

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 372/TT/2020**

**Coram:**

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

**Date of Order: 02.01.2024**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, for truing up of transmission tariff of the 2014-19 period under the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 for assets under "Eastern Region Strengthening Scheme-III (ERSS-III)" in the Eastern Region.

**And in the matter of:**

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

**....Petitioner**

**Vs.**

1. Bihar State Power (Holding) Company Limited,  
(Formerly Bihar State Electricity),  
Vidyut Bhavan, Bailey Road,  
Patna-800001.
2. West Bengal State Electricity Distribution Company Limited,  
Bidyut Bhawan, Bidhan Nagar,  
Block DJ, Sector-II, Salt Lake City,  
Calcutta-700091.
3. Grid Corporation of Orissa Limited,  
Shahid Nagar,  
Bhubaneswar-751007.
4. Damodar Valley Corporation,  
DVC Tower, Maniktala,  
Civic Centre, VIP Road,  
Calcutta-700054.



5. Power Department,  
Government of Sikkim,  
Gangtok-737101.
6. Jharkhand State Electricity Board,  
In Front of Main Secretariat,  
Doranda,  
Ranchi-834002.
7. Jharkhand Urja Sancharan Nigam Limited,  
JUSNL Building, Kusai Colony,  
Doranda,  
Ranchi-834002.
8. Odisha Power Transmission Corporation Limited,  
Janpath,  
Bhubaneswar-751022.

....Respondent(s)

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

**For Respondents** : None

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for truing up of transmission tariff for the period from the date of Commercial Operation (COD) to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as 'the 2014 Tariff Regulations') and determination of transmission tariff for the 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 twenty two assets (hereinafter referred to as the "transmission assets") covered in the "Eastern Region Strengthening Scheme-III (ERSS-III)" in the Eastern Region (hereinafter referred to as 'transmission project'):



**Asset-1:** Combined Asset comprising of: (Asset-1) LILO of 400 kV S/C Meramundali-Jeypore line at Bolangir and associated bays alongwith 2 numbers 50 MVAR Shunt Reactors and 01 number 315 MVA ICT (ICT-II) and associated bays and 2 numbers 220 kV line bays (COD: 1.9.2012), (Asset-2) Installation of 01 number 80 MVAR Bus Reactor and associated bay at Bolangir (COD: 1.10.2012), (Asset-3) 01 number 315 MVA ICT-I & associated bays and 2 numbers 220 kV line bays at Bolangir (COD: 1.11.2012), (Asset-4) LILO of 400 kV S/C Baripada-Rengali Line at Keonjhar and associated bays at Keonjhar (COD: 1.2.2013), (Asset-5) Installation of 01 number of 400/220 kV, 315 MVA (1<sup>st</sup>) ICT alongwith associated bays and 2 numbers 220 kV Line Bays at Keonjhar Sub-station (COD: 1.2.2013), (Asset-6) Installation of 01 number of 400/220 kV, 315 MVA (2<sup>nd</sup>) ICT alongwith associated bays and 2 numbers 220 kV Line Bays at Keonjhar Sub-station (COD:1.3.2013), (Asset-7) Installation of 01 number 80 MVAR, 420 kV Bus Reactor and associated bays at Keonjhar Sub-station (COD: 1.2.2013), (Asset-8) LILO of Kahalgaon-Biharshariff 400 kV D/C Transmission Line (2<sup>nd</sup> Line) alongwith associated bays at Banka, 400/132 kV, 200 MVA ICT-I with associated bays at Banka Sub-Station and 2 numbers 132 kV line bays at Banka Sub-Station (COD: 1.12.2012), (Asset-9) 400/132 kV, 200 MVA ICT-II with associated bays at Banka Sub-station (COD: 1.1.2013), and (Asset-10) 2x50 MVAR Switchable Line Reactor at Banka Sub-station and 400 kV, 1X80 MVAR Bus Reactor with associated bays at Banka Sub-station;

**Asset-2:** Combined Asset of LILO of Ckt.- I of 400 kV D/C Kahalgaon-Biharsharif at Lakhisarai alongwith associated bays; 400/132 kV 200 MVA ICT I at Lakhisarai Sub-station alongwith associated bays; 400 kV 80 MVAR Bus Reactor alongwith associated bays at Lakhisarai Sub-station and 2 numbers 132 kV line bays at Lakhisarai Sub-station;

**Asset-3:** 400/132 kV 200 MVA ICT-II alongwith associated bays at Lakhisarai Sub-station;

**Asset-4:** LILO of Ckt.-II of 400 kV D/C Kahalgaon-Biharsharif at Lakhisarai alongwith associated bays with 2 numbers of 50 MVAR line reactor;

**Asset-5:** 2 numbers 132 kV line bays at Lakhisarai Sub-station;

**Asset-6:** LILO of one circuit of Jamshedpur-Rourkela 400 kV D/C transmission line at Chaibasa;

**Asset-7:** 02 numbers of 220 kV line bays at Chaibasa;

**Asset-8:** 80 MVAR Bus Reactor alongwith associated bay at Chaibasa Sub-station;

**Asset-9:** 400/220 kV 315 MVA ICT-II alongwith associated bays at Chaibasa Sub-station;

**Asset-10:** LILO of I ckt. of 400 kV D/C Baripada-Mendhasal transmission line at Duburi Sub-station alongwith associated bays;



**Asset-11:** 315 MVA ICT-I at Chaibasa Sub station;

**Asset-12:** 02 numbers 220 kV line bays at Chaibasa Sub-station;

**Asset-13:** LILO of 400 kV D/C Baripada-Mendhasal line and associated bays at Pandiabilli GIS; 01 number 500 MVA, 3 phase 400/220 kV, transformer (1<sup>st</sup>) and associated bays at Pandiabilli GIS alongwith 06 numbers 220 kV line bays at Pandiabilli; 01 number 80 MVAR, 400 kV Bus Reactor and associated bay at Pandiabilli GIS; Shifting of 02 numbers 63 MVAR, 400 kV Line Reactor-I from Mendhasal end of 400 kV D/C Baripada-Mendhasal Transmission Line to Pandiabilli end (Switchable) of 400 kV D/C Baripada-Pandiabilli Transmission Line and associated bay at Pandiabilli GIS;

**Asset-14:** Combined Asset consisting of: 400 kV D/C Sasaram-Daltonganj Transmission Line at Daltonganj Sub-station; 400/220 kV, 315 MVA ICT-I alongwith bays at Daltonganj Sub-station; and 400 kV 80 MVAR Bus Reactor at Daltonganj Sub-station;

**Asset-15:** 400/220 kV, 315 MVA ICT-II alongwith bays at Daltonganj Sub-station;

**Asset-16:** 04 numbers 220 kV line bays at Daltonganj Sub-station;

**Asset-17:** Provision of Circuit Breakers for making line reactors at Biharshariff Sub-station switchable;

**Asset-18:** 01 number 80 MVAR Bus Reactor at Duburi Sub station;

**Asset-19:** LILO of 2<sup>nd</sup> Ckt. of 400 kV D/C Jamshedpur-Rourkela Transmission Line at Chaibasa Sub-station (non-bussed at Chaibasa);

**Asset-20:** 01 number 500 MVA, 3 phase 400/220 kV, transformer (2<sup>nd</sup>) and associated bays at Pandiabilli GIS;

**Asset-21:** 400 kV, 50 MVAR Line Reactor-I at Daltonganj Sub-station, and

**Asset-22:** 400 kV, 50 MVAR Line Reactor-II at Daltonganj Sub-station

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

- "1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9.1 and 10.0 above.*
- 2) Approve the Completion cost and additional capitalization incurred during 2014-19.*
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum*



*Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.1 and 10.0 above for respective block.*

- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*
- 7) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 8) Allow the petitioner to claimed initial spares project as whole.*
- 9) Allow the petitioner to claimed IEDC as per actual expenditure.*
- 10) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.6 above.*
- 11) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./ municipal authorities shall be allowed to be recovered from the beneficiaries.*

*and pass such other relief as 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) Investment Approval ('IA') for the transmission project was accorded in the 237<sup>th</sup> meeting of the Board of Directors of the Petitioner's Company held on 2.7.2010 and conveyed vide Memorandum Ref. No. C/CP/ERSS-III dated 7.7.2010 at an estimated cost of ₹127280 lakh including an IDC of ₹8152 lakh based on 1<sup>st</sup> quarter, 2010 price level.
- (b) Revised Cost Estimate (RCE) of the transmission project was accorded by the Board of Directors of the Petitioner's Company in its 326<sup>th</sup> meeting held on 9.3.2016 at an estimated cost of ₹173110 lakh including an IDC of ₹15131



lakh based on October, 2015 price level (communicated vide Memorandum No. C/CP/RCE:ERSS-III dated 11.3.2016).

(c) The scope of the scheme was discussed and agreed upon in meeting of Standing Committee on Power System in Eastern Region held on 8.11.2008 at Bhubaneswar. The scheme was also discussed and approved in the 8<sup>th</sup> ERPC meeting dated 21.11.2008 and special meeting of ERPC held on 30.12.2008 at Kolkata.

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

#### **Transmission Lines**

1. Sasaram -Daltonganj 400 kV D/C Line
2. Mendhasal-Uttara\* 400 kV D/C Line
3. LILO of Kahalgaon-Biharsharif 400 kV D/C Line (1<sup>st</sup> line) at Lakhisarai
4. LILO of Kahalgaon-Biharsharif 400 kV D/C Line (2<sup>nd</sup> line) at Banka
5. LILO of Meramundali-Jeypore 400 kV S/C Line at Bolangir
6. LILO of Rengali-Baripada 400 kV S/C Line at Keonjhar
7. LILO of one circuit of Baripada-Mendhasal 400 kV D/C Line at Duburi (OPTCL)
8. LILO of both circuits of Jamshedpur-Rourkela 400 kV D/C Transmission Line at Chaibasa (out of the two LILOs bussing of one LILO at Chaibasa, the 2<sup>nd</sup> LILO would be routed through Chaibasa but not bussed at Chaibasa).

#### **Sub-stations**

1. New 400/220 kV Sub-station at Daltonganj
  - a) 2x315 MVA, 400/220 kV transformer with associated bays
  - b) 2 numbers of 400 kV line bays (for Sasaram-Daltonganj 400 kV D/C)
  - c) 6 numbers of 220 kV line bays
2. New 400/132 kV Sub-station at Lakhisarai
  - a) 2x200 MVA, 400/132 kV transformer with associated bays



- b) 4 numbers of 400 kV line bays (for LILO of Kahalgaon-Biharsharif 400 kV D/C-one double circuit line)
  - c) 4 numbers of 132 kV line bays
3. New 400/132 kV Sub-station at Banka
- a) 2x200 MVA, 400/132 kV Transformer with associated bays
  - b) 4 numbers of 400 kV line bays (for LILO of Kahalgaon Biharsharif 400 kV D/C-other double circuit line)
  - c) 4 numbers of 132 kV line bays
4. New 400/220 kV Sub-station at Bolangir
- a) 2x315 MVA, 400/220 kV transformer with associated bays
  - b) 2 numbers of 400 kV line bays (for Meramundali-Jeypore 400 kV S/C)
  - c) 4 numbers of 220 kV line bays
5. New 400/220 kV Sub-station at Chaibasa
- a) 2x315 MVA, 400/220 kV transformer with associated bays
  - b) 2 numbers of 400 kV line bays (for bussing of LILO of one circuit)
  - c) 4 numbers of 220 kV line bays
6. New 400/220 kV Sub-station at Keonjhar
- a) 2x315 MVA, 400/220 kV Transformer with associated bays
  - b) 2 numbers of 400 kV line bays (for LILO of Rengali-Baripada 400 kV S/C)
  - c) 4 numbers of 220 kV line bays
7. Extension at Sasaram 400 kV Sub-station
- a) 2 numbers 400 kV Line bays (for Sasaram -Daltonganj 400 kV D/C)
8. Extension at Duburi 400 kV Sub-station
- a) 2 numbers 400 kV Line bays (for LILO of one ckt. of Baripada-Mendhasal line)
9. Provision of Circuit Breakers for making line reactors at Biharsharif Sub-station switchable.

\*The establishment of 2x315 MVA, 400/220 kV Sub-station at Uttara in Odisha along with 400 kV Uttara-Mendhasal D/C line was approved as a part of



Eastern Region Strengthening Scheme (ERSS-III) in the SCM held on 14.9.2009. As the land identified for Uttara Sub-station was earmarked for international airport, the Petitioner alongwith OPTCL identified another land at Begunia. Due to the land acquisition problems at Begunia, OPTCL again identified a land at Pattanaikaya between Bhubaneswar and Puri. Hence, establishment of 400/220 kV, 2x315 MVA GIS Sub-station at Pattanaikaya alongwith a 400 kV D/C line to Mendhasal was discussed and agreed in the Standing Committee meeting held on 8.2.2012. In the meeting, it was also decided that the Petitioner and OPTCL would make a joint site visit to firm up the sub-station land. Further, after the site visit, it was decided that the proposed GIS Sub-station at Pattanaikaya would be relocated to Pandiabilli. It was also decided to LILO Baripada-Mendhasal D/C line at Pandiabilli, instead of a direct D/C line between Mendhasal and Pandiabilli. CEA vide its letter dated 29.6.2012 agreed for the in-principle of the same. The modified scope for establishment of new 2x315 MVA, 400/220 kV GIS at Pandiabilli is as follows which would be implemented by the Petitioner:

i) 2x315 MVA, 400/220 kV GIS Sub-station at Pandiabilli

ii) LILO of both circuits of Baripada-Mendhasal 400 kV D/C line at Pandiabilli.

(e) The details of the transmission tariff allowed by the Commission for 2014-19 tariff period in respect of the transmission assets under the transmission project covered in the various petitions are as follows:

Sl. No.	Name of Asset	COD	Petition No.
1	<b>Asset-1:</b> Combined Asset comprising of: (Asset-1) LILO of 400 kV S/C Meramundali-Jeypore line at Bolangir and associated bays alongwith 2 numbers 50 MVAR Shunt Reactors and 01 number 315 MVA ICT (ICT-II) and associated bays and 2 numbers 220 kV line bays (COD: 1.9.2012), (Asset-2) Installation of 01 number 80 MVAR Bus Reactor and associated bay at Bolangir (COD: 1.10.2012), (Asset-3) 01 number 315 MVA ICT-I & associated bays and 2 numbers 220 kV line bays at Bolangir (COD: 1.11.2012), (Asset-4) LILO of 400 kV S/C Baripada-Rengali Line at Keonjhar and associated bays at Keonjhar (COD: 1.2.2013), (Asset-5) Installation of 01 number of 400/220 kV, 315 MVA (1st) ICT alongwith associated bays and 2 numbers 220 kV Line Bays at Keonjhar Sub-station (COD: 1.2.2013), (Asset-6) Installation of 01 No. of 400/220 kV, 315 MVA (2nd) ICT alongwith associated bays and 2 numbers 220 kV Line Bays	1.12.2012	<b>Covered in the instant petition</b> (Tariff for the 2009-14 period was covered in Petition Nos. 92/TT/2012, 202/TT/2012 and 213/TT/2012. Truing up of tariff of the 2009-14 period and determination of the tariff for the 2014-19 tariff is allowed by the Commission vide order dated 21.3.2016 in Petition No. 30/TT/2015.



	at Keonjhar Sub-station (COD:1.3.2013), (Asset-7) Installation of 01 No. 80 MVAR, 420 kV Bus Reactor and associated bays at Keonjhar Sub-station (COD: 1.2.2013), (Asset-8) LILO of Kahalgaon-Biharshariff 400 kV D/C Transmission Line (TL) (2nd Line) alongwith associated bays at Banka, 400/132 kV, 200 MVA ICT-I with associated bays at Banka Sub-Station and 2 numbers 132 kV line bays at Banka Sub-Station (COD: 1.12.2012), (Asset-9) 400/132 kV, 200 MVA ICT-II with associated bays at Banka Sub-station (COD: 1.1.2013), and (Asset-10) 2x50 MVAR Switchable Line Reactor at Banka Sub-station and 400 kV, 1X80 MVAR Bus Reactor with associated bays at Banka Sub-station (COD: 1.2.2013)		
2	<b>Asset-2:</b> Combined Asset of LILO of Ckt.- I of 400 kV D/C Kahalgaon-Biharshariff at Lakhisarai alongwith associated bays; 400/132 kV 200 MVA ICT I at Lakhisarai Sub-station alongwith associated bays; 400 kV 80 MVAR Bus Reactor alongwith associated bays at Lakhisarai Sub-station and 2 numbers 132 kV line bays at Lakhisarai Sub-station.	1.4.2014*	<b>Covered in the instant petition</b> (The Commission allowed tariff for the 2014-19 tariff period in Petition No. 85/TT/2015 vide its order dated 24.2.2017.
3	<b>Asset-3:</b> 400/132 kV 200 MVA ICT-II alongwith associated bays at Lakhisarai Sub-station.	1.6.2014*	
4	<b>Asset-4:</b> LILO of Ckt.-II of 400 kV D/C Kahalgaon-Biharshariff at Lakhisarai alongwith associated bays with 2 numbers of 50 MVAR line reactor.	3.9.2014*	
5	<b>Asset-5:</b> 2 numbers 132 kV line bays at Lakhisarai Sub-station.	29.9.2014*	
6	<b>Asset-6:</b> LILO of one circuit of Jamshedpur – Rourkela 400 kV D/C Trans Line at Chaibasa.	3.12.2014*	
7	<b>Asset-7:</b> 02 numbers of 220 kV line bays at Chaibasa.	3.12.2014*	
8	<b>Asset-8:</b> 80 MVAR Bus Reactor alongwith associated bay at Chaibasa Sub-station.	26.11.2015*	
9	<b>Asset-9:</b> 400/220 kV 315 MVA ICT-II alongwith associated bays at Chaibasa Sub-station.	3.12.2014*	<b>Covered in the instant petition</b> (The Commission allowed tariff for the 2014-19 period in Petition No. 278/TT/2015 vide order dated 20.9.2017)
10	<b>Asset-10:</b> LILO of I ckt. of 400 kV D/C Baripada-Mendhasal transmission line at Duburi Sub- station alongwith associated bays.	19.8.2015	
11	<b>Asset-11:</b> 315 MVA ICT-I at Chaibasa Sub station.	22.1.2015	
12	<b>Asset-12:</b> 02 numbers 220 kV line bays at Chaibasa Sub-station.	3.3.2016	
13	<b>Asset-13:</b> LILO of 400 kV D/C Baripada-Mendhasal line and associated bays at Pandiabilli GIS; 01 number 500 MVA, 3 phase 400/220 kV, transformer (1st) and associated bays at Pandiabilli GIS alongwith 06 numbers 220 kV line bays at Pandiabilli; 01 numbers 80 MVAR, 400 kV Bus Reactor and associated bay at Pandiabilli GIS; Shifting of 02 numbers 63 MVAR, 400 kV Line Reactor-I from Mendhasal end of 400 kV D/C Baripada-Mendhasal Transmission Line to	31.7.2016	



	Pandiabilli end (Switchable) of 400 kV D/C Baripada-Pandiabilli Transmission Line and associated bay at Pandiabilli GIS.		
14	<b>Asset-14:</b> Combined Asset consisting of: 400 kV D/C Sasaram-Daltonganj Transmission Line at Daltonganj Sub-station; 400/220 kV, 315 MVA ICT-I alongwith bays at Daltonganj Sub-station; and 400 kV 80 MVAR Bus Reactor at Daltonganj Sub-station.	31.3.2018	<b>Covered in the instant petition</b> (The Commission allowed tariff for the 2014-19 period in Petition No. 105/TT/2018 vide order dated 21.11.2019)
15	<b>Asset-15:</b> 400/220 kV, 315 MVA ICT-II alongwith bays at Daltonganj Sub-station.	5.11.2018	
16	<b>Asset-16:</b> 04 numbers 220 kV line bays at Daltonganj Sub-station.	16.9.2018**	
17	<b>Asset-17:</b> Provision of Circuit Breakers for making line reactors at Biharshariff Sub-station switchable.	14.3.2019	
18	<b>Asset-18:</b> 01 number 80 MVAR Bus Reactor at Duburi Sub station.	19.8.2015	
19	<b>Asset-19:</b> LILO of 2nd Ckt. of 400 kV D/C Jamshedpur-Rourkela Transmission Line at Chaibasa Sub-station (non-bussed at Chaibasa)	2.11.2015	
20	<b>Asset-20:</b> 01 number 500 MVA, 3 phase 400/220 kV, transformer (2nd) and associated bays at Pandiabilli GIS.	18.11.2017	<b>Covered in the instant petition</b> (The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 did not allow tariff for the 2014-19 period . Therefore, the Petitioner has re-filed the tariff in respect of this asset in the present petition along with de-capitalization details)
21	<b>Asset-21:</b> 400 kV, 50 MVAR Line Reactor-I at Daltonganj Sub-station	29.9.2018	
22	<b>Asset-22:</b> 400 kV, 50 MVAR Line Reactor-II at Daltonganj Sub-station	3.8.2019	<b>Covered in the instant petition</b> (The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 for the 2014-19 did not allow the tariff due to non-execution of the asset in 2014-19 tariff period. Therefore, the Petitioner has re-filed the asset here along with de-capitalization details)

\* COD of the Asset-2 to Asset-9 has been approved under proviso (ii) to clause (3) of Regulation 4 of the 2014 Tariff Regulations.

\*\* COD of Asset-16 has been approved under proviso (ii) to clause (3) of Regulation 4 of the 2014 Tariff Regulations.



- (f) The Petitioner has submitted that Asset-1 was executed during the 2009-14 tariff period; Assets-2 to 21 have been executed during the 2014-19 tariff period, and that Asset-22 has been executed during the 2019-24 tariff period.
- (g) The Petitioner vide affidavit dated 13.1.2021 has submitted that the entire scope of work defined under the transmission project (i.e. ERSS–III) has been completed and is covered in the instant petition, and that no transmission tariff petition remains to be filed in respect of any of the elements/assets covered in the transmission project.
- (h) The details of the transmission tariff allowed by the Commission for the 2014-19 tariff period in respect of the transmission assets are as follows:
- (i) Asset-1 vide order dated 21.3.2016 in Petition No. 30/TT/2015.
  - (ii) Assets-2-9 vide order dated 24.2.2017 in Petition No. 85/TT/2015.
  - (iii) Assets-10-13 vide order dated 20.9.2017 in Petition No.278/TT/2015.
  - (iv) Assets-14-20 vide order dated 21.11.2019 in Petition No.105/TT/2018.
  - (v) Tariff for Assets-21 and 22 is yet to be determined.
- (i) With regard to Asset-21 (Asset-I(A)(ii) in Petition No. 105/TT/2018), the Commission vide order dated 21.11.2019 in Petition No.105/TT/2018, did not allow the tariff and held that tariff shall be allowed only after de-capitalisation of old asset i.e. 50 MVAR Line Reactor at Agra and associated cost of bays and adjustment of cumulative depreciation etc. The relevant portion of the said order dated 21.11.2019 is extracted as follows:
- “22. Allowing tariff for 50 MVAR Bus Reactor at Daltonganj without decapitalisation of the existing 50 MVAR Line Reactor at Agra would tantamount to servicing two assets for the same purpose. Therefore, tariff for Asset-I(A)(ii) shall be allowed only after decapitalisation of old asset i.e. 50 MVAR Line Reactor at Agra and associated cost of bays and adjustment of cumulative depreciation etc. The Petitioner is directed to file a separate petition claiming tariff for 50 MVAR Line Reactor at Daltonganj along with the details of decapitalisation within three months of issue of this order.”*



- (j) In compliance to the direction of the Commission in Petition No. 105/TT/2018, the Petitioner has filed details of Asset-21 in the instant petition for approval of tariff for the 2014-19 (including truing-up) based on actual expenditure and determination of tariff for the 2019-24 period.
- (k) With regard to Asset-22 (Asset-I(A)(iii) in Petition No. 105/TT/2018), the Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 observed that the asset was not then executed and directed the Petitioner to submit fresh petition after execution of the same. The relevant portion of the said order dated 21.11.2019 is in Petition No. 105/TT/2018 extracted as follows:

*“23. Further, the Petitioner has submitted that Asset-I(A)(iii) is yet to be commissioned. Therefore, the Petitioner is directed to submit fresh petition after actual commissioning of the Asset. Accordingly, we are not proceeding with the tariff determination in respect of Asset-I(A)(ii) & I(A)(iii) as of now.”*

- (l) In compliance to the above directions of the Commission in Petition No. 105/TT/2018, the Petitioner has furnished the details of Asset-22 (i.e. Asset-I (A) (iii) in Petition No.105/TT/2018) for determination of tariff for the 2019-24 period and submitted that Asset-22 is the last element under the transmission project and as such the Petitioner has claimed its tariff for the 2019-24 period in the present petition.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers



by the Petitioner. Bihar State Power Holding Company Limited (BSPHCL), Respondent No. 1 has filed its reply vide affidavit dated 10.9.2021. BSPHCL has raised the issues of Return on Equity (RoE), Additional Capital Expenditure (ACE), GST, floating rate of interest, filing fees and expenses and sharing of transmission charges. The Petitioner has filed its rejoinder to the reply of BSPHCL vide affidavit dated 4.10.2021. The issues raised by the Respondents and the clarifications given by the Petitioner have been considered in the relevant portions of this order.

6. The hearing in this matter was held on 28.6.2022 through video conference and the order was reserved.

7. During the course of hearing on 31.8.2021, BSPHCL informed that an Appeal under DFR No. 184 of 2020 has been filed by South Bihar Power Distribution Company Limited & Others before the Appellate Tribunal for Electricity (APTEL) against the Commission's order dated 24.2.2017 in Petition No. 85/TT/2015 to the extent of approval of COD of Assets-2, 3 and 4 in the said petition which relate to Assets-2 to 4 of the present petition and condonation of time over-run of Assets-2 to 5 of the instant petition. BSPHCL has further submitted that the issue of transmission charges from COD till the commercial operation of the downstream network with respect to instant Asset-2, Combined Asset comprising of LILO of Ckt.-I of 400 kV D/C Kahalgaon-Biharsharif at Lakhisarai alongwith associated bays; 400/132 kV 200 MVA ICT-I at Lakhisarai Sub-station alongwith associated bays; 400 kV 80 MVAR Bus Reactor alongwith associated bays at Lakhisarai Sub-station and 2 numbers 32 kV line bays at Lakhisarai Sub-station, Asset-3: 400/132 kV 200 MVA ICT-II alongwith associated bays at Lakhisarai Sub-station and Asset-4: LILO of Ckt-II of 400 kV D/C Kahalgaon-Biharsharif at Lakhisarai alongwith associated bays with 2 numbers of 50 MVAR line reactor corresponding to Assets-1, 2 and 3 respectively in Petition No. 85/TT/2015 is also under challenge in DFR No. 184 of 2020.



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

9. This order is being issued considering the submissions made by the Petitioner in the petition, the Petitioner's affidavits dated 19.2.2020 and 13.1.2021 and the reply filed by BSPHCL vide affidavit dated 10.9.2021 and the Petitioner's rejoinder vide affidavit dated 4.10.2021.

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

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

#### **Asset-1**

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1485.43	1566.03	1593.33	1626.82	1646.44
Interest on Loan	1670.38	1626.12	1508.98	1384.92	1254.31
Return on Equity	1752.07	1851.18	1880.81	1918.31	1945.50
O&M Expenses	2010.75	2077.48	2146.46	2217.73	2291.28
Interest on Working Capital	224.05	230.85	233.28	235.99	238.13
<b>Total</b>	<b>7142.68</b>	<b>7351.66</b>	<b>7362.86</b>	<b>7383.77</b>	<b>7375.66</b>

#### **Asset-2**

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	307.85	354.65	402.96	428.53	440.41
Interest on Loan	367.03	389.43	408.88	399.73	374.50
Return on Equity	368.15	422.25	477.26	507.29	522.19
O&M Expenses	344.43	355.87	367.68	379.90	392.50
Interest on Working Capital	43.04	46.51	49.98	51.73	52.46
<b>Total</b>	<b>1430.50</b>	<b>1568.71</b>	<b>1706.76</b>	<b>1767.18</b>	<b>1782.06</b>

#### **Asset-3**

	(₹ in lakh)				
Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	59.04	84.51	103.82	116.58	118.54
Interest on Loan	77.16	100.77	112.85	116.00	107.92
Return on Equity	74.03	104.64	126.65	141.74	144.75
O&M Expenses	75.33	93.45	96.55	99.76	103.07



Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	9.00	11.84	13.24	14.13	14.24
<b>Total</b>	<b>294.56</b>	<b>395.21</b>	<b>453.11</b>	<b>488.21</b>	<b>488.52</b>

#### Asset-4

(₹ in lakh)

Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	61.72	119.99	132.26	136.60	140.34
Interest on Loan	73.26	132.55	134.20	125.91	117.65
Return on Equity	71.85	139.56	153.27	158.35	162.97
O&M Expenses	76.73	137.82	142.40	147.13	152.00
Interest on Working Capital	9.00	16.64	17.53	17.81	18.09
<b>Total</b>	<b>292.56</b>	<b>546.56</b>	<b>579.66</b>	<b>585.80</b>	<b>591.05</b>

#### Asset-5

(₹ in lakh)

Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	6.08	16.22	23.96	30.47	33.94
Interest on Loan	11.25	25.95	32.96	37.93	38.86
Return on Equity	10.78	26.18	35.67	43.95	48.16
O&M Expenses	30.40	62.30	64.36	66.50	68.72
Interest on Working Capital	2.33	5.02	5.69	6.26	6.58
<b>Total</b>	<b>60.84</b>	<b>135.67</b>	<b>162.64</b>	<b>185.11</b>	<b>196.26</b>

#### Asset-6

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	43.88	139.65	144.09	147.02	149.48
Interest on Loan	50.04	150.93	143.90	134.94	124.72
Return on Equity	48.50	155.05	160.87	165.07	168.27
O&M Expenses	42.74	135.46	139.96	144.61	149.39
Interest on Working Capital	5.64	17.74	18.06	18.28	18.44
<b>Total</b>	<b>190.80</b>	<b>598.83</b>	<b>606.88</b>	<b>609.92</b>	<b>610.30</b>

#### Asset-7

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	12.03	39.98	43.62	45.17	47.61
Interest on Loan	18.02	55.06	53.99	49.30	47.31
Return on Equity	16.06	52.99	57.05	58.79	61.69



Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	27.52	87.22	90.12	93.10	96.20
Interest on Working Capital	2.58	8.23	8.54	8.67	8.92
<b>Total</b>	<b>76.21</b>	<b>243.48</b>	<b>253.32</b>	<b>255.03</b>	<b>261.73</b>

#### Asset-8

(₹ in lakh)

Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
Depreciation	17.26	51.68	53.17	55.39
Interest on Loan	20.43	58.22	54.89	52.60
Return on Equity	19.88	59.47	61.21	64.11
O&M Expenses	21.62	64.37	66.51	68.71
Interest on Working Capital	2.52	7.45	7.57	7.76
<b>Total</b>	<b>81.71</b>	<b>241.19</b>	<b>243.35</b>	<b>248.57</b>

#### Asset-9

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	27.57	105.98	119.36	122.01	124.11
Interest on Loan	32.24	116.45	121.73	113.76	105.46
Return on Equity	31.31	120.46	135.43	138.53	141.64
O&M Expenses	33.42	105.91	109.43	113.06	116.81
Interest on Working Capital	3.94	13.74	14.71	14.86	15.00
<b>Total</b>	<b>128.48</b>	<b>462.54</b>	<b>500.66</b>	<b>502.22</b>	<b>503.02</b>

#### Asset-10

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Depreciation	152.87	266.06	284.34	285.11
Interest on Loan	189.21	298.05	268.45	238.95
Return on Equity	171.25	297.89	318.35	320.07
O&M Expenses	84.18	140.85	145.53	150.35
Interest on Working Capital	16.47	27.62	28.09	27.74
<b>Total</b>	<b>613.98</b>	<b>1030.47</b>	<b>1044.76</b>	<b>1022.22</b>

#### Asset-11

(₹ in lakh)

Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	17.85	98.04	103.16	105.84	108.11
Interest on Loan	24.02	120.70	112.26	96.93	88.39
Return on Equity	20.37	112.26	117.98	121.08	124.14
O&M Expenses	19.38	105.91	109.43	113.06	116.81



Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	2.50	13.47	13.72	13.70	13.83
<b>Total</b>	<b>84.12</b>	<b>450.38</b>	<b>456.55</b>	<b>450.61</b>	<b>451.28</b>

#### Asset-12

(₹ in lakh)

Particulars	2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
Depreciation	3.67	48.20	50.60	52.65
Interest on Loan	5.13	64.78	62.94	60.93
Return on Equity	4.93	64.35	67.11	70.03
O&M Expenses	6.91	90.12	93.10	96.20
Interest on Working Capital	0.70	9.06	9.30	9.54
<b>Total</b>	<b>21.34</b>	<b>276.51</b>	<b>283.05</b>	<b>289.35</b>

#### Asset-13

(₹ in lakh)

Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
Depreciation	1197.76	1967.36	2037.47
Interest on Loan	1338.06	1969.92	1848.05
Return on Equity	1324.62	2177.17	2261.71
O&M Expenses	554.28	856.61	885.08
Interest on Working Capital	113.15	178.10	180.30
<b>Total</b>	<b>4527.87</b>	<b>7149.16</b>	<b>7212.61</b>

(₹ in lakh)

	Asset-14		Asset-15	Asset-16	Asset-17
Particulars	2017-18 (pro-rata for 1 day)	2018-19	2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
Depreciation	6.51	2436.74	43.11	27.47	0.39
Interest on Loan	7.19	2627.27	44.95	27.26	0.42
Return on Equity	7.42	2792.31	48.40	30.84	0.43
O&M Expenses	1.63	618.49	47.04	103.84	6.78
Interest on Working Capital	0.54	200.36	5.18	6.95	0.36
<b>Total</b>	<b>23.29</b>	<b>8675.17</b>	<b>188.68</b>	<b>196.36</b>	<b>8.38</b>

#### Asset-18

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Depreciation	30.43	50.86	54.00	55.99
Interest on Loan	32.39	50.47	48.42	45.35
Return on Equity	31.50	52.73	56.23	58.63
O&M Expenses	38.47	64.37	66.51	68.71



Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Interest on Working Capital	4.30	7.10	7.33	7.48
<b>Total</b>	<b>137.09</b>	<b>225.53</b>	<b>232.49</b>	<b>236.16</b>

#### Asset-19

(₹ in lakh)

Particulars	2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
Depreciation	38.73	95.19	96.39	96.40
Interest on Loan	44.66	103.93	96.60	88.09
Return on Equity	43.38	106.58	107.91	108.22
O&M Expenses	4.09	10.23	10.57	10.92
Interest on Working Capital	3.14	7.60	7.51	7.34
<b>Total</b>	<b>134.00</b>	<b>323.53</b>	<b>318.98</b>	<b>310.97</b>

#### Asset-20

(₹ in lakh)

Particulars	2017-18 (pro-rata for 134 days)	2018-19
Depreciation	91.07	257.54
Interest on Loan	99.06	265.29
Return on Equity	101.96	289.12
O&M Expenses	37.96	106.83
Interest on Working Capital	8.22	22.92
<b>Total</b>	<b>338.27</b>	<b>941.70</b>

#### Asset-21 (New Equipment)

(₹ in lakh)

Particulars	2018-19
Depreciation	3.30
Interest on Loan	3.47
Return on Equity	3.70
O&M Expenses	0.00
Interest on Working Capital	0.22
<b>Total</b>	<b>10.69</b>

#### Asset-21 (Recaptlization)

(₹ in lakh)

Particulars	2018-19
Depreciation	7.71
Interest on Loan	3.23
Return on Equity	8.66
O&M Expenses	0.00
Interest on Working Capital	0.41
<b>Total</b>	<b>20.01</b>

11. The details of the trued-up Interest on Working Capital (IWC) claimed by the



Petitioner in respect of the transmission assets are as follows:

#### Asset-1

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	167.56	173.12	178.87	184.81	190.94
Maintenance Spares	301.61	311.62	321.97	332.66	343.69
Receivables	1190.45	1225.28	1227.14	1230.63	1229.28
<b>Total Working Capital</b>	<b>1659.62</b>	<b>1710.02</b>	<b>1727.98</b>	<b>1748.10</b>	<b>1763.91</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>224.05</b>	<b>230.85</b>	<b>233.28</b>	<b>235.99</b>	<b>238.13</b>

#### Asset-2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	28.70	29.66	30.64	31.66	32.71
Maintenance Spares	51.66	53.38	55.15	56.99	58.88
Receivables	238.42	261.45	284.46	294.53	297.01
<b>Total Working Capital</b>	<b>318.79</b>	<b>344.49</b>	<b>370.25</b>	<b>383.17</b>	<b>388.59</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>43.04</b>	<b>46.51</b>	<b>49.98</b>	<b>51.73</b>	<b>52.46</b>

#### Asset-3

(₹ in lakh)					
Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	7.54	7.79	8.05	8.31	8.59
Maintenance Spares	13.57	14.02	14.48	14.96	15.46
Receivables	58.95	65.87	75.52	81.37	81.42
<b>Total Working Capital</b>	<b>80.06</b>	<b>87.68</b>	<b>98.05</b>	<b>104.64</b>	<b>105.47</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>9.00</b>	<b>11.84</b>	<b>13.24</b>	<b>14.13</b>	<b>14.24</b>

#### Asset-4

(₹ in lakh)					
Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	11.12	11.49	11.87	12.26	12.67
Maintenance Spares	20.01	20.67	21.36	22.07	22.80
Receivables	84.75	91.09	96.61	97.63	98.51
<b>Total Working Capital</b>	<b>115.87</b>	<b>123.25</b>	<b>129.84</b>	<b>131.96</b>	<b>133.98</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>9.00</b>	<b>16.64</b>	<b>17.53</b>	<b>17.81</b>	<b>18.09</b>



**Asset-5**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.65	9.98	10.31
Receivables	20.11	22.61	27.11	30.85	32.71
<b>Total Working Capital</b>	<b>34.18</b>	<b>37.15</b>	<b>42.13</b>	<b>46.37</b>	<b>48.74</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>2.33</b>	<b>5.01</b>	<b>5.69</b>	<b>6.26</b>	<b>6.58</b>

**Asset-6**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	10.93	11.29	11.66	12.05	12.45
Maintenance Spares	19.67	20.32	20.99	21.69	22.41
Receivables	97.54	99.81	101.15	101.65	101.72
<b>Total Working Capital</b>	<b>128.14</b>	<b>131.42</b>	<b>133.81</b>	<b>135.39</b>	<b>136.58</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>5.64</b>	<b>17.74</b>	<b>18.06</b>	<b>18.28</b>	<b>18.44</b>

**Asset-7**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	7.03	7.27	7.51	7.76	8.02
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	38.96	40.58	42.22	42.51	43.62
<b>Total Working Capital</b>	<b>58.66</b>	<b>60.93</b>	<b>63.25</b>	<b>64.23</b>	<b>66.07</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>2.58</b>	<b>8.23</b>	<b>8.54</b>	<b>8.67</b>	<b>8.92</b>

**Asset-8**

(₹ in lakh)

Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
O&M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	39.25	40.20	40.56	41.43
<b>Total Working Capital</b>	<b>53.79</b>	<b>55.22</b>	<b>56.08</b>	<b>57.46</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>2.52</b>	<b>7.45</b>	<b>7.57</b>	<b>7.76</b>



**Asset-9**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	8.54	8.83	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
Receivables	65.68	77.09	83.44	83.70	8.84
<b>Total Working Capital</b>	<b>89.60</b>	<b>101.80</b>	<b>108.97</b>	<b>110.08</b>	<b>36.10</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>3.94</b>	<b>13.74</b>	<b>14.71</b>	<b>14.86</b>	<b>4.87</b>

**Asset-10**

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
O&M Expenses	11.39	11.74	12.13	12.53
Maintenance Spares	20.50	21.13	21.83	22.55
Receivables	165.72	171.75	174.13	170.37
<b>Total Working Capital</b>	<b>197.62</b>	<b>204.62</b>	<b>208.09</b>	<b>205.45</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>16.47</b>	<b>27.62</b>	<b>28.09</b>	<b>27.74</b>

**Asset-11**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	8.54	8.83	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
Receivables	74.16	75.06	76.09	75.10	75.21
<b>Total Working Capital</b>	<b>98.08</b>	<b>99.77</b>	<b>101.62</b>	<b>101.48</b>	<b>102.47</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>2.50</b>	<b>13.47</b>	<b>13.72</b>	<b>13.70</b>	<b>13.83</b>

**Asset-12**

(₹ in lakh)

Particulars	2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
O&M Expenses	7.27	7.51	7.76	8.02
Maintenance Spares	13.08	13.52	13.97	14.43
Receivables	44.89	46.09	47.18	48.23
<b>Total Working Capital</b>	<b>65.24</b>	<b>67.12</b>	<b>68.90</b>	<b>70.68</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.70</b>	<b>9.06</b>	<b>9.30</b>	<b>9.54</b>



**Asset-13**

(₹ in lakh)

Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
O&M Expenses	69.10	71.38	73.76
Maintenance Spares	124.38	128.49	132.76
Receivables	44.89	46.09	47.18
<b>Total Working Capital</b>	<b>238.36</b>	<b>245.97</b>	<b>253.70</b>
Rate of Interest (in %)	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>21.51</b>	<b>33.21</b>	<b>34.25</b>

(₹ in lakh)

	<b>Asset-14</b>		<b>Asset-15</b>	<b>Asset-16</b>	<b>Asset-17</b>
Particulars	2017-18 (pro-rata for 1 day)	2018-19	2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
O&M Expenses	49.88	51.54	9.73	16.03	11.45
Maintenance Spares	89.79	92.77	17.52	28.86	20.61
Receivables	1417.26	1445.86	78.08	60.64	28.32
<b>Total Working Capital</b>	<b>1556.93</b>	<b>1590.17</b>	<b>105.33</b>	<b>105.53</b>	<b>60.38</b>
Rate of Interest (in %)	12.60	12.60	12.20	12.20	12.20
<b>Interest on Working Capital</b>	<b>0.54</b>	<b>200.36</b>	<b>5.18</b>	<b>5.18</b>	<b>7.37</b>

**Asset-18**

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
O&M Expenses	5.19	5.36	5.54	5.73
Maintenance Spares	9.35	9.66	9.98	10.31
Receivables	37.00	37.59	38.75	39.36
<b>Total Working Capital</b>	<b>51.54</b>	<b>52.61</b>	<b>54.27</b>	<b>55.40</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>4.30</b>	<b>7.10</b>	<b>7.33</b>	<b>7.48</b>

**Asset-19**

(₹ in lakh)

Particulars	2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
O&M Expenses	0.83	0.85	0.88	0.91
Maintenance Spares	1.49	1.53	1.59	1.64
Receivables	54.14	53.92	53.16	51.83
<b>Total Working Capital</b>	<b>56.46</b>	<b>56.30</b>	<b>55.63</b>	<b>54.38</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>3.14</b>	<b>7.60</b>	<b>7.51</b>	<b>7.34</b>



**Asset-20**

(₹ in lakh)

Particulars	2017-18 (pro-rata for 134 days)	2018-19
O&M Expenses	8.62	8.90
Maintenance Spares	15.51	16.02
Receivables	153.57	156.95
<b>Total Working Capital</b>	<b>177.70</b>	<b>181.87</b>
Rate of Interest (in %)	13.50	13.50
<b>Interest on Working Capital</b>	<b>8.81</b>	<b>24.55</b>

**Asset-21 (New Equipment)**

(₹ in lakh)

Particulars	2018-19
O&M Expenses	0.00
Maintenance Spares	0.00
Receivables	3.53
<b>Total Working Capital</b>	<b>3.53</b>
Rate of Interest (in %)	12.20
<b>Interest on Working Capital</b>	<b>0.22</b>

**Asset-21 (Recaptlization)**

(₹ in lakh)

Particulars	2018-19
O&M Expenses	0.00
Maintenance Spares	0.00
Receivables	6.62
<b>Total Working Capital</b>	<b>6.62</b>
Rate of Interest (in %)	12.20
<b>Interest on Working Capital</b>	<b>0.81</b>

**Date of Commercial Operation (COD)**

12. The Commission has approved the COD of the combined Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6, Asset-7, Asset-8, Asset-9, Asset-10, Asset-11, Asset-12, Asset-13, Asset-14, Asset-15, Asset-16, Asset-17, Asset-18, Asset-19 and Asset-20 as 1.12.2012, 1.4.2014, 1.6.2014, 3.9.2014, 29.9.2014, 3.12.2014, 3.12.2014, 26.11.2015, 3.12.2014, 19.8.2015, 22.10.2015, 3.3.2016, 31.7.2016, 31.3.2018, 5.11.2018, 16.9.2018, 14.3.2019, 19.8.2015, 2.11.2015 and 18.11.2017 respectively, as stated in paragraph 3(8) above.

13. The Petitioner in the instant petition has claimed the COD of Asset-21 and Asset-



22 as 29.9.2018 and 3.8.2019 respectively.

14. In support of the actual COD of the Asset-21, the Petitioner has submitted CEA energisation certificate dated 13.9.2018, RLDC charging certificate dated 11.10.2018 certified that the asset is completed successful trial run on 28.9.2018 and the CMD certificate as required under Grid Code. In support of actual COD of Asset-22, the Petitioner has submitted CEA energisation certificate dated 30.7.2019, RLDC charging certificate dated 15.10.2019 certified that the Asset-22 is completed successful trial run on 2.8.2019 and the CMD certificate as required under Grid Code.

15. The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 did not allow transmission tariff for Assets-21 and 22. Assets-21 and 22 are 50 MVAR Line Reactors for 400 kV D/C Daltonganj-Sasaram Line at Daltonganj Sub-station. These two 50 MVAR Line Reactors at Daltonganj were put into commercial operation and were in use at 400/220 kV Agra Sub-station as 2x50 MVAR Line Reactors for 400 kV D/C Agra-Sikar Line commissioned w.e.f. 1.1.2014 under Sasan and Mundra UMPP in Northern Region. The same were subsequently replaced by 2 x 80 MVAR Line Reactors at Agra and the 2 x 50 MVAR Line Reactors were shifted to Daltonganj and put into commercial operation w.e.f. 29.9.2018 and 3.8.2019 respectively under ERSS-III project. Truing up of the transmission tariff in respect of Asset-21 is claimed in this petition as it was put into commercial operation during 2014-19 period while tariff is claimed for Asset-22 in this petition as it has been put into commercial operation during 2019-24 period.

16. The petitioner has carried out requisite de-cap of the Assets-21 and 22 in its parent project "SASAN and MUNDRA UMPP" vide Petition No. 469/TT/2020.

17. We have considered the submissions of the Petitioner. As stated above, taking into consideration the CEA energisation certificate, RLDC charging certificate and CMD certificate, COD of the Asset-21 has been approved as 29.9.2018 and COD of Asset-22



has been approved as 3.8.2019.

18. With respect to de-capitalisation of 2X50 MVAR reactors at Agra Sub-station, the Commission vide order dated 6.6.2022 in Petition No. 469/TT/2020 is held as follows:

*“44. The Petitioner vide affidavit dated 12.8.2021 has submitted the details of decapitalization of 2x50 MVAR line reactors at Agra commissioned along with "400 KV Agra-Sikar (D/C QUAD) Line with associated Bays at Agra" covered in the instant Petition as Asset-II. The Petitioner has further submitted that the 2x50 MVAR line reactors at Agra is replaced with the 80 MVAR Line reactor (Petition No. 242/TT/2018) under "North East Northern/Western Interconnector-I Project" on 1.8.2017 and has utilized the replaced 50 MVAR Line reactor at Daltonganj Sub-station (True up Petition No. 372/TT/2020) under ERSS-III. The actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017.*

*45. We have considered the submission of the Petitioner. ACE and decapitalisation 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) and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations, as applicable. The date of de-capitalization is considered as 15.7.2017.....”*

19. As per the above decision of the Commission, the Petitioner has de-capitalised the 2x50 MVAR line reactor form Agra is 15.7.2017 and the re-capitalisation of Asset-21 and Asset-22 has been dealt in subsequent paras.

20. The determination of transmission tariff for Asset-1 to Asset-20 dealt first and tariff for Asset-21 dealt in 2014-19 tariff period and tariff for asset-22 dealt in 2019-24 tariff period.

### **Capital Cost**

21. The capital cost of the transmission project has been calculated in accordance with the Regulation 9(1) and Regulation 9(2) of the 2014 Tariff Regulations. The details of the capital cost approved earlier by the Commission vide order dated 21.3.2016 in Petition No. 30/TT/2015 in respect of Asset-1; vide order dated 24.2.2017 in Petition No. 85/TT/2015 in respect of Assets-2 to 9; vide order dated 20.9.2017 in Petition No. 278/TT/2015 in respect of Assets-10 to 13, and vide order dated 21.11.2019 in Petition No. 105/TT/2018 in respect of Assets-14 to 20, are as follows:



(₹ in lakh)

Assets	FR apporportioned approved cost	RCE apporportioned approved cost	Expenditure up to 31.3.2014/ COD (as admitted)	ACE 2014-19 (as admitted by the Commission)					Estimated Completion Cost as on 31.3.19 (as admitted)
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	40858.54	33411.69	28425.34	2596.36	641.00		0.00	0.00	31662.71
Asset-2	9337.02	9333.98	5946.87	1504.53	922.32	922.29	0.00	0.00	9296.01
Asset-3	2874.90	2754.41	1408.37	490.37	348.69	348.71	0.00	0.00	2596.14
Asset-4	3268.05	3213.76	2066.24	399.94	299.94	299.94	0.00	0.00	3066.06
Asset-5	835.24	932.55	356.10	183.74	137.80	137.80	0.00	0.00	815.44
Asset-6	4032.47	3569.41	2340.62	112.68	603.60	402.38	0.00	0.00	3459.28
Asset-7	1152.00	1258.53	794.41	19.31	254.73	83.55	0.00	0.00	1152.00
Asset-8	1197.47	1214.63	920.78	48.92	97.96	97.91	0.00	0.00	1165.57
Asset-9	2715.00	2647.24	1359.61	388.53	471.92	314.62	0.00	0.00	2534.68
Asset-10	3265.65	5488.27	4670.53	0.00	36.99	74.86	0.00	0.00	4782.38
Asset-11	2715.00	2817.83	1816.67	26.49	110.01	498.02	213.43	0.00	2664.62
Asset-12	1340.85	1736.65	1051.65	0.00	0.00	349.54	135.04	0.00	1536.23
Asset-13	12978.50	39802.81	31219.03	0.00	0.00	4688.37	1955.54	0.00	37862.94
Asset-14	30032.98	50851.00	44009.80	0.00	0.00	0.00	0.00	2531.34	46541.14
Asset-15	2351.54	2450.50	1841.82	0.00	0.00	0.00	0.00	139.64	1981.46
Asset-16	1486.37	1297.21	863.05	0.00	0.00	0.00	0.00	84.63	947.68
Asset-17	- *	256.27	137.38	0.00	0.00	0.00	0.00	-	137.38
Asset-18	946.62	1035.96	854.71	0.00	0.00	0.00	0.00	134.19	988.90
Asset-19	2532.54	2444.41	1775.03	0.00	0.00	0.00	0.00	573.01	2348.04
Asset-20	2191.50	5655.39	4209.28	0.00	0.00	0.00	0.00	659.44	4868.72

\*No provision in FR included in RCE

Tariff with respect to Asset-21 was not allowed by the Commission in its order dated 21.11.2019 in Pettition No. 105/TT/2018. The Petitioner was directed to file a fresh petition in respect of Asset-21 after incorporating the details of its decapitalization.

22. The Petitioner in the instant true-up petition has claimed the following capital cost in respect of the transmission assets for truing-up in the 2014-19 tariff period and the same are as follows:

(₹ in lakh)

Assets	FR Apporportioned approved cost	Apporportioned approved cost as per RCE	Expenditure up to 31.3.2014/ COD	ACE 2014-2019					Estimated Completion Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	40858.54	33411.69	28425.34	2657.60	422.33	611.95	656.71	86.60	32860.53
Asset-2	9337.02	9333.98	5969.93	612.49	1159.59	708.70	307.56	148.98	8907.25
Asset-3	2874.90	2754.41	1416.64	213.39	294.75	451.70	58.88	29.80	2465.16
Asset-4	3268.05	3213.76	2103.69	110.05	366.59	99.77	72.05	69.38	2821.53



Assets	FR Appor- tioned approved cost	Appor- tioned approved cost as per RCE	Expen- diture up to 31.3.2014/ COD	ACE 2014-2019					Estima- ted Comple- tion Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-5	835.24	932.55	373.21	0.00	159.00	162.52	117.81	20.01	832.55
Asset-6	4032.47	3569.41	2623.16	112.68	77.25	122.23	20.07	72.94	3028.33
Asset-7	1152.00	1258.53	869.03	19.31	98.86	39.45	19.44	72.94	1119.03
Asset-8	1197.47	1214.63	999.21	0.00	35.11	39.45	19.44	72.94	1166.15
Asset-9	2715.00	2647.24	1518.76	388.53	423.04	85.49	19.44	72.94	2508.20
Asset-10	3265.65	5488.27	4670.53	0.00	36.99	663.14	29.14	0.00	5399.80
Asset-11	2715.00	2817.83	1827.07	20.23	105.67	85.49	19.44	72.94	2130.84
Asset-12	1340.85	1736.65	1086.09	0.00	0.00	39.45	19.46	72.94	1217.94
Asset-13	12978.50	39802.81	31831.64	0.00	0.00	4084.72	1922.65	635.82	38474.83
Asset-14	30032.98	50851.00	46715.45	0.00	0.00	0.00	0.00	1708.78	48424.23
Asset-15	2351.54	2450.50	1988.70	0.00	0.00	0.00	0.00	114.81	2103.51
Asset-16	1486.37	1297.21	932.13	0.00	0.00	0.00	0.00	84.63	1016.76
Asset-17		256.27	184.61	0.00	0.00	0.00	0.00	0.00	184.61
Asset-18	946.62	1035.96	868.59	0.00	5.32	39.53	75.63	0.00	989.07
Asset-19	2532.54	2444.41	1776.25	0.00	5.60	43.33	0.63	0.00	1825.81
Asset-20	2191.50	5655.39	4758.78	0.00	0.00	0.00	227.76	131.42	5117.96
Asset-21	483.68	419.50	125.74	0.00	0.00	0.00	0.00	0.00	125.74

### **Cost over-run**

23. The Petitioner has made the following submissions with respect to cost over-run of the transmission assets:

- a) The cost over-run for Asset-1 has already been decided by the Commission vide order dated 21.3.2016 in Petition No. 30/TT/2015; with respect to Assets-2 to 9 vide order dated 24.2.2017 in Petition No. 85/TT/2015; in respect of Assets-10 to 13 vide its order dated 20.9.2017 in Petition No. 278/TT/2015, and for Assets-14 to 20 vide its order dated 21.11.2019 in Petition No.105/TT/2018.
- b) The Commission vide order dated 21.11.2019 in Petition No.105/TT/2018 directed the Petitioner to file a fresh petition for Assets-21 and 22. Assets-21 and 22 have been filed in the instant true up petition as they are the last two elements executed in the transmission project.
- c) The variation in preliminary investigation, Right of Way (RoW), forest clearance, PTCC and general civil works etc. is as per actual site conditions as compared to the normative prices considered at FR stage. Further, the variation is due to actual



awarded rates on the basis of competitive bidding whereas the FR estimate was prepared on the basis of previously awarded prices.

24. The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 directed the Petitioner to submit the segregated cost as per FR and RCE for Asset-I(A)(i) and Asset-I(B) (Assets-14 and 15 in the present petition) at the time of truing up. In response, the Petitioner has submitted break-up of FR apportioned approved cost and RCE in respect of Assets-14 and 15 in the instant petition.

25. The Petitioner has submitted justification for variation between estimated completion cost and FR. Further, the Petitioner has compared the asset-wise apportioned RCE cost vis-à-vis estimated completion cost. It is observed that RCE has been duly approved by the Board of Directors of the Petitioner and was considered by the Commission in its earlier orders with respect to the transmission assets. The estimated completion cost of the transmission assets is within the apportioned approved cost as per RCE. Hence, the variation in respect of individual assets/elements is allowed.

### **Capital cost of Asset-21**

26. The Petitioner in the instant true-up petition has claimed the following capital cost in respect of Asset-21 for the 2014-19 tariff period and the same are as follows:

Assets	FR apportioned approved cost	Apportioned approved cost as per RCE	Expenditure up to 31.3.2014 / COD	ACE 2014-2019					(₹ in lakh)
				2014-15	2015-16	2016-17	2017-18	2018-19	Estimated Completion Cost as on 31.3.2019
Asset-21	483.68	419.50	125.74	0.00	0.00	0.00	0.00	0.00	125.74

27. The estimated completion cost of Assets-21 is ₹125.74 lakh against the FR apportioned approved cost of ₹483.68 lakh. Therefore, there is no cost over-run with respect to FR in Asset-21.



**Decapitalisation of 2X50 MVAR Reactors at Agra Sub-station and re-capitalisation of 2X50 MVAR Reactors at Daltonganj Sub-station**

28. The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 directed the Petitioner to submit the details of decapitalisation of Asset-21 and Asset-22. The Petitioner has submitted the following details in respect of decapitalisation of Asset-21 and Asset-22:

- (a) Asset-21 and Asset-22 are 50 MVAR Line Reactors for 400 kV D/C Daltonganj-Sasaram line at Daltonganj Sub-station.
- (b) The said 02 numbers 50 MVAR Line Reactors at Daltonganj were originally installed at 400/220 kV Agra Sub-station as 2X50 MVAR Line Reactors for 400 kV D/C Agra- Sikar line put under commercial operation with effect from 1.1.2014 under the 'Transmission System Strengthening for Sasan and Mundra UMPP in Northern Region'.
- (c) The above 2x50 MVAR line reactors were replaced with 2X80 MVAR line reactors at Agra and the replaced 2x50 MVAR line reactors were shifted to Daltonganj and put under commercial operation as Asset-21 and Asset-22 in the instant petition with COD as 29.9.2018 and 3.8.2019 respectively under the transmission project i.e. ERSS-III.
- (d) These 2X50 MVAR Line Reactors were filed for approval of tariff in Petition No. 105/TT/2018 under the transmission project. However, the Commission did not allow the transmission tariff for them observing that allowing tariff for 50 MVAR Bus Reactor at Daltonganj without de-capitalisation of the existing 50 MVAR Line Reactor at Agra would tantamount to servicing two assets for the same purpose. Therefore, tariff for 50 MVAR line reactors at Daltonganj shall be allowed only after decapitalisation of old asset i.e. 50 MVAR Line Reactor at Agra and



associated cost of bays and adjustment of cumulative depreciation etc. Accordingly, the Petitioner was directed to file a separate petition claiming tariff for 50 MVAR Line Reactor at Daltonganj along with the details of decapitalisation.

- (e) As per direction of the Commission, the de-capitalization of 2X50 MVAR line reactors, originally put under commercial execution with effect from 1.1.2014 has been done under truing up petition of Sasan and Mundra UMPP project.
- (f) Further, corresponding adjustment against the above mentioned de-capitalization has been done in the instant petition under the transmission project i.e. ERSS-III with effect from their respective CODs (i.e. 29.9.2018 and 3.8.2019) and Form-10B containing details of de-capitalization submitted herein.

29. The Petitioner vide affidavit dated 13.1.2021, has submitted that Assets-21 and 22 have been de-capitalized under the project “System Strengthening in Northern Region for Sasan and Mundra UMPP” in the Petition No. 469/TT/2020.

30. The Petitioner in response to the reply of BSPHCL has submitted as follows:

- (a) Form-10B and Auditor’s certificates (along with tariff forms) for Assets-21 and 22 submitted in the petition need to be revised since the date of de-capitalization was considered the same as the date of re-capitalization i.e. 29.9.2018 (COD of Asset-21) and 3.8.2019 (COD of Asset-22), respectively. However, the date of de-capitalization has to be considered as ‘actual date’ of removal of the asset concerned as per recent directions and calculation methodology used by the Commission in the similar cases.
- (b) The actual date of de-capitalization or the date of actual removal of reactor associated with Assets-21 and 22 is 15.7.2017. Accordingly, Form-10B has been revised wherein the date of de-capitalization is considered as date of removal i.e.



15.7.2017 instead of date of re-deployment of the reactor (i.e. 29.9.2018 and 3.8.2019).

- (c) The corresponding de-capitalization of these reactors i.e. shifted from Agra under 'Sasan and Mundra UMPP' project to Daltonganj under ERSS-III project has been carried in its parent project i.e. Sasan and Mundra UMPP in its corresponding truing up Petition No. 469/TT/2020. Form-10B submitted in the said petition indicates the date of de-capitalization as 15.7.2017.
- (d) Consequently, due to change in the date (year) of de-capitalization as mentioned above, the Net Book Value (NBV) alongwith cumulative depreciation and cumulative repayment of loan for these reactors associated with Assets-21 and 22 have undergone changes. Accordingly, the revised Form-10B for Assets-21 and 22 has been submitted as follows:

(₹ in lakh)									Remarks
Assets	Year of decapitalisation	Work/ Equipment proposed to be decapitalised	Year of capitalisation of asset/ equipment being decapitalised	Original Book Value of the asset being decapitalised	Debt Equity ratio at the time of capitalisation*	Cummulative depreciation corresponding to	Cummulative repayment of loan corresponding	Net Book Value	
Asset-21	2017-18 (15.7.2017)	50 MVAR LR -I	2013-14 (1.1.2014)	289.70	70:30	53.34	53.34	236.36	Shifting Agra reactors to Daltonganj
Asset-22	2017-18 (15.7.2017)	50 MVAR LR-II	2013-14 (1.1.2014)	289.70	70:30	53.34	53.34	236.36	

31. Further, the Petitioner has submitted revised Auditor's certificates for Assets-21 and 22. The original gross block of the reactors (i.e. ₹289.70 lakh each as mentioned in the revised Form-10B) has been removed from the capital cost of Assets-21 and 22. The tariff against Goss Block of ₹289.70 lakh each shall be claimed as part of Assets-21 and 22 after compensating for the associated cumulative depreciation recovered and



cumulative repayment. The Petitioner has submitted the revised Auditor's certificates for Assets-21 and 22 alongwith their revised IDC discharge statements.

32. The Petitioner has submitted the following cost against Asset-21 as per Auditor certificate and as considered for tariff purpose:

**Asset-21**

- (i) Cost of new associated equipment used to charge shifted line reactor-I at Daltonganj Sub-station w.e.f. COD i.e. 29.9.2018 under the transmission project i.e. ERSS-III.

								(₹ in lakh)
Asset	Apportioned approved cost as per FR/RCE	Expenditure up to COD (29.9.2018)	ACE 2014-19					Estimated completion cost as on 31.3.2019
			(as per Auditor certificate)					
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-21	483.68/419.50	125.74	-	-	-	-	-	125.74

- (ii) Original gross block of Line reactor-I as shifted from Agra under original project "Sasan UMPP" to Daltonganj under "ERSS-III".

Asset	Year of capitalization of asset being de-capitalized	Year of de-capitalization as per actual date of removal	Original book value of asset being de-capitalized	Corresponding cumulative depreciation	Corresponding cumulative repayment	Net book value of asset being decapitalized
Asset-21	2013-14 (1.1.2014)	2017-18 (15.7.2017)	289.70	50.79	50.79	238.91

- (iii) Cost of new associated equipment used to charge shifted line reactor-I at Daltonganj considered for tariff purpose for the 2014-19 tariff period:

(₹ in lakh)								
Asset	Apportioned approved cost as per FR / RCE	Expenditure considered up to 31.3.2014/ COD	Add Cap 2014-2019					Estimated completion cost considered as on 31.3.2019
			(considered for tariff purpose)					
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-21	483.68 / 419.50	122.71	-	-	-	-	2.27	124.98

- (iv) Carrying Cost



- (a) Year of removal of Reactor from pervious project: 15.7.2017 (i.e. 2017-18).  
(b) Year of deployment of reactor in new project: 29.9.2018 (i.e. 2018-19)

Now Gross loan opening considered for 2018-19 = {Original book value} \* (70%) =  
289.70 \* 0.70 = 202.79

New loan opening for 2018-19 = {Gross Loan Opening} – {cumulative repayment  
Loan corresponding to de-cap} = 202.79 – 53.34 = ₹149.45 lakh

Carrying cost (a) from 15.7.2017 to 31.3.2018 and (b) from 1.4.2018 to 28.9.2018:

- (a) From 15.7.2017 to 31.3.2018:  
= {149.45} \* {weighted average rate of IBRD-V during FY 2017-18} \* {No. of  
days/365}  
= {149.45} \* {3.1850%} \* {260/365} = ₹3.39 lakh
- (b) From 1.4.2018 to 28.9.2018:  
= {149.45} \* {weighted average rate of IBRD-V during FY 2018-19} \* {No. of  
days/365}  
= {149.45} \* {4.1250%} \* {181/365} = ₹3.06 lakh
- (c) Total carrying cost claimed from 15.7.2018 to 28.9.2018 = ₹6.45 lakh

- (v) For the tariff block 2019-24: Cost of new associated equipment used to charge  
shifted reactor at Daltonganj Sub-station w.e.f. COD 29.9.2018 under the  
transmission project i.e. ERSS-III.

Asset	Apportioned approved cost as per FR / RCE	Expenditure considered up to 31.3.2019	ACE 2019-24					(₹ in lakh)
			(as per Auditor certificates)					Estimated completion cost considered as on 31.3.2024
			2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-21	483.68 / 419.50	124.98	23.27	0.90	24.00	-	-	173.15

33. We have considered the submissions of the Petitioner. It is observed that the Commission has disposed of the Petition No. 469/TT/2020 vide order dated 6.6.2022, wherein it has been observed that the actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017. Accordingly, the date of de-capitalisation is considered as 15.7.2017. The relevant portion of the order dated 6.6.2022 in Petition No.



469/TT/2020 is extracted as follows:

*“44. The Petitioner vide affidavit dated 12.8.2021 has submitted the details of decapitalization of 2x50 MVAR line reactors at Agra commissioned along with “400 KV Agra-Sikar (D/C QUAD) Line with associated Bays at Agra” covered in the instant Petition as Asset-II. The Petitioner has further submitted that the 2x50 MVAR line reactors at Agra is replaced with the 80 MVAR Line reactor (Petition No. 242/TT/2018) under “North East Northern/Western Interconnector-I Project” on 1.8.2017 and has utilized the replaced 50 MVAR Line reactor at Daltonganj Sub-station (True up Petition No. 372/TT/2020) under ERSS-III. The actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017.*

*45. We have considered the submission of the Petitioner. ACE and decapitalisation 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) and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations, as applicable. The date of de-capitalization is considered as 15.7.2017. The undischarged IDC liability as on COD has been allowed as ACE during the year of its discharge. The excess Initial Spares are disallowed as per actual discharge for Asset-II.”*

34. The Petitioner has claimed an amount ₹13.58 lakh towards transportation cost incurred on diversion of Reactor from Agra to Daltonganj Sub-station. The Commission vide order dated 28.9.2017 in Petition No. 195/TT/2016 has already held that expenditure towards shifting, dismantling and transportation are of the nature of revenue expenditure and cannot be capitalised. Accordingly the amount of ₹13.58 lakh towards transportation cost is not allowed under capital cost and the same is allowed to be recovered directly from the beneficiaries covered under the instant petition as a one-time exercise.

35. The Petitioner has claimed an amount of ₹6.45 lakh towards carrying cost from 15.7.2018 to 28.9.2018. We have considered the submissions of the petitioner.

Regulation 9(6) of the 2014 Tariff Regulations provides as follows:

*“(6) The following shall be excluded or removed from the capital cost of the existing and new project:*

*(a) The assets forming part of the project, but not in use;*

*(b) Decapitalisation of Asset;*

*(c) In case of hydro generating station 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 two stage transparent process of bidding; and (d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:*

*Provided that 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;”*

36. Accordingly, as per Regulation 9(6) of the 2014 Tariff Regulations, the transmission assets not in use shall be excluded from the capital cost of the existing project. In the instant case, the 50 MVAR reactor was not in use from 15.7.2018 to 28.9.2018. Accordingly, as provided in Regulation 9(6) of the 2014 Tariff Regulations, transmission charges are not allowed for the period from 6.12.2016 to 27.9.2017 as it was not in use.....”

37. The 50 MVAR Reactor-I is commissioned on 1.1.2014 and the actual date of de-capitalisation of 50 MVAR Reactor already approved as 15.7.2017 and the Petitioner has claimed the recapitalisation date as 29.9.2018. As per the Regulation 9(6) of the 2014 Tariff Regulations, carrying cost is also not admissible.

38. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)		
Capital Cost as on COD as per Auditor's Cost Certificate	Less Amount of dismantling, shifting, transportation and re-erection of the shifted reactor deducted from the Capital cost as on COD	Capital Cost as on COD entitled for tariff calculation
125.74	13.58	112.16

### **Recapitalisation of Asset-21**

39. As discussed above, the re-capitalisation of asset-21 has been considered as 29.9.2018. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)						
Asset	Year of capitalization of asset being de-capitalized	Year of de-capitalization as per actual date of removal	Original book value of asset being de-capitalized	Corresponding cumulative depreciation	Corresponding cumulative re-payment	Net book value of asset being decapital-ized



Asset-21(Re-capitalisation of Reactor)	2013-14 (1.1.2014)	2017-18 (15.7.2017)	289.70	50.79	50.79	238.91
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### **Time Over-run**

40. The present petition has been filed in respect of Assets-1 to 22. The Commission vide earlier order has already decided time over-run vide orders dated 21.3.2016 in Petition No. 30/TT/2015 for Asset-1, dated 24.2.2017 in Petition No. 85/TT/2015 for Assets-2 to 9), dated 20.9.2017 in Petition No. 278/TT/2015 for Assets-10 to 13 and dated 21.11.2019 in Petition No. 105/TT/2018 for Assets-14 to 20. Further, the Commission vide order dated 21.11.2019 in Petition No.105/TT/2018 directed the Petitioner to a file fresh petition for Assets-21 and 22.

41. The Commission vide order dated 20.9.2017 in Petition No. 278/TT/2015 directed the Petitioner to submit Stage-II Forest Clearance letter in respect of the instant Asset-10 i.e. LILO of one circuit of 400 kV D/C Baripada-Mendhasal line at Duburi Sub-station alongwith associated bays at the time of truing-up. The relevant portion of the said order dated 20.9.2017 is as follows:

*“23. We have considered the submission of the petitioner and respondents. After examining the documents submitted by the petitioner in support of its claim, it is evident that OPTCL permitted to execute required electrical and civil works vide letter dated 11.6.2013 and work was started by the petitioner after such permission. The petitioner had written letter to OPTCL on 9.12.2013 stating that assets were expected to be commissioned on 25.12.2013. The petitioner further wrote letters to OPTCL dated 14.1.2014 and 18.3.2014 intimating commissioning of its system and requesting OPTCL to charge the line. It is observed from the letters that the petitioner had consistently communicated with OPTCL regarding handing over of land, execution of electrical and civil works at Duburi sub-station and had taken proper steps to apprise OPTCL regarding the status of commissioning of its assets, so that it can plan accordingly. It is evident from copy of news dated 9.9.2011 and 23.9.2011 submitted by the petitioner that work could not be started due to severe rains and flood. Further, it is observed that the petitioner has not submitted any letter in support of its claim of Stage-II clearance. However, the petitioner has submitted other letters with regard to forest clearance. Hence, we are condoning the delay provisionally and the petitioner is directed to submit the Stage II clearance letter at the time of truing up.”*

42. In compliance of the directions of the Commission in Petition No. 278/TT/2015, the



Petitioner has submitted letter dated 21.11.2014. We have considered the submissions of the Petitioner. The Commission vide order dated 20.9.2017 in Petition No. 278/TT/2015, has provisionally condoned the time over-run in case of Asset-2, now Asset-10 (i.e. LILO of one circuit of 400 kV D/C Baripada-Mendhasal line at Duburi Sub-station alongwith associated bays) in the current petition subject to submission of Stage-II Forest Clearance letter at the time of truing-up. Since the Petitioner has submitted the desired letter dated 21.11.2014, pertaining to Stage-II Forest Clearance in the present petition, we hereby confirm our order regarding condoning the time over-run of 991 days in the case of Asset-2 vide order dated 20.9.2017 in Petition No. 278/TT/2015.

43. As per the Investment Approval (IA), the transmission project was scheduled for commercial operation within 28 months from the date of IA i.e. w.e.f 2.7.2010. Accordingly, the scheduled date for commercial operation of the transmission assets was 2.11.2012. The Petitioner has submitted the details of COD claimed and delay occurred in execution of Assets-21 and 22 which is as follows:

Sl. No.	Asset	COD	Actual COD	Delay
1	Asset-21	2.11.2012	29.9.2018	2157 days
2	Asset-22		3.8.2019	2465 days

44. The Petitioner has submitted that time over-run in respect of Assets-21 and 22 is mainly on account of delay in land acquisition at Daltonganj Sub-station, law and order situation in and around Daltonganj Sub-station, RoW issues in the associated 400 kV D/C Sasaram-Daltonganj line and obstruction from JUSNL's transmission line at Daltonganj premises.

45. The Petitioner has submitted that Assets-21 and 22 were to be installed at Daltonganj Sub-station. Since, there was substantial delay in the commercial operation of Daltonganj Sub-station which was due to land acquisition and RoW issues, therefore,



COD of Assets-21 and 22 was delayed. The Petitioner has further submitted that delay reasons pertaining to Assets-21 and 22 are identical to the following transmission assets filed in Petition No. 105/TT/2018:

Asset's Nomenclature as per order dated 21.11.2019 in Petition No. 105/TT/2018	Asset's Nomenclature/ Description in the current petition	COD	Actual COD	Delay	Remarks
<b>Asset-I(A)(i)</b>	<b>Asset-14:</b> Combined Asset comprising of: 400 kV D/C Sasaram-Daltonganj Transmission Line, 400/220 kV, 315 MVA ICT-I alongwith bays and 400 kV 80 MVAR Bus Reactor at Daltonganj Sub-station	2.11.2012	31.3.2018	1975 days	Entire delay condoned on account of land acquisition, RoW and issues of obstruction of JUSNL line
<b>Asset-I(B)</b>	<b>Asset-15:</b> 400/220 kV, 315 MVA ICT-II alongwith bays at Daltonganj Sub-station		5.11.2018	2194 days	
<b>Asset-II</b>	<b>Asset-16:</b> 04 numbers 220 kV Line Bays at Daltonganj Sub-station.		16.9.2018	2144 days	

46. The Petitioner has submitted that all the above transmission assets were installed at Daltonganj Sub-station with their CODs between 31.3.2018 to 5.11.2018 and time over-run ranging from 1975 days to 2194 days. The Petitioner has further submitted that the entire time over-run in respect of the transmission assets at Daltonganj Sub-station, as filed in Petition No. 105/TT/2018 was condoned by the Commission vide order dated 21.11.2019. The relevant extract of the said order dated 21.11.2019 is as follows:

*"45. The Petitioner has attributed the time overrun in case of Asset-I and Asset-II to delay in getting land acquisition for the Daltonganj Sub-station, delay due to retendering of LOA and delay due to obstruction from JUSNL transmission line. The Petitioner had made application for 40.10 acre of land on 27.5.2009 much before i.e. about one year prior to the Investment Approval of 2.7.2010. Thereafter, the Petitioner vide letter dated 20.3.2010, deposited ₹ 4 crore towards land acquisition. The Petitioner, followed it up with letters dated 14.5.2010, 8.6.2010, 4.8.2010, 19.10.2010, 28.10.2010, 3.11.2010, 14.12.2010, 15.12.2010, 23.3.2011, 18.3.2011, 27.6.2011, 12.9.2011, 9.11.2011, 23.11.2011, 20.1.2012, 19.3.2012 and 10.4.2012. The Petitioner obtained certificate of possession of land on 31.7.2015. The time period prior to Investment Approval date of 2.7.2010 is not condonable as the same is considered under normal scheduled activity. Normal time in land acquisition is about one year from date of IA. However, the time taken for obtaining land was from 2.7.2010 to 31.7.2015 (1855 days). Therefore the time delay of about 1490 days (1855-365) due to acquisition of land is beyond the control of*



*the Petitioner and the same has been condoned.*

*46. The Petitioner has submitted that due to delay in land acquisition, the Petitioner has retendered various letters of Award (LOA). The Petitioner awarded the contour survey & soil investigation work on 30.8.2011 and main sub-station supply and erection work on 16.3.2012. However, the Petitioner had to retender the above contracts and accordingly, the new LOA for contour survey & soil investigation work was placed on 14.8.2015 and that of main sub-station supply and erection work on 1.7.2016. It is observed from the letters dated 20.6.2014, 18.9.2014, 22.9.2014, 31.12.2014 and 7.10.2015 written by the main agency (Alstom), requesting the Petitioner to short-close the contract. On receiving the possession of land on 1.7.2015, the Petitioner continued to discuss the issue with M/s Alstom Limited regarding execution of balance supply and total civil and erection work at Daltonganj sub-station. But the same could not materialize as M/s Alstom Limited was taking time in responding and requesting for short closure as evident from the letter dated 7.10.2015 of Alstom. Hence, Petitioner short closed the contract and started fresh bidding process and NIT was floated. Finally contract was awarded to M/s Alstom T&D Limited on 1.7.2016.*

*47. The Petitioner has submitted that after possession of land at Daltonganj, the work was hampered due to severe law & order and ROW problems. The Petitioner has submitted letters dated 18.9.2015, 26.11.2015 to substantiate its claim. We have gone through the submissions of the Petitioner and observe that the time delay from 18.9.2015 to 26.11.2015 (69 days) due to ROW problem is beyond the control of the Petitioner and the same has been condoned.*

*48. The Petitioner has submitted that delay in diversion of 220 KV Latehar- Daltonganj D/C line of JUSNL led to delay in construction of Daltonganj Sub-station. The Petitioner has submitted that it took up the issue with JUSNL in the month of April, 2014 and also sent various letters dated 21.4.2015, 18.9.2015, 2.9.2016, 7.10.2016, 8.1.2017 and 17.3.2017. The Petitioner has submitted that the issue was discussed in 37th ERPC meeting held on 3.8.2017 and finally the said diversion work was completed by JUSNL on December, 2017. The issue was resolved on 9.3.2018 and the Petitioner, thereafter, commissioned the 400/220 kV Daltonganj Sub-station on 31.3.2018.*

*49. We have gone through the submissions of the Petitioner and the supporting documentary evidence. However, we note that the time delay from April 2014 to 31.7.2015 is subsumed in the activities of land acquisition while that from 18.9.2015 to 26.11.2015 is subsumed in delay due to law & order and ROW problems. The delay on account of this is not attributable to the Petitioner. Therefore, the period from 26.11.2015 to 31.12.2017 of 765 days was beyond the control of the Petitioner and, therefore, condoned.*

*50. In view of the above, the delay due to Land acquisition of 1490 days, ROW issues of 69 days and obstruction of JUSNL line of 765 days totaling to 2324 days was beyond the control of the Petitioner. However, the Petitioner compressed the execution time and commissioned the Asset-I(A)(i), Asset-I(B) and Asset-II with an overall delay of 1975 days, 2194 days and 2144 days, respectively. Therefore, the total time delay of 1975 days, 2194 days and 2144 days in commissioning of Asset- I(A)(i), Asset-I(B) and Asset-II is condoned.*

xxxx

*63. In view of the above the time over-run condoned/not condoned in respect of the instant assets is summarized as below:-*



Assets	Time over-run in commissioning asset (days)	Time over-run condoned (days)	Time over-run not condoned (days)
Asset-I(A)(i)	1975	1975	0
Asset-I(B)	2194	2194	0
Asset-II	2144	2144	0
xxxxx			
xxxx			

47. The Petitioner has concluded that the delay of 2324 days at Daltonganj has been acknowledged by the Commission. Accordingly, the entire delay of 2194 days has been condoned. Thus, the delay reasons in respect of Assets-21 and 22, which are installed at Daltonganj Sub-station, are identical to the transmission assets for which delay had already been condoned by the Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018, namely, Asset- I(A)(i), Asset-I(B) and Asset-II (i.e. Asset-14, Asset-15 and Asset-16 in the instant petition). Accordingly, the Petitioner has submitted that delay may be condoned in completion of Assets-21 and 22 as the same was out of control of the Petitioner and is covered under Regulation 12(2)(i) of the 2014 Tariff Regulations.

48. The Petitioner has also submitted chronology of activity-wise comparison of scheduled and actual time taken in the execution of Assets-21 and 22 and the same as follows:

#### **Asset-21**

Sl. No.	Activity	Period of activity				Reasons for delay
		Schedule		Actual		
		From	to	From	to	
1	Land Acquisition	4.1.2010	9.7.2010	27.5.2009	31.7.2015	The reasons for delay predominantly include the delay in land acquisition for the Daltonganj (G) Sub-station which took more than 06 years time. Further, there was delay due to re-tendering of LOAs and delay in
2	LOA	13.10.2010	13.10.2010	24.3.2011	17.5.2016	
3	Supplies	14.6.2011	11.7.2012	1.8.2011	30.11.2016	



4	Civil works & Erection	10.12.2010	13.9.2012	1.6.2011 (CW)/ 3.10.2016 (E)	1.12.2017 (CW)/ 25.7.2018 (E)	acquisition led to termination of initial LOAs. Delay due to law order situation around Daltonganj premises.
5	Testing & commissioning	14.9.2012	01.11.12	25.7.2018	27.9.2018	Delay due to hindrance caused by existing line of JUSNL passing over the Daltonganj Sub-station.  The same have been condoned under order dated 21.11.2019 in 105/TT/2018

### **Asset-22**

Sl. No.	Activity	Period of activity				Reasons for delay
		Schedule		Actual		
		From	to	From	to	
1	Land Acquisition	4.1.2010	9.7.2010	27.5.2009	31.7.2015	The reasons for delay predominantly include the delay in land acquisition for the Daltonganj (G) sub-station which took more than 06 years time. Further, there was delay due to re-tendering of LOAs and delay in acquisition led to the termination of initial LOAs. Delay due to law and order situation around Daltonganj Premises. Delay due to hindrance caused by existing line of JUSNL passing over the Daltonganj Sub-station
2	LOA	13.10.2010	13.10.2010	24.3.2011	17.5.2016	
3	Supplies	14.6.2011	11.7.2012	1.8.2011	30.11.2016	
4	Civil works & Erection	10.12.2010	13.9.2012	1.6.2011 (CW)/ 3.10.2016 (E)	1.12.2017 (CW)/ 20.7.2019 (E)	
5	Testing & commissioning	14.9.2012	1.11.2012	20.7.2019	3.8.2019	

49. As per the Investment Approval (IA), the scheduled COD of the transmission project was 28 months i.e. 2.11.2012 from the date of IA i.e. 2.7.2010. However, Assets-21 and 22 were put into commercial operation on 29.9.2018 and 3.8.2019 with delay of 2157 and 2465 days respectively.



50. The Petitioner has submitted that Asset-21 and Asset-22 are installed in the 400/220 kV Daltonganj. There was delay in completion of assets—at Daltonganj Sub-station due to land acquisition for Daltonganj Sub-station, law and order situation in around at Daltonganj Sub-station, RoW issues in the associated 400 kV D/C Sasaram-Daltongnaji line, obstruction from JUSNL transmission line in Daltonganj premises. The Petitioner has further submitted that the entire time over-run in case of the Daltonganj Sub-station has already been condoned by the Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018. As Asset-21 and Asset-22 are to be installed in Daltonganj Sub-station, in which case the time over-run has already been condoned, the time over-run in case of the Asset-21 and Asset-22 is also liable to be condoned.

51. We have considered the submissions of the Petitioner. The Petitioner is required to install 2 x 50 MVAR LR at Daltonganj Sub-station for 400 kV D/C Sasaram-Daltonganj Transmission Line. Therefore, the completion of the 400 kV D/C Sasaram-Daltonganj Transmission Line and Daltonganj Sub-station will have a direct impact on the completion and installation of 2 x 50 MVAR Line Reactors at Daltonganj Sub-station. As stated above, the Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 has condoned the time over-run of 1975 days (SCOD to COD i.e. 2.11.2012 to 31.3.2018) for 400 KV D/C Sasaram-Daltonganj Transmission Line at Daltonganj Sub-station; 400 /220 kV, 315 MVA ICT-I alongwith bays at Daltonganj Sub-station and 400 kV 80 MVAR Bus Reactor at Daltonganj Sub-station. As we have already condoned the time over-run in case of Daltonganj Sub-station, where Asset-21 and Asset-22 are to be installed, we condone the time over-run in case of Asset-21 and Asset-22 upto 31.3.2018, i.e. COD of the sub-station and COD of 400 KV D/C Sasaram-Daltonganj Transmission Line.



52. The Petitioner has taken further taken 182 days in case of Asset-21 and 490 days in case of Asset-22 for commissioning of the 2 x 50 MVAR Line Reactors at Daltonganj Sub-station. The petitioner should commission the 2 x 50 MVAR Line Reactors at Daltonganj Sub-station alongwith the 400 KV D/C Sasaram-Daltonganj Transmission Line. The Petitioner has not explained the reasons for not commissioning of 2 x 50 MVAR Line Reactors alongwith the transmission line. .Threfore, we are of the view that we condone the time over-run only upto 31.3.2018 i.e. COD of 400 KV D/C Sasaram-Daltonganj Transmission Line and time over-run of 182 days in case of Asset-21 and 490 days in case of Asset-22 beyond 31.3.2018 is not condoned.

53. Accordingly, our decision with regard to time over-run in respect of Assets-21 and 22 is as follows:

<b>Assets</b>	<b>SCOD</b>	<b>COD</b>	<b>Time over-run</b>	<b>Time over-run condoned</b>	<b>Time over-run not condoned</b>
<b>Asset-21</b>	2.11.2012	29.9.2018	2157 days	1975 days	182
<b>Asset-22</b>	2.11.2012	3.8.2019	2465 days	1975 days	490

#### **Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)**

54. The Petitioner has claimed IDC as per Auditor's certificate and has also submitted IDC statement showing loan-wise IDC discharged up to the COD and discharged after the COD.

55. BSPHCL in its reply has submitted that IDC has already been decided after taking into consideration time over-run condoned /not-condoned. BSPHCL has submitted that the Petitioner is requied to submit the rectified details of IDC as per the Commission's order dated 21.11.2019 in Petition No. 105/TT/2018. BSPHCL has submitted that IDC in respect of Asset-21 is yet to be determined as per Regualtion 11(A) of the 2014 Tariff Regulations.



56. In response, the Petitioner has submitted that cash IDC statements for Assets-2 to 20 in the present petition.

57. The Petitioner has also submitted IDC computation statement which contains the name of loan, drawl date, loan amount, interest rate and interest claimed. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. The IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	IDC Claimed as per the Auditor's Certificate	Entitled IDC as on COD as worked out	IDC Dis-Allowed as on COD due to computation difference and time overrun	Un-discharged portion of Entitled IDC as on COD	IDC Allowed on cash basis as on COD
a	b	c	d=b-c	e	f=b-d-e
Asset-1	NA				
Asset-2	451.03	451.03	0.00	0.00	451.03
Asset-3	135.51	131.55	3.96	21.90	109.65
Asset-4	201.23	174.30	26.93	42.34	131.97
Asset-5	35.70	21.88	13.82	8.16	13.73
Asset-6	320.19	81.09	239.10	50.99	30.10
Asset-7	78.60	16.50	62.10	6.90	9.60
Asset-8	141.08	78.98	62.10	13.84	65.14
Asset-9	165.51	29.51	136.00	23.61	5.90
Asset-10	561.18	561.18	0.00	233.45	327.73
Asset-11	116.03	111.54	4.49	13.87	97.66
Asset-12	158.07	158.07	0.00	34.44	123.63
Asset-13	3798.60	3736.74	61.86	550.75	3185.99
Asset-14	10752.38	10752.38	0.00	922.75	9829.63
Asset-15	302.63	302.63	0.00	19.22	283.41
Asset-16	115.93	115.93	0.00	18.18	97.75
Asset-17	38.07	0.22	37.85	0.22	0.00
Asset-18	128.07	127.71	0.36	13.44	114.27
Asset-19	243.95	243.95	0.00	1.22	242.73
Asset-20	727.38	351.89	375.49	144.20	207.70
Asset-21	27.97	25.09	2.88	4.22	20.88

58. The Petitioner has claimed IEDC for the transmission assets as per the Auditor's



certificate and considered IEDC disallowed due to time over-run not condoned.

59. BSPHCL has submitted that the Petitioner ought to submit the details of IEDC as per Regulation 11(B) of the 2014 Tariff Regulations and allow the same after prudence check. BSPHCL has further submitted that delay with respect to Assets-21 and 22 is yet to be condoned, and that no explanation has been offered for further delay of 141 days in the case of Asset-22. With respect to Asset-1, it is submitted that there was no consideration of IEDC in the Commission's order dated 21.3.2016 in Petition No. 30/TT/2015 and as such the Petitioner is required to explain the same in the present petition.

60. In response, the Petitioner has submitted that IEDC deducted for any asset due to time over-run has not been re-claimed. The Petitioner has submitted that IEDC for the entire project has been claimed and prayed that IDC may be allowed as claimed by the Petitioner except for wherever IEDC is restricted corresponding to time over-run not condoned.

61. We have considered the submissions of the Petitioner and BSPHCL. The asset-wise details of claimed and allowed IEDC for the purpose of tariff determination in respect of transmission assets are as follows:

(₹ in lakh)			
Assets	Claimed	Allowed	Disallowed
Asset-1	NA		
Asset-2	263.58	240.58	23.00
Asset-3	65.37	57.11	8.26
Asset-4	97.06	79.55	17.51
Asset-5	17.21	13.87	3.34
Asset-6	125.49	81.76	43.73
Asset-7	43.07	28.06	15.01
Asset-8	53.87	40.38	13.49
Asset-9	73.74	48.05	25.69
Asset-10	378.77	378.77	0.00
Asset-11	93.81	93.81	0.00
Asset-12	58.47	58.47	0.00



Assets	Claimed	Allowed	Disallowed
Asset-13	1137.88	1137.88	0.00
Asset-14	2904.09	2904.09	0.00
Asset-15	208.46	208.46	0.00
Asset-16	91.37	91.37	0.00
Asset-17	11.15	3.00	8.15
Asset-18	30.85	30.85	0.00
Asset-19	87.51	87.51	0.00
Asset-20	154.09	123.51	30.58
Asset-21	35.97	33.79	2.18

### Initial Spares

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

#### *“(d) Transmission System*

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

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

Assets	Capital cost (A)		Spares limit (B)		Spares claimed (C)		Spares worked out D = [(A-C)*B / (100-B)]	
	Transmission line	Sub-station (excluding land cost)	Transmission line (in %)	Sub-station (in %)	Transmission line	Sub-station	Transmission line	
Asset-1	7934.9	18304.16	0.75	2.50	22.60	455.81	59.79	457.65
Asset-2	3562.83	2880.62	1	4	35.62	115.22	35.63	115.23
Asset-3	0	1504.70	1	4	0.00	60.19	0.00	60.19
Asset-4	702.78	1368.84	1	4	7.03	54.75	7.03	54.75
Asset-5	0	236.81	1	4	0.00	9.47	0.00	9.47
Asset-6	2016.58	803.92	1	4	19.97	32.16	20.17	32.16
Asset-7	0	819.68	1	4	0.00	32.79	0.00	32.79
Asset-8	0	886.73	1	4	0.00	35.47	0.00	35.47
Asset-9	0	2112.37	1	4	0.00	84.00	0.00	84.52
Asset-10	3615.00	844.85	1	6	22.00	28.42	36.29	52.11
Asset-11	0	1780.66	1	4	0.00	84.49	0.00	70.67
Asset-12	0	780.32	1	4	0.00	39.50	0.00	30.87
Asset-13	16133.14	16660.02	1	5	107.18	705.10	161.88	839.73
Asset-14	27082.40	5434.43	1	4	270.82	217.38	270.82	217.38
Asset-15	0	1939.22	1	4	0.00	77.57	0.00	77.57
Asset-16	0	1075.92	1	4	0.00	43.04	0.00	43.04
Asset-17	0	192.39	1	6	0.00	7.00	0.00	7.72



Assets	Capital cost (A)		Spares limit (B)		Spares claimed (C)		Spares worked out $D = [(A-C)*B / (100-B)]$	
	Transmission line	Sub-station (excluding land cost)	Transmission line (in %)	Sub-station (in %)	Transmission line	Sub-station	Transmission line	
Asset-18	0	830.15	1	6	0.00	26.02	0.00	51.33
Asset-19	1854.35	0	1	4	18.54	0.00	18.54	0.00
Asset-20	0	4392.55	1	5	0.00	189.95	0.00	221.19
Asset-21	0	334.55	1	4	0.00	13.38	0.00	13.38
Total	62901.98	63182.89			503.76	2311.71	610.15	2507.22

64. BSPHCL has submitted that the transmission assets covered in the present petition span over tariff blocks for 2009-14, 2014-19 and 2019-24 tariff periods and as such the reliance placed by the Petitioner on Regulation 13(iii) of the 2014 Tariff Regulations is misplaced and is required to be explained by the Petitioner.

65. In response, the Petitioner has submitted that Initial spares claimed as against the permissible limit and details thereof have been given in para 8.3 of the present petition on project basis and the Petitioner has re-claimed the restricted Initial Spares corresponding corresponding to instant Assets-1, 8 and 14. The Petitioner has further submitted that entire Initial Spares have been discharged upto 31.3.2014 in respect of Asset-1 and upto respective COD in respect of Assets-2 to 22.

66. We have considered the submissions of the Petitioner and BSPHCL. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the norms on overall project cost. In the present case, the entire transmission project has been completed during 2014-19 tariff period except for Asset-22. Overall project cost of the transmission assets can ideally be arrived at only when all the transmission assets are combined. We, therefore, allow Initial Spares on the basis of individual cost of transmission assets in 2009-14 tariff period for Asset-1 and in 2014-19 tariff period for Asset-2 to Asset-21. Accordingly, Initial Spares allowed in respect of the transmission assets are as follows:



(₹ in lakh)

Assets	Capital cost (A)		Spares claimed (C)		Spares worked out $D = [(A-C) \times B / (100-B)]$		Spares allowed		Excess spares disallowed	
	transmission line	Sub-station (excluding Land cost)	Transmission line	Sub-station	Transmission line	Sub-station	Transmission line	Sub-station	Transmission line	Sub-station
Asset-1	7934.90	18304.16	22.60	455.81	59.79	457.65	22.60	455.81	0.00	0.00
Asset-2	3562.83	2880.62	35.62	115.22	35.63	115.23	35.62	115.22	0.00	0.00
Asset-3	0.00	1504.70	0.00	60.19	0.00	60.19	0.00	60.19	0.00	0.00
Asset-4	702.78	1368.84	7.03	54.75	7.03	54.75	7.03	54.75	0.00	0.00
Asset-5	0.00	236.81	0.00	9.47	0.00	9.47	0.00	9.47	0.00	0.00
Asset-6	2016.58	803.92	19.97	32.16	20.17	32.16	19.97	32.16	0.00	0.00
Asset-7	0.00	819.68	0.00	32.79	0.00	32.79	0.00	32.79	0.00	0.00
Asset-8	0.00	886.73	0.00	35.47	0.00	35.47	0.00	35.47	0.00	0.00
Asset-9	0.00	2112.37	0.00	84.00	0.00	84.52	0.00	84.00	0.00	0.00
Asset-10	3615.00	844.85	22.00	28.42	36.29	52.11	22.00	28.42	0.00	0.00
Asset-11	0.00	1780.66	0.00	84.49	0.00	70.67	0.00	70.67	0.00	13.82
Asset-12	0.00	780.32	0.00	39.50	0.00	30.87	0.00	30.87	0.00	8.63
Asset-13	16133.14	16660.02	107.18	705.10	161.88	839.73	107.18	705.10	0.00	0.00
Asset-14	27082.40	5434.43	270.82	217.38	270.82	217.38	270.82	217.38	0.00	0.00
Asset-15	0.00	1939.22	0.00	77.57	0.00	77.57	0.00	77.57	0.00	0.00
Asset-16	0.00	1075.92	0.00	43.04	0.00	43.04	0.00	43.04	0.00	0.00
Asset-17	0.00	192.39	0.00	7.00	0.00	7.72	0.00	7.00	0.00	0.00
Asset-18	0.00	830.15	0.00	26.02	0.00	51.33	0.00	26.02	0.00	0.00
Asset-19	1854.35	0.00	18.54	0.00	18.54	0.00	18.54	0.00	0.00	0.00
Asset-20	0.00	4392.55	0.00	189.95	0.00	221.19	0.00	189.95	0.00	0.00
Asset-21	0.00	334.55	0.00	13.38	0.00	13.38	0.00	13.38	0.00	0.00
			503.76	2311.71	610.15	2507.22	503.76	2289.26	0.00	22.45

### Capital Cost as on COD

67. The details of the capital cost approved as on COD in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Capital cost as on COD claimed/entitled by the Petitioner	IDC dis-allowed due to time over run and computational difference	Un-discharged IDC as on COD	IEDC disallowed on COD	Excess Initial Spares	Capital Cost as on COD considered for tariff calculation
1	2	3	4	5	6	7= (2-3-4-5-6)
Asset-1	28425.34	0.00	0.00	0.00	0.00	28425.34
Asset-2	5969.93	0.00	0.00	23.00	0.00	5946.93
Asset-3	1416.64	3.96	21.90	8.26	0.00	1382.52
Asset-4	2103.69	26.93	42.34	17.51	0.00	2016.91
Asset-5	373.21	13.82	8.16	3.34	0.00	347.89
Asset-6	2623.16	239.10	50.99	43.73	0.00	2289.34
Asset-7	869.03	62.10	6.90	15.01	0.00	785.02
Asset-8	999.21	62.10	13.84	13.49	0.00	909.78
Asset-9	1518.76	136.00	23.61	25.69	0.00	1333.46
Asset-10	4670.53	0.00	233.45	0.00	0.00	4437.08
Asset-11	1827.07	4.49	13.87	0.00	13.82	1794.89
Asset-12	1086.09	0.00	34.44	0.00	8.63	1043.02
Asset-13	31831.64	61.86	550.75	0.00	0.00	31219.03



Assets	Capital cost as on COD claimed/entitled by the Petitioner	IDC dis-allowed due to time over run and computational difference	Un-discharged IDC as on COD	IEDC disallowed on COD	Excess Initial Spares	Capital Cost as on COD considered for tariff calculation
Asset-14	46715.45	0.00	922.75	0.00	0.00	45792.70
Asset-15	1988.70	0.00	19.22	0.00	0.00	1969.48
Asset-16	932.13	0.00	18.18	0.00	0.00	913.95
Asset-17	184.61	37.85	0.22	8.15	0.00	138.39
Asset-18	868.59	0.36	13.44	0.00	0.00	854.79
Asset-19	1776.25	0.00	1.22	0.00	0.00	1775.03
Asset-20	4758.78	375.49	144.20	30.58	0.00	4208.51
Asset-21	112.16	2.88	4.22	2.18	0.00	102.89
	<b>141050.97</b>	<b>1026.94</b>	<b>2123.70</b>	<b>190.94</b>	<b>22.45</b>	<b>137686.95</b>

### **Additional Capital Expenditure (ACE)**

68. The Petitioner has claimed the Additional Capital Expenditure (ACE) based on actual expenditure in respect of the transmission assets and has submitted Audited Certificate and Form-7 in support of the same. Further, the ACE claimed is incurred on account of any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date and the same has been claimed under Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. The ACE on account of balance and retention payment after the cut-off date for the works executed within the cut-off date has been claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations. Additionally, the Petitioner has confirmed that no ACE has been claimed on account of undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed after the cut-off date. ACE on account of undischarged IDC up to COD has been claimed in the respective year of discharge. The details of ACE claimed in respect of transmission assets are as follows:

						(₹ in lakh)
Assets	ACE 2014-2019					Total ACE for 2014-19 (as claimed for true-up)
	(as claimed for true-up)					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	2657.60	422.33	611.95	656.71	86.60	4435.19
Asset-2	612.49	1159.59	708.70	307.56	148.98	2937.32



Assets	ACE 2014-2019					Total ACE for 2014-19 (as claimed for true-up)
	(as claimed for true-up)					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-3	213.39	294.75	451.70	58.88	29.80	1048.52
Asset-4	110.05	366.59	99.77	72.05	69.38	717.84
Asset-5	0.00	159.00	162.52	117.81	20.01	459.34
Asset-6	112.68	77.25	122.23	20.07	72.94	405.17
Asset-7	19.31	98.86	39.45	19.44	72.94	250.00
Asset-8	0.00	35.11	39.45	19.44	72.94	166.94
Asset-9	388.53	423.04	85.49	19.44	72.94	989.44
Asset-10	0.00	36.99	663.14	29.14	0.00	729.27
Asset-11	20.23	105.67	85.49	19.44	72.94	303.77
Asset-12	0.00	0.00	39.45	19.46	72.94	131.85
Asset-13	0.00	0.00	4084.72	1922.65	635.82	6643.19
Asset-14	0.00	0.00	0.00	0.00	1708.78	1708.78
Asset-15	0.00	0.00	0.00	0.00	114.81	114.81
Asset-16	0.00	0.00	0.00	0.00	84.63	84.63
Asset-17	0.00	0.00	0.00	0.00	0.00	0.00
Asset-18	0.00	5.32	39.53	75.63	0.00	120.48
Asset-19	0.00	5.60	43.33	0.63	0.00	49.56
Asset-20	0.00	0.00	0.00	227.76	131.42	359.18
Asset-21	0.00	0.00	0.00	0.00	0.00	0.00
	4134.28	3190.10	7276.92	3586.11	3467.87	21655.28

69. The Petitioner has submitted the details of cut-off dates as per Regulation 3(13) of the 2014 Tariff Regulations in respect of transmission assets and the same are as follows:

Assets	COD	Cut-off date
Asset-1	1.12.2012 (E-COD)	31.3.2015
Asset-2	1.4.2014	31.3.2017
Asset-3	1.6.2014	31.3.2017
Asset-4	3.9.2014	31.3.2017
Asset-5	29.9.2014	31.3.2017
Asset-6	3.12.2014	31.3.2017
Asset-7	3.12.2014	31.3.2017
Asset-8	26.11.2015	31.3.2018
Asset-9	3.12.2014	31.3.2017
Asset-10	19.8.2015	31.3.2018
Asset-11	22.1.2015	31.3.2018
Asset-12	3.3.2016	31.3.2019
Asset-13	30.7.2016	31.3.2019
Asset-14	31.3.2018	31.3.2021
Asset-15	5.11.2018	31.3.2021
Asset-16	16.9.2018	31.3.2021
Asset-17	14.3.2019	31.3.2022
Asset-18	19.8.2015	31.3.2018



<b>Assets</b>	<b>COD</b>	<b>Cut-off date</b>
Asset-19	2.11.2015	31.3.2018
Asset-20	18.11.2017	31.3.2020
Asset-21	29.8.2018	31.3.2021
Asset-22	3.8.2019	31.3.2022

70. The Petitioner has submitted that ACE has been incurred for the work executed within the 'cut-off' date on account of balance and retention payment done within the 'cut-off' date under Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. ACE with respect to transmission assets beyond the 'cut-off' date is covered under Regulation 14(3)(v) of the 2014 Tariff Regulations and the Petitioner has submitted Auditor's certificate in support of the same.

71. BSPHCL in its reply has submitted that the Petitioner has failed to give details of estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution etc. as per Regulation 14(1) and Regulation 14(3 (v) of the 2014 Tariff Regulations. BSPHCL has further submitted that as per Regulation 13(3) of the 2014 Tariff Regulations, repair and maintenance under O&M Expenses cannot be claimed. However, the Petitioner has considered ACE with respect to Assets-14 to 16 on account of balance work O&M Expenses. BHPHCL has also submitted that no ACE is incurred by the Petitioner in respect of Assets-2, 9 and 11.

72. In response, the Petitioner has submitted that it has given the necessary details including liability flow statement vide affidavit 13.1.2021. The Petitioner has clarified that ACE in respect of Assets-14 and 16 has been claimed under Regulation 14(1) (ii) 2014 Tariff Regulations towards unexecuted works within the cut-off date and not as ACE for O&M Expenses.

73. The Commission through its Technical Validation (TV) letter dated 29.12.2020 directed the Petitioner to submit year-wise reconciliation statement of additional



capitalization showing gross additional capitalization, LD adjustment amount and net additional capitalization after LD adjustment in respect of Asset-17 during 2014-19 period. In response, the Petitioner vide affidavit dated 13.1.2021 has submitted that 'Nil' LD has been imposed for the delay for Asset-17. The Petitioner has submitted that original contractor/agency engaged for Asset-17 i.e. Biharshariff Extension works deserted the site on 13.2.2014 and matter is under arbitration. Therefore, LD of the main agency (GET Power) is yet to be decided. The Petitioner has also submitted that balance work has been carried out through different agencies and no LD has been imposed on them.

74. The Petitioner has submitted that ACE incurred is inclusive of undischarged IDC. The details of underlying reasons for ACE of the transmission assets are given in Form-7. We have considered the submissions of the Petitioner and perused Form-7. The asset-wise ACE allowed for the transmission assets excluding IDC discharged after COD and the reasons are as follows:

(₹ in lakh)						
Assets	ACE towards	ACE allowed				
		2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1 (Cut-off date: 31.3.2015)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	2657.60	-	-	-	-
	Liability Paymnet after cut-off date allowed under 14(3)(v) of the 2014 Tariff Regulations	-	422.33	611.95	656.71	86.50
Asset-2 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	612.49	1159.69	708.70	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	307.56	148.98
Asset-3 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	213.39	294.75	451.70	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	58.88	29.80



Asset-4 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	110.05	366.59	99.77	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	72.05	69.38
Asset-5 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	159.00	162.52	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations				117.81	20.01
Asset-6 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	112.68	77.25	122.23	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	20.07	72.94
Asset-7 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	19.31	98.66	39.45	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	19.44	72.94
Asset-8 (Cut-off date 31.3.2018)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	35.11	39.45	19.44	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	-	72.94
Asset-9 (Cut-off date 31.3.2017)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	388.53	423.04	85.49	-	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	19.44	72.94
Asset-10 (Cut-off date 31.3.2018)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	36.99	663.14	29.14	-
Asset-11 (cut-off date: 31.3.2018)	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	20.23	105.67	85.49	19.44	-
	Liability Paymnet after cut-off date under 14(2)(iv) of the 2014 Tariff Regulations	-	-	-	-	72.94
Asset-12	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	-	39.45	19.46	72.94
Asset-13	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	-	4084.72	1922.65	635.82
Asset-14	Liability Payment within cut off allowed under 14(1)(i) of	-	-	-	-	1708.78



	the 2014 Tariff Regulations					
Asset-15	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	-	-	-	114.81
Asset-16	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	-	-	-	84.63
Asset-17	-	-	-	-	-	-
Asset-18	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	5.32	39.53	75.63	-
Asset-19	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	5.60	43.33	0.63	-
Asset-20	Liability Payment within cut off allowed under 14(1)(i) of the 2014 Tariff Regulations	-	-	-	227.76	156.06
Asset-21	-	-	-	-	-	-

75. The year-wise discharged IDC allowed as ACE in the respective assets is summarised as follows:

(₹ in lakh)						
Assets	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Asset-1	-	-	-	-	-	-
Asset-2	-	-	-	-	-	-
Asset-3	10.54	11.36	-	-	-	-
Asset-4	42.34	-	-	-	-	-
Asset-5	4.30	3.86	-	-	-	-
Asset-6	22.05	28.94	-	-	-	-
Asset-7	5.45	1.45	-	-	-	-
Asset-8	-	13.84	-	-	-	-
Asset-9	2.59	21.02	-	-	-	-
Asset-10	-	233.45	-	-	-	-
Asset-11	6.26	7.61	-	-	-	-
Asset-12	-	-	34.44	-	-	-
Asset-13	-	-	516.07	34.68	-	-
Asset-14	-	-	-	-	922.75	-
Asset-15	-	-	-	-	1.18	18.04
Asset-16	-	-	-	-	15.47	2.71
Asset-17	-	-	-	-	-	0.22
Asset-18	-	10.35	3.09	-	-	-
Asset-19	-	-	1.22	-	-	-
Asset-20	-	-	-	47.02	97.18	-
Asset-21	-	-	-	-	3.58	0.64
<b>Total</b>	<b>93.53</b>	<b>331.88</b>	<b>554.82</b>	<b>81.70</b>	<b>1040.16</b>	<b>21.61</b>

76. The total ACE allowed after truing up for transmission assets are as follows:



						(₹ in lakh)
Assets	ACE 2014-2019					Total ACE for 2014-19 (as allowed for true-up)
	(as allowed for true-up)					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	2657.60	422.33	611.95	656.71	86.60	4435.19
Asset-2	612.49	1159.59	708.70	307.56	148.98	2937.32
Asset-3	223.93	306.11	451.70	58.88	29.80	1070.42
Asset-4	152.39	366.59	99.77	72.05	69.38	760.18
Asset-5	4.30	162.86	162.52	117.81	20.01	467.50
Asset-6	134.73	106.19	122.23	20.07	72.94	456.16
Asset-7	24.76	100.31	39.45	19.44	72.94	256.90
Asset-8	0.00	48.95	39.45	19.44	72.94	180.78
Asset-9	391.12	444.06	85.49	19.44	72.94	1013.05
Asset-10	0.00	270.44	663.14	29.14	0.00	962.72
Asset-11	26.49	113.28	85.49	19.44	72.94	317.64
Asset-12	0.00	0.00	73.89	19.46	72.94	166.29
Asset-13	0.00	0.00	4600.79	1957.32	635.82	7193.93
Asset-14	0.00	0.00	0.00	0.00	2631.53	2631.53
Asset-15	0.00	0.00	0.00	0.00	115.99	115.99
Asset-16	0.00	0.00	0.00	0.00	100.10	100.10
Asset-17	0.00	0.00	0.00	0.00	0.00	0.00
Asset-18	0.00	15.67	42.62	75.63	0.00	133.92
Asset-19	0.00	5.60	44.55	0.63	0.00	50.78
Asset-20	0.00	0.00	0.00	274.78	228.60	503.38
Asset-21	0.00	0.00	0.00	0.00	3.58	3.58
Total	4227.81	3521.98	7831.74	3667.80	4508.03	23757.36

77. Based on the above, summary of capital cost considered for tariff in respect of the transmission assets from COD/ 1.4.2014 to 31.3.2019 is as follows:

(₹ in lakh)

Assets	Capital cost allowed as on COD/31.3.2014	ACE allowed for true-up in 2014-19					Admitted capital Cost as on 31.3.19 (as allowed for true-up)
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	28425.34	2657.60	422.33	611.95	656.71	86.60	32860.53
Asset-2	5946.93	612.49	1159.59	708.70	307.56	148.98	8884.25
Asset-3	1382.52	223.93	306.11	451.70	58.88	29.80	2452.93
Asset-4	2016.91	152.39	366.59	99.77	72.05	69.38	2777.09
Asset-5	347.89	4.30	162.86	162.52	117.81	20.01	815.39
Asset-6	2289.34	134.73	106.19	122.23	20.07	72.94	2745.50
Asset-7	785.02	24.76	100.31	39.45	19.44	72.94	1041.92
Asset-8	909.78	0.00	48.95	39.45	19.44	72.94	1090.56
Asset-9	1333.46	391.12	444.06	85.49	19.44	72.94	2346.50
Asset-10	4437.08	0.00	270.44	663.14	29.14	0.00	5399.80
Asset-11	1794.89	26.49	113.28	85.49	19.44	72.94	2112.53
Asset-12	1043.02	0.00	0.00	73.89	19.46	72.94	1209.31
Asset-13	31219.03	0.00	0.00	4600.79	1957.32	635.82	38412.96
Asset-14	45792.7	0.00	0.00	0.00	0.00	2631.53	48424.23
Asset-15	1969.48	0.00	0.00	0.00	0.00	115.99	2085.47



Asset-16	913.95	0.00	0.00	0.00	0.00	100.10	1014.05
Asset-17	138.39	0.00	0.00	0.00	0.00	0.00	138.39
Asset-18	854.79	0.00	15.67	42.62	75.63	0.00	988.71
Asset-19	1775.03	0.00	5.60	44.55	0.63	0.00	1825.81
Asset-20	4208.51	0.00	0.00	0.00	274.78	228.60	4711.89
Asset-21	102.89	0.00	0.00	0.00	0.00	3.58	106.47
Asset-21(Recap)	289.70	0.00	0.00	0.00	0.00	0.00	289.70
Total	137976.65	4227.81	3521.98	7831.74	3667.8	4508.03	161734.01

### **Debt-Equity ratio**

78. The Petitioner has claimed debt-equity ratio of 70:30 as on COD of the transmission assets. Debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt and equity as on the COD and as on 31.3.2019 for the transmission assets considered for the purpose of tariff of the 2014-19 period are as follows:

#### **Asset-1**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	19897.74	70.00	23002.37	70.00
Equity	8527.60	30.00	9858.16	30.00
<b>Total</b>	<b>28425.34</b>	<b>100.00</b>	<b>32860.53</b>	<b>100.00</b>

#### **Asset-2**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	4162.85	70.00	6218.98	70.00
Equity	1784.08	30.00	2665.28	30.00
<b>Total</b>	<b>5946.93</b>	<b>100.00</b>	<b>8884.25</b>	<b>100.00</b>

#### **Asset-3**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	967.75	70.00	1717.05	70.00
Equity	414.75	30.00	735.88	30.00
<b>Total</b>	<b>1382.51</b>	<b>100.00</b>	<b>2452.93</b>	<b>100.00</b>

#### **Asset-4**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1411.84	70.00	1943.97	70.00
Equity	605.07	30.00	833.13	30.00



Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
<b>Total</b>	<b>2016.92</b>	<b>100.00</b>	<b>2777.10</b>	<b>100.00</b>

#### Asset-5

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	243.52	70.00	570.77	70.00
Equity	104.37	30.00	244.62	30.00
<b>Total</b>	<b>347.89</b>	<b>100.00</b>	<b>815.39</b>	<b>100.00</b>

#### Asset-6

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1602.54	70.00	1921.85	70.00
Equity	686.80	30.00	823.65	30.00
<b>Total</b>	<b>2289.34</b>	<b>100.00</b>	<b>2745.50</b>	<b>100.00</b>

#### Asset-7

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	549.51	70.00	729.34	70.00
Equity	235.50	30.00	312.58	30.00
<b>Total</b>	<b>785.02</b>	<b>100.00</b>	<b>1041.92</b>	<b>100.00</b>

#### Asset-8

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	636.84	70.00	763.39	70.00
Equity	272.93	30.00	327.17	30.00
<b>Total</b>	<b>909.78</b>	<b>100.00</b>	<b>1090.56</b>	<b>100.00</b>

#### Asset-9

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	933.42	70.00	1642.55	70.00
Equity	400.04	30.00	703.95	30.00
<b>Total</b>	<b>1333.45</b>	<b>100.00</b>	<b>2346.50</b>	<b>100.00</b>

#### Asset-10

Funding	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	3105.95	70.00	3779.86	70.00



<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Equity	1331.12	30.00	1619.94	30.00
<b>Total</b>	<b>4437.08</b>	<b>100.00</b>	<b>5399.80</b>	<b>100.00</b>

#### **Asset-11**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1256.42	70.00	1478.77	70.00
Equity	538.47	30.00	633.76	30.00
<b>Total</b>	<b>1794.89</b>	<b>100.00</b>	<b>2112.53</b>	<b>100.00</b>

#### **Asset-12**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	730.11	70.00	846.51	70.00
Equity	312.90	30.00	362.79	30.00
<b>Total</b>	<b>1043.02</b>	<b>100.00</b>	<b>1209.31</b>	<b>100.00</b>

#### **Asset-13**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	21853.32	70.00	26889.07	70.00
Equity	9365.71	30.00	11523.89	30.00
<b>Total</b>	<b>31219.03</b>	<b>100.00</b>	<b>38412.96</b>	<b>100.00</b>

#### **Asset-14**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	32054.89	70.00	33896.97	70.00
Equity	13737.81	30.00	14527.27	30.00
<b>Total</b>	<b>45792.71</b>	<b>100.00</b>	<b>48424.24</b>	<b>100.00</b>

#### **Asset-15**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1378.64	70.00	1459.83	70.00
Equity	590.84	30.00	625.64	30.00
<b>Total</b>	<b>1969.48</b>	<b>100.00</b>	<b>2085.47</b>	<b>100.00</b>



**Asset-16**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	639.76	70.00	709.83	70.00
Equity	274.18	30.00	304.21	30.00
<b>Total</b>	<b>913.95</b>	<b>100.00</b>	<b>1014.05</b>	<b>100.00</b>

**Asset-17**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	96.87	70.00	96.87	70.00
Equity	41.52	30.00	41.52	30.00
<b>Total</b>	<b>138.39</b>	<b>100.00</b>	<b>138.39</b>	<b>100.00</b>

**Asset-18**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	598.35	70.00	692.10	70.00
Equity	256.44	30.00	296.61	30.00
<b>Total</b>	<b>854.79</b>	<b>100.00</b>	<b>988.71</b>	<b>100.00</b>

**Asset-19**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1242.52	70.00	1278.07	70.00
Equity	532.51	30.00	547.74	30.00
<b>Total</b>	<b>1775.03</b>	<b>100.00</b>	<b>1825.81</b>	<b>100.00</b>

**Asset-20**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	2945.96	70.00	3298.33	70.00
Equity	1262.56	30.00	1413.57	30.00
<b>Total</b>	<b>4208.52</b>	<b>100.00</b>	<b>4711.90</b>	<b>100.00</b>

**Asset-21 (New Equipment)**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	72.02	70.00	74.53	70.00
Equity	30.87	30.00	31.94	30.00
<b>Total</b>	<b>102.89</b>	<b>100.00</b>	<b>106.47</b>	<b>100.00</b>



**Asset-21 (Recapitalized)**

<b>Funding</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
Debt	202.79	70.00	202.79	70.00
Equity	86.91	30.00	86.91	30.00
<b>Total</b>	<b>289.70</b>	<b>100.00</b>	<b>289.70</b>	<b>100.00</b>

**Depreciation**

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

**(₹ in lakh)**

<b>Asset-1</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	28425.34	31082.94	31505.27	32117.22	32773.93
B	ACE	2657.60	422.33	611.95	656.71	86.60
C	Closing Gross Block (A+B)	31082.94	31505.27	32117.22	32773.93	32860.53
D	Average Gross Block (A+C)/2	29754.14	31294.11	31811.25	32445.58	32817.23
E	Weighted Average Rate of Depreciation (in %)	4.9085	4.9245	4.9302	4.9371	4.9410
F	Balance useful life of the asset	27	26	25	24	23
G	Elapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregate Depreciable Value	24786.97	26153.27	26618.69	27189.59	27524.08
I	<b>Combined Depreciation during the year</b>	<b>1460.47</b>	<b>1541.07</b>	<b>1568.37</b>	<b>1601.86</b>	<b>1621.49</b>
J	Aggregate Cumulative Depreciation	3230.33	4771.40	6339.77	7941.63	9563.12
K	Remaining Depreciable Value (H-J)	21556.64	21381.87	20278.92	19247.96	17960.96



(₹ in lakh)

Asset-2						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	5946.93	6559.42	7719.01	8427.71	8735.27
B	ACE	612.49	1159.59	708.70	307.56	148.98
C	Closing Gross Block (A+B)	6559.42	7719.01	8427.71	8735.27	8884.25
D	Average Gross Block (A+C)/2	6253.18	7139.22	8073.36	8581.49	8809.76
E	Weighted Average Rate of Depreciation (in %)	4.7724	4.8355	4.8745	4.8839	4.8922
F	Balance useful life of the asset	31	30	29	28	27
G	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
H	Aggregate Depreciable Value	5084.14	5879.91	6718.97	7176.29	7381.73
I	<b>Combined Depreciation during the year</b>	<b>298.43</b>	<b>345.22</b>	<b>393.53</b>	<b>419.11</b>	<b>430.99</b>
J	Aggregate Cumulative Depreciation	298.43	643.64	1037.18	1456.29	1887.28
K	Remaining Depreciable Value (H-J)	4785.72	5236.27	5681.79	5720.00	5494.45

(₹ in lakh)

Asset-3						
	Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1382.51	1606.44	1912.55	2364.25	2423.13
B	ACE	223.93	306.11	451.70	58.88	29.80
C	Closing Gross Block (A+B)	1606.44	1912.55	2364.25	2423.13	2452.93
D	Average Gross Block (A+C)/2	1494.47	1759.49	2138.40	2393.69	2438.03
E	Weighted Average Rate of Depreciation (in %)	4.5160	4.6266	4.7236	4.7523	4.7466
F	Balance useful life of the asset	25	24	23	22	21
G	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
H	Aggregate Depreciable Value	1150.84	1388.52	1728.70	1958.46	1998.37
I	<b>Combined Depreciation during the year</b>	<b>56.21</b>	<b>81.40</b>	<b>101.01</b>	<b>113.76</b>	<b>115.72</b>
J	Aggregate Cumulative Depreciation	56.21	137.62	238.63	352.38	468.11
K	Remaining Depreciable Value (H-J)	1094.63	1250.91	1490.08	1606.08	1530.26

(₹ in lakh)

Asset-4						
	Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	2016.92	2169.31	2535.90	2635.67	2707.72
B	ACE	152.39	366.59	99.77	72.05	69.38
C	Closing Gross Block (A+B)	2169.31	2535.90	2635.67	2707.72	2777.10



Asset-4						
	Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
D	Average Gross Block (A+C)/2	2093.11	2352.60	2585.78	2671.69	2742.41
E	Weighted Average Rate of Depreciation (in %)	4.9079	4.9544	4.9818	4.9843	4.9920
F	Balance useful life of the asset	29	28	27	26	25
G	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
H	Aggregate Depreciable Value	1747.87	1980.86	2190.16	2267.48	2331.12
I	<b>Combined Depreciation during the year</b>	<b>59.10</b>	<b>116.56</b>	<b>128.82</b>	<b>133.17</b>	<b>136.90</b>
J	Aggregate Cumulative Depreciation	59.10	175.66	304.48	437.64	574.54
K	Remaining Depreciable Value (H-J)	1688.77	1805.20	1885.68	1829.83	1756.58

(₹ in lakh)

Asset-5						
	Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	347.89	352.19	515.05	677.57	795.38
B	ACE	4.30	162.86	162.52	117.81	20.01
C	Closing Gross Block (A+B)	352.19	515.05	677.57	795.38	815.39
D	Average Gross Block (A+C)/2	350.04	433.62	596.31	736.47	805.38
E	Weighted Average Rate of Depreciation (in %)	3.0066	3.4406	3.8183	3.9750	4.0652
F	Balance useful life of the asset	25	24	23	22	21
G	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
H	Aggregate Depreciable Value	179.11	253.77	399.63	525.78	587.80
I	<b>Combined Depreciation during the year</b>	<b>5.31</b>	<b>14.92</b>	<b>22.77</b>	<b>29.27</b>	<b>32.74</b>
J	Aggregate Cumulative Depreciation	5.31	20.22	42.99	72.27	105.01
K	Remaining Depreciable Value (H-J)	173.80	233.55	356.64	453.51	482.79

(₹ in lakh)

Asset-6						
	Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	2289.34	2424.07	2530.26	2652.49	2672.56
B	ACE	134.73	106.19	122.23	20.07	72.94
C	Closing Gross Block (A+B)	2424.07	2530.26	2652.49	2672.56	2745.50
D	Average Gross Block (A+C)/2	2356.71	2477.16	2591.37	2662.52	2709.03
E	Weighted Average Rate of Depreciation (in %)	5.0490	5.0631	5.0410	5.0167	5.0212
F	Balance useful life of the asset	32	31	30	29	28



Asset-6						
	Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
G	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
H	Aggregate Depreciable Value	2014.83	2123.24	2225.80	2289.60	2331.46
I	<b>Combined Depreciation during the year</b>	<b>38.79</b>	<b>125.42</b>	<b>130.63</b>	<b>133.57</b>	<b>136.03</b>
J	Aggregate Cumulative Depreciation	38.79	164.22	294.85	428.42	564.44
K	Remaining Depreciable Value (H-J)	1976.03	1959.02	1930.95	1861.19	1767.02

(₹ in lakh)

Asset-7						
	Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	785.02	809.78	910.09	949.54	968.98
B	ACE	24.76	100.31	39.45	19.44	72.94
C	Closing Gross Block (A+B)	809.78	910.09	949.54	968.98	1041.92
D	Average Gross Block (A+C)/2	797.40	859.93	929.81	959.26	1005.45
E	Weighted Average Rate of Depreciation (in %)	4.1079	4.1924	4.2734	4.3043	4.3492
F	Balance useful life of the asset	25	25	24	23	22
G	Elapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	558.35	614.63	677.52	704.02	745.59
I	<b>Combined Depreciation during the year</b>	<b>10.68</b>	<b>36.05</b>	<b>39.73</b>	<b>41.29</b>	<b>43.73</b>
J	Aggregate Cumulative Depreciation	10.68	46.73	86.47	127.76	171.48
K	Remaining Depreciable Value (H-J)	547.67	567.90	591.06	576.27	574.11

(₹ in lakh)

Asset-8					
	Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	909.78	958.73	998.18	1017.62
B	ACE	48.95	39.45	19.44	72.94
C	Closing Gross Block (A+B)	958.73	998.18	1017.62	1090.56
D	Average Gross Block (A+C)/2	934.25	978.45	1007.90	1054.09
E	Weighted Average Rate of Depreciation (in %)	4.8948	4.9086	4.9124	4.9080
F	Balance useful life of the asset	25	25	24	23
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	779.48	819.16	845.55	887.13



Asset-8					
	Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
I	<b>Combined Depreciation during the year</b>	<b>15.87</b>	<b>48.03</b>	<b>49.51</b>	<b>51.73</b>
J	Aggregate Cumulative Depreciation	15.87	63.90	113.41	165.14
K	Remaining Depreciable Value (H-J)	763.61	755.26	732.15	721.98

(₹ in lakh)

Asset-9						
	Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1333.45	1724.57	2168.63	2254.12	2273.56
B	ACE	391.12	444.06	85.49	19.44	72.94
C	Closing Gross Block (A+B)	1724.57	2168.63	2254.12	2273.56	2346.50
D	Average Gross Block (A+C)/2	1529.01	1946.60	2211.38	2263.84	2310.03
E	Weighted Average Rate of Depreciation (in %)	4.8725	4.9597	4.9965	4.9977	4.9886
F	Balance useful life of the asset	25	25	24	23	22
G	Elapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	1269.90	1645.73	1884.03	1931.25	1972.82
I	<b>Combined Depreciation during the year</b>	<b>24.29</b>	<b>96.54</b>	<b>110.49</b>	<b>113.14</b>	<b>115.24</b>
J	Aggregate Cumulative Depreciation	24.29	120.83	231.32	344.46	459.70
K	Remaining Depreciable Value (H-J)	1245.61	1524.90	1652.70	1586.78	1513.12

(₹ in lakh)

Asset-10					
	Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	4437.08	4707.52	5370.66	5399.80
B	ACE	270.44	663.14	29.14	0.00
C	Closing Gross Block (A+B)	4707.52	5370.66	5399.80	5399.80
D	Average Gross Block (A+C)/2	4572.30	5039.09	5385.23	5399.80
E	Weighted Average Rate of Depreciation (in %)	5.2800	5.2800	5.2800	5.2800
F	Balance useful life of the asset	33	33	32	31
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	4115.07	4535.18	4846.70	4859.82
I	<b>Combined Depreciation during the year</b>	<b>149.07</b>	<b>266.06</b>	<b>284.34</b>	<b>285.11</b>
J	Aggregate Cumulative Depreciation	149.07	415.14	699.48	984.58
K	Remaining Depreciable Value (H-J)	3966.00	4120.04	4147.23	3875.23



(₹ in lakh)

Asset-11						
	Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
	<b>Depreciation</b>					
A	Opening Gross Block	1794.89	1821.38	1934.66	2020.15	2039.59
B	ACE	26.49	113.28	85.49	19.44	72.94
C	Closing Gross Block (A+B)	1821.38	1934.66	2020.15	2039.59	2112.53
D	Average Gross Block (A+C)/2	1808.13	1878.02	1977.41	2029.87	2076.06
E	Weighted Average Rate of Depreciation (in %)	4.9354	4.9482	4.9627	4.9671	4.9652
F	Balance useful life of the asset	25	25	24	23	22
G	Elapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	1521.11	1584.01	1673.23	1720.22	1761.79
I	<b>Combined Depreciation during the year</b>	<b>16.87</b>	<b>92.93</b>	<b>98.13</b>	<b>100.82</b>	<b>103.08</b>
J	Aggregate Cumulative Depreciation	16.87	109.80	207.93	308.76	411.84
K	Remaining Depreciable Value (H-J)	1504.24	1474.21	1465.29	1411.46	1349.95

(₹ in lakh)

Asset-12					
	Particulars	2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	1043.02	1043.02	1116.91	1136.37
B	ACE	0.00	73.89	19.46	72.94
C	Closing Gross Block (A+B)	1043.02	1116.91	1136.37	1209.31
D	Average Gross Block (A+C)/2	1043.02	1079.96	1126.64	1172.84
E	Weighted Average Rate of Depreciation (in %)	4.3932	4.4209	4.4507	4.4494
F	Balance useful life of the asset	25	25	24	23
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	779.41	812.66	854.66	896.24
I	<b>Combined Depreciation during the year</b>	<b>3.63</b>	<b>47.74</b>	<b>50.14</b>	<b>52.18</b>
J	Aggregate Cumulative Depreciation	3.63	51.37	101.52	153.70
K	Remaining Depreciable Value (H-J)	775.77	761.28	753.15	742.54

(₹ in lakh)

Asset-13				
	Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
	<b>Depreciation</b>			
A	Opening Gross Block	31219.03	35819.82	37777.14
B	ACE	4600.79	1957.32	635.82



Asset-13				
	Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
C	Closing Gross Block (A+B)	35819.82	37777.14	38412.96
D	Average Gross Block (A+C)/2	33519.43	36798.48	38095.05
E	Weighted Average Rate of Depreciation (in %)	5.3498	5.3452	5.3429
F	Balance useful life of the asset	29	29	28
G	Elapsed life at the beginning of the year (Year)	0	0	1
H	Aggregate Depreciable Value	29520.86	32472.01	33638.92
I	<b>Combined Depreciation during the year</b>	<b>1198.77</b>	<b>1966.95</b>	<b>2035.39</b>
J	Aggregate Cumulative Depreciation	1198.77	3165.72	5201.11
K	Remaining Depreciable Value (H-J)	28322.09	29306.29	28437.81

Asset-14					(₹ in lakh)	
	Particulars	2017-18 (pro-rata for 1 day)	2018-19	Asset-15 2018-19 (pro-rata for 147 days)	Asset-16 2018-19 (pro-rata for 197 days)	Asset-17 2018-19 (pro-rata for 18 days)
	<b>Depreciation</b>					
A	Opening Gross Block	45792.71	45792.71	1969.48	913.95	138.39
B	ACE	0.00	2631.53	115.99	100.10	0.00
C	Closing Gross Block (A+B)	45792.71	48424.24	2085.47	1014.05	138.39
D	Average Gross Block (A+C)/2	45792.71	47108.47	2027.47	964.00	138.39
E	Weighted Average Rate of Depreciation (in %)	5.2254	5.2072	5.2800	5.2800	5.2800
F	Balance useful life of the asset	33	33	25	25	25
G	Elapsed life at the beginning of the year (Year)	0	0	0	0	0
H	Aggregate Depreciable Value	40706.36	41805.01	1824.73	867.60	124.55
I	<b>Combined Depreciation during the year</b>	<b>6.56</b>	<b>2453.04</b>	<b>43.11</b>	<b>27.47</b>	<b>0.36</b>
J	Aggregate Cumulative Depreciation	6.56	2459.60	43.11	27.47	0.36
K	Remaining Depreciable Value (H-J)	40699.80	39345.42	1781.61	840.13	124.19

Asset-18					(₹ in lakh)	
	Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19	
	<b>Depreciation</b>					
A	Opening Gross Block	854.79	870.46	913.08	988.71	
B	ACE	15.67	42.62	75.63	0.00	
C	Closing Gross Block (A+B)	870.46	913.08	988.71	988.71	
D	Average Gross Block (A+C)/2	862.63	891.77	950.89	988.71	



<b>Asset-18</b>					
	<b>Particulars</b>	<b>2015-16 (pro-rata for 226 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
E	Weighted Average Rate of Depreciation (in %)	5.2800	5.2800%	5.2800	5.2800
F	Balance useful life of the asset	25	25	24	23
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	776.36	802.59	855.80	889.84
I	<b>Combined Depreciation during the year</b>	<b>28.12</b>	<b>47.09</b>	<b>50.21</b>	<b>52.20</b>
J	Aggregate Cumulative Depreciation	28.12	75.21	125.42	177.62
K	Remaining Depreciable Value (H-J)	748.24	727.38	730.39	712.22

(₹ in lakh)

<b>Asset-19</b>					
	<b>Particulars</b>	<b>2015-16 (pro-rata for 151 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	<b>Depreciation</b>				
A	Opening Gross Block	1775.03	1780.63	1825.18	1825.81
B	ACE	5.60	44.55	0.63	0.00
C	Closing Gross Block (A+B)	1780.63	1825.18	1825.81	1825.81
D	Average Gross Block (A+C)/2	1777.83	1802.91	1825.50	1825.81
E	Weighted Average Rate of Depreciation (in %)	5.2800	5.2800	5.2800	5.2800
F	Balance useful life of the asset	35	35	34	33
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	1600.05	1622.61	1642.95	1643.23
I	<b>Combined Depreciation during the year</b>	<b>38.73</b>	<b>95.19</b>	<b>96.39</b>	<b>96.40</b>
J	Aggregate Cumulative Depreciation	38.73	133.92	230.31	326.71
K	Remaining Depreciable Value (H-J)	1561.32	1488.69	1412.64	1316.52

(₹ in lakh)

<b>Asset-20</b>			
	<b>Particulars</b>	<b>2017-18 (pro-rata for 134 days)</b>	<b>2018-19</b>
	<b>Depreciation</b>		
A	Opening Gross Block	4208.52	4483.30
B	ACE	274.78	228.60
C	Closing Gross Block (A+B)	4483.30	4711.90
D	Average Gross Block (A+C)/2	4345.91	4597.60
E	Weighted Average Rate of Depreciation (in %)	5.2800	5.2800
F	Balance useful life of the asset	25	25



<b>Asset-20</b>			
	<b>Particulars</b>	<b>2017-18 (pro-rata for 134 days)</b>	<b>2018-19</b>
G	Elapsed life at the beginning of the year (Year)	0	0
H	Aggregate Depreciable Value	3911.32	4137.84
I	<b>Combined Depreciation during the year</b>	<b>84.24</b>	<b>242.75</b>
J	Aggregate Cumulative Depreciation	84.24	326.99
K	Remaining Depreciable Value (H-J)	3827.08	3810.84

(₹ in lakh)

<b>Asset-21 (New Equipment)</b>		
	<b>Particulars</b>	<b>2018-19</b>
	<b>Depreciation</b>	
A	Opening Gross Block	102.89
B	ACE	3.58
C	Closing Gross Block (A+B)	106.47
D	Average Gross Block (A+C)/2	104.68
E	Weighted Average Rate of Depreciation (in %)	5.2800
F	Balance useful life of the asset	25
G	Elapsed life at the beginning of the year (Year)	0
H	Aggregate Depreciable Value	94.21
I	<b>Combined Depreciation during the year</b>	<b>2.79</b>
J	Aggregate Cumulative Depreciation	2.79
K	Remaining Depreciable Value (H-J)	91.42

(₹ in lakh)

<b>Asset-21 (Recapitalization)</b>		
	<b>Particulars</b>	<b>2018-19</b>
	<b>Depreciation</b>	
A	Opening Gross Block	289.70
B	ACE	0.00
C	Closing Gross Block (A+B)	289.70
D	Average Gross Block (A+C)/2	289.70
E	Weighted Average Rate of Depreciation (in %)	5.2800
F	Balance useful life of the asset	21
G	Elapsed life at the beginning of the year (Year)	4
H	Aggregate Depreciable Value	260.73
I	<b>Combined Depreciation during the year</b>	<b>7.71</b>
J	Aggregate Cumulative Depreciation	58.50
K	Remaining Depreciable Value (H-J)	202.23

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

80. The Petitioner has claimed the weighted average rate of IoL based on its actual



loan portfolio and rate of interest. We have considered the submissions of the Petitioner.

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

(₹ in lakh)

	Particulars	Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	19897.74	21758.06	22053.69	22482.05	22941.75
B	Cumulative Repayments upto Previous Year	1769.86	3230.33	4771.40	6339.77	7941.63
C	Net Loan-Opening (A-B)	18127.88	18527.73	17282.29	16142.28	15000.12
D	Additions	1860.32	295.63	428.37	459.70	60.62
E	Repayment during the year	1460.47	1541.07	1568.37	1601.86	1621.49
F	Net Loan-Closing (C+D-E)	18527.73	17282.29	16142.28	15000.12	13439.25
G	Average Loan (C+F)/2	18327.80	17905.01	16712.29	15571.20	14219.68
H	Weighted Average Rate of Interest on Loan (in %)	9.1184	9.0992	9.0611	8.9423	8.8890
I	<b>Interest on Loan (G*H)</b>	<b>1671.20</b>	<b>1629.21</b>	<b>1514.32</b>	<b>1392.42</b>	<b>1263.99</b>

(₹ in lakh)

	Particulars	Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	4162.85	4591.60	5403.31	5899.40	6114.69
B	Cumulative Repayments upto Previous Year	0.00	298.43	643.64	1037.18	1456.29
C	Net Loan-Opening (A-B)	4162.85	4293.17	4759.67	4862.22	4658.40
D	Additions	428.74	811.71	496.09	215.29	104.29
E	Repayment during the year	298.43	345.22	393.53	419.11	430.99
F	Net Loan-Closing (C+D-E)	4293.17	4759.67	4862.22	4658.40	4331.70
G	Average Loan (C+F)/2	4228.01	4526.42	4810.94	4760.31	4495.05
H	Weighted Average Rate of Interest on Loan (in %)	8.6906	8.6306	8.5408	8.4558	8.4109
I	<b>Interest on Loan (G*H)</b>	<b>367.44</b>	<b>390.66</b>	<b>410.89</b>	<b>402.52</b>	<b>378.07</b>

(₹ in lakh)

	Particulars	Asset-3				
		2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	967.75	1124.51	1338.79	1654.98	1696.19
B	Cumulative Repayments upto Previous Year	0.00	56.21	137.62	238.63	352.38



	Particulars	Asset-3				
		2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
C	Net Loan-Opening (A-B)	967.75	1068.29	1201.17	1416.35	1343.81
D	Additions	156.75	214.28	316.19	41.22	20.86
E	Repayment during the year	56.21	81.40	101.01	113.76	115.72
F	Net Loan-Closing (C+D-E)	1068.29	1201.17	1416.35	1343.81	1248.95
G	Average Loan (C+F)/2	1018.02	1134.73	1308.76	1380.08	1296.38
H	Weighted Average Rate of Interest on Loan (in %)	9.0173	8.8616	8.6529	8.4502	8.3903
I	<b>Interest on Loan (G*H)</b>	<b>76.46</b>	<b>100.56</b>	<b>113.25</b>	<b>116.62</b>	<b>108.77</b>

(₹ in lakh)

	Particulars	Asset-4				
		2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	1411.84	1518.51	1775.13	1844.97	1895.40
B	Cumulative Repayments upto Previous Year	0.00	59.10	175.66	304.48	437.64
C	Net Loan-Opening (A-B)	1411.84	1459.41	1599.47	1540.49	1457.76
D	Additions	106.67	256.61	69.84	50.44	48.57
E	Repayment during the year	59.10	116.56	128.82	133.17	136.90
F	Net Loan-Closing (C+D-E)	1459.41	1599.47	1540.49	1457.76	1369.42
G	Average Loan (C+F)/2	1435.63	1529.44	1569.98	1499.12	1413.59
H	Weighted Average Rate of Interest on Loan (in %)	8.7575	8.6634	8.5634	8.4348	8.3806
I	<b>Interest on Loan (G*H)</b>	<b>72.33</b>	<b>132.50</b>	<b>134.44</b>	<b>126.45</b>	<b>118.47</b>

(₹ in lakh)

	Particulars	Asset-5				
		2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	243.52	246.53	360.53	474.30	556.76
B	Cumulative Repayments upto Previous Year	0.00	5.31	20.22	42.99	72.27
C	Net Loan-Opening (A-B)	243.52	241.23	340.31	431.30	484.50
D	Additions	3.01	114.00	113.76	82.47	14.01
E	Repayment during the year	5.31	14.92	22.77	29.27	32.74
F	Net Loan-Closing (C+D-E)	241.23	340.31	431.30	484.50	465.76
G	Average Loan (C+F)/2	242.38	290.77	385.81	457.90	475.13
H	Weighted Average Rate of Interest on Loan (in %)	8.8822	8.7788	8.4943	8.2646	8.1804
I	<b>Interest on Loan (G*H)</b>	<b>10.85</b>	<b>25.53</b>	<b>32.77</b>	<b>37.84</b>	<b>38.87</b>



(₹ in lakh)

	Particulars	Asset-6				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	1602.54	1696.85	1771.18	1856.74	1870.79
B	Cumulative Repayments upto Previous Year	0.00	38.79	164.22	294.85	428.42
C	Net Loan-Opening (A-B)	1602.54	1658.05	1606.97	1561.89	1442.37
D	Additions	94.31	74.33	85.56	14.05	51.06
E	Repayment during the year	38.79	125.42	130.63	133.57	136.03
F	Net Loan-Closing (C+D-E)	1658.05	1606.97	1561.89	1442.37	1357.41
G	Average Loan (C+F)/2	1630.30	1632.51	1584.43	1502.13	1399.89
H	Weighted Average Rate of Interest on Loan (in %)	8.7876	8.7682	8.7250	8.6856	8.6739
I	<b>Interest on Loan (G*H)</b>	<b>46.71</b>	<b>143.14</b>	<b>138.24</b>	<b>130.47</b>	<b>121.43</b>

(₹ in lakh)

	Particulars	Asset-7				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	549.51	566.84	637.06	664.68	678.28
B	Cumulative Repayments upto Previous Year	0.00	10.68	46.73	86.47	127.76
C	Net Loan-Opening (A-B)	549.51	556.16	590.33	578.21	550.53
D	Additions	17.33	70.22	27.62	13.61	51.06
E	Repayment during the year	10.68	36.05	39.73	41.29	43.73
F	Net Loan-Closing (C+D-E)	556.16	590.33	578.21	550.53	557.86
G	Average Loan (C+F)/2	552.84	573.25	584.27	564.37	554.19
H	Weighted Average Rate of Interest on Loan (in %)	9.5346	9.2509	8.9716	8.5290	8.3896
I	<b>Interest on Loan (G*H)</b>	<b>17.19</b>	<b>53.03</b>	<b>52.42</b>	<b>48.14</b>	<b>46.49</b>

(₹ in lakh)

	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	636.84	671.11	698.72	712.33
B	Cumulative Repayments upto Previous Year	0.00	15.87	63.90	113.41
C	Net Loan-Opening (A-B)	636.84	655.24	634.83	598.92
D	Additions	34.27	27.62	13.61	51.06
E	Repayment during the year	15.87	48.03	49.51	51.73
F	Net Loan-Closing (C+D-E)	655.24	634.83	598.92	598.25



	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
G	Average Loan (C+F)/2	646.04	645.03	616.87	598.58
H	Weighted Average Rate of Interest on Loan (in %)	8.7973	8.8067	8.7228	8.6616
I	<b>Interest on Loan (G*H)</b>	<b>19.72</b>	<b>56.81</b>	<b>53.81</b>	<b>51.85</b>

(₹ in lakh)

	Particulars	Asset-9				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	933.42	1207.20	1518.04	1577.88	1591.49
B	Cumulative Repayments upto Previous Year	0.00	24.29	120.83	231.32	344.46
C	Net Loan-Opening (A-B)	933.42	1182.91	1397.21	1346.56	1247.03
D	Additions	273.78	310.84	59.84	13.61	51.06
E	Repayment during the year	24.29	96.54	110.49	113.14	115.24
F	Net Loan-Closing (C+D-E)	1182.91	1397.21	1346.56	1247.03	1182.85
G	Average Loan (C+F)/2	1058.16	1290.06	1371.88	1296.79	1214.94
H	Weighted Average Rate of Interest on Loan (in %)	8.7672	8.6571	8.6307	8.5759	8.5342
I	<b>Interest on Loan (G*H)</b>	<b>30.25</b>	<b>111.68</b>	<b>118.40</b>	<b>111.21</b>	<b>103.69</b>

(₹ in lakh)

	Particulars	Asset-10			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	3105.95	3295.26	3759.46	3779.86
B	Cumulative Repayments upto Previous Year	0.00	149.07	415.14	699.48
C	Net Loan-Opening (A-B)	3105.95	3146.19	3344.32	3080.38
D	Additions	189.31	464.20	20.40	0.00
E	Repayment during the year	149.07	266.06	284.34	285.11
F	Net Loan-Closing (C+D-E)	3146.19	3344.32	3080.38	2795.27
G	Average Loan (C+F)/2	3126.07	3245.26	3212.35	2937.83
H	Weighted Average Rate of Interest on Loan (in %)	9.5582	9.1950	8.3666	8.1441
I	<b>Interest on Loan (G*H)</b>	<b>184.50</b>	<b>298.40</b>	<b>268.76</b>	<b>239.26</b>



(₹ in lakh)

	Particulars	Asset-11				
		2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>					
A	Gross Normative Loan	1256.42	1274.96	1354.26	1414.11	1427.71
B	Cumulative Repayments upto Previous Year	0.00	16.87	109.80	207.93	308.76
C	Net Loan-Opening (A-B)	1256.42	1258.09	1244.46	1206.17	1118.96
D	Additions	18.54	79.30	59.84	13.61	51.06
E	Repayment during the year	16.87	92.93	98.13	100.82	103.08
F	Net Loan-Closing (C+D-E)	1258.09	1244.46	1206.17	1118.96	1066.93
G	Average Loan (C+F)/2	1257.26	1251.28	1225.32	1162.56	1092.94
H	Weighted Average Rate of Interest on Loan (in %)	9.9898	9.5660	9.1301	8.3430	8.1306
I	<b>Interest on Loan (G*H)</b>	<b>23.74</b>	<b>119.70</b>	<b>111.87</b>	<b>96.99</b>	<b>88.86</b>

(₹ in lakh)

	Particulars	Asset-12			
		2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	730.11	730.11	781.83	795.46
B	Cumulative Repayments upto Previous Year	0.00	3.63	51.37	101.52
C	Net Loan-Opening (A-B)	730.11	726.48	730.46	693.94
D	Additions	0.00	51.72	13.62	51.06
E	Repayment during the year	3.63	47.74	50.14	52.18
F	Net Loan-Closing (C+D-E)	726.48	730.46	693.94	692.81
G	Average Loan (C+F)/2	728.30	728.47	712.20	693.38
H	Weighted Average Rate of Interest on Loan (in %)	8.8240	8.8222	8.7721	8.7255
I	<b>Interest on Loan (G*H)</b>	<b>5.09</b>	<b>64.27</b>	<b>62.47</b>	<b>60.50</b>

(₹ in lakh)

	Particulars	Asset-13		
		2016-17 (pro-rata for 244 days)	2017-18	2018-19
	<b>Interest on Loan</b>			
A	Gross Normative Loan	21853.32	25073.87	26444.00
B	Cumulative Repayments upto Previous Year	0.00	1198.77	3165.72
C	Net Loan-Opening (A-B)	21853.32	23875.11	23278.28
D	Additions	3220.55	1370.12	445.07
E	Repayment during the year	1198.77	1966.95	2035.39
F	Net Loan-Closing (C+D-E)	23875.11	23278.28	21687.96



	Particulars	Asset-13		
		2016-17 (pro-rata for 244 days)	2017-18	2018-19
G	Average Loan (C+F)/2	22864.21	23576.69	22483.12
H	Weighted Average Rate of Interest on Loan (in %)	8.7541	8.3474	8.2041
I	Interest on Loan (G*H)	1338.03	1968.04	1844.54

(₹ in lakh)

	Particulars	Asset-14		2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
		2017-18 (pro-rata for 1 day)	2018-19			
	<b>Interest on Loan</b>					
A	Gross Normative Loan	32054.89	32054.89	1378.64	639.76	96.87
B	Cumulative Repayments upto Previous Year	0.00	6.56	0.00	0.00	0.00
C	Net Loan-Opening (A-B)	32054.89	32048.34	1378.64	639.76	96.87
D	Additions	0.00	1842.07	81.19	70.07	0.00
E	Repayment during the year	6.56	2453.04	43.11	27.47	0.36
F	Net Loan-Closing (C+D-E)	32048.34	31437.37	1416.71	682.36	96.51
G	Average Loan (C+F)/2	32051.62	31742.85	1397.67	661.06	96.69
H	Weighted Average Rate of Interest on Loan (in %)	8.1919	8.2746	7.9845	7.6389	8.2529
I	Interest on Loan (G*H)	7.19	2626.59	44.94	27.26	0.39

(₹ in lakh)

	Particulars	Asset-18			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	598.35	609.32	639.15	692.10
B	Cumulative Repayments upto Previous Year	0.00	28.12	75.21	125.42
C	Net Loan-Opening (A-B)	598.35	581.20	563.94	566.68
D	Additions	10.97	29.83	52.94	0.00
E	Repayment during the year	28.12	47.09	50.21	52.20
F	Net Loan-Closing (C+D-E)	581.20	563.94	566.68	514.47
G	Average Loan (C+F)/2	589.78	572.57	565.31	540.58
H	Weighted Average Rate of Interest on Loan (in %)	8.9109	8.8771	8.6834	8.5713
I	Interest on Loan (G*H)	32.45	50.83	49.09	46.33



(₹ in lakh)

	Particulars	Asset-19			
		2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
	<b>Interest on Loan</b>				
A	Gross Normative Loan	1242.52	1246.44	1277.63	1278.07
B	Cumulative Repayments upto Previous Year	0.00	38.73	133.92	230.31
C	Net Loan-Opening (A-B)	1242.52	1207.71	1143.71	1047.76
D	Additions	3.92	31.19	0.44	0.00
E	Repayment during the year	38.73	95.19	96.39	96.40
F	Net Loan-Closing (C+D-E)	1207.71	1143.71	1047.76	951.36
G	Average Loan (C+F)/2	1225.12	1175.71	1095.73	999.56
H	Weighted Average Rate of Interest on Loan (in %)	8.8369	8.8395	8.8155	8.8129
I	<b>Interest on Loan (G*H)</b>	<b>44.67</b>	<b>103.93</b>	<b>96.59</b>	<b>88.09</b>

(₹ in lakh)

	Particulars	Asset-20	
		2017-18 (pro-rata for 134 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	2945.96	3138.31
B	Cumulative Repayments upto Previous Year	0.00	84.24
C	Net Loan-Opening (A-B)	2945.96	3054.07
D	Additions	192.35	160.02
E	Repayment during the year	84.24	242.75
F	Net Loan-Closing (C+D-E)	3054.07	2971.33
G	Average Loan (C+F)/2	3000.02	3012.70
H	Weighted Average Rate of Interest on Loan (in %)	8.3199	8.3044
I	<b>Interest on Loan (G*H)</b>	<b>91.63</b>	<b>250.19</b>

(₹ in lakh)

	Particulars	Asset-21 (New Equipment) 2018-19
	<b>Interest on Loan</b>	
A	Gross Normative Loan	72.02
B	Cumulative Repayments upto Previous Year	0.00
C	Net Loan-Opening (A-B)	72.02
D	Additions	2.51
E	Repayment during the year	2.79
F	Net Loan-Closing (C+D-E)	71.74
G	Average Loan (C+F)/2	71.88



	Particulars	Asset-21 (New Equipment) 2018-19
H	Weighted Average Rate of Interest on Loan (in %)	8.0862
I	<b>Interest on Loan (G*H)</b>	<b>2.93</b>

(₹ in lakh)		
	Particulars	Asset-21 (Recapitalization) 2018-19
	<b>Interest on Loan</b>	
A	Gross Normative Loan	202.79
B	Cumulative Repayments upto Previous Year	50.79
C	Net Loan-Opening (A-B)	152.00
D	Additions	0.00
E	Repayment during the year	7.71
F	Net Loan-Closing (C+D-E)	144.29
G	Average Loan (C+F)/2	148.14
H	Weighted Average Rate of Interest on Loan (in %)	4.3924
I	<b>Interest on Loan (G*H)</b>	<b>3.28</b>

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

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

Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.077	19.625
2015-16	21.381	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

82. BSPHCL has submitted that as provided in Regulation 25(3) of the 2014 Tariff Regulations, penalty, if any, arising on account of delay in deposit or short deposit of tax amount cannot be permitted to be claimed and the actual tax paid has to be duly adjusted for any refund of tax including interest received from the income tax authorities. The instant petition is silent on whether the tax and interest paid by the Petitioner is indeed



after such adjustment and exclusive of the impermissible claims. BSPHCL has submitted that the grossed-up rate of RoE has to be trued up every financial year based on actual tax paid as stated in Regulations 25 (3) of the 2014 Tariff Regulations and Regulations also do not contemplate claim of differential tariff on this account directly from the beneficiaries. Thus, differential tariff on this account should not be permitted to be claimed directly from the beneficiaries. The Petitioner did not give any clarification to the above mentioned submissions of BSPHCL.

83. In response, the Petitioner has submitted that the Commission vide orders dated 18.4.2020 in Petition No. 247/TT/2019; dated 27.4.2020 in Petition No. 274/TT/2019; dated 23.4.2020 in Petition No. 245/TT/2019 and dated 16.4.2020 in Petition No. 307/TT/2019 has trued up the tariff for 2014-19 period wherein effective tax rate for the 2014-19 period has already been determined by the Commission. The Petitioner has further submitted that differential tariff on account of the trued up RoE based on effective tax rate and income tax assessment/re-assessment for the FY 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 may be allowed to be claimed on receipt of assessment orders directly from the beneficiaries on year to year basis as provided in the regulation. The Petitioner has further submitted that income tax assessment for the year 2017-18 and 2018-19 has not yet been completed.

84. We have considered the submissions of the Petitioner and BSPHCL. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates and the same is as follows:

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



2018-19	21.549	21.549
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85. The same MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

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

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

(₹ in lakh)

	Particulars	Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	8527.60	9324.88	9451.58	9635.17	9832.18
B	Additions	797.28	126.70	183.59	197.01	25.98
C	Closing Equity (A+B)	9324.88	9451.58	9635.17	9832.18	9858.16
D	Average Equity (A+C)/2	8926.24	9388.23	9543.37	9733.67	9845.17
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>1750.44</b>	<b>1849.95</b>	<b>1880.52</b>	<b>1918.02</b>	<b>1945.21</b>

(₹ in lakh)

	Particulars	Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	1784.08	1967.83	2315.70	2528.31	2620.58
B	Additions	183.75	347.88	212.61	92.27	44.69
C	Closing Equity (A+B)	1967.83	2315.70	2528.31	2620.58	2665.28
D	Average Equity (A+C)/2	1875.95	2141.77	2422.01	2574.45	2642.93
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549



	Particulars	Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>367.87</b>	<b>422.03</b>	<b>477.26</b>	<b>507.30</b>	<b>522.19</b>

(₹ in lakh)

	Particulars	Asset-3				
		2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	414.75	481.93	573.77	709.28	726.94
B	Additions	67.18	91.83	135.51	17.66	8.94
C	Closing Equity (A+B)	481.93	573.77	709.28	726.94	735.88
D	Average Equity (A+C)/2	448.34	527.85	641.52	718.11	731.41
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>73.23</b>	<b>104.01</b>	<b>126.41</b>	<b>141.50</b>	<b>144.51</b>

(₹ in lakh)

	Particulars	Asset-4				
		2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	605.07	650.79	760.77	790.70	812.31
B	Additions	45.72	109.98	29.93	21.62	20.81
C	Closing Equity (A+B)	650.79	760.77	790.70	812.31	833.13
D	Average Equity (A+C)/2	627.93	705.78	775.73	801.51	822.72
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>70.85</b>	<b>139.07</b>	<b>152.86</b>	<b>157.94</b>	<b>162.55</b>

(₹ in lakh)

	Particulars	Asset-5				
		2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	104.37	105.66	154.51	203.27	238.61
B	Additions	1.29	48.86	48.76	35.34	6.00
C	Closing Equity (A+B)	105.66	154.51	203.27	238.61	244.62
D	Average Equity (A+C)/2	105.01	130.09	178.89	220.94	241.61
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549



	Particulars	Asset-5				
		2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>10.38</b>	<b>25.63</b>	<b>35.25</b>	<b>43.54</b>	<b>47.74</b>

(₹ in lakh)

	Particulars	Asset-6				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	686.80	727.22	759.08	795.75	801.77
B	Additions	40.42	31.86	36.67	6.02	21.88
C	Closing Equity (A+B)	727.22	759.08	795.75	801.77	823.65
D	Average Equity (A+C)/2	707.01	743.15	777.41	798.76	812.71
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>45.20</b>	<b>146.44</b>	<b>153.19</b>	<b>157.40</b>	<b>160.57</b>

(₹ in lakh)

	Particulars	Asset-7				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	235.50	242.93	273.03	284.86	290.69
B	Additions	7.43	30.09	11.84	5.83	21.88
C	Closing Equity (A+B)	242.93	273.03	284.86	290.69	312.58
D	Average Equity (A+C)/2	239.22	257.98	278.94	287.78	301.63
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>15.29</b>	<b>50.83</b>	<b>54.97</b>	<b>56.71</b>	<b>59.60</b>

(₹ in lakh)

	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	272.93	287.62	299.45	305.28
B	Additions	14.69	11.84	5.83	21.88
C	Closing Equity (A+B)	287.62	299.45	305.28	327.17
D	Average Equity (A+C)/2	280.28	293.54	302.37	316.23



	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>19.16</b>	<b>57.84</b>	<b>59.58</b>	<b>62.48</b>

(₹ in lakh)

	Particulars	Asset-9				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	400.04	517.37	650.59	676.24	682.07
B	Additions	117.34	133.22	25.65	5.83	21.88
C	Closing Equity (A+B)	517.37	650.59	676.24	682.07	703.95
D	Average Equity (A+C)/2	458.70	583.98	663.41	679.15	693.01
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>29.33</b>	<b>115.07</b>	<b>130.73</b>	<b>133.83</b>	<b>136.92</b>

(₹ in lakh)

	Particulars	Asset-10			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	1331.12	1412.26	1611.20	1619.94
B	Additions	81.13	198.94	8.74	0.00
C	Closing Equity (A+B)	1412.26	1611.20	1619.94	1619.94
D	Average Equity (A+C)/2	1371.69	1511.73	1615.57	1619.94
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>166.90</b>	<b>297.89</b>	<b>318.35</b>	<b>320.07</b>

(₹ in lakh)

	Particulars	Asset-11				
		2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
	<b>Return on Equity</b>					
A	Opening Equity	538.47	546.41	580.40	606.05	611.88
B	Additions	7.95	33.98	25.65	5.83	21.88



	Particulars	Asset-11				
		2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
C	Closing Equity (A+B)	546.41	580.40	606.05	611.88	633.76
D	Average Equity (A+C)/2	542.44	563.41	593.22	608.96	622.82
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>20.11</b>	<b>111.02</b>	<b>116.89</b>	<b>120.00</b>	<b>123.06</b>

(₹ in lakh)

	Particulars	Asset-12			
		2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	312.90	312.90	335.07	340.91
B	Additions	0.00	22.17	5.84	21.88
C	Closing Equity (A+B)	312.90	335.07	340.91	362.79
D	Average Equity (A+C)/2	312.90	323.99	337.99	351.85
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>4.89</b>	<b>63.84</b>	<b>66.60</b>	<b>69.52</b>

(₹ in lakh)

	Particulars	Asset-13		
		2016-17 (pro-rata for 244 days)	2017-18	2018-19
	<b>Return on Equity</b>			
A	Opening Equity	9365.71	10745.95	11333.14
B	Additions	1380.24	587.20	190.75
C	Closing Equity (A+B)	10745.95	11333.14	11523.89
D	Average Equity (A+C)/2	10055.83	11039.54	11428.51
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342
G	Rate of Return on Equity (in %)	19.705	19.705	19.705
H	<b>Return on Equity (D*G)</b>	<b>1324.62</b>	<b>2175.34</b>	<b>2251.99</b>



(₹ in lakh)

	Particulars	Asset-14		Asset-15	Asset-16	Asset-17
		2017-18 (pro-rata for 1 day)	2018-19	2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
	<b>Return on Equity</b>					
A	Opening Equity	13737.81	13737.81	590.84	274.18	41.52
B	Additions	0.00	789.46	34.80	30.03	0.00
C	Closing Equity (A+B)	13737.81	14527.27	625.64	304.21	41.52
D	Average Equity (A+C)/2	13737.81	14132.54	608.24	289.20	41.52
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.549	21.549	21.549	21.549
G	Rate of Return on Equity (in %)	19.705	19.758	19.758	19.758	19.758
H	<b>Return on Equity (D*G)</b>	<b>7.42</b>	<b>2792.31</b>	<b>48.40</b>	<b>30.84</b>	<b>0.40</b>

(₹ in lakh)

	Particulars	Asset-18			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	256.44	261.14	273.92	296.61
B	Additions	4.70	12.79	22.69	0.00
C	Closing Equity (A+B)	261.14	273.92	296.61	296.61
D	Average Equity (A+C)/2	258.79	267.53	285.27	296.61
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>31.49</b>	<b>52.72</b>	<b>56.21</b>	<b>58.60</b>

(₹ in lakh)

	Particulars	Asset-19			
		2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	532.51	534.19	547.55	547.74
B	Additions	1.68	13.37	0.19	0.00
C	Closing Equity (A+B)	534.19	547.55	547.74	547.74
D	Average Equity (A+C)/2	533.35	540.87	547.65	547.74
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>43.36</b>	<b>106.58</b>	<b>107.91</b>	<b>108.22</b>



(₹ in lakh)

		<b>Asset-20</b>	
	<b>Particulars</b>	<b>2017-18 (pro-rata for 134 days)</b>	<b>2018-19</b>
	<b>Return on Equity</b>		
A	Opening Equity	1262.56	1344.99
B	Additions	82.43	68.58
C	Closing Equity (A+B)	1344.99	1413.57
D	Average Equity (A+C)/2	1303.77	1379.28
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	MAT Rate for respective year (in %)	21.342	21.342
G	Rate of Return on Equity (in %)	19.705	19.705
H	<b>Return on Equity (D*G)</b>	<b>94.32</b>	<b>271.79</b>

(₹ in lakh)

		<b>Asset-21 (New Equipment) 2018-19</b>
	<b>Particulars</b>	
	<b>Return on Equity</b>	
A	Opening Equity	30.87
B	Additions	1.07
C	Closing Equity (A+B)	31.94
D	Average Equity (A+C)/2	31.40
E	Return on Equity (Base Rate) (in %)	15.50
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity (in %)	19.758
H	<b>Return on Equity (D*G)</b>	<b>3.13</b>

(₹ in lakh)

		<b>Asset-21 (Recapitalization) 2018-19</b>
	<b>Particulars</b>	
	<b>Return on Equity</b>	
A	Opening Equity	86.91
B	Additions	0.00
C	Closing Equity (A+B)	86.91
D	Average Equity (A+C)/2	86.91
E	Return on Equity (Base Rate) (in %)	15.50
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity (in %)	19.758
H	<b>Return on Equity (D*G)</b>	<b>8.66</b>

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

87. Regulation 29(3)(a) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system based on the type of sub-station and the



transmission line. The norms specified for the transmission assets are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norms as per Regulation</b>					
Single Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
Double Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
Multi Circuit (Twin & Triple Conductor) (₹ lakh/km)	1.24	1.282	1.324	1.368	1.413
400 kV GIS Bays (₹ lakh/bay)	51.54	53.25	55.02	56.84	58.73
400 kV Bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10
132 kV & below Bays (₹ lakh/bay)	30.15	31.15	32.18	33.25	34.36

88. The Petitioner has computed normative O&M Expenses as per 29(4)(a) of the 2014 Tariff Regulations. The O&M Expenses have been worked out as per the transmission line and sub-station details verified from the previous orders of 2014-19 tariff period and the norms specified in the 2014 Tariff Regulations. Accordingly, the O&M Expenses in respect of the transmission assets are allowed as follows:

#### Asset-1

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Single Circuit (Twin & Triple Conductor) (km)	0.693	0.693	0.693	0.693	0.693
Double Circuit (Twin & Triple Conductor) (km)	80.26	80.26	80.26	80.26	80.26
400 kV Bays (numbers)	21	21	21	21	21
220 kV Bays (numbers)	12	12	12	12	12
132 kV & below Bays (number)	6	6	6	6	6
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>57.02</b>	<b>58.96</b>	<b>60.89</b>	<b>62.91</b>	<b>65.01</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>1953.72</b>	<b>2018.52</b>	<b>2085.57</b>	<b>2154.81</b>	<b>2226.27</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>2010.74</b>	<b>2077.48</b>	<b>2146.47</b>	<b>2217.72</b>	<b>2291.28</b>

#### Asset-2

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Single Circuit (Twin & Triple Conductor) (km)	31.626	31.626	31.626	31.626	31.626
400 kV Bays (numbers)	4	4	4	4	4
132 kV & below Bays (number)	3	3	3	3	3
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>12.78</b>	<b>13.22</b>	<b>13.66</b>	<b>14.11</b>	<b>14.58</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>331.65</b>	<b>342.65</b>	<b>354.02</b>	<b>365.79</b>	<b>377.92</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>344.43</b>	<b>355.87</b>	<b>367.68</b>	<b>379.90</b>	<b>392.50</b>



**Asset-3**

Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
400 kV Bays (numbers)	1	1	1	1	1
132 kV & below Bays (number)	1	1	1	1	1
<b>Total O&amp;M (₹ in lakh)</b>	<b>75.33</b>	<b>93.45</b>	<b>96.55</b>	<b>99.76</b>	<b>103.07</b>

**Asset-4**

Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
Single Circuit (Twin & Triple Conductor) (km)	31.626	31.626	31.626	31.626	31.626
400 kV Bays (numbers)	2	2	2	2	2
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>7.35</b>	<b>13.22</b>	<b>13.66</b>	<b>14.11</b>	<b>14.58</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>69.39</b>	<b>124.60</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>76.74</b>	<b>137.82</b>	<b>142.40</b>	<b>147.13</b>	<b>152.00</b>

**Asset-5**

Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
132 kV & below Bays (number)	2	2	2	2	2
<b>Total O&amp;M (₹ in lakh)</b>	<b>30.40</b>	<b>62.30</b>	<b>64.36</b>	<b>66.50</b>	<b>68.72</b>

**Asset-6**

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Double Circuit (Twin & Triple Conductor) (km)	14.855	14.855	14.855	14.855	14.855
400 kV Bays (Nos.)	2	2	2	2	2
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>3.42</b>	<b>10.86</b>	<b>11.22</b>	<b>11.59</b>	<b>11.97</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>39.32</b>	<b>124.60</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>42.74</b>	<b>135.46</b>	<b>139.96</b>	<b>144.61</b>	<b>149.39</b>

**Asset-7**

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
220 kV Bays (numbers)	2	2	2	2	2
<b>Total O&amp;M (₹ in lakh)</b>	<b>27.52</b>	<b>87.22</b>	<b>90.12</b>	<b>93.10</b>	<b>96.20</b>



**Asset-8**

Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
400 kV Bays (numbers)	1	1	1	1
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>21.68</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

**Asset-9**

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
400 kV Bays (numbers)	1	1	1	1	1
220 kV Bays (numbers)	1	1	1	1	1
<b>Total O&amp;M (₹ in lakh)</b>	<b>33.42</b>	<b>105.91</b>	<b>109.43</b>	<b>113.06</b>	<b>116.81</b>

**Asset-10**

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Double Circuit (Twin & Triple Conductor) (km)	16.04	16.04	16.04	16.04
400 kV Bays (numbers)	2	2	2	2
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>7.26</b>	<b>12.11</b>	<b>12.51</b>	<b>12.93</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>77.15</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>84.41</b>	<b>140.85</b>	<b>145.53</b>	<b>150.35</b>

**Asset-11**

Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
400 kV Bays (numbers)	1	1	1	1	1
220 kV Bays (numbers)	1	1	1	1	1
<b>Total O&amp;M (₹ in lakh)</b>	<b>19.38</b>	<b>105.91</b>	<b>109.43</b>	<b>113.06</b>	<b>116.81</b>

**Asset-12**

Particulars	2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
220 kV Bays (numbers)	2	2	2	2
<b>Total O&amp;M (₹ in lakh)</b>	<b>6.93</b>	<b>90.12</b>	<b>93.10</b>	<b>96.20</b>

**Asset-13**

Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
Multi Circuit (Twin & Triple Conductor) (km)	54.87	54.87	54.87
Double Circuit (Twin & Triple Conductor) (km)	1.25	1.25	1.25
400 kV GIS Bays (numbers)	8	8	8
220 kV Bays (numbers)	7	7	7
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>49.20</b>	<b>76.04</b>	<b>78.54</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>505.10</b>	<b>780.57</b>	<b>806.54</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>554.30</b>	<b>856.61</b>	<b>885.08</b>



**Asset-14**

Particulars	2017-18 (pro-rata for 1 day)	2018-19
Double Circuit (Twin & Triple Conductor) (km)	196.19	196.19
400 kV Bays (numbers)	6	6
220 kV Bays (numbers)	1	1
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>0.42</b>	<b>158.13</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>1.22</b>	<b>460.36</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>1.64</b>	<b>618.49</b>

**Asset-15**

Particulars	2018-19 (pro-rata for 147 days)
400 kV Bays (numbers)	1
220 kV Bays (numbers)	1
<b>Total O&amp;M (₹ in lakh)</b>	<b>47.04</b>

**Asset-16**

Particulars	2018-19 (pro-rata for 197 days)
220 kV Bays (numbers)	4
<b>Total O&amp;M (₹ in lakh)</b>	<b>103.84</b>

**Asset-17**

Particulars	2018-19 (pro-rata for 18 days)
400 kV Bays (numbers)	2
<b>Total O&amp;M (₹ in lakh)</b>	<b>6.78</b>

**Asset-18**

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
400 kV Bays (numbers)	1	1	1	1
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>38.57</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

**Asset-19**

Particulars	2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
Double Circuit (Twin & Triple Conductor) (km)	13.552	13.552	13.552	13.552
<b>Total O&amp;M (₹ in lakh)</b>	<b>4.10</b>	<b>10.23</b>	<b>10.57</b>	<b>10.92</b>

**Asset-20**

Particulars	2017-18 (pro-rata for 134 days)	2018-19
400 kV GIS Bays (numbers)	1	1
220 kV GIS Bays (numbers)	1	1



Particulars	2017-18 (pro-rata for 134 days)	2018-19
<b>Total O&amp;M (₹ in lakh)</b>	<b>37.96</b>	<b>106.83</b>

#### Asset-21

Particulars	2018-19
400 kV Bays (numbers)	0
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>00.0</b>

#### Interest on Working Capital (IWC)

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

(₹ in lakh)						
	Particulars	Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	167.56	173.12	178.87	184.81	190.94
B	Maintenance Spares (15% for O&M)	301.61	311.62	321.97	332.66	343.69
C	Receivables (Equivalent to two months of annual transmission charges)	1186.05	1221.34	1223.75	1227.60	1226.62
D	<b>Total Working Capital (A+B+C)</b>	<b>1655.22</b>	<b>1706.08</b>	<b>1724.59</b>	<b>1745.07</b>	<b>1761.25</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>223.46</b>	<b>230.32</b>	<b>232.82</b>	<b>235.58</b>	<b>237.77</b>

(₹ in lakh)						
	Particulars	Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	28.70	29.66	30.64	31.66	32.71
B	Maintenance Spares (15% for O&M)	51.66	53.38	55.15	56.99	58.88
C	Receivables (Equivalent to two months of annual transmission charges)	236.83	260.02	283.20	293.40	296.01
D	<b>Total Working Capital (A+B+C)</b>	<b>317.20</b>	<b>343.05</b>	<b>368.99</b>	<b>382.04</b>	<b>387.60</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>42.82</b>	<b>46.31</b>	<b>49.81</b>	<b>51.58</b>	<b>52.33</b>



(₹ in lakh)

	Particulars	Asset-3				
		2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	7.54	7.79	8.05	8.31	8.59
B	Maintenance Spares (15% for O&M)	13.57	14.02	14.48	14.96	15.46
C	Receivables (Equivalent to two months of annual transmission charges)	58.06	65.19	75.07	80.95	81.04
D	<b>Total Working Capital (A+B+C)</b>	<b>79.16</b>	<b>87.00</b>	<b>97.59</b>	<b>104.23</b>	<b>105.09</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>8.90</b>	<b>11.74</b>	<b>13.18</b>	<b>14.07</b>	<b>14.19</b>

(₹ in lakh)

	Particulars	Asset-4				
		2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	11.12	11.49	11.87	12.26	12.67
B	Maintenance Spares (15% for O&M)	20.01	20.67	21.36	22.07	22.80
C	Receivables (Equivalent to two months of annual transmission charges)	83.41	90.42	95.99	97.07	97.99
D	<b>Total Working Capital (A+B+C)</b>	<b>114.53</b>	<b>122.57</b>	<b>129.22</b>	<b>131.40</b>	<b>133.46</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>8.90</b>	<b>16.55</b>	<b>17.44</b>	<b>17.74</b>	<b>18.02</b>

(₹ in lakh)

	Particulars	Asset-5				
		2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
B	Maintenance Spares (15% for O&M)	9.05	9.35	9.65	9.98	10.31
C	Receivables (Equivalent to two months of annual transmission charges)	19.58	22.22	26.80	30.56	32.43
D	<b>Total Working Capital (A+B+C)</b>	<b>33.65</b>	<b>36.76</b>	<b>41.82</b>	<b>46.08</b>	<b>48.47</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>2.29</b>	<b>4.96</b>	<b>5.65</b>	<b>6.22</b>	<b>6.54</b>



(₹ in lakh)

	Particulars	Asset-6				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	10.92	11.29	11.66	12.05	12.45
B	Maintenance Spares (15% for O&M)	19.66	20.32	20.99	21.69	22.41
C	Receivables (Equivalent to two months of annual transmission charges)	91.41	94.58	96.58	97.29	97.55
D	<b>Total Working Capital (A+B+C)</b>	<b>122.00</b>	<b>126.19</b>	<b>129.24</b>	<b>131.03</b>	<b>132.41</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>5.37</b>	<b>17.04</b>	<b>17.45</b>	<b>17.69</b>	<b>17.87</b>

(₹ in lakh)

	Particulars	Asset-7				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	7.03	7.27	7.51	7.76	8.02
B	Maintenance Spares (15% for O&M)	12.66	13.08	13.52	13.97	14.43
C	Receivables (Equivalent to two months of annual transmission charges)	37.42	39.20	40.93	41.29	42.46
D	<b>Total Working Capital (A+B+C)</b>	<b>57.11</b>	<b>59.55</b>	<b>61.96</b>	<b>63.01</b>	<b>64.91</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>2.51</b>	<b>8.04</b>	<b>8.36</b>	<b>8.51</b>	<b>8.76</b>

(₹ in lakh)

	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	O & M Expenses (O&M Expenses for one month)	5.21	5.36	5.54	5.73
B	Maintenance Spares (15% for O&M)	9.37	9.66	9.98	10.31
C	Receivables (Equivalent to two months of annual transmission charges)	37.89	39.06	39.47	40.40



	Particulars	Asset-8			
		2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
D	<b>Total Working Capital (A+B+C)</b>	<b>52.47</b>	<b>54.08</b>	<b>54.99</b>	<b>56.43</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>2.46</b>	<b>7.30</b>	<b>7.42</b>	<b>7.62</b>

(₹ in lakh)

	Particulars	Asset-9				
		2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	8.54	8.83	9.12	9.42	9.73
B	Maintenance Spares (15% for O&M)	15.38	15.89	16.41	16.96	17.52
C	Receivables (Equivalent to two months of annual transmission charges)	61.89	73.75	80.56	80.95	81.22
D	<b>Total Working Capital (A+B+C)</b>	<b>85.80</b>	<b>98.46</b>	<b>106.10</b>	<b>107.34</b>	<b>108.47</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>3.78</b>	<b>13.29</b>	<b>14.32</b>	<b>14.49</b>	<b>14.64</b>

(₹ in lakh)

	Particulars	Asset-10			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	O & M Expenses (O&M Expenses for one month)	11.39	11.74	12.13	12.53
B	Maintenance Spares (15% for O&M)	20.50	21.13	21.83	22.55
C	Receivables (Equivalent to two months of annual transmission charges)	162.24	171.81	174.18	170.42
D	<b>Total Working Capital (A+B+C)</b>	<b>194.13</b>	<b>204.67</b>	<b>208.14</b>	<b>205.50</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>16.18</b>	<b>27.63</b>	<b>28.10</b>	<b>27.74</b>



(₹ in lakh)

	Particulars	Asset-11				
		2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	8.54	8.83	9.12	9.42	9.73
B	Maintenance Spares (15% for O&M)	15.38	15.89	16.41	16.96	17.52
C	Receivables (Equivalent to two months of annual transmission charges)	72.80	73.81	74.98	74.07	74.25
D	<b>Total Working Capital (A+B+C)</b>	<b>96.72</b>	<b>98.52</b>	<b>100.52</b>	<b>100.45</b>	<b>101.51</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>2.47</b>	<b>13.30</b>	<b>13.57</b>	<b>13.56</b>	<b>13.70</b>

(₹ in lakh)

	Particulars	Asset-12			
		2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	O & M Expenses (O&M Expenses for one month)	7.29	7.51	7.76	8.02
B	Maintenance Spares (15% for O&M)	13.12	13.52	13.97	14.43
C	Receivables (Equivalent to two months of annual transmission charges)	44.67	45.83	46.93	47.99
D	<b>Total Working Capital (A+B+C)</b>	<b>65.07</b>	<b>66.86</b>	<b>68.65</b>	<b>70.43</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>0.70</b>	<b>9.03</b>	<b>9.27</b>	<b>9.51</b>

(₹ in lakh)

	Particulars	Asset-13		
		2016-17 (pro-rata for 244 days)	2017-18	2018-19
	<b>Interest on Working Capital</b>			
A	O & M Expenses (O&M Expenses for one month)	69.10	71.38	73.76
B	Maintenance Spares (15% for O&M)	124.38	128.49	132.76
C	Receivables (Equivalent to two months of annual transmission charges)	1129.13	1190.83	1199.49
D	<b>Total Working Capital (A+B+C)</b>	<b>1322.60</b>	<b>1390.70</b>	<b>1406.01</b>
E	Rate of Interest (in %)	12.80	12.80	12.80
F	<b>Interest of working capital (D*E)</b>	<b>113.17</b>	<b>178.01</b>	<b>179.97</b>



(₹ in lakh)

		Asset-14		Asset-15	Asset-16	Asset-17
	Particulars	2017-18 (pro-rata for 1 day)	2018-19	2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
	<b>Interest on Working Capital</b>					
A	O & M Expenses (O&M Expenses for one month)	49.88	51.54	9.73	16.03	11.46
B	Maintenance Spares (15% for O&M)	89.79	92.77	17.52	28.86	20.62
C	Receivables (Equivalent to two months of annual transmission charges)	1420.11	1448.52	78.08	60.63	28.05
D	<b>Total Working Capital (A+B+C)</b>	<b>1559.78</b>	<b>1592.84</b>	<b>105.33</b>	<b>105.53</b>	<b>60.13</b>
E	Rate of Interest (in %)	12.60	12.60	12.20	12.20	12.20
F	<b>Interest of working capital (D*E)</b>	<b>0.54</b>	<b>200.70</b>	<b>5.18</b>	<b>6.95</b>	<b>0.36</b>

(₹ in lakh)

	Particulars	Asset-18			
		2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	O & M Expenses (O&M Expenses for one month)	5.21	5.36	5.54	5.73
B	Maintenance Spares (15% for O&M)	9.37	9.66	9.98	10.31
C	Receivables (Equivalent to two months of annual transmission charges)	36.41	37.00	38.21	38.88
D	<b>Total Working Capital (A+B+C)</b>	<b>50.98</b>	<b>52.02</b>	<b>53.73</b>	<b>54.91</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>4.25</b>	<b>7.02</b>	<b>7.25</b>	<b>7.41</b>

(₹ in lakh)

	Particulars	Asset-19			
		2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	O & M Expenses (O&M Expenses for one month)	0.83	0.85	0.88	0.91
B	Maintenance Spares (15% for O&M)	1.49	1.53	1.59	1.64
C	Receivables (Equivalent to two months of annual transmission charges)	54.13	53.92	53.16	51.83
D	<b>Total Working Capital (A+B+C)</b>	<b>56.45</b>	<b>56.31</b>	<b>55.63</b>	<b>54.38</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>3.14</b>	<b>7.60</b>	<b>7.51</b>	<b>7.34</b>



(₹ in lakh)

		<b>Asset-20</b>	
	<b>Particulars</b>	<b>2017-18 (pro-rata for 134 days)</b>	<b>2018-19</b>
	<b>Interest on Working Capital</b>		
A	O & M Expenses (O&M Expenses for one month)	8.62	8.90
B	Maintenance Spares (15% for O&M)	15.51	16.02
C	Receivables (Equivalent to two months of annual transmission charges)	143.41	148.91
D	<b>Total Working Capital (A+B+C)</b>	<b>167.54</b>	<b>173.84</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of working capital (D*E)</b>	<b>7.75</b>	<b>21.90</b>

(₹ in lakh)

		<b>Asset-21 (New Equipment)</b>
	<b>Particulars</b>	<b>2018-19</b>
	<b>Interest on Working Capital</b>	
A	O & M Expenses (O&M Expenses for one month)	0.00
B	Maintenance Spares (15% for O&M)	0.00
C	Receivables (Equivalent to two months of annual transmission charges)	2.96
D	<b>Total Working Capital (A+B+C)</b>	<b>2.98</b>
E	Rate of Interest (in %)	12.20
F	<b>Interest of working capital (D*E)</b>	<b>0.18</b>

(₹ in lakh)

		<b>Asset-21 (Recapitalization)</b>
	<b>Particulars</b>	<b>2018-19</b>
	<b>Interest on Working Capital</b>	
A	O & M Expenses (O&M Expenses for one month)	0.00
B	Maintenance Spares (15% for O&M)	0.00
C	Receivables (Equivalent to two months of annual transmission charges)	6.63
D	<b>Total Working Capital (A+B+C)</b>	<b>6.63</b>
E	Rate of Interest (in %)	12.20
F	<b>Interest of working capital (D*E)</b>	<b>0.41</b>

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

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



**Asset-1**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1460.47	1541.07	1568.37	1601.86	1621.49
Interest on Loan	1671.20	1629.21	1514.32	1392.42	1263.99
Return on Equity	1750.44	1849.95	1880.52	1918.02	1945.21
O&M Expenses	2010.74	2077.48	2146.47	2217.72	2291.28
Interest on Working Capital	223.46	230.32	232.82	235.58	237.77
<b>Total</b>	<b>7116.31</b>	<b>7328.03</b>	<b>7342.50</b>	<b>7365.60</b>	<b>7359.74</b>

**Asset-2**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	298.43	345.22	393.53	419.11	430.99
Interest on Loan	367.44	390.66	410.89	402.52	378.07
Return on Equity	367.87	422.03	477.26	507.30	522.19
O&M Expenses	344.43	355.87	367.68	379.90	392.50
Interest on Working Capital	42.82	46.31	49.81	51.58	52.33
<b>Total</b>	<b>1420.99</b>	<b>1560.09</b>	<b>1699.17</b>	<b>1760.41</b>	<b>1776.08</b>

**Asset-3**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 304 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	56.21	81.40	101.01	113.76	115.72
Interest on Loan	76.46	100.56	113.25	116.62	108.77
Return on Equity	73.23	104.01	126.41	141.50	144.51
O&M Expenses	75.33	93.45	96.55	99.76	103.07
Interest on Working Capital	8.90	11.74	13.18	14.07	14.19
<b>Total</b>	<b>290.13</b>	<b>391.16</b>	<b>450.40</b>	<b>485.71</b>	<b>486.26</b>

**Asset-4**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 210 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	59.10	116.56	128.82	133.17	136.90
Interest on Loan	72.33	132.50	134.44	126.45	118.47
Return on Equity	70.85	139.07	152.86	157.94	162.55
O&M Expenses	76.74	137.82	142.40	147.13	152.00
Interest on Working Capital	8.90	16.55	17.44	17.74	18.02
<b>Total</b>	<b>287.92</b>	<b>542.50</b>	<b>575.96</b>	<b>582.43</b>	<b>587.94</b>

**Asset-5**

(₹ in lakh)

Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	5.31	14.92	22.77	29.27	32.74
Interest on Loan	10.85	25.53	32.77	37.84	38.87



Particulars	2014-15 (pro-rata for 184 days)	2015-16	2016-17	2017-18	2018-19
Return on Equity	10.38	25.63	35.25	43.54	47.74
O&M Expenses	30.40	62.30	64.36	66.50	68.72
Interest on Working Capital	2.29	4.96	5.65	6.22	6.54
<b>Total</b>	<b>59.23</b>	<b>133.34</b>	<b>160.80</b>	<b>183.37</b>	<b>194.61</b>

#### Asset-6

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	38.79	125.42	130.63	133.57	136.03
Interest on Loan	46.71	143.14	138.24	130.47	121.43
Return on Equity	45.20	146.44	153.19	157.40	160.57
O&M Expenses	42.74	135.46	139.96	144.61	149.39
Interest on Working Capital	5.37	17.04	17.45	17.69	17.87
<b>Total</b>	<b>178.81</b>	<b>567.50</b>	<b>579.47</b>	<b>583.73</b>	<b>585.29</b>

#### Asset-7

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	10.68	36.05	39.73	41.29	43.73
Interest on Loan	17.19	53.03	52.42	48.14	46.49
Return on Equity	15.29	50.83	54.97	56.71	59.60
O&M Expenses	27.52	87.22	90.12	93.10	96.20
Interest on Working Capital	2.51	8.04	8.36	8.51	8.76
<b>Total</b>	<b>73.19</b>	<b>235.18</b>	<b>245.60</b>	<b>247.75</b>	<b>254.78</b>

#### Asset-8

(₹ in lakh)

Particulars	2015-16 (pro-rata for 127 days)	2016-17	2017-18	2018-19
Depreciation	15.87	48.03	49.51	51.73
Interest on Loan	19.72	56.81	53.81	51.85
Return on Equity	19.16	57.84	59.58	62.48
O&M Expenses	21.68	64.37	66.51	68.71
Interest on Working Capital	2.46	7.30	7.42	7.62
<b>Total</b>	<b>78.89</b>	<b>234.35</b>	<b>236.83</b>	<b>242.39</b>

#### Asset-9

(₹ in lakh)

Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	24.29	96.54	110.49	113.14	115.24
Interest on Loan	30.25	111.68	118.40	111.21	103.69
Return on Equity	29.33	115.07	130.73	133.83	136.92



Particulars	2014-15 (pro-rata for 119 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	33.42	105.91	109.43	113.06	116.81
Interest on Working Capital	3.78	13.29	14.32	14.49	14.64
<b>Total</b>	<b>121.07</b>	<b>442.49</b>	<b>483.37</b>	<b>485.73</b>	<b>487.30</b>

#### Asset-10

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Depreciation	149.07	266.06	284.34	285.11
Interest on Loan	184.50	298.40	268.76	239.26
Return on Equity	166.90	297.89	318.35	320.07
O&M Expenses	84.41	140.85	145.53	150.35
Interest on Working Capital	16.18	27.63	28.10	27.74
<b>Total</b>	<b>601.06</b>	<b>1030.83</b>	<b>1045.08</b>	<b>1022.53</b>

#### Asset-11

(₹ in lakh)

Particulars	2014-15 (pro-rata for 69 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	16.87	92.93	98.13	100.82	103.08
Interest on Loan	23.74	119.70	111.87	96.99	88.86
Return on Equity	20.11	111.02	116.89	120.00	123.06
O&M Expenses	19.38	105.91	109.43	113.06	116.81
Interest on Working Capital	2.47	13.30	13.57	13.56	13.70
<b>Total</b>	<b>82.57</b>	<b>442.86</b>	<b>449.89</b>	<b>444.43</b>	<b>445.51</b>

#### Asset-12

(₹ in lakh)

Particulars	2015-16 (pro-rata for 29 days)	2016-17	2017-18	2018-19
Depreciation	3.63	47.74	50.14	52.18
Interest on Loan	5.09	64.27	62.47	60.50
Return on Equity	4.89	63.84	66.60	69.52
O&M Expenses	6.93	90.12	93.10	96.20
Interest on Working Capital	0.70	9.03	9.27	9.51
<b>Total</b>	<b>21.24</b>	<b>275.00</b>	<b>281.58</b>	<b>287.91</b>

#### Asset-13

(₹ in lakh)

Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
Depreciation	1198.77	1966.95	2035.39
Interest on Loan	1338.03	1968.04	1844.54
Return on Equity	1324.62	2175.34	2251.99
O&M Expenses	554.30	856.61	885.08



Particulars	2016-17 (pro-rata for 244 days)	2017-18	2018-19
Interest on Working Capital	113.17	178.01	179.97
<b>Total</b>	<b>4528.89</b>	<b>7144.95</b>	<b>7196.97</b>

(₹ in lakh)

Particulars	Asset-14		Asset-15	Asset-16	Asset-17
	2017-18 (pro-rata for 1 day)	2018-19	2018-19 (pro-rata for 147 days)	2018-19 (pro-rata for 197 days)	2018-19 (pro-rata for 18 days)
Depreciation	6.56	2453.04	43.11	27.47	0.36
Interest on Loan	7.19	2626.59	44.94	27.26	0.39
Return on Equity	7.42	2792.31	48.40	30.84	0.40
O&M Expenses	1.64	618.49	47.04	103.84	6.78
Interest on Working Capital	0.54	200.70	5.18	6.95	0.36
<b>Total</b>	<b>23.35</b>	<b>8691.13</b>	<b>188.67</b>	<b>196.36</b>	<b>8.29</b>

#### Asset-18

(₹ in lakh)

Particulars	2015-16 (pro-rata for 226 days)	2016-17	2017-18	2018-19
Depreciation	28.12	47.09	50.21	52.20
Interest on Loan	32.45	50.83	49.09	46.33
Return on Equity	31.49	52.72	56.21	58.60
O&M Expenses	38.57	64.37	66.51	68.71
Interest on Working Capital	4.25	7.02	7.25	7.41
<b>Total</b>	<b>134.88</b>	<b>222.03</b>	<b>229.27</b>	<b>233.25</b>

#### Asset-19

(₹ in lakh)

Particulars	2015-16 (pro-rata for 151 days)	2016-17	2017-18	2018-19
Depreciation	38.73	95.19	96.39	96.40
Interest on Loan	44.67	103.93	96.59	88.09
Return on Equity	43.36	106.58	107.91	108.22
O&M Expenses	4.10	10.23	10.57	10.92
Interest on Working Capital	3.14	7.60	7.51	7.34
<b>Total</b>	<b>134.00</b>	<b>323.53</b>	<b>318.97</b>	<b>310.97</b>

#### Asset-20

(₹ in lakh)

Particulars	2017-18 (pro-rata for 134 days)	2018-19
Depreciation	84.24	242.75
Interest on Loan	91.63	250.19
Return on Equity	94.32	271.79
O&M Expenses	37.96	106.83



Particulars	2017-18 (pro-rata for 134 days)	2018-19
Interest on Working Capital	7.75	21.90
<b>Total</b>	<b>315.90</b>	<b>893.46</b>

#### Asset-21 (New Equipment)

Particulars	(₹ in lakh) 2018-19
Depreciation	2.79
Interest on Loan	2.93
Return on Equity	3.13
O&M Expenses	0.00
Interest on Working Capital	0.18
<b>Total</b>	<b>9.03</b>

#### Asset-21 (Recapitalization)

Particulars	(₹ in lakh) 2018-19
Depreciation	7.71
Interest on Loan	3.28
Return on Equity	8.66
O&M Expenses	0.00
Interest on Working Capital	0.41
<b>Total</b>	<b>20.66</b>

### **DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD**

91. The Petitioner has combined Assets-1 to 21 of the present petition into single 'Combined Asset' and has accordingly claimed combined tariff for them for the 2019-24 tariff period as provided in Regulation 8 (1) of the 2019 Tariff Regulations. The Petitioner has claimed separate tariff for Asset-22 for the 2019-24 period.

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	8453.63	8560.35	8591.57	8431.85	8415.33
Interest on Loan	7260.64	6687.32	6021.29	5305.84	4585.16
Return on Equity	9239.53	9384.48	9436.90	9437.06	9437.06
O&M Expenses	4479.49	4637.86	4799.85	4969.52	5139.02
Interest on Working Capital	570.47	573.77	572.05	566.25	561.37
<b>Total</b>	<b>30003.76</b>	<b>29843.78</b>	<b>29421.66</b>	<b>28710.52</b>	<b>28137.94</b>

93. The Petitioner has claimed the following transmission charges for 2019-24 tariff



period for Asset-22:

**Asset-22 (New Equipment)**

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	8.54	13.43	13.43	13.43	13.43
Interest on Loan	9.59	14.03	12.84	11.65	10.45
Return on Equity	9.11	14.33	14.33	14.33	14.33
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.41	0.63	0.61	0.59	0.57
<b>Total</b>	<b>27.65</b>	<b>42.42</b>	<b>41.21</b>	<b>40.00</b>	<b>38.78</b>

**Asset-22 (Recapitalization)**

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	10.12	15.30	15.30	15.30	15.30
Interest on Loan	3.53	4.87	4.31	3.74	3.17
Return on Equity	10.79	16.32	16.32	16.32	16.32
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.37	0.55	0.54	0.53	0.52
<b>Total</b>	<b>24.81</b>	<b>37.04</b>	<b>36.47</b>	<b>35.89</b>	<b>35.31</b>

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	373.29	386.49	399.99	414.13	428.25
Maintenance Spares	671.92	695.68	719.98	745.43	770.85
Receivables	3688.99	3679.37	3627.33	3539.65	3459.58
<b>Total Working Capital</b>	<b>4734.20</b>	<b>4761.54</b>	<b>4747.30</b>	<b>4699.21</b>	<b>4658.68</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>399.41</b>	<b>405.12</b>	<b>409.47</b>	<b>408.76</b>	<b>400.48</b>

95. The details of IWC claimed by the Petitioner for the 2019-24 tariff period in respect of the Asset-22 are as follows:

**Asset-22 (New Equipment)**

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	5.14	5.23	5.08	4.93	4.77
<b>Total Working Capital</b>	<b>5.14</b>	<b>5.23</b>	<b>5.08</b>	<b>4.93</b>	<b>4.77</b>



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	0.62	0.63	0.61	0.59	0.57

### Asset-22 (Recapitalization)

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	4.61	4.57	4.50	4.42	4.34
<b>Total Working Capital</b>	<b>4.61</b>	<b>4.57</b>	<b>4.50</b>	<b>4.42</b>	<b>4.34</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	0.37	0.55	0.54	0.53	0.52

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

96. The Petitioner has stated that E-COD of the Combined Asset works out to be 8.3.2016. 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 are as follows:

Assets	Capital Cost as on 31.3.2019 (₹ in lakh)	COD	Number of days from last COD	Weight of the cost (in %)	No. of days from last COD	Weighted days	COD (latest COD-total weighted days)
Combined Asset-1	32860.53	1.12.2012	2294.00	20.32	2294.00	466.09	31.1.2016
Asset-2	8884.25	1.4.2014	1808.00	5.49	1808.00	99.32	
Asset-3	2452.93	1.6.2014	1747.00	1.52	1747.00	26.50	
Asset-4	2777.10	3.9.2014	1653.00	1.72	1653.00	28.38	
Asset-5	815.39	29.9.2014	1627.00	0.50	1627.00	8.20	
Asset-6	2745.50	3.12.2014	1562.00	1.70	1562.00	26.52	
Asset-7	1041.92	3.12.2014	1562.00	0.64	1562.00	10.06	
Asset-8	1090.56	26.11.2015	1204.00	0.67	1204.00	8.12	
Asset-9	2346.50	3.12.2014	1562.00	1.45	1562.00	22.66	
Asset-10	5399.80	19.8.2015	1303.00	3.34	1303.00	43.50	
Asset-11	2112.53	22.1.2015	1512.00	1.31	1512.00	19.75	
Asset-12	1209.31	3.3.2016	1106.00	0.75	1106.00	8.27	
Asset-13	38412.96	31.7.2016	956.00	23.75	956.00	227.06	
Asset-14	48424.24	31.3.2018	348.00	29.94	348.00	104.19	
Asset-15	2085.47	5.11.2018	129.00	1.29	129.00	1.66	
Asset-16	1014.05	16.9.2018	179.00	0.63	179.00	1.12	
Asset-17	138.39	14.3.2019	0.00	0.09	0.00	0.00	
Asset-18	988.71	19.8.2015	1303.00	0.61	1303.00	7.97	
Asset-19	1825.81	2.11.2015	1228.00	1.13	1228.00	13.86	



Assets	Capital Cost as on 31.3.2019 (₹ in lakh)	COD	Number of days from last COD	Weight of the cost (in %)	No.of days from last COD	Weighted days	COD (latest COD-total weighted days)
Asset-20	4711.90	18.11.2017	481.00	2.91	481.00	14.01	
Asset-21	396.17	29.9.2018	166.00	0.24	166.00	0.41	
Total	161734.01			100.00		1137.65	

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

### **Weighted Average Life (WAL) of the Assets**

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

99. 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.

100. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, the WAL of the Combined Asset (except for Asset-22, since declared under commercial operation during 2019-24 period) has been worked out as 29 years as follows:



Admitted Capital Cost (Excluding land) as on 1.4.2019)				
Particulars	Combined asset cost (₹ in lakh) (1)	Life in years (2)	Weighted cost (3)=(1) x (2) (₹ in lakh) (3)	Weighted average life of asset (in years) (4)=(3)/(1)
Freehold Land	4580.51	0	0.00	<b>28.9532 years (rounded off to 29 years)</b>
Leasehold Land	1033.84	25	25846.00	
Building & Other Civil Works	2989.47	25	74736.74	
Transmission Line	78743.08	35	2756007.81	
Sub-Station Equipments	72022.99	25	1800553.11	
PLCC	1176.55	15	17648.18	
IT Equipment	1187.55	6.67	7920.96	
<b>Total</b>	161734.01		<b>4682734.54</b>	

101. The 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, Effective COD of the Combined Asset is 31.1.2016 and the elapsed life of the project as a whole, works out as three 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**

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being*



equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;

(e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;

(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;

(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;

(h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;

(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;

(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;

(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;

(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;

(n) Expenditure on account of change in law and force majeure events; and

(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

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



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

- (5) The following shall be excluded from the capital cost of the existing and new projects:
- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
  - (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

- (c) *In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*
- (d) *Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
- (e) *Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."*

103. The trued-up capital cost as on 31.3.2019 for Combined Asset has been considered as capital cost as on 1.4.2019 for the Combined Asset. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets are clubbed together and the capital cost has been considered as capital cost for the Combined Asset as on 1.4.2019.

104. Accordingly, the trued-up capital cost of ₹161734.01 lakh for the Combined Assets is considered as admitted capital cost as on 1.4.2019 for working out tariff for 2019-24 tariff period.

105. Further, with regard to Asset-22 (New Equipment), the Petitioner has claimed the following capital cost and has submitted the Auditor's Certificate in support of the same:



(₹ in lakh)

Asset	FR apportioned approved cost	Apportioned approved cost as per RCE	Expenditure up to COD (As claimed )	ACE 2019-24	Estimated Comple- tion Cost as on 31.3.2024 (as claimed)
				2019-20	
Asset-22	483.68	518.00	242.29	12.04	254.33

106. As compared with FR cost, the estimated, the estimated completion cost is within FR cost. Hence, there is not cost over-run in case of Asset-22.

### Asset-22

- (i) Cost of new associated equipment used to charge shifted reactor at Daltonganj Sub-station w.e.f. COD 3.8.2019 under the transmission project i.e. ERSS-III.

(₹ in lakh)

Asset	Apportioned approved cost as per FR / RCE	Expenditure up to COD (3.8.2019)	ACE 2019-24					Estimated completion cost as on 31.3.2024
			(as per Auditor's certificate)					
			2019-20	2020-21	2021-22	2022-23	2203-24	
Asset-22	483.68 / 518.00	242.29	12.04	-	-	-	-	254.33

- (ii) Original gross block of Line Reactor-II as shifted from Agra under original project "Sasan UMPP" to Daltonganj under the transmission project i.e. "ERSS-III".

(₹ in lakh)

Asset	Year of capitalization of asset being de- capitalized	Year of de- capitalization as per actual date of removal	Original book value of asset being de- capitalized	Corres- ponding cumulative depreciation	Correspo nding cumula- tive re- payment	Net book value of asset being decapital- ized
Asset-22	2013-14 (1.1.2014)	2017-18 (15.7.2017)	289.70	50.79	50.79	238.91

### (iii) Carrying Cost

- (a) Year of removal of reactor from pervious project: 15.7.2017 (i.e. 2017-18).  
(b) Year of deployment of reactor in new project: 3.8.2019 (i.e. 2019-20)

Now, Gross loan opening considered for 2019-20 = {Original book value} \* (70%) =  
280.70 \* 0.70 = ₹202.79

New loan opening for 2019-20 = {Gross Loan Opening} – {cumulative repayment  
Loan corresponding to de-cap} = 202.79 – 53.34 = ₹149.45 lakh



Carrying cost (a) from 15.7.2017 to 31.3.2018, (b) from 1.4.2018 to 31.3.2019 and (c) from 1.4.2019 to 2.8.2019:

- (a) From 15.7.2017 to 31.3.2018:  
= {149.45} \* {weighted average rate of IBRD-V during FY 2017-18} \* {No. of days/365}  
= {149.45} \* {3.1850%} \* {260/365} = ₹3.39 lakh
- (b) From 1.4.2018 to 31.3.2019:  
= {149.45} \* {weighted average rate of IBRD-V during FY 2018-19} \* {No. of days/365}  
= {149.45} \* {4.1250%} \* {365/365} = ₹6.16 lakh
- (c) From 1.4.2019 to 2.8.2019:  
= {149.45} \* {weighted average rate of IBRD-V during FY 2019-20} \* {No. of days/365}  
= {149.45} \* {4.3600%} \* {124/365} = ₹2.21 lakh
- (d) Total carrying cost claimed from 15.7.2018 to 2.9.2019 = ₹11.76 lakh

107. We have considered the submissions of the Petitioner. It is observed that the Commission has disposed of the Petition No. 469/TT/2020 vide order dated 6.6.2022, wherein it has been observed that the actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017. Accordingly, the date of de-capitalisation is considered as 15.7.2017. The relevant portion of the order dated 6.6.2022 in Petition No. 469/TT/2020 is extracted as follows:

*“44. The Petitioner vide affidavit dated 12.8.2021 has submitted the details of decapitalization of 2x50 MVAR line reactors at Agra commissioned along with "400 KV Agra-Sikar (D/C QUAD) Line with associated Bays at Agra" covered in the instant Petition as Asset-II. The Petitioner has further submitted that the 2x50 MVAR line reactors at Agra is replaced with the 80 MVAR Line reactor (Petition No. 242/TT/2018) under "North East Northern/Western Interconnector-I Project" on 1.8.2017 and has utilized the replaced 50 MVAR Line reactor at Daltonganj Sub-station (True up Petition No. 372/TT/2020) under ERSS-III. The actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017.*

*45. We have considered the submission of the Petitioner. ACE and decapitalisation 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) and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations, as applicable. The date of de-capitalization is considered as 15.7.2017. The undischarged IDC liability as on COD has been allowed as ACE during the year of its discharge. The excess Initial Spares are disallowed as per actual discharge for Asset-II.”*



108. The Petitioner has claimed an amount ₹13.58 lakh towards transportation cost of incurred on diversion of Reactor from Agra to Daltonganj Sub-station. The Commission vide order dated 28.9.2017 in Petition No. 195/TT/2016 has already held that expenditure towards shifting, dismantling and transportation are of the nature of revenue expenditure and cannot be capitalised. Accordingly an amount of ₹13.58 lakh towards transportation cost is not allowed under capital cost and the same is allowed to be recovered directly from the beneficiaries covered under the instant petition as a one-time exercise.

109. The Petitioner has claimed an amount of ₹11.76 lakh towards carrying cost from 15.7.2018 to 2.8.2019. We have considered the submissions of the petitioner.

Regulation 9(6) of the 2014 Tariff Regulations provides as follows:

*“(6) The following shall be excluded or removed from the capital cost of the existing and new project:*

*(a) The assets forming part of the project, but not in use;*

*(b) Decapitalisation of Asset;*

*(c) In case of hydro generating station 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 two stage transparent process of bidding; and (d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:*

*Provided that 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;”*

110. Accordingly, as per Regulation 9(6) of the 2014 Tariff Regulations, the transmission assets not in use shall be excluded from the capital cost of the existing project. In the instant case, the 50 MVAR reactor was not in use from 15.7.2018 to 2.9.2019. Accordingly, as provided in Regulation 9(6) of the 2014 Tariff Regulations, transmission charges are not allowed for the period from 15.7.2018 to 2.8.2019 as it was not in use.

111. The 50 MVAR Reactor-II is commissioned on 1.1.2014 and the actual date of de-capitalisation of 50 MVAR Reactor already approved as 15.7.2017 and the Petitioner has claimed the recapitalisation date as 3.8.2019. As per the Regulation 9(6) of the 2014



Tariff Regulations, carrying cost also not admissible.

112. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)

Capital Cost as on COD as per Auditor's Certificate	Less Amount of dismantling, shifting, transportation and re-erection of the shifted reactor deducted from the Capital cost as on COD	Capital Cost as on COD considered/entitled for tariff calculation
242.29	13.58	228.71

### **Re-capitalisation of Asset-22**

113. As discussed above, the re-capitalisation of Asset-22 has been considered as 3.8.2019. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)

Asset	Year of capitalization of asset being de-capitalized	Year of de-capitalization as per actual date of removal	Original book value of asset being de-capitalized	Corresponding cumulative depreciation	Corresponding cumulative re-payment	Net book value of asset being decapitalized
Asset-22	2013-14 (1.1.2014)	2017-18 (15.7.2017)	289.70	50.79	50.79	238.91

### **Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)**

114. The petitioner has claimed IDC for Asset-22 (New Equipment) as per Auditor's certificate and has also submitted IDC statement showing the loan wise IDC discharged up to COD and discharged after COD.

115. The Petitioner has submitted IDC computation statement which contains the name of loan, drawl date, loan amount, interest rate and interest claimed. The IDC is worked out based on the details given in the IDC statement. The allowable IDC has been worked out based on the information available on record. The 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 claimed as per the Auditor's Certificate	Entitled IDC as on COD as worked out	IDC dis-allowed as on COD due to computation difference and time over-run	Un-discharged portion of Entitled IDC as on COD	IDC allowed on cash basis as on COD
a	b	c	d=b-c	e	f=b-d-e
Asset-22- New Equipment	79.39	67.95	11.44	5.57	62.38

116. The Petitioner has claimed IEDC for the Asset-22 (New Equipment) as per the Auditor's Certificate. The Petitioner has submitted that the IEDC mentioned in the Auditor's Certificate is on cash basis and was paid upto the COD. The details of claimed and allowed IEDC for the purpose of tariff determination is as follows:

(₹ in lakh)

IEDC claimed	IEDC allowed	IEDC disallowed
65.71	55.99	9.72

117. The Petitioner has not claimed any Initial Spares for the Asset-22 (New Equipment). As stated earlier in this order, Initial Spares are allowed for the 2009-14 and 2014-19 tariff periods on the basis of the cost of individual assets. The assets covered in the transmission project are combined during 2019-24 tariff period and, hence, the Initial Spares are allowed on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017 at the time of truing up of 2019-24 tariff period.

#### **Capital Cost Allowed as on 1.4.2019/COD**

118. Accordingly, the capital cost allowed in respect of Combined Asset and Asset 22 as on 1.4.2019/COD is as follows:



(₹ in lakh)

Asset	Capital cost allowed as on 1.4.2014/ (COD)
Combined Asset (Asset-1 to Asset-21)	161734.01
Asset-22 (COD-3.8.2019)	201.99

### **Additional Capital Expenditure (ACE)**

119. 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**

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

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



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

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

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

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

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

120. The Petitioner has claimed the following ACE excluding year-wise discharged IDC in respect of the Combined Asset and Asset-22 for the 2019-24 period in accordance with the provisions of Regulation 24 of the 2019 Tariff Regulations on account of undischarged liability towards final payment for the works executed and for the works deferred for execution within the cut-off date. The same are as follows:

Assets	Projected Expenditure					(₹ in lakh)
	(as per Auditor certificates/ considered for tariff)					Total ACE Claimed
	2019-20	2020-21	2021-22	2022-23	2023-24	(2019-24)
Asset-1	319.70	-	-	-	-	319.70
Asset-2	243.00	-	-	-	-	243.00
Asset-3	67.00	-	-	-	-	67.00
Asset-4	201.00	-	-	-	-	201.00
Asset-5	-	-	-	-	-	0.00
Asset-6	440.00	-	-	-	-	440.00
Asset-7	-	-	-	-	-	0.00
Asset-8	-	-	-	-	-	0.00
Asset-9	-	-	-	-	-	0.00
Asset-10	-	-	-	-	-	0.00
Asset-11	-	-	-	-	-	0.00
Asset-12	-	-	-	-	-	0.00
Asset-13	196.43	-	-	-	-	196.43
Asset-14	728.01	1698.70	-	-	-	2426.71
Asset-15	294.79	52.02	-	-	-	346.81
Asset-16	186.52	79.94	-	-	-	266.46
Asset-17	34.20	17.10	5.70	-	-	57.00
Asset-18	-	-	-	-	-	0.00
Asset-19	360.00	-	-	-	-	360.00



Asset-20	156.06	-	-	-	-	156.06
Asset-21	22.51	0.90	24.00	-	-	47.41
Total	3249.22	1848.66	29.70			5127.58
Asset-22	12.04	-	-	-	-	12.04
Total	12.04					12.04

(₹ in lakh)

Assets	Projected Expenditure					Total ACE Claimed (2019-24)
	(as per Auditor certificates/ considered for tariff)					
	2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset-1 to 21	3249.22	1848.66	29.70	-	-	5127.58
Asset-22	12.04	-	-	-	-	12.04

121. BSPHCL has submitted that the Petitioner is required to clarify under which head of Regulation 24 and Regulation 25 of the 2019 Tariff Regulations ACE is claimed. BSPHCL has further submitted that the cut-off date has to be determined as per Regulation 3 (14) of the 2019 Tariff Regulations and for most of the transmission assets claim is made by the Petitioner after the cut-off date, i.e. under Regulation 25 of the 2019 Tariff Regulations, which has no head of works deferred for execution. The Petitioner is also required to submit the details as contemplated by Regulation 24(2) of the 2019 Tariff Regulations.

122. In response, the Petitioner has submitted that ACE for 2019-24 period is as per Regulation 24(1)(a) and Regulation 24(1)(b) and Regulation 25 of the 2019 Tariff Regulations.

123. The Petitioner vide affidavit dated 13.1.2021 has submitted liability flow statement in support of claimed ACE. Accordingly, the contractor-wise details of ACE (liability flow statement) claimed including details of balance and retention payments has been submitted by the Petitioner. The Petitioner has submitted that the ACE incurred till the cut-off date for the 2019-24 tariff period will be governed by Regulation 24(1)(a) and



Regulation 24(1)(b) of the 2019 Tariff Regulations whereas ACE incurred after the cut-off date for works executed within the cut-off date shall be governed under Regulation 25(1)(d) of the 2019 Tariff Regulations.

124. We have considered the submissions of the Petitioner and BSPHCL. The ACE claimed by the Petitioner has been allowed under Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations on account of balance and retention payments for the works already executed within the cut-off date and IDC discharged during 2019-20 . The asset-wise ACE allowed for the transmission assets and the reasons are as follows:

(₹ in lakh)						
Assets	ACE allowed under	ACE allowed				
		2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	319.70	-	-	-	-
Asset-2	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	243.00	-	-	-	-
Asset-3	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	67.00	-	-	-	-
Asset-4	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	201.00	-	-	-	-
Asset-6	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	440.00	-	-	-	-
Asset-13	Liability Paymnet after cut-off date under 25(1)(d) of 2019 tariff regulations	196.43	-	-	-	-
Asset-14	Liability Paymnet within cut-off date under 24(1)(a) of tariff regulations	378.43	1698.70	-	-	-
	Works deferred for execution under wihin cutoff 24(1)(b) of 2019 tariff regulations	349.58	-	-	-	-
Asset-15	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	294.79	52.02	-	-	-
Asset-16	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	186.52	79.94	-	-	-



Asset-17	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	34.20	17.10	5.70	-	-
Asset-19	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	360.00	-	-	-	-
Asset-20	Works deferred for execution within cut off date under 24(1)(b) of 2019 tariff regulations	156.06	-	-	-	-
Asset-21	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	22.51	0.90	-	-	-
Asset-22	Liability Paymnet within cut-off date under 24(1)(a) of 2019 tariff regulations	12.04	-	-	-	-

125. The year-wise IDC discharged as ACE for the respective assets is as follows:

(₹ in lakh)	
Assets	2019-20
Combined Asset	21.61
Asset-22	5.57

126. Accordingly, the ACE allowed for Combined Assets and Asset-22 for the 2019-24 period is as follows:

						(₹ in lakh)
Asset	Projected Expenditure					Total ACE Allowed
	(As per Auditor's certificates/ considered for tariff)					
	2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset	3270.83	1848.66	29.70	-	-	5149.19
Asset-22	17.61	-	-	-	-	17.61

127. Accordingly, the capital cost considered for Combined Asset and Asset-22 for the 2019-24 tariff period is as follows:

Assets	Capital Cost as on 1.4.2019/COD	ACE 2019-24					Capital Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset-1 to 21	161734.01	3270.83	1848.66	29.70	0.00	0.00	166883.18
Asset-22 (New Equipment)	201.99	17.61	0.00	0.00	0.00	0.00	219.60



Assets	Capital Cost as on 1.4.2019/COD	ACE 2019-24					Capital Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Asset- 22(Recap)	289.70	0.00	0.00	0.00	0.00	0.00	289.70

### **Debt-Equity ratio**

128. 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.”

129. The debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The debt-equity considered for the purpose of computation of tariff for the Combined Asset for the 2019-24 tariff period is as follows:

Funding	Capital cost as on 1.4.2019 (₹ in lakh)	(In %)	ACE in 2019-24 (₹ in lakh)	(In %)	Capital cost as on 31.3.2024 (₹ in lakh)	(In %)
Debt	113213.81	70.00	3604.43	70.00	116818.22	70.00
Equity	48520.20	30.00	1544.76	30.00	50064.95	30.00
<b>Total</b>	<b>161734.01</b>	<b>100.00</b>	<b>5149.19</b>	<b>100.00</b>	<b>166883.18</b>	<b>100.00</b>

130. The debt-equity considered for the purpose of computation of tariff for Asset-22 for the 2019-24 tariff period is as follows:

#### **Asset-22 (New Equipment)**

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(In %)	ACE in 2019-24 (₹ in lakh)	(In %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(In %)
Debt	141.39	70.00	12.33	70.00	153.72	70.00
Equity	60.60	30.00	5.28	30.00	65.88	30.00
<b>Total</b>	<b>201.99</b>	<b>100.00</b>	<b>17.61</b>	<b>100.00</b>	<b>219.60</b>	<b>100.00</b>



## Asset-22 (Recapitalization)

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(In %)	ACE in 2019-24 (₹ in lakh)	(In %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(In %)
Debt	202.79	70.00	0.00	70.00	202.79	70.00
Equity	86.91	30.00	0.00	30.00	86.91	30.00
<b>Total</b>	<b>289.70</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>289.70</b>	<b>100.00</b>

## Depreciation

131. 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.”

132. BSPHCL has submitted that depreciation may be considered only as per Regulation



33(5) of the 2019 Tariff Regulations.

133. The 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 after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as Nil, i.e. IT asset has been considered as 100 per cent depreciable. 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	161734.01	165004.82	166853.48	166883.18	166883.18
B	Addition during the year 2019-24 due to projected ACE	3270.83	1848.66	29.70	0.00	0.00
C	Closing Gross Block (A+B)	165004.84	166853.48	166883.18	166883.18	166883.18
D	Average Gross Block (A+C)/2	163369.42	165929.15	166868.33	166883.18	166883.18
E	Depreciable value (90% of average gross block excluding freehold land)	142938.95	145114.42	145921.18	145934.55	145934.55
J	Weighted average rate of Depreciation (WAROD) (in %)	5.1556	5.1399	5.1300	5.1300	5.1300
K	Lapsed useful life at the beginning of the year (Year)	3	4	5	6	7
L	Balance useful life at the beginning of the year (Year)	26	25	24	23	22
M	<b>Depreciation during the year (D*J)</b>	8422.59	8528.65	8560.33	8561.12	8561.12
N	Cumulative Depreciation at the end of the year	32555.81	41084.45	49644.79	58205.90	66767.02
O	Remaining Aggregate Depreciable Value at the end of the year	110383.14	104029.96	96276.40	87728.65	79167.53

134. The depreciation allowed for Asset-22 is as follows:



**Asset-22 (New Equipment)**

(₹ in lakh)

	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Depreciation</b>					
A	Opening Gross Block	201.99	219.60	219.60	219.60	219.60
B	Addition during the year 2019-24 due to projected ACE	17.61	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	219.60	219.60	219.60	219.60	219.60
D	Average Gross Block (A+C)/2	210.79	219.60	219.60	219.60	219.60
E	Depreciable value (90% of average gross block excluding freehold land)	189.71	197.64	197.64	197.64	197.64
F	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800	5.2800	5.2800
G	Lapsed useful life at the beginning of the year (Year)	0	0	1	2	3
H	Balance useful life at the beginning of the year (Year)	25	25	24	23	22
I	<b>Depreciation during the year (D*F)</b>	<b>7.36</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>
J	Cumulative Depreciation at the end of the year	7.36	18.95	30.55	42.14	53.74
K	Remaining Aggregate Depreciable Value at the end of the year	182.35	178.68	167.09	155.49	143.90

**Asset-22 (Recapitalization)**

(₹ in lakh)

	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Depreciation</b>					
A	Opening Gross Block	289.70	289.70	289.70	289.70	289.70
B	Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	289.70	289.70	289.70	289.70	289.70
D	Average Gross Block (A+C)/2	289.70	289.70	289.70	289.70	289.70
E	Depreciable value (90% of average gross block excluding freehold land)	260.73	260.73	260.73	260.73	260.73
F	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800	5.2800	5.2800
G	Lapsed useful life at the beginning of the year (Year)	5	6	7	8	9
H	Balance useful life at the beginning of the year (Year)	20	19	18	17	16
I	<b>Depreciation during the year (D*J)</b>	<b>10.11</b>	<b>15.30</b>	<b>15.30</b>	<b>15.30</b>	<b>15.30</b>
J	Cumulative Depreciation at the end of the year	60.90	76.20	91.50	106.79	122.09
K	Remaining Aggregate Depreciable Value at the end of the year	199.83	184.53	169.23	153.94	138.64



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

135. 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.”*

136. The Petitioner has submitted that tariff calculation for the 2019-24 period, IoL has been calculated on the basis of interest rates prevailing as on 1.4.2019 for the respective loans. The change in interest rate due to floating rate of interest applicable, if any, for



the project needs to be claimed/adjusted over the tariff block of 5 years directly from the beneficiaries.

137. BSPHCL has submitted that IoL may be calculated as per Regulation 32 of the 2019 Tariff Regulations. It is further submitted that nothing in the 2019 Tariff Regulations permit change in interest rate due to floating rate of interest applicable, if any, to be adjusted/claimed over the tariff block of 5 years directly from the beneficiaries.

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	113213.79	115503.37	116797.43	116818.22	116818.22
B	Cumulative Repayments upto Previous Year	24133.21	32555.81	41084.45	49644.79	58205.90
C	Net Loan-Opening (A-B)	89080.58	82947.57	75712.98	67173.44	58612.32
D	Additions	2289.58	1294.06	20.79	0.00	0.00
E	Repayment during the year	8422.59	8528.65	8560.33	8561.12	8561.12
F	Net Loan-Closing (C+D-E)	82947.57	75712.98	67173.44	58612.32	50051.21
G	Average Loan (C+F)/2	86014.07	79330.27	71443.21	62892.88	54331.76
H	Weighted Average Rate of Interest on Loan (in %)	8.439	8.430	8.433	8.436	8.417
I	<b>Interest on Loan (G*H)</b>	<b>7258.73</b>	<b>6687.30</b>	<b>6024.45</b>	<b>5305.58</b>	<b>4573.32</b>

139. The IoL allowed for Asset-22 is as follows:

#### **Asset-22 (New Equipment)**

(₹ in lakh)						
	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	141.39	153.72	153.72	153.72	153.72



	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
B	Cumulative Repayments upto Previous Year	0.00	7.36	18.95	30.55	42.14
C	Net Loan-Opening (A-B)	141.39	146.36	134.76	123.17	111.57
D	Additions	12.33	0.00	0.00	0.00	0.00
E	Repayment during the year	7.36	11.59	11.59	11.59	11.59
F	Net Loan-Closing (C+D-E)	146.36	134.76	123.17	111.57	99.98
G	Average Loan (C+F)/2	143.87	140.56	128.97	117.37	105.78
H	Weighted Average Rate of Interest on Loan (in %)	8.69	8.62	8.60	8.57	8.53
I	<b>Interest on Loan (G*H)</b>	<b>8.26</b>	<b>12.12</b>	<b>11.09</b>	<b>10.06</b>	<b>9.03</b>

### Asset-22 (Recapitalization)

(₹ in lakh)

	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	202.79	202.79	202.79	202.79	202.79
B	Cumulative Repayments upto Previous Year	50.79	60.90	76.20	91.50	106.79
C	Net Loan-Opening (A-B)	152.00	141.89	126.59	111.29	96.00
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	10.11	15.30	15.30	15.30	15.30
F	Net Loan-Closing (C+D-E)	141.89	126.59	111.29	96.00	80.70
G	Average Loan (C+F)/2	146.94	134.24	118.94	103.65	88.35
H	Weighted Average Rate of Interest on Loan (in %)	3.70	3.70	3.70	3.70	3.70
I	<b>Interest on Loan (G*H)</b>	<b>3.59</b>	<b>4.97</b>	<b>4.40</b>	<b>3.83</b>	<b>3.27</b>

### Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest



on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

*Provided further that:*

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

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

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

**“31. Tax on Return on Equity:***(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

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

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

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



licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

**Illustration-**

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

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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;

(d) Rate of return on equity =  $15.50 / (1 - 0.24) = 20.395\%$ .

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

141. The Petitioner has submitted that MAT rate is applicable to it. BSPHCL has submitted that tax on RoE may be considered as per Regulation 31 of the 2019 Tariff Regulations.

142. We have considered the submissions of the Petitioner and BSPHCL. We have considered the MAT rate applicable for 2019-20 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 for the 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	48520.19	49501.44	50056.04	50064.95	50064.95
B	Additions	981.25	554.60	8.91	0.00	0.00



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
C	Closing Equity (A+B)	49501.44	50056.04	50064.95	50064.95	50064.95
D	Average Equity (A+C)/2	49010.82	49778.74	50060.50	50064.95	50064.95
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>9205.21</b>	<b>9349.44</b>	<b>9402.36</b>	<b>9403.20</b>	<b>9403.20</b>

143. Return on Equity (RoE) approved for Asset-22 is as follows:

#### Asset-22 (New Equipment)

(₹ in lakh)						
	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	60.60	65.88	65.88	65.88	65.88
B	Additions	5.28	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	65.88	65.88	65.88	65.88	65.88
D	Average Equity (A+C)/2	63.24	65.88	65.88	65.88	65.88
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>7.85</b>	<b>12.37</b>	<b>12.37</b>	<b>12.37</b>	<b>12.37</b>

#### Asset-22 (Recapitalization)

(₹ in lakh)						
	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	86.91	86.91	86.91	86.91	86.91
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	86.91	86.91	86.91	86.91	86.91
D	Average Equity (A+C)/2	86.91	86.91	86.91	86.91	86.91
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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>10.79</b>	<b>16.32</b>	<b>16.32</b>	<b>16.32</b>	<b>16.32</b>



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

144. The total O&M expenses claimed by the Petitioner for 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line	400.70	414.81	429.31	444.41	459.83
Substation	4055.15	4199.41	4346.90	4501.47	4655.45
Communication System	23.64	23.64	23.64	23.64	23.64
O&M Expenses	4479.49	4637.86	4799.85	4969.52	5139.02

145. Regulation 35(3)(a) and Regulation 33(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
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289



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

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

*Provided further that:*

- 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;*
- the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV,*



*Bishwanath-Agra HVDC bi-pole scheme;*  
v. *the O&M expenses of  $\pm 800$  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 year*

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

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

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

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

146. BSPHCL in its reply has submitted that O&M Expenses may be considered as per Regulation 35(3) (c) of the 2019 Tariff Regulations.

147. The Petitioner has claimed O&M Expenses as per Regulation 35(3)(a) of the 2019 Tariff Regulations.

148. The Petitioner has claimed O&M Expenses as per Regulation 35(3)(a) of the 2019 Tariff Regulations. Further, the Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and the Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 and 2019 Tariff Regulations and the norms for sub-station has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for



PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The Assets-1 to Asset-21 has been combined for 2019-24 tariff period. Accordingly, the combined O&M Expenses has been worked out for Asset-1 to Asset-21. Further, the O&M Expenses is not admissible for Asset-22, being a line reactor.

149. Accordingly, the O&M Expenses allowed for Combined Asset is as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Single Circuit (Twin & Triple Conductor) (km)	63.945	63.945	63.945	63.945	63.945
Double Circuit (Twin & Triple Conductor) (km)	322.147	322.147	322.147	322.147	322.147
Multi Circuit (Twin & Triple Conductor) (km)	54.87	54.87	54.87	54.87	54.87
400 kV Bays (numbers)	45	45	45	45	45
400 kV GIS Bays (number)	9	9	9	9	9
220 kV Bays (numbers)	24	24	24	24	24
220 kV GIS Bays (number)	8	8	8	8	8
132 kV & below Bays (number)	12	12	12	12	12
400 kV ICT (MVA)*	4320	4320	4320	4320	4320
<b>Sub-total O&amp;M for transmission line (A) (₹ in lakh)</b>	<b>399.59</b>	<b>413.66</b>	<b>428.15</b>	<b>443.19</b>	<b>458.67</b>
<b>Sub-total O&amp;M for sub-station (B) (₹ in lakh)</b>	<b>4055.11</b>	<b>4199.34</b>	<b>4346.88</b>	<b>4501.49</b>	<b>4655.39</b>
<b>Total O&amp;M (A+B) (₹ in lakh)</b>	<b>4454.70</b>	<b>4613.00</b>	<b>4775.03</b>	<b>4944.68</b>	<b>5114.06</b>

\*Total 14 numbers ICTs (2x200 MVA+8x315 MVA+2x500 MVA)=4320 MVA

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

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

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

.....

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

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

.....

**(3) Rate of interest on working capital shall be on normative basis and shall be considered**



as the bank rate as on 1.4.2019 or as on 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 1<sup>st</sup> April of each of the financial year during the tariff period 2019-24.

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

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

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

151. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards it has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed for Combined Asset 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 O&M Expenses (O&M Expenses for one month)	371.23	384.42	397.92	412.06	426.17
B	Working Capital Maintenance Spares (15% of O&M Expenses)	668.21	691.95	716.25	741.70	767.11
C	Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	3677.41	3663.07	3607.14	3539.26	3459.87
D	<b>Total Working Capital (A+B+C)</b>	4716.84	4739.44	4721.31	4693.02	4653.15
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	<b>Interest on working capital (D*E)</b>	<b>568.38</b>	<b>533.19</b>	<b>495.74</b>	<b>492.77</b>	<b>488.58</b>

152. The components of the working capital and interest for Asset-22 are as follows:



### Asset-22 (New Equipment)

(₹ in lakh)

	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Working Capital</b>					
A	Working Capital O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	4.43	4.51	4.38	4.25	4.11
D	<b>Total Working Capital (A+B+C)</b>	4.43	4.51	4.38	4.25	4.11
E	Rate of Interest (in %)	12.05	11.25	11.25	11.25	11.25
F	<b>Interest on working capital (D*E)</b>	<b>0.35</b>	<b>0.51</b>	<b>0.46</b>	<b>0.45</b>	<b>0.43</b>

### Asset-22 (Recapitalization)

(₹ in lakh)

	Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Working Capital</b>					
A	Working Capital O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	4.62	4.57	4.50	4.43	4.35
D	<b>Total Working Capital (A+B+C)</b>	<b>4.62</b>	<b>4.57</b>	<b>4.50</b>	<b>4.43</b>	<b>4.35</b>
E	Rate of Interest (in %)	12.05	11.25	11.25	11.25	11.25
F	<b>Interest on working capital (D*E)</b>	<b>0.37</b>	<b>0.51</b>	<b>0.47</b>	<b>0.46</b>	<b>0.46</b>

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

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	8422.59	8528.65	8560.33	8561.12	8561.12
Interest on Loan	7258.73	6687.30	6024.45	5305.58	4573.32
Return on Equity	9205.21	9349.44	9402.36	9403.20	9403.20
O&M Expenses	4454.70	4613.00	4775.03	4944.68	5114.06
Interest on Working Capital	568.38	533.19	495.74	492.77	488.58
<b>Total</b>	<b>29909.61</b>	<b>29711.58</b>	<b>29257.91</b>	<b>28707.35</b>	<b>28140.28</b>



154. The transmission charges allowed in respect of Asset-22 for the 2019-24 tariff period are as follows:

**Asset-22 (New Equipment)**

(₹ in lakh)

Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	7.36	11.59	11.59	11.59	11.59
Interest on Loan	8.26	12.12	11.09	10.06	9.03
Return on Equity	7.85	12.37	12.37	12.37	12.37
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.35	0.51	0.46	0.45	0.43
<b>Total</b>	<b>23.82</b>	<b>36.59</b>	<b>35.51</b>	<b>34.47</b>	<b>33.42</b>

**Asset-22 (Recapitalization)**

(₹ in lakh)

Particulars	2019-20 (pro-rata for 242 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	10.11	15.30	15.30	15.30	15.30
Interest on Loan	3.59	4.97	4.40	3.83	3.27
Return on Equity	10.79	16.32	16.32	16.32	16.32
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.37	0.51	0.47	0.46	0.46
<b>Total</b>	<b>24.86</b>	<b>37.10</b>	<b>36.49</b>	<b>35.91</b>	<b>35.35</b>

**Filing Fee and the Publication Expenses**

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

156. BSPHCL has submitted that grant of filing fees and expenses incurred is in the discretion of the Commission and need not necessarily be allowed in all cases. BSPHCL has further submitted that nothing beyond what is considered under the 2019 Tariff Regulations may be granted.

157. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in



connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

### **License Fees and RLDC Fees and Charges**

158. 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 the 2019-24 tariff period.

### **Goods and Services Tax (GST)**

159. 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.

160. BSPHCL has submitted that Regulation 56 of the 2019 Tariff Regulations contemplates recovery of statutory charges by the generating company and not by the transmission licensee and as such the claim of the Petitioner is liable to be rejected being pre-mature.

161. In response, the Petitioner has submitted that currently transmission of electricity by an electric transmission utility is exempted from 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.



162. We have considered the submissions of the Petitioner and BSPHCL. GST is not levied on transmission service at present. We are of the view that the Petitioner's prayer for GST at this stage is pre-mature.

### **Security Expenses**

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

164. BSPHCL has submitted that relief as admissible under Regulation 35(3) (c) of the 2019 Tariff Regulations may be considered.

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

### **Capital Spares**

166. The Petitioner has sought reimbursement of capital spares at the end of tariff period.

167. BSPHCL has submitted that relief as admissible under Regulation 35(3) (c) of the 2019 Tariff Regulations may be considered.

168. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019



Tariff Regulations.

### **Sharing of Transmission Charges**

169. With respect to Asset-1, Asset-14, Asset-15 and Asset-17 to Asset-22, the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations, as the case may be.

### **Asset-2 to Asset-9**

170. The Commission vide order dated 24.02.2017 in Petition No.85/TT/2015 is held as under:

*“ 72. The assets have been planned to cater to the drawal requirements of Bihar and Jharkhand Discoms. However, due to non-availability of downstream assets the instant assets have not been put to regular use. Accordingly, we are of the view that the transmission charges of Assets-1 to 4 and Assets-5 to 8, from the COD till the commissioning of downstream network will be borne by the Bihar Discoms and by Jharkhand discoms respectively. After that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.”*

171. As per the above decision of the commission vide order dated 24.02.2017 in Petition No.85/TT/2015, the transmission charges for Assets- 1 to 4 (corresponding asset numbers as per instant petition as asset 2 to 5 and asset numbers different in Petition No.85/TT/2015 quoted above) from the COD till the commissioning of downstream network will be borne by the Bihar Discoms and the transmission charges for Assets- 5 to 8 (corresponding asset numbers as per instant petition as asset 6 to Asset-9 and numbers different in Petition No.85/TT/2015 quoted above) from the COD till the commissioning of downstream network will be borne by the Jharkhand discoms. After



that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations, as the case may be.

### **Asset-10 to Asset-13**

172. The Commission vide order dated 20.09.2017 in Petition No. 278/TT/2015 is held as under:

*“76. The assets have been planned to cater to the drawal requirements of Odisha and Jharkhand Discoms. However, due to non-availability of downstream assets, the instant assets have not been put to regular use. Accordingly, we are of the view that the transmission charges of Asset 2, Asset 3, Asset 5 and Asset 6a from the COD till the commissioning of downstream network will be borne by JSEB and OPTCL. After that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of the 2014 Tariff Regulations.”*

173. As per the above decision of the commission vide order dated 20.09.2017 in Petition No.278/TT/2015, the transmission charges for Assets-2 and Asset-3 (corresponding asset numbers as per instant petition as asset No 10 and Asset-11 and asset numbers different in Petition No. 278/TT/2015 quoted above) from the COD till the commissioning of downstream network will be borne by the JSEB and the transmission charges for Assets-5 and Asset-6a (corresponding asset numbers as per instant petition as asset 12 and asset-13 and asset numbers different in Petition No. 278/TT/2015 quoted above) from the COD till the commissioning of downstream network will be borne by the OPTCL. After that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations



and Regulation 57 of the 2019 Tariff Regulations, as the case may be.

**Asset-16:**

174. The Commission vide order dated 21.11.2019 in Petition No. 105/TT/2018 is held as under:

*“98. As regards Asset-II, the COD has been approved under proviso (ii) of Regulation 4(3) (ii) of 2014 Tariff Regulations. The asset has not been put to regular use as the associated downstream transmission system, under the scope of JUSNL, is not ready. Accordingly, the transmission charges of Asset-II, from the COD till the commissioning of downstream network shall be borne by JUSNL. Thereafter, the transmission charges approved in the instant petition in respect of Asset-II shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time”*

175. As per the above decision of the commission vide order dated 21.11.2019 in Petition No.105/TT/2018, the the transmission charges for Assets-II (corresponding asset numbers as per instant petition as asset-16 and asset number different in Petition No. 105/TT/2018 quoted above) from the COD till the commissioning of downstream network will be borne by the JUSNL. After that the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations, as the case may be.

176. To summarise:

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

(₹ in lakh)					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	7116.31	7328.03	7342.50	7365.60	7359.74
Asset-2	1420.99	1560.09	1699.17	1760.41	1776.08
Asset-3	290.13	391.16	450.40	485.71	486.26



<b>Assets</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-4	287.92	542.50	575.96	582.43	587.94
Asset-5	59.23	133.34	160.80	183.37	194.61
Asset-6	178.81	567.50	579.47	583.73	585.29
Asset-7	73.19	235.18	245.60	247.75	254.78
Asset-8		78.89	234.35	236.83	242.39
Asset-9	121.07	442.49	483.37	485.73	487.30
Asset-10		601.06	1030.83	1045.08	1022.53
Asset-11	82.57	442.86	449.89	444.43	445.51
Asset-12		21.24	275.00	281.58	287.91
Asset-13			4528.89	7144.95	7196.97
Asset-14				23.35	8691.13
Asset-15					188.67
Asset-16					196.36
Asset-17					8.29
Asset-18		134.88	222.02	229.27	233.25
Asset-19		134.00	323.53	318.97	310.97
Asset-20				315.90	893.46
Asset-21 (New Equipment)					9.03
Asset-21 (Recapitalization)					20.66

b. Annual Fixed Charges allowed in respect of the Combined Asset (except for Asset-22) and Asset-22 for 2019-24 tariff period in this order are as follows:

<b>(₹ in lakh)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Combined Asset (except for Asset-22)	29909.61	29711.58	29257.91	28707.35	28140.28
Asset-22 (New Equipment)	23.82	36.59	35.51	34.47	33.42
Asset-22 (Recapitalization)	24.86	37.10	36.49	35.91	35.35

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

178. This order disposes of Petition No. 372/TT/2020 in terms of the above findings and discussion.

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

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

**sd/-**  
**(I.S. Jha)**  
**Member**



**Annexure-I**

**Asset-1**

Previous Tariff Reference	Aggregated admitted cost as on 31.03.2014	Projected Additional capitalisation						Admitted Cost as 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
Capital Expenditures as on 31.3.2014		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	1875.84	43.71	0.00	0.00	0.00	0.00	43.71	1919.55	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	315.37	0.00	0.00	0.00	0.00	0.00	0.00	315.37	3.34	10.53	10.53	10.53	10.53	10.53
Building & Other Civil Works	354.18	0.00	0.00	0.00	0.00	0.00	0.00	354.18	3.34	11.83	11.83	11.83	11.83	11.83
Transmission Line	7934.90	696.14	165.01	13.93	33.04	0.00	908.12	8843.02	5.28	437.34	460.08	464.80	466.04	466.91
Sub-Station Equipments	17735.27	1834.29	257.32	598.02	623.67	86.60	3399.90	21135.17	5.28	984.85	1040.07	1062.65	1094.90	1113.65
PLCC	209.78	83.46	0.00	0.00	0.00	0.00	83.46	293.24	6.33	15.92	18.56	18.56	18.56	18.56
<b>Total</b>	<b>28425.34</b>	<b>2657.60</b>	<b>422.33</b>	<b>611.95</b>	<b>656.71</b>	<b>86.60</b>	<b>4435.19</b>	<b>32860.53</b>		<b>1460.47</b>	<b>1541.07</b>	<b>1568.37</b>	<b>1601.86</b>	<b>1621.49</b>
									Average Gross block	29754.14	31294.11	31811.25	32445.58	32817.23
									Weighted average rate of depreciation (in %)	4.9085	4.9245	4.9302	4.9371	4.9410



## Asset-2

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	604.13	0.00	3.71	0.00	0.00	0.00	3.71	607.84	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	3.61	6.44	1.77	111.09	17.92	0.00	137.22	140.83	3.34	0.23	0.37	2.25	4.40	4.70
Transmission Line	2961.96	162.91	647.99	48.09	13.17	72.04	944.20	3906.16	5.28	160.69	182.10	200.48	202.09	204.34
Sub-Station Equipments	2349.73	443.14	470.67	549.52	276.47	76.94	1816.74	4166.47	5.28	135.76	159.89	186.82	208.63	217.96
PLCC	27.50	0.00	35.45	0.00	0.00	0.00	35.45	62.95	6.33	1.74	2.86	3.98	3.98	3.98
<b>Total</b>	<b>5946.93</b>	<b>612.49</b>	<b>1159.59</b>	<b>708.70</b>	<b>307.56</b>	<b>148.98</b>	<b>2937.32</b>	<b>8884.25</b>		<b>298.43</b>	<b>345.22</b>	<b>393.53</b>	<b>419.11</b>	<b>430.99</b>
									Average Gross block	6253.18	7139.22	8073.36	8581.49	8809.76
									<b>Weighted average rate of depreciation</b>	4.7724	4.8355	4.8745	4.8839	4.8922
									(in %)					



### Asset-3

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	215.76	0.00	1.86	0.00	0.00	0.00	1.86	217.62	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	1.26	3.87	1.78	37.22	38.37	0.00	81.24	82.51	3.34	0.11	0.20	0.85	2.11	2.76
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 Equipments	1162.08	220.03	297.56	414.48	20.51	29.80	982.38	2144.46	5.28	67.17	80.83	99.63	111.11	112.44
PLCC	3.40	0.03	4.91	0.00	0.00	0.00	4.94	8.34	6.33	0.22	0.37	0.53	0.53	0.53
<b>Total</b>	<b>1382.51</b>	<b>223.93</b>	<b>306.11</b>	<b>451.70</b>	<b>58.88</b>	<b>29.80</b>	<b>1070.42</b>	<b>2452.93</b>		<b>67.49</b>	<b>81.40</b>	<b>101.01</b>	<b>113.76</b>	<b>115.72</b>
									Average Gross Block	1494.47	1759.49	2138.40	2393.69	2438.03
									<b>Weighted average rate of depreciation</b>	4.5160	4.6266	4.7236	4.7523	4.7466
									<b>(in %)</b>					



#### Asset-4

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	151.03	0.00	1.24	0.00	0.00	0.00	1.24	152.27	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.90	1.31	0.59	19.41	0.00	0.00	21.31	22.21	3.34	0.05	0.08	0.42	0.74	0.74
Transmission Line	680.46	78.33	10.24	18.51	0.00	0.00	107.08	787.54	5.28	38.00	40.33	41.09	41.58	41.58
Sub-Station Equipments	1164.15	72.29	320.95	61.85	72.05	69.38	596.52	1760.67	5.28	63.38	73.76	83.86	87.40	91.13
PLCC	20.37	0.46	33.57	0.00	0.00	0.00	34.03	54.40	6.33	1.30	2.38	3.44	3.44	3.44
<b>Total</b>	<b>2016.92</b>	<b>152.39</b>	<b>366.59</b>	<b>99.77</b>	<b>72.05</b>	<b>69.38</b>	<b>760.18</b>	<b>2777.10</b>		<b>102.73</b>	<b>116.56</b>	<b>128.82</b>	<b>133.17</b>	<b>136.90</b>
									Average Gross Block	2093.11	2352.60	2585.78	2671.69	2742.41
									<b>Weighted average rate of depreciation</b>	4.9079	4.9544	4.9818	4.9843	4.9920
									<b>(in %)</b>					



## Asset-5

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	151.03	0.00	1.24	0.00	0.00	0.00	1.24	152.27	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.83	0.02	1.20	74.44	17.79	0.00	93.44	94.28	3.34	0.03	0.05	1.31	2.85	3.15
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 Equipments	192.92	4.21	155.49	88.08	100.02	20.01	367.81	560.73	5.28	10.30	14.51	20.94	25.91	29.08
PLCC	3.11	0.07	4.93	0.00	0.00	0.00	5.00	8.11	6.33	0.20	0.36	0.51	0.51	0.51
<b>Total</b>	<b>347.89</b>	<b>4.30</b>	<b>162.86</b>	<b>162.52</b>	<b>117.81</b>	<b>20.01</b>	<b>467.50</b>	<b>815.39</b>		<b>10.52</b>	<b>14.92</b>	<b>22.77</b>	<b>29.27</b>	<b>32.74</b>
									Average Gross Block	350.04	433.62	596.31	736.47	805.38
									<b>Weighted average rate of depreciation</b>	3.0066	3.4406	3.8183	3.9750	4.0652
									(in %)					



## Asset-6

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	118.01	0.00	0.00	0.51	0.00	0.00	0.51	118.52	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.59	83.03	0.00	0.00	83.62	83.62	3.34	0.00	0.01	1.41	2.79	2.79
Transmission Line	1496.62	15.20	96.61	38.69	0.00	72.94	223.43	1720.06	5.28	79.42	82.37	85.95	86.97	88.89
Sub-Station Equipments	606.49	105.95	8.08	0.00	20.07	0.00	134.10	740.59	5.28	34.82	37.83	38.04	38.57	39.10
PLCC	68.22	13.58	0.91	0.00	0.00	0.00	14.49	82.71	6.33	4.75	5.21	5.24	5.24	5.24
<b>Total</b>	<b>2289.34</b>	<b>134.73</b>	<b>106.19</b>	<b>122.23</b>	<b>20.07</b>	<b>72.94</b>	<b>456.16</b>	<b>2745.50</b>		<b>118.99</b>	<b>125.42</b>	<b>130.63</b>	<b>133.57</b>	<b>136.03</b>
									Average Gross Block	2356.71	2477.16	2591.37	2662.52	2709.03
									<b>Weighted average rate of depreciation</b>	5.0490	5.0631	5.0410	5.0167	5.0212
									(in %)					



### Asset-7

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	177.01	0.00	0.00	0.00	0.00	0.00	0.00	177.01	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.67	0.00	0.00	0.00	0.67	0.67	3.34	0.00	0.01	0.02	0.02	0.02
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 Equipments	608.01	24.76	99.64	39.45	19.44	72.94	256.23	864.24	5.28	32.76	36.04	39.71	41.27	43.71
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
<b>Total</b>	<b>785.02</b>	<b>24.76</b>	<b>100.31</b>	<b>39.45</b>	<b>19.44</b>	<b>72.94</b>	<b>256.90</b>	<b>1041.92</b>		<b>32.76</b>	<b>36.05</b>	<b>39.73</b>	<b>41.29</b>	<b>43.73</b>
									Average Gross Block	797.40	859.93	929.81	959.26	1005.45
									Weighted average rate of depreciation	4.1079	4.1924	4.2734	4.3043	4.3492
									(in %)					



## Asset-8

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation					Estimated Completion Cost as on 31.03.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation			
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19
Freehold Land	68.16	0.00	0.23	0.00	0.00	0.23	68.39	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	3.00	3.72	18.52	25.24	25.24	3.34	0.00	0.05	0.16	0.53
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00
Sub-Station Equipments	841.62	48.95	36.22	15.72	54.42	155.31	996.93	5.28	45.73	47.98	49.35	51.20
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00
<b>Total</b>	<b>909.78</b>	<b>48.95</b>	<b>39.45</b>	<b>19.44</b>	<b>72.94</b>	<b>180.78</b>	<b>1090.56</b>		<b>45.73</b>	<b>48.03</b>	<b>49.51</b>	<b>51.73</b>
								Average Gross Block	934.25	978.45	1007.90	1054.09
								Weighted average rate of depreciation	4.8948	4.9086	4.9124	4.9080
								(in %)				



## Asset-9

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (%)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	118.01	0.00	0.00	0.00	0.00	0.00	0.00	118.01	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.51	3.00	9.56	25.50	38.57	38.57	3.34	0.00	0.01	0.07	0.28	0.86
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 Equipments	1215.44	391.12	443.55	82.49	9.88	47.44	974.48	2189.92	5.28	74.50	96.54	110.42	112.86	114.38
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
<b>Total</b>	<b>1333.45</b>	<b>391.12</b>	<b>444.06</b>	<b>85.49</b>	<b>19.44</b>	<b>72.94</b>	<b>1013.05</b>	<b>2346.50</b>		<b>74.50</b>	<b>96.54</b>	<b>110.49</b>	<b>113.14</b>	<b>115.24</b>
									Average Gross Block	1529.01	1946.60	2211.38	2263.84	2310.03
									Weighted average rate of depreciation	4.8725	4.9597	4.9965	4.9977	4.9886
									(in %)					



## Asset-10

Capital Expenditure s as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation					Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation			
		2015- 16	2016- 17	2017-18	2018- 19	Total			2015-16	2016-17	2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Transmission Line	3503.45	210.57	549.77	29.14	0.00	789.48	4292.93	5.28	190.54	210.61	225.90	226.67
Sub-Station Equipments	933.63	59.87	113.37	0.00	0.00	173.24	1106.87	5.28	50.88	55.45	58.44	58.44
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00
<b>Total</b>	<b>4437.08</b>	<b>270.44</b>	<b>663.14</b>	<b>29.14</b>	<b>0.00</b>	<b>962.72</b>	<b>5399.80</b>		<b>241.42</b>	<b>266.06</b>	<b>284.34</b>	<b>285.11</b>
								Average Gross Block	4572.30	5039.09	5385.23	5399.80
								<b>Weighted average rate of depreciation</b>	5.2800	5.2800	5.2800	5.2800
								(in %)				



## Asset-11

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation						Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	118.01	0.00	0.00	0.51	0.00	0.00	0.51	118.52	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	3.00	3.72	15.10	21.82	21.82	3.34	0.00	0.00	0.05	0.16	0.48
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 Equipments	1676.88	26.49	113.28	81.98	15.72	57.84	295.31	1972.19	5.28	89.24	92.93	98.08	100.66	102.60
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
<b>Total</b>	<b>1794.89</b>	<b>26.49</b>	<b>113.28</b>	<b>85.49</b>	<b>19.44</b>	<b>72.94</b>	<b>317.64</b>	<b>2112.53</b>		<b>89.24</b>	<b>92.93</b>	<b>98.13</b>	<b>100.82</b>	<b>103.08</b>
									Average Gross Block	1808.13	1878.02	1977.41	2029.87	2076.06
									Weighted average rate of depreciation	4.9354	4.9482	4.9627	4.9671	4.9652
									(in %)					



## Asset-12

Capital Expenditure s as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation					Estimated Completi on Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation			
		2015- 16	2016- 17	2017- 18	2018- 19	Total			2015-16	2016-17	2017-18	2018-19
Freehold Land	177.01	0.00	0.00	0.00	0.00	0.00	177.01	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	3.00	3.72	37.35	44.07	44.07	3.34	0.00	0.05	0.16	0.85
Transmissio n Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00
Sub-Station Equipments	856.75	0.00	70.89	15.74	35.59	122.22	978.97	5.28	45.24	47.11	49.39	50.75
PLCC	9.26	0.00	0.00	0.00	0.00	0.00	9.26	6.33	0.59	0.59	0.59	0.59
<b>Total</b>	<b>1043.02</b>	<b>0.00</b>	<b>73.89</b>	<b>19.46</b>	<b>72.94</b>	<b>166.29</b>	<b>1209.31</b>		<b>45.82</b>	<b>47.74</b>	<b>50.14</b>	<b>52.18</b>
								Average Gross Blcok	1043.02	1079.96	1126.64	1172.84
								<b>Weighted average rate of depreciation</b>	4.3932	4.4209	4.4507	4.4494
								<b>(in %)</b>				



### Asset-13

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation				Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation		
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	718.47	0.00	0.00	0.00	0.00	718.47	3.34	24.00	24.00	24.00
Building & Other Civil Works	260.14	4.40	0.30	0.00	4.70	264.83	3.34	8.76	8.84	8.85
Transmission Line	14769.79	2736.92	856.59	20.11	3613.62	18383.40	5.28	852.10	946.97	970.11
Sub-Station Equipments	15152.31	1734.09	1100.08	615.71	3449.87	18602.19	5.28	845.82	920.64	965.94
PLCC	318.33	125.39	0.35	0.00	125.74	444.07	6.33	24.12	28.10	28.11
<b>Total</b>	<b>31219.03</b>	<b>4600.79</b>	<b>1957.32</b>	<b>635.82</b>	<b>7193.93</b>	<b>38412.96</b>		<b>1754.80</b>	<b>1928.55</b>	<b>1997.01</b>
							Average Gross Block	33519.43	36798.48	38095.05
							<b>Weighted average rate of depreciation</b>	5.3498	5.3452	5.3429
							(in %)			



## Asset-14

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation			Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation	
		2017-18	2018-19	Total			2017-18	2018-19
Freehold Land	563.42	0.00	190.08	190.08	753.50	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00
Building & Other Civil Works	1387.33	0.00	429.31	429.31	1816.64	3.34	46.34	53.51
Transmission Line	37391.50	0.00	1592.66	1592.66	38984.16	5.28	1974.27	2016.32
Sub-Station Equipments	6241.27	0.00	415.21	415.21	6656.48	5.28	329.54	340.50
PLCC	209.19	0.00	4.27	4.27	213.46	6.33	13.24	13.38
<b>Total</b>	<b>45792.71</b>	<b>0.00</b>	<b>2631.53</b>	<b>2631.53</b>	<b>48424.24</b>		<b>2363.39</b>	<b>2423.70</b>
						Average Gross Blcok	45792.71	47108.47
						Weighted average rate of depreciation	5.2254	5.2072
						(in %)		



## Asset-15

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation		Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation
		2018-19	Total			2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub-Station Equipments	1969.48	115.99	115.99	2085.47	5.28	107.05
PLCC	0.00	0.00	0.00	0.00	6.33	0.00
<b>Total</b>	<b>1969.48</b>	<b>115.99</b>	<b>115.99</b>	<b>2085.47</b>		<b>107.05</b>
					Average Gross Blcok	2027.47
					Weighted average rate of depreciation	5.2800
					(in %)	



## Asset-16

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation		Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation
		2018-19	Total			2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub-Station Equipments	913.95	100.10	100.10	1014.05	5.28	50.90
PLCC	0.00	0.00	0.00	0.00	6.33	0.00
<b>Total</b>	<b>913.95</b>	<b>100.10</b>	<b>100.10</b>	<b>1014.05</b>		<b>50.90</b>
					Average Gross Blcok	964.00
					<b>Weighted average rate of depreciation</b>	5.2800
					(in %)	



## Asset-17

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation		Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation
		2018-19	Total			2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub-Station Equipments	138.39	0.00	0.00	138.39	5.28	7.31
PLCC	0.00	0.00	0.00	0.00	6.33	0.00
<b>Total</b>	<b>138.39</b>	<b>0.00</b>	<b>0.00</b>	<b>138.39</b>		<b>7.31</b>
					Average Gross Blcok	138.39
					<b>Weighted average rate of depreciation</b>	5.2800
					(in %)	



## Asset-18

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation					Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation			
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00
Sub-Station Equipments	854.79	15.67	42.62	75.63	0.00	133.92	988.71	5.28	45.55	47.09	50.21	52.20
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00
<b>Total</b>	<b>854.79</b>	<b>15.67</b>	<b>42.62</b>	<b>75.63</b>	<b>0.00</b>	<b>133.92</b>	<b>988.71</b>		<b>45.55</b>	<b>47.09</b>	<b>50.21</b>	<b>52.20</b>
								Average Gross Block	862.63	891.77	950.89	988.71
								Weighted average rate of depreciation	5.2800	5.2800	5.2800	5.2800
								(in %)				



## Asset-19

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation					Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation			
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00
Transmission Line	1775.03	5.60	44.55	0.63	0.00	50.78	1825.81	5.28	93.87	95.19	96.39	96.40
Sub-Station Equipments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1775.03</b>	<b>5.60</b>	<b>44.55</b>	<b>0.63</b>	<b>0.00</b>	<b>50.78</b>	<b>1825.81</b>		<b>93.87</b>	<b>95.19</b>	<b>96.39</b>	<b>96.40</b>
								Average Gross Blcok	1777.83	1802.91	1825.50	1825.81
								Weighted average rate of depreciation	5.2800	5.2800	5.2800	5.2800
								(in %)				



## Asset-20

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation			Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation	
		2017-18	2018-19	Total			2017-18	2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00
Sub-Station Equipments	4208.52	274.78	228.60	503.38	4711.90	5.28	229.46	242.75
PLCC	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00
<b>Total</b>	<b>4208.52</b>	<b>274.78</b>	<b>228.60</b>	<b>503.38</b>	<b>4711.90</b>		<b>229.46</b>	<b>242.75</b>
						Average Gross Blcok	4345.91	4597.60
						<b>Weighted average rate of depreciation</b>	5.2800	5.2800
						(in %)		



### Asset-21 (New Equipment)

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation		Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation
		2018-19	Total			2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00%	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34%	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34%	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28%	0.00
Sub-Station Equipments	102.89	3.58	3.58	109.85	5.28%	5.53
PLCC	0.00	0.00	0.00	0.00	6.33%	0.00
<b>Total</b>	<b>102.89</b>	<b>3.58</b>	<b>3.58</b>	<b>106.47</b>		<b>5.53</b>
					Average Gross Blcok	104.68
					<b>Weighted average rate of depreciation</b>	5.2800%
					(in %)	



## Asset-21 (Recapitalization)

Capital Expenditures as on COD / 1.4.2014	Admissible Capital Cost as on COD for tariff purpose	Projected Additional capitalisation		Estimated Completion Cost as on 31.3.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation
		2018-19	Total			2018-19
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub-Station Equipments	289.70	0.00	0.00	289.70	5.28	15.30
PLCC	0.00	0.00	0.00	0.00	6.33	0.00
<b>Total</b>	<b>289.70</b>	<b>0.00</b>	<b>0.00</b>	<b>289.70</b>		<b>15.30</b>
					Average Gross Blcok	289.70
					Weighted average rate of depreciation	5.2800
					(in %)	



## Annexure-II

### Combined Asset (Except Asset-22)

		Projected Additional Capitalisation						Admitted Cost as 31.3.2024	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2019	2019-20	2020-21	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	4580.51	199.58	85.54	0.00	0.00	0.00	285.12	4865.63	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	1033.84	0.00	0.00	0.00	0.00	0.00	0.00	1033.84	3.34	34.53	34.53	34.53	34.53	34.53
Building & Other Civil Works	2989.47	610.66	1613.16	0.00	0.00	0.00	2223.82	5213.29	3.34	110.05	147.18	174.12	174.12	174.12
Transmission Line	78743.08	1019.46	0.00	0.00	0.00	0.00	1019.46	79762.54	5.28	4184.55	4211.46	4211.46	4211.46	4211.46
Sub-Station Equipments	72022.99	1441.13	149.96	29.70	0.00	0.00	1620.79	73643.78	5.28	3840.86	3882.86	3887.61	3888.39	3888.39
PLCC	1176.55	0.00	0.00	0.00	0.00	0.00	0.00	1176.55	6.33	74.48	74.48	74.48	74.48	74.48
IT Equipment	1187.55	0.00	0.00	0.00	0.00	0.00	0.00	1187.55	15.00	178.13	178.13	178.13	178.13	178.13
<b>Total</b>	<b>161734.01</b>	<b>3270.83</b>	<b>1848.66</b>	<b>29.70</b>	<b>0.00</b>	<b>0.00</b>	<b>5149.19</b>	<b>166883.18</b>		<b>8422.59</b>	<b>8528.65</b>	<b>8560.33</b>	<b>8561.12</b>	<b>8561.12</b>
									Average Gross Blcok	163369.42	165929.15	166868.33	166883.18	166883.18
									Weighted average rate of depreciation (in %)	5.1556	5.1399	5.1300	5.1300	5.1300



### Asset-22 (New Equipment)

Capital Expenditures as on COD/ 1.4.2019	Admissible Capital Cost as on 31.3.2019	Projected Additional capitalisation						Estimated Completion Cost as 31.3.2024	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2019-20	2020-21	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	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 & Other Civil Works	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	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 Equipments	201.99	17.61	0.00	0.00	0.00	0.00	17.61	219.60	5.28	11.13	11.59	11.59	11.59	11.59
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 assets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>221.34</b>	<b>19.41</b>					<b>17.61</b>	<b>219.60</b>		<b>11.13</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>
									Average Gross Blcok	210.79	219.60	219.60	219.60	219.60
									<b>Weighted average rate of depreciation</b>	5.2800	5.2800	5.2800	5.2800	5.2800
									<b>(in %)</b>					



## Asset-22 (Recapitalization)

Capital Expenditures as on COD/ 1.4.2019	Admissible Capital Cost as on 31.03.2019	Projected Additional capitalisation						Estimated Completion Cost as 31.3.2024	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2019-20	2020-21	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leasehold Land	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 & Other Civil Works	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	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 Equipments	289.70	0.00	0.00	0.00	0.00	0.00	0.00	289.70	5.28	15.30	15.30	15.30	15.30	15.30
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 assets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>289.70</b>	-	-	-	-	-	<b>0.00</b>	<b>289.70</b>		<b>15.30</b>	<b>15.30</b>	<b>15.30</b>	<b>15.30</b>	<b>15.30</b>
									Average Gross Blcok	289.70	289.70	289.70	289.70	289.70
									<b>Weighted average rate of depreciation</b>	5.2800	5.2800	5.2800	5.2800	5.2800
									(in %)					

