100.00	8898.73	100.00	98183.55	100.00
Asset-B1						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	11027.12	70.00	1631.11	70.00	12658.23	70.00
Equity	4725.91	30.00	699.05	30.00	5424.96	30.00
Total	15753.03	100.00	2330.16	100.00	18083.19	100.00
Asset-B2						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	1221.72	70.00	596.24	70.00	1817.96	70.00
Equity	523.60	30.00	255.53	30.00	779.13	30.00
Total	1745.32	100.00	851.77	100.00	2597.09	100.00
Asset-B3						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	1676.74	70.00	774.30	70.00	2451.04	70.00
Equity	718.60	30.00	331.84	30.00	1050.44	30.00
Total	2395.34	100.00	1106.14	100.00	3501.48	100.00



Asset-B4						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	43541.92	70.00	2142.53	70.00	45684.44	70.00
Equity	18660.82	30.00	918.23	30.00	19579.05	30.00
Total	62202.74	100.00	3060.75	100.00	65263.49	100.00

Asset-B5						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	60008.61	70.00	11856.30	70.00	71864.91	70.00
Equity	25717.97	30.00	5081.27	30.00	30799.25	30.00
Total	85726.58	100.00	16937.57	100.00	102664.15	100.00

Asset-B6						
Particulars	Capital cost as on COD	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	1438.09	70.00	769.06	70.00	2207.15	70.00
Equity	616.32	30.00	329.60	30.00	945.92	30.00
Total	2054.42	100.00	1098.66	100.00	3153.07	100.00

Asset-B7						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	3240.19	70.00	1805.85	70.00	5046.04	70.00
Equity	1388.65	30.00	773.93	30.00	2162.59	30.00
Total	4628.85	100.00	2579.78	100.00	7208.63	100.00

Asset-B8						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	34126.03	70.00	5521.74	70.00	39647.77	70.00
Equity	14625.44	30.00	2366.46	30.00	16991.90	30.00
Total	48751.48	100.00	7888.20	100.00	56639.68	100.00



Asset-B9						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	1563.74	70.00	1048.24	70.00	2611.97	70.00
Equity	670.17	30.00	449.24	30.00	1119.42	30.00
Total	2233.91	100.00	1497.48	100.00	3731.39	100.00

Asset-B10						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	724.51	70.00	236.87	70.00	961.38	70.00
Equity	310.50	30.00	101.51	30.00	412.02	30.00
Total	1035.01	100.00	338.38	100.00	1373.40	100.00

Asset-B11						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	320.40	70.00	24.13	70.00	344.53	70.00
Equity	137.32	30.00	10.34	30.00	147.66	30.00
Total	457.72	100.00	34.47	100.00	492.19	100.00

Asset-B12						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014- 19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	337.34	70.00	37.18	70.00	374.52	70.00
Equity	144.57	30.00	15.94	30.00	160.51	30.00
Total	481.91	100.00	53.12	100.00	535.03	100.00

Asset-B13						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	416.03	70.00	135.39	70.00	551.42	70.00
Equity	178.30	30.00	58.02	30.00	236.32	30.00
Total	594.33	100.00	193.41	100.00	787.74	100.00

Asset-B14						
Particulars	Capital cost as on	(in %)	ACE 2014-19	(in %)	Capital cost as on	(in %)



	1.4.2014				31.3.2019	
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2781.16	70.00	100.08	70.00	2881.24	70.00
Equity	1191.93	30.00	42.89	30.00	1234.82	30.00
Total	3973.08	100.00	142.97	100.00	4116.05	100.00

Asset-C1						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	31497.63	70.00	3290.25	70.00	34787.87	70.00
Equity	13498.98	30.00	1410.11	30.00	14909.09	30.00
Total	44996.61	100.00	4700.35	100.00	49696.96	100.00

Asset-C2						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2215.92	70.00	491.64	70.00	2707.56	70.00
Equity	949.68	30.00	210.70	30.00	1160.38	30.00
Total	3165.60	100.00	702.34	100.00	3867.94	100.00

Asset-D						
Particulars	Capital cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2588.18	70.00	0.00	70.00	2588.18	70.00
Equity	1109.22	30.00	0.00	30.00	1109.22	30.00
Total	3697.40	100.00	0.00	100.00	3697.40	100.00

Depreciation

57. The Petitioner's claim towards depreciation in respect of the transmission assets in the instant petition is higher than the depreciation allowed vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14) order dated 23.5.2016 in Petition No.



201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D). The Petitioner has not give any justification for claiming more depreciation than approved in previous orders nor made any specific prayer for allowing higher depreciation in the instant petition. The Commission has earlier dealt with similar issue in order dated 9.5.2020 Petition No. 19/TT/2020.

58. In line with the decision in Petition No. 19/TT/2020, depreciation @5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for 2014-19 tariff period as provided in 2014 Tariff Regulations. During 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.

59. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of the transmission assets as specified in the 2014 Tariff Regulations and depreciation allowed in respect of the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

Combined Asset-A						
	Particulars	2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	89284.82	93533.25	95418.66	98069.45	98183.55
B	ACE	4248.43	1885.41	2650.79	114.10	0.00
C	Closing Gross Block (A+B)	93533.25	95418.66	98069.45	98183.55	98183.55



D	Average Gross Block (A+C)/2	91409.03	94475.95	96744.05	98126.50	98183.55
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.2818	5.2820	5.2820	5.2820	5.2820
G	Aggregate Depreciable Value	34	33	32	31	30
H	Balance useful life of the asset (Year)	0	1	2	3	4
I	Lapsed life at the beginning of the year (Year)	82268.13	85028.36	87069.65	88313.85	88365.19
J	Depreciation during the year	4828.04	4990.19	5110.06	5183.05	5186.06
K	Cumulative depreciation	6035.21	11025.40	16135.46	21318.51	26504.58
L	Remaining Depreciable Value (G-K)	76232.92	74002.96	70934.19	66995.34	61860.62

(₹ in lakh)

Asset-B1						
	Particulars	2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	15753.03	17438.74	17823.15	17823.15	18083.19
B	ACE	1685.71	384.41	0.00	260.04	0.00
C	Closing Gross Block (A+B)	17438.74	17823.15	17823.15	18083.19	18083.19
D	Average Gross Block (A+C)/2	16595.89	17630.95	17823.15	17953.17	18083.19
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset (Year)	35	35	34	33	32
H	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
I	Aggregate Depreciable Value	14936.30	15867.85	16040.84	16157.85	16274.87
J	Depreciation during the year	645.79	930.91	941.06	947.93	954.79
K	Aggregate Cumulative Depreciation	645.79	1576.71	2517.77	3465.70	4420.49
L	Remaining Aggregate Depreciable Value	14290.50	14291.14	13523.07	12692.16	11854.38



(₹ in lakh)

	Particulars	Asset-B2				
		2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	1745.32	1771.32	2050.65	2597.09	2597.09
B	ACE	26.00	279.33	546.44	0.00	0.00
C	Closing Gross Block (A+B)	1771.32	2050.65	2597.09	2597.09	2597.09
D	Average Gross Block (A+C)/2	1758.32	1910.98	2323.87	2597.09	2597.09
E	Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	25	25	24	23	22
G	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	1582.49	1719.88	2091.48	2337.38	2337.38
I	Depreciation during the year	35.36	100.90	122.70	137.13	137.13
J	Aggregate Cumulative Depreciation	35.36	136.26	258.96	396.08	533.21
K	Remaining Aggregate Depreciable Value	1547.13	1583.63	1832.53	1941.30	1804.17

(₹ in lakh)

	Particulars	Asset-B3				
		2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	2395.34	2408.78	2664.05	3107.23	3501.48
B	ACE	13.44	255.27	443.18	394.25	0.00
C	Closing Gross Block	2408.78	2664.05	3107.23	3501.48	3501.48
D	Average Gross Block	2402.06	2536.41	2885.64	3304.36	3501.48
E	Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	25	25	24	23	22
G	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	2161.85	2282.77	2597.08	2973.92	3151.33



	Particulars	Asset-B3				
		2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
I	Combined depreciation during the year	26.75	133.92	152.36	174.47	184.87
J	Aggregate Cumulative Depreciation	26.75	160.67	313.03	487.51	672.38
K	Remaining Aggregate Depreciable Value	2135.10	2122.10	2284.04	2486.41	2478.95

(₹ in lakh)

	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	62202.74	63588.84	65228.47	65263.49
B	ACE	1386.10	1639.63	35.02	0.00
C	Closing Gross Block	63588.84	65228.47	65263.49	65263.49
D	Average Gross Block	62895.79	64408.66	65245.98	65263.49
E	Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	34	34	33	32
G	Lapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	56606.21	57967.79	58721.38	58737.14
I	Combined Depreciation during the year	2096.58	3401.74	3445.95	3446.87
J	Aggregate Cumulative Depreciation	2096.58	5498.32	8944.27	12391.14
K	Remaining Aggregate Depreciable Value	54509.63	52469.47	49777.11	46346.00

(₹ in lakh)

	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	85726.58	93559.23	100526.32	102582.03
B	ACE	7832.65	6967.09	2055.71	82.12
C	Closing Gross Block (A+B)	93559.23	100526.32	102582.03	102664.15
D	Average Gross Block (A+C)/2	89642.91	97042.78	101554.18	102623.09
E	Freehold land	7262.36	7293.50	7324.64	7324.64
F	Weighted Average Rate of Depreciation (WAROD) (in %)	4.85	4.87	4.88	4.88



	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
G	Balance useful life of the asset (Year)	33	33	32	31
H	Lapsed life at the beginning of the year (Year)	0	0	1	2
I	Aggregate Depreciable Value	74142.49	80774.35	84806.58	85768.61
J	Depreciation during the year	4336.30	4726.21	4952.17	5006.54
K	Aggregate Cumulative Depreciation	4336.30	9062.51	14014.68	19021.22
L	Remaining Aggregate Depreciable Value	69806.19	71711.84	70791.90	66747.39

(₹ in lakh)

	Particulars	Asset-B6			
		2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	2054.42	2190.69	2997.19	3153.07
B	ACE	136.27	806.51	155.88	0.00
C	Closing Gross Block	2190.69	2997.19	3153.07	3153.07
D	Average Gross Block	2122.55	2593.94	3075.13	3153.07
E	Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	25	25	24	23
G	Lapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	1910.30	2334.55	2767.62	2837.77
I	Combined Depreciation during the year	86.04	136.96	162.37	166.48
J	Aggregate Cumulative Depreciation	86.04	223.00	385.37	551.85
K	Remaining Aggregate Depreciable Value	1824.25	2111.54	2382.25	2285.91

(₹ in lakh)

	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	4628.85	6138.48	6875.84	7208.63
B	ACE	1509.63	737.36	332.79	0.00
C	Closing Gross Block (A+B)	6138.48	6875.84	7208.63	7208.63



	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
D	Average Gross Block (A+C)/2	5383.66	6507.16	7042.23	7208.63
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
F	Aggregate Depreciable Value	25	25	24	23
G	Balance useful life of the asset (Year)	0	0	1	2
H	Elapsed life at the beginning of the year (Year)	4845.30	5856.44	6338.01	6487.76
I	Depreciation during the year	211.25	343.58	371.83	380.62
J	Cumulative depreciation	211.25	554.83	926.66	1307.27
K	Remaining Depreciable Value (F-J)	4634.04	5301.61	5411.35	5180.49

(₹ in lakh)

	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	48751.48	52653.81	55322.44	56323.42
B	ACE	3902.33	2668.63	1000.98	316.26
C	Closing Gross Block (A+B)	52653.81	55322.44	56323.42	56639.68
D	Average Gross Block (A+C)/2	50702.64	53988.12	55822.93	56481.55
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
F	Aggregate Depreciable Value	34	34	33	32
G	Balance useful life of the asset (Year)	0	0	1	2
H	Elapsed life at the beginning of the year (Year)	45632.38	48589.31	50240.63	50833.39
I	Depreciation during the year	1712.17	2851.55	2948.43	2983.21
J	Cumulative depreciation	1712.17	4563.72	7512.16	10495.36
K	Remaining Depreciable Value (F-J)	43920.20	44025.59	42728.48	40338.03

(₹ in lakh)

	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	2233.91	2658.33	3482.70	3731.39
B	ACE	424.42	824.37	248.69	0.00
C	Closing Gross Block (A+B)	2658.33	3482.70	3731.39	3731.39
D	Average Gross Block (A+C)/2	2446.12	3070.52	3607.05	3731.39
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
F	Aggregate Depreciable Value	25	25	24	23
G	Balance useful life of the asset (Year)	0	0	1	2



	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
H	Lapsed life at the beginning of the year (Year)	2201.51	2763.46	3246.34	3358.25
I	Depreciation during the year	77.99	162.12	190.45	197.02
J	Cumulative depreciation	77.99	240.11	430.56	627.58
K	Remaining Depreciable Value (F-J)	2123.52	2523.35	2815.78	2730.67

(₹ in lakh)

	Particulars	Asset-B10			
		2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	1035.01	1128.41	1373.40	1373.40
B	ACE	93.40	244.98	0.00	0.00
C	Closing Gross Block (A+B)	1128.41	1373.40	1373.40	1373.40
D	Average Gross Block (A+C)/2	1081.71	1250.90	1373.40	1373.40
E	Weighted Average Rate of Depreciation (in %)	5.37	5.36	5.36	5.36
F	Aggregate Depreciable Value	23	23	22	21
G	Balance useful life of the asset (Year)	0	0	1	2
H	Lapsed life at the beginning of the year (Year)	973.54	1125.81	1236.06	1236.06
I	Depreciation during the year	33.97	67.08	73.55	73.55
J	Cumulative depreciation	33.97	101.05	174.60	248.16
K	Remaining Depreciable Value (F-J)	939.57	1024.76	1061.45	987.90

(₹ in lakh)

	Particulars	Asset-B11			
		2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	457.72	485.68	492.19	492.19
B	ACE	27.96	6.51	0.00	0.00
C	Closing Gross Block (A+B)	485.68	492.19	492.19	492.19
D	Average Gross Block (A+C)/2	471.70	488.94	492.19	492.19
E	Weighted Average Rate of Depreciation (in %)	5.40	5.39	5.39	5.39
F	Aggregate Depreciable Value	23	23	22	21
G	Balance useful life of the asset (Year)	0	0	1	2
H	Lapsed life at the beginning of the year (Year)	424.53	440.04	442.97	442.97
I	Depreciation during the year	11.34	26.38	26.55	26.55
J	Cumulative depreciation	11.34	37.71	64.26	90.82
K	Remaining Depreciable Value (F-J)	413.19	402.33	378.71	352.15



(₹ in lakh)

	Particulars	Asset-B12			
		2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	481.91	502.74	535.03	535.03
B	ACE	20.83	32.29	0.00	0.00
C	Closing Gross Block (A+B)	502.74	535.03	535.03	535.03
D	Average Gross Block (A+C)/2	492.33	518.89	535.03	535.03
E	Weighted Average Rate of Depreciation (in %)	5.39	5.39	5.39	5.39
F	Aggregate Depreciable Value	23	23	22	21
G	Balance useful life of the asset (Year)	0	0	1	2
H	Lapsed life at the beginning of the year (Year)	443.10	467.00	481.53	481.53
I	Depreciation during the year	10.66	27.96	28.82	28.82
J	Cumulative depreciation	10.66	38.62	67.44	96.26
K	Remaining Depreciable Value (F-J)	432.43	428.38	414.09	385.27

(₹ in lakh)

	Particulars	Asset-B13			
		2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	594.33	639.89	735.77	735.77
B	ACE	45.56	95.88	0.00	51.97
C	Closing Gross Block (A+B)	639.89	735.77	735.77	787.74
D	Average Gross Block (A+C)/2	617.11	687.83	735.77	761.76
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
F	Aggregate Depreciable Value	25	25	24	23
G	Balance useful life of the asset (Year)	0	0	1	2
H	Lapsed life at the beginning of the year (Year)	555.40	619.05	662.19	685.58
I	Depreciation during the year	0.98	36.32	38.85	40.22
J	Cumulative depreciation	0.98	37.30	76.15	116.37
K	Remaining Depreciable Value (F-J)	554.42	581.75	586.05	569.21

(₹ in lakh)

	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	3973.08	4015.36	4064.38	4116.05
B	ACE	42.28	49.02	51.67	0.00
C	Closing Gross Block (A+B)	4015.36	4064.38	4116.05	4116.05
D	Average Gross Block (A+C)/2	3994.22	4039.87	4090.22	4116.05



	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
E	Weighted Average Rate of Depreciation (in %)	5.29	5.29	5.29	5.29
F	Aggregate Depreciable Value	34	34	33	32
G	Balance useful life of the asset (Year)	0	0	1	2
H	Lapsed life at the beginning of the year (Year)	3594.80	3635.89	3681.20	3704.45
I	Depreciation during the year	97.63	213.87	216.53	217.89
J	Cumulative depreciation	97.63	311.50	528.03	745.93
K	Remaining Depreciable Value (F-J)	3497.17	3324.38	3153.17	2958.52

(₹ in lakh)

Asset-C1						
	Particulars	2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	44996.61	46163.84	46867.31	49043.02	49234.69
B	ACE	1167.23	703.47	2175.71	191.67	462.27
C	Closing Gross Block (A+B)	46163.84	46867.31	49043.02	49234.69	49696.96
D	Average Gross Block (A+C)/2	45580.23	46515.58	47955.17	49138.86	49465.83
E	Freehold land	98.83	98.83	98.83	98.83	98.83
F	Weighted Average Rate of Depreciation (in %)	5.26	5.26	5.25	5.24	5.24
G	Aggregate Depreciable Value	34	34	33	32	31
H	Balance useful life of the asset (Year)	0	0	1	2	3
I	Lapsed life at the beginning of the year (Year)	40933.26	41775.07	43070.70	44136.02	44430.30
J	Depreciation during the year	1563.71	2446.33	2516.76	2574.58	2591.17
K	Cumulative depreciation	1563.71	4010.04	6526.79	9101.37	11692.54
L	Remaining Depreciable Value (G-K)	39369.55	37765.04	36543.91	35034.65	32737.76

(₹ in lakh)

Asset-C2						
	Particulars	2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	3165.60	3511.18	3536.12	3867.94	3867.94
B	ACE	345.58	24.94	331.82	0.00	0.00



Asset-C2						
	Particulars	2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
C	Closing Gross Block (A+B)	3511.18	3536.12	3867.94	3867.94	3867.94
D	Average Gross Block (A+C)/2	3338.39	3523.65	3702.03	3867.94	3867.94
E	Freehold land	5.28	5.28	5.28	5.28	5.28
F	Weighted Average Rate of Depreciation (in %)	25	25	24	23	22
G	Aggregate Depreciable Value	0	0	1	2	3
H	Balance useful life of the asset (Year)	3004.55	3171.28	3331.82	3481.14	3481.14
I	Lapsed life at the beginning of the year (Year)	88.37	186.05	195.47	204.23	204.23
J	Depreciation during the year	88.37	274.42	469.89	674.12	878.34
K	Cumulative depreciation	2916.17	2896.86	2861.93	2807.03	2602.80
L	Remaining Depreciable Value (G-K)	2932.16	2911.88	2875.99	2820.12	2614.92

(₹ in lakh)

Asset-D						
	Particulars	2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	3697.40	3697.40	3697.40	3697.40	3697.40
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3697.40	3697.40	3697.40	3697.40	3697.40
D	Average Gross Block (A+C)/2	3697.40	3697.40	3697.40	3697.40	3697.40
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
G	Aggregate Depreciable Value	25	25	24	23	22
H	Balance useful life of the asset (Year)	0	0	1	2	3
I	Lapsed life at the beginning of the year (Year)	3327.66	3327.66	3327.66	3327.66	3327.66
J	Depreciation during the year	46.53	195.22	195.22	195.22	195.22
K	Cumulative depreciation	46.53	241.75	436.98	632.20	827.42



L	Remaining Depreciable Value (G-K)	3281.12	3085.90	2890.68	2695.46	2500.23
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60. The details of depreciation approved in respect of the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D), claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A					
Approved vide order dated 5.9.2018 in Petition No. 9/TT/2018	4829.28	4987.10	5122.17	5207.35	5207.35
Claimed by the Petitioner in the instant petition	4835.90	4996.08	5116.18	5189.31	5192.33
Allowed after truing-up in this order	4828.04	4990.19	5110.06	5183.05	5186.06
Asset-B1					
Approved vide order dated 31.5.2016 in Petition No. 71/TT/2015	643.88	915.56	915.56	915.56	915.56
Claimed by the Petitioner in the instant petition	645.79	930.91	941.06	947.93	954.79
Allowed after truing-up in this order	645.79	930.91	941.06	947.93	954.79
Asset-B2					
Approved vide order dated 31.5.2016 in Petition No. 71/TT/2015	35.36	110.47	132.29	137.16	137.16
Claimed by the Petitioner in the instant petition	36.38	103.59	125.53	140.08	140.08
Allowed after truing-up in this order	35.36	100.90	122.70	137.13	137.13
Asset-B3					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	26.76	148.71	176.14	182.04	182.04
Claimed by the Petitioner in the instant petition	27.34	136.73	155.31	177.56	187.96
Allowed after truing-up in this order	26.75	133.92	152.36	174.47	184.87
Asset-B4					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		2110.38	3437.39	3449.47	3449.47
Claimed by the Petitioner in the instant petition		2075.26	3396.20	3445.94	3446.87
Allowed after truing-up in this order		2096.58	3401.74	3445.95	3446.87
Asset-B5					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		4309.54	4561.01	4632.65	4642.40
Claimed by the Petitioner in the instant petition		4339.98	4730.13	4956.20	5010.57
Allowed after truing-up in this order		4336.30	4726.21	4952.17	5006.54
Asset-B6					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		95.56	146.53	153.52	154.46
Claimed by the Petitioner in the instant petition		86.05	136.98	162.39	166.50
Allowed after truing-up in this order		86.04	136.96	162.37	166.48
Asset-B7					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		204.77	322.37	343.27	348.49
Claimed by the Petitioner in the instant petition		211.25	343.59	371.85	380.63
Allowed after truing-up in this order		211.25	343.58	371.83	380.62
Asset-B8					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1727.58	2868.45	2907.39	2907.39
Claimed by the Petitioner in the instant petition		1713.54	2854.13	2951.44	2986.23



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after truing-up in this order		1712.17	2851.55	2948.43	2983.21
Asset-B9					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		81.61	167.14	185.41	189.21
Claimed by the Petitioner in the instant petition		77.99	162.13	190.46	197.02
Allowed after truing-up in this order		77.99	162.12	190.45	197.02
Asset-B10					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		35.23	69.00	71.61	71.61
Claimed by the Petitioner in the instant petition		36.46	71.57	78.24	78.24
Allowed after truing-up in this order		33.97	67.08	73.55	73.55
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		11.15	25.97	26.31	26.31
Claimed by the Petitioner in the instant petition		12.16	28.32	28.58	28.58
Allowed after truing-up in this order		11.34	26.38	26.55	26.55
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		10.86	28.36	28.55	28.55
Claimed by the Petitioner in the instant petition		11.41	29.90	30.85	30.85
Allowed after truing-up in this order		10.66	27.96	28.82	28.82
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		0.98	38.23	43.30	43.72
Claimed by the Petitioner in the instant petition		0.98	38.47	43.15	44.52
Allowed after truing-up in this order		0.98	36.32	38.85	40.22
Asset-B14					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		91.93	202.71	204.53	204.53
Claimed by the Petitioner in the instant petition		97.63	213.88	216.54	217.90
Allowed after truing-up in this order		97.63	213.87	216.53	217.89
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	1566.00	2449.84	2556.73	2660.58	2674.80
Claimed by the Petitioner in the instant petition	1567.83	2452.67	2523.24	2581.19	2597.78
Allowed after truing-up in this order	1563.71	2446.33	2516.76	2574.58	2591.17
Asset-C2					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	89.17	187.76	197.02	210.10	214.59
Claimed by the Petitioner in the instant petition	89.59	188.65	198.10	206.86	206.86
Allowed after truing-up in this order	88.37	274.42	469.89	674.12	878.34
Asset-D					
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	46.55	195.31	210.52	225.72	225.72
Claimed by the Petitioner in the instant petition	46.55	195.31	195.31	195.31	195.31
Allowed after truing-up in this order	46.53	195.22	195.22	195.22	195.22

Interest on Loan ("IoL")

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

62. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets is as follows:



(₹ in lakh)

	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	62499.37	65473.27	66793.06	68648.61	68728.48
B	Cumulative Repayments upto Previous Year	1207.17	6035.21	11025.40	16135.46	21318.51
C	Net Loan-Opening (A-B)	61292.20	59438.06	55767.66	52513.15	47409.97
D	Additions	2973.90	1319.79	1855.55	79.87	0.00
E	Repayment during the year	4828.04	4990.19	5110.06	5183.05	5186.06
F	Net Loan-Closing (C+D-E)	59438.06	55767.66	52513.15	47409.97	42223.91
G	Average Loan (C+F)/2	60365.13	57602.86	54140.41	49961.56	44816.94
H	Weighted Average Rate of Interest on Loan (in %)	7.9106	7.9986	8.1634	8.1888	8.1881
H	Interest on Loan (G*H)	4775.27	4607.43	4419.72	4091.23	3669.68

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	11027.12	12207.12	12476.21	12476.21	12658.23
B	Cumulative Repayments upto Previous Year	0.00	645.79	1576.71	2517.77	3465.70
C	Net Loan-Opening (A-B)	11027.12	11561.32	10899.50	9958.44	9192.54
D	Additions	1180.00	269.09	0.00	182.03	0.00
E	Repayment during the year	645.79	930.91	941.06	947.93	954.79
F	Net Loan-Closing (C+D-E)	11561.32	10899.50	9958.44	9192.54	8237.74
G	Average Loan (C+F)/2	11294.22	11230.41	10428.97	9575.49	8715.14
H	Weighted Average Rate of Interest on Loan (in %)	6.8091	7.1241	7.6424	7.8575	8.0440
H	Interest on Loan (G*H)	566.77	800.06	797.02	752.39	701.04

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	1221.72	1239.92	1435.45	1817.96	1817.96
B	Cumulative Repayments upto Previous Year	0.00	35.36	136.26	258.96	396.08

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	Particulars	Asset-B2				
		2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
C	Net Loan-Opening (A-B)	1221.72	1204.57	1299.20	1559.01	1421.88
D	Additions	18.20	195.53	382.51	0.00	0.00
E	Repayment during the year	35.36	100.90	122.70	137.13	137.13
F	Net Loan-Closing (C+D-E)	1204.57	1299.20	1559.01	1421.88	1284.75
G	Average Loan (C+F)/2	1213.14	1251.88	1429.10	1490.44	1353.32
H	Weighted Average Rate of Interest on Loan (in %)	7.7987	8.1681	8.4795	8.3652	8.3178
H	Interest on Loan (G*H)	36.03	102.26	121.18	124.68	112.57

(₹ in lakh)

	Particulars	Asset-B3				
		2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	1676.74	1686.15	1864.84	2175.06	2451.04
B	Cumulative Repayments upto Previous Year	0.00	26.75	160.67	313.03	487.51
C	Net Loan-Opening (A-B)	1676.74	1659.39	1704.16	1862.03	1963.53
D	Additions	9.41	178.69	310.23	275.98	0.00
E	Repayment during the year	26.75	133.92	152.36	174.47	184.87
F	Net Loan-Closing (C+D-E)	1659.39	1704.16	1862.03	1963.53	1778.65
G	Average Loan (C+F)/2	1668.07	1681.78	1783.10	1912.78	1871.09
H	Weighted Average Rate of Interest on Loan (in %)	9.0480	9.0808	8.9756	8.7035	8.5672
H	Interest on Loan (G*H)	31.84	152.72	160.04	166.48	160.30

(₹ in lakh)

	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	43541.92	44512.19	45659.93	45684.44
B	Cumulative Repayments upto Previous Year	0.00	2096.58	5498.32	8944.27
C	Net Loan-Opening (A-B)	43541.92	42415.61	40161.61	36740.17
D	Additions	970.27	1147.74	24.51	0.00
E	Repayment during the year	2096.58	3401.74	3445.95	3446.87



	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
F	Net Loan-Closing (C+D-E)	42415.61	40161.61	36740.17	33293.30
G	Average Loan (C+F)/2	42978.76	41288.61	38450.89	35016.74
H	Weighted Average Rate of Interest on Loan (in %)	7.3387	7.5751	7.5387	7.6151
H	Interest on Loan (G*H)	1990.68	3127.64	2898.68	2666.57

(₹ in lakh)

	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	60008.61	65491.46	70368.42	71807.42
B	Cumulative Repayments upto Previous Year	0.00	4336.30	9062.51	14014.68
C	Net Loan-Opening (A-B)	60008.61	61155.16	61305.92	57792.74
D	Additions	5482.86	4876.96	1439.00	57.48
E	Repayment during the year	4336.30	4726.21	4952.17	5006.54
F	Net Loan-Closing (C+D-E)	61155.16	61305.92	57792.74	52843.69
G	Average Loan (C+F)/2	60581.88	61230.54	59549.33	55318.21
H	Weighted Average Rate of Interest on Loan (in %)	8.4664	8.5929	8.5647	8.5240
H	Interest on Loan (G*H)	5115.09	5261.48	5100.21	4715.31

(₹ in lakh)

	Particulars	Asset-B6			
		2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	1438.09	1533.48	2098.04	2207.15
B	Cumulative Repayments upto Previous Year	0.00	86.04	223.00	385.37
C	Net Loan-Opening (A-B)	1438.09	1447.44	1875.03	1821.78
D	Additions	95.39	564.56	109.12	0.00
E	Repayment during the year	86.04	136.96	162.37	166.48
F	Net Loan-Closing (C+D-E)	1447.44	1875.03	1821.78	1655.30
G	Average Loan (C+F)/2	1442.76	1661.24	1848.41	1738.54
H	Weighted Average Rate of Interest on Loan (in %)	9.1133	8.8858	8.6775	8.6107
H	Interest on Loan (G*H)	100.95	147.61	160.40	149.70



(₹ in lakh)

	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	3240.19	4296.93	4813.08	5046.04
B	Cumulative Repayments upto Previous Year	0.00	211.25	554.83	926.66
C	Net Loan-Opening (A-B)	3240.19	4085.68	4258.26	4119.38
D	Additions	1056.74	516.15	232.95	0.00
E	Repayment during the year	211.25	343.58	371.83	380.62
F	Net Loan-Closing (C+D-E)	4085.68	4258.26	4119.38	3738.76
G	Average Loan (C+F)/2	3662.94	4171.97	4188.82	3929.07
H	Weighted Average Rate of Interest on Loan (in %)	8.8161	8.6930	8.5838	8.5359
H	Interest on Loan (G*H)	239.99	362.67	359.56	335.38

(₹ in lakh)

	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	34126.03	36857.67	38725.70	39426.39
B	Cumulative Repayments upto Previous Year	0.00	1712.17	4563.72	7512.16
C	Net Loan-Opening (A-B)	34126.03	35145.49	34161.98	31914.24
D	Additions	2731.63	1868.04	700.69	221.38
E	Repayment during the year	1712.17	2851.55	2948.43	2983.21
F	Net Loan-Closing (C+D-E)	35145.49	34161.98	31914.24	29152.41
G	Average Loan (C+F)/2	34635.76	34653.74	33038.11	30533.32
H	Weighted Average Rate of Interest on Loan (in %)	8.8191	8.7688	8.7175	8.6953
H	Interest on Loan (G*H)	1952.91	3038.72	2880.11	2654.96

(₹ in lakh)

	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	1563.74	1860.83	2437.89	2611.97
B	Cumulative Repayments upto Previous Year	0.00	77.99	240.11	430.56
C	Net Loan-Opening (A-B)	1563.74	1782.84	2197.78	2181.41
D	Additions	297.09	577.06	174.08	0.00
E	Repayment during the year	77.99	162.12	190.45	197.02



	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
F	Net Loan-Closing (C+D-E)	1782.84	2197.78	2181.41	1984.39
G	Average Loan (C+F)/2	1673.29	1990.31	2189.60	2082.90
H	Weighted Average Rate of Interest on Loan (in %)	8.9374	8.7221	8.4113	8.3210
H	Interest on Loan (G*H)	90.30	173.60	184.17	173.32

(₹ in lakh)

	Particulars	Asset-B10			
		2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	724.51	789.89	961.38	961.38
B	Cumulative Repayments upto Previous Year	0.00	33.97	101.05	174.60
C	Net Loan-Opening (A-B)	724.51	755.92	860.33	786.77
D	Additions	65.38	171.49	0.00	0.00
E	Repayment during the year	33.97	67.08	73.55	73.55
F	Net Loan-Closing (C+D-E)	755.92	860.33	786.77	713.22
G	Average Loan (C+F)/2	740.21	808.12	823.55	749.99
H	Weighted Average Rate of Interest on Loan (in %)	9.3385	8.9613	8.3080	8.1210
H	Interest on Loan (G*H)	40.42	72.42	68.42	60.91

(₹ in lakh)

	Particulars	Asset-B11			
		2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	320.40	339.98	344.53	344.53
B	Cumulative Repayments upto Previous Year	0.00	11.34	37.71	64.26
C	Net Loan-Opening (A-B)	320.40	328.64	306.82	280.27
D	Additions	19.57	4.56	0.00	0.00
E	Repayment during the year	11.34	26.38	26.55	26.55
F	Net Loan-Closing (C+D-E)	328.64	306.82	280.27	253.72
G	Average Loan (C+F)/2	324.52	317.73	293.54	266.99
H	Weighted Average Rate of Interest on Loan (in %)	9.1214	8.9530	8.3948	8.2054
H	Interest on Loan (G*H)	13.18	28.45	24.64	21.91



(₹ in lakh)

	Particulars	Asset-B12			
		2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	337.34	351.92	374.52	374.52
B	Cumulative Repayments upto Previous Year	0.00	10.66	38.62	67.44
C	Net Loan-Opening (A-B)	337.34	341.26	335.90	307.08
D	Additions	14.58	22.60	0.00	0.00
E	Repayment during the year	10.66	27.96	28.82	28.82
F	Net Loan-Closing (C+D-E)	341.26	335.90	307.08	278.27
G	Average Loan (C+F)/2	339.30	338.58	321.49	292.68
H	Weighted Average Rate of Interest on Loan (in %)	9.1294	9.0166	8.6061	8.4638
H	Interest on Loan (G*H)	12.44	30.53	27.67	24.77

(₹ in lakh)

	Particulars	Asset-B13			
		2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	416.03	447.92	515.04	515.04
B	Cumulative Repayments upto Previous Year	0.00	0.98	37.30	76.15
C	Net Loan-Opening (A-B)	416.03	446.94	477.74	438.89
D	Additions	31.89	67.12	0.00	36.38
E	Repayment during the year	0.98	36.32	38.85	40.22
F	Net Loan-Closing (C+D-E)	446.94	477.74	438.89	435.05
G	Average Loan (C+F)/2	431.49	462.34	458.32	436.97
H	Weighted Average Rate of Interest on Loan (in %)	9.1909	8.9207	8.4010	8.2490
H	Interest on Loan (G*H)	1.19	41.24	38.50	36.05

(₹ in lakh)

	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	2781.16	2810.75	2845.07	2881.24
B	Cumulative Repayments upto Previous Year	0.00	97.63	311.50	528.03
C	Net Loan-Opening (A-B)	2781.16	2713.12	2533.57	2353.21



	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
D	Additions	29.60	34.31	36.17	0.00
E	Repayment during the year	97.63	213.87	216.53	217.89
F	Net Loan-Closing (C+D-E)	2713.12	2533.57	2353.21	2135.31
G	Average Loan (C+F)/2	2747.14	2623.34	2443.39	2244.26
H	Weighted Average Rate of Interest on Loan (in %)	9.2148	9.0933	8.6422	8.4852
H	Interest on Loan (G*H)	116.89	238.55	211.16	190.43

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	31497.63	32314.69	32807.12	34330.11	34464.28
B	Cumulative Repayments upto Previous Year	0.00	1563.71	4010.04	6526.79	9101.37
C	Net Loan-Opening (A-B)	31497.63	30750.98	28797.08	27803.32	25362.91
D	Additions	817.06	492.43	1523.00	134.17	323.59
E	Repayment during the year	1563.71	2446.33	2516.76	2574.58	2591.17
F	Net Loan-Closing (C+D-E)	30750.98	28797.08	27803.32	25362.91	23095.34
G	Average Loan (C+F)/2	31124.31	29774.03	28300.20	26583.12	24229.12
H	Weighted Average Rate of Interest on Loan (in %)	7.4901	7.5954	7.7974	7.8333	7.8531
H	Interest on Loan (G*H)	1520.09	2261.44	2206.67	2082.33	1902.74

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	2215.92	2457.82	2475.28	2707.56	2707.56
B	Cumulative Repayments upto Previous Year	0.00	88.37	274.42	469.89	674.12
C	Net Loan-Opening (A-B)	2215.92	2369.45	2200.86	2237.67	2033.44
D	Additions	241.91	17.46	232.27	0.00	0.00
E	Repayment during the year	88.37	186.05	195.47	204.23	204.23



	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
F	Net Loan-Closing (C+D-E)	2369.45	2200.86	2237.67	2033.44	1829.21
G	Average Loan (C+F)/2	2292.68	2285.15	2219.26	2135.55	1931.33
H	Weighted Average Rate of Interest on Loan (in %)	9.2258	9.2086	9.1168	9.0225	9.0095
H	Interest on Loan (G*H)	106.05	210.43	202.33	192.68	174.00

(₹ in lakh)

	Particulars	Asset-D				
		2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	2588.18	2588.18	2588.18	2588.18	2588.18
B	Cumulative Repayments upto Previous Year	0.00	46.53	241.75	436.98	632.20
C	Net Loan-Opening (A-B)	2588.18	2541.64	2346.42	2151.20	1955.98
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	46.53	195.22	195.22	195.22	195.22
F	Net Loan-Closing (C+D-E)	2541.64	2346.42	2151.20	1955.98	1760.75
G	Average Loan (C+F)/2	2564.91	2444.03	2248.81	2053.59	1858.37
H	Weighted Average Rate of Interest on Loan (in %)	10.1334	9.7294	9.3284	8.5298	8.2359
H	Interest on Loan (G*H)	61.95	237.79	209.78	175.17	153.05

63. The details of IoL approved for the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D), as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A					
Approved <i>vide</i> order dated 5.9.2018 in Petition No. 9/TT/2018	4776.85	4606.83	4430.40	4135.33	3690.99
Claimed by the Petitioner in the instant petition	4778.40	4607.66	4419.50	4090.49	3668.38
Allowed after truing-up in this order	4775.27	4607.43	4419.72	4091.23	3669.68
Asset-B1					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	551.60	747.79	726.25	684.68	616.22
Claimed by the Petitioner in the instant petition	566.77	800.06	797.03	752.40	701.05
Allowed after truing-up in this order	566.77	800.06	797.02	752.39	701.04
Asset-B2					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	36.02	110.08	131.07	129.43	117.34
Claimed by the Petitioner in the instant petition	36.01	102.06	120.75	124.01	111.66
Allowed after truing-up in this order	36.03	102.26	121.18	124.68	112.57
Asset-B3					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	31.84	169.16	187.27	178.06	161.56
Claimed by the Petitioner in the instant petition	31.83	152.54	159.61	165.79	159.36
Allowed after truing-up in this order	31.84	152.72	160.04	166.48	160.30
Asset-B4					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1971.58	3072.86	2864.41	2615.23
Claimed by the Petitioner in the instant petition		1970.46	3123.92	2900.72	2668.61
Allowed after truing-up in this order		1990.68	3127.64	2898.68	2666.57
Asset-B5					
Approved <i>vide</i> order dated 31.5.2016 in Petition No.		5105.05	5123.05	4853.27	4453.24



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
71/TT/2015					
Claimed by the Petitioner in the instant petition		5114.94	5260.99	5098.39	4714.16
Allowed after truing-up in this order		5115.09	5261.48	5100.21	4715.31
	Asset-B6				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		112.41	161.98	156.56	143.44
Claimed by the Petitioner in the instant petition		100.96	147.63	160.42	149.72
Allowed after truing-up in this order		100.95	147.61	160.40	149.70
	Asset-B7				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		234.93	347.67	342.33	317.40
Claimed by the Petitioner in the instant petition		239.99	362.68	359.58	335.40
Allowed after truing-up in this order		239.99	362.67	359.56	335.38
	Asset-B8				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1975.17	3079.39	2868.02	2609.81
Claimed by the Petitioner in the instant petition		1952.94	3038.98	2880.51	2655.11
Allowed after truing-up in this order		1952.91	3038.72	2880.11	2654.96
	Asset-B9				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		96.04	186.04	191.72	179.37
Claimed by the Petitioner in the instant petition		90.30	173.60	184.18	173.32
Allowed after truing-up in this order		90.30	173.60	184.17	173.32
	Asset-B10				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		43.21	79.81	76.35	69.43



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition		40.36	72.01	67.66	59.79
Allowed after truing-up in this order		40.42	72.42	68.42	60.91
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		13.53	29.77	27.70	25.19
Claimed by the Petitioner in the instant petition		13.16	28.29	24.33	21.43
Allowed after truing-up in this order		13.18	28.45	24.64	21.91
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		12.75	31.54	29.10	26.43
Claimed by the Petitioner in the instant petition		12.43	30.38	27.35	24.29
Allowed after truing-up in this order		12.44	30.53	27.67	24.77
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1.19	44.55	46.74	43.32
Claimed by the Petitioner in the instant petition		1.19	43.69	42.93	40.04
Allowed after truing-up in this order		1.19	41.24	38.50	36.05
Asset-B14					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		109.55	227.90	210.97	191.77
Claimed by the Petitioner in the instant petition		116.89	238.56	211.17	190.44
Allowed after truing-up in this order		116.89	238.55	211.16	190.43
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	1522.30	2267.23	2243.19	2173.74	1971.80
Claimed by the Petitioner in the instant petition	1522.40	2264.57	2209.44	2084.60	1904.49
Allowed after truing-up in this order	1520.09	2261.44	2206.67	2082.33	1902.74



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-C2					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	107.01	212.37	205.94	203.20	189.16
Claimed by the Petitioner in the instant petition	107.00	212.29	203.93	194.03	175.11
Allowed after truing-up in this order	106.05	210.43	202.33	192.68	174.00
Asset-D					
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	62.01	247.89	247.73	245.98	223.03
Claimed by the Petitioner in the instant petition	61.98	237.90	209.88	175.25	153.12
Allowed after truing-up in this order	61.95	237.79	209.78	175.17	153.05

Return on Equity (“RoE”)

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

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

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



Year	Notified MAT rates (inclusive of surcharge & cess)	Effective tax (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	20.961	19.611
2015-16	21.342	21.342	19.706
2016-17	21.342	21.342	19.706
2017-18	21.342	21.342	19.706
2018-19	21.549	21.549	19.758

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

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

67. Trued-up RoE is allowed in respect of the transmission assets on the basis of MAT rate applicable in the respective years for 2014-19 tariff period is as follows:

(₹ in lakh)						
	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	26785.45	28059.97	28625.60	29420.83	29455.06
B	Additions	1274.53	565.62	795.24	34.23	0.00
C	Closing Equity (A+B)	28059.97	28625.60	29420.83	29455.06	29455.06
D	Average Equity (A+C)/2	27422.71	28342.79	29023.22	29437.95	29455.06
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549



	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	5377.59	5584.95	5719.02	5800.75	5819.73

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	4725.91	5231.62	5346.95	5346.95	5424.96
B	Additions	505.71	115.32	0.00	78.01	0.00
C	Closing Equity (A+B)	5231.62	5346.95	5346.95	5424.96	5424.96
D	Average Equity (A+C)/2	4978.77	5289.28	5346.95	5385.95	5424.96
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	719.55	1042.25	1053.62	1061.30	1071.86

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	523.60	531.40	615.19	779.13	779.13
B	Additions	7.80	83.80	163.93	0.00	0.00
C	Closing Equity (A+B)	531.40	615.19	779.13	779.13	779.13
D	Average Equity (A+C)/2	527.50	573.29	697.16	779.13	779.13
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	39.39	112.97	137.38	153.53	153.94



(₹ in lakh)

	Particulars	Asset-B3				
		2014-15 (Pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	718.60	722.63	799.22	932.17	1050.44
B	Additions	4.03	76.58	132.95	118.28	0.00
C	Closing Equity (A+B)	722.63	799.22	932.17	1050.44	1050.44
D	Average Equity (A+C)/2	720.62	760.92	865.69	991.31	1050.44
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	29.81	149.94	170.58	195.34	207.55

(₹ in lakh)

	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	18660.82	19076.65	19568.54	19579.05
B	Additions	415.83	491.89	10.51	0.00
C	Closing Equity (A+B)	19076.65	19568.54	19579.05	19579.05
D	Average Equity (A+C)/2	18868.74	19322.60	19573.79	19579.05
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	2346.66	3807.52	3857.02	3868.43

(₹ in lakh)

	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	25717.97	28067.77	30157.90	30774.61
B	Additions	2349.80	2090.13	616.71	24.64
C	Closing Equity (A+B)	28067.77	30157.90	30774.61	30799.25
D	Average Equity (A+C)/2	26892.87	29112.83	30466.25	30786.93
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549



	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	5284.76	5736.68	6003.38	6082.88

(₹ in lakh)

	Particulars	Asset-B6			
		2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	616.32	657.21	899.16	945.92
B	Additions	40.88	241.95	46.76	0.00
C	Closing Equity (A+B)	657.21	899.16	945.92	945.92
D	Average Equity (A+C)/2	636.77	778.18	922.54	945.92
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	96.33	153.34	181.79	186.90

(₹ in lakh)

	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	1388.65	1841.54	2062.75	2162.59
B	Additions	452.89	221.21	99.84	0.00
C	Closing Equity (A+B)	1841.54	2062.75	2162.59	2162.59
D	Average Equity (A+C)/2	1615.10	1952.15	2112.67	2162.59
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	236.52	384.67	416.30	427.28

(₹ in lakh)

	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	14625.44	15796.14	16596.73	16897.02
B	Additions	1170.70	800.59	300.29	94.88



	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
C	Closing Equity (A+B)	15796.14	16596.73	16897.02	16991.90
D	Average Equity (A+C)/2	15210.79	16196.44	16746.88	16944.46
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	1916.30	3191.51	3299.97	3347.89

(₹ in lakh)

	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	670.17	797.50	1044.81	1119.42
B	Additions	127.33	247.31	74.61	0.00
C	Closing Equity (A+B)	797.50	1044.81	1119.42	1119.42
D	Average Equity (A+C)/2	733.84	921.15	1082.11	1119.42
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	87.31	181.51	213.23	221.17

(₹ in lakh)

	Particulars	Asset-B10			
		2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	310.50	338.52	412.02	412.02
B	Additions	28.02	73.49	0.00	0.00
C	Closing Equity (A+B)	338.52	412.02	412.02	412.02
D	Average Equity (A+C)/2	324.51	375.27	412.02	412.02
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	37.39	73.95	81.19	81.41



(₹ in lakh)

	Particulars	Asset-B11			
		2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	137.32	145.70	147.66	147.66
B	Additions	8.39	1.95	0.00	0.00
C	Closing Equity (A+B)	145.70	147.66	147.66	147.66
D	Average Equity (A+C)/2	141.51	146.68	147.66	147.66
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	12.42	28.90	29.10	29.17

(₹ in lakh)

	Particulars	Asset-B12			
		2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	144.57	150.82	160.51	160.51
B	Additions	6.25	9.69	0.00	0.00
C	Closing Equity (A+B)	150.82	160.51	160.51	160.51
D	Average Equity (A+C)/2	147.70	155.67	160.51	160.51
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	11.69	30.67	31.63	31.71

(₹ in lakh)

	Particulars	Asset-B13			
		2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	178.30	191.97	220.73	220.73
B	Additions	13.67	28.76	0.00	15.59
C	Closing Equity (A+B)	191.97	220.73	220.73	236.32
D	Average Equity (A+C)/2	185.13	206.35	220.73	228.53
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	1.10	40.66	43.50	45.15



(₹ in lakh)

	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	1191.93	1204.61	1219.32	1234.82
B	Additions	12.68	14.71	15.50	0.00
C	Closing Equity (A+B)	1204.61	1219.32	1234.82	1234.82
D	Average Equity (A+C)/2	1198.27	1211.96	1227.07	1234.82
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	109.03	238.82	241.79	243.97

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	13498.98	13849.15	14060.19	14712.91	14770.41
B	Additions	350.17	211.04	652.71	57.50	138.68
C	Closing Equity (A+B)	13849.15	14060.19	14712.91	14770.41	14909.09
D	Average Equity (A+C)/2	13674.07	13954.67	14386.55	14741.66	14839.75
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	1748.47	2749.77	2834.87	2904.84	2932.04

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	949.68	1053.35	1060.84	1160.38	1160.38
B	Additions	103.67	7.48	99.55	0.00	0.00
C	Closing Equity (A+B)	1053.35	1060.84	1160.38	1160.38	1160.38
D	Average Equity (A+C)/2	1001.52	1057.09	1110.61	1160.38	1160.38
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500



F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	98.47	208.30	218.85	228.65	229.27

(₹ in lakh)

	Particulars	Asset-D				
		2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	1109.22	1109.22	1109.22	1109.22	1109.22
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	1109.22	1109.22	1109.22	1109.22	1109.22
D	Average Equity (A+C)/2	1109.22	1109.22	1109.22	1109.22	1109.22
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	51.85	218.57	218.57	218.57	219.16

68. The details of RoE approved in respect of the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D), as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Combined Asset-A				
Approved vide order dated 5.9.2018 in Petition No. 9/TT/2018	5379.25	5554.86	5705.23	5800.14	5800.14
Claimed by the Petitioner in the instant petition	5385.39	5588.94	5720.18	5801.90	5820.89



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after truing-up in this order	5377.59	5584.95	5719.02	5800.75	5819.73
	Asset-B1				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	717.43	1025.09	1025.09	1025.09	1025.09
Claimed by the Petitioner in the instant petition	720.09	1042.78	1053.61	1061.30	1071.86
Allowed after truing-up in this order	719.55	1042.25	1053.62	1061.30	1071.86
	Asset-B2				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	39.39	123.69	148.12	153.57	153.57
Claimed by the Petitioner in the instant petition	39.42	113.02	137.38	153.53	153.94
Allowed after truing-up in this order	39.39	112.97	137.38	153.53	153.94
	Asset-B3				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	29.81	166.50	197.22	203.82	203.82
Claimed by the Petitioner in the instant petition	29.83	150.02	170.58	195.34	207.54
Allowed after truing-up in this order	29.81	149.94	170.58	195.34	207.55
	Asset-B4				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		2362.16	3847.51	3861.03	3861.03
Claimed by the Petitioner in the instant petition		2323.98	3801.32	3857.01	3868.42
Allowed after truing-up in this order		2346.66	3807.52	3857.02	3868.43
	Asset-B5				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		5265.11	5564.79	5649.26	5660.18
Claimed by the Petitioner in the instant petition		5287.44	5736.69	6003.37	6082.88
Allowed after truing-up in this order		5284.76	5736.68	6003.38	6082.88
	Asset-B6				



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		106.99	164.05	171.89	172.93
Claimed by the Petitioner in the instant petition		96.39	153.36	181.81	186.92
Allowed after truing-up in this order		96.33	153.34	181.79	186.90
Asset-B7					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		229.27	360.94	384.34	390.18
Claimed by the Petitioner in the instant petition		236.64	384.68	416.32	427.30
Allowed after truing-up in this order		236.52	384.67	416.30	427.28
Asset-B8					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1933.60	3210.54	3254.14	3254.14
Claimed by the Petitioner in the instant petition		1917.33	3191.98	3300.83	3348.74
Allowed after truing-up in this order		1916.30	3191.51	3299.97	3347.89
Asset-B9					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		91.37	187.13	207.59	211.85
Claimed by the Petitioner in the instant petition		87.36	181.52	213.24	221.18
Allowed after truing-up in this order		87.31	181.51	213.23	221.17
Asset-B10					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		38.79	76.11	79.03	79.03
Claimed by the Petitioner in the instant petition		37.41	73.96	81.20	81.42
Allowed after truing-up in this order		37.39	73.95	81.19	81.41
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		12.21	28.45	28.83	28.83



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition		12.43	28.90	29.09	29.17
Allowed after truing-up in this order		12.42	28.90	29.10	29.17
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		11.91	31.13	31.34	31.34
Claimed by the Petitioner in the instant petition		11.70	30.68	31.63	31.72
Allowed after truing-up in this order		11.69	30.67	31.63	31.71
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1.10	42.81	48.37	48.95
Claimed by the Petitioner in the instant petition		1.10	43.07	48.31	49.98
Allowed after truing-up in this order		1.10	40.66	43.50	45.15
Asset-B14					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		102.64	226.34	228.38	228.38
Claimed by the Petitioner in the instant petition		109.09	238.82	241.80	243.98
Allowed after truing-up in this order		109.03	238.82	241.79	243.97
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	1751.07	2753.77	2877.07	2995.50	3011.42
Claimed by the Petitioner in the instant petition	1752.51	2755.31	2839.02	2908.99	2936.19
Allowed after truing-up in this order	1748.47	2749.77	2834.87	2904.84	2932.04
Asset-C2					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	99.36	210.22	220.59	235.24	240.26
Claimed by the Petitioner in the instant petition	99.44	210.33	220.76	230.57	231.19
Allowed after truing-up in this order	98.47	208.30	218.85	228.65	229.27



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Asset-D				
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	51.87	217.62	234.56	251.50	251.50
Claimed by the Petitioner in the instant petition	51.91	218.78	218.67	218.67	219.26
Allowed after truing-up in this order	51.85	218.57	218.57	218.57	219.16

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

69. O&M Expenses claimed by the Petitioner for all the transmission assets except Asset-C2 for 2014-19 tariff period are as follows:

Particulars	Combined Asset-A				
	2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) D/C 400 kV Vindhyachal IV-Vindhyachal Pooling Station (29.280 km)					
(ii) D/C 400 kV Sasan-Vindhyachal Pooling Station (5.240 km)					
(iii) D/C 400 kV Bassi Jaipur (48.000 km)					
(iv) S/C 765 kV Satna-Gwalior Ckt-1(294.472km)					
(v) S/C 765 kV Satna-Gwalior Ckt-1 (42.180 km)					
Bay(s)					
(vi) 765 kV Satna-Line Reactor and Gwalior Bay: 2 bays					
(vii) 765 kV Gwalior-Line Reactor and Jaipur Bay: 4 bays					
(viii) 400 kV Bassi-Jaipur Bays: 2 bays					
(ix) 400 kV Satna Bus Reactor Bay: 1 bay					
765 kV Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
400 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
D/C 4 conductors (km)	77.280	77.280	77.280	77.280	77.280
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
S/C 4 conductors (km)	336.652	336.652	336.652	336.652	336.652
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C 2 conductors (km)	5.24	5.24	5.24	5.24	5.24
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Total O&M Expenses claimed (₹ in lakh)	977.21	1009.21	1043.15	1078.00	1113.69



Particulars	Asset-B1				
	2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
Transmission Lines					
(i) 765 kV S/C Rihand III-Vindhyachal (65.000 km)					
S/C 4 conductors (km)	65.00	65.00	65.00	65.00	65.00
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	29.03	40.76	42.06	43.39	44.92

Particulars	Asset-B2				
	2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Satna: Vindhyachal Pooling Station Bay 1					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
Total O&M Expenses claimed (₹ in lakh)	32.15	87.22	90.12	93.11	96.20

Particulars	Asset-B3				
	2014-15 (Pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Satna-Vindhyachal Pooling Station Bay-II					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	17.81	87.22	90.12	93.11	96.20

Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Jaipur:Gwalior Line Bay				
Transmission Lines				
(ii) 765 kV S/C Gwalior-Jaipur Ckt-1 (300.330 km)				



Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	300.330	300.330	300.330	300.330
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	173.90	284.43	294.03	303.73

Particulars	Asset-B5			
	2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Sasan- Vindhyachal Pooling Station Bay: 765 kV 1 bay				
(ii) Vindhyachal: ICT, Satna SLR, Sasan Bay: 765 kV 4 bays				
(iii) Vindhyachal: ICT and Satna Bay: 400 kV 2 bays				
Transmission Lines				
(iv) Sasan-Vindhyachal Line (6 km)				
(v) Vindh-Satna Line S/C Portion(192.310 km)				
(vi) D/C Portion of Satna-Vindh Line(156.22 km)				
765 kV Bays	5	5	5	5
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
S/C 4 conductors(km)	6.00	6.00	6.00	6.00
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
S/C 6 conductors(km)	192.31	192.31	192.31	192.31
Norms (₹ lakh/km)	0.731	0.755	0.78	0.806
D/C 6 conductors(km)	78.11	78.11	78.11	78.11
Norms (₹ lakh/km)	1.097	1.133	1.171	1.21
Total O&M Expenses (₹ in lakh)	788.56	816.91	844.05	872.08

Particulars	Asset-B6			
	2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Satna:Bus Reactor Bay				
765 kV Bays	1	1	1	1



Particulars	Asset-B6			
	2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	66.96	90.12	93.11	96.20

Particulars	Asset-B7			
	2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal ICT-I Bay (765/400)-Vindhyachal Pooling Station (765 kV): 765 kV 1 bay				
(ii) Vindhyachal ICT-I Bay (765/400)-Vindhyachal Pooling Station (765 kV): 400 kV 1 bay				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.3	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	111.12	154.49	159.62	164.91

Particulars	Asset-B8			
	2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal Bay-II-Satna (765 kV): 1 bay				
(ii) Vindhyachal SLR Bay: 765 kV 1 bay				
Transmission Line				
(iii) S/C 765 kV Vindhyachal Pooling Station Satna Ckt #2				
765 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 6 conductors(km)	193.060	193.060	193.060	193.060
Norms (₹ lakh/km)	0.731	0.755	0.78	0.806
Total O&M Expenses (₹ in lakh)	201.75	326.00	336.81	348.01

Particulars	Asset-B9			
	2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: BR-I Bay-Vindhyachal-Vindhyachal Pooling Station (765 kV): 765 kV 1 bay				



Particulars	Asset-B9			
	2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	52.67	90.12	93.11	96.20

Particulars	Asset-B10			
	2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal-Vindhyachal IV Bay: 400 kV 1 bay				
(ii) Vindhyachal: Sasan 2 Bay: 400 kV 1 bay				
400 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	72.86	128.74	133.02	137.42

Particulars	Asset-B11			
	2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Vindhyachal IV Bay: 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	27.75	64.37	66.51	68.71

Particulars	Asset-B12			
	2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Rihand Bay: 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	25.02	64.37	66.51	68.71



Particulars	Asset-B13			
	2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Bus Reactor-I Bay-Vindhyachal-Vindhyachal Pooling Station (765 kV): 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	1.87	64.37	66.51	68.71

Particulars	Asset-B14			
	2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal:Rihand Bay: 400 kV 1 bay				
Transmission Lines				
(ii) 2nd circuit of 765 D/C Rihand Vindhyachal Pooling Station				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
S/C 4 conductors (km)	65.000	65.000	65.000	65.000
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	47.59	106.43	110.00	113.63

Particulars	Asset-C1				
	2014-15 (Pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Gwalior: Satna II Line Bay					
(ii) Satna: Gwalior II Line Bay					
(iii) Satna: Switchable Line Reactor at Satna for Satna-Gwalior Ckt II					
Transmission Lines					
(iv) 765 kV S/C Satna-Gwalior Ckt II					
765 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
S/C 4 conductors(km)	330.330	330.330	330.330	330.330	330.330
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	283.82	449.97	464.67	480.35	496.13



Particulars	Asset-D				
	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Jaipur: Bassi-1-Jaipur (S)-Jaipur South: 400 kV 1 bay					
(ii) Jaipur: Bassi-1-Jaipur(S-Jaipur South: 400 kV 1 bay					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	28.74	124.60	128.74	133.02	137.42

70. The applicable norms for the O&M Expenses as per the 2014 Tariff Regulations is as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Bundled Conductor with four or more sub-conductors					
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
D/C Twin/Triple Conductor					
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
D/C Single Conductor					
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
S/C Bundled Conductor with four sub conductors					
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
765 kV Bays					
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
400 kV Bays					
Norms (₹ lakh/Bay)	60.3	62.30	64.37	66.51	68.71
220 kV Bays					
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1

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



Particulars	Combined Asset-A				
	2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) D/C 400 kV Vindhyachal IV Vindhyachal Pooling Station (29.280km)					
(ii) D/C 400 kV Sasan-Vindhyachal Pooling Station (5.240 km)					
(iii) D/C 400 kV Bassi Jaipur (48.000 km)					
(iv) S/C 765 kV Satna Gwalior Ckt-1 (294.472+42.180=336.652 km)					
Bay(s)					
(v) 765 kV Satna-SLR and Gwalior Bay: 2 bays					
(vi) 765 kV Gwalior-SLR and Jaipur Bay: 2 bays, SLR and Jaipur Bay: 2 bays					
(vii) 400 kV Bassi-Jaipur Bays: 2 bays					
(viii) 400 kV Satna Bus Reactor Bay: 1 bay					
765 kV Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
400 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
D/C 4 conductors (km)	77.280	77.280	77.280	77.280	77.280
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
S/C 4 conductors (km)	336.652	336.652	336.652	336.652	336.652
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C 2 conductors (km)	5.24	5.24	5.24	5.24	5.24
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Total O&M Expenses (₹ in lakh)	977.21	1009.91	1043.16	1077.99	1113.69

Particulars	Asset-B1				
	2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
Transmission Lines					
(i) 765 kV S/C Rihand III-Vindhyachal (65.000 km)					
S/C 4 conductors (km)	65.00	65.00	65.00	65.00	65.00
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	29.03	40.76	42.06	43.49	44.92

Particulars	Asset-B2				
	2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Satna: Vindhyachal Pooling Station Bay 1					
765 kV Bays	1	1	1	1	1



Particulars	Asset-B2				
	2014-15 (Pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
Total O&M Expenses (₹ in lakh)	32.15	87.22	90.12	93.11	96.20

Particulars	Asset-B3				
	2014-15 (Pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
Bay(s) (i) Satna-Vindhyachal Pooling Station Bay-II					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	17.81	87.22	90.12	93.11	96.20

Particulars	Asset-B4			
	2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
Bay(s) (i) Jaipur:Gwalior Line Bay				
Transmission Lines (ii) 765 kV S/C Gwalior-Jaipur Ckt-1 (300.330 km)				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	300.330	300.330	300.330	300.330
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	173.90	284.43	294.03	303.73

Particulars	Asset-B5			
	2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
Bay(s) (i) Sasan-Vindhyachal Pooling Station Bay: 765 kV 1 bay (ii) Vindhyachal: ICT, Satna SLR, Sasan Bay: 765 kV 4 bays (iii) Vindhyachal: ICT and Satna Bay: 400 kV 2 bays				
Transmission Lines (iv) Sasan-Vindhyachal Line (6 km) (v) Vindh-Satna Line S/C Portion (192.310 km)				



Particulars	Asset-B5			
	2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
(vi) D/C Portion of Satna-Vindh Line (156.22 km)				
765 kV Bays	5	5	5	5
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
S/C 4 conductors(km)	6.00	6.00	6.00	6.00
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
S/C 6 conductors(km)	192.31	192.31	192.31	192.31
Norms (₹ lakh/km)	0.731	0.755	0.78	0.806
D/C 6 conductors(km)	78.11	78.11	78.11	78.11
Norms (₹ lakh/km)	1.097	1.133	1.171	1.21
Total O&M Expenses (₹ in lakh)	788.57	816.91	844.05	872.08

Particulars	Asset-B6			
	2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
Bay(s) (i) Satna:Bus Reactor Bay				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	66.96	90.12	93.11	96.20

Particulars	Asset-B7			
	2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
Bay(s) (i) Vindhyachal ICT-I Bay (765/400)-Vindhyachal Pooling Station (765 kV): 765 kV 1 bay (ii) Vindhyachal ICT-I Bay (765/400)-Vindhyachal Pooling Station (765 kV): 400 kV 1 bay				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.3	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	111.12	154.49	159.62	164.91



Particulars	Asset-B8			
	2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal Bay-II-Satna (765 kV): 1 bay				
(ii) Vindhyachal SLR Bay: 765 kV 1 bay				
Transmission Line				
(iii) S/C 765 KV Vindhyachal Pooling Station Satna Ckt #2				
765 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 6 conductors(km)	193.060	193.060	193.060	193.060
Norms (₹ lakh/km)	0.731	0.755	0.78	0.806
Total O&M Expenses (₹ in lakh)	201.76	326.00	336.81	348.01

Particulars	Asset-B9			
	2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Bus Reactor-I Bay-Vindhyachal-Vindhyachal Pooling Station (765 kV): 765 kV 1 bay				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	52.67	90.12	93.11	96.20

Particulars	Asset-B10			
	2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal-Vindhyachal IV Bay: 400 kV 1 bay				
(ii) Vindhyachal: Sasan 2 Bay: 400 kV 1 bay				
400 kV Bays	2	2	2	2
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	72.85	128.74	133.02	137.42



Particulars	Asset-B11			
	2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Vindhyachal IV Bay: 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	27.75	64.37	66.51	68.71

Particulars	Asset-B12			
	2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Rihand Bay: 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	25.02	64.37	66.51	68.71

Particulars	Asset-B13			
	2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal: Bus Reactor-I Bay-Vindhyachal-Vindhyachal Pooling Station (765 kV): 400 kV 1 bay				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	1.87	64.37	66.51	68.71

Particulars	Asset-B14			
	2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Vindhyachal:Rihand Bay: 400 kV 1 bay				
Transmission Lines				
(ii) 2nd circuit of 765 D/C Rihand Vindhyachal Pooling Station				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
S/C 4 conductors(km)	65.000	65.000	65.000	65.000



Particulars	Asset-B14			
	2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	47.59	106.43	110.00	113.63

Particulars	Asset-C1				
	2014-15 (Pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Gwalior: Satna II Line Bay					
(ii) Satna: Gwalior II Line Bay					
(iii) Satna: Switchable Line Reactor at Satna for Satna-Gwalior Ckt II					
Transmission Lines					
(iv) 765 KV S/C Satna Gwalior Ckt II					
765 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
S/C 4 conductors(km)	330.330	330.330	330.330	330.330	330.330
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	283.81	449.97	464.67	480.25	496.13

Particulars	Asset-D				
	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Jaipur: Bassi-1-Jaipur (S)-Jaipur South: 400 kV 1 bay					
(ii) Jaipur: Bassi-1-Jaipur(S)-Jaipur South: 400 kV 1 bay					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	28.75	124.60	128.74	133.02	137.42

72. The details of O&M Expenses approved in respect of the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in



Petition No. 204/TT/2016 (Asset-D), claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A					
Approved <i>vide</i> order dated 5.9.2018 in Petition No. 9/TT/2018	977.21	1009.91	1043.16	1077.99	1113.69
Claimed by the Petitioner in the instant petition	977.21	1009.91	1043.15	1078.00	1113.69
Allowed after truing-up in this order	977.21	1009.91	1043.16	1077.99	1113.69
Asset-B1					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	29.03	40.76	42.06	43.49	44.92
Claimed by the Petitioner in the instant petition	29.03	40.76	42.06	43.49	44.92
Allowed after truing-up in this order	29.03	40.76	42.06	43.49	44.92
Asset-B2					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	32.15	87.22	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	32.15	87.22	90.12	93.11	96.20
Allowed after truing-up in this order	32.15	87.22	90.12	93.11	96.20
Asset-B3					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	17.81	87.22	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	17.81	87.22	90.12	93.11	96.20
Allowed after truing-up in this order	17.81	87.22	90.12	93.11	96.20
Asset-B4					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		173.90	284.43	294.03	303.73
Claimed by the Petitioner in the instant petition		173.90	284.43	294.03	303.73



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after truing-up in this order		173.90	284.43	294.03	303.73
	Asset-B5				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		788.57	816.91	844.05	872.08
Claimed by the Petitioner in the instant petition		788.58	816.91	844.05	872.08
Allowed after truing-up in this order		788.57	816.91	844.05	872.08
	Asset-B6				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		66.96	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition		66.96	90.12	93.11	96.20
Allowed after truing-up in this order		66.96	90.12	93.11	96.20
	Asset-B7				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		111.12	154.49	159.62	164.91
Claimed by the Petitioner in the instant petition		111.12	154.49	159.62	164.91
Allowed after truing-up in this order		111.12	154.49	159.62	164.91
	Asset-B8				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		201.76	326.00	336.81	348.01
Claimed by the Petitioner in the instant petition		201.75	326.00	336.81	348.01
Allowed after truing-up in this order		201.76	326.00	336.81	348.01
	Asset-B9				
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		52.67	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition		52.67	90.12	93.11	96.20
Allowed after truing-up in this order		52.67	90.12	93.11	96.20
	Asset-B10				



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		73.85	128.74	133.02	137.42
Claimed by the Petitioner in the instant petition		72.86	128.74	133.02	137.42
Allowed after truing-up in this order		72.85	128.74	133.02	137.42
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		27.75	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition		27.75	64.37	66.51	68.71
Allowed after truing-up in this order		27.75	64.37	66.51	68.71
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		25.02	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition		25.02	64.37	66.51	68.71
Allowed after truing-up in this order		25.02	64.37	66.51	68.71
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		1.87	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition		1.87	64.37	66.51	68.71
Allowed after truing-up in this order		1.87	64.37	66.51	68.71
Asset-B14					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		47.59	106.43	110.00	113.63
Claimed by the Petitioner in the instant petition		47.59	106.43	110.00	113.63
Allowed after truing-up in this order		47.59	106.43	110.00	113.63
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	283.81	449.97	464.67	480.25	496.13



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	283.82	449.97	464.67	480.25	496.13
Allowed after truing-up in this order	283.81	449.97	464.67	480.25	496.13
Asset-C2					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	0.00	0.00	0.00	0.00	0.00
Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	0.00	0.00
Allowed after truing g-up in this order	0.00	0.00	0.00	0.00	0.00
Asset-D					
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	28.76	124.60	128.74	133.02	137.42
Claimed by the Petitioner in the instant petition	28.74	124.60	128.74	133.02	137.42
Allowed after truing-up in this order	28.75	124.60	128.74	133.02	137.42

Interest on Working Capital (“IWC”)

73. IWC in respect of the transmission assets has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and it is as follows:

(₹ in lakh)						
	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	81.43	84.16	86.93	89.83	92.81
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	146.58	151.49	156.47	161.70	167.05
C	Working Capital for Receivables (equivalent to two months of Annual Fixed	2726.15	2766.29	2783.43	2759.93	2698.08



	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Charges/Annual Transmission Charges)					
D	Total Working Capital (A+B+C)	2954.17	3001.93	3026.84	3011.46	2957.94
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	398.81	405.26	408.62	406.55	399.32

(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	3.28	3.40	3.50	3.62	3.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	5.91	6.11	6.31	6.52	6.74
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	453.92	480.01	483.39	478.51	472.98
D	Total Working Capital (A+B+C)	463.12	489.52	493.20	488.66	483.46
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	46.08	66.09	66.58	65.97	65.27

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15 (pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	7.04	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43



	Particulars	Asset-B2				
		2014-15 (pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	64.45	69.24	80.86	87.19	85.74
D	Total Working Capital (A+B+C)	84.14	89.59	101.88	108.92	108.19
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	4.33	12.09	13.75	14.70	14.61

(₹ in lakh)

	Particulars	Asset-B3				
		2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	7.04	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	86.30	89.78	98.20	107.82	111.16
D	Total Working Capital (A+B+C)	105.99	110.13	119.23	129.54	133.61
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	3.02	14.87	16.10	17.49	18.04

(₹ in lakh)

	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	22.96	23.70	24.50	25.31
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	41.33	42.67	44.10	45.56
C	Working Capital for Receivables	1786.57	1812.50	1791.12	1755.36



	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	(equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)				
D	Total Working Capital (A+B+C)	1850.86	1878.86	1859.73	1826.23
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	157.70	253.65	251.06	246.54

(₹ in lakh)

	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	65.89	68.08	70.34	72.67
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	118.61	122.54	126.61	130.81
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	2658.51	2824.73	2886.00	2848.13
D	Total Working Capital (A+B+C)	2843.01	3015.34	3082.95	3051.62
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	382.76	407.07	416.20	411.97

(₹ in lakh)

	Particulars	Asset-B6			
		2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	78.26	90.52	102.40	102.70
D	Total Working Capital (A+B+C)	98.61	111.54	124.13	125.14
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	10.22	15.06	16.76	16.89



(₹ in lakh)

	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	12.46	12.87	13.30	13.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	22.43	23.17	23.94	24.74
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	184.09	213.18	223.76	223.94
D	Total Working Capital (A+B+C)	218.98	249.22	261.00	262.42
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	21.97	33.65	35.24	35.43

(₹ in lakh)

	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	26.30	27.17	28.07	29.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	47.34	48.90	50.52	52.20
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	1543.97	1605.80	1615.67	1593.35
D	Total Working Capital (A+B+C)	1617.60	1681.87	1694.26	1674.56
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	139.62	227.05	228.73	226.06

(₹ in lakh)

	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission	87.51	104.04	116.61	117.77



	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Charges)				
D	Total Working Capital (A+B+C)	107.87	125.07	138.33	140.22
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	8.79	16.88	18.67	18.93

(₹ in lakh)

	Particulars	Asset-B10			
		2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.38	10.73	11.09	11.45
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	18.69	19.31	19.95	20.61
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	54.51	59.03	61.44	60.97
D	Total Working Capital (A+B+C)	83.58	89.07	92.48	93.04
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	6.60	12.03	12.49	12.56

(₹ in lakh)

	Particulars	Asset-B11			
		2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	25.10	25.60	25.39	25.32
D	Total Working Capital (A+B+C)	39.63	40.62	40.91	41.35
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	2.38	5.48	5.52	5.58



(₹ in lakh)

	Particulars	Asset-B12			
		2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	25.73	26.52	26.72	26.63
D	Total Working Capital (A+B+C)	40.26	41.54	42.24	42.66
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	2.18	5.61	5.70	5.76

(₹ in lakh)

	Particulars	Asset-B13			
		2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	29.49	31.48	32.30	32.79
D	Total Working Capital (A+B+C)	44.03	46.50	47.82	48.82
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	0.18	6.28	6.46	6.59

(₹ in lakh)

	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	8.59	8.87	9.17	9.47
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	15.46	15.96	16.50	17.04
C	Working Capital for Receivables	137.60	136.57	133.49	131.20



	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	(equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)				
D	Total Working Capital (A+B+C)	161.64	161.41	159.16	157.71
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	10.08	21.79	21.49	21.29

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	36.27	37.50	38.72	40.02	41.34
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	65.29	67.50	69.70	72.04	74.42
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	1340.12	1350.67	1370.44	1373.76	1353.40
D	Total Working Capital (A+B+C)	1441.68	1455.66	1478.86	1485.82	1469.17
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	126.91	196.51	199.65	200.59	198.34

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00



	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	99.60	103.12	105.14	106.66	103.58
D	Total Working Capital (A+B+C)	99.60	103.12	105.14	106.66	103.58
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	6.74	13.92	14.19	14.40	13.98

(₹ in lakh)

	Particulars	Asset-D				
		2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.05	10.38	10.73	11.09	11.45
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	18.09	18.69	19.31	19.95	20.61
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	135.90	133.01	128.96	123.81	120.92
D	Total Working Capital (A+B+C)	164.04	162.08	159.00	154.85	152.98
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	5.28	21.88	21.47	20.91	20.65

74. The details of IWC approved in respect of the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No.



204/TT/2016 (Asset-D), claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A					
Approved <i>vide</i> order dated 5.9.2018 in Petition No. 9/TT/2018	398.92	404.48	408.83	408.11	399.85
Claimed by the Petitioner in the instant petition	399.24	405.49	408.78	406.70	399.46
Allowed after truing-up in this order	398.81	405.26	408.62	406.55	399.32
Asset-B1					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	45.63	64.13	63.71	62.83	61.33
Claimed by the Petitioner in the instant petition	46.09	66.10	66.58	65.97	65.27
Allowed after truing-up in this order	46.08	66.09	66.58	65.97	65.27
Asset-B2					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	4.33	12.74	14.45	14.81	14.71
Claimed by the Petitioner in the instant petition	4.35	12.15	13.81	14.76	14.65
Allowed after true-up in this order	4.33	12.09	13.75	14.70	14.61
Asset-B3					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	3.02	15.97	17.88	18.12	17.91
Claimed by the Petitioner in the instant petition	3.03	14.93	16.15	17.54	18.09
Allowed after truing-up in this order	3.02	14.87	16.10	17.49	18.04
Asset-B4					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		157.94	254.13	250.45	245.25
Claimed by the Petitioner in the instant petition		156.22	253.29	251.11	246.59



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after truing-up in this order		157.70	253.65	251.06	246.54
Asset-B5					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		381.48	396.13	395.01	387.82
Claimed by the Petitioner in the instant petition		382.90	407.15	416.25	412.03
Allowed after truing-up in this order		382.76	407.07	416.20	411.97
Asset-B6					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		10.95	15.86	16.24	16.15
Claimed by the Petitioner in the instant petition		10.23	15.06	16.76	16.90
Allowed after truing-up in this order		10.22	15.06	16.76	16.89
Asset-B7					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		21.54	32.27	33.45	33.42
Claimed by the Petitioner in the instant petition		21.98	33.64	35.24	35.43
Allowed after truing-up in this order		21.97	33.65	35.24	35.43
Asset-B8					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		140.88	228.82	226.45	221.12
Claimed by the Petitioner in the instant petition		139.67	227.13	228.82	226.16
Allowed after truing-up in this order		139.62	227.05	228.73	226.06
Asset-B9					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		9.10	17.42	18.60	18.67
Claimed by the Petitioner in the instant petition		8.79	16.88	18.68	18.93
Allowed after truing-up in this order		8.79	16.88	18.67	18.93
Asset-B10					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		6.72	12.29	12.57	12.66
Claimed by the Petitioner in the instant petition		6.65	12.12	12.58	12.64
Allowed after truing-up in this order		6.60	12.03	12.49	12.56
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		2.38	5.49	5.58	5.64
Claimed by the Petitioner in the instant petition		2.40	5.52	5.56	5.62
Allowed after truing-up in this order		2.38	5.48	5.52	5.58
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		2.20	5.65	5.72	5.78
Claimed by the Petitioner in the instant petition		2.20	5.65	5.74	5.80
Allowed after truing-up in this order		2.18	5.61	5.70	5.76
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		0.18	6.45	6.86	6.93
Claimed by the Petitioner in the instant petition		0.18	6.44	6.77	6.89
Allowed after truing-up in this order		0.18	6.28	6.46	6.59
Asset-B14					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		9.63	21.00	20.90	20.66
Claimed by the Petitioner in the instant petition		10.08	21.79	21.49	21.29
Allowed after truing-up in this order		10.08	21.79	21.49	21.29
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	127.07	196.82	202.38	206.75	203.68



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	127.15	196.86	199.95	200.89	198.63
Allowed after true-up in this order	126.91	196.51	199.65	200.59	198.34
Asset-C2					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	6.80	14.05	14.35	14.93	14.82
Claimed by the Petitioner in the instant petition	6.81	14.07	14.34	14.54	14.11
Allowed after truing-up in this order	6.74	13.92	14.19	14.40	13.98
Asset-D					
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	5.28	22.09	23.06	24.00	23.71
Claimed by the Petitioner in the instant petition	5.28	21.89	21.47	20.91	20.66
Allowed after truing-up in this order	5.28	21.88	21.47	20.91	20.65

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

	Particulars	Combined Asset-A				
		2014-15 (pro-rata 90 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	4828.04	4990.19	5110.06	5183.05	5186.06
B	Interest on Loan	4775.27	4607.43	4419.72	4091.23	3669.68
C	Return on Equity	5377.59	5584.95	5719.02	5800.75	5819.73
D	O&M Expenses	977.21	1009.91	1043.16	1077.99	1113.69
E	Interest on Working Capital	398.81	405.26	408.62	406.55	399.32
F	Total (A+B+C+D+E)	16356.93	16597.73	16700.59	16559.57	16188.48



(₹ in lakh)

	Particulars	Asset-B1				
		2014-15 (pro-rata 269 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	645.79	930.91	941.06	947.93	954.79
B	Interest on Loan	566.77	800.06	797.02	752.39	701.04
C	Return on Equity	719.55	1042.25	1053.62	1061.30	1071.86
D	O&M Expenses	29.03	40.76	42.06	43.49	44.92
E	Interest on Working Capital	46.08	66.09	66.58	65.97	65.27
F	Total (A+B+C+D+E)	2007.21	2880.07	2900.34	2871.07	2837.88

(₹ in lakh)

	Particulars	Asset-B2				
		2014-15 (pro-rata 139 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	35.36	100.90	122.70	137.13	137.13
B	Interest on Loan	36.03	102.26	121.18	124.68	112.57
C	Return on Equity	39.39	112.97	137.38	153.53	153.94
D	O&M Expenses	32.15	87.22	90.12	93.11	96.20
E	Interest on Working Capital	4.33	12.09	13.75	14.70	14.61
F	Total (A+B+C+D+E)	147.25	415.44	485.13	523.14	514.44

(₹ in lakh)

	Particulars	Asset-B3				
		2014-15 (pro-rata 77 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	26.75	133.92	152.36	174.47	184.87
B	Interest on Loan	31.84	152.72	160.04	166.48	160.30
C	Return on Equity	29.81	149.94	170.58	195.34	207.55
D	O&M Expenses	17.81	87.22	90.12	93.11	96.20
E	Interest on Working Capital	3.02	14.87	16.10	17.49	18.04
F	Total (A+B+C+D+E)	109.23	538.67	589.20	646.89	666.96



(₹ in lakh)

	Particulars	Asset-B4			
		2015-16 (pro-rata 231 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	2096.58	3401.74	3445.95	3446.87
B	Interest on Loan	1990.68	3127.64	2898.68	2666.57
C	Return on Equity	2346.66	3807.52	3857.02	3868.43
D	O&M Expenses	173.90	284.43	294.03	303.73
E	Interest on Working Capital	157.70	253.65	251.06	246.54
F	Total (A+B+C+D+E)	6765.53	10874.97	10746.74	10532.14

(₹ in lakh)

	Particulars	Asset-B5			
		2015-16 (pro-rata 365 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	4336.30	4726.21	4952.17	5006.54
B	Interest on Loan	5115.09	5261.48	5100.21	4715.31
C	Return on Equity	5284.76	5736.68	6003.38	6082.88
D	O&M Expenses	788.57	816.91	844.05	872.08
E	Interest on Working Capital	382.76	407.07	416.20	411.97
F	Total (A+B+C+D+E)	15907.47	16948.35	17316.01	17088.79

(₹ in lakh)

	Particulars	Asset-B6			
		2015-16 (pro-rata 281 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	86.04	136.96	162.37	166.48
B	Interest on Loan	100.95	147.61	160.40	149.70
C	Return on Equity	96.33	153.34	181.79	186.90
D	O&M Expenses	66.96	90.12	93.11	96.20
E	Interest on Working Capital	10.22	15.06	16.76	16.89
F	Total (A+B+C+D+E)	360.51	543.09	614.42	616.17



(₹ in lakh)

	Particulars	Asset-B7			
		2015-16 (pro-rata 272 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	211.25	343.58	371.83	380.62
B	Interest on Loan	239.99	362.67	359.56	335.38
C	Return on Equity	236.52	384.67	416.30	427.28
D	O&M Expenses	111.12	154.49	159.62	164.91
E	Interest on Working Capital	21.97	33.65	35.24	35.43
F	Total (A+B+C+D+E)	820.85	1279.05	1342.55	1343.62

(₹ in lakh)

	Particulars	Asset-B8			
		2015-16 (pro-rata 234 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	1712.17	2851.55	2948.43	2983.21
B	Interest on Loan	1952.91	3038.72	2880.11	2654.96
C	Return on Equity	1916.30	3191.51	3299.97	3347.89
D	O&M Expenses	201.76	326.00	336.81	348.01
E	Interest on Working Capital	139.62	227.05	228.73	226.06
F	Total (A+B+C+D+E)	5922.75	9634.83	9694.04	9560.12

(₹ in lakh)

	Particulars	Asset-B9			
		2015-16 (pro-rata 221 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	77.99	162.12	190.45	197.02
B	Interest on Loan	90.30	173.60	184.17	173.32
C	Return on Equity	87.31	181.51	213.23	221.17
D	O&M Expenses	52.67	90.12	93.11	96.20
E	Interest on Working Capital	8.79	16.88	18.67	18.93
F	Total (A+B+C+D+E)	317.06	624.24	699.64	706.64



(₹ in lakh)

	Particulars	Asset-B10			
		2015-16 (pro-rata 214 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	33.97	67.08	73.55	73.55
B	Interest on Loan	40.42	72.42	68.42	60.91
C	Return on Equity	37.39	73.95	81.19	81.41
D	O&M Expenses	72.85	128.74	133.02	137.42
E	Interest on Working Capital	6.60	12.03	12.49	12.56
F	Total (A+B+C+D+E)	191.23	354.21	368.67	365.85

(₹ in lakh)

	Particulars	Asset-B11			
		2015-16 (pro-rata 163 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	11.34	26.38	26.55	26.55
B	Interest on Loan	13.18	28.45	24.64	21.91
C	Return on Equity	12.42	28.90	29.10	29.17
D	O&M Expenses	27.75	64.37	66.51	68.71
E	Interest on Working Capital	2.38	5.48	5.52	5.58
F	Total (A+B+C+D+E)	67.07	153.58	152.32	151.93

(₹ in lakh)

	Particulars	Asset-B12			
		2015-16 (pro-rata 147 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	10.66	27.96	28.82	28.82
B	Interest on Loan	12.44	30.53	27.67	24.77
C	Return on Equity	11.69	30.67	31.63	31.71
D	O&M Expenses	25.02	64.37	66.51	68.71
E	Interest on Working Capital	2.18	5.61	5.70	5.76
F	Total (A+B+C+D+E)	62.00	159.14	160.33	159.77



(₹ in lakh)

	Particulars	Asset-B13			
		2015-16 (pro-rata 11 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	0.98	36.32	38.85	40.22
B	Interest on Loan	1.19	41.24	38.50	36.05
C	Return on Equity	1.10	40.66	43.50	45.15
D	O&M Expenses	1.87	64.37	66.51	68.71
E	Interest on Working Capital	0.18	6.28	6.46	6.59
F	Total (A+B+C+D+E)	5.32	188.87	193.81	196.72

(₹ in lakh)

	Particulars	Asset-B14			
		2015-16 (pro-rata 169 days)	2016-17	2017-18	2018-19
	Annual Transmission Charges				
A	Depreciation	97.63	213.87	216.53	217.89
B	Interest on Loan	116.89	238.55	211.16	190.43
C	Return on Equity	109.03	238.82	241.79	243.97
D	O&M Expenses	47.59	106.43	110.00	113.63
E	Interest on Working Capital	10.08	21.79	21.49	21.29
F	Total (A+B+C+D+E)	381.21	819.45	800.97	787.21

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 238 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	1563.71	2446.33	2516.76	2574.58	2591.17
B	Interest on Loan	1520.09	2261.44	2206.67	2082.33	1902.74
C	Return on Equity	1748.47	2749.77	2834.87	2904.84	2932.04
D	O&M Expenses	283.81	449.97	464.67	480.25	496.13
E	Interest on Working Capital	126.91	196.51	199.65	200.59	198.34
F	Total (A+B+C+D+E)	5242.99	8104.02	8222.62	8242.59	8120.41



(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 183 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	88.37	186.05	195.47	204.23	204.23
B	Interest on Loan	106.05	210.43	202.33	192.68	174.00
C	Return on Equity	98.47	208.30	218.85	228.65	229.27
D	O&M Expenses	0.00	0.00	0.00	0.00	0.00
E	Interest on Working Capital	6.74	13.92	14.19	14.40	13.98
F	Total (A+B+C+D+E)	299.63	618.70	630.83	639.96	621.48

(₹ in lakh)

	Particulars	Asset-D				
		2014-15 (pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	46.53	195.22	195.22	195.22	195.22
B	Interest on Loan	61.95	237.79	209.78	175.17	153.05
C	Return on Equity	51.85	218.57	218.57	218.57	219.16
D	O&M Expenses	28.75	124.60	128.74	133.02	137.42
E	Interest on Working Capital	5.28	21.88	21.47	20.91	20.65
F	Total (A+B+C+D+E)	194.36	798.07	773.78	742.89	725.51

76. The details of AFC approved in respect of the transmission assets vide order dated 5.9.2018 in Petition No. 9/TT/2018 (Combined Asset-A), order dated 31.5.2016 in Petition No. 71/TT/2015 (Assets B1 to B-14), order dated 23.5.2016 in Petition No. 201/TT/2014 (Asset C1 and Asset-C2) and order dated 13.11.2017 in Petition No. 204/TT/2016 (Asset-D), claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A					
Approved <i>vide</i> order dated 5.9.2018 in Petition No. 9/TT/2018	16361.50	16563.19	16709.79	16628.93	16212.03
Claimed by the Petitioner in the instant petition	16376.14	16608.08	16707.79	16566.40	16194.75
Allowed after truing-up in this order	16356.93	16597.73	16700.59	16559.57	16188.48
Asset-B1					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	1987.57	2793.33	2772.67	2731.65	2663.02
Claimed by the Petitioner in the instant petition	2007.77	2880.61	2900.34	2871.09	2837.89
Allowed after truing-up in this order	2007.21	2880.07	2900.34	2871.07	2837.88
Asset-B2					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	148.25	444.21	516.05	528.08	518.97
Claimed by the Petitioner in the instant petition	148.31	418.04	487.59	525.49	516.53
Allowed after truing-up in this order	147.25	415.44	485.13	523.14	514.44
Asset-B3					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015	109.23	587.57	668.64	675.17	661.54
Claimed by the Petitioner in the instant petition	109.84	541.44	591.77	649.34	669.15
Allowed after truing-up in this order	109.23	538.67	589.20	646.89	666.96
Asset-B4					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		6775.96	10896.33	10719.39	10474.70
Claimed by the Petitioner in the instant petition		6699.82	10859.16	10748.81	10534.22
Allowed after truing-up in this order		6765.53	10874.97	10746.74	10532.14
Asset-B5					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		15850.75	16461.88	16374.25	16015.73
Claimed by the Petitioner in the instant petition		15913.84	16951.87	17318.26	17091.72
Allowed after truing-up in this order		15907.47	16948.35	17316.01	17088.79
Asset-B6					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		392.88	578.53	591.31	583.18
Claimed by the Petitioner in the instant petition		360.59	543.15	614.49	616.24
Allowed after truing-up in this order		360.51	543.09	614.42	616.17
Asset-B7					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		801.62	1217.73	1263.01	1254.40
Claimed by the Petitioner in the instant petition		820.98	1279.08	1342.61	1343.67
Allowed after truing-up in this order		820.85	1279.05	1342.55	1343.62
Asset-B8					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		5978.99	9713.20	9592.80	9340.46
Claimed by the Petitioner in the instant petition		5925.23	9638.22	9698.41	9564.25
Allowed after truing-up in this order		5922.75	9634.83	9694.04	9560.12
Asset-B9					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		330.78	647.84	696.43	695.30
Claimed by the Petitioner in the instant petition		317.11	624.25	699.67	706.65
Allowed after truing-up in this order		317.06	624.24	699.64	706.64
Asset-B10					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		196.72	365.95	372.59	370.16



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition		193.74	358.40	373.70	369.51
Allowed after truing-up in this order		191.23	354.21	368.67	365.85
Asset-B11					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		67.02	154.04	154.92	154.68
Claimed by the Petitioner in the instant petition		67.90	155.40	154.07	153.51
Allowed after trueing-up in this order		67.07	153.58	152.32	151.93
Asset-B12					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		62.74	161.06	161.23	160.82
Claimed by the Petitioner in the instant petition		62.76	160.98	162.08	161.37
Allowed after truing-up in this order		62.00	159.14	160.33	159.77
Asset-B13					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		5.32	196.41	211.68	211.63
Claimed by the Petitioner in the instant petition		5.32	196.04	207.67	210.14
Allowed after truing-up in this order		5.32	188.87	193.81	196.72
Asset-B14					
Approved <i>vide</i> order dated 31.5.2016 in Petition No. 71/TT/2015		361.34	784.38	774.76	758.95
Claimed by the Petitioner in the instant petition		381.28	819.48	801.00	787.24
Allowed after truing-up in this order		381.21	819.45	800.97	787.21
Asset-C1					
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	5250.25	8117.62	8344.04	8516.82	8357.82
Claimed by the Petitioner in the instant petition	5253.71	8119.38	8236.32	8255.92	8133.22
Allowed after truing-up in this order	5242.99	8104.02	8222.62	8242.59	8120.41



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Asset-C2				
Approved <i>vide</i> order dated 23.5.2016 in Petition No. 201/TT/2014	302.35	624.40	637.90	663.46	658.83
Claimed by the Petitioner in the instant petition	302.84	625.34	637.13	646.00	627.27
Allowed after truing-up in this order	299.63	618.70	630.83	639.96	621.48
	Asset-D				
Approved <i>vide</i> order dated 13.11.2017 in Petition No. 204/TT/2016	194.48	807.52	844.61	880.23	861.39
Claimed by the Petitioner in the instant petition	194.46	798.48	774.07	743.16	725.77
Allowed after truing-up in this order	194.36	798.07	773.78	742.89	725.51

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

77. The Petitioner has combined the transmission assets into one single Combined Asset with effect from 1.4.2019 and has claimed the following transmission charges in respect of them for 2019-24 tariff period :

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	22116.24	22156.53	22151.35	22120.75	22120.75
Interest on Loan	16163.16	14341.50	12506.22	10878.71	9258.27
Return on Equity	24024.58	24067.57	24078.85	24078.85	24078.85
O&M Expenses	1124.01	1107.08	1086.31	1068.37	1048.67
Interest on Working Capital	4292.47	4441.41	4597.66	4759.71	4926.13
Total	67720.46	66114.09	64420.39	62906.39	61432.67

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



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	357.71	370.12	383.14	396.64	410.51
Working Capital for Maintenance Spares (15% of O&M Expenses)	643.87	666.21	689.65	713.96	738.92
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	8326.29	8151.05	7942.24	7755.58	7553.20
Total Working Capital	9327.87	9817.38	9015.03	8866.18	8702.63
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	1124.01	1107.08	1086.31	1068.37	1048.67

Effective Date of Commercial Operation ("E-COD")

79. The Petitioner has submitted that E-COD of the Combined Asset works out to be 18.12.2014. E-COD of the Combined Asset has been worked out based on the trued-up capital cost and COD of the individual assets and the same is as follows:

Assets	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset / from COD of Project	Weighted cost (in %)	Weighted days
Combined Asset-A	98183.55	26.12.2013	815.79	23.07%	188.20
Asset-B1	18083.19	6.7.2014	624.00	4.25%	26.51
Asset-B2	2597.09	13.11.2014	494.00	0.61%	3.01
Asset-B3	3501.48	14.1.2015	432.00	0.82%	3.55
Asset-B4	65263.49	14.8.2015	220.00	15.33%	33.74
Asset-B5	102664.15	2.4.2015	354.00	24.12%	85.39
Asset-B6	3153.07	25.6.2015	270.00	0.74%	2.00
Asset-B7	7208.63	4.7.2015	261.00	1.69%	4.42
Asset-B8	56639.68	11.8.2015	223.00	13.31%	29.68
Asset-B9	3731.39	24.8.2015	210.00	0.88%	1.84
Asset-B10	1373.40	31.8.2015	203.00	0.32%	0.66
Asset-B11	492.19	21.10.2015	152.00	0.12%	0.18
Asset-B12	535.03	6.11.2015	136.00	0.13%	0.17
Asset-B13	787.74	21.3.2016	0.00	0.19%	0.00
Asset-B14	4116.05	15.10.2015	158.00	0.97%	1.53
Asset-C1	49696.96	6.8.2014	593.00	11.68%	69.25
Asset-C2	3867.94	30.9.2014	538.00	0.91%	4.89
Asset-D	3697.40	4.1.2015	442.00	0.87%	3.84



Assets	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset / from COD of Project	Weighted cost (in %)	Weighted days
Total	425592.42			1.00	458.86
E-COD (latest COD – total weighted days)					18.12.2014

80. E-COD is used to determine the lapsed life of the project as a whole which works out as 4 (four) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (“WAL”) of the Project

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

82. 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.

83. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of all the transmission assets executed during 2004-09 and 2014-19 tariff periods has been worked out as 33 years and the same is as follows:



Particulars	Life (in years) (1)	Capital Cost as on 31.3.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) * (2)	Weighted Average Life of Asset (in years) (4) = (3) / (2)
Building Civil Works & Colony	25.00	2301.41	57535.25	33.069 years (rounded off to 33 years)
Transmission Line	35.00	338927.51	11862462.76	
Sub Station	25.00	75670.67	1891766.81	
PLCC	15.00	960.44	14406.65	
I.T. Equipment	6.67	308.92	2059.44	
Total		418168.95	13828230.92	

84. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, E-COD of the transmission assets is 18.12.2014 and the lapsed life of the project as a whole works out as 4 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 29 years.

Capital Cost

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

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

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

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



- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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



- (4) *The capital cost in case of existing or new hydro generating station shall also include:*
- (a) *cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
 - (b) *cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*
- (5) *The following shall be excluded from the capital cost of the existing and new projects:*
- (a) *The assets forming part of the project, but not in use, as declared in the tariff petition;*
 - (b) *De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*
- Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;*
- Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
- (c) *In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*
 - (d) *Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
 - (e) *Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."*

86. The Petitioner has claimed capital cost of ₹425814.56 lakh as on 31.3.2019. Capital cost of ₹425592.42 lakh has been considered as opening capital cost as on 31.3.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Initial Spares

87. The transmission assets covered in the transmission project are combined and overall project cost has been arrived at in 2019-24 tariff period and, therefore, Initial Spares are allowed during 2019-24 tariff period on the basis of overall project cost as



per the APTEL's judgement dated 14.9.2019 in Appeal No.74 of 2017. Accordingly, the following Initial Spares are allowed in respect of the transmission assets in 2019-24 tariff period:

Transmission Line:

Assets	Capital cost/Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial spares claimed (₹ in lakh)	Norms as per 2009/2014 Tariff Regulations	Initial spares allowable as per 2009/2014 Tariff Regulations (₹ in lakh)	Excess initial spares claimed (₹ in lakh)	Initial spares allowed during 2014-19 period (₹ in lakh)	Initial Spares allowed for Combined Asset in 2019-24 period (₹ in lakh)	Additional Initial Spares allowed (₹ in lakh)
Combined A	86004.37	519.63	0.75	645.98	Nil	2517.64	3062.56	9.17
Asset-B1	15370.16	139.33	1.00	153.85				
Asset-B4	53085.18	498.00	1.00	531.18				
Asset-B5	66987.38	547.05	1.00	671.11				
Asset-B8	44809.54	410.00	1.00	448.48				
Asset-C1	39454.76	403.63	1.00	394.46				
Combined Asset	305711.39	2517.64		2845.03				

Sub-station:

Assets	Capital cost/ Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2009/2014 Tariff Regulations	Initial Spares allowable as per 2009/2014 Tariff Regulations (₹ in lakh)	Excess initial spares claimed (₹ in lakh)	Initial spares allowed during 2014-19 period (₹ in lakh)	Initial Spares allowed on Combined Asset for 2019-24 period (₹ in lakh)	Additional Initial Spares allowed (₹ in lakh)
Combined Asset A	12087.56	322.16	2.50	301.68	Nil	2382.9	3908.98	100.05
Asset-B2	2405.15	144.34	6.00	144.31				
Asset-B3	3139.85	185.17	6.00	188.60				
Asset-B4	3846.20	3.00	6.00	245.31				
Asset-B5	16015.62	570.71	6.00	985.85				
Asset-B6	2765.27	152.00	6.00	166.80				
Asset-B7	6651.48	240.00	4.00	267.15				
Asset-B8	4565.70	176.00	4.00	182.90				
Asset-B9	3294.21	126.00	4.00	132.01				
Asset-B10	1166.32	46.00	4.00	46.68				
Asset-B11	408.84	16.00	4.00	16.37				
Asset-B12	448.65	18.00	4.00	17.94				
Asset-B13	616.33	23.01	4.00	24.72				



Asset-B14	446.02	18.00	4.00	17.83				
Asset-C1	2886.09	230.51	6.00	169.51				
Asset-C2	2963.25	195.00	6.00	176.70				
Combined Asset	63706.52	2382.90		3086.48				

88. Thus, in line with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹124.12 lakh are admissible. Capital cost as on 1.4.2019 for the Combined Asset allowed after addition of Initial Spares which is as follows:

(₹ in lakh)

Capital cost as on 31.3.2019	Additional Initial Spares as per APTEL's Judgment dated 14.9.2019	Capital cost as on 1.4.2019
425592.42	109.22	425701.64

Additional Capital Expenditure ("ACE")

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

"24. Additional Capitalisation within the original scope and upto the cut-off date:

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

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

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

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



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

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

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

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

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

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

90. The Petitioner has submitted that ACE projected to be incurred during 2019-20 and 2020-21 is on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date. The Petitioner has submitted the following ACE for the Combined Asset-A, Asset-B4 and Asset-D claimed under Regulation 25(1)(d) of the 2019 Tariff Regulations:

		(₹ in lakh)	
Assets	Asset Type	Projected ACE	
		2019-20	2020-21
Combined Asset-A	Sub-station	150.00	100.00



Assets	Asset Type	Projected ACE	
		2019-20	2020-21
Asset-B4	Transmission Line	0.65	0.35
	Sub-Station	400.00	300.00
Asset-D	Sub-Station	575.00	
Combined Asset		1125.65	400.35

91. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner for Combined Asset-A, Asset-B4 and Asset-D has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations on account of liabilities for works executed prior to the cut-off date, subject to true-up as per actuals and on submission of documentary evidence. Accordingly, the capital cost considered for the Combined Asset for 2019-24 tariff period is as follows:

Capital Cost as on 1.4.2019	ACE 2019-24					(₹ in lakh)
	2019-20	2020-21	2021-22	2022-23	2023-24	Capital Cost as on 31.3.2024
425701.64	1125.65	400.35	-	-	-	427227.64

Debt-Equity ratio

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

“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- 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."

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



Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	297991.15	70.00	1068.20	70.00	299059.35	70.00
Equity	127710.49	30.00	457.80	30.00	128168.29	30.00
Total	425701.64	100.00	1526.00	100.00	427227.64	100.00

Depreciation

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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



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

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	425701.64	426827.29	427227.64	427227.64	427227.64
B	ACE	1125.65	400.35	0.00	0.00	0.00
C	Closing Gross Block (A+B)	426827.29	427227.64	427227.64	427227.64	427227.64
E	Average Gross Block (A+C)/2	426264.46	427027.46	427227.64	427227.64	427227.64
D	Freehold Land	7423.47	7423.47	7423.47	7423.47	7423.47
F	Weighted average rate of Depreciation (WAROD) (in %)	5.19	5.19	5.19	5.19	5.19
G	Balance useful life of the asset (Year)	29	28	27	26	25
H	Lapsed life at the beginning of the year (Year)	4	5	6	7	8
I	Aggregate Depreciable Value	376987.79	377674.49	377854.64	377854.64	377854.64
J	Depreciation during the year	22110.27	22150.55	22161.12	22161.12	22161.12
K	Cumulative Depreciation	113331.18	135481.74	157642.86	179803.99	201965.11
L	Remaining Depreciable Value (I-K)	263656.60	242192.75	220211.78	198050.66	175889.53

Interest on Loan ("IoL")

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

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



calculation of interest on loan.

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

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

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

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

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

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

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

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

97. According to UPPCL, the Petitioner with regard to IOL in the present petition has referred to documents submitted in Petition No. 244/TT/2019 for prudence check which needs to be rejected and the Petitioner may be asked to submit relevant documents pertaining to the loans taken for the transmission assets/Combined Asset of the instant petition through a separate affidavit for prudence check. UPPCL has



submitted that the Petitioner's request to allow adjustment of change in interest rate due to floating rate of interest, if any, may be rejected as rate of interest is always subject to true-up exercise.

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

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

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	297991.15	298779.11	299059.35	299059.35	299059.35
B	Cumulative Repayments upto Previous Year	91220.92	113331.18	135481.74	157642.86	179803.99
C	Net Loan-Opening (A-B)	206770.23	185447.92	163577.61	141416.49	119255.36
D	Additions	787.96	280.25	0.00	0.00	0.00
E	Repayment during the year	22110.27	22150.55	22161.12	22161.12	22161.12
F	Net Loan-Closing (C+D-E)	185447.92	163577.61	141416.49	119255.36	97094.24
G	Average Loan (C+F)/2	196109.08	174512.77	152497.05	130335.92	108174.80
H	Weighted Average Rate of Interest on Loan (in %)	8.2446	8.2213	8.2046	8.3494	8.5588
I	Interest on Loan (G*H)	16168.34	14347.25	12511.83	10882.22	9258.47

Return on Equity ("RoE")

100. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:



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

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

Provided that return on equity in respect of additional capitalization after 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.”



101. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, 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 in respect of the Combined Asset is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	127710.49	128048.19	128168.29	128168.29	128168.29
B	Additions	337.70	120.11	0.00	0.00	0.00
C	Closing Equity (A+B)	128048.19	128168.29	128168.29	128168.29	128168.29
D	Average Equity (A+C)/2	127879.34	128108.24	128168.29	128168.29	128168.29
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	24018.30	24061.29	24072.57	24072.57	24072.57

Operation & Maintenance Expenses ("O&M Expenses")

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

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
14 number of 400 kV Bays)	450.10	465.92	482.30	499.24	516.74
22 number of 765 kV Bays	990.22	1025.20	1061.06	1098.46	1136.96
(S/C (Bundle Conductor- 4 sub-conductor) (km)	810.37	838.27	868.32	898.37	930.58
S/C (Six Conductor) (km)	339.52	351.46	363.79	376.51	389.61
D/C (Six Conductor)	103.26	106.85	110.60	114.51	118.49
(D/C (Bundle Conductor- 4 sub-conductor)	102.17	105.72	109.43	113.29	117.24
D/C (Twin Conductor)	4.62	4.78	4.95	5.12	5.30
765 kV (MVA)	1473.00	1524.00	1578.00	1635.00	1692.00
PLCC (@ 2% of capital cost)					
Capital cost for PLCC	19.21	19.21	19.21	19.21	19.21



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Total O&M Expenses (₹ in lakh)	4292.47	4441.41	4597.66	4759.71	4926.13

103. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provide as follows:

“35. Operation and Maintenance Expenses:

...

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±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.”*

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

105. O&M Expenses have been worked out for the Combined Asset as per the norms specified in the 2019 Tariff Regulations and the same are as follows:



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV Bays	14	14	14	14	14
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
O&M Expenses allowed (₹ in lakh)	450.10	465.92	482.30	499.24	516.74
765 kV Bays	22	22	22	22	22
Norms (₹ lakh/km)	45.01	46.60	48.23	49.93	51.68
O&M Expenses allowed (₹ in lakh)	990.22	1025.20	1061.06	1098.46	1136.96
(S/C (Bundle Conductor- 4 sub-conductor) (km)	1073.312	1073.312	1073.312	1073.312	1073.312
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
O&M Expenses allowed (₹ in lakh)	810.35	838.26	868.31	898.36	930.56
S/C (Six Conductor) (km)	385.37	385.37	385.37	385.37	385.37
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
O&M Expenses allowed (₹ in lakh)	339.51	351.46	363.79	376.51	389.61
(D/C (Bundle Conductor- 4 sub-conductor)	155.39	155.39	155.39	155.39	155.39
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
O&M Expense (₹ in lakh)	205.43	212.57	220.03	227.80	235.73
D/C (Twin Conductor)	5.24	5.24	5.24	5.24	5.24
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
O&M Expenses allowed (₹ in lakh)	4.62	4.78	4.95	5.12	5.30
765 kV (2X1500 MVA)	3000	3000	3000	3000	3000
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
O&M Expenses allowed (₹ in lakh)	1473.00	1524.00	1578.00	1635.00	1692.00
Total O&M Expenses allowed (₹ in lakh)	4273.22	4422.19	4578.44	4740.49	4906.89

Interest on Working Capital ("IWC")

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

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

.....

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

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



(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
Operation and maintenance expenses, including security expenses for one month.

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

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

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

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

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

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



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	356.10	368.52	381.54	395.04	408.91
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	640.98	663.33	686.77	711.07	736.03
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	8322.93	8138.58	7923.46	7740.65	7538.21
D	Total Working Capital	9320.02	9170.43	8991.77	8846.77	8683.15
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital	1123.06	1031.67	944.14	928.91	911.73

Annual Fixed Charges for 2019-24 Tariff Period

108. The transmission charges allowed for the Combined Asset for 2019-24 tariff period are as follows:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Annual Transmission Charges					
A	Depreciation	22110.27	22150.55	22161.12	22161.12	22161.12
B	Interest on Loan	16168.34	14347.25	12511.83	10882.22	9258.47
C	Return on Equity	24018.30	24061.29	24072.57	24072.57	24072.57
D	Interest on Working Capital	1123.06	1031.67	944.14	928.91	911.73
E	O&M Expenses	4273.22	4422.19	4578.44	4740.49	4906.89
F	Total (A+B+C+D+E)	67693.19	66012.96	64268.10	62785.31	61310.79

Filing Fees and Publication Expenses

109. The Petitioner has sought reimbursement of fees paid by it for filing the Petition and publication expenses.

110. 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 Fees & RLDC Fees and Charges

111. 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 fees and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

112. UPPCL has submitted that the Petitioner in the instant petition has submitted that GST is NIL in respect of transmission utilities and as such the prayer of Petitioner for recovery of any future imposition of GST is pre-mature.

113. MPPMCL has submitted that the demand of the Petitioner for GST is premature and need not to be considered at this juncture.

114. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on Charges of Transmission of Electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/Statutory authorities, the same may be allowed to be recovered from the beneficiaries.



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

Security Expenses

116. 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 consequential IWC.

117. UPPCL has submitted that the Petitioner has mentioned that as per Regulation 35(3)(c) of the 2019 Tariff Regulations, security expenses and capital spares for the transmission system shall be allowed separately after prudence check. UPPCL has further submitted that the Petitioner has stated that a separate petition for security expenses will be filed by the Petitioner and as such the Commission should not allow any ad-hoc expenditure on account of security expenses by taking numbers of FY 2018-19 as base which will be against the stipulation of the Regulation 35(3)(c) of the 2019 Tariff Regulations and outside the ambit of the instant petition as well.

118. We have considered the submissions of the Petitioner and UPPCL. 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 said petition has already been disposed of by the Commission *vide* order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.



Capital Spares

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

Sharing of Transmission Charges

120. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (the 2020 Sharing Regulations). Accordingly, the billing, collection and disbursement of the transmission charges shall be recovered in terms of provisions of the 2010 Sharing Regulations and 2020 Sharing Regulations as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations respectively.

121. To summarize:

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

(₹ in lakh)					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A	16356.93	16597.73	16700.59	16559.57	16188.48
Asset-B1	2007.21	2880.07	2900.34	2871.07	2837.88
Asset-B2	147.25	415.44	485.13	523.14	514.44
Asset-B3	109.23	538.67	589.20	646.89	666.96
Asset-B4		6765.53	10874.97	10746.74	10532.14
Asset-B5		15907.47	16948.35	17316.01	17088.79
Asset-B6		360.51	543.09	614.42	616.17
Asset-B7		820.85	1279.05	1342.55	1343.62
Asset-B8		5922.75	9634.83	9694.04	9560.12



Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-B9		317.06	624.24	699.64	706.64
Asset-B10		191.23	354.21	368.67	365.85
Asset-B11		67.07	153.58	152.32	151.93
Asset-B12		62.00	159.14	160.33	159.77
Asset-B13		5.32	188.87	193.81	196.72
Asset-B14		381.21	819.45	800.97	787.21
Asset-C1	5242.99	8104.02	8222.62	8242.59	8120.41
Asset-C2	299.63	618.70	630.83	639.96	621.48
Asset-D	194.36	798.07	773.78	742.89	725.51

b) AFC allowed for the Combined Asset for 2019-24 tariff period in the instant order are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	67693.19	66012.96	64268.10	62785.31	61310.79

122. The Annexure-I and Annexure-II given hereinafter form part of this order.

123. This order disposes of Petition No. 7/TT/2021 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Combined Asset-A

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	2017-18	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	80091.50	3188.37	1403.80	1320.70	114.10	6026.97	86118.47	5.28%	4313.00	4434.24	4506.16	4544.04	4547.06
Sub Station	9001.89	1037.04	457.62	1327.39	-	2822.05	11823.94	5.28%	502.68	542.14	589.26	624.30	624.30
PLCC	147.12	18.86	21.95	-	-	40.81	187.93	6.33%	9.91	11.20	11.90	11.90	11.90
IT Equipment (Incl. Software)	44.30	4.17	2.04	2.70	-	8.91	53.21	5.28%	2.45	2.61	2.74	2.81	2.81
Total	89284.82	4248.43	1885.41	2650.79	114.10	8898.73	98183.55		4828.04	4990.19	5110.06	5183.05	5186.06
Average Gross Block (₹ in lakh)									91409.03	94475.95	95744.05	98126.50	98183.55
Weighted Average Rate of Depreciation									5.28%	5.28%	5.28%	5.28%	5.28%

Asset-B1

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	15753.03	1685.71	384.41	-	2330.16	18083.19	5.28%	645.79	930.91	941.06	947.93	954.79
Total	15753.03	1685.71	384.41	-	2330.16	18083.19		645.79	930.91	941.06	947.93	954.79
							Average Gross Block (₹ in lakh)	16595.89	17630.95	17823.15	17953.17	18083.19
							Weighted Average Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%



Asset-B2

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	1717.66	25.97	279.32	543.74	849.04	2566.70	5.28%	34.80	99.44	121.17	135.52	135.52
IT Equipment (Incl. Software)	27.66	0.03	0.01	2.70	2.73	30.39	5.28%	.56	1.46	1.53	1.60	1.60
Total	1745.32	26.00	279.33	546.44	851.77	2597.09		35.36	100.90	122.70	137.13	137.13
Average Gross Block (₹ in lakh)								1758.32	1910.98	2323.87	2597.09	2597.09
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%	5.28%

Asset-B3

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	2366.45	13.44	255.15	440.48	394.25	-	1103.32	3469.77	5.28%	26.43	132.39	150.76	172.80	183.20
IT Equipment (Incl. Software)	28.89	-	0.12	2.70	-	-	2.82	31.71	5.28%	0.32	1.53	1.60	1.67	1.67
Total	2395.34	13.44	255.27	443.18	394.25	-	1106.14	3501.48	Total	26.76	133.92	152.36	174.47	184.88
Average Gross Block (₹ in lakh)										2402.06	2536.41	2885.64	3304.36	3501.48
Weighted Average Rate of Depreciation										5.28%	5.28%	5.28%	5.28%	5.28%



Asset-B4

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Transmission Line	57310.95	1386.10	1639.63	35.02	3060.75	60371.70	5.28%	1932.96	3142.49	3186.70	3187.63
Sub Station	4800.26	-	-	-	-	4800.26	5.28%	159.97	253.45	253.45	253.45
PLCC	91.53	-	-	-	-	91.53	6.33%	3.66	5.79	5.79	5.79
Total	62202.74	1386.10	1639.63	35.02	3060.75	65263.49	Total	2096.58	3401.74	3445.95	3446.87
Average Gross Block (₹ in lakh)								62895.79	64408.66	65245.98	65263.49
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%

Asset-B5

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Land - Freehold	7262.36	-	62.28	-	62.28	7324.64	-	-	-	-	-
Building Civil Works & Colony	74.85	247.78	915.50	178.33	1376.26	1451.11	3.34%	6.62	26.06	44.33	47.89
Transmission Line	66102.35	5035.89	3067.71	1350.16	9501.23	75603.58	5.28%	3613.25	3837.09	3953.72	3990.62
Sub Station	12049.95	2501.57	2917.17	527.22	5945.96	17995.91	5.28%	700.36	845.33	936.27	950.18
PLCC	200.30	44.78	2.45	-	47.23	247.53	6.33%	14.06	15.59	15.67	15.67
IT Equipment (Incl. Software)	36.76	2.64	1.98	-	4.62	41.38	5.28%	2.01	2.13	2.18	2.18
Total	85726.58	7832.65	6967.09	2055.71	16937.57	102664.15	Total	4336.30	4726.21	4952.17	5006.54
Average Gross Block (₹ in lakh)								89642.91	97042.78	101554.18	102623.09
Weighted Average Rate of Depreciation								4.85%	4.87%	4.88%	4.88%



Asset-B6

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	2054.42	136.27	806.51	155.88	1098.66	3153.07	5.28%	86.04	136.96	162.37	166.48
Total	2054.42	136.27	806.51	155.88	1098.66	3153.07	Total	86.04	136.96	162.37	166.48
Average Gross Block (₹ in lakh)								2122.55	2593.94	3075.13	3153.07
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%

Asset-B7

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	4628.85	1509.63	737.36	332.79	2579.78	7208.63	5.28%	211.25	343.58	371.83	380.62
Total	4628.85	1509.63	737.36	332.79	2579.78	7208.63	Total	211.25	343.58	371.83	380.62
Average Gross Block (₹ in lakh)								5383.66	6507.16	7042.23	7208.63
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%

Asset-B8

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Transmission Line	44978.75	2654.57	2411.10	967.89	6034.67	51013.42	5.28%	1563.17	2578.69	2667.90	2693.48
Sub Station	3670.06	1236.61	254.76	33.09	1839.61	5509.67	5.28%	144.76	265.80	273.40	282.59
PLCC	82.03	10.61	0.76	-	11.37	93.40	6.33%	3.53	5.89	5.91	5.91
IT Equipment (Incl. Software)	20.64	0.54	2.01	-	2.55	23.19	5.28%	0.71	1.17	1.22	1.22
Total	48751.48	3902.33	2668.63	1000.98	7888.20	56639.68	Total	1712.17	2851.55	2948.43	2983.21
Average Gross Block (₹ in lakh)								50702.64	53988.12	55822.93	56481.55
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%



Asset-B9

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	2233.91	424.42	824.37	248.69	1497.48	3731.39	5.28%	77.99	162.12	190.45	197.02
Total	2233.91	424.42	824.37	248.69	1497.48	3731.39	Total	77.99	162.12	190.45	197.02
Average Gross Block (₹ in lakh)								2446.12	3070.52	3607.05	3731.39
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%

Asset-B10

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	901.37	85.56	239.52	-	325.08	1226.45	5.28%	29.15	58.43	64.76	64.76
PLCC	90.09	7.49	1.38	-	8.87	98.96	6.33%	3.47	6.22	6.26	6.26
IT Equipment (Incl. Software)	43.56	0.36	4.08	-	4.43	47.99	5.28%	1.35	2.43	2.53	2.53
Total	1035.01	93.40	244.98	-	338.38	1373.40	Total	33.97	67.08	73.55	73.55
Average Gross Block (₹ in lakh)								1081.71	1250.90	1373.40	1373.40
Weighted Average Rate of Depreciation								5.37%	5.36%	5.36%	5.36%

Asset-B11

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	387.43	26.09	4.01	-	30.11	417.54	5.28%	9.42	21.94	22.05	22.05
PLCC	51.23	1.82	0.74	-	2.56	53.79	6.33%	1.47	3.38	3.40	3.40
IT Equipment (Incl. Software)	19.05	0.04	1.76	-	1.81	20.86	5.28%	0.45	1.05	1.10	1.10
Total	457.72	27.96	6.51	-	34.47	492.19	Total	11.34	26.38	26.55	26.55
Average Gross Block (₹ in lakh)								471.70	488.94	492.19	492.19
Weighted Average Rate of Depreciation								5.40%	5.39%	5.39%	5.39%



Asset-B12

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	410.74	19.87	29.52	-	49.39	460.13	5.28%	8.92	23.52	24.30	24.30
Total	481.91	20.83	32.29	-	53.12	535.03	Total	10.66	27.96	28.82	28.82
Average Gross Block (₹ in lakh)								492.33	518.89	535.03	535.03
Weighted Average Rate of Depreciation								5.39%	5.39%	5.39%	5.39%

Asset-B13

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	594.33	45.56	95.88	-	193.41	787.74	5.28%	0.98	36.32	38.85	40.22
Total	594.33	45.56	95.88	-	193.41	787.74	Total	0.98	36.32	38.85	40.22
Average Gross Block (₹ in lakh)								617.11	687.83	735.77	761.76
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%

Asset-B14

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2015-16	2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub Station	421.29	21.27	30.28	-	51.55	472.84	5.28%	10.53	24.17	24.97	24.97
Total	3973.08	42.28	49.02	51.67	142.97	4116.05	Total	97.63	213.87	216.53	217.89
Average Gross Block (₹ in lakh)								3994.22	4039.87	4090.22	4116.05
Weighted Average Rate of Depreciation								5.29%	5.29%	5.29%	5.29%



Asset-C1

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Building	183.55	1.94	156.07	439.34	666.75	850.30	3.34%	4.02	8.80	18.75	26.81	27.97
Transmission Line	41554.28	1046.95	195.52	1219.34	2593.63	44147.91	5.28%	1448.67	2254.51	2291.86	2327.40	2330.88
Sub Station	3121.38	87.64	314.68	514.33	1369.37	4490.76	5.28%	108.97	177.74	199.63	213.77	225.73
PLCC	11.70	30.41	37.20	-	67.61	79.31	6.33%	1.11	3.84	5.02	5.02	5.02
IT Equipment (Incl. Software)	26.88	0.28	-	2.70	2.98	29.86	5.28%	.93	1.43	1.51	1.58	1.58
Total	44996.61	1167.23	703.47	2175.71	4700.35	49696.96		1563.71	2437.53	2498.01	2547.77	2563.20
Average Gross Block (₹ in lakh)								45580.23	46515.58	47955.17	49138.86	49465.83
Weighted Average Rate of Depreciation								5.26%	5.26%	5.25%	5.24%	5.24%

Asset-C2

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	3157.32	345.19	24.16	331.82	701.17	3858.48	5.28%	88.15	185.57	194.97	203.73	203.73
IT Equipment (Incl. Software)	8.28	0.39	0.78	-	1.17	9.45	5.28%	0.22	0.48	0.50	0.50	0.50
Total	3165.60	345.58	24.94	331.82	702.34	3867.94		88.37	186.05	195.47	204.23	204.23
Average Gross Block (₹ in lakh)								3338.39	3523.65	3702.03	3867.94	3867.94
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%	5.28%



Asset-D

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	3697.40	-	3697.40	5.28%	46.53	195.22	195.22	195.22	195.22
Total	3697.40	-	3697.40		46.53	195.22	195.22	195.22	195.22
Average Gross Block (₹ in lakh)					3697.40	3697.40	3697.40	3697.40	3697.40
Weighted Average Rate of Depreciation					5.28%	5.28%	5.28%	5.28%	5.28%



Combined Asset

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	7423.47	-	-	7423.47	-	-	-	-	-	-
Building Civil Works & Colony	2301.41	-	-	2301.41	3.34%	76.87	76.87	76.87	76.87	76.87
Transmission Line	338936.68	0.00	0.00	338936.68	5.28%	17895.87	17895.90	17895.91	17895.91	17895.91
Sub Station	75770.72	-	0.00	75770.72	5.28%	4030.39	4070.65	4081.21	4081.21	4081.21
PLCC	960.44	-	0.00	960.44	6.33%	60.80	60.80	60.80	60.80	60.80
IT Equipment (Incl. Software)	308.92	0.00	0.00	308.92	15.00%	46.34	46.34	46.34	46.34	46.34
Total	425701.64	-	-	425701.64		22110.27	22150.55	22161.12	22161.12	22161.12
Average Gross Block (₹ in lakh)						426264.46	427027.46	427227.64	427227.64	427227.64
Weighted Average Rate of Depreciation						5.19%	5.19%	5.19%	5.19%	5.19%

