

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 403/TT/2020  
alongwith I.A. No. 14/IA/2022**

**Coram:**

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

**Date of order: 27.09.2022**

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Combined Asset-A** consisting of Asset-1: 400 kV D/C Mundra-Bachchau Transmission Line alongwith associated bays; Asset-2: 400 kV D/C Bachchau-Ranchoddapura Transmission Line; Asset-3: Part of 400 kV D/C Mundra-Limbdi (from tapping point at Surajbadi to Limbdi) line along with associated bays; Asset-4: 400 kV D/C Mundra-Surajbari (balance portion) Transmission Line; Asset-5: New 400/220 kV Bachchau sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau sub-station (New) along with associated bays; Asset-6: 400/220 kV ICT-I and II along with associated bays at Bachchau Sub-station; Asset-7A: 400 kV D/C Surajbari-Jetpur Transmission Line (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird) with associated bays at Jetpur (GETCO); Asset-7B: 400 kV D/C Mundra – Surajbari Transmission Line (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird); Asset-8A: 400 kV Gandhar (NTPC) - Navsari Transmission Line circuit -II associated bays at Gandhar (NTPC)–Navsari (GIS) Sub-station, Navsari GIS Sub-station (new) and Bus reactor at Navsari GIS; Asset-8B: 400 kV Gandhar (NTPC) – Navsari Transmission Line Circuit-I associated bays at Gandhar (NTPC) and Navsari (GIS) Sub-station, Navsari GIS Sub-station (new); Asset-9A: LILO of 220 kV D/C Kawas-Navsari Transmission Line at Navsari GIS Sub-station and 400/220 kV ICT-II alongwith associated bays at GIS Sub-station at Navsari; Asset-9B: 400/220 kV ICT-I along with associated bays at Navsari GIS Sub-station; **Combined Asset-B** consisting of Asset-A1: Establishment of 765/400 kV Wardha Sub-station with 1500 MVA ICT1, 240 MVAR Bus Reactor and Switchable 240 MVAR Line Reactor at Seoni, Bays for Seoni-Wardha Circuit-2 at Wardha Sub-station & Seoni Sub-station; Asset-A2: 765/400 kV 1500 MVA ICT-3 at Wardha Sub-station with bays; Asset-A3: Bay Extension at 765 kV Seoni Sub-station & Wardha Sub-station for 765 Seoni-Wardha Circuit-1 alongwith Switchable Line Reactor at Seoni; Asset-A4: 765/400 kV 1500 MVA ICT 2 at Wardha Sub-station with bays; Asset-B1: Aurangabad (MSETCL)-Aurangabad (PG) D/C Line and Shifting of Akola-Aurangabad (MSETCL) line to Aurangabad (PG) (twin) (LILO of 400 kV Akola-Aurangabad



Transmission Line Ckt-II at Aurangabad (PG) with associated bays at both ends; Asset-B2: 400/220 kV 315 MVA ICT-I at Aurangabad with Bays; Asset-B3: 400/220 kV 315 MVA ICT-II at Aurangabad with Bays; Asset-C: 2 Nos. 80 MVAR Line reactor for 400 kV D/C Wardha-Aurangabad Transmission Line Circuit#1&2 charged as Bus Reactor-1 & 2 at 400/220 kV Aurangabad Sub-station under Mundra UMPP; Asset-D: 400 kV D/C Navsari-New Mumbai (Boisar) {cut-off point of WRTS-II portion only} {Part of 400 kV Navsari-Boisar Transmission Line} alongwith respective bays at Navsari GIS SS associated with Regional System of Mundra UMPP (Interconnection with Vapi-Navi Mumbai line alongwith associated bays at Vapi Sub-station) under interim contingency arrangement; **Asset-C1:** Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Circuit #1) AND shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends; **Asset-C2:** Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Circuit -#2) and shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends; **Asset-C3:** 400 kV D/C Vapi-Kala Transmission Line WR1 portion from AP 38-AP44 and AP 44-AP 45A/0 (Part of 400 kV D/C Navsari-Boisar Transmission Line); **Asset-D1:** Part of 400 kV D/C Navsari Boisar Transmission Line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), part of 400 kV D/C Navsari-Boisar Transmission Line from 69/0 to 313/0 and part of 400 kV D/C Navsari-Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin-Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad-Boisar); **Asset-D2:** 240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Circuit#1 at Seoni Sub-station; **Asset-D3:** 240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Circuit#2 at Seoni Sub-station; **Asset-D4:** Part of 400 kV D/C Vapi-Kudus Transmission Line from location 44-45 A/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus)- {400 kV D/C Navsari - Boisar portion from location 44 to 45A/0 already executed on 1.4.2014}; **Asset-D5:** Part of 400 kV D/C Aurangabad-Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin-Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad - Boisar); and **Asset-D6:** Part of 400 kV D/C Vapi - Kudus Transmission Line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), Part of 400 kV D/C Vapi-Kudus Transmission Line from 69/0 - 104/0 under "Transmission System associated with Mundra Ultra Mega Power Project" in the Western Region.

**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 Co. Limited,  
Hongkong Bank Building, 3rd Floor,  
M.G. Road, Fort, Mumbai-400 001.
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 Nagra 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.

**...Respondent(s)**

**For Petitioner** : Ms. Swapna Seshadri, Advocate, PGCIL  
Shri Anand K. Ganeshan, Advocate, PGCIL  
Shri Jai Dhanani, Advocate, PGCIL  
Shri S. S. Raju, PGCIL



Shri D. K. Biswal, PGCIL  
Shri A. K. Verma, PGCIL  
Shri V.P. Rastogi, PGCIL

**For Respondent(s) :** Shri Anindya Khare, MPPMCL

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets under “Transmission System associated with Mundra Ultra Mega Power Project” (hereinafter referred to as “the transmission project) in the Western Region:

**Combined Asset-A:** consisting of

Asset-1: 400 kV D/C Mundra-Bachchau Transmission Line along with associated bays;

Asset-2: 400 kV D/C Bachchau-Ranchoddpura Transmission Line;

Asset-3: Part of 400 kV D/C Mundra-Limbdi (from tapping point at Surajbadi to Limbdi) line along with associated bays;

Asset-4: 400 kV D/C Mundra-Surajbari (balance portion) Transmission Line;

Asset-5: New 400/220 kV Bachchau Sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau Sub-station (New) along with associated bays;

Asset-6: 400/220 kV ICT-I and II along with associated bays at Bachchau Sub-station;

Asset-7A: 400 kV D/C Surajbari-Jetpur Transmission Line (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird) with associated bays at Jetpur (GETCO);

Asset-7B: 400 kV D/C Mundra-Surajbari Transmission Line (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird);



Asset-8A: 400 kV Gandhar (NTPC)-Navsari Transmission Line Circuit-II associated bays at Gandhar (NTPC)–Navsari (GIS) Sub-station, Navsari GIS Sub-station (new) and Bus reactor at Navsari GIS;

Asset-8B: 400 kV Gandhar (NTPC)-Navsari Transmission Line Circuit-I associated bays at Gandhar (NTPC) and Navsari (GIS) Sub-station, Navsari GIS Sub-station (new);

Asset-9A: LILO of 220 kV D/C Kawas-Navsari Transmission Line at Navsari GIS Sub-station and 400/220 kV ICT-II alongwith associated bays at GIS Sub-station at Navsari;

Asset-9B: 400/220 kV ICT-I along with associated bays at Navsari GIS Sub-station;

**Combined Asset-B** consisting of

Asset-A1: Establishment of 765/400 kV Wardha Sub-station with 1500 MVA ICT1, 240 MVAR Bus Reactor and Switchable 240 MVAR Line Reactor at Seoni, bays for Seoni-Wardha Circuit-2 at Wardha Sub-station and Seoni Sub-station;

Asset-A2: 765/400 kV 1500 MVA ICT 3 at Wardha Sub-station with bays;

Asset-A3: Bay Extension at 765 kV Seoni Sub-station and Wardha Sub-station for 765 Seoni-Wardha Circuit-1 alongwith switchable Line Reactor at Seoni;

Asset-A4: 765/400 kV 1500 MVA ICT 2 at Wardha Sub-station with bays;

Asset-B1: Aurangabad (MSETCL)-Aurangabad (PG) D/C Line and Shifting of Akola-Aurangabad (MSETCL) line to Aurangabad (PG) (twin) (LILO of 400 kV Akola-Aurangabad Transmission Line Circuit-II at Aurangabad (PG) with associated bays at both ends;

Asset-B2: 400/220 kV 315 MVA ICT-I at Aurangabad with bays;

Asset-B3: 400/220 kV 315 MVA ICT-II at Aurangabad with bays;

Asset-C: 2 Nos. 80 MVAR Line Reactor for 400 kV D/C Wardha-Aurangabad Transmission Line Circuit#1 and 2 charged as Bus Reactor 1 and 2 at 400/220 kV Aurangabad Sub-station under Mundra UMPP;

Asset-D: 400 kV D/C Navsari-New Mumbai (Boisar) {cut-off point of WRTS-II portion only} {Part of 400 kV Navsari-Boisar Transmission Line} alongwith respective bays at Navsari GIS Sub-station associated with Regional System of Mundra UMPP (Interconnection with Vapi-Navi Mumbai line alongwith associated bays at Vapi Sub-station) under interim contingency arrangement;

**Asset-C1**: Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Circuit-#1) and Shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends;



**Asset-C2:** Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Circuit-#2) and shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends;

**Asset-C3:** 400 kV D/C Vapi-Kala Transmission Line WR1 portion from AP 38-AP44 and AP44-AP45A/0 (Part of 400 kV D/C Navsari-Boisar Transmission Line);

**Asset-D1:** Part of 400 kV D/C Navsari Boisar Transmission Line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), Part of 400 kV D/C Navsari-Boisar Transmission Line from 69/0 to 313/0 and Part of 400 kV D/C Navsari-Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin-Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad-Boisar);

**Asset-D2:** 240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Circuit#1 at Seoni Sub-station;

**Asset-D3:** 240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Circuit#2 at Seoni Sub-station;

**Asset-D4:** Part of 400 kV D/C Vapi-Kudus Transmission Line from location 44-45A/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus)-{400 kV D/C Navsari-Boisar portion from location 44 to 45A/0 already commissioned on 1.4.2014};

**Asset-D5:** Part of 400 kV D/C Aurangabad - Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad-Boisar); and

**Asset-D6:** Part of 400 kV D/C Vapi - Kudus Transmission Line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), Part of 400 kV D/C Vapi - Kudus Transmission Line from 69/0 - 104/0.

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 Petitioner has implemented transmission assets under transmission project. The Investment Approval (IA) in respect of the transmission project was accorded by Board of Directors of the Petitioner *vide* Memorandum No. C/CP/Mundra dated 15.10.2008 at an estimated cost of ₹482412 lakh including an IDC of ₹44686 lakh (based on 1<sup>st</sup> Quarter, 2008 price level. Subsequently, the administrative approval and expenditure sanction of Revised Cost Estimate (RCE) was approved by Board of Directors of the Petitioner *vide* Memorandum no. C/CP/RCE/Mundra UMPP dated 11.3.2016 at an estimated cost of ₹507194 lakh including IDC of ₹43189 lakh based on October, 2015 price level The Petitioner, *vide* affidavit dated 25.1.2022 , has



submitted that approval of Revised Cost Estimate-II (RCE-II) has been accorded by the Committee on Investment on Projects (CoIP) in its 126<sup>th</sup> meeting held on 9.11.2021 *vide* Memorandum no. C/CP/PA2122-08-0W-RCE003 dated 18.11.2021 at an estimated cost of ₹552766 lakh including IDC of ₹54396 lakh based on March, 2021 price level.

- b) As per the Investment Approval (IA) dated 15.10.2008, the transmission assets were schedule to be put into commercial operation within 48 months of the date of IA i.e by 15.10.2012. The transmission project was approved in the 25<sup>th</sup> Standing Committee meeting of Power System Planning of Western Region constituents held on 30.9.2006. Initially, the scope of work covered under the transmission project is broadly as follows:

**Part (A): Transmission System associated with Mundra (4000 MW) UMPP**

**Transmission Lines:**

- (i) Mundra - Limdi 400 kV D/C
- (ii) Mundra-Bachchau-Ranchodpura 400 kV D/C
- (iii) Mundra-Jetpur 400 kV D/C

**Part (B): Regional System Strengthening in WR for Mundra UMPP**

**Transmission Lines:**

- (i) Gandhar-Navsari 400 kV D/C
- (ii) Navsari-Mumbai (new location) 400 kV D/C
- (iii) LILO of both circuits of Kawas-Navsari 220 kV D/C at Navsari
- (iv) Wardha-Aurangabad 400 kV D/C (Quad) along with 40% FSC with provision to upgrade the line to 1200 kV S/C
- (v) Aurangabad-Aurangabad (MSETCL) 400 kV D/C (Quad) line.

**Sub-stations:**

- (i) Establishment of new 400/200 kV, 2x315 MVA sub-stations at Bachchau





- (ii) Establishment of new 400/200 kV, 2x315 MVA GIS Sub-stations at Navsari
  - (iii) Establishment of new 400 kV GIS switching station at Mumbai (New location)
  - (iv) Establishment of new 765/400 kV, 3x1500 MVA sub-stations at Wardha
  - (v) 765 kV line bays for operation of Seoni-Wardha 2xS/C lines at 765 kV level
  - (vi) Establishment of new 400/220 kV, 2x315 MVA sub-stations at Aurangabad.
- c) Subsequently, the scope of work covered under the transmission project was revised and was submitted through RCE-II vide affidavit dated 25.1.2022 and the same is as follows:

**“Part-I Works excl. FSC for Wardha-Aurangabad 400 kV D/C (Quad) line at Wardha Sub-station**

**(A): Transmission System of Mundra (4000 MW) UMPP**

**Transmission Lines**

- (i) Mundra-Limbdi (GETCO) 400 kV D/C (Triple snowbird);
- (ii) Mundra-Bachchau-Ranchodpura (GETCO) 400 kV D/C (triple snowbird);
- (iii) Mundra-Jetpur (GETCO) 400 kV D/C (Triple snowbird).

**Sub-station**

- (i) Extension of 400 kV, Bachchau (Powergrid) Sub-station;
- (ii) Extension of 400 kV Limbdi (GETCO), 400 kV Ranchodpura and 400 kV Jetpur (GETCO) Sub-station;

**Reactive Compensation**

**1. Line Reactor**

<b>Line</b>	<b>From End</b>	<b>To End</b>
Mundra-Limbdi (GETCO) 400 kV D/C		2x63 MVAR
Mundra- Bhachau 400 kV D/C	-	-



Bachchau-Ranchodpura(GETCO) 400 kV D/C	-	2x50 MVAR
Mundra-Jetpur (GETCO) 400 kV	-	2x63 MVAR

## (B): Regional System Strengthening in WR for Mundra (UMPP)

### Transmission line

- (i) Gandhar (NTPC)- Navsari 400 kV D/C;
- (ii) Navsari- Boisar 400 kV D/C with intermittent common M/C portions;
- (iii) LILO of both circuits of Kawas-Navsari 220 kV D/C at Navsari;
- (iv) Wardha-Aurangabad 400 kV D/C (Quad) along with provision to upgrade the line at 1200 kV at a later date;
- (v) Aurangabad (PG)-Aurangabad-I (MSETCL) 400 kV D/C (Quad) line along with shifting of Akola-I-Auragabad-I (MSETCL) line to Aurangabad (Powergrid) including multi-circuit towers.

### Sub-station

- (i) Establishment of new 400/200 kV, 2x315 MVA Sub-station at Bachchau;
- (ii) Establishment of new 400/200 kV, 2x315 MVA GIS Sub-station at Navsari;
- (iii) Bay extension at 400 kV Boisar Sub-station;
- (iv) Establishment of 765/400 kV, 3x1500 MVA Sub-station at Wardha;
- (v) 765 kV line bays for operation of Seoni-Wardha 2xS/C lines at 765 kV level;
- (vi) Establishment of 400/220 kV, 2x315 MVA Sub-station at Aurangabad.
- (vii) Extension of 400 kV Gandhar (NTPC) Sub-station;
- (viii) Extension of 400 kV Aurganbad-I (MSETCL) Sub-station.

### Reactive Compensation

#### 1. Line Reactor

Transmission Line	From End	To End
Wardha-Aurangabad 400 kV D/C (Quad)	2x80 MVAR	2X80 MVAR
Charging of Seoni-Wardha 2xS/c at 765 level	2x240 MVAR*	2x240 MVAR

\*Switchable line reactor

#### 2. Bus Reactor



<b>Sub-station</b>	<b>765 kV</b>	<b>400 kV Bus</b>
400 kV Bhachau		1x63 MVAR
400 kV Navsari		1x63 MVAR
765 kV Wardha	1x 240 MVAR	

**Part-II: Works associated with FSC for Wardha - Aurangabad 400 kV DIC (Quad) line at Wardha Sub-station**

**Sub-station**

40 % Fixed Series Compensation for Wardha–Aurangabad 400 kV D/C (Quad) line at Wardha Sub-station.”

- d) In response to the Technical Validation letter dated 16.11.2020, the Petitioner *vide* affidavit dated 2.12.2020 has confirmed that all the transmission assets are currently in use and no decapitalization has been done under the instant transmission project. The Petitioner has submitted that one element of the project named as “Wardha-Aurangabad 400 kV D/C (Quad) alongwith 40% Fixed Series Compensation with provision to upgrade the line at 1200 kV at later date” is still under construction and remaining scope of the project has been completed. In all 31 number of executed transmission assets of the transmission project have been included in the instant petition whose tariff was determined/ trued-up in various tariff orders for 2009-14 and 2014-19 tariff periods. However, 16 number of transmission assets have been executed within the scheduled time. Time over-run in the case of remaining 15 number of transmission assets has been condoned in the respective tariff orders.
- e) Accordingly, the details of date of commercial operation (COD) and time over-run in respect of the transmission assets covered in the instant petition are as follows:



Sl.No.	Assets' nomenclature in previous true-up orders	Assets' nomenclature in current petition	COD	Time over-run	Time over-run condoned (Petition No.)
1	Asset-1	Combined Asset-A	1.10.2011	No Delay	Entire delay, if any, condoned in respective orders and consolidated in true-up order dated 26.5.2016 in Petition No. 20/TT/2016
2	Asset-2		1.10.2011		
3	Asset-3		1.12.2011		
4	Asset-4		1.3.2012		
5	Asset-5		1.10.2011		
6	Asset-6A		1.10.2011		
7	Asset-6B		1.10.2011		
8	Asset-7A		1.9.2012		
9	Asset-7B		1.1.2013	2 months	
10	Asset-8A		1.8.2012	No Delay	
11	Asset-8B		1.11.2012		
12	Asset-9A		1.8.2012		
13	Asset-9B		1.9.2012		
14	Asset-A1	Combined Asset-B	1.3.2012	No Delay	Entire delay, if any, condoned in respective orders and consolidated in true-up order dated 2.12.2019 in Petition No. 194/TT/2018
15	Asset-A2		1.3.2012		
16	Asset-A3		1.6.2012		
17	Asset-A4		1.4.2012	15 months	
18	Asset-B1		1.2.2014		
19	Asset-B2		1.2.2014		
20	Asset-B3		1.2.2014		
21	Asset-C		1.2.2014	15 months	
22	Asset-D		1.4.2013	5 months	
23	Asset-1		Asset-C1	30.4.2014	
24	Asset-2	Asset-C2	29.4.2014	563 days	
25	Asset-5	Asset-C3	1.4.2014	535 days	
26	Asset-1	Asset-D1	31.12.2016	50 months 17 days	Entire delay condoned <i>vide</i> order dt 23.7.2018 in Petition no. 207/TT/2017
27	Asset-2	Asset-D2	2.5.2014	18 months 18 days	
28	Asset-3	Asset-D3	1.4.2014	17 months 18 days	
29	Asset-4	Asset-D4	1.3.2015	28 months 15 days	
30	Asset-5A	Asset-D5	29.12.2017	62 months 15 days	
31	Asset-5B	Asset-D6	31.12.2017	62 months 17 days	

f) The tariff from respective COD to 31.3.2014 for the transmission assets under Combined-Asset-A was determined *vide* order dated 2.5.2013 in Petition No.



105/TT/2011 for Asset-5, Asset-6A and Asset-6B, order dated 6.2.2014 in Petition No. 104/TT/2012 for Asset-1, Asset-2 and Asset-3 and Asset-4, order dated 3.7.2014 in Petition No. 64/TT/2012 for Asset-7A, Asset-7B, Asset-8A, Asset-8B, Asset-9A and Asset-9B in accordance with the 2009 Tariff Regulations. The transmission tariff for the transmission assets covered under Combined Asset-A for 2009-14 tariff period was subsequently trued up and the transmission tariff for 2014-19 tariff period was determined *vide* order dated 26.5.2016 in Petition No. 20/TT/2015.

- g) The annual transmission charges for 2009-14 tariff period for the transmission assets covered under Combined Asset-B was determined by the Commission *vide* orders dated 1.12.2014 in Petition No. 72/TT/2012 for Asset-A1, Asset-A2, Asset-A3 and Asset-A4, dated 15.10.2015 in Petition No. 296/TT/2013 for Asset-B1, Asset-B2 and Asset-B3, dated 31.12.2015 in Petition No. 101/TT/2014 for Asset-C and dated 15.3.2016 in Petition No.57/TT/2013 for Asset-D. The transmission tariff for transmission assets covered under Combined Asset-B for 2009-14 tariff period was subsequently trued up and transmission tariff for 2014-19 tariff period was determined *vide* order dated 2.12.2019 in Petition No. 194/TT/2018.
- h) The transmission tariff for Asset-C1, Asset-C2 and Asset-C3 for the 2014-19 tariff period was determined *vide* order dated 29.4.2016 in Petition No. 185/TT/2014 and transmission tariff for Asset-D1, Asset-D2, Asset-D3, Asset-D4, Asset-D5 and Asset-D6 for 2014-19 tariff period was determined *vide* order dated 23.7.2018 in Petition No. 207/TT/2017.



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 of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. M.P. Power Management Company Limited (MPPMCL), Respondent No. 1, *vide* affidavit dated 5.6.2020 has filed its reply and has raised issues of grossing up of RoE, effect of CGST and claim of Initial Spares. The Petitioner *vide* affidavit dated 14.9.2020 has filed rejoinder to the reply of MPPMCL. The issues raised by MPPMCL and clarifications given by the Petitioner are discussed in the relevant portions of this order.

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

7. Hearing in this matter was held on 28.6.2022 and 8.6.2021 through video conference and order was reserved.





8. Having heard learned counsel for the Petitioner, representatives of the Petitioner and Respondent and after perusal of the materials on record, we proceed to dispose of the petition.

9. This order is issued considering the submission made by the Petitioner *vide* affidavits dated 2.3.2020, 2.12.2020, 4.7.2022; 25.1.2022 (IA No. 14 of 2022); MPPMCL's reply *vide* affidavit dated 5.6.2020 and Petitioner's rejoinder affidavit dated 14.9.2020 to the reply filed by MPPMCL.

**IA No. 14/IA/2022 in Petition No. 403/TT/2020**

10. The Petitioner has filed an Interlocutory Application (IA) No. 14 of 2022, inter-alia, praying to admit the IA and to take on record the Revised Cost Estimate-II (RCE-II) furnished alongwith with the said IA. During the course of hearing dated 28.6.2022, learned counsel for the Petitioner sought leave of the Commission to file additional information with regard to reasons and subsequent developments for cost difference between RCE-I and RCE-II. In the said IA, the Petitioner submitted that Petition No. 403/TT/2020 was heard on 8.6.2021, wherein a specific query of the Commission was with regard to re-apportionment of FR cost for one of the assets out of the thirty assets covered in Petition No. 403/TT/2020. Since, Revised Cost Estimate ("RCE-II") was required to be prepared for such re-apportionment, the representative of the Petitioner made oral submission in the hearing dated 8.6.2021 that RCE-II was under preparation and this fact was also noted by the Commission. The relevant extract of the ROP dated 8.6.2021 is as follows:

*"4. In response to a query of the Commission on re-apportionment of FR cost for one of the assets covered in the instant petition, the representative of the Petitioner submitted that re-apportionment of FR cost is related to the assets covered in order dated 26.5.2016 in Petition No. 20/TT/2015 which were put under commercial operation during*



*2009-14 period. He further submitted that capital cost of all the transmission assets was approved individually in the said order dated 26.5.2016 and the assets have now been combined as Combined Asset-A as on 1.4.2014 in the instant petition. He further submitted that in one of the assets of Combined Asset-A, there is cost-over run. He submitted that cost of Combined Asset-A is well within the apportioned approved RCE cost. The representative of the Petitioner also submitted that out of the thirty assets covered in the instant petition, only one asset is impacted on account of re-apportionment. He further submitted that RCE-II is under process for approval.”*

11. Accordingly, the Petitioner has submitted RCE-II duly approved *vide* Memorandum No. C/CP/PA 2122-08-0W-RCE003 dated 18.11.2021 at an estimated cost of ₹552766 lakh based on March, 2021 price level. The Petitioner has submitted that due to outbreaks of Covid-19 Wave-I and Wave-II, the offices of the Petitioner remained functional only with limited staff for substantial period of time due to which RCE-II could not be submitted earlier and, therefore, the same is now submitted through IA.

12. In response, MPPMCL submitted that the reply filed by it in the matter may be considered. Thereafter, the order was reserved in the matter.

13. Subsequently, the Petitioner *vide* affidavit dated 4.7.2022 filed additional submissions with regard to item-wise cost variation in RCE-II vis-à-vis RCE-I alongwith justification. Keeping in mind the circumstances as narrated above, we allow IA No. 14 of 2022 and RCE-II is allowed to be taken on record. Accordingly, IA No. 14 of 2022 is disposed of.

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

14. 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	2015-16	2016-17	2017-18	2018-19
Depreciation	11850.33	11881.51	11886.60	11886.79	11886.79
Interest on Loan	10798.09	9869.38	8958.09	7986.77	7051.80
Return on Equity	13354.80	13455.55	13456.22	13456.56	13492.75
O&M Expenses	2484.80	2567.82	2652.86	2740.78	2831.85
Interest on Working Capital	965.99	952.23	936.09	918.60	902.94
<b>Total</b>	<b>39454.01</b>	<b>38726.49</b>	<b>37889.86</b>	<b>36989.50</b>	<b>36166.13</b>

(₹ in lakh)

Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4821.63	4920.34	4946.84	4981.00	5005.04
Interest on Loan	4549.44	4324.63	4043.40	3709.99	3414.58
Return on Equity	5822.28	5968.56	5998.78	6046.34	6099.80
O&M Expenses	1540.57	1591.75	1644.61	1699.17	1755.55
Interest on Working Capital	434.83	438.12	435.87	433.09	431.19
<b>Total</b>	<b>17168.75</b>	<b>17243.40</b>	<b>17069.50</b>	<b>16869.59</b>	<b>16706.16</b>

(₹ in lakh)

Particulars	Asset-C1				
	2014-15 (Pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	165.92	184.60	190.40	194.99	194.99
Interest on Loan	38.29	48.82	66.48	73.42	80.95
Return on Equity	185.08	207.38	214.48	220.18	220.77
O&M Expenses	112.65	126.43	130.63	134.97	139.43
Interest on Working Capital	15.19	17.13	18.07	18.70	19.13
<b>Total</b>	<b>517.13</b>	<b>584.36</b>	<b>620.06</b>	<b>642.26</b>	<b>655.27</b>

(₹ in lakh)

Particulars	Asset-C2				
	2014-15 (Pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	183.09	207.67	214.74	217.30	217.30
Interest on Loan	43.31	59.92	79.72	83.46	90.94
Return on Equity	203.42	232.13	240.61	244.02	244.68
O&M Expenses	161.72	180.97	186.96	193.19	199.59
Interest on Working Capital	18.83	21.50	22.64	23.21	23.75
<b>Total</b>	<b>610.37</b>	<b>702.19</b>	<b>744.67</b>	<b>761.18</b>	<b>776.26</b>



(₹ in lakh)

Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	99.24	101.58	109.46	117.34	117.34
Interest on Loan	109.98	104.01	103.38	102.12	91.95
Return on Equity	110.66	113.79	122.55	131.38	131.73
O&M Expenses	9.67	9.99	10.32	10.67	11.02
Interest on Working Capital	7.90	7.90	8.29	8.67	8.46
<b>Total</b>	<b>337.45</b>	<b>337.27</b>	<b>354.00</b>	<b>370.18</b>	<b>360.50</b>

(₹ in lakh)

Particulars	Asset-D1		
	2016-17 (Pro-rata 91 days)	2017-18	2018-19
Depreciation	206.72	947.43	1013.75
Interest on Loan	224.90	977.54	964.01
Return on Equity	231.37	1060.43	1137.73
O&M Expenses	39.67	164.37	169.80
Interest on Working Capital	16.53	73.68	76.80
<b>Total</b>	<b>719.19</b>	<b>3223.45</b>	<b>3362.09</b>

(₹ in lakh)

Particulars	Asset-D2				
	2014-15 (Pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	101.09	138.75	140.74	141.94	146.18
Interest on Loan	69.34	103.98	103.24	98.53	98.28
Return on Equity	112.72	157.95	160.48	162.43	168.29
O&M Expenses	77.25	87.22	90.12	93.11	96.20
Interest on Working Capital	10.79	14.04	14.29	14.42	14.81
<b>Total</b>	<b>371.19</b>	<b>501.94</b>	<b>508.87</b>	<b>510.43</b>	<b>523.76</b>

(₹ in lakh)

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	86.36	107.03	135.10	163.19	168.12
Interest on Loan	59.41	79.74	105.54	126.59	124.88
Return on Equity	97.20	122.73	154.38	185.97	192.26
O&M Expenses	84.42	87.22	90.12	93.11	96.20
Interest on Working Capital	10.26	11.94	14.07	16.09	16.48
<b>Total</b>	<b>337.65</b>	<b>408.66</b>	<b>499.21</b>	<b>584.95</b>	<b>597.94</b>



(₹ in lakh)

Particulars	Asset-D4				
	2014-15 (Pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	0.57	6.85	6.88	6.88	6.88
Interest on Loan	0.65	7.58	7.01	6.41	5.81
Return on Equity	0.63	7.67	7.70	7.70	7.73
O&M Expenses	0.14	1.67	1.72	1.78	1.84
Interest on Working Capital	0.05	0.60	0.59	0.58	0.57
<b>Total</b>	<b>2.04</b>	<b>24.37</b>	<b>23.90</b>	<b>23.35</b>	<b>22.83</b>

(₹ in lakh)

Particulars	Asset-D5	
	2017-18 (Pro-rata 93 days)	2018-19
Depreciation	32.30	136.33
Interest on Loan	34.71	139.17
Return on Equity	36.17	153.05
O&M Expenses	5.12	20.77
Interest on Working Capital	2.48	10.26
<b>Total</b>	<b>110.78</b>	<b>459.58</b>

(₹ in lakh)

Particulars	Asset-D6	
	2017-18 (Pro-rata 91 days)	2018-19
Depreciation	74.79	336.94
Interest on Loan	81.69	349.91
Return on Equity	83.73	378.25
O&M Expenses	10.73	44.47
Interest on Working Capital	5.70	25.14
<b>Total</b>	<b>256.64</b>	<b>1134.71</b>

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

(₹ in lakh)

Particulars	Combined Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	207.07	213.99	221.07	228.40	235.99
Working Capital for Maintenance Spares	372.72	385.17	397.93	411.12	424.78

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Particulars	Combined Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
(15% of O&M Expenses)					
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	6575.67	6454.42	6314.98	6164.92	6027.69
<b>Total Working Capital</b>	<b>7155.46</b>	<b>7053.58</b>	<b>6933.98</b>	<b>6804.44</b>	<b>6688.46</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>965.99</b>	<b>952.23</b>	<b>936.09</b>	<b>918.60</b>	<b>902.94</b>

(₹ in lakh)

Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	128.38	132.65	137.05	141.60	146.30
Working Capital for Maintenance Spares (15% of O&M Expenses)	231.09	238.76	246.69	254.88	263.33
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	2861.46	2873.90	2844.92	2811.60	2784.36
<b>Total Working Capital</b>	<b>3220.93</b>	<b>3245.31</b>	<b>3228.66</b>	<b>3208.08</b>	<b>3193.99</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>434.83</b>	<b>438.12</b>	<b>435.87</b>	<b>433.09</b>	<b>431.19</b>

(₹ in lakh)

Particulars	Asset-C1				
	2014-15 (Pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	10.20	10.54	10.89	11.25	11.62
Working Capital for Maintenance Spares (15% of O&M Expenses)	18.36	18.96	19.59	20.25	20.91
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	93.63	97.39	103.34	107.04	109.21
<b>Total Working Capital</b>	<b>122.19</b>	<b>126.89</b>	<b>133.82</b>	<b>138.54</b>	<b>141.74</b>
Rate of Interest (in%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>15.19</b>	<b>17.13</b>	<b>18.07</b>	<b>18.70</b>	<b>19.13</b>





(₹ in lakh)

Particulars	Asset-C2				
	2014-15 (Pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	14.60	15.08	15.58	16.10	16.63
Working Capital for Maintenance Spares (15 %of O&M Expenses)	26.28	27.15	28.04	28.98	29.94
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	110.18	117.03	124.11	126.87	129.38
<b>Total Working Capital</b>	<b>151.06</b>	<b>159.26</b>	<b>167.73</b>	<b>171.95</b>	<b>175.95</b>
Rate of Interest (in%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>18.83</b>	<b>21.50</b>	<b>22.64</b>	<b>23.21</b>	<b>23.75</b>

(₹ in lakh)

Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.81	0.83	0.86	0.89	0.92
Working Capital for Maintenance Spares (15% of O&M Expenses)	1.45	1.50	1.55	1.60	1.65
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	56.24	56.21	59.00	61.70	60.08
<b>Total Working Capital</b>	<b>58.50</b>	<b>58.54</b>	<b>61.41</b>	<b>64.19</b>	<b>62.65</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>7.90</b>	<b>7.90</b>	<b>8.29</b>	<b>8.67</b>	<b>8.46</b>

(₹ in lakh)

Particulars	Asset-D1		
	2016-17 (Pro-rata 91 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	13.26	13.70	14.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	23.86	24.66	25.47
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	480.77	537.24	560.35



Particulars	Asset-D1		
	2016-17 (Pro-rata 91 days)	2017-18	2018-19
<b>Total Working Capital</b>	<b>517.89</b>	<b>575.60</b>	<b>599.97</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Interest on Working Capital</b>	<b>16.53</b>	<b>73.68</b>	<b>76.80</b>

(₹ in lakh)

Particulars	Asset-D2				
	2014-15 (Pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 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 2 months of annual fixed cost)	67.61	83.66	84.81	85.07	87.29
<b>Total Working Capital</b>	<b>87.31</b>	<b>104.01</b>	<b>105.84</b>	<b>106.80</b>	<b>109.74</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>10.79</b>	<b>14.04</b>	<b>14.29</b>	<b>14.42</b>	<b>14.81</b>

(₹ in lakh)

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 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 2 months of annual fixed cost)	56.28	68.11	83.20	97.49	99.66
<b>Total Working Capital</b>	<b>75.98</b>	<b>88.46</b>	<b>104.23</b>	<b>119.22</b>	<b>122.11</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>10.26</b>	<b>11.94</b>	<b>14.07</b>	<b>16.09</b>	<b>16.48</b>



(₹ in lakh)

Particulars	Asset-D4				
	2014-15 (Pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.13	0.14	0.14	0.15	0.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.24	0.25	0.26	0.27	0.28
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	4.00	4.06	3.98	3.89	3.81
<b>Total Working Capital</b>	<b>4.37</b>	<b>4.45</b>	<b>4.38</b>	<b>4.31</b>	<b>4.24</b>
Rate of Interest (in%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.05</b>	<b>0.60</b>	<b>0.59</b>	<b>0.58</b>	<b>0.57</b>

(₹ in lakh)

Particulars	Asset-D5	
	2017-18 (Pro-rata 93 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	1.68	1.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	3.02	3.12
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	72.46	76.60
<b>Total Working Capital</b>	<b>77.16</b>	<b>81.45</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>2.48</b>	<b>10.26</b>

(₹ in lakh)

Particulars	Asset-D6	
	2017-18 (Pro-rata 91 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 month)	3.59	3.71
Working Capital for Maintenance Spares (15% of O&M Expenses)	6.46	6.67
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost)	171.57	189.12
<b>Total Working Capital</b>	<b>181.62</b>	<b>199.50</b>
Rate of Interest (in %)	12.60	12.60



Particulars	Asset-D6	
	2017-18 (Pro-rata 91 days)	2018-19
Interest on Working Capital	5.70	25.14

### **Commercial Operation Date (“COD”)**

16. The details of COD approved in various tariff orders with respect to the transmission assets covered in the present petition are as follows:

Asset	Description	Asset name in instant Petition	COD	
<b>Commission’s order dated 26.5.2016 in Petition No. 20/TT/2015</b>				
<b>Asset-1</b>	400 kV D/C Mundra- Bachchau transmission line along with associated bays	Combined Asset-A	1.10.2011	
<b>Asset-2</b>	400 kV D/C Bachchau – Ranchoddpura transmission line		1.10.2011	
<b>Asset-3</b>	Part of 400 kV D/C Mundra – Limbdi (from tapping point at Surajbadi to Limbdi) line along with associated bays		1.12.2011	
<b>Asset-4</b>	400 kV D/C Mundra – Surajbari (balance portion) transmission line		1.3.2012	
<b>Asset-5</b>	New 400/220 kV Bachchau Sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau Sub-station (New) along with associated bays		1.10.2011	
<b>Asset-6</b>	400/220 kV ICT-I and II along with associated bays at Bachchau Sub-station		1.10.2011	
<b>Asset-7A</b>	400 kV D/C Surajbari-Jetpur transmission line (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird) with associated bays at Jetpur (GETCO)		1.9.2012	
<b>Asset-7B</b>	400 kV D/C Mundra – Surajbari TL (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird)		1.1.2013	
<b>Asset-8A</b>	400 kV Gandhar (NTPC)-Navsari transmission line ckt-II associated bays at Gandhar (NTPC)–Navsari (GIS) Sub-station, Navsari GIS S/S (new) and Bus Reactor at Navsari GIS		1.8.2012	
<b>Asset-8B</b>	400 kV Gandhar (NTPC) – Navsari transmission line ckt-I associated bays at Gandhar (NTPC) and Navsari (GIS) Sub-station, Navsari GIS Sub-station (new)		1.11.2012	
<b>Asset-9A</b>	LILO of 220 kV D/C Kawas – Navsari transmission line at Navsari GIS Sub-station and 400/220 kV ICT-II alongwith associated bays at GIS S/S at Navsari		1.8.2012	
<b>Asset-9B</b>	400/220 kV ICT-I along with associated bays at Navsari GIS Sub-station		1.9.2012	
<b>Commission’s order dated 2.12.2019 in Petition No. 194/TT/2018</b>				



Asset	Description	Asset name in instant Petition	COD
Asset-A1	Establishment of 765/400 kV Wardha Sub-station with 1500 MVA ICT1, 240 MVAR Bus Reactor and Switchable 240 MVAR Line Reactor at Seoni, Bays for Seoni-Wardha Ckt-2 at Wardha Sub-station and Seoni Sub-station	<b>Combined Asset-B</b>	1.3.2012
Asset-A2	765/400 kV 1500 MVA ICT 3 at Wardha Sub-station with bays		1.3.2012
Asset-A3	Bay Extension at 765 kV Seoni Sub-station and Wardha Sub-station for 765 Seoni-Wardha Ckt-1 alongwith Switchable Line Reactor at Seoni		1.6.2012
Asset-A4	765/400 kV 1500 MVA ICT 2 at Wardha Sub-station with bays		1.4.2012
Asset-B1	Aurangabad (MSETCL)-Aurangabad (PG) D/C Line and Shifting of Akola - Aurangabad (MSETCL) line to Aurangabad (PG) (twin) (LILO of 400 kV Akola – Aurangabad transmission line Ckt -II at Aurangabad (PG) with associated bays at both ends		1.2.2014
Asset-B2	400/220 kV 315 MVA ICT-I at Aurangabad with Bays		1.2.2014
Asset-B3	400/220 kV 315 MVA ICT-II at Aurangabad with Bays		1.2.2014
Asset-C	2 number 80 MVAR Line reactor for 400 kV D/C Wardha- Aurangabad Transmission line Ckt#1&2 charged as Bus Reactor 1 and 2 at 400/220 kV Aurangabad Sub-station under Mundra UMPP		1.2.2014
Asset-D	400 kV D/C Navsari-New Mumbai (Boisar) {cut-off point of WRTS-II portion only} {Part of 400 kV Navsari-Boisar TL} alongwith respective bays at Navsari GIS Sub-station associated with Regional System of Mundra UMPP (Interconnection with Vapi-Navi Mumbai line alongwith associated bays at Vapi Sub-station) under interim contingency arrangement		1.4.2013
<b>Commission's order dated 29.4.2016 in Petition No. 185/TT/2014</b>			
Asset-1	Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Ckt-#1) and shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends,	Asset-C1	30.4.2014
Asset-2	Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Ckt-#2) AND Shifting of 400kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends,	Asset-C2	29.4.2014
Asset-3	400 kV D/C Vapi-Kala TL WR1 portion from AP 38-AP44 and AP44- AP 45A/0 (Part of 400 kV D/C Navsari - Boisar Transmission line)	Asset-C3	1.4.2014
<b>Commission's order dated 23.7.2018 in Petition No. 207/TT/2017</b>			
Asset-1	Part of 400 kV D/C Navsari Boisar Transmission line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), Part of 400 kV D/C	Asset-D1	31.12.2016



Asset	Description	Asset name in instant Petition	COD
	Navsari-Boisar Transmission line from 69/0 to 313/0 and Part of 400 kV D/C Navsari - Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin-Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad - Boisar)		
<b>Asset-2</b>	240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Ckt.#1 at Seoni Sub-station	<b>Asset-D2</b>	2.5.2014
<b>Asset-3</b>	240 MVA Switchable Line Reactor for 765 kV Seoni-Wardha Ckt.#2 at Seoni Sub-station	<b>Asset-D3</b>	1.4.2014
<b>Asset-4</b>	Part of 400 kV D/C Vapi-Kudus transmission line from location 44- 45A/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus)- {400 kV D/C Navsari - Boisar portion from location 44 to 45A/0 already commissioned on 1.4.2014}	<b>Asset-D4</b>	1.3.2015
<b>Asset-5A</b>	Part of 400 kV D/C Aurangabad - Boisar from 313/0 to 332/0 (D/C portion strung on M/C Twin - Quad portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Aurangabad - Boisar)	<b>Asset-D5</b>	29.12.2017
<b>Asset-5B</b>	Part of 400 kV D/C Vapi - Kudus transmission line from 45A/0 to 69/0 (D/C portion strung on M/C Twin-Twin portion comprising of 400 kV D/C Navsari-Boisar and 400 kV D/C Vapi-Kudus), Part of 400 kV D/C Vapi - Kudus transmission line from 69/0 - 104/0	<b>Asset-D6</b>	31.12.2017

17. The Commission vide order dated 29.4.2016 in Petition No. 185/TT/2014 with regard to COD of Asset-1, Asset-2 and Asset-5 (herein, Asset-C1, Asset-C2 & Asset-C3) has held as follows:

*“6. The petitioner has claimed the date of the commercial operation as 30.4.2015, 29.4.2014 and 1.4.2014 for Asset-1, Asset-2 and Asset-5 respectively. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:*

*4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:*

xxx

*(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:*

xxx





xxx”

7. The petitioner has submitted the Notification for COD for the said assets. However the RLDC Certificate for the assets is not yet submitted. The petitioner is directed to submit the RLDC certificate in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation and CEA Energisation certificates at the time of truing up for the 2014-19 tariff period.”

18. In compliance to the above direction of the Commission *vide* order dated 29.4.2016 in Petition No. 185/TT/2014, the Petitioner has submitted RLDC charging certificates dated 5.5.2016 and 9.5.2016. Taking into consideration the submissions of the Petitioner, we approve COD of Asset-C1, Asset-C2 and Asset-C3, as follows:

<b>Asset</b>	<b>Description</b>	<b>COD</b>
<b>Asset-C1</b>	Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Ckt-#1) and shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends	30.4.2014
<b>Asset-C2</b>	Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C (Quad) Line (Ckt-#2) and shifting of 400 kV D/C Akola-Aurangabad (MSETCL) line to Aurangabad (PG) along with associated bays at both ends	29.4.2014
<b>Asset-C3</b>	400 kV D/C Vapi-Kala Transmission line WR 1 portion from AP 38-AP 44 and AP 44- AP 45A/0 (Part of 400 kV D/C Navsari-Boisar Transmission line)	1.4.2014

### **Capital Cost**

19. The capital cost of the transmission project has been calculated in accordance with Regulation 9 (3) of the 2014 Tariff Regulations.

20. The Commission *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, allowed capital cost as on 31.3.2014/COD and admitted Additional Capital Expenditure (ACE) as on 31.3.2019 for determination of tariff for 2014-19 period in respect of the transmission assets covered in the instant petition. The details of the same are as follows:



(₹ in lakh)

Assets	Apportioned approved Cost as per RCE-I	Admitted capital cost (as on COD or 31.3.2014 whichever is later)	ACE (Allowed)					Total admitted capital cost (as on 31.3.2019)
			2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-A	236310.90	224761.72	635.87	0.00	0.00	0.00	0.00	225397.59
Combined Asset-B	118343.31	97074.80	3422.05	621.02	503.78	1424.99	0.00	103046.64
Asset-C1	3894.04	3351.91	253.70	86.51	0.00	0.00	0.00	3692.12
Asset-C2	4374.81	3650.08	365.09	86.89	0.00	0.00	0.00	4102.06
Asset-C3	2274.66	1899.14	351.11	0.00	0.00	0.00	0.00	2250.25
Asset-D1	25329.91	14420.18	0.00	0.00	997.53	2294.26	572.88	18284.85
Asset-D2	2908.98	1547.32	1089.96	66.64	138.54	0.00	0.00	2842.46
Asset-D3	3665.62	1253.71	794.50	53.58	919.78	0.00	0.00	3021.57
Asset-D4	316.40	123.87	5.25	1.25	1.15	0.00	0.00	131.52
Asset-D5	4075.90	2302.55	0.00	0.00	0.00	20.94	135.12	2458.61
Asset-D6	9708.74	5156.31	0.00	0.00	0.00	680.24	194.71	6031.26

21. The Petitioner has claimed the following capital cost in respect of the transmission assets and has submitted the Auditor's Certificates dated 26.2.2020, 24.12.2014, 16.1.2020, 1.9.2015 and 28.2.2020 in support of the same for true-up of tariff for 2014-19 period:

(₹ in lakh)

Assets	Apportioned approved cost as per RCE-I	Apportioned approved cost as per RCE-II	Capital cost (as on COD or as on 31.3.2014 whichever is later)	ACE Claimed					Capital Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-A	236310.90	230178.57	226286.13	1093.85	242.26	11.37	0.00	0.00	227633.61
Combined Asset-B	118343.31	107272.73	97286.49	3334.72	621.02	503.78	1105.27	150.01	103001.29
Asset-C1	3894.04	3749.28	3351.91	128.78	51.23	192.67	0.00	0.00	3724.59
Asset-C2	4374.81	4154.89	3650.08	186.99	175.37	115.55	0.00	0.00	4127.99
Asset-C3	2274.66	2249.11	1899.14	24.72	0.00	298.55	0.00	0.00	2222.41
Asset-D1	25329.91	19723.24	14736.04	0.00	0.00	2477.20	1686.68	589.20	19489.12
Asset-D2	2908.98	2957.49	1562.01	1075.27	66.64	21.65	44.17	139.07	2908.81
Asset-D3	3665.62	3368.09	1263.06	785.16	53.58	1019.56	49.11	146.41	3316.88
Asset-D4	316.40	133.10	130.37	0.00	0.00	0.00	0.00	0.00	130.37



Assets	AppORTIONED approved cost as per RCE-I	AppORTIONED approved cost as per RCE-II	Capital cost (as on COD or as on 31.3.2014 whichever is later)	ACE Claimed					Capital Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-D5	4075.90	2881.79	2446.15	0.00	0.00	0.00	50.50	240.92	2737.57
Asset-D6	9708.74	7121.15	5254.63	0.00	0.00	0.00	1050.01	251.97	6556.61

### Cost over-run

22. The Petitioner *vide* affidavit dated 25.1.2022 has submitted a copy of RCE-II of the transmission project which was approved *vide* Memorandum No. C/CP/PA2122-08-0W-RCE003 dated 18.11.2021 showing estimated cost of ₹552766 lakh including IDC of ₹54396 lakh based on March, 2021 price level.

23. Further, the Petitioner *vide* affidavit dated 4.7.2022 has submitted that there is variation in the approved RCE-II of the transmission project at March, 2021 price level vis-à-vis the cost approved in RCE-I of the transmission project at October, 2015 price level. Accordingly, the Petitioner has submitted relevant details of RCE-II as well as the justification for cost escalation. The Petitioner has submitted a summary of variation of cost between RCE-I and RCE-II which is as follows:

Particulars	DPR Cost (1Q, 2008 Price Level) (A)	RCE-I (October, 2015 Price Level) (B)	RCE-II Cost (March, 2021 Price Level) (C)	(₹ in lakh)
				Variation RCE-II as against RCE-I (C) - (B)
Cost (excl. IEDC/IDC/FERV)	406597	448912	471512	22600
IEDC including contingencies	31129	8199	8750	551
FERV on foreign loan re-valuation	0.00	6894	18108	11214
IDC	44686	43189	54396	11207
<b>Total</b>	<b>482412</b>	<b>507194</b>	<b>552766</b>	<b>45572 (8.99 %)</b>



24. Further, the Petitioner has submitted head-wise comparison of RCE-II cost of ₹552766 lakh with RCE-I cost of ₹507194 lakh in a tabular form which is as follows:

Sr. No.	Variation on account of:	Variation	
		(Rs. in crore)	(in%)
(i)	Price Variation (from RCE-I to RCE-II)	(-) 30.33	(-) 0.60
(ii)	Variation in quantity of approved items	45.19	0.89
(iii)	Addition of items	53.65	1.06
(iii)	Land and Compensation	165.85	3.27
(iv)	<b>FERV</b>		
(a)	FERV on account of packages awarded in foreign currency	(-) 8.37	(-) 0.16
(b)	FERV due to foreign loan re-valuation (CWIP stage only)	112.13	2.21
	<b>Sub- Total (FERV)</b>	103.77	2.05
(v)	<b>Other Reasons (IEDC and IDC)</b>		
(a)	IEDC (including contingencies)	5.51	0.11
(b)	IDC	112.07	2.21
	<b>Sub- Total (IEDC &amp; IDC)</b>	117.59	2.32
	<b>Grand Total</b>	<b>455.72</b>	<b>8.99</b>

25. The Petitioner has submitted that from the above table, it is apparent that there is variation of ₹45572 lakh (8.99 %) from the approved RCE-I cost of ₹507194 lakh. The cost variation is mainly due to price variation, variation in quantity of approved items, addition of items, land compensation payment and variation in IDC/IEDC based on actuals which were beyond the control of the Petitioner. The details of the head-wise variation in the cost has been submitted by the Petitioner and the same are as follows:

A. Price Variation (PV) (Net decrease of ₹3033 lakh: (-) 0.60 %)

The Petitioner has submitted that there has been a decrease in the cost of the project by ₹3033 lakh, which works out to (-) 0.60 % of the approved RCE-I cost.



The Petitioner has further submitted that this variation is mainly attributable to price variation in RCE-II vis-à-vis PV provision envisaged in RCE-I.

B. Variation in quantity of approved items (Net increase of ₹4519 lakh : 0.89 %)

The Petitioner has submitted that the line length and type of various types of towers and foundations in the DPR were estimated on the basis of walk-over/preliminary survey. Further, in approved RCE-I, the same was envisaged on the basis of detailed survey and executed/likely to be executed quantities of the project. However, in RCE-II quantities have been considered based on final amendments issued/ material re-conciliation for the completed works. For balance works, quantities which are likely to be executed have been considered. This has resulted in overall increase of ₹4519 lakh on account of variation in quantities of approved items from approved RCE-I.

The major variation is summarized hereunder –

- Tower Steel (Supply and erection) : ₹3840 lakh
- Conductor : ₹675 lakh
- Insulator : ₹506 lakh
- Concreting and Reinforcement : (-) ₹360 lakh

C. Addition of Items (Net increase of ₹5365 lakh: 1.06 %)

The Petitioner has submitted that there has been addition of items in the RCE-II which has resulted in an increase of ₹5365 lakh in the project cost whose details are as follows:



Srl.No.	Description	Amount (₹ in lakh)	Remarks
a)	Open Store Yard and Firefighting Pump House at 765 kV Wardha and 400 kV Aurangabad Sub-station	419	This work had to be carried out considering the actual site requirements during execution which were not envisaged at any time prior to approval of RCE-I.
b)	Prototype tower testing cost for 1200 kV towers	2396	This cost had to be incurred at the site due to actual requirements. This was also not included in RCE-I.
c)	Rectification works	1086	As per actual/ anticipated expenditure towards rectification works being done in the entire Wardha – Aurangabad 400 kV line, which were carried out after the approval of RCE-I.
d)	Provision towards modification in the Fixed Series Compensation (FSC) at Wardha Sub-station to suit the additional short circuit level	1464 (@20% of the original FSC cost in RCE-II)	The originally designed 02 number FSCs at Wardha Sub-station are at 40 kA, 1 sec based on short circuit level of 24,500 MVA of the year 2012 network parameters. However, the short circuit level has now gone up to 46,637 MVA in 2021. Accordingly, suitable modifications were required to be carried out for upgradation of the FSCs at 50 kA, 1 sec. before charging of the FSCs.
	Total	5365	

D. Land and Compensation (Net increase of ₹16585 lakh: 3.27 %)

The Petitioner has submitted that there was a provision of ₹40735 lakh under this head in the RCE-I. However, based on actual/anticipated expenditure, an amount of ₹57319 lakh has been incurred/ likely to be incurred under the head, resulting in an increase of ₹16585 lakh in the cost of the project. The detail of variation in cost under the head is explained as follows:

(₹ in lakh)				
Description	As per DPR	As per RCE-I	As per RCE-II	Remarks
Land for sub-station and R&R compensation	4650	8446	8246	Based on actual expenditure towards this, about 190 Ha land acquired for establishment of new sub-stations at



Description	As per DPR	As per RCE-I	As per RCE-II	Remarks
				Aurangabad, Navsari, and Bhachau alongwith upgradation of Wardha Sub-station at 1200 kV level in future.
Compensation towards crop, tree, PTCC and Railway etc.	7861	27937	38681	Based on actual/anticipated expenditure incurred/likely to be incurred under the head.
Forest compensation	2097	4352	3594	Based on actual expenditure incurred under the head.
Compensation towards tower base and diminution of land value in the width of Right of Way (RoW) Corridor	0.00	0.00	6798	In line with MoP guidelines dated 15.10.2015 and Maharashtra GR dated 31.5.2017 for 400 kV Navsari - Boisar (₹584 lakh) and Wardha Aurangabad (₹6214 lakh) lines.
Total	14608	40735	57319	

E. Foreign Exchange Rate Variation (Net increase of ₹10377 lakh: 2.05 %)

The Petitioner has submitted that there has been a net increase of ₹10377 lakh in the project cost under the head of FERV whose details are as follows:

- i) The project involves payments in foreign currency towards the contracts awarded in foreign currency under the project. Subsequent to RCE-I, based on payments made under these contracts, there has been a decrease of ₹837 lakh on account of FERV in RCE-II from approved RCE-I.
- ii) Further, the project also involves partial funding through the World Bank in foreign currency. FERV due to foreign currency loan re-valuation upto CWIP stage is ₹18108 lakh in actual vis-à-vis FERV of ₹6894 lakh considered during RCE-I. Thus, there is an increase of ₹11213 lakh in the project cost on account of the said FERV.





F. Variation in IDC/IEDC (Net increase of ₹11759 lakh: 2.32 %)

The Petitioner has submitted that total IDC and IEDC under the project have increased by ₹11759 lakh in comparison to considered in approved RCE-I cost which works out to 2.32% as per the following break-up:

(i) Increase in IEDC:

As per RCE-I, IEDC including contingencies for the project was estimated at ₹8199 lakh as per actual expenditure incurred and balance to be incurred. However, the same now works out to ₹8750 lakh as per actuals and anticipated to be incurred in RCE-II resulting in an increase of ₹551 lakh. Therefore, in RCE-II, IEDC has been considered as per actual till 2020-21, IEDC including contingencies @ 8% (5%+3%) on the Development Consent Order (DCO) upto element-wise execution (April, 2023 in 2023-24) and contingency @ 3% on balance DCO of the project for 2023-24.

(ii) Increase in IDC:

Interest during Construction (IDC) for the project as per RCE-I was estimated at ₹43189 lakh, whereas based on the actual/anticipated funds flow, IDC for the project in the RCE-II works out to ₹54396 lakh. Thus, there is an increase of ₹11207 lakh in IDC. The main reasons for increase in IDC are (i) increase in estimated cost of the project (excluding IDC) from ₹464006 lakh to ₹498370 lakh and (ii) change in overall execution schedule of the project from March, 2017 in RCE-I to April 2023 in RCE-II.

26. We have considered the submissions of the Petitioner regarding variation in RCE-II with respect to RCE-I. The overall increase in RCE-II vis-à-vis RCE-I comes to



₹45572 lakh (8.99%) out of which the major variation is due to quantity variation/new item as per actual requirement and site conditions of about 1.95%, land and compensation of about 3.3% as per actual expenditure on land, tree, crop compensation etc. and compensation towards tower base and diminution of land as per latest Government Regulations, FERV of about 2.0% due to foreign loan re-valuation upto CWIP stage and IDC of about 2.2% due to overall increase in the estimated project cost, change in overall execution schedule of about 6 years from March, 2017 in RCE-I to April, 2023 in RCE-II. The RCE-II has been duly approved by the Management of the Petitioner. Accordingly, RCE-II is taken on record of the instant petition.

27. The details of cost of the transmission assets in instant petition submitted by the Petitioner vide affidavit dated 4.7.2022 is as follows:

(₹ in lakh)

Asset	Apportioned Approved Cost (FR)	Revised Apportioned Approved Cost (RCE-I)	Revised Apportioned Approved Cost (RCE-II)	Total Estimated Completion Cost
Asset-1	17860.68	17772.72	16387.16	16209.58
Asset-2	103375.60	45571.66	41834.92	41381.57
Asset-3		36573.10	36437.20	36042.34
Asset-4		21196.90	21088.46	20859.93
Asset-5	4579.73	5424.90	5554.54	5488.61
Asset-6	7043.86	7427.62	7067.64	6983.74
Asset-7A	30523.74	32937.61	31303.22	30964.31
Asset-7B	31427.16	34111.03	34326.99	33955.94
Asset-8A	18052.07	17341.00	18759.68	18536.27
Asset-8B	6094.87	6291.46	6024.51	5953.00
Asset-9A	9520.44	9871.89	9647.52	9533.46
Asset-9B	1767.69	1791.01	1746.73	1724.86
<b>Total cost for Combined Asset-A</b>	<b>230245.84</b>	<b>236310.9</b>	<b>230178.57</b>	<b>227633.61</b>
Asset-A1	40133.00	37416.36	31317.06	29404.87
Asset-A2	13058.00	11653.39	11724.35	10874.29



Asset	Apportioned Approved Cost (FR)	Revised Apportioned Approved Cost (RCE-I)	Revised Apportioned Approved Cost (RCE-II)	Total Estimated Completion Cost
Asset-A3	12963.00	10477.26	5738.74	5631.68
Asset-A4	12920.00	10768.34	10865.10	10072.81
Asset-B1	13067.00	23033.38	22973.37	22880.47
Asset-B2	3521.82	2530.71	2622.19	2484.66
Asset-B3	2321.27	1802.92	1938.56	1802.37
Asset-C	2397.61	1438.50	1566.34	1543.04
Asset-D	14457.96	19222.45	18527.02	18307.10
<b>Total cost for Combined Asset-B</b>	<b>114839.66</b>	<b>118343.31</b>	<b>107272.72</b>	<b>103001.29</b>
C1	936.94	3894.04	3749.28	<b>3724.59</b>
C2	1213.45	4374.81	4154.89	<b>4127.99</b>
C3	2279.14	2274.66	2249.11	<b>2222.41</b>
D1	18721.68	25329.91	19723.24	<b>19489.12</b>
D2	4634.85	2908.98	2957.49	<b>2908.81</b>
D3	5958.53	3665.62	3368.09	<b>3316.88</b>
D4	206.14	316.40	133.10	<b>130.37</b>
D5	4953.49	4075.90	2881.79	<b>2737.57</b>
D6		9708.74	7121.15	<b>6656.61</b>
<b>Total</b>	<b>383989.72</b>	<b>411203.27</b>	<b>383789.44</b>	<b>375949.25</b>

28. The Petitioner has submitted that estimated completion cost of all the transmission assets as well as entire project as claimed in the instant petition is within the apportioned approved cost as per RCE-II. The Petitioner has further submitted that from the above-mentioned table, in the case of Asset-5 and Asset-8A covered under Combined Asset A and Asset-C covered under Combined Asset-B, there is cost over-run with respect to approved cost as per RCE-I. The reasons of cost over-run are as follows:

**Asset-5 under Combined Asset-A: New 400/220 kV Bachchau Sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau Sub-station (New) along with associated bays:**



29. The Petitioner has submitted that against the apportioned approved cost of ₹ 5424.90 lakh with respect to RCE-I, the total estimated cost is ₹5488.61 lakh. Therefore, there is minor increase of ₹63.71 lakh. The Petitioner has submitted that in RCE-I, the cost was envisaged on the basis of executed/likely to be executed quantities under the subject scope of works. The estimated completion cost is based on final amendments and site requirements due to which there is a variation of ₹63.71 lakh in the sub-station package of above-mentioned asset. The said variation between estimated completion cost claimed in the instant true-up petition vis-à-vis the apportioned approved cost with respect to RCE-I is attributable to final amendments and payments made to various vendors based on reconciliation/amendments in awarded contracts.

**Asset-8A under Combined Asset-A: 400 kV Gandhar (NTPC) – Navsari Transmission line ckt-II associated bays at Gandhar (NTPC)–Navsari (GIS) Sub-station, Navsari GIS S/S (new) and Bus reactor at Navsari GIS:**

30. Against the apportioned approved cost of ₹ 17341.00 lakh with respect to RCE-I, the total estimated cost is ₹18536.27 lakh. Therefore, there is an increase of ₹1195.27 lakh in the cost. It is submitted that in RCE-I, the cost was envisaged on the basis of executed/likely to be executed quantities under the subject scope of works. The estimated completion cost is based on final amendments and site requirements due to which there is a variation of ₹1195.27 lakh in the tower and sub-station package of above-mentioned asset. The said variation between estimated completion cost claimed in instant true-up petition vis-à-vis the apportioned approved cost with respect to RCE-I is attributable to final amendments and payments made to various vendors based on reconciliation/amendments in awarded contracts. The increase in cost is also attributable to cost incurred on account of deposit work payment made to NTPC Limited.

**Asset-C under Combined Asset-B: 2 Nos. 80 MVAR Line Reactor for 400 kV D/C Wardha- Aurangabad Transmission line Ckt# 1&2 charged as Bus Reactor 1 and**



**2 at 400/220 kV Aurangabad Sub-station under Mundra UMPP:**

31. Against the apportioned approved cost of ₹1438.50 lakh with respect to RCE-I, the total estimated cost is ₹1543.04 lakh. Therefore, there is an increase of ₹104.54 lakh in the cost. It is submitted that in RCE-I, the cost was envisaged on the basis of executed/likely to be executed quantities under the subject scope of works. The estimated completion cost is based on final amendments and site requirements due to which there is a variation of ₹104.54 lakh in the sub-station package of above-mentioned asset. The said variation between estimated completion cost claimed in instant true-up petition vis-à-vis the apportioned approved cost with respect to RCE-I is attributable to final amendments and payments made to various vendors based on reconciliation/amendments in awarded contracts.

32. We have considered the submissions of the Petitioner. The cost variation from apportioned approved cost (FR) to Revised Cost Estimate (RCE-I) has already been settled in previous orders i.e *vide* order dated 26.5.2016 in Petition No. 20/TT/2015 for Combined Asset-A, dated 2.12.2019 in Petition No. 194/TT/2018 for Combined Asset-B, dated 29.4.2016 in Petition No. 185/TT/2014 for Asset-C1, Asset-C2 and Asset-C3, and dated 23.7.2018 in Petition No. 207/TT/2017 for Asset-D1, Asset-D2, Asset-D3, Asset-D4, Asset-D5 and Asset-D6. The cost over-run in the above mentioned orders has not been challenged and therefore it has attained finality.

33. However, it is observed at the stage of trueing -up, there is cost over-run of about ₹63.71 lakh and ₹1195.27 lakh, respectively in cases of Asset-5 and Asset-8A, covered under Combined Asset-A, and cost over-run of about ₹104.54 lakh Asset-C covered under Combined Asset-B, based on completion cost as on 31.3.2019 vis-à-vis



apportioned approved cost as per RCE-I. The variation is mainly attributable to final amendments and payments made to various vendors based on reconciliation/amendments in awarded contracts. The estimated completion cost of Asset-5 and Asset-8A, covered under Combined Asset-A, and Asset-C covered under Combined Asset-B, is within the apportioned approved cost as per RCE-II. Therefore, cost variation in case of Asset-5 and Asset-8A covered under Combined Asset A and Asset-C covered under Combined Asset-B is allowed. Further, the total estimated completion cost as on 31.3.2019 of ₹376421.59 lakh for the transmission assets submitted by the Petitioner along with the petition is within the RCE cost of ₹383789.44 lakh. Hence, cost variation is allowed for tariff purpose.

**Time over-run**

34. As per the IA dated 15.10.2008, the instant assets were schedule to be put into commercial operation within 48 months from the date of IA. Accordingly, the scheduled COD (SCOD) was 15.10.2012 against which the transmission assets were put into commercial operation as per the following details:

<b>Assets</b>	<b>Asset's name in the instant petition</b>	<b>COD</b>	<b>Time over-run</b>
Asset-1	Combined Asset-A	1.10.2011	None
Asset-2		1.10.2011	None
Asset-3		1.12.2011	None
Asset-4		1.3.2012	None
Asset-5		1.10.2011	None
Asset-6		1.10.2011	None
Asset-7A		1.9.2012	None
Asset-7B		1.1.2013	2 Months
Asset-8A		1.8.2012	None
Asset-8B		1.11.2012	None
Asset-9A		1.8.2012	None
Asset-9B		1.9.2012	None
Asset-A1			1.3.2012



Assets	Asset's name in the instant petition	COD	Time over-run
Asset-A2	Combined Asset-B	1.3.2012	None
Asset-A3		1.6.2012	None
Asset-A4		1.4.2012	None
Asset-B1		1.2.2014	15 Months
Asset-B2		1.2.2014	15 Months
Asset-B3		1.2.2014	15 Months
Asset-C		1.2.2014	15 Months
Asset-D		1.4.2013	5 Months
Asset-1	Asset-C1	30.4.2014	18 Months 16 Days
Asset-2	Asset-C2	29.4.2014	18 Months 15 Days
Asset-3	Asset-C3	1.4.2014	17 Months 19 Days
Asset-1	Asset-D1	31.12.2016	50 Months 17 Days
Asset-2	Asset-D2	2.5.2014	18 Months 18 Days
Asset-3	Asset-D3	1.4.2014	18 Months 16 Days
Asset-4	Asset-D4	1.3.2015	17 Months 18 Days
Asset-5A	Asset-D5	29.12.2017	62 Months 15 Days
Asset-5B	Asset-D6	31.12.2017	62 Months 17 Days

35. The time over-run with respect to the transmission assets has already been settled by the Commission in previous orders *vide* order dated 26.5.2016 in Petition No. 20/TT/2015 for Combined Asset-A, dated 2.12.2019 in Petition No. 194/TT/2018 for Combined Asset-B, dated 29.4.2016 in Petition No. 185/TT/2014 for Asset-C1, Asset-C2 and Asset-C3, and dated 23.7.2018 in Petition No. 207/TT/2017 for Asset-D1, Asset-D2, Asset-D3, Asset-D4, Asset-D5 and Asset-D6. The time over-run in the above orders has not been challenged and, therefore, the same has attained finality.

**Interest During Construction (“IDC”) /Incidental Expenditure During Construction (“IEDC”)**

36. The Petitioner has claimed IDC for the following transmission assets covered in the instant petition and has submitted Auditor’s Certificates in support of the same. The Petitioner has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter which is as follows:





(₹ in lakh)

Asset	IDC as per certificate	IDC discharged upto COD/ 31.3.14	Accrued IDC Discharged In				
			2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset-A</b>	15143.80	15143.80	0.00	0.00	0.00	0.00	0.00
<b>Combined Asset-B</b>	7059.61	6968.32	91.31	0.00	0.00	0.00	0.00
<b>C1</b>	220.77	218.03	2.74	0.00	0.00	0.00	0.00
<b>C2</b>	240.59	237.65	2.94	0.00	0.00	0.00	0.00
<b>C3</b>	127.39	63.34	64.05	0.00	0.00	0.00	0.00
<b>D1</b>	1462.26	1146.40	0.00	0.00	79.67	236.19	0.00
<b>D2</b>	111.13	16.77	14.69	0.00	79.67	0.00	0.00
<b>D3</b>	88.83	79.49	9.34	0.00	0.00	0.00	0.00
<b>D4</b>	13.79	7.29	5.25	1.25	0.00	0.00	0.00
<b>D5</b>	369.35	299.17	0.00	0.00	0.00	0.00	70.18
<b>D6</b>	691.55	593.23	0.00	0.00	0.00	0.00	98.32
<b>Total</b>	<b>25529.07</b>	<b>24773.49</b>	<b>190.32</b>	<b>1.25</b>	<b>159.34</b>	<b>236.19</b>	<b>168.50</b>

37. We have considered the submissions of the Petitioner. The Petitioner has submitted IDC computation statement containing 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 observed such as mismatch in loan amount between IDC statement and Forms-6 and Form-9C and lack of detailed computation of IDC for foreign loans. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form 9C. IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows.



(₹ in lakh)

Asset	IDC as per Auditor's Certificate (A)	IDC Disallowed		IDC allowed	IDC discharged upto COD/ 31.3.2014	IDC Discharged				
		Due to time over-run not condoned	Due to computational error			2014-15	2015-16	2016-17	2017-18	2018-19
	1	2	3	4=1-2-3						
<b>Combined Asset-A</b>	15143.80	0.00	0.00	15143.80	15143.80	0.00	0.00	0.00	0.00	0.00
<b>Combined Asset-B</b>	7059.61	12.04*	91.63*	6955.94	6864.65	91.29	0.00	0.00	0.00	0.00
<b>C1</b>	220.77	0.00	220.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>C2</b>	240.59	0.00	240.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>C3</b>	127.39	0.00	0.00	127.39	63.34	64.05	0.00	0.00	0.00	0.00
<b>D1</b>	1462.26	0.00	1.87	1460.39	1146.39	0.00	0.00	79.67	234.33	0.00
<b>D2</b>	111.13	0.00	63.97	47.16	35.80	11.36	0.00	0.00	0.00	0.00
<b>D3</b>	88.83	0.00	52.34	36.49	28.99	7.50	0.00	0.00	0.00	0.00
<b>D4</b>	13.79	0.00	0.04	13.75	7.30	5.25	1.20	0.00	0.00	0.00
<b>D5</b>	369.35	0.00	0.00	369.35	299.17	0.00	0.00	0.00	0.00	70.18
<b>D6</b>	691.55	0.00	1.49	690.06	593.23	0.00	0.00	0.00	0.00	96.83

(\*) IDC for Combined Asset-B disallowed vide order dated 2.12.2019 in Petition No. 194/TT/2018

38. The Petitioner has claimed IEDC and has submitted Auditor's Certificate in support of the same. The Petitioner has submitted the details of the entire IEDC and the same is as follows:

(₹ in lakh)

Asset	IEDC claimed (As per Auditor's Certificate)	IEDC and disallowed (due to time over-run not condoned)	IEDC considered as on COD	IEDC discharged up to COD
<b>Combined Asset-A</b>	2049.08	0.00	2049.08	2049.08
<b>Combined Asset-B</b>	2024.14	5.62*	2018.52	2018.52
<b>C1</b>	69.44	0.00	69.44	69.44
<b>C2</b>	74.61	0.00	74.61	74.61
<b>C3</b>	44.10	0.00	44.10	44.10
<b>D1</b>	292.64	0.00	292.64	292.64
<b>D2</b>	29.37	0.00	29.37	29.37
<b>D3</b>	23.48	0.00	23.48	23.48
<b>D4</b>	1.57	0.00	1.57	1.57



Asset	IEDC claimed (As per Auditor's Certificate)	IEDC and disallowed (due to time over-run not condoned)	IEDC considered as on COD	IEDC discharged up to COD
D5	168.82	0.00	168.82	168.82
D6	131.47	0.00	131.47	131.47

(\*) IEDC for Combined Asset-B disallowed vide order dated 2.12.2019 in Petition No. 194/TT/2018

39. We have considered the submissions of the Petitioner. IEDC has been disallowed due to time over-run not condoned in respect of Combined Asset-B as per order dated 2.12.2019 in Petition No.194/TT/2018. IEDC claimed and considered as on COD and summary of discharge of IEDC liability up to COD for the purpose of tariff determination is as follows:

(₹ in lakh)

Asset	IEDC claimed (As per Auditor's Certificate)	IEDC disallowed (due to time over-run not condoned)	IEDC considered as on COD	IEDC discharged up to COD
Combined Asset-A	2049.08	0.00	2049.08	2049.08
Combined Asset-B	2024.14	5.62	2018.52	2018.52
C1	69.44	0.00	69.44	69.44
C2	74.61	0.00	74.61	74.61
C3	44.10	0.00	44.10	44.10
D1	292.64	0.00	292.64	292.64
D2	29.37	0.00	29.37	29.37
D3	23.48	0.00	23.48	23.48
D4	1.57	0.00	1.57	1.57
D5	168.82	0.00	168.82	168.82
D6	131.47	0.00	131.47	131.47

### Initial Spares

40. 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 cut-off date, subject to the following ceiling norms:

“(d) Transmission System



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

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

(₹ in lakh)						
Asset	Element	Estimated Completion Cost (A)	Initial Spares Claimed (B)	Ceiling (in %) (C)	Initial Spares Worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D
Combined Asset-A	Transmission Line	154109.63	774.92	0.75	1158.70	0.00
	Sub-station	57911.35	1498.21	2.5	1446.49	51.72
Combined Asset-B	Transmission Line	16684.68	3.99	0.75	126.05	0.00
	Sub-station	86316.61	291.23	2.5	2205.78	0.00
<b>Assets commissioned during 2009-14</b>	<b>Transmission Line</b>	<b>170794.31</b>	<b>778.91</b>	<b>0.75</b>	<b>1284.75</b>	<b>0.00</b>
	<b>Sub-station</b>	<b>144227.96</b>	<b>1789.44</b>	<b>2.5</b>	<b>3652.27</b>	<b>0.00</b>
C1	Transmission Line	2521.53	0	1	25.47	0.00
	Sub-station	350.02	0	4	22.34	0.00
C2	Transmission Line	2811.82	0	1	28.40	0.00
	Sub-station	494.38	0	4	31.56	0.00
C3	Transmission Line	2050.92	0	1	20.72	0.00
D1	Transmission Line	16813.29	154	1	168.28	0.00
	Sub-station	920.93	52.68	6	55.42	0.00
D2	Sub-station	2181.64	0	6	139.25	0.00
D3	Sub-station	2740.39	91.67	6	169.07	0.00
D4	Transmission Line	115.01	1.16	1	1.15	0.00
D5	Transmission Line	2309.41	19	1	23.14	0.00
D6	Transmission Line	6213.59	52	1	62.24	0.00



Asset	Element	Estimated Completion Cost (A)	Initial Spares Claimed (B)	Ceiling (in %) (C)	Initial Spares Worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D
Assets commissioned during 2014-19	Transmission Line	32835.57	226.16	1	329.39	0.00
	Sub-station (Brownfield)	5842.96	144.35	6	363.74	0.00
	Sub-station (Greenfield)	844.40	0.00	4	35.18	0.00

42. MPPMCL has submitted that the Petitioner has stated that the Initial Spares for sub-station are within the limit specified in the 2014 Tariff Regulations. MPPMCL has further submitted that the Petitioner has shown overall Initial Spares as percentage of capital cost in Combined Assets is within limit as against the ceiling. MPPMCL has submitted that the facts in relation to Appeal No. 74 of 2017 are not similar to the present case. The Commission in its various orders has established that Initial Spares are to be calculated asset-wise as every asset has its own identity and it is different from other assets. Accordingly, MPPMCL has requested that excess Initial Spares claimed in respect of Asset-A (sub-station component) may be disallowed.

43. In response, the Petitioner vide affidavit dated 14.9.2020 has submitted that there was some error in the calculation of Initial Spares submitted in the petition which has been rectified in the instant affidavit. The Petitioner further submitted that Initial Spares are within the specified limit on overall project basis. The computation of Initial Spares submitted by the Petitioner vide affidavit dated 14.9.2020 is as follows:



(₹ in lakh)

Asset	Parts	Estimated Completion Cost (A)	Initial Spares Claimed (B)	Ceiling (in %) (C)	Initial Spares worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D	Balance available within criteria [D-B] If D>B
A1	Transmission Line	15612.63	0.00	0.75	117.98	0.00	117.98
	Sub-station	596.95	46.29	2.5	14.12	32.17	0.00
A2	Transmission Line	39357.57	301.3	0.75	295.14	6.16	0.00
	Sub-station	2024.00	197.15	2.5	46.84	150.31	0.00
A3	Transmission Line	33688.54	180.51	0.75	253.21	0.00	72.70
	Sub-station	2353.80	146.2	2.5	56.61	89.59	0.00
A4	Transmission Line	20859.93	115.4	0.75	156.76	0.00	41.36
A5	Sub-station	5488.61	57.36	2.5	139.26	0.00	81.90
A6	Sub-station	6983.74	197.64	2.5	174.00	23.64	0.00
A7	Transmission Line	28473.84	100.74	0.75	214.41	0.00	113.67
	Sub-station	2490.47	134.75	2.5	60.40	74.35	0.00
A8	Transmission Line	33955.94	100.74	0.75	255.83	0.00	155.09
A9	Transmission Line	11821.27	43.82	0.75	89.00	0.00	45.18
	Sub-station	6715.00	99.00	2.5	169.64	0.00	70.64
A10	Transmission Line	2409.13	43.82	0.75	17.87	25.95	0.00
	Sub-station	3543.87	169.19	2.5	86.53	82.66	0.00
A11	Transmission Line	4403.34	3.99	0.75	33.24	0.00	29.25
	Sub-station	5130.12	291.23	2.5	124.07	167.16	0.00
A12	Sub-station	1724.86	44	2.5	43.10	0.90	0.00
<b>Combined Asset-A</b>	<b>Transmission Line</b>	<b>190582.19</b>	<b>890.32</b>	<b>0.75</b>	<b>1433.44</b>	<b>0.00</b>	<b>543.12</b>
	<b>Sub-station</b>	<b>37051.42</b>	<b>1382.81</b>	<b>2.5</b>	<b>914.58</b>	<b>468.23</b>	<b>0.00</b>
B1	Sub-station	29404.87	665.88	2.5	736.90	0.00	71.02
B2	Sub-station	10874.29	236.4	2.5	272.77	0.00	36.37
B3	Sub-station	5631.68	129.52	2.5	141.08	0.00	11.56
B4	Sub-station	10072.81	216.72	2.5	252.72	0.00	36.00
B5	Transmission Line	12002.98	0.00	0.75	90.70	0.00	90.70
	Sub-station	10877.49	138.32	2.5	275.36	0.00	137.04
B6	Sub-station	2484.66	20.37	2.5	63.19	0.00	42.82
B7	Sub-station	1802.37	0	2.5	46.21	0.00	46.21
B8	Sub-station	1543.04	22.95	2.5	38.98	0.00	16.03
B9	Transmission Line	16684.68	51.69	0.75	125.69	0.00	74.00



Asset	Parts	Estimated Completion Cost (A)	Initial Spares Claimed (B)	Ceiling (in %) (C)	Initial Spares worked out $D = [(A-B) \times C / (100-C)]$	Excess [B-D] If B>D	Balance available within criteria [D-B] If D>B
	Sub-station	1622.42	67.05	2.5	39.88	27.17	0.00
<b>Combined Asset-B</b>	<b>Transmission Line</b>	<b>28687.66</b>	<b>51.69</b>	<b>0.75</b>	<b>216.39</b>	<b>0.00</b>	<b>164.70</b>
	<b>Sub-station</b>	<b>74313.63</b>	<b>1497.21</b>	<b>2.5</b>	<b>1867.09</b>	<b>0.00</b>	<b>369.88</b>
<b>Total for 2009-14 commissioned assets</b>	<b>Transmission Line</b>	<b>219269.85</b>	<b>942.01</b>	<b>0.75</b>	<b>1649.83</b>	<b>0.00</b>	<b>707.82</b>
	<b>Sub-station</b>	<b>111365.05</b>	<b>2880.02</b>	<b>2.5</b>	<b>2781.67</b>	<b>98.35</b>	<b>0.00</b>
C1	Transmission Line	2521.53	0.00	1	25.47	0.00	25.47
	Sub-station	350.02	0.00	4	14.58	0.00	14.58
C2	Transmission Line	2811.82	0.00	1	28.40	0.00	28.40
	Sub-station	494.38	0.00	4	20.60	0.00	20.60
C3	Transmission Line	2050.92	0.00	1	20.72	0.00	20.72
D1	Transmission Line	16813.29	154.00	1	168.28	0.00	14.28
	Sub-station	920.93	52.68	6	55.42	0.00	2.74
D2	Sub-station	2181.64	0.00	6	139.25	0.00	139.25
D3	Sub-station	2740.39	91.67	6	169.07	0.00	77.40
D4	Transmission Line	115.01	1.16	1	1.15	0.01	0.00
D5	Transmission Line	2309.41	19.00	1	23.14	0.00	4.14
D6	Transmission Line	6213.59	52.00	1	62.24	0.00	10.24
<b>Total for 2014-19 commissioned assets</b>	<b>Transmission Line</b>	<b>32835.57</b>	<b>226.16</b>	<b>1</b>	<b>329.39</b>	<b>0.00</b>	103.23
	<b>Sub-station (Brownfield)</b>	<b>5842.96</b>	<b>144.35</b>	<b>6</b>	<b>363.74</b>	<b>0.00</b>	219.39
	<b>Sub-station (Greenfield)</b>	<b>844.40</b>	<b>0.00</b>	<b>4</b>	<b>35.18</b>	<b>0.00</b>	35.18
<b>Total of complete Project</b>	<b>Transmission Line</b>	<b>1168.17</b>			<b>1979.22</b>	<b>0.00</b>	<b>811.05</b>
	<b>Sub-station (Brownfield)</b>	<b>290.55</b>			<b>420.35</b>	<b>0.00</b>	<b>129.80</b>
	<b>Sub-station (Greenfield)</b>	<b>2733.82</b>			<b>2760.25</b>	<b>0.00</b>	<b>26.43</b>

44. We have considered the submissions of the Petitioner and the Respondent, MPPMCL. APTEL in its judgement dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares





to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling on the overall project cost. Similar issue was raised by the Respondent BRPL in Petition No. 168/TT/2020. The Commission disposed of the objection of the Respondent vide order dated 3.2.2021.

45. Therefore, Initial Spares are allowed on the basis of overall project cost in 2019-24 tariff period when the transmission assets are combined and overall project cost is arrived at. Initial Spares allowed for the transmission assets are as follows:

**Transmission assets put to commercial operation/ COD during 2009-14 tariff period**

46. For Asset-4, Asset-7A, Asset-7B, Asset-8A, Asset-8B, Asset-9A and Asset-9B covered under Combined Asset-A and for all assets covered under Combined Asset-B, Initial Spares have been computed again in the instant order since the cut-off date for these assets was during 2014-19 tariff period. Initial Spares for the transmission assets whose commercial operation is during 2009-14 tariff period, they have been computed as per the 2009 Tariff Regulations.

(₹ in lakh)

Combined Asset-A						
Assets	Project cost as on cut-off date	Apportioned Initial Spares claimed	Ceiling (in %) as per Regulation 8 of the 2009 Tariff Regulations	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
<b>Transmission line</b>						
Asset-1	15612.63	0.00	0.75	117.98	0.00	0.00
Asset-2	39357.47	301.30	0.75	295.13	6.17	295.13
Asset-3	33648.08	180.51	0.75	252.90	0.00	180.51
Asset-4	20859.93	115.40	0.75	156.76	0.00	115.40
Asset-7A	28473.86	100.74	0.75	214.41	0.00	100.74



Combined Asset-A						
Assets	Project cost as on cut-off date	Apportioned Initial Spares claimed	Ceiling (in %) as per Regulation 8 of the 2009 Tariff Regulations	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Asset-7B	33955.94	100.74	0.75	255.83	0.00	100.74
Asset-8A	11802.36	43.82	0.75	88.86	0.00	43.82
Asset-8B	2409.13	43.82	0.75	17.87	25.95	17.87
Asset-9A	4403.34	3.99	0.75	33.24	0.00	3.99
<b>Sub-station</b>						
Asset-1	596.95	46.29	2.50	14.12	32.17	14.12
Asset-2	1975.04	197.15	2.50	45.59	151.56	45.59
Asset-3	2353.80	146.20	2.50	56.61	89.59	56.61
Asset-5	5315.19	57.36	2.50	134.82	0.00	57.36
Asset-6A	4221.99	158.32	2.50	104.20	54.12	104.20
Asset-6B	2653.07	39.32	2.50	67.02	0.00	39.32
Asset-7A	2490.47	134.75	2.50	60.40	74.35	60.40
Asset-8A	6581.24	99.00	2.50	166.21	0.00	99.00
Asset-8B	3543.87	169.19	2.50	86.53	82.66	86.53
Asset-9A	5130.12	291.23	2.50	124.07	167.16	124.07
Asset-9B	1724.86	44.00	2.50	43.10	0.90	43.10

(₹ in lakh)

Combined Asset-B						
Assets	Project cost as on cut-off date	Apportioned initial spares claimed	Ceiling (in%) as per Regulation 8 of the 2009 Tariff Regulations	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
<b>Transmission line</b>						
Asset-D	16684.68	51.69	0.75	117.98	0.00	51.69
<b>Sub-station</b>						
Asset-A1	29225.26	665.88	2.50	732.29	0.00	665.88
Asset-A2	10874.29	236.4	2.50	272.77	0.00	236.40
Asset-A3	5561.67	129.52	2.50	139.29	0.00	129.52
Asset-A4	10072.81	216.72	2.50	252.72	0.00	216.72
Asset-B1	9756.39	138.32	2.50	246.62	0.00	138.32
Asset-B2	2441.02	20.37	2.50	62.07	0.00	20.37



Combined Asset-B						
Assets	Project cost as on cut-off date	Apportioned initial spares claimed	Ceiling (in%) as per Regulation 8 of the 2009 Tariff Regulations	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Asset-B3	1772.84	0	2.50	45.46	0.00	0.00
Asset-C	1482.03	22.95	2.50	37.41	0.00	22.95
Asset-D	1622.42	67.05	2.50	39.88	27.17	39.88

**For Transmission Assets put to commercial operation/COD during 2014-19 tariff period:**

(₹ in lakh)

Assets	Element	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 (in %) as per 2014 Tariff Regulations	Ceiling of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Asset-C1	Transmission Line	2521.53	0.00	1	25.47	N/A	0.00
	Sub-station	350.02	0.00	4	14.58	N/A	0.00
Asset-C2	Transmission Line	2811.82	0.00	1	28.40	N/A	0.00
	Sub-station	494.38	0.00	4	20.60	N/A	0.00
Asset-C3	Transmission Line	2050.92	0.00	1	20.72	N/A	0.00
Asset-D1	Transmission Line	16813.29	154.00	1	168.28	NIL	154.00
	Sub-station	920.93	52.68	6	55.42	NIL	52.68
Asset-D2	Sub-station	2181.64	0.00	6	139.25	N/A	0.00
Asset-D3	Sub-station	2740.39	91.67	6	169.07	NIL	91.67
Asset-D4	Transmission Line	115.01	1.16	1	1.15	0.01	1.15
Asset-D5	Transmission Line	2309.41	19.00	1	23.14	NIL	19.00
Asset-D6	Transmission Line	6213.59	52.00	1	62.24	NIL	52.00

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



(₹ in lakh)

Asset	Capital Cost claimed as on COD (A)	IDC disallowed (B)	IEDC disallowed (C)	Undischarged IDC (D)	Excess Initial Spares disallowed as on COD (E)	Capital Cost allowed as on COD (F) = (A-B-C-D-E)
Combined Asset-A	226286.13	0.00	0.00	0.00	684.62	225601.51
Combined Asset-B	97286.49	103.67	5.62	91.29	27.17	97058.74
Asset-C1	3351.91	220.77	0.00	0.00	0.00	3131.14
Asset-C2	3650.08	240.59	0.00	0.00	0.00	3409.49
Asset-C3	1899.14	0.00	0.00	64.05	0.00	1835.09
Asset-D1	14736.04	1.87	0.00	314.00	0.00	14420.17
Asset-D2	1562.01	63.97	0.00	11.36	0.00	1486.68
Asset-D3	1263.06	52.34	0.00	7.50	0.00	1203.22
Asset-D4	130.37	0.04	0.00	6.45	0.01	123.87
Asset-D5	2446.16	0.00	0.00	70.18	0.00	2375.98
Asset-D6	5254.63	1.49	0.00	96.83	0.00	5156.31

### Additional Capital Expenditure (“ACE”)

48. The Commission *vide* order dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No.194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017 had allowed the following ACE for 2014-19 tariff period:

(₹ in lakh)

Asset	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A	635.87	0.00	0.00	0.00	0.00
Combined Asset-B	3422.05	621.02	503.78	1424.99	0.00
Asset-C1	253.70	86.51	0.00	0.00	0.00
Asset-C2	365.09	86.89	0.00	0.00	0.00
Asset-C3	351.11	0.00	0.00	0.00	0.00
Asset-D1	0.00	0.00	997.53	2294.26	572.88
Asset-D2	1089.96	66.64	138.54	0.00	0.00
Asset-D3	794.50	53.58	919.78	0.00	0.00
Asset-D4	5.25	1.25	1.15	0.00	0.00
Asset-D5	0.00	0.00	0.00	20.94	135.12

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Asset	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-D6	0.00	0.00	0.00	680.24	194.71

49. The Petitioner in the instant true-up petition has claimed the following ACE based on actual expenditure:

(₹ in lakh)

Asset	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-A	1093.85	242.26	11.37	0.00	0.00
Combined Asset-B	3334.72	621.02	503.78	1105.27	150.01
Asset-C1	128.78	51.23	192.67	0.00	0.00
Asset-C2	186.99	175.37	115.55	0.00	0.00
Asset-C3	24.72	0.00	298.55	0.00	0.00
Asset-D1	0.00	0.00	2477.2	1686.68	589.2
Asset-D2	1075.27	66.64	21.65	44.17	139.07
Asset-D3	785.16	53.58	1019.56	49.11	146.41
Asset-D4	0.00	0.00	0.00	0.00	0.00
Asset-D5	0.00	0.00	0.00	50.5	240.92
Asset-D6	0.00	0.00	0.00	1050.01	251.97

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

Asset	Description	COD	Cut-off date
Combined Asset-A	Asset-1	1.10.2011	31.3.2014
	Asset-2	1.10.2011	31.3.2014
	Asset-3	1.12.2011	31.3.2014
	Asset-4	1.3.2012	31.3.2015
	Asset-5	1.10.2011	31.3.2014
	Asset-6	1.10.2011	31.3.2014
	Asset-7A	1.9.2012	31.3.2015
	Asset-7B	1.1.2013	31.3.2016
	Asset-8A	1.8.2012	31.3.2015
	Asset-8B	1.11.2012	31.3.2015
	Asset-9A	1.8.2012	31.3.2015
	Asset-9B	1.9.2012	31.3.2015
Combined Asset-B	Asset-A1	1.3.2012	31.3.2015
	Asset-A2	1.3.2012	31.3.2015
	Asset-A3	1.6.2012	31.3.2015
	Asset-A4	1.4.2012	31.3.2015



Asset	Description	COD	Cut-off date
	Asset-B1	1.2.2014	31.3.2017
	Asset-B2	1.2.2014	31.3.2017
	Asset-B3	1.2.2014	31.3.2017
	Asset-C	1.2.2014	31.3.2017
	Asset-D	1.4.2013	31.3.2016
Asset-C1		30.4.2014	31.3.2017
Asset-C2		29.4.2014	31.3.2017
Asset-C3		1.4.2014	31.3.2017
Asset-D1		31.12.2016	31.3.2019
Asset-D2		2.5.2014	31.3.2017
Asset-D3		1.4.2014	31.3.2017
Asset-D4		1.3.2015	31.3.2018
Asset-D5		29.12.2017	31.3.2020
Asset-D6		31.12.2017	31.3.2020

51. The details of ACE incurred after the cut-off date is furnished by the Petitioner and the same is as follows:

(₹ in lakh)

**Combined Asset-A**

Asset	Party	2014-15
Asset-2	Crop Compensation	0.10
	Siemens LTD – LoA 3035 & 3036 Bay Extension – Retention payment	48.96
<b>Total</b>		<b>49.06</b>

(₹ in lakh)

Asset	Party	2017-18
Asset-3	Crop Compensation	4.15
	ICOMM LTD – 3131 & 3132 Tower Package - Retention payment	36.31
<b>Total</b>		<b>40.46</b>

(₹ in lakh)

Asset	Party	2014-15	2015-16
Asset-5	Civil works – Retention payment	266.04	32.68
	Siemens LTD - LoA 3035 & 3036 Bay Extension - Retention payment	24.02	0.00
	CGL – LoA 3049 & 3050 BR - Retention payment	22.50	0.00
<b>Total</b>		<b>312.56</b>	<b>32.68</b>



(₹ in lakh)			
Asset	Party	2014-15	2015-16
Asset-6	Siemens LTD- 3035&3036 Bay Extension - Retention amount	55.84	52.84

(₹ in lakh)			
Asset	Party	2015-16	2016-17
Asset-8A	Crop Compensation	1.19	0.00
	KEC – LoA 2951 & 2952 Tower Package – Retention payment	17.72	0.00
	Civil Works	122.39	11.37
<b>Total</b>		<b>141.30</b>	<b>11.37</b>

(₹ in lakh)

**Combined Asset-B**

Asset	Party	2015-16	2016-17
Asset-A1	ABB- LoA 3008 & 3009 - Retention payment	92.86	0.00
	Kashyap Construction - LOA-67/2009/ 974 dated 6.8.2009 – Retention payment	5.61	0.00
	Civil Works– Retention payment	80.43	0.70
<b>Total</b>		<b>178.90</b>	<b>0.70</b>

(₹ in lakh)		
Asset	Party	2015-16
Asset-A3	ABB- LoA 3008, 3009 - Retention payment	70.01

(₹ in lakh)			
Asset	Party	2017-18	2018-19
Asset-B1	Pandit Engg Company - LOA-58/ 798 dated 15.11.2011 - Retention payment	27.91	4.87
	Pandit Engineering Co.- LOA/74 dated 30.10.2013 – Retention payment	173.10	30.19
	Civil Works– Retention payment	770.07	114.95
<b>Total</b>		<b>971.08</b>	<b>150.01</b>

(₹ in lakh)		
Asset	Party	2017-18
Asset-B2	BHEL- LoA 4044 & 4045 - Retention payment	43.64

(₹ in lakh)		
Asset	Party	2017-18
Asset-B3	BHEL- LoA 4044 & 4045 - Retention payment	29.53





(₹ in lakh)		
Asset	Party	2017-18
Asset-C	BHEL- LoA 4044 & 4045 - Retention payment	51.12
	CGL – LoA 3889 - Retention payment	9.89
<b>Total</b>		61.01

(₹ in lakh)			
Asset	Party	2017-18	2018-19
Asset-D2	TBEA- LoA 4388, 4389 and 4390 - Retention payment	44.17	139.07

(₹ in lakh)			
Asset	Party	2017-18	2018-19
Asset-D3	TBEA- LoA 4388, 4389 and 4390 - Retention payment	49.11	146.41

52. 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) of the 2014 Tariff Regulations against the respective transmission assets.

53. The Petitioner has further submitted that the Commission *vide* order dated 2.12.2019 in Petition No. 194/TT/2018 in the case of Asset-C covered under Combined Asset-B disallowed IDC of ₹12.04 lakh IEDC of ₹5.62 lakh on account of time over-run not condoned and reduced it from the capital cost as on COD. Subsequently, an amount of ₹0.61 lakh was recovered as Liquidated Damages (LD) from the executing agency(ies) and is added in the capital cost in 2014-15.

54. We have considered the submissions made by the Petitioner. The Appellate Tribunal for Electricity (APTEL) in its judgement dated 27.4.2011 in Appeal No. 72 of 2010 has laid down the following principles for dealing with the issue of time over-run in execution of projects. The relevant extract of the judgment dated 27.4.2011 is as follows:



*“7.4. The delay in execution of a generating project could occur due to following reasons:*

- i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*
- ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*
- iii) situation not covered by (i) & (ii) above.*

*In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.”*

55. As per the above judgment of APTEL, when time over-run is attributable to the project developer, in the instant case the Petitioner, or its contractors, the cost of time over-run, i.e. IDC and IEDC has to be borne by the project developer and LD, if any, recovered can be retained by the Petitioner. In the instant case, time over-run in case of Asset-C covered under Combined Asset-B was not condoned. Accordingly, IDC and IEDC for the period of time over-run not condoned in case of Asset-C covered under Combined Asset-B is not capitalised and LD recovered by the Petitioner pertaining to the concerned assets can be retained by the Petitioner. The capital cost of the said Asset-C is allowed in accordance with the observations of APTEL in its judgement dated 27.4.2011 in Appeal No. 72 of 2010. IDC and IEDC disallowed in the case of Asset-C



is deducted from the capital cost as on COD and ACE incurred by the Petitioner after the COD is added to the capital cost.

56. The ACE claimed by the Petitioner has been verified from the Auditor's Certificate. Accordingly, ACE within the cut-off date has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. ACE incurred after the cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations. The capital cost allowed in respect of the transmission assets for 2014-19 tariff period is as follows:

Asset	Cost as per RCE	Cost as per RCE-II	Capital Cost allowed as on 1.4.2014/ COD	ACE					Capital cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-A	236310.90	230178.57	225601.51	1093.85	242.26	11.37	0.00	0.00	226948.99
Combined Asset-B	118343.31	107272.73	97058.74	3426.01	621.02	503.78	1105.27	150.01	102864.83
Asset-C1	3894.04	3749.28	3131.14	128.78	51.23	192.67	0.00	0.00	3503.82
Asset-C2	4374.81	4154.89	3409.49	186.99	175.37	115.55	0.00	0.00	3887.40
Asset-C3	2274.66	2249.11	1835.09	88.77	0.00	298.55	0.00	0.00	2222.41
Asset-D1	25329.91	19723.24	14420.17	0.00	0.00	2556.87	1921.01	589.20	19487.25
Asset-D2	2908.98	2957.49	1486.68	1086.63	66.64	21.65	44.17	139.07	2844.84
Asset-D3	3665.62	3368.09	1203.22	792.66	53.58	1019.56	49.11	146.41	3264.54
Asset-D4	316.40	133.10	123.87	5.25	1.20	0.00	0.00	0.00	130.32
Asset-D5	4075.90	2881.79	2375.98	0.00	0.00	0.00	50.50	311.10	2737.58
Asset-D6	9708.74	7121.15	5156.31	0.00	0.00	0.00	1050.01	348.80	6555.12

### Debt-Equity ratio

57. The debt-equity ratio has been allowed in accordance with Regulation 19 of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, debt-equity ratio allowed by the Commission for Combined Asset-A and Combined Asset-B for determination of tariff for the period ending on 31.3.2014 shall be considered



whereas for Asset-C1, Asset-C2, Asset-C3, Asset-D1, Asset-D2, Asset-D3, Asset-D4, Asset-D5 and Asset D-6, debt-equity ratio applicable as on COD shall be considered. The details of the debt-equity ratio in respect of the transmission assets as on 1.4.2014 and 31.3.2019 are as follows:

<b>Combined Asset-A</b>						
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	157921.06	70.00	943.24	70.00	158864.29	70.00
Equity	67680.45	30.00	404.24	30.00	68084.70	30.00
<b>Total</b>	<b>225601.51</b>	<b>100.00</b>	<b>1347.48</b>	<b>100.00</b>	<b>226948.99</b>	<b>100.00</b>

<b>Combined Asset-B</b>						
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	67941.12	70.00	4064.26	70.00	72005.38	70.00
Equity	29117.62	30.00	1741.83	30.00	30859.45	30.00
<b>Total</b>	<b>97058.74</b>	<b>100.00</b>	<b>5806.09</b>	<b>100.00</b>	<b>102864.83</b>	<b>100.00</b>

<b>Asset-C1</b>						
Particulars	Capital Cost as on 1.4.2014/ COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2191.80	70.00	260.88	70.00	2452.67	70.00
Equity	939.34	30.00	111.80	30.00	1051.15	30.00
<b>Total</b>	<b>3131.14</b>	<b>100.00</b>	<b>372.68</b>	<b>100.00</b>	<b>3503.82</b>	<b>100.00</b>

<b>Asset-C2</b>						
Particulars	Capital Cost as on 1.4.2014/ COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2386.64	70.00	334.54	70.00	2721.18	70.00
Equity	1022.85	30.00	143.37	30.00	1166.22	30.00



Asset-C2						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
<b>Total</b>	<b>3409.49</b>	<b>100.00</b>	<b>477.91</b>	<b>100.00</b>	<b>3887.40</b>	<b>100.00</b>

Asset-C3						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1284.56	70.00	271.12	70.00	1555.69	70.00
Equity	550.53	30.00	116.20	30.00	666.72	30.00
<b>Total</b>	<b>1835.09</b>	<b>100.00</b>	<b>387.32</b>	<b>100.00</b>	<b>2222.41</b>	<b>100.00</b>

Asset-D1						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	10094.12	70.00	3546.96	70.00	13641.08	70.00
Equity	4326.05	30.00	1520.12	30.00	5846.18	30.00
<b>Total</b>	<b>14420.17</b>	<b>100.00</b>	<b>5067.08</b>	<b>100.00</b>	<b>19487.25</b>	<b>100.00</b>

Asset-D2						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1040.67	70.00	950.71	70.00	1991.39	70.00
Equity	446.00	30.00	407.45	30.00	853.45	30.00
<b>Total</b>	<b>1486.68</b>	<b>100.00</b>	<b>1358.16</b>	<b>100.00</b>	<b>2844.84</b>	<b>100.00</b>



Asset-D3						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	842.25	70.00	1442.92	70.00	2285.18	70.00
Equity	360.97	30.00	618.40	30.00	979.36	30.00
<b>Total</b>	<b>1203.22</b>	<b>100.00</b>	<b>2061.32</b>	<b>100.00</b>	<b>3264.54</b>	<b>100.00</b>

Asset-D4						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	86.71	70.00	4.52	70.00	91.22	70.00
Equity	37.16	30.00	1.94	30.00	39.10	30.00
<b>Total</b>	<b>123.87</b>	<b>100.00</b>	<b>6.45</b>	<b>100.00</b>	<b>130.32</b>	<b>100.00</b>

Asset-D5						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1663.19	70.00	253.12	70.00	1916.31	70.00
Equity	712.79	30.00	108.48	30.00	821.27	30.00
<b>Total</b>	<b>2375.98</b>	<b>100.00</b>	<b>361.60</b>	<b>100.00</b>	<b>2737.58</b>	<b>100.00</b>

Asset-D6						
Particulars	Capital Cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	3609.42	70.00	979.16	70.00	4588.58	70.00
Equity	1546.89	30.00	419.64	30.00	1966.53	30.00
<b>Total</b>	<b>5156.31</b>	<b>100.00</b>	<b>1398.81</b>	<b>100.00</b>	<b>6555.12</b>	<b>100.00</b>

### Depreciation

58. The Petitioner's claim towards depreciation in the instant petition was found to be higher than the depreciation allowed in order dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition



No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017. The Petitioner has neither given any justification for claiming higher depreciation which was not allowed in previous orders nor has made any specific prayer for allowing higher depreciation in this petition. Similar issue was dealt *vide* order dated 9.5.2020 Petition No. 19/TT/2020., wherein, the Commission held as follows:

*“31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009- 14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards “IT Equipment” in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations (the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to “IT Equipment”. The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head “IT Equipment” @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”*

59. In line with the above order dated 9.5.2020 in Petition No.19/TT/2020, depreciation @5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 tariff period. However, for 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT





equipment in accordance with Regulation 33 of the 2019 Tariff Regulations. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD as given at Annexure-I has been worked out considering the depreciation rates of asset as specified in the 2014 Tariff Regulations and depreciation allowed during 2014-19 tariff period is as follows:

(₹ in lakh)

<b>Combined Asset-A</b>						
	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	<b>Depreciation</b>					
A	Opening Gross Block	225601.51	226695.36	226937.62	226948.99	226948.99
B	ACE	1093.85	242.26	11.37	0.00	0.00
C	Closing Gross Block (A+B)	226695.36	226937.62	226948.99	226948.99	226948.99
D	Average Gross Block (A+C)/2	226148.44	226816.49	226943.31	226948.99	226948.99
E	Freehold land	1911.58	1911.58	1911.58	1911.58	1911.58
F	Weighted Average Rate of Depreciation (in %)	5.21	5.21	5.21	5.21	5.21
G	Aggregate Depreciable Value	201813.17	202414.42	202528.55	202533.67	202533.67
H	Balance useful life of the asset (Year)	30	29	28	27	26
I	Lapsed life (Year)	2	3	4	5	6
J	<b>Depreciation during the year</b>	<b>11778.75</b>	<b>11807.98</b>	<b>11813.06</b>	<b>11813.25</b>	<b>11813.25</b>
K	Cumulative depreciation	34231.27	46039.24	57852.30	69665.55	81478.79
L	Remaining Depreciable Value (G-K)	167581.90	156375.18	144676.25	132868.12	121054.88

(₹ in lakh)

<b>Combined Asset-B</b>						
	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	<b>Depreciation</b>					
A	Opening Gross Block	97058.74	100484.75	101105.77	101609.55	102714.82
B	ACE	3426.01	621.02	503.78	1105.27	150.01
C	Closing Gross Block (A+B)	100484.75	101105.77	101609.55	102714.82	102864.83
D	Average Gross Block (A+C)/2	98771.75	100795.26	101357.66	102162.19	102789.83
E	Freehold land	6411.73	6411.73	6411.73	6411.73	6411.73





Combined Asset-B						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
F	Weighted Average Rate of Depreciation (in %)	4.85	4.85	4.85	4.84	4.84
G	Aggregate Depreciable Value	83124.01	84945.18	85451.34	86175.41	86740.29
H	Balance useful life of the asset (Year)	31	30	29	28	27
I	Lapsed life (Year)	1	2	3	4	5
J	<b>Depreciation during the year</b>	<b>4787.67</b>	<b>4886.46</b>	<b>4912.96</b>	<b>4947.11</b>	<b>4971.15</b>
K	Cumulative depreciation	11361.43	16247.89	21160.85	26107.96	31079.10
L	Remaining Depreciable Value (G-K)	71762.59	68697.29	64290.49	60067.46	55661.18

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	3131.14	3259.92	3311.15	3503.82	3503.82
B	ACE	128.78	51.23	192.67	0.00	0.00
C	Closing Gross Block (A+B)	3259.92	3311.15	3503.82	3503.82	3503.82
D	Average Gross Block (A+C)/2	3195.53	3285.54	3407.49	3503.82	3503.82
E	Weighted Average Rate of Depreciation (in %)	5.22	5.21	5.19	5.18	5.18
F	Aggregate Depreciable Value	2875.98	2956.98	3066.74	3153.44	3153.44
G	Balance useful life of the asset (Year)	33	33	32	31	30
H	Lapsed life (Year)	0	0	1	2	3
I	<b>Depreciation during the year</b>	<b>153.60</b>	<b>171.16</b>	<b>176.94</b>	<b>181.55</b>	<b>181.55</b>
J	Cumulative depreciation	153.60	324.75	501.70	683.24	864.79
K	Remaining Depreciable Value (F-J)	2722.38	2632.23	2565.04	2470.19	2288.65

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	3409.49	3596.48	3771.85	3887.40	3887.40
B	ACE	186.99	175.37	115.55	0.00	0.00
C	Closing Gross Block (A+B)	3596.48	3771.85	3887.40	3887.40	3887.40



	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
D	Average Gross Block (A+C)/2	3502.99	3684.17	3829.63	3887.40	3887.40
E	Weighted Average Rate of Depreciation (in %)	5.25	5.24	5.23	5.22	5.22
F	Aggregate Depreciable Value	3152.69	3315.75	3446.66	3498.66	3498.66
G	Balance useful life of the asset (Year)	33.00	33.00	32.00	31.00	30.00
H	Lapsed life (Year)	0.00	0.00	1.00	2.00	3.00
I	<b>Depreciation during the year</b>	<b>169.75</b>	<b>193.13</b>	<b>200.20</b>	<b>202.75</b>	<b>202.75</b>
J	Cumulative depreciation	169.75	362.87	563.07	765.82	968.57
K	Remaining Depreciable Value (F-J)	2982.94	2952.88	2883.59	2732.84	2530.09

(₹ in lakh)

	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1835.09	1923.86	1923.86	2222.41	2222.41
B	ACE	88.77	0.00	298.55	0.00	0.00
C	Closing Gross Block (A+B)	1923.86	1923.86	2222.41	2222.41	2222.41
D	Average Gross Block (A+C)/2	1879.48	1923.86	2073.14	2222.41	2222.41
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
F	Aggregate Depreciable Value	1691.53	1731.47	1865.82	2000.17	2000.17
G	Balance useful life of the asset (Year)	35.00	34.00	33.00	32.00	31.00
H	Elapsed life (Year)	0.00	1.00	2.00	3.00	4.00
I	<b>Depreciation during the year</b>	<b>99.24</b>	<b>101.58</b>	<b>109.46</b>	<b>117.34</b>	<b>117.34</b>
J	Cumulative depreciation	99.24	200.82	310.28	427.62	544.96
K	Remaining Depreciable Value (F-J)	1592.29	1530.66	1555.54	1572.55	1455.20



(₹ in lakh)

	Particulars	Asset-D1		
		2016-17 (pro-rata 91 days)	2017-18	2018-19
	<b>Depreciation</b>			
A	Opening Gross Block	14420.17	16977.04	18898.05
B	ACE	2556.87	1921.01	589.20
C	Closing Gross Block (A+B)	16977.04	18898.05	19487.25
D	Average Gross Block (A+C)/2	15698.61	17937.55	19192.65
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28
F	Aggregate Depreciable Value	14128.74	16143.79	17273.39
G	Balance useful life of the asset (Year)	34.00	34.00	33.00
H	Lapsed life (Year)	0.00	0.00	1.00
I	<b>Depreciation during the year</b>	<b>206.72</b>	<b>947.38</b>	<b>1013.65</b>
J	Cumulative depreciation	206.72	1154.10	2167.76
K	Remaining Depreciable Value (F-J)	13922.02	14989.69	15105.63

(₹ in lakh)

	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1486.68	2573.31	2639.95	2661.60	2705.77
B	ACE	1086.63	66.64	21.65	44.17	139.07
C	Closing Gross Block (A+B)	2573.31	2639.95	2661.60	2705.77	2844.84
D	Average Gross Block (A+C)/2	2029.99	2606.63	2650.77	2683.68	2775.30
E	Weighted Average Rate of Depreciation (in %)	5.13	5.08	5.07	5.05	5.04
F	Aggregate Depreciable Value	1826.99	2345.96	2385.69	2415.31	2497.77
G	Balance useful life of the asset (Year)	25.00	25.00	24.00	23.00	22.00
H	Elapsed life (Year)	0.00	0.00	1.00	2.00	3.00
I	<b>Depreciation during the year</b>	<b>95.36</b>	<b>132.39</b>	<b>134.37</b>	<b>135.57</b>	<b>139.82</b>
J	Cumulative depreciation	95.36	227.75	362.12	497.69	637.51
K	Remaining Depreciable Value (F-J)	1731.63	2118.21	2023.57	1917.62	1860.26

(₹ in lakh)

	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1203.22	1995.88	2049.46	3069.02	3118.13
B	ACE	792.66	53.58	1019.56	49.11	146.41



	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
C	Closing Gross Block (A+B)	1995.88	2049.46	3069.02	3118.13	3264.54
D	Average Gross Block (A+C)/2	1599.55	2022.67	2559.24	3093.57	3191.33
E	Weighted Average Rate of Depreciation (in %)	5.14%	5.08%	5.11%	5.14%	5.14%
F	Aggregate Depreciable Value	1439.60	1820.40	2303.32	2784.22	2872.20
G	Balance useful life of the asset (Year)	25.00	24.00	23.00	22.00	21.00
H	Lapsed life (Year)	0.00	1.00	2.00	3.00	4.00
I	<b>Depreciation during the year</b>	<b>82.16</b>	<b>102.80</b>	<b>130.86</b>	<b>158.95</b>	<b>163.89</b>
J	Cumulative depreciation	82.16	184.96	315.82	474.77	638.66
K	Remaining Depreciable Value (F-J)	1357.43	1635.44	1987.49	2309.45	2233.54

(₹ in lakh)

	Particulars	Asset-D4				
		2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	123.87	129.12	130.32	130.32	130.32
B	ACE	5.25	1.20	0.00	0.00	0.00
C	Closing Gross Block (A+B)	129.12	130.32	130.32	130.32	130.32
D	Average Gross Block (A+C)/2	126.49	129.72	130.32	130.32	130.32
E	Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.28%
F	Aggregate Depreciable Value	113.84	116.75	117.29	117.29	117.29
G	Balance useful life of the asset (Year)	35.00	35.00	34.00	33.00	32.00
H	Lapsed life (Year)	0.00	0.00	1.00	2.00	3.00
I	<b>Depreciation during the year</b>	<b>0.57</b>	<b>6.85</b>	<b>6.88</b>	<b>6.88</b>	<b>6.88</b>
J	Cumulative depreciation	0.57	7.42	14.30	21.18	28.06
K	Remaining Depreciable Value (F-J)	113.28	109.33	102.99	96.11	89.23



(₹ in lakh)

	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	2375.98	2426.48
B	ACE	50.50	311.10
C	Closing Gross Block (A+B)	2426.48	2737.58
D	Average Gross Block (A+C)/2	2401.23	2582.03
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28
F	Aggregate Depreciable Value	2161.11	2323.83
G	Balance useful life of the asset. (Year)	35.00	35.00
H	Lapsed life (Year)	0.00	0.00
<b>I</b>	<b>Depreciation during the year</b>	<b>32.30</b>	<b>136.33</b>
J	Cumulative depreciation	32.30	168.64
K	Remaining Depreciable Value (F-J)	2128.80	2155.19

(₹ in lakh)

	Particulars	Asset-D6	
		2017-18 (pro-rata 91 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	5156.31	6206.32
B	ACE	1050.01	348.80
C	Closing Gross Block (A+B)	6206.32	6555.12
D	Average Gross Block (A+C)/2	5681.32	6380.72
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28
F	Aggregate Depreciable Value	5113.18	5742.65
G	Balance useful life of the asset (Year)	35.00	35.00
H	Lapsed life (Year)	0.00	0.00
<b>I</b>	<b>Depreciation during the year</b>	<b>74.79</b>	<b>336.90</b>
J	Cumulative depreciation	74.79	411.69
K	Remaining Depreciable Value (F-J)	5038.40	5330.96

60. The details of depreciation approved vide order dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset-A</b>					
Approved <i>vide</i> order dated 26.5.2016 in Petition No. 20/TT/2015	11732.07	11747.51	11747.51	11747.51	11747.51
Claimed by the Petitioner in the instant petition	11850.33	11881.51	11886.60	11886.79	11886.79
Allowed after true-up in the instant order	11778.75	11807.98	11813.06	11813.25	11813.25
<b>Combined Asset-B</b>					
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	4827.76	4925.81	4952.31	4991.93	5018.93
Claimed by the Petitioner in the instant petition	4821.63	4920.34	4946.84	4981.00	5005.04
Allowed after true-up in the instant order	4787.67	4886.46	4912.96	4947.11	4971.15
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	166.77	189.16	191.28	191.28	191.28
Claimed by the Petitioner in the instant petition	165.92	184.60	190.40	194.99	194.99
Allowed after true-up in this order	153.60	171.16	176.94	181.55	181.55
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	185.48	212.25	214.44	214.44	214.44
Claimed by the Petitioner in the instant petition	183.09	207.67	214.74	217.30	217.30
Allowed after true-up in the instant order	169.75	193.13	200.20	202.75	202.75
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	109.55	118.82	118.82	118.82	118.82
Claimed by the Petitioner in the instant petition	99.24	101.58	109.46	117.34	117.34
Allowed after true-up in the instant order	99.24	101.58	109.46	117.34	117.34
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			196.46	874.62	950.32



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Claimed by the Petitioner in the instant petition			206.72	947.43	1013.75
Allowed after true-up in the instant order			206.72	947.38	1013.65
	<b>Asset-D2</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	98.34	135.73	140.91	144.56	144.56
Claimed by the Petitioner in the instant petition	101.09	138.75	140.74	141.94	146.18
Allowed after true-up in the instant order	95.36	132.39	134.37	135.57	139.82
	<b>Asset-D3</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	84.84	105.53	131.04	155.33	155.33
Claimed by the Petitioner in the instant petition	86.36	107.03	135.10	163.19	168.12
Allowed after true-up in the instant order	82.16	102.80	130.86	158.95	163.89
	<b>Asset-D4</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	0.57	6.85	6.91	6.94	6.94
Claimed by the Petitioner in the instant petition	0.57	6.85	6.88	6.88	6.88
Allowed after true-up in the instant order	0.57	6.85	6.88	6.88	6.88
	<b>Asset-D5</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				31.12	126.25
Claimed by the Petitioner in the instant petition				32.30	136.33
Allowed after true-up in this order				32.30	136.33
	<b>Asset-D6</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				72.35	313.31
Claimed by the Petitioner in the instant petition				74.79	336.94
Allowed after true-up in the instant order				74.79	336.90



## 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. Accordingly, 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	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	157921.06	158686.75	158856.33	158864.29	158864.29
B	Cumulative Repayments upto Previous Year	22452.52	34231.27	46039.24	57852.30	69665.55
C	Net Loan-Opening (A-B)	135468.54	124455.49	112817.09	101011.99	89198.75
D	Additions	765.70	169.58	7.96	0.00	0.00
E	Repayment during the year	11778.75	11807.98	11813.06	11813.25	11813.25
F	Net Loan-Closing (C+D-E)	124455.49	112817.09	101011.99	89198.75	77385.50
G	Average Loan (C+F)/2	129962.01	118636.29	106914.54	95105.37	83292.12
H	Weighted Average Rate of Interest on Loan (in %)	8.2804	8.2931	8.3555	8.3781	8.4511
H	<b>Interest on Loan (G*H)</b>	<b>10761.39</b>	<b>9838.60</b>	<b>8933.28</b>	<b>7968.04</b>	<b>7039.06</b>

		(₹ in lakh)				
	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	67941.12	70339.33	70774.04	71126.69	71900.37
B	Cumulative Repayments upto Previous Year	6573.76	11361.43	16247.89	21160.85	26107.96
C	Net Loan-Opening (A-B)	61367.36	58977.90	54526.15	49965.84	45792.42
D	Additions	2398.21	434.71	352.65	773.69	105.01
E	Repayment during the year	4787.67	4886.46	4912.96	4947.11	4971.15
F	Net Loan-Closing (C+D-E)	58977.90	54526.15	49965.84	45792.42	40926.28





	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
G	Average Loan (C+F)/2	60172.63	56752.02	52245.99	47879.13	43359.35
H	Weighted Average Rate of Interest on Loan (in%)	7.5522	7.6159	7.7394	7.7544	7.8877
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>4544.35</b>	<b>4322.18</b>	<b>4043.50</b>	<b>3712.72</b>	<b>3420.05</b>

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	2191.80	2281.94	2317.81	2452.67	2452.67
B	Cumulative Repayments upto Previous Year	0.00	153.60	324.75	501.70	683.24
C	Net Loan-Opening (A-B)	2191.80	2128.35	1993.05	1950.98	1769.43
D	Additions	90.15	35.86	134.87	0.00	0.00
E	Repayment during the year	153.60	171.16	176.94	181.55	181.55
F	Net Loan-Closing (C+D-E)	2128.35	1993.05	1950.98	1769.43	1587.88
G	Average Loan (C+F)/2	2160.07	2060.70	1972.01	1860.20	1678.66
H	Weighted Average Rate of Interest on Loan (in%)	1.8027	2.2230	3.1745	3.7290	4.5638
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>35.85</b>	<b>45.81</b>	<b>62.60</b>	<b>69.37</b>	<b>76.61</b>

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	2386.64	2517.54	2640.30	2721.18	2721.18
B	Cumulative Repayments upto Previous Year	0.00	169.75	362.87	563.07	765.82
C	Net Loan-Opening (A-B)	2386.64	2347.79	2277.42	2158.11	1955.36
D	Additions	130.89	122.76	80.89	0.00	0.00
E	Repayment during the year	169.75	193.13	200.20	202.75	202.75
F	Net Loan-Closing (C+D-E)	2347.79	2277.42	2158.11	1955.36	1752.61
G	Average Loan (C+F)/2	2367.22	2312.61	2217.76	2056.73	1853.99
H	Weighted Average Rate of Interest on Loan (in %)	1.8559	2.4355	3.3910	3.8363	4.6443
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>40.56</b>	<b>56.32</b>	<b>75.20</b>	<b>78.90</b>	<b>86.11</b>



(₹ in lakh)

	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	1284.56	1346.70	1346.70	1555.69	1555.69
B	Cumulative Repayments upto Previous Year	0.00	99.24	200.82	310.28	427.62
C	Net Loan-Opening (A-B)	1284.56	1247.47	1145.89	1245.41	1128.07
D	Additions	62.14	0.00	208.99	0.00	0.00
E	Repayment during the year	99.24	101.58	109.46	117.34	117.34
F	Net Loan-Closing (C+D-E)	1247.47	1145.89	1245.41	1128.07	1010.72
G	Average Loan (C+F)/2	1266.01	1196.68	1195.65	1186.74	1069.39
H	Weighted Average Rate of Interest on Loan (in %)	8.6870	8.6913	8.6460	8.6052	8.5986
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>109.98</b>	<b>104.01</b>	<b>103.38</b>	<b>102.12</b>	<b>91.95</b>

(₹ in lakh)

	Particulars	Asset-D1		
		2016-17 (pro-rata 91 days)	2017-18	2018-19
	<b>Interest on Loan</b>			
A	Gross Normative Loan	10094.12	11883.93	13228.64
B	Cumulative Repayments upto Previous Year	0.00	206.72	1154.10
C	Net Loan-Opening (A-B)	10094.12	11677.21	12074.53
D	Additions	1789.81	1344.71	412.44
E	Repayment during the year	206.72	947.38	1013.65
F	Net Loan-Closing (C+D-E)	11677.21	12074.53	11473.32
G	Average Loan (C+F)/2	10885.66	11875.87	11773.93
H	Weighted Average Rate of Interest on Loan (in %)	8.2873	8.2309	8.1868
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>224.91</b>	<b>977.49</b>	<b>963.90</b>

(₹ in lakh)

	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	1040.67	1801.31	1847.96	1863.12	1894.04
B	Cumulative Repayments upto Previous Year	0.00	95.36	227.75	362.12	497.69
C	Net Loan-Opening (A-B)	1040.67	1705.95	1620.21	1501.00	1396.34
D	Additions	760.64	46.65	15.16	30.92	97.35
E	Repayment during the year	95.36	132.39	134.37	135.57	139.82
F	Net Loan-Closing (C+D-E)	1705.95	1620.21	1501.00	1396.34	1353.88



	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
G	Average Loan (C+F)/2	1373.31	1663.08	1560.60	1448.67	1375.11
H	Weighted Average Rate of Interest on Loan (in%)	5.3588	6.1205	6.4923	6.6942	7.0611
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>67.34</b>	<b>101.79</b>	<b>101.32</b>	<b>96.98</b>	<b>97.10</b>

(₹ in lakh)

	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	842.25	1397.12	1434.62	2148.31	2182.69
B	Cumulative Repayments upto Previous Year	0.00	82.16	184.96	315.82	474.77
C	Net Loan-Opening (A-B)	842.25	1314.95	1249.66	1832.49	1707.92
D	Additions	554.86	37.51	713.69	34.38	102.49
E	Repayment during the year	82.16	102.80	130.86	158.95	163.89
F	Net Loan-Closing (C+D-E)	1314.95	1249.66	1832.49	1707.92	1646.52
G	Average Loan (C+F)/2	1078.60	1282.31	1541.08	1770.21	1677.22
H	Weighted Average Rate of Interest on Loan (in%)	5.3411	6.0745	6.7344	7.0638	7.3682
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>57.61</b>	<b>77.89</b>	<b>103.78</b>	<b>125.04</b>	<b>123.58</b>

(₹ in lakh)

	Particulars	Asset-D4				
		2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	86.71	90.38	91.22	91.22	91.22
B	Cumulative Repayments upto Previous Year	0.00	0.57	7.42	14.30	21.18
C	Net Loan-Opening (A-B)	86.71	89.81	83.81	76.93	70.04
D	Additions	3.68	0.84	0.00	0.00	0.00
E	Repayment during the year	0.57	6.85	6.88	6.88	6.88
F	Net Loan-Closing (C+D-E)	89.81	83.81	76.93	70.04	63.16
G	Average Loan (C+F)/2	88.26	86.81	80.37	73.48	66.60
H	Weighted Average Rate of Interest on Loan (in %)	8.7392	8.7258	8.7232	8.7232	8.7242
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>0.66</b>	<b>7.57</b>	<b>7.01</b>	<b>6.41</b>	<b>5.81</b>



(₹ in lakh)

	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	1663.19	1698.54
B	Cumulative Repayments upto Previous Year	0.00	32.30
C	Net Loan-Opening (A-B)	1663.19	1666.23
D	Additions	35.35	217.77
E	Repayment during the year	32.30	136.33
F	Net Loan-Closing (C+D-E)	1666.23	1747.67
G	Average Loan (C+F)/2	1664.71	1706.95
H	Weighted Average Rate of Interest on Loan (in %)	8.1840	8.1529
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>34.71</b>	<b>139.17</b>

(₹ in lakh)

	Particulars	Asset-D6	
		2017-18 (pro-rata 91 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	3609.42	4344.42
B	Cumulative Repayments upto Previous Year	0.00	74.79
C	Net Loan-Opening (A-B)	3609.42	4269.64
D	Additions	735.01	244.16
E	Repayment during the year	74.79	336.90
F	Net Loan-Closing (C+D-E)	4269.64	4176.89
G	Average Loan (C+F)/2	3939.53	4223.26
H	Weighted Average Rate of Interest on Loan (in%)	8.3175	8.2842
<b>H</b>	<b>Interest on Loan (G*H)</b>	<b>81.69</b>	<b>349.86</b>

62. The details of lol approved *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset-A</b>					
Approved <i>vide</i> order dated 26.5.2016 in Petition No. 20/TT/2015	10695.43	9728.71	8731.30	7725.56	6720.84
Claimed by the Petitioner in the instant petition	10798.09	9869.38	8958.09	7986.77	7051.80
Allowed after true-up in this order	10761.39	9838.60	8933.28	7968.04	7039.06
<b>Combined Asset-B</b>					
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	4540.43	4299.81	3943.10	3590.44	3216.41
Claimed by the Petitioner in the instant petition	4549.44	4324.63	4043.40	3709.99	3414.58
Allowed after true-up in this order	4544.35	4322.18	4043.50	3712.72	3420.05
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	34.85	36.92	34.34	31.26	28.18
Claimed by the Petitioner in the instant petition	38.29	48.82	66.48	73.42	80.95
Allowed after true-up in this order	35.85	45.81	62.60	69.37	76.61
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	38.50	41.05	38.10	34.65	31.20
Claimed by the Petitioner in the instant petition	43.31	59.92	79.72	83.46	90.94
Allowed after true-up in the instant order	40.56	56.32	75.20	78.90	86.11
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	121.37	122.13	111.75	101.39	91.08
Claimed by the Petitioner in the instant petition	109.98	104.01	103.38	102.12	91.95
Allowed after true-up in the instant order	109.98	104.01	103.38	102.12	91.95
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			214.59	910.90	916.26



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition			224.90	977.54	964.01
Allowed after true-up in the instant order			224.91	977.49	963.90
	<b>Asset-D2</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	69.29	102.87	100.49	95.47	87.09
Claimed by the Petitioner in the instant petition	69.34	103.98	103.24	98.53	98.28
Allowed after true-up in the instant order	67.34	101.79	101.32	96.98	97.10
	<b>Asset-D3</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	59.32	78.76	93.72	105.37	96.54
Claimed by the Petitioner in the instant petition	59.41	79.74	105.54	126.59	124.88
Allowed after true-up in the instant order	57.61	77.89	103.78	125.04	123.58
	<b>Asset-D4</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	0.66	7.57	7.05	6.47	5.87
Claimed by the Petitioner in the instant petition	0.65	7.58	7.01	6.41	5.81
Allowed after true-up in the instant order	0.66	7.57	7.01	6.41	5.81
	<b>Asset-D5</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				33.45	127.53
Claimed by the Petitioner in the instant petition				34.71	139.17
Allowed after true-up in the instant order				34.71	139.17
	<b>Asset-D6</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				79.62	328.50
Claimed by the Petitioner in the instant petition				81.69	349.91
Allowed after true-up in the instant order				81.69	349.86



### **Return on Equity (“RoE”)**

63. 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 it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for 2014-19 tariff period:

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

64. 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:

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

65. The MAT rates 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 the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which are as follows:

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess) (in %)</b>	<b>Base rate of RoE (in %)</b>	<b>Grossed up ROE [(Base Rate)/(1-t)] (in %)</b>
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705



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

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

(₹ in lakh)

	Particulars	Combined Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	67680.45	68008.61	68081.29	68084.70	68084.70
B	Additions	328.16	72.68	3.41	0.00	0.00
C	Closing Equity (A+B)	68008.61	68081.29	68084.70	68084.70	68084.70
D	Average Equity (A+C)/2	67844.53	68044.95	68082.99	68084.70	68084.70
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	<b>Return on Equity (D*G)</b>	<b>13304.31</b>	<b>13408.26</b>	<b>13415.75</b>	<b>13416.09</b>	<b>13452.17</b>

(₹ in lakh)

	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	29117.62	30145.43	30331.73	30482.87	30814.45
B	Additions	1027.80	186.31	151.13	331.58	45.00
C	Closing Equity (A+B)	30145.43	30331.73	30482.87	30814.45	30859.45
D	Average Equity (A+C)/2	29631.52	30238.58	30407.30	30648.66	30836.95
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	<b>Return on Equity (D*G)</b>	<b>5810.74</b>	<b>5958.51</b>	<b>5991.76</b>	<b>6039.32</b>	<b>6092.76</b>





(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	939.34	977.98	993.35	1051.15	1051.15
B	Additions	38.63	15.37	57.80	0.00	0.00
C	Closing Equity (A+B)	977.98	993.35	1051.15	1051.15	1051.15
D	Average Equity (A+C)/2	958.66	985.66	1022.25	1051.15	1051.15
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	<b>Return on Equity (D*G)</b>	<b>173.06</b>	<b>194.22</b>	<b>201.43</b>	<b>207.13</b>	<b>207.69</b>

(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	1022.85	1078.94	1131.56	1166.22	1166.22
B	Additions	56.10	52.61	34.67	0.00	0.00
C	Closing Equity (A+B)	1078.94	1131.56	1166.22	1166.22	1166.22
D	Average Equity (A+C)/2	1050.90	1105.25	1148.89	1166.22	1166.22
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	<b>Return on Equity (D*G)</b>	<b>190.27</b>	<b>217.79</b>	<b>226.39</b>	<b>229.80</b>	<b>230.42</b>

(₹ in lakh)

	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	550.53	577.16	577.16	666.72	666.72
B	Additions	26.63	0.00	89.57	0.00	0.00
C	Closing Equity (A+B)	577.16	577.16	666.72	666.72	666.72
D	Average Equity (A+C)/2	563.84	577.16	621.94	666.72	666.72



	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
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	<b>Return on Equity (D*G)</b>	<b>110.57</b>	<b>113.73</b>	<b>122.55</b>	<b>131.38</b>	<b>131.73</b>

(₹ in lakh)

	Particulars	Asset-D1		
		2016-17 (pro-rata 91 days)	2017-18	2018-19
	<b>Return on Equity</b>			
A	Opening Equity	4326.05	5093.11	5669.42
B	Additions	767.06	576.30	176.76
C	Closing Equity (A+B)	5093.11	5669.42	5846.18
D	Average Equity (A+C)/2	4709.58	5381.26	5757.80
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>231.37</b>	<b>1060.38</b>	<b>1137.63</b>

(₹ in lakh)

	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	446.00	771.99	791.98	798.48	811.73
B	Additions	325.99	19.99	6.50	13.25	41.72
C	Closing Equity (A+B)	771.99	791.98	798.48	811.73	853.45
D	Average Equity (A+C)/2	609.00	781.99	795.23	805.10	832.59
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	<b>Return on Equity (D*G)</b>	<b>109.28</b>	<b>154.09</b>	<b>156.70</b>	<b>158.65</b>	<b>164.50</b>

(₹ in lakh)

	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					



	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	360.97	598.76	614.84	920.71	935.44
B	Additions	237.80	16.07	305.87	14.73	43.92
C	Closing Equity (A+B)	598.76	614.84	920.71	935.44	979.36
D	Average Equity (A+C)/2	479.87	606.80	767.77	928.07	957.40
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	<b>Return on Equity (D*G)</b>	<b>94.10</b>	<b>119.57</b>	<b>151.29</b>	<b>182.88</b>	<b>189.16</b>

(₹ in lakh)

	Particulars	Asset-D4				
		2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	37.16	38.73	39.10	39.10	39.10
B	Additions	1.58	0.36	0.00	0.00	0.00
C	Closing Equity (A+B)	38.73	39.10	39.10	39.10	39.10
D	Average Equity (A+C)/2	37.95	38.92	39.10	39.10	39.10
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	<b>Return on Equity (D*G)</b>	<b>0.63</b>	<b>7.67</b>	<b>7.70</b>	<b>7.70</b>	<b>7.72</b>

(₹ in lakh)

	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	712.79	727.94
B	Additions	15.15	93.33
C	Closing Equity (A+B)	727.94	821.27
D	Average Equity (A+C)/2	720.37	774.61
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758



	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
<b>H</b>	<b>Return on Equity (D*G)</b>	<b>36.17</b>	<b>153.05</b>

(₹ in lakh)

	Particulars	Asset-D6	
		2017-18 (pro-rata 91 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	1546.89	1861.90
B	Additions	315.00	104.64
C	Closing Equity (A+B)	1861.90	1966.53
D	Average Equity (A+C)/2	1704.39	1914.22
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
<b>H</b>	<b>Return on Equity (D*G)</b>	<b>83.73</b>	<b>378.21</b>

67. The details of RoE approved *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Combined Asset-A</b>				
Approved <i>vide</i> order dated 26.5.2016 in Petition No. 20/TT/2015	13240.88	13259.58	13259.58	13259.58	13259.58
Claimed by the Petitioner in the instant petition	13354.80	13455.55	13456.22	13456.56	13492.75
Allowed after true-up in this order	13304.31	13408.26	13415.75	13416.09	13452.17
	<b>Combined Asset-B</b>				
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	5811.57	5930.50	5963.58	6020.32	6062.23
Claimed by the Petitioner in the instant petition	5822.28	5968.56	5998.78	6046.34	6099.80



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after true-up in this order	5810.74	5958.51	5991.76	6039.32	6092.76
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	188.40	214.66	217.21	217.21	217.21
Claimed by the Petitioner in the instant petition	185.08	207.38	214.48	220.18	220.77
Allowed after true-up in the instant order	173.06	194.22	201.43	207.13	207.69
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	208.18	238.77	241.32	241.32	241.32
Claimed by the Petitioner in the instant petition	203.42	232.13	240.61	244.02	244.68
Allowed after true-up in this order	190.27	217.79	226.39	229.80	230.42
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	122.05	132.38	132.38	132.38	132.38
Claimed by the Petitioner in the instant petition	110.66	113.79	122.55	131.38	131.73
Allowed after true-up in the instant order	110.57	113.73	122.55	131.38	131.73
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			218.82	974.51	1058.85
Claimed by the Petitioner in the instant petition			231.37	1060.43	1137.73
Allowed after true-up in the instant order			231.37	1060.38	1137.63
<b>Asset-D2</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	112.64	157.11	163.15	167.22	167.22
Claimed by the Petitioner in the instant petition	112.72	157.95	160.48	162.43	168.29
Allowed after true-up in the instant order	109.28	154.09	156.70	158.65	164.50
<b>Asset-D3</b>					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	97.13	122.07	150.70	177.76	177.76
Claimed by the Petitioner in the instant petition	97.20	122.73	154.38	185.97	192.26
Allowed after true-up in the instant order	94.10	119.57	151.29	182.88	189.16
	<b>Asset-D4</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	0.63	7.63	7.70	7.74	7.74
Claimed by the Petitioner in the instant petition	0.63	7.67	7.70	7.70	7.73
Allowed after true-up in the instant order	0.63	7.67	7.70	7.70	7.72
	<b>Asset-D5</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				34.67	140.67
Claimed by the Petitioner in the instant petition				36.17	153.05
Allowed after true-up in the instant order				36.17	153.05
	<b>Asset-D6</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				80.62	349.09
Claimed by the Petitioner in the instant petition				83.73	378.25
Allowed after true-up in the instant order				83.73	378.21

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

68. The O&M Expenses claimed by the Petitioner for the transmission assets for 2014-19 period are as follows:

Particulars	Combined Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
(i) Mundra-Bhachau Ckt-I and II (3 Sub-conductors) (99.468 km)					
(ii) Bachau Ranchhodpura (3 Sub-conductors) (282.856 km)					



Particulars	Combined Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
(iii) Mundra Limbdi (From Tapping at Surajbari to Limbdi) (3 Sub-conductors) (192.187 km)					
(iv) Mundra Surajbari (Balance Portion) Of Mundra Limbdi Transmission Line (3 Sub-conductors) (123.515 km)					
(v) Gandhar-Navsari Ckt-II (2 Sub-conductors) (102.152 km)					
(vi) Mundra-Jetpur (Mundra - Surajbari) Transmission Line (3 Sub-conductors) (168.5 km)					
(vii) Surajbari-Jetpur (Part of Mundra - Jetpur) Transmission Line (3 Sub-conductors) (168.242 km)					
(viii) LIIO of 220 kV D/C Kawas-Navsari (Getco) at Navsari GIS (1 Sub-conductor) (40.49 km)					
D/C Twin/Triple Conductor (km)	1136.920	1136.920	1136.920	1136.920	1136.920
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
D/C Single Conductor (km)	40.490	40.490	40.490	40.490	40.490
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
<b>400 kV bays of:</b>					
(i) Getco Jetpur:Mundra Ckt-I and II Bay [2 Number of bay(s)]					
(ii) Bhachau:Bus Reactor Bay [1 Number. of bay(s)]					
(iii) Bhachau:ICT I and 2 Bay [2 Number. of bay(s)]					
(iv) Bhachau:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]					
(v) Limbdi:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]					
(vi) Bhachau:Ranchodpura I and Ranchodpura II Bay [2 Number of bay(s)]					
(vii) Ranchodpura:Bachau I and Bachau II Bay [2 Number of bay(s)]					
(viii) Navsari:Gandhar-II Bay [1 Number of bay(s)]					
(ix) Navsari:Bus Reactor Bay [1 Number of bay(s)]					
(x) NTPC Gandhar:Navsari - II Bay [1 Number. of bay(s)]					
(xi) Navsari:ICT II Bay [1 Number of bay(s)]					
(xii) Navsari:ICT I Bay [1 Number of bay(s)]					
(xiii) Navsari:Gandhar Bay [1 Number of bay(s)]					
(xiv) NTPC Gandhar:Navasari Bay [1 Number of bay(s)]					
<b>220 kV bays of:</b>					
(i) Bhachau:ICT I and 2 Bay [2 Number of bay(s)]					
(ii) Bhachau:Line I Bay, Line II Bay, Line III Bay and Line IV [4 Number of bay(s)]					
(iii) Navsari:ICT II Bay [1 Number of bay(s)]					
(iv) Navsari:Kawas I and Kawas II Bay [2 Number of bay(s)]					
(v) Navsari:Navsari I and Navsari II Bay [2 Number of bay(s)]					
(vi) Navsari:ICT I Bay [1 Number of bay(s)]					
400 kV Bays	20	20	20	20	20
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays	12	12	12	12	12
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>2484.80</b>	<b>2567.82</b>	<b>2652.86</b>	<b>2740.78</b>	<b>2831.85</b>



Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
(i) Aurangabad (MSETCL) - Aurangabad (2 Sub-conductors) (51.154 km)					
(ii) 400 kV Navsari-Boisar Ckt-I and II (Cut off Point Vapi for WR-II Portion) (2 Sub-conductors) (105.684 km)					
D/C Twin/Triple Conductor (km)	156.838	156.838	156.838	156.838	156.838
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
<b>765 kV bays of:</b>					
(i) Seoni:Wardha Bay-II-Seoni-Seoni (765 kV) [1 Number of bay(s)]-					
(ii) Wardha:BR-I Bay-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(iii) Wardha:Seoni Bay-II-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(iv) Wardha:ICT-I Bay (765/400) -Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(v) Wardha:ICT-III Bay (765/400) -Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(vi) Seoni:Wardha Bay-I-Seoni-Seoni (765 kV) [1 Number of bay(s)]					
(vii) Wardha:Seoni Bay-I-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(viii) Wardha:ICT-II Bay (765/400) -Wardha-Wardha (765 kV) [1 Number of bay(s)]					
<b>400 kV bays of:</b>					
(i) Wardha:ICT-I Bay (765/400)-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(ii) Wardha:ICT-III Bay (765/400)-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(iii) Aurangabad:Akola Bay 1 and 2 [2 Number of bay(s)]					
(iv) Aurangabad:ICT-I Bay (400/220)-Aurangabad-Aurangabad (765 kV) [1 Number of bay(s)]					
(v) Aurangabad:ICT-II Bay(400/220)-Aurangabad-Aurangabad (765 kV) [1 No. of bay(s)]"					
(vi) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]					
(vii) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]					
(viii) Navsari:Magarwada Bay-I-Navsari-Navsari (GIS) [1 Number of bay(s)]					
(ix) Navsari:Magarwada Bay-II-Navsari-Navsari (GIS) [1 Number of bay(s)]					
<b>220 kV bays of:</b>					
(x) Aurangabad:Chitegaon Bay-I-Aurangabad-Aurangabad (765 kV) [1 Number of bay(s)]					
(xi) Aurangabad:Chitegaon Bay-II-Aurangabad-Aurangabad (765 kV) [1 Number of bay(s)]					
(xii) Aurangabad:ICT-I Bay (400/220)-Aurangabad-Aurangabad (765 kV) [1 Number of bay(s)]					
(xiii) Aurangabad:ICT-II Bay (400/220)-Aurangabad-Aurangabad (765 kV) [1 Number of bay(s)]					
765 kV Bays	8	8	8	8	8
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
400 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>1540.57</b>	<b>1591.75</b>	<b>1644.61</b>	<b>1699.17</b>	<b>1755.55</b>





Particulars	Asset-C1				
	2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
(i) Aurangabad(MSETCL)-Aurangabad(PG) 400 kV D/C(Quad) Line(Ckt#1) Alongwith Associated Bays at Both Ends (4 Sub-conductors) (2.916 km)					
S/C Bundled Conductor with four sub conductors (km)	2.916	2.916	2.916	2.916	2.916
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
<b>400 kV bay of:</b>					
(i) Aurangabad:400 kV Bay for Aurangabad (MSETCL) [1 Number of bay(s)]					
(ii) Aurangabad Sub-station MSETCL (Waluz):400 kV Bay for Aurangabad [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>112.65</b>	<b>126.43</b>	<b>130.63</b>	<b>134.97</b>	<b>139.43</b>

Particulars	Asset-C2				
	2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
(i) Aurangabad (MSETCL)-Aurangabad (PG) 400 kV D/C(Quad) Line (Ckt#2) (4 Sub-conductors) (2.916 km)					
(ii) Aurangabad (MSETCL)-Aurangabad(PG) 400 kV D/C(Quad) Line (Ckt#1 & #2) (4 Sub-conductors) (49.716 km)					
S/C Bundled Conductor with four sub-conductors (km)	2.916	2.916	2.916	2.916	2.916
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C Bundled Conductor with four or more sub-conductors (km)	49.716	49.716	49.716	49.716	49.716
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
<b>400 kV bay of:</b>					
(i) Aurangabad: Aurangabad (MSETCL) Ckt#2 [1 Number of bay(s)]					
(ii) Aurangabad Sub-station MSETCL (Waluz): Aurangabad (P.G.) Ckt#2 [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>161.72</b>	<b>180.97</b>	<b>186.96</b>	<b>193.19</b>	<b>199.59</b>

Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					



Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
(i) WR1 Portion from AP 38-AP44 and AP44-AP45A/0 (Part of 400 kV D/C Navsari-Boisar Transmission Line) (2 Sub-conductors) (10.40 km)					
(ii) WR1 Portion From AP 38-AP44 and AP44-AP45A/0 (Part of 400 kV D/C Navsari-Boisar Transmission Line) (4 Sub-conductors) (2.182 km)					
D/C Bundled Conductor with four or more sub conductors (km)	2.182	2.182	2.182	2.182	2.182
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
D/C Twin/triple conductors (km)	10.400	10.400	10.400	10.400	10.400
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>9.67</b>	<b>9.99</b>	<b>10.32</b>	<b>10.67</b>	<b>11.02</b>

Particulars	Asset-D1		
	2016-17 (pro-rata 91 days)	2017-18	2018-19
<b>Transmission line</b>			
(i) AP 45A to AP 69 (2 Sub-conductors) (14.011 km)			
(ii) AP69 to AP 313 and AP 353 to AP354 (2 Sub-conductors) (9.008 km)			
(iii) AP313 to AP332 (2 Sub-conductors) (17.164 km)			
D/C Twin/triple Conductor (km)	40.183	40.183	40.183
Norms (₹ lakh/km)	0.755	0.780	0.806
<b>400 kV Bays of:</b>			
(i) Boisar: Navsari Bay 1 And 2 [2 Number of bay(s)]			
400 kV Bays	2	2	2
Norms (₹ lakh/Bay)	64.37	66.51	68.71
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>39.67</b>	<b>164.37</b>	<b>169.80</b>

Particulars	Asset-D2				
	2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
<b>765 kV bay of:</b>					
(i) Seoni:3x80 MVar Switchable Line Reactor# 1 [1 Number of bay(s)]					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>77.25</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>765 kV bay of:</b>					
(i) Seoni:3x80 MVar Switchable Line Reactor# 2 [1 Number of bay(s)]					
765 kV Bays	1	1	1	1	1



Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>84.42</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

Particulars	Asset-D4				
	2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
(i) Part of 400 kV D/C Vapi-Kudus Transmission Line from Location 44-45A/0 (2 Sub-conductors) (2.280 km)					
D/C Twin/triple conductors (km)	2.280	2.280	2.280	2.280	2.280
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>0.14</b>	<b>1.67</b>	<b>1.72</b>	<b>1.78</b>	<b>1.84</b>

Particulars	Asset-D5	
	2017-18 (pro-rata 93 days)	2018-19
<b>Transmission line</b>		
(i) AP 313 to AP 332 (Part of 400 kV D/C (Quad) Aurangabad-Boisar of M/C T-Q Portion) (4 Sub-conductors) (17.164 km)		
D/C Bundled Conductor with four or more sub-conductors (km)	17.164	17.164
Norms (₹ lakh/km)	0.780	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>5.12</b>	<b>20.77</b>

Particulars	Asset-D6	
	2017-18 (pro-rata 91 days)	2018-19
<b>Transmission line</b>		
(i) Kala-Kudus Transmission Line from AP 45 to AP 104 (2 Sub-conductors) (55.178 km)		
D/C Bundled Conductor with four or more sub-conductors (km)	55.178	55.178
Norms (₹ lakh/km)	0.780	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>10.73</b>	<b>44.47</b>

69. Regulation 29(3)(a) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission asset are as follows:



Element	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	96.2
400 kV Bays					
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
220 kV Bays					
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1

70. We have considered the submission of the Petitioner. The 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	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
D/C Twin/Triple Conductor (km)	1136.920	1136.920	1136.920	1136.920	1136.920
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
D/C Single Conductor (km)	40.490	40.490	40.490	40.490	40.490
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
<b>Sub-station</b>					
400 kV Bays	20	20	20	20	20
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays	12	12	12	12	12
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>2528.59</b>	<b>2613.08</b>	<b>2699.61</b>	<b>2789.12</b>	<b>2881.77</b>

Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					



Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Twin/Triple Conductor (km)	156.838	156.838	156.838	156.838	156.838
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
<b>Sub-station</b>					
765 kV Bays	8	8	8	8	8
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
400 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>1558.08</b>	<b>1609.85</b>	<b>1663.31</b>	<b>1718.51</b>	<b>1775.51</b>

Particulars	Asset-C1				
	2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
S/C Bundled Conductor with four sub-conductors (km)	2.916	2.916	2.916	2.916	2.916
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
<b>Sub-station</b>					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>112.64</b>	<b>126.43</b>	<b>130.63</b>	<b>134.97</b>	<b>139.43</b>
Particulars	Asset-C2				
	2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
S/C Bundled Conductor with four sub-conductors (km)	2.916	2.916	2.916	2.916	2.916
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
D/C Bundled Conductor with four or more sub-conductors (km)	49.716	49.716	49.716	49.716	49.716
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
<b>Substation</b>					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71



Particulars	Asset-C1				
	2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>161.73</b>	<b>180.97</b>	<b>186.95</b>	<b>193.19</b>	<b>199.59</b>

Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
D/C Bundled Conductor with four or more sub-conductors (km)	2.182	2.182	2.182	2.182	2.182
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
D/C Twin/triple conductors (km)	10.400	10.400	10.400	10.400	10.400
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>9.67</b>	<b>10.00</b>	<b>10.32</b>	<b>10.67</b>	<b>11.02</b>

Particulars	Asset-D1		
	2016-17 (pro-rata 91 days)	2017-18	2018-19
<b>Transmission line</b>			
D/C Twin/triple Conductor (km)	40.183	40.183	40.183
Norms (₹ lakh/km)	0.755	0.780	0.806
<b>Sub-station</b>			
400 kV Bays	2	2	2
Norms (₹ lakh/Bay)	64.37	66.51	68.71
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>39.66</b>	<b>164.36</b>	<b>169.81</b>

Particulars	Asset-D2				
	2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
<b>Sub-station</b>					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>77.25</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station</b>					
765 kV Bays	1	1	1	1	1



Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>84.42</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

Particulars	Asset-D4				
	2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
<b>Transmission line</b>					
D/C Twin/triple conductors (km)	2.280	2.280	2.280	2.280	2.280
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>0.14</b>	<b>1.67</b>	<b>1.72</b>	<b>1.78</b>	<b>1.84</b>

Particulars	Asset-D5	
	2017-18 (pro-rata 93 days)	2018-19
<b>Transmission line</b>		
D/C Bundled Conductor with four or more sub-conductors (km)	17.164	17.164
Norms (₹ lakh/km)	0.780	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>5.12</b>	<b>20.77</b>

Particulars	Asset-D6	
	2017-18 (pro-rata 91 days)	2018-19
<b>Transmission line</b>		
D/C Bundled Conductor with four or more sub-conductors (km)	55.178	55.178
Norms (₹ lakh/km)	0.780	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>10.73</b>	<b>44.47</b>

71. The details of O&M Expenses approved *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset-A</b>					
Approved <i>vide</i> order dated 26.5.2016 in Petition No. 20/TT/2015	2528.59	2613.08	2699.61	2789.12	2881.77
Claimed by the Petitioner in the instant petition	2484.80	2567.82	2652.86	2740.78	2831.85
Allowed after true-up in this order	2528.59	2613.08	2699.61	2789.12	2881.77
<b>Combined Asset-B</b>					
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	1558.08	1609.85	1663.31	1718.51	1775.51
Claimed by the Petitioner in the instant petition	1540.57	1591.75	1644.61	1699.17	1755.55
Allowed after true-up in the instant order	1558.08	1609.85	1663.31	1718.51	1775.51
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	112.64	126.43	130.63	134.97	139.43
Claimed by the Petitioner in the instant petition	112.65	126.43	130.63	134.97	139.43
Allowed after true-up in the instant order	112.64	126.43	130.63	134.97	139.43
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	161.73	180.97	186.95	193.19	199.59
Claimed by the Petitioner in the instant petition	161.72	180.97	186.96	193.19	199.59
Allowed after true-up in the instant order	161.73	180.97	186.95	193.19	199.59
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	9.67	10.00	10.32	10.67	11.02
Claimed by the Petitioner in the instant petition	9.67	9.99	10.32	10.67	11.02
Allowed after true-up in the instant order	9.67	10.00	10.32	10.67	11.02
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			39.64	164.34	169.80





<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Claimed by the Petitioner in the instant petition			39.67	164.37	169.80
Allowed after true-up in the instant order			39.66	164.36	169.81
	<b>Asset-D2</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	77.16	87.22	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	77.25	87.22	90.12	93.11	96.20
Allowed after true-up in the instant order	77.25	87.22	90.12	93.11	96.20
	<b>Asset-D3</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	84.42	87.22	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	84.42	87.22	90.12	93.11	96.20
Allowed after true-up in the instant order	84.42	87.22	90.12	93.11	96.20
	<b>Asset-D4</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	0.13	1.66	1.72	1.77	1.83
Claimed by the Petitioner in the instant petition	0.14	1.67	1.72	1.78	1.84
Allowed after true-up in the instant order	0.14	1.67	1.72	1.78	1.84
	<b>Asset-D5</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				5.12	20.76
Claimed by the Petitioner in the instant petition				5.12	20.77
Allowed after true-up in the instant order				5.12	20.77
	<b>Asset-D6</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				10.73	44.47
Claimed by the Petitioner in the instant petition				10.73	44.47
Allowed after true-up in the instant order				10.73	44.47



### Interest on Working Capital (“IWC”)

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

(₹ in lakh)

	Particulars	Combined Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	210.72	217.76	224.97	232.43	240.15
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	379.29	391.96	404.94	418.37	432.27
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	6556.30	6436.53	6299.53	6150.78	6014.84
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>7146.30</b>	<b>7046.24</b>	<b>6929.44</b>	<b>6801.58</b>	<b>6687.25</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>964.75</b>	<b>951.24</b>	<b>935.47</b>	<b>918.21</b>	<b>902.78</b>

(₹ in lakh)

	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	129.84	134.15	138.61	143.21	147.96
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	233.71	241.48	249.50	257.78	266.33
C	Working Capital for Receivables (equivalent to two months of Annual Fixed	2855.91	2869.18	2841.25	2808.49	2781.82



	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Charges/Annual Transmission Charges)					
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>3219.46</b>	<b>3244.81</b>	<b>3229.36</b>	<b>3209.48</b>	<b>3196.11</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>434.63</b>	<b>438.05</b>	<b>435.96</b>	<b>433.28</b>	<b>431.47</b>

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.20	10.54	10.89	11.25	11.62
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	18.36	18.96	19.59	20.25	20.92
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	88.66	92.34	98.16	101.84	103.95
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>117.22</b>	<b>121.84</b>	<b>128.64</b>	<b>133.33</b>	<b>136.49</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>14.57</b>	<b>16.45</b>	<b>17.37</b>	<b>18.00</b>	<b>18.43</b>



(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	14.60	15.08	15.58	16.10	16.63
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	26.27	27.15	28.04	28.98	29.94
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	104.78	111.49	118.44	121.18	123.64
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>145.65</b>	<b>153.72</b>	<b>162.06</b>	<b>166.26</b>	<b>170.21</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>18.15</b>	<b>20.75</b>	<b>21.88</b>	<b>22.44</b>	<b>22.98</b>

(₹ in lakh)

	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.81	0.83	0.86	0.89	0.92
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	1.45	1.50	1.55	1.60	1.65
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	56.22	56.20	59.00	61.70	60.08
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>58.48</b>	<b>58.53</b>	<b>61.41</b>	<b>64.18</b>	<b>62.66</b>



	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	<b>7.89</b>	<b>7.90</b>	<b>8.29</b>	<b>8.66</b>	<b>8.46</b>

(₹ in lakh)

	Particulars	Asset-D1		
		2016-17 (pro-rata 91 days)	2017-18	2018-19
	<b>Interest on Working Capital</b>			
A	Working Capital for O&M Expenses (O&M Expenses for one month)	13.26	13.70	14.15
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	23.86	24.65	25.47
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	480.78	537.21	560.30
D	<b>Total Working Capital (A+B+C)</b>	<b>517.90</b>	<b>575.57</b>	<b>599.92</b>
E	Rate of Interest (in %)	12.80	12.80	12.80
F	<b>Interest of Working Capital (D*E)</b>	<b>16.53</b>	<b>73.67</b>	<b>76.79</b>

(₹ in lakh)

	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
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)	65.53	81.54	82.75	83.08	85.36
D	<b>Total Working Capital (A+B+C)</b>	<b>85.22</b>	<b>101.89</b>	<b>103.78</b>	<b>104.80</b>	<b>107.81</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	<b>10.53</b>	<b>13.76</b>	<b>14.01</b>	<b>14.15</b>	<b>14.55</b>

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(₹ in lakh)

	Particulars	Asset-D3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
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)	54.72	66.54	81.65	95.98	98.19
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>74.42</b>	<b>86.89</b>	<b>102.68</b>	<b>117.70</b>	<b>120.63</b>
E	Rate of Interest (in%)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest on Working Capital (D*E)</b>	<b>10.05</b>	<b>11.73</b>	<b>13.86</b>	<b>15.89</b>	<b>16.29</b>

(₹ in lakh)

	Particulars	Asset-D4				
		2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.13	0.14	0.14	0.15	0.15
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.24	0.25	0.26	0.27	0.28
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	4.01	4.06	3.98	3.89	3.80
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>4.38</b>	<b>4.45</b>	<b>4.39</b>	<b>4.31</b>	<b>4.23</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest on Working Capital (D*E)</b>	<b>0.05</b>	<b>0.60</b>	<b>0.59</b>	<b>0.58</b>	<b>0.57</b>



(₹ in lakh)

	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	1.67	1.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	3.01	3.12
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	72.47	76.60
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>77.16</b>	<b>81.44</b>
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>2.48</b>	<b>10.26</b>

(₹ in lakh)

	Particulars	Asset-D6	
		2017-18 (pro-rata 91 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for one month)	3.59	3.71
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	6.46	6.67
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	171.57	189.10
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>181.61</b>	<b>199.47</b>
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>5.71</b>	<b>25.13</b>

73. The details of IWC approved *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset-A</b>					
Approved <i>vide</i> order dated 26.5.2016 in Petition no. 20/TT/2015	960.70	943.90	925.72	907.52	889.51
Claimed by the Petitioner in the instant petition	965.99	952.23	936.09	918.60	902.94
Allowed after true-up in the instant order	964.75	951.24	935.47	918.21	902.78
<b>Combined Asset-B</b>					
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	435.48	437.79	433.91	431.06	427.18
Claimed by the Petitioner in the instant petition	434.83	438.12	435.87	433.09	431.19
Allowed after true-up in the instant order	434.63	438.05	435.96	433.28	431.47
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	15.20	17.13	17.41	17.58	17.75
Claimed by the Petitioner in the instant petition	15.19	17.13	18.07	18.70	19.13
Allowed after true-up in the instant order	14.57	16.45	17.37	18.00	18.43
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	18.88	21.32	21.70	21.96	22.23
Claimed by the Petitioner in the instant petition	18.83	21.50	22.64	23.21	23.75
Allowed after true-up in the instant order	18.15	20.75	21.88	22.44	22.98
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	8.66	9.15	8.92	8.71	8.49
Claimed by the Petitioner in the instant petition	7.90	7.90	8.29	8.67	8.46
Allowed after true-up in the instant order	7.89	7.90	8.29	8.66	8.46
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			15.80	68.76	72.65





<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Claimed by the Petitioner in the instant petition			16.53	73.68	76.80
Allowed after true-up in the instant order			16.53	73.67	76.79
	<b>Asset-D2</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	10.71	13.93	14.29	14.52	14.50
Claimed by the Petitioner in the instant petition	10.79	14.04	14.29	14.42	14.81
Allowed after true-up in the instant order	10.53	13.76	14.01	14.15	14.55
	<b>Asset-D3</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	10.22	11.87	13.62	15.24	15.20
Claimed by the Petitioner in the instant petition	10.26	11.94	14.07	16.09	16.48
Allowed after true-up in the instant order	10.05	11.73	13.86	15.89	16.29
	<b>Asset-D4</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	0.05	0.60	0.59	0.58	0.57
Claimed by the Petitioner in the instant petition	0.05	0.60	0.59	0.58	0.57
Allowed after true-up in the instant order	0.05	0.60	0.59	0.58	0.57
	<b>Asset-D5</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				2.43	9.68
Claimed by the Petitioner in the instant petition				2.48	10.26
Allowed after true-up in the instant order				2.48	10.26
	<b>Asset-D6</b>				
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				5.63	23.93
Claimed by the Petitioner in the instant petition				5.70	25.14
Allowed after true-up in the instant order				5.71	25.13



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

74. The trued-up AFC for the transmission assets for 2014-19 tariff period is summarised as follows:

(₹ in lakh)

	Particulars	Combined Asset-A				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	11778.75	11807.98	11813.06	11813.25	11813.25
B	Interest on Loan	10761.39	9838.60	8933.28	7968.04	7039.06
C	Return on Equity	13304.31	13408.26	13415.75	13416.09	13452.17
D	O&M Expenses	2528.59	2613.08	2699.61	2789.12	2881.77
E	Interest on Working Capital	964.75	951.24	935.47	918.21	902.78
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>39337.79</b>	<b>38619.16</b>	<b>37797.17</b>	<b>36904.71</b>	<b>36089.03</b>

(₹ in lakh)

	Particulars	Combined Asset-B				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	4787.67	4886.46	4912.96	4947.11	4971.15
B	Interest on Loan	4544.35	4322.18	4043.50	3712.72	3420.05
C	Return on Equity	5810.74	5958.51	5991.76	6039.32	6092.76
D	O&M Expenses	1558.08	1609.85	1663.31	1718.51	1775.51
E	Interest on Working Capital	434.63	438.05	435.96	433.28	431.47
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>17135.47</b>	<b>17215.05</b>	<b>17047.49</b>	<b>16850.94</b>	<b>16690.94</b>

(₹ in lakh)

	Particulars	Asset-C1				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	153.60	171.16	176.94	181.55	181.55
B	Interest on Loan	35.85	45.81	62.60	69.37	76.61
C	Return on Equity	173.06	194.22	201.43	207.13	207.69
D	O&M Expenses	112.64	126.43	130.63	134.97	139.43
E	Interest on Working Capital	14.57	16.45	17.37	18.00	18.43
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>489.72</b>	<b>554.07</b>	<b>588.97</b>	<b>611.02</b>	<b>623.71</b>



(₹ in lakh)

	Particulars	Asset-C2				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	169.75	193.13	200.20	202.75	202.75
B	Interest on Loan	40.56	56.32	75.20	78.90	86.11
C	Return on Equity	190.27	217.79	226.39	229.80	230.42
D	O&M Expenses	161.73	180.97	186.95	193.19	199.59
E	Interest on Working Capital	18.15	20.75	21.88	22.44	22.98
F	<b>Total (A+B+C+D+E)</b>	<b>580.46</b>	<b>668.96</b>	<b>710.62</b>	<b>727.08</b>	<b>741.85</b>

(₹ in lakh)

	Particulars	Asset-C3				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	99.24	101.58	109.46	117.34	117.34
B	Interest on Loan	109.98	104.01	103.38	102.12	91.95
C	Return on Equity	110.57	113.73	122.55	131.38	131.73
D	O&M Expenses	9.67	10.00	10.32	10.67	11.02
E	Interest on Working Capital	7.89	7.90	8.29	8.66	8.46
F	<b>Total (A+B+C+D+E)</b>	<b>337.35</b>	<b>337.22</b>	<b>354.00</b>	<b>370.17</b>	<b>360.50</b>

(₹ in lakh)

	Particulars	Asset-D1		
		2016-17 (pro-rata 91 days)	2017-18	2018-19
	<b>Annual Transmission Charges</b>			
A	Depreciation	206.72	947.38	1013.65
B	Interest on Loan	224.91	977.49	963.90
C	Return on Equity	231.37	1060.38	1137.63
D	O&M Expenses	39.66	164.36	169.81
E	Interest on Working Capital	16.53	73.67	76.79
F	<b>Total (A+B+C+D+E)</b>	<b>719.19</b>	<b>3223.28</b>	<b>3361.78</b>



(₹ in lakh)

	Particulars	Asset-D2				
		2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	95.36	132.39	134.37	135.57	139.82
B	Interest on Loan	67.34	101.79	101.32	96.98	97.10
C	Return on Equity	109.28	154.09	156.70	158.65	164.50
D	O&M Expenses	77.25	87.22	90.12	93.11	96.20
E	Interest on Working Capital	10.53	13.76	14.01	14.15	14.55
F	<b>Total (A+B+C+D+E)</b>	<b>359.76</b>	<b>489.25</b>	<b>496.52</b>	<b>498.46</b>	<b>512.17</b>

(₹ in lakh)

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Annual Transmission Charges</b>					
Depreciation	82.16	102.80	130.86	158.95	163.89
Interest on Loan	57.61	77.89	103.78	125.04	123.58
Return on Equity	94.10	119.57	151.29	182.88	189.16
O&M Expenses	84.42	87.22	90.12	93.11	96.20
Interest on Working Capital	10.05	11.73	13.86	15.89	16.29
<b>Total (A+B+C+D+E)</b>	<b>328.34</b>	<b>399.21</b>	<b>489.91</b>	<b>575.87</b>	<b>589.12</b>

(₹ in lakh)

	Particulars	Asset-D4				
		2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>					
A	Depreciation	0.57	6.85	6.88	6.88	6.88
B	Interest on Loan	0.66	7.57	7.01	6.41	5.81
C	Return on Equity	0.63	7.67	7.70	7.70	7.72
D	O&M Expenses	0.14	1.67	1.72	1.78	1.84
E	Interest on Working Capital	0.05	0.60	0.59	0.58	0.57
F	<b>Total (A+B+C+D+E)</b>	<b>2.05</b>	<b>24.36</b>	<b>23.90</b>	<b>23.35</b>	<b>22.82</b>



(₹ in lakh)

	Particulars	Asset-D5	
		2017-18 (pro-rata 93 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	32.30	136.33
B	Interest on Loan	34.71	139.17
C	Return on Equity	36.17	153.05
D	O&M Expenses	5.12	20.77
E	Interest on Working Capital	2.48	10.26
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>110.78</b>	<b>459.58</b>

(₹ in lakh)

	Particulars	Asset-D6	
		2017-18 (pro-rata 91 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	74.79	336.90
B	Interest on Loan	81.69	349.86
C	Return on Equity	83.73	378.21
D	O&M Expenses	10.73	44.47
E	Interest on Working Capital	5.71	25.13
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>256.65</b>	<b>1134.57</b>

75. Accordingly, the Annual Transmission Charges approved *vide* orders dated 26.5.2016 in Petition No. 20/TT/2015, dated 2.12.2019 in Petition No. 194/TT/2018, dated 29.4.2016 in Petition No. 185/TT/2014 and dated 23.7.2018 in Petition No. 207/TT/2017, claimed by the Petitioner and approved after truing up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Combined Asset-A</b>				
Approved <i>vide</i> order dated 26.5.2016 in Petition No. 20/TT/2015	39157.67	38292.78	37363.72	36429.29	35499.21
Claimed by the Petitioner in the instant petition	39454.01	38726.49	37889.86	36989.50	36166.13
Allowed after true-up in the instant order	39337.79	38619.16	37797.17	36904.71	36089.03
	<b>Combined Asset-B</b>				



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved <i>vide</i> order dated 2.12.2019 in Petition No. 194/TT/2018	17173.32	17203.76	16956.21	16752.25	16500.27
Claimed by the Petitioner in the instant petition	17168.75	17243.40	17069.50	16869.59	16706.16
Allowed after true-up in the instant order	17135.47	17215.05	17047.49	16850.94	16690.94
<b>Asset-C1</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	517.86	584.30	590.87	592.30	593.86
Claimed by the Petitioner in the instant petition	517.13	584.36	620.06	642.26	655.27
Allowed after true-up in the instant order	489.72	554.07	588.97	611.02	623.71
<b>Asset-C2</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	612.77	694.35	702.51	705.56	708.78
Claimed by the Petitioner in the instant petition	610.37	702.19	744.67	761.18	776.26
Allowed after true-up in the instant order	580.46	668.96	710.62	727.08	741.85
<b>Asset-C3</b>					
Approved <i>vide</i> order dated 29.4.2016 in Petition No. 185/TT/2014	371.30	392.47	382.19	371.96	361.78
Claimed by the Petitioner in the instant petition	337.45	337.27	354.00	370.18	360.50
Allowed after true-up in the instant order	337.35	337.22	354.00	370.17	360.50
<b>Asset-D1</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017			685.31	2993.13	3167.88
Claimed by the Petitioner in the instant petition			719.19	3223.45	3362.09
Allowed after true-up in this order			719.19	3223.28	3361.78
<b>Asset-D2</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	368.14	496.86	508.96	514.88	509.57
Claimed by the Petitioner in the instant petition	371.19	501.94	508.87	510.43	523.76



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Allowed after true-up in the instant order	359.76	489.25	496.52	498.46	512.17
<b>Asset-D3</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	335.93	405.44	479.20	546.80	541.03
Claimed by the Petitioner in the instant petition	337.65	408.66	499.21	584.95	597.94
Allowed after true-up in the instant order	328.34	399.21	489.91	575.87	589.12
<b>Asset-D4</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017	2.03	24.32	23.98	23.50	22.96
Claimed by the Petitioner in the instant petition	2.04	24.37	23.90	23.35	22.83
Allowed after true-up in the instant order	2.05	24.36	23.90	23.35	22.82
<b>Asset-D5</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				106.79	424.89
Claimed by the Petitioner in the instant petition				110.78	459.58
Allowed after true-up in the instant order				110.78	459.58
<b>Asset-D6</b>					
Approved <i>vide</i> order dated 23.7.2018 in Petition No. 207/TT/2017				248.95	1059.30
Claimed by the Petitioner in the instant petition				256.64	1134.71
Allowed after true-up in the instant order				256.65	1134.57

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

76. The transmission assets have been combined into Combined Asset for 2019-24 tariff period and combined tariff has been worked out for them as per the 2019 Tariff Regulations.



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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	19274.75	19202.29	19196.26	19196.26	19196.26
Interest on Loan	10898.03	9282.38	7676.59	6061.26	4456.76
Return on Equity	21179.12	21195.74	21209.83	21209.83	21209.83
O&M Expenses	6109.94	6323.77	6545.83	6778.15	7012.60
Interest on Working Capital	1038.51	1025.04	1010.63	996.41	980.26
<b>Total</b>	<b>58500.35</b>	<b>57029.22</b>	<b>55639.14</b>	<b>54241.91</b>	<b>52855.71</b>

78. The details of IWC claimed by the Petitioner in respect of the Combined Asset for 2019-24 period 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)	509.16	526.98	545.49	564.85	584.38
Working Capital for Maintenance Spares (15% of O&M Expenses)	916.49	948.57	981.87	1016.72	1051.89
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	7192.67	7031.00	6859.62	6687.36	6498.65
<b>Total Working Capital</b>	<b>8618.32</b>	<b>8506.55</b>	<b>8386.98</b>	<b>8268.93</b>	<b>8134.92</b>
Rate of Interest (in%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1038.51</b>	<b>1025.04</b>	<b>1010.63</b>	<b>996.41</b>	<b>980.26</b>

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

79. The Petitioner has claimed E-COD of the Combined Asset works out to be 22.11.2012. E-COD of the Combined Asset has been worked out based on the trued-up capital cost and dates of commercial operation of the individual assets which is as follows:





Assets	Capital Cost as on 31.3.2019 (₹ in lakh)	COD	Number of days from COD of Asset from COD of Project	Weight of the cost (in %)	Weighted days
Combined Asset-A	226948.99	1.4.2012	2100	60.61	1272.79
Combined Asset-B	102864.83	8.11.2012	1879	27.47	516.18
Asset-C1	3503.82	30.4.2014	1341	0.94	12.55
Asset-C2	3887.40	29.4.2014	1342	1.04	13.93
Asset-C3	2222.41	1.4.2014	1370	0.59	8.13
Asset-D1	19487.25	31.12.2016	365	5.20	19.00
Asset-D2	2844.84	2.5.2014	1339	0.76	10.17
Asset-D3	3264.54	1.4.2014	1370	0.87	11.94
Asset-D4	130.32	1.3.2015	1036	0.03	0.36
Asset-D5	2737.58	29.12.2017	2	0.73	0.01
Asset-D6	6555.12	31.12.2017	0	1.75	0.00
<b>Total</b>	<b>374447.09</b>				<b>1865.07</b>
<b>Effective COD (latest COD – total weighted days)</b> <b>22.11.2012</b>					

80. E-COD is used to determine the lapsed life of the project as a whole which works out as 6 (six) 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)**

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

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



Regulations. Accordingly, WAL of all the transmission assets executed during 2014-19 period has been worked out as 32 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)	WAL of Asset (in years) (4) = (3) / (2)
Building Civil Works & Colony	25.00	10889.52	272238.11	<b>31.91 years (rounded off to 32 years)</b>
Transmission Line	35.00	255284.67	8934963.52	
Sub-station	25.00	98272.28	2456806.90	
PLCC	15.00	902.64	13539.54	
I.T. Equipment	6.67	710.49	4736.62	
<b>Total</b>		<b>366059.60</b>	<b>11682284.70</b>	

83. 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, the Effective COD of the transmission assets is 23.11.2012 and the lapsed life of the project as a whole works out as 6 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 26 years.

### **Capital Cost**

84. 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."*

85. The Petitioner has claimed the capital cost of individual assets which has been added to arrive at the capital cost claimed during 2019-24 period in respect of Combined Asset and the same is as follows:



Assets	Apportioned Approved capital cost as per RCE-II	Capital cost as on 31.3.2019	ACE		Estimated Completion cost as on 31.3.2024
			2019-20	2020-21	
Combined Asset-A	230178.57	226948.99	0.00	0.00	226948.99
Combined Asset-B	107272.73	102864.83	0.00	0.00	102835.88
Asset-C1	3749.28	3503.82	0.00	0.00	3724.59
Asset-C2	4154.89	3887.40	0.00	0.00	4127.99
Asset-C3	2249.11	2222.41	0.00	0.00	2222.41
Asset-D1	19723.24	19487.25	0.00	0.00	19487.25
Asset-D2	2957.49	2844.84	0.00	0.00	2844.84
Asset-D3	3368.09	3264.54	0.00	0.00	3264.54
Asset-D4	133.10	130.32	0.00	0.00	130.32
Asset-D5	2881.79	2737.58	10.00	100.00	2847.58
Asset-D6	7121.15	6555.12	80.00	400.00	7035.12
<b>Total</b>	<b>383789.44</b>	<b>374447.09</b>	<b>90.00</b>	<b>500.00</b>	<b>375469.51</b>

86. Against the overall approved apportioned capital cost (as per RCE-II) of ₹383789.44 lakh, the estimated completion cost is ₹375469.51 lakh as on 31.3.2024. The individual capital cost of each asset is also within the respective apportioned capital cost as per RCE-II. Therefore, there is no cost over-run in respect of the respective transmission asset upto 31.3.2024.

### **Initial Spares**

87. As stated above in this order, Initial Spares allowed for 2014-19 tariff period on the basis of cost of the individual assets. The transmission assets covered in the transmission project have been combined during 2019-24 tariff period and overall project cost is arrived at in the 2019-24 tariff period. 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, Initial Spares allowed during 2019-24 tariff period are as follows:



**Transmission Line:**

Assets	Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms (in %) 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 lakh)	Additional Initial Spares allowed (₹ in lakh)
Asset-1	15612.63	0.00	0.75	117.98	NIL	1136.04	1168.17	32.13
Asset-2	39357.47	301.30	0.75	295.13				
Asset-3	33648.08	180.51	0.75	252.90				
Asset-4	20859.93	115.40	0.75	156.76				
Asset-7A	28473.86	100.74	0.75	214.41				
Asset-7B	33955.94	100.74	0.75	255.83				
Asset-8A	11802.36	43.82	0.75	88.86				
Asset-8B	2409.13	43.82	0.75	17.87				
Asset-9A	4403.34	3.99	0.75	33.24				
Asset-D	16684.68	51.69	0.75	125.69				
Asset-C1	2521.53	0.00	1.00	25.47				
Asset-C2	2811.82	0.00	1.00	28.40				
Asset-C3	2050.92	0.00	1.00	20.72				
Asset-D1	16813.29	154.00	1.00	168.28				
Asset-D4	115.01	1.16	1.00	1.15				
Asset-D5	2309.41	19.00	1.00	23.14				
Asset-D6	6213.59	52.00	1.00	62.24				
<b>Combined Asset</b>		<b>1168.17</b>		<b>1888.07</b>	<b>NIL</b>	<b>1136.04</b>	<b>1168.17</b>	<b>32.13</b>

**Sub-station:**

Assets	Capital Cost/P&M cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms (in%) 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 (₹ in lakh)	Additional Initial Spares allowed (₹ in lakh)
Asset-1	596.95	46.29	2.50	14.12	NIL	2344.70	3024.37	679.67
Asset-2	1975.04	197.15	2.50	45.59				
Asset-3	2353.80	146.20	2.50	56.61				
Asset-5	5315.19	57.36	2.50	134.82				
Asset-6A	4221.99	158.32	2.50	104.20				



Assets	Capital Cost/P&M cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms (in%) 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 (₹ in lakh)	Additional Initial Spares allowed (₹ in lakh)
Asset-6B	2653.07	39.32	2.50	67.02				
Asset-7A	2490.47	134.75	2.50	60.40				
Asset-8A	6581.24	99.00	2.50	166.21				
Asset-8B	3543.87	169.19	2.50	86.53				
Asset-9A	5130.12	291.23	2.50	124.07				
Asset-9B	1724.86	44.00	2.50	43.10				
A1	29225.26	665.88	2.50	732.29				
A2	10874.29	236.40	2.50	272.77				
A3	5561.67	129.52	2.50	139.29				
A4	10072.81	216.72	2.50	252.72				
B1	9756.39	138.32	2.50	246.62				
B2	2441.02	20.37	2.50	62.07				
B3	1772.84	0.00	2.50	45.46				
C	1482.03	22.95	2.50	37.41				
D	1622.42	67.05	2.50	39.88				
Asset-C1	350.02	0.00	4.00	14.58				
Asset-C2	494.38	0.00	4.00	20.60				
Asset-D1	920.93	52.68	6.00	55.42				
Asset-D2	2181.64	0.00	6.00	139.25				
Asset-D3	2740.39	91.67	6.00	169.07				
<b>Combined Asset</b>		<b>3024.37</b>		<b>3130.09</b>	<b>NIL</b>	<b>2344.70</b>	<b>3024.37</b>	<b>679.67</b>

88. Thus, in line with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017 additional Initial Spares of ₹711.80 lakh (₹32.13 lakh + ₹679.67 lakh) are admissible. Capital cost as on 1.4.2019 for Combined Asset allowed after adding Initial Spares 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
374447.09	711.80	375158.89





## **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;*
- (g) Raising of ash dyke as a part of ash disposal system.*

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





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

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

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

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

90. The Petitioner has submitted the following ACE in respect of the transmission assets for 2019-24 tariff period:

(₹ in lakh)

Assets	Projected ACE	
	2019-20	2020-21
Asset-D5	10.00	100.00
Asset-D6	80.00	400.00
<b>Combined Asset</b>	<b>90.00</b>	<b>500.00</b>

91. The Petitioner has further submitted that ACE projected to be incurred during 2019-24 is on account of payment of tree and crop compensation and is based on projections and detailed documentary evidence shall be submitted at the time of 2019-24 truing up. Since the ACE is beyond the cut-off date and is accordingly claimed as per Regulation 25(1)(d) of the 2019 Tariff Regulations.

92. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner 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(s). Accordingly, the capital cost considered for the Combined Asset for 2019-24 tariff period is as follows:



(₹ in lakh)

Capital Cost as on 1.4.2019	ACE 2019-24					Capital Cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
375158.89	90.00	500.00	0.00	0.00	0.00	375748.89

### **Debt-Equity ratio**

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

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

*Provided that:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

**Explanation-**The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;*

*Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.*



(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

94. Debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period 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	262611.22	70.00	413.00	70.00	263024.22	70.00
Equity	112547.67	30.00	177.00	30.00	112724.67	30.00
<b>Total</b>	<b>375158.89</b>	<b>100.00</b>	<b>590.00</b>	<b>100.00</b>	<b>375748.89</b>	<b>100.00</b>

### Depreciation

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

96. We have considered the submissions of the Petitioner. IT equipment has been considered as part of the Gross Block and depreciated using WAROD (as placed at Annexure-II). WAROD has been worked out considering 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 percent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Depreciation</b>					
A	Opening Gross Block	375158.89	375248.89	375748.89	375748.89	375748.89
B	Additional Capitalisation	90.00	500.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	375248.89	375748.89	375748.89	375748.89	375748.89
E	Average Gross Block (A+C)/2	375203.89	375498.89	375748.89	375748.89	375748.89
D	Freehold Land	8387.49	8387.49	8387.49	8387.49	8387.49



	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
F	Weighted average rate of Depreciation (WAROD) (in%)	5.13	5.13	5.13	5.13	5.13
G	Balance useful life of the asset (Year)	26	25	24	23	22
H	Aggregate Depreciable Value	330205.81	330471.31	330696.31	330696.31	330696.31
I	<b>Depreciation during the year</b>	<b>19235.19</b>	<b>19250.76</b>	<b>19263.96</b>	<b>19263.96</b>	<b>19263.96</b>
J	Cumulative Depreciation	138223.71	157474.48	176738.44	196002.40	215266.37
K	Remaining Depreciable Value (H-J)	191982.10	172996.83	153957.87	134693.91	115429.94

### **Interest on Loan (“IoL”)**

97. 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.”

98. 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 truing up. In view of above, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for 2019-24 tariff period in respect of Combined Asset is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	262611.22	262674.22	263024.22	263024.22	263024.22
B	Cumulative Repayments upto Previous Year	118988.53	138223.71	157474.48	176738.44	196002.40
C	Net Loan-Opening (A-B)	143622.70	124450.51	105549.75	86285.78	67021.82
D	Additions	63.00	350.00	0.00	0.00	0.00
E	Repayment during the year	19235.19	19250.76	19263.96	19263.96	19263.96
F	Net Loan-Closing (C+D-E)	124450.51	105549.75	86285.78	67021.82	47757.86
G	Average Loan (C+F)/2	134036.60	115000.13	95917.77	76653.80	57389.84
H	Weighted Average Rate of Interest on Loan (in %)	8.1473	8.0906	8.0210	7.9222	7.7761
I	<b>Interest on Loan (G*H)</b>	<b>10920.36</b>	<b>9304.20</b>	<b>7693.56</b>	<b>6072.67</b>	<b>4462.69</b>

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

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



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

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

*Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*

*Provided further that:*

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

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

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

**“31. Tax on Return on Equity.** (1) *The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in*





line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

**Illustration-**

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

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

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

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

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	112547.67	112574.67	112724.67	112724.67	112724.67
B	Additions	27.00	150.00	0.00	0.00	0.00
C	Closing Equity (A+B)	112574.67	112724.67	112724.67	112724.67	112724.67
D	Average Equity (A+C)/2	112561.17	112649.67	112724.67	112724.67	112724.67
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>21141.24</b>	<b>21157.86</b>	<b>21171.95</b>	<b>21171.95</b>	<b>21171.95</b>

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

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

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Transmission line</b>					
(i)	WR1 Portion from AP 38- AP44 and AP44- AP45A/0 (Part of 400 kV D/C Navsari - Boisar Transmission Line) (2 sub-conductors) (10.4 km)				
(ii)	WR1 Portion From AP 38- AP44 and AP44- Ap45A/0 (Part of 400 kV D/C Navsari - Boisar Transmission Line) (4 sub-conductors) (2.182 km)				
(iii)	Aurangabad(MSETCL)-Aurangabad(Pg) 400 kV D/C(Quad) Line(Ckt#2) (4 sub-conductors) (2.916 km)				
(iv)	Aurangabad(MSETCL)-Aurangabad(Pg) 400 kV D/C(Quad) Line(Ckt#1 & #2) (4 sub-conductors) (49.716 km)				
(v)	Aurangabad (MSETCL)-Aurangabad(PG) 400 kV D/C (Quad) Line (Ckt#1) alongwith associated bays at both ends (4 sub-conductors) (2.916 km)				
(vi)	Mundra-Bhachau Ckt-I and II (3 sub-conductors) (99.468 km)				
(vii)	Bachau Ranchhodpura (3 sub-conductors) (282.856 km)				
(viii)	Mundra Limbdi (from Tapping at Surajbari to Limbdi) (3 sub-conductors) (192.187 km)				
(ix)	Mundra Surajbari (Balance Portion) of Mundra Limbdi Transmission Line (3 sub-conductors) (123.515 km)				
(x)	Gandhar-Navsari Ckt-II (2 sub-conductors) (102.152 km)				
(xi)	LILO of 220 kV D/C Kawas-Navsari (GETCO) at Navsari GIS (1 sub-conductors) (40.49 km)				
(xii)	Mundra-Jetpur (Mundra - Surajbari) Transmission Line (3 Sub-conductors) (168.5 km)				
(xiii)	Surajbari-Jetpur(Part of Mundra - Jetpur) Transmission Line (3 Sub-conductors) (168.242 km)				



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(xiv) Part of 400 kV D/C Vapi-Kudus Transmission Line from Location 44- 45A/0 (2 sub-conductors) (2.28 km)					
(xv) AP 45A to AP 69 (2 sub-conductors) (14.011 km)					
(xvi) AP69 to AP313 and AP353 to AP354 (2 sub-conductors) (9.008 km)					
(xvii) AP313 to AP332 (2 sub-conductors) (17.164 km)					
(xviii) Kala-Kudus Transmission Line from AP 45 to AP 104 (2 sub-conductors) (55.178 km)					
(xix) AP 313 to AP 332 (Part of 400 kV D/C (Quad) Aurangabad-Boisar of M/C T-Q Portion) (4 sub-conductors) (17.164 km)					
(xx) Aurangabad (MSETCL) - Aurangabad (2 sub-conductors) (51.154 km)					
(xxi) 400 kV Navsari-Boisar Ckt-I and II (cut-off Point Vapi for WR-II Portion) (2 sub-conductors) (105.684 km)					
S/C Bundled Conductor with four sub-conductors (km)	5.832	5.832	5.832	5.832	5.832
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
D/C Bundled Conductor with four or more sub-conductors (km)	69.062	69.062	69.062	69.062	69.062
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
D/C Twin/Triple Conductor (km)	1401.799	1401.799	1401.799	1401.799	1401.799
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
D/C Single Conductor (km)	40.49	40.49	40.49	40.49	40.49
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433
<b>765 kV bays of:</b>					
(i) Seoni:3x80 MVA Switchable Line Reactor# 2 [1 Number of bay(s)]					
(ii) Seoni:3x80 MVA Switchable Line Reactor# 1 [1 Number of bay(s)]					
(iii) Seoni: Wardha Bay-II-Seoni-Seoni (765 kV) [1 Number of bay(s)]					
(iv) Wardha: BR-I Bay-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(v) Wardha: Seoni Bay-II-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(vi) Wardha: ICT-I Bay (765/400)-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(vii) Wardha: ICT-III Bay (765/400)-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(viii) Seoni: Wardha Bay-I-Seoni-Seoni (765 kV) [1 Number of bay(s)]					
(ix) Wardha: Seoni Bay-I-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
(x) Wardha: ICT-II Bay (765/400)-Wardha-Wardha (765 kV) [1 Number of bay(s)]					
<b>400 kV bays of:</b>					
(i) Aurangabad: Aurangabad (MSETCL) Ckt#2 [1 Number of bay(s)]					
(ii) Aurangabad Sub-station MSETCL (Waluz): Aurangabad (P.G.) Ckt#2 [1 Number of bay(s)]					
(iii) Aurangabad:400 kV Bay for Aurangabad (MSETCL) [1 No. of bay(s)]					
(iv) Aurangabad Sub-station MSETCL (Waluz):400 kV Bay for Aurangabad [1 Number of bay(s)]					
(v) Getco Jetpur:Mundra Ckt-I and II Bay [2 Number of bay(s)]					
(vi) Bhachau:Bus Reactor Bay [1 Number of bay(s)]					
(vii) Bhachau:ICT I and 2 Bay [2 Number of bay(s)]					
(viii) Bhachau:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]					
(ix) Limbdi:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]					
(x) Bhachau:Ranchodpura I and Ranchodpura II Bay [2 Number of bay(s)]					
(xi) Ranchordpura:Bachau I and Bachau II Bay [2 Number of bay(s)]					
(xii) NTPC Gandhar:Navsari - II Bay [1 Number of bay(s)]					



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(xiii) NTPC Gandhar:Navasari Bay [1 Number of bay(s)]					
(xiv) Boisar:Navsari Bay 1 and 2 [2 Number of bay(s)]					
(xv) Wardha:ICT-I Bay (765/400)_Wardha_Wardha (765 kV) [1 Number of bay(s)]					
(xvi) Wardha:ICT-III Bay (765/400)_Wardha_Wardha (765 kV) [1 Number of bay(s)]					
(xvii) Aurangabad:Akola Bay 1 and 2 [2 No. of bay(s)]					
(xviii) Aurangabad:ICT-I Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(xix) Aurangabad:ICT-II Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(xx) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]					
(xxi) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]					
<b>400 kV GIS bays of:</b>					
(i) Navsari: Gandhar-II Bay [1 Number of bay(s)]					
(ii) Navsari: Bus Reactor Bay [1 Number of bay(s)]					
(iii) Navsari:ICT II Bay [1 Number of bay(s)]					
(iv) Navsari:ICT I Bay [1 Number of bay(s)]					
(v) Navsari:Gandhar Bay [1 Number of bay(s)]					
(vi) Navsari:Magarwada Bay- I_Navsari_Navsari (GIS) [1 Number of bay(s)]					
(vii) Navsari:Magarwada Bay- II_Navsari_Navsari (GIS) [1 Number of bay(s)]					
<b>220 kV bays of:</b>					
(i) Bhachau:ICT I and 2 Bay [2 Number of bay(s)]					
(ii) Bhachau: Line I Bay, Line II Bay, Line II Bay and Line IV [4 Number of bay(s)]					
(iii) Aurangabad: Chitegaon Bay-I_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(iv) Aurangabad: Chitegaon Bay-II_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(v) Aurangabad: ICT-I Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(vi) Aurangabad: ICT-II Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
<b>220 kV GIS bays of:</b>					
(i) Navsari:ICT II Bay [1 Number of bay(s)]					
(ii) Navsari:Kawas I and Kawas II Bay [2 Number of bay(s)]					
(iii) Navsari:Navsari I and Navsari II Bay [2 Number of bay(s)]					
(iv) Navsari:ICT I Bay [1 Number of bay(s)]					
765 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
400 kV Bays	29	29	29	29	29
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
400 kV GIS Bays	7	7	7	7	7
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
220 kV GIS Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	15.757	16.310	16.884	17.472	18.088
<b>Transformers:</b>					
<b>765 kV</b>					



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(i) Wardha:Wardha ICT I (765 kV) (1500 MVA) x 1					
(ii) Wardha:Wardha ICT III (765 kV) (1500 MVA) x 1					
(iii) Wardha:Wardha ICT II (765 kV) (1500 MVA) x 1					
<b>400 kV</b>					
(i) Navsari: ICT 1 and 2 (400 kV) (315 MVA) x 2					
(ii) Bhachau: ICT 1 and 2 (400 kV) (315 MVA) x 2					
(iii) Aurangabad: Aurangabad ICT I (400 kV) (315 MVA) x 1					
(iv) Aurangabad:Aurangabad ICT II (400 kV) (315 MVA) x 1					
765 kV (MVA)	4500	4500	4500	4500	4500
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
400 kV (MVA)	1890	1890	1890	1890	1890
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
<b>PLCC (@ 2% of capital cost)</b>					
Capital cost for PLCC	910.40	910.40	910.40	910.40	910.40
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>6109.94</b>	<b>6323.77</b>	<b>6545.83</b>	<b>6778.15</b>	<b>7012.60</b>

103. The norms specified under Regulation 35(3)(a) and Regulation 35(4) 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
<b>Norms for Sub-station Bays (₹ Lakh per bay)</b>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578



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

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

Provided further that:

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





(iii) the O&M expenses of  $\pm 500$  kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);

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

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

(vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three 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 in 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. The O&M Expenses have been worked out 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
<b>Transmission line</b>					
(i) WR1 Portion from AP 38- AP44 and AP44- AP45A/0 (Part of 400 kV D/C Navsari - Boisar Transmission Line) (2 sub-conductors) (10.4 km)					
(ii) WR1 Portion From AP 38- AP44 and AP44- AP 45A/0 (Part of 400 kV D/C Navsari - Boisar Transmission Line) (4 sub-conductors) (2.182 km)					
(iii) Aurangabad(MSETCL)-Aurangabad(PG) 400 kV D/C(Quad) Line (Ckt#2) (4 sub-conductors) (2.916 km)					
(iv) Aurangabad(MSETCL)-Aurangabad(PG) 400 kV D/C(Quad) Line(Ckt#1 & #2) (4 sub-conductors) (49.716 km)					
(v) Aurangabad(MSETCL)-Aurangabad(PG) 400 kV D/C(Quad) Line (Ckt#1) alongwith associated bays at both ends (4 sub-conductors) (2.916 km)					
(vi) Mundra-Bhachau Ckt-I and II (3 sub-conductors) (99.468 km)					
(vii) Bachau Ranchhodpura (3 sub-conductors) (282.856 km)					
(viii) Mundra Limbdi (from Tapping at Surajbari to Limbdi) (3 sub-conductors) (192.187 km)					
(ix) Mundra Surajbari (Balance Portion) of Mundra Limbdi Transmission Line (3 sub-conductors) (123.515 km)					
(x) Gandhar-Navsari Ckt-II (2 sub-conductors) (102.152 km)					
(xi) LILO of 220 kV D/C Kawas-Navsari(GETCO) at Navsari GIS (1 sub-conductors) (40.49 km)					
(xii) Mundra-Jetpur (Mundra - Surajbari) Transmission Line (3 sub-conductors) (168.5 km)					
(xiii) Surajbari-Jetpur(Part of Mundra - Jetpur) Transmission Line (3 sub-conductors) (168.242 km)					
(xiv) Part of 400 kV D/C Vapi-Kudus Transmission Line from Location 44- 45A/0 (2 sub-conductors) (2.28 km)					
(xv) AP 45A to AP 69 (2 sub-conductors) (14.011 km)					
(xvi) AP69 to AP313 and AP353 to AP354 (2 sub-conductors) (9.008 km)					
(xvii) AP313 to AP332 (2 sub-conductors) (17.164 km)					
(xviii) Kala-Kudus Transmission Line from AP 45 to AP 104 (2 sub-conductors) (55.178 km)					
(xix) AP 313 to AP 332 (Part of 400 kV D/C (Quad) Aurangabad-Boisar of M/C T-Q Portion) (4 sub-conductors) (17.164 km)					
(xx) Aurangabad (Msetcl) - Aurangabad (2 sub-conductors) (51.154 km)					
(xxi) 400 kV Navsari-Boisar Ckt-I And II (cut-off Point Vapi for WR-II Portion) (2 sub-conductors) (105.684 km)					
S/C Bundled Conductor with four sub-conductors (km)	5.832	5.832	5.832	5.832	5.832
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
D/C Bundled Conductor with four or more sub-conductors (km)	69.062	69.062	69.062	69.062	69.062
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
D/C Twin/Triple Conductor (km)	1401.799	1401.799	1401.799	1401.799	1401.799





Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
D/C Single Conductor (km)	40.49	40.49	40.49	40.49	40.49
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433

**765 kV bays of:**

- (i) Seoni:3x80 MVAr Switchable Line Reactor# 2 [1 Number of bay(s)]
- (ii) Seoni:3x80 MVAr Switchable Line Reactor# 1 [1 Number of bay(s)]
- (iii) Seoni:Wardha Bay-II\_Seoni\_Seoni (765 kV) [1 Number of bay(s)]
- (iv) Wardha:BR-I Bay\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (v) Wardha:Seoni Bay-II\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (vi) Wardha:ICT-I Bay (765/400)\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (vii) Wardha:ICT-III Bay (765/400)\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (viii) Seoni:Wardha Bay-I\_Seoni\_Seoni (765 kV) [1 Number of bay(s)]
- (ix) Wardha:Seoni Bay-I\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (x) Wardha:ICT-II Bay (765/400)\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]

**400 kV bays of:**

- (i) Aurangabad:Aurangabad (MSETCL) Ckt#2 [1 Number of bay(s)]
- (ii) Aurangabad Sub-station Msetcl(Waluz):Aurangabad (P.G.) Ckt#2 [1 Number of bay(s)]
- (iii) Aurangabad:400 kV Bay for Aurangabad(MSETCL) [1 Number of bay(s)]
- (iv) Aurangabad Sub-station MSETCL (Waluz):400 kV Bay for Aurangabad [1 Number of bay(s)]
- (v) GETCO Jetpur:Mundra Ckt-I and II Bay [2 Number of bay(s)]
- (vi) Bhachau:Bus Reactor Bay [1 Number of bay(s)]
- (vii) Bhachau:ICT I and 2 Bay [2 Number of bay(s)]
- (viii) Bhachau:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]
- (ix) Limbdi:Mundra I Bay and Mundra II Bay [2 Number of bay(s)]
- (x) Bhachau:Ranchodpura I and Ranchodpura II Bay [2 Number. of bay(s)]
- (xi) Ranchordpura:Bachau I and Bachau II Bay [2 Number of bay(s)]
- (xii) NTPC Gandhar:Navsari - II Bay [1 Number of bay(s)]
- (xiii) NTPC Gandhar:Navasari Bay [1 Number of bay(s)]
- (xiv) Boisar:Navsari Bay 1 and 2 [2 Number of bay(s)]
- (xv) Wardha:ICT-I Bay (765/400)\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (xvi) Wardha:ICT-III Bay (765/400)\_Wardha\_Wardha (765 kV) [1 Number of bay(s)]
- (xvii) Aurangabad:Akola Bay 1 and 2 [2 Number of bay(s)]
- (xviii) Aurangabad:ICT-I Bay (400/220)\_Aurangabad\_Aurangabad (765 kV) [1 Number of bay(s)]
- (xix) Aurangabad:ICT-II Bay (400/220)\_Aurangabad\_Aurangabad (765 kV) [1 Number of bay(s)]
- (xx) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]
- (xxi) Aurangabad:Wardha-1 Line Reactor [1 Number of bay(s)]

**400 kV GIS bays of:**

- (i) Navsari:Gandhar-II Bay [1 Number of bay(s)]
- (ii) Navsari:Bus Reactor Bay [1 Number of bay(s)]
- (iii) Navsari:ICT II Bay [1 Number of bay(s)]
- (iv) Navsari:ICT I Bay [1 Number of bay(s)]
- (v) Navsari:Gandhar Bay [1 Number of bay(s)]
- (vi) Navsari:Magarwada Bay- I\_Navsari\_Navsari (GIS) [1 Number of bay(s)]
- (vii) Navsari:Magarwada Bay- II\_Navsari\_Navsari (GIS) [1 Number of bay(s)]



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>220 kV bays of:</b>					
(i) Bhachau:ICT I and 2 Bay [2 Number of bay(s)]					
(ii) Bhachau: Line I Bay, Line II Bay, Line II Bay and Line IV [4 Number of bay(s)]					
(iii) Aurangabad:Chitegaon Bay-I_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(iv) Aurangabad:Chitegaon Bay-II_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(v) Aurangabad:ICT-I Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
(vi) Aurangabad:ICT-II Bay (400/220)_Aurangabad_Aurangabad (765 kV) [1 Number of bay(s)]					
<b>220 kV GIS bays of:</b>					
(i) Navsari:ICT II Bay [1 Number of bay(s)]					
(ii) Navsari:Kawas I and Kawas II Bay [2 Number of bay(s)]					
(iii) Navsari:Navsari I and Navsari II Bay [2 Number of bay(s)]					
(iv) Navsari:ICT I Bay [1 Number of bay(s)]					
765 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
400 kV Bays	29	29	29	29	29
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
400 kV GIS Bays	7	7	7	7	7
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
220 kV GIS Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	15.757	16.310	16.884	17.472	18.088
<b>Transformers:</b>					
<b>765 kV</b>					
(i) Wardha:Wardha ICT I (765 kV) (1500 MVA) x 1					
(ii) Wardha:Wardha ICT III (765 kV) (1500 MVA) x 1					
(iii) Wardha:Wardha ICT II (765 kV) (1500 MVA) x 1					
<b>400 kV</b>					
(i) Navsari:ICT 1 and 2 (400 kV) (315 MVA) x 2					
(ii) Bhachau:ICT 1 and 2 (400 kV) (315 MVA) x 2					
(iii) Aurangabad:Aurangabad ICT I (400 kV) (315 MVA) x 1					
(iv) Aurangabad:Aurangabad ICT II (400 kV) (315 MVA) x 1					
765 kV (MVA)	4500	4500	4500	4500	4500
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
400 kV (MVA)	1890	1890	1890	1890	1890
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>6091.70</b>	<b>6305.55</b>	<b>6527.59</b>	<b>6759.98</b>	<b>6994.34</b>



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

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

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

.....

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

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

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

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

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

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

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

106. 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).

107. We have considered the submissions of the Petitioner. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and components of the working capital and interest allowed thereon in respect of the Combined Asset for 2019-19 tariff period are as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	507.64	525.46	543.97	563.33	582.86
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	913.75	945.83	979.14	1014.00	1049.15
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	7183.45	7024.21	6846.89	6674.17	6485.07
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>8604.84</b>	<b>8495.50</b>	<b>8370.00</b>	<b>8251.50</b>	<b>8117.08</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital (D*E)</b>	<b>1036.88</b>	<b>955.74</b>	<b>878.85</b>	<b>866.41</b>	<b>852.29</b>

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

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

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Annual Transmission Charges</b>					
A	Depreciation	19235.19	19250.76	19263.96	19263.96	19263.96
B	Interest on Loan	10920.36	9304.20	7693.56	6072.67	4462.69
C	Return on Equity	21141.24	21157.86	21171.95	21171.95	21171.95
D	Interest on Working Capital	6091.70	6305.55	6527.59	6759.98	6994.34
E	O&M Expenses	1036.88	955.74	878.85	866.41	852.29
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>58425.37</b>	<b>56974.11</b>	<b>55535.91</b>	<b>54134.97</b>	<b>52745.23</b>



### **Filing Fees and the Publication Expenses**

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

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

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

111. The Petitioner shall be entitled for reimbursement of licence fees 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. 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.

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



114. In response, the Petitioner has submitted that currently transmission of electricity by an electric transmission utility is exempted from payment of GST. Hence, the transmission charges currently charged are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately.

115. We have considered the submissions of the Petitioner and the Respondent, 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/ Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and consequential IWC.

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



### **Capital Spares**

118. 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**

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

120. To summarize:

- a) The trued-up AFC allowed in respect of the transmission assets or 2014-19 tariff period is as follows:



(₹ in lakh)

Particulars	Combined Asset-A				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	39337.79	38619.16	37797.17	36904.71	36089.03

(₹ in lakh)

Particulars	Combined Asset-B				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	17135.47	17215.05	17047.49	16850.94	16690.94

(₹ in lakh)

Particulars	Asset-C1				
	2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
AFC	489.72	554.07	588.97	611.02	623.71

(₹ in lakh)

Particulars	Asset-C2				
	2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
AFC	580.46	668.96	710.62	727.08	741.85

(₹ in lakh)

Particulars	Asset-C3				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	337.35	337.22	354.00	370.17	360.50

(₹ in lakh)

Particulars	Asset-D1		
	2016-17 (pro-rata 91 days)	2017-18	2018-19
AFC	719.19	3223.28	3361.78

(₹ in lakh)

Particulars	Asset-D2				
	2014-15 (pro-rata 334 days)	2015-16	2016-17	2017-18	2018-19
AFC	359.76	489.25	496.52	498.46	512.17

(₹ in lakh)

Particulars	Asset-D3				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	328.34	399.21	489.91	575.87	589.12





(₹ in lakh)

Particulars	Asset-D4				
	2014-15 (pro-rata 31 days)	2015-16	2016-17	2017-18	2018-19
AFC	2.05	24.36	23.90	23.35	22.82

(₹ in lakh)

Particulars	Asset-D5	
	2017-18 (pro-rata 93 days)	2018-19
AFC	110.78	459.58

(₹ in lakh)

Particulars	Asset-D6	
	2017-18 (pro-rata 91 days)	2018-19
AFC	256.65	1134.57

121. AFC allowed for the Combined Asset for 2019-24 tariff period in this order is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	58425.37	56974.11	55535.91	54134.97	52745.23

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

123. This order disposes of Petition No. 403/TT/2020 along with I.A. No. 14/IA/2022 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		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	1911.58	0.00	0.00	0.00	0.00	0.00	0.00	1911.58	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	3079.40	468.16	155.07	11.37	0.00	0.00	634.60	3714.00	3.34%	110.67	121.08	123.86	124.05	124.05
Transmission Line	190104.91	410.83	34.35	0.00	0.00	0.00	445.18	190550.09	5.28%	10048.39	10060.14	10061.04	10061.04	10061.04
Sub Station	29844.87	214.86	52.84	0.00	0.00	0.00	267.70	30112.57	5.28%	1581.48	1588.55	1589.94	1589.94	1589.94
PLCC	316.45	0.00	0.00	0.00	0.00	0.00	0.00	316.45	6.33%	20.03	20.03	20.03	20.03	20.03
IT Equipment (Incl. Software)	344.30	0.00	0.00	0.00	0.00	0.00	0.00	344.30	5.28%	18.18	18.18	18.18	18.18	18.18
<b>Total</b>	<b>225601.51</b>	<b>1093.85</b>	<b>242.26</b>	<b>11.37</b>	<b>0.00</b>	<b>0.00</b>	<b>1347.48</b>	<b>226948.99</b>	<b>Total</b>	<b>11778.75</b>	<b>11807.98</b>	<b>11813.06</b>	<b>11813.25</b>	<b>11813.25</b>
<b>Average Gross Block (₹ in lakh)</b>										226148.44	226816.49	226943.31	226948.99	226948.99
<b>Weighted Average Rate of Depreciation</b>										5.21%	5.21%	5.21%	5.21%	5.21%



**Combined Asset-B**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	6411.73	64.18	0.00	0.00	0.00	0.00	64.18	6475.91	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	4525.40	401.62	260.73	71.64	788.75	150.01	1672.75	6198.15	3.34%	157.86	168.92	174.47	188.84	204.51
Transmission Line	26292.87	1933.71	137.20	305.52	0.00	0.00	2376.43	28669.29	5.28%	1439.31	1493.99	1505.67	1513.74	1513.74
Sub Station	59126.40	1015.72	220.30	124.47	315.27	0.00	1675.76	60802.16	5.28%	3148.69	3181.32	3190.42	3202.03	3210.35
PLCC	418.07	10.27	2.79	2.15	1.25	0.00	16.46	434.52	6.33%	26.79	27.20	27.36	27.47	27.51
IT Equipment (Incl. Software)	284.27	0.52	0.00	0.00	0.00	0.00	0.52	284.79	5.28%	15.02	15.04	15.04	15.04	15.04
<b>Total</b>	<b>97058.74</b>	<b>3426.01</b>	<b>621.02</b>	<b>503.78</b>	<b>1105.27</b>	<b>150.01</b>	<b>5806.09</b>	<b>102864.83</b>	<b>Total</b>	4787.67	4886.46	4912.96	4947.11	4971.15
<b>Average Gross Block (₹ in lakh)</b>										98771.75	100795.26	101357.66	102162.19	102789.8
<b>Weighted Average Rate of Depreciation</b>										4.85%	4.85%	4.85%	4.84%	4.84%



**Asset-C1**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	112.41	30.81	19.99	50.56	0.00	0.00	101.36	213.77	3.34%	4.27	5.12	6.30	7.14	7.14
Transmission Line	2688.16	69.17	10.48	40.21	0.00	0.00	119.86	2808.02	5.28%	143.76	145.86	147.20	148.26	148.26
Sub Station	256.44	24.42	16.58	100.24	0.00	0.00	141.24	397.68	5.28%	14.18	15.27	18.35	21.00	21.00
PLCC	55.80	4.38	4.18	1.66	0.00	0.00	10.22	66.02	6.33%	3.67	3.94	4.13	4.18	4.18
IT Equipment (Incl. Software)	18.33	0.00	0.00	0.00	0.00	0.00	0.00	18.33	5.28%	0.97	0.97	0.97	0.97	0.97
<b>Total</b>	<b>3131.14</b>	<b>128.78</b>	<b>51.23</b>	<b>192.67</b>	<b>0.00</b>	<b>0.00</b>	<b>372.68</b>	<b>3503.82</b>	<b>Total</b>	<b>166.85</b>	<b>171.16</b>	<b>176.94</b>	<b>181.55</b>	<b>181.55</b>
<b>Average Gross Block (₹ in lakh)</b>										3195.53	3285.54	3407.49	3503.82	3503.82
<b>Weighted Average Rate of Depreciation</b>										5.22%	5.21%	5.19%	5.18%	5.18%



**Asset-C2**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	74.73	20.54	13.33	52.46	0.00	0.00	86.33	161.06	3.34%	2.84	3.40	4.50	5.38	5.38
Transmission Line	2951.88	126.46	16.05	20.14	0.00	0.00	162.65	3114.53	5.28%	159.20	162.96	163.92	164.45	164.45
Sub Station	314.97	36.27	141.87	41.49	0.00	0.00	219.63	534.60	5.28%	17.59	22.29	27.13	28.23	28.23
PLCC	49.58	3.72	4.12	1.46	0.00	0.00	9.30	58.88	6.33%	3.26	3.50	3.68	3.73	3.73
IT Equipment (Incl. Software)	18.33	0.00	0.00	0.00	0.00	0.00	0.00	18.33	5.28%	0.97	0.97	0.97	0.97	0.97
<b>Total</b>	<b>3409.49</b>	<b>186.99</b>	<b>175.37</b>	<b>115.55</b>	<b>0.00</b>	<b>0.00</b>	<b>477.91</b>	<b>3887.40</b>	<b>Total</b>	183.85	193.13	200.20	202.75	202.75
<b>Average Gross Block (₹ in lakh)</b>										3502.99	3684.17	3829.63	3887.40	3887.40
<b>Weighted Average Rate of Depreciation</b>										5.25%	5.24%	5.23%	5.22%	5.22%



**Asset-C3**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	1835.09	88.77	0.00	298.55	0.00	0.00	387.32	2222.41	5.28%	99.24	101.58	109.46	117.34	117.34
Sub Station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1835.09</b>	<b>88.77</b>	<b>0.00</b>	<b>298.55</b>	<b>0.00</b>	<b>0.00</b>	<b>387.32</b>	<b>2222.41</b>	<b>Total</b>	<b>99.24</b>	<b>101.58</b>	<b>109.46</b>	<b>117.34</b>	<b>117.34</b>
<b>Average Gross Block (₹ in lakh)</b>										1879.48	1923.86	2073.14	2222.41	2222.41
<b>Weighted Average Rate of Depreciation</b>										5.28%	5.28%	5.28%	5.28%	5.28%



**Asset-D1**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	13690.65	0.00	0.00	2452.28	1855.74	498.64	4806.66	18497.31	5.28%	0.00	0.00	787.61	901.34	963.49
Sub Station	703.32	0.00	0.00	104.45	64.85	90.56	259.85	963.18	5.28%	0.00	0.00	39.89	44.36	48.47
PLCC	26.20	0.00	0.00	0.14	0.43	0.00	0.57	26.77	6.33%	0.00	0.00	1.66	1.68	1.69
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>14420.17</b>	<b>0.00</b>	<b>0.00</b>	<b>2556.87</b>	<b>1921.01</b>	<b>589.20</b>	<b>5067.08</b>	<b>19487.25</b>	<b>Total</b>	0.00	0.00	829.16	947.38	1013.65
<b>Average Gross Block (₹ in lakh)</b>										0.00	0.00	15698.61	17937.55	19192.65
<b>Weighted Average Rate of Depreciation</b>										N/A	N/A	5.28%	5.28%	5.28%



**Asset-D2**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	48.55	209.26	24.58	11.68	43.46	17.61	306.59	355.14	3.34%	5.12	9.02	9.63	10.55	11.57
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	1408.52	877.14	42.06	9.97	0.71	121.46	1051.34	2459.86	5.28%	97.53	121.79	123.17	123.45	126.67
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	29.61	0.23	0.00	0.00	0.00	0.00	0.23	29.84	5.28%	1.57	1.58	1.58	1.58	1.58
<b>Total</b>	<b>1486.68</b>	<b>1086.63</b>	<b>66.64</b>	<b>21.65</b>	<b>44.17</b>	<b>139.07</b>	<b>1358.16</b>	<b>2844.84</b>	<b>Total</b>	104.21	132.39	134.37	135.57	139.82
<b>Average Gross Block (₹ in lakh)</b>										2029.99	2606.63	2650.77	2683.68	2775.30
<b>Weighted Average Rate of Depreciation</b>										5.13%	5.08%	5.07%	5.05%	5.04%





**Asset-D3**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	39.55	157.41	18.50	8.79	4.21	18.94	207.85	247.40	3.34%	3.95	6.89	7.34	7.56	7.95
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	1148.85	635.16	35.08	1010.77	44.90	127.47	1853.38	3002.22	5.28%	77.43	95.12	122.73	150.60	155.15
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	14.82	0.09	0.00	0.00	0.00	0.00	0.09	14.92	5.28%	0.79	0.79	0.79	0.79	0.79
<b>Total</b>	<b>1203.22</b>	<b>792.66</b>	<b>53.58</b>	<b>1019.56</b>	<b>49.11</b>	<b>146.41</b>	<b>2061.32</b>	<b>3264.54</b>	<b>Total</b>	82.16	102.80	130.86	158.95	163.89
										<b>Average Gross Block (₹ in lakh)</b>				
										<b>Weighted Average Rate of Depreciation</b>				
										1599.55	2022.67	2559.24	3093.57	3191.33
										5.14%	5.08%	5.11%	5.14%	5.14%



**Asset-D4**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	123.87	5.25	1.20	0.00	0.00	0.00	6.45	130.32	5.28%	6.68	6.85	6.88	6.88	6.88
Sub Station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>123.87</b>	<b>5.25</b>	<b>1.20</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.45</b>	<b>130.32</b>	<b>Total</b>	<b>6.68</b>	<b>6.85</b>	<b>6.88</b>	<b>6.88</b>	<b>6.88</b>
<b>Average Gross Block (₹ in lakh)</b>										<b>126.49</b>	<b>129.72</b>	<b>130.32</b>	<b>130.32</b>	<b>130.32</b>
<b>Weighted Average Rate of Depreciation</b>										<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>



**Asset-D5**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	2375.98	0.00	0.00	0.00	50.50	311.10	361.60	2737.58	5.28%	0.00	0.00	0.00	126.78	136.33
Sub Station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>2375.98</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>50.50</b>	<b>311.10</b>	<b>361.60</b>	<b>2737.58</b>	<b>Total</b>	0.00	0.00	0.00	126.78	136.33
<b>Average Gross Block (₹ in lakh)</b>										0.00	0.00	0.00	2401.23	2582.03
<b>Weighted Average Rate of Depreciation</b>										N/A	N/A	N/A	5.28%	5.28%



**Asset-D6**

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-15	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	5156.31	0.00	0.00	0.00	1050.01	348.80	1398.81	6555.12	5.28%	0.00	0.00	0.00	299.97	336.90
Sub Station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>5156.31</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1050.01</b>	<b>348.80</b>	<b>1398.81</b>	<b>6555.12</b>	<b>Total</b>	0.00	0.00	0.00	299.97	336.90
<b>Average Gross Block (₹ in lakh)</b>										0.00	0.00	0.00	5681.32	6380.72
<b>Weighted Average Rate of Depreciation</b>										N/A	N/A	N/A	5.28%	5.28%



## Annexure-II

## Combined Asset

2019-24		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2019 (₹ in lakh)	2019-20	2020-21	2021-22	2022-23	2023-24	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation	2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	8387.49	0.00	0.00	0.00	0.00	0.00	0.00	8387.49	-	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	10889.52	0.00	0.00	0.00	0.00	0.00	0.00	10889.52	3.34%	363.71	363.71	363.71	363.71	363.71
Transmission Line	255316.80	90.00	500.00	0.00	0.00	0.00	590.00	255906.80	5.28%	13483.10	13498.68	13511.88	13511.88	13511.88
Sub Station	98951.95	0.00	0.00	0.00	0.00	0.00	0.00	98951.95	5.28%	5224.66	5224.66	5224.66	5224.66	5224.66
PLCC	902.64	0.00	0.00	0.00	0.00	0.00	0.00	902.64	6.33%	57.14	57.14	57.14	57.14	57.14
IT Equipment (Incl. Software)	710.49	0.00	0.00	0.00	0.00	0.00	0.00	710.49	15.00%	106.57	106.57	106.57	106.57	106.57
<b>Total</b>	<b>375158.89</b>	<b>90.00</b>	<b>500.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>590.00</b>	<b>375748.89</b>	<b>Total</b>	<b>19235.19</b>	<b>19250.76</b>	<b>19263.96</b>	<b>19263.96</b>	<b>19263.96</b>
<b>Average Gross Block (₹ in lakh)</b>										<b>375203.89</b>	<b>375498.89</b>	<b>375748.89</b>	<b>375748.89</b>	<b>375748.89</b>
<b>Weighted Average Rate of Depreciation</b>										<b>5.13%</b>	<b>5.13%</b>	<b>5.13%</b>	<b>5.13%</b>	<b>5.13%</b>

