

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 681/TT/2020**

**Coram:**

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

**Date of Order: 20.07.2023**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of transmission assets under "Transmission System associated with North East-Northern/Western Inter Connector-I".

**And in the matter of:**

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

**....Petitioner**

**Vs.**

1. Assam Electricity Grid Corporation Limited,  
(Formerly Assam State Electricity Board),  
Bijulee Bhawan, Paltan Bazar,  
Guwahati-781001, Assam.
2. Meghalaya Energy Corporation Limited,  
(Formerly Meghalaya State Electricity Board),  
Short Round Road, "Lumjingshai",  
Shillong-793001, Meghalaya.
3. Government of Arunachal Pradesh,  
Vidyut Bhawan, Itanagar-791111,  
Arunachal Pradesh.
4. Power and Electricity Department,  
Government of Mizoram, Aizawl, Mizoram.



5. Manipur State Electricity Distribution Company Limited,  
(Formerly Electricity Department, Government of Manipur),  
Electricity Complex, Patta No. 1293 Under 87(2),  
Khwai Bazar, Keishampat, District-Imphal West,  
Manipur-795001.
6. Department of Power,  
Government of Nagaland,  
Kohima, Nagaland.
7. Tripura State Electricity Corporation Limited,  
Vidyut Bhawan, North Banamalipur,  
Agartala, Tripura (W)-799001, Tripura.
8. Himachal Pradesh State Electricity Board  
Vidyut Bhawan, Shimla-171004 (Himachal Pradesh).
9. Punjab State Power Corporation Limited,  
Thermal Shed T-1a, Patiala.
10. Haryana Power Purchase Centre, IInd Floor,  
Shakti Bhawan, Sector-6, Panchkula-134109.
11. Power Development Department,  
Janipura Grid Station, Jammu (Tawi) 180007.
12. Uttar Pradesh Power Corporation Limited,  
10th Floor, Shakti Bhawan Extension,  
14, Ashok Marg, Lucknow-226001.
13. Delhi Transco Limited,  
Shakti Sadan, Kotla Road (Near ITO),  
New Delhi.
14. Chandigarh Administration,  
Sector -9, Chandigarh.
15. Uttarakhand Power Corporation Limited,  
Urja Bhawan, Kanwali Road, Dehradun.
16. Rajasthan Power Procurement Centre,  
Vidyut Bhawan, Janpath, Jaipur.
17. Ajmer Vidyut Vitran Nigam Limited,  
400 kV, GSS Building, Ajmer Road,  
Heerapura, Jaipur.



18. Jodhpur Vidyut Vitran Nigam Limited,  
400 kV GSS Building, Ajmer Road,  
Heerapura, Jaipur
19. Jaipur Vidyut Vitran Nigam Limited,  
400 kV GSS Building, Ajmer Road,  
Heerapura, Jaipur.
20. Northern Central Railway,  
Allahabad.
21. BSES Yamuna Power Limited,  
Shakti Kiran Building, Karkardooma,  
Delhi-110092.
22. BSES Rajdhani Power Limited,  
BSES Bhawan, Nehru Place, New Delhi
23. Tata Power Delhi Distribution Limited,  
33 kV Sub-station, Building  
Hudson Lane, Kingsway Camp  
North Delhi-110009
24. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110002.
25. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008.
26. Maharashtra State Electricity Distribution Company Limited,  
Prakashgad, 4th Floor, Andheri (East),  
Mumbai-400052.
27. Gujarat Urja Vikas Nigam Limited,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390 007
28. Electricity Department,  
Government of Goa, Vidyut Bhawan,  
Panaji, Near Mandvi Hotel,  
Goa-403001.
29. Electricity Department,  
Administration of Daman & Diu,  
Daman-396210.



30. Electricity Department,  
Administration of Dadra Nagar Haveli,  
U.T., Silvassa-396230.
31. Chhattisgarh State Electricity Board,  
P.O.Sunder Nagar, Dangania, Raipur,  
Chhatisgaarh-492013.
32. Madhya Pradesh Audyogik Kendra,  
Vikas Nigam (Indore) Limited,  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452008.
33. Karnataka Power Transmission Corporation Limited,  
Kaveri Bhavan, Bangalore-560 009.
34. Transmission Corporation of Andhra Pradesh Limited,  
Vidyut Soudha, Hyderabad-500082.
35. Kerala State Electricity Board,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram-695004.
36. Tamilnadu Electricity Board,  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600002.
37. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605001.
38. Eastern Power Distribution Company of Andhra Pradesh Limited,  
P&T Colony, Seethmmadhara,  
Vishakhapatnam, Andhra Pradesh.
39. Southern Power Distribution Company of Andhra Pradesh Limited,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517501, Chittoor District, Andhra Pradesh.
40. Central Power Distribution Company of Andhra Pradesh Limited,  
Corporate Office, Mint Compound,  
Hyderabad-500 063, Andhra Pradesh.
41. Northern Power Distribution Company of Andhra Pradesh Limited,  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal-506004, Andhra Pradesh.



42. Bangalore Electricity Supply Company Limited,  
Corporate Office, K.R. Circle,  
Bangalore-560001, Karnataka.
43. Gulbarga Electricity Supply Company Limited,  
Station Main Road, Gulbarga, Karnataka.
44. Hubli Electricity Supply Company Limited,  
Navanagar, PB Road,  
Hubli, Karnataka.
45. MESCOM Corporate Office,  
Paradigm Plaza, Ab Shetty Circle  
Mangalore-575001, Karnataka
46. Chamundeswari Electricity Supply Corporation Limited,  
927, L J Avenue Ground Floor,  
New Kantharaj Urs Road, Saraswatipuram,  
Mysore-570 009, Karnataka.
47. Telanagana State Pc Co-Ordination Committee  
R.No. 547/A Block , Vidyut Soudha, Somajiguda, Khairathabad,  
Somajiguda, Hyderabad-500082, Andhra Pradesh.
48. Andhra Pradesh Power Co-ordination Committee,  
Room No. 547, 5th Floor, Block-A,  
Vidyut Soudha, Somajiguda, Khairathabad,  
Hyderabad-500 082, Andhra Pradesh.
49. Bihar State Electricity Board,  
Vidyut Bhawan, Bailey Road,  
Patna-800001.
50. West Bengal State Electricity Distribution Company Limited,  
Bidyut Bhawan, Bidhan Nagar, Block DJ,  
Sector-II, Salt Lake City, Calcutta-700091.
51. Grid Corporation of Orissa Limited,  
Shahid Nagar, Bhubaneswar-751007.
52. Damodar Valley Corporation,  
DVC Tower, Maniktala, Civic Centre,  
VIP Road, Calcutta-700054.
53. Power Department,  
Government of Sikkim,  
Gangtok-737101.



54. Jharkhand State Electricity Board,  
In Front of Main Secretariat,  
Doranda, Ranchi-834002.
55. North Bihar Power Distribution Company Limited,  
Vidyut Bhawan, Bailey Road,  
Patna, Bihar-800001.
56. South Bihar Power Distribution Company Limited,  
Vidyut Bhawan, Bailey Road,  
Patna, Bihar-800001.
57. Tata Steel Limited,  
Generation Office (W-175) Jamshedpur,  
Jharkhand.
58. Maithan Power Limited,  
MA-5, Gogna Colony, Maithan Dam Post Office,  
Distt: Dhanbad-828207, Jharkhand.
59. Ind-Barath Energy (Utkal) Limited,  
Plot No: 30-A, Road No. 1, Film Nagar,  
Jubilee Hills, Hyderabad-500033,  
Andhra Pradesh.
60. AD Hydro Power Limited,  
Bhilwara Towers, A-12, Sector-1,  
Noida-201301, Uttar Pradesh.
61. Lanco Budhil PowerPrivate Limited,  
Plot No. 397, Udyog Vihar Phase-III,  
Gurgaon, Haryana.
62. Himachal Sorang Power Private Limited,  
D-7, Sector - I, Lane - 1, 2nd Floor,  
New Shimla, Shimla-171009, Himachal Pradesh.
63. MB Power (Madhya Pradesh) Limited,  
239, Okhla Industrial Area,  
Phase-III, New Delhi, 110020.
64. Himachal Baspa Power Company Limited,  
Karcham Wangtoo Hep, Sholtu Colony,  
PO: Tapri, Distt: Kinnaur, 172104, Himachal Pradesh.
65. Jindal Power Limited, 6<sup>th</sup> Floor,  
MTNL Building, 8, Bhikaji Cama Place,  
New Delhi-110066.



66. KSK Mahanadi Power Company Limited,  
8-2-293/82/A/431/A Road No 22, Jubilee Hills,  
Hyderabad, Andhra Pradesh-500033.
67. PTC India Limited,  
2nd Floor, NBCC Tower,  
15, Bhikaji Cama Place,  
New Delhi-110066.
68. IL&FS Tamil Nadu Power Company Limited,  
C. Pudhupettai Post, Parangipettai (Via),  
Chidambaram (Tk), Cuddalore, 608502,  
Tamil Nadu.
69. Adani Power Limited, 10 B, Sambhav Press Building,  
Judges Bungalow Road, Badakdev,  
Ahmedabad-380015.
70. Torrent Power Limited,  
Naranpura Zonal Office,  
Sola Road, Ahmedabad-380013.
71. Heavy Water Board,  
Vikram Sarabhai Bhavan, 5th Floor,  
Anushaktinagar, Mumbai-400094.
72. ACB India Limited,  
7th Floor, Corporate Tower, Ambience Mall,  
NH-8, Gurgaon-122001, Haryana.
73. EMCO Energy Limited,  
Plot No. – F-5, Road No. - 28,  
Wagle Industrial Area, Thane,  
Mumbai-400604.
74. Spectrum Coal and Power Limited,  
7<sup>th</sup> Floor, Corporate Tower,  
Ambience Mall, NH 8,  
Gurgaon-122 001, Haryana.
75. BARC,  
TRP, Post-Ghivali, Distt.-Palghar,  
BARC Plant Site, 401505,  
Maharashtra.
76. Balco, Raipur,  
Bharat Aluminium Company Limited,  
Captive Power Plant-II, Balconagar, Korba-495684.



77. Dhariwal Infrastructure Limited,  
C-6 Tadali Growth Centre, M.I.D.C.T,  
District Chandrapur, Maharashtra-442406.
78. DB Power Limited,  
Opp. Dena Bank, C-31, G- Block,  
3rd Floor, Naman Corporate Link,  
Bandar - Kurla Complex, Bandra (East),  
Mumbai-400051, Maharashtra.
79. NEEPCO, 15, NBCC Tower,  
Bhikaji Cama Place, New Delhi.
80. NHPC Limited,  
NHPC Office Complex,  
Sector-33, Faridabad.
81. NTPC Limited,  
Core-7, Scope Complex,  
New Delhi.

....Respondent(s)

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

**For Respondents** : Shri Manish Kumar Choudhary, Advocate, Bihar  
Discoms  
Shri Anindya Khare, MPPMCL

### **ORDER**

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 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 transmission assets "Transmission System associated





with North East-Northern/ Western Inter Connector-I” in North Eastern Region (hereinafter referred to as the ‘transmission project’).

**Asset-1:** 2<sup>nd</sup> 315 MVA,400/220 kV ICT at Misa;

**Asset-2:** 80 MVAR Bus Reactor at Balipara;

**Asset-3:** 80 MVAR Bus Reactor at Bongaigaon;

**Asset-4:** 400 kV, D/C (Quad) Balipara-Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station and Balipara Sub-station including 30% FSC at Balipara and 4 X 63 MVAR, 420 kV LR;

**Asset-5:** 200 MVA, 400/132/33 kV ICT - 2 along with associated bays at BNC;

**Asset-6:** 80 MVAR Bus Reactor - 1 along with associated bays at Biswanath Chariali;

**Asset-7:** 80 MVAR Bus Reactor - 2 along with associated Bays at Biswanath Chariali;

**Asset-8:** Augmentation of 400 kV Agra Sub-Station by 1X315 MVA, 400/220/33 kV ICT along with associated bays;

**Asset-9:** 400 kV D/C Balipara-Biswanath Chariali # 3 Transmission Line along with associated bays at Balipara and Biswanath Chariali Pooling Station;

**Asset-10:** 400 kV D/C Balipara-Biswanath Chariali # 4 Transmission Line along with associated bays at Balipara and Biswanath Chariali Pooling Station;

**Asset-11:** 2X80 MVAR, 400 kV Switchable Line Reactors for 400 kV D/C Agra-Sikar Transmission Line at Agra Sub-station;

**Asset-12:** 63 MVAR Line Reactor (to be used as Bus Reactor) connected to 400 kV Lower Subansiri-BNC-I line bay alongwith associated bays at BNC Sub-station;

**Asset-13:** 63 MVAR line reactor (to be used as Bus Reactor) connected to 400 kV Lower Subansiri-BNC-III line bay alongwith associated bays at BNC Sub-station;

**Asset-14:** Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-I T/L at Biswanath Chariali PS alongwith associated bays at Biswanath Chariali Pooling Station;



**Asset-15:** Loop In and Loop Out (LILO) of 400 kV Ranganadi-Balipara-II Transmission Line at Biswanath Chariali Pooling Station alongwith associated bays at Biswanath Chariali Pooling Station;

**Asset-16:** 132 kV D/C BNC (PG) - BNC (AEGCL) Transmission Line alongwith associated bays at BNC (AEGCL) and BNC Pooling Station (PGCIL);

**Asset-17:** 200 MVA, 400/132/33 kV ICT– I at Biswanath Chariali Pooling Station;

**Asset-18:** ± 800 kV HVDC Biswanath Chariali – Agra Pole-1 (1500 MW HVDC Terminals at Biswanath Chariali and Agra each along with the ± 800 kV Hexa Lapwing Transmission Line);

**Asset-19:** ±800 kV Biswanath Chariali-Agra HVDC Pole-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra;

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 10.2 and 11.1 above.*

*2) Admit the capital cost claimed and additional capitalization incurred during 2014-19 and also allow the projected additional capitalization during 2019-24.*

*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 10.2 and 11.1 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 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 11.1 above.

8) Allow the Initial spares claimed as project as a whole.

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

10) 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”.*

(In this order, Asset-1 to Asset-19 have been referred to as “transmission assets” while turing up the tariff of 2014-19 period. In 2019-24 tariff period, Asset-1 to Asset-17 have been referred to as ‘Combined Asset’ and Asset-18 and Asset-19 have been referred individually.)

### **Background**

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

(a) Investment Approval (IA) for transmission project was accorded in the 219<sup>th</sup> meeting of the Board of Directors of the Petitioner's company held on 24.2.2009 and conveyed vide Memorandum Ref. No. C/CP/NER-NR.WR Intr-I dated 27.2.2009 at an estimated cost of ₹1113019 lakh including IDC of ₹106605 lakh based on 4<sup>th</sup> quarter, 2008 price level.

(b) Revised Cost Estimate (RCE-I) of the transmission project was accorded by the Board of Directors of the Petitioner's company in its 323<sup>rd</sup> meeting held on 30.11.2015 at an estimated cost of ₹1376271 lakh including IDC of ₹174732 lakh based on April, 2015 price level and communicated vide Memorandum No. C/CP/RCE:NE-NR/WR Interconnector-I dated 9.12.2015).

(c) Revised Cost Estimate-II (RCE-II) for the transmission project was accorded by Board of Directors of the Petitioner's company in its 363<sup>rd</sup>



meeting held on 7.3.2019 and communicated vide Memorandum No. C/CP/RCE-II/PA1819-12-0AY-RTE023 dated 28.3.2019 at an estimated cost of ₹1471910 lakh including IDC of ₹176395 lakh based on March, 2018 price level.

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

### **Transmission Lines**

#### **Part-A: North East – Northern/Western Interconnector–I:**

- (i) Biswanath Chariali – Agra  $\pm$ 800 kV, 6000 MW HVDC bipole line

(This includes four (4) number of corridors with  $\pm$  800 kV HVDC towers in the chicken neck area. One corridor has been utilized by stringing of the Biswanath Chariyali - Agra HVDC bipole line while only towers will be erected in the other three corridors (No Stringing)\*. Further, this includes Earth Electrode line at Biswanath Chariyali end and at Agra end.)

- (ii) Balipara–Biswanath Chariali 400 kV D/C line  
(iii) LILO of Ranganadi–Balipara 400 kV D/C line at Biswanath Chariali (Pooling Point)  
(iv) Biswanath Chariali – Biswanath Chariali (AEGCL) 132 kV D/C line

#### **Part-B: Transmission System for immediate evacuation of power from Kameng HEP**

- (i) Kameng–Balipara 400 kV D/C line  
(ii) Balipara–Bongaigaon 400 kV D/C (Quad conductor) with 30% Fixed Series Compensation at Balipara end

#### **Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP**

- (i) Lower Subansiri–Biswanath Chariali (Pooling Point) – 2 numbers 400 kV D/C lines with twin lapwing conductor

### **Sub-stations**

#### **Part-A: North East–Northern/Western Interconnector – I**

- (i) Establishment of 400/132 kV Pooling Station at Biswanath Chariali with 2x200 MVA, 400/132/33 kV transformers alongwith associated line bays;



- (ii) HVDC rectifier module of 3000 MW at Biswanath Chariali and inverter module of 3000 MW capacity at Agra;
- (iii) Augmentation of 400 kV Agra Sub-Station by 4x105 MVA, 400/220/33 kV transformer along with associated bays
- (iv) Extension of 400 kV line bays at Balipara Sub-station
- (v) Extension of 132 kV line bays at Biswanath Chariali (AEGCL)

**Part-B: Transmission System for immediate evacuation of power from Kameng HEP**

- (i) 2<sup>nd</sup> 315 MVA, 400/220 kV ICT at MISA
- (ii) Extension of 400 kV line bays at Bongaigaon and Balipara Sub-stations

**Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP**

- (i) Extension of 400 kV line bays at Biswanath Chariali Pooling Sub-station

**Reactive Compensation**

**A. Line Reactors**

Sl. No.	Name of Line	Line Reactor
1.	2x400 kV D/C L. Subansiri-Biswanath Chariali line	2x63 MVAR* at Biswanath Chariyali end on each ckts (total 4 numbers of reactors out of which 2 numbers of reactors are being utilized as bus reactors)**
2.	400 kV, D/C (Quad Moose) Balipara-Bongaigaon line	1x63 MVAR at both end on each ckt. (total 4 numbers of reactors)
3.	400 kV D/C Balipara-Biswanath Chariali line resulting from LILO of Ranganadi-Balipara 400 kV D/C line at Biswanath Chariali	1x50 MVAR Existing Fixed line reactor in each circuit at Balipara end to be made switchable at the present location itself.
4.	Agra-Sikar 400 kV D/C line	2x80 MVAR line reactors in place of 2x50 MVAR existing line reactors at Agra end.***

*\*Switchable line reactor*

*\*\*As agreed during 6th NER Standing Committee Meeting held on 3.10.2016.*

*\*\*\* As agreed during 33rd SCM of NR held on 23.12. 2013.*



## **B. Bus Reactors**

<b>Sl. No.</b>	<b>Name of Sub-station</b>	<b>Bus Reactor</b>
1.	Biswanath Chariali	2x80 MVAR
2.	Bongaigaon	1x80 MVAR
3.	Balipara	1x80 MVAR
4.	Lower Subansiri	1x80 MVAR*
5.	Kameng	1x80 MVAR*

\* These reactors would be a part of generation switchyard

(e) As per IA dated 24.2.2009, the transmission assets were scheduled to be put into commercial operation within 54 months for Part-A and 48 months for Part-B and C from the date of IA. Therefore, the scheduled date of commercial operation (SCOD) of the transmission assets for Part-A was 1.8.2013 while for Part-B and Part-C it was 26.3.2013. The details of transmission tariff approved for 2014-19 tariff period in respect of the transmission assets are as follows:

<b>Asset nomenclature in previous petition</b>	<b>Asset No.</b>	<b>Name of Asset</b>	<b>COD</b>	<b>Description of the Petition No. and date of order by which tariff for 2014-19 tariff period allowed</b>	<b>Remarks</b>
Asset	1	2 <sup>nd</sup> 315 MVA, 400/220 kV ICT at Misa	1.7.2012	Vide order dated 11.3.2016 in Petition No. 391/TT/2014	<b>Covered under instant petition for true-up of 2014-19 tariff period and determination of tariff of 2019-24 tariff period</b>
Asset	2	80 MVAR Bus Reactor at Balipara	1.10.2012	Vide order dated 28.1.2016 in Petition No. 131/TT/2015	
Asset	3	80 MVAR Bus Reactor at Bongaigaon	1.3.2013	Vide order dated 18.2.2016 in Petition No. 217/TT/2015	
Asset	4	400 kV, D/C (Quad) Balipara-Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station and Balipara Sub-station including 30% FSC at Balipara and 4x63 MVAR, 420 kV LR	7.11.2014	Vide order dated 14.7.2016 in Petition No. 65/TT/2015	
Asset-I	5	200 MVA, 400/132/33 kV ICT-	1.10.2015		



Asset nomenclature in previous petition	Asset No.	Name of Asset	COD	Description of the Petition No. and date of order by which tariff for 2014-19 tariff period allowed	Remarks	
		2 along with associated bays at BNC		Vide order dated 26.5.2016 in Petition No. 259/TT/2015		
Asset-II	6	80 MVAR Bus Reactor-1 along with associated Bays at Biswanath Chariali	3.10.2015			
Asset-III	7	80 MVAR Bus Reactor-2 along with associated Bays at Biswanath Chariali	26.2.2016			
Asset-IV	8	Augmentation of 400 kV Agra Sub-Station by 1X315 MVA, 400/220/33 kV ICT along with associated bays.	10.12.2015			
Asset-Va	9	400 kV D/C Balipara-Biswanath Chariali #3 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS.	12.10.2015			
Asset-Vb	10	400 kV D/C Balipara-Biswanath Chariali #4 Transmission Line along with associated bays at Balipara and Biswanath Chariali PS.	1.10.2015			
Asset-I	11	2X80 MVAR, 400 kV Switchable Line Reactors for 400 kV D/C Agra-Sikar Transmission Line at Agra Sub-station.	1.8.2017			Vide order dated 25.6.2019 in Petition No. 242/TT/2018
Asset-II	12	63 MVAR Line Reactor (to be used as Bus Reactor)	21.7.2017			



Asset nomenclature in previous petition	Asset No.	Name of Asset	COD	Description of the Petition No. and date of order by which tariff for 2014-19 tariff period allowed	Remarks
		connected to 400 kV Lower Subansiri-BNC-I line bay alongwith associated bays at BNC sub-station.			
Asset-III	13	63 MVAR line reactor (to be used as Bus Reactor) connected to 400 kV Lower Subansiri-BNC-III line bay alongwith associated bays at BNC sub-station.	11.12.2017		
Asset-I	14	Loop-In-and-Loop-Out (LILO) of 400 kV Ranganadi-Balipara-I Transmission Line at Biswanath Chariali Pooling Station alongwith associated bays at Biswanath Chariali Pooling Station.	28.10.2015		
Asset-II	15	Loop-In-and-Loop-Out (LILO) of 400 kV Ranganadi-Balipara-II Transmission Line at Biswanath Chariali Pooling Station alongwith associated bays at Biswanath Chariali Pooling Station.	27.10.2015	Vide order dated 17.12.2019 in Petition No. 363/TT/2018	
Asset-III	16	132 kV D/C BNC (PG)-BNC (AEGCL) Transmission Line alongwith associated bays at BNC (AEGCL) and BNC Pooling Station (PGCIL)	1.10.2015		
Asset-IV	17	200 MVA, 400/132/33 kV ICT-I at Biswanath	19.12.2015		





Asset nomenclature in previous petition	Asset No.	Name of Asset	COD	Description of the Petition No. and date of order by which tariff for 2014-19 tariff period allowed	Remarks
		Chariali Pooling Station			
Asset-V	18	± 800 kV HVDC Biswanath Chariali-Agra Pole-1 (1500 MW HVDC Terminals at Biswanath Chariali and Agra each along with the ± 800 kV Hexa Lapwing Transmission Line)	1.11.2015		
Asset-VI	19	± 800 kV Biswanath Chariali-Agra HVDC POLE-II (1500 MW HVDC Terminal at Biswanath Chariali and Agra) along with Earth Electrode line and Earth Electrode Station for both BNC and Agra.	2.9.2016		
-	20	Kameng–Balipara 400 kV D/C line alongwith associated bays and 1x80 MVar Bus Reactor	30.3.2018	Vide order dated 31.8.2021 in Petition No. 121/TT/2019 and trued up vide order dated 7.10.2022 in Petition No. 165/TT/2022.	
-	21	Lower Subansiri-Biswanath Chariali (Pooling Point)–2 numbers 400 kV D/C lines with twin Lapwing conductor along with associated bays and 1x80 MVar Bus Reactor and 4x63 MVar Line Reactor			Under implementation and petition will be filed under 2019 Tariff Regulations.

(f) The Petitioner has submitted that entire scope of work defined under the transmission project consists of 21 number of transmission assets



(Asset-1 to Asset-21 as enumerated above), out of which Asset-1 to Asset-19 are covered in the instant petition. Asset-20, as detailed above in the table, has already been tried up vide order dated 7.10.2022 in Petition No. 165/TT/2022 while Asset-21, as detailed above in the table, is still under implementation.

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 Northern 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. A combined reply has been filed on behalf of Bihar State Electricity Board (BSEB), North Bihar Power Distribution Company Limited (NBPDC), South Bihar Power Distribution Company Limited (SBPDCL), Respondent Nos. 49, 55 and 56 (collectively referred to as "Bihar Discoms" vide affidavit dated 20.7.2021 and M.P. Power Management Company Limited (MPPMCL), Respondent No. 25 vide affidavit dated 18.2.2021. The Bihar Discoms have raised the issue of Return on Equity (RoE), GST, floating rate of interest, filing fee and expenses and sharing of transmission charges. MPPMCL has raised the issue of RoE, effect of GST and Initial Spares. The Petitioner has filed its rejoinders to the reply of Bihar Discoms and MPPMCL vide affidavits dated 18.8.2021 and 8.7.2021, respectively. 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 order was reserved.

7. During the course of hearing on 28.6.2022, the Petitioner informed that it has filed an appeal, being Appeal No. 188 of 2020, before the Appellate Tribunal for Electricity (APTEL) against the Commission's order dated 25.6.2019 in Petition No. 242/TT/2018 on the issue of payment of Incidental Expenses During Construction (IEDC) on account of time over-run. The APTEL vide judgment dated 13.9.2021, remanded the matter back to the Commission observing that the Commission has already decided that time over-run is not attributable to the Appellant (Petitioner in the instant matter) due to uncontrollable factors as specified in Regulation 12 of the 2014 Tariff Regulations, IEDC should have been allowed as per actuals after due prudence check. The Petitioner vide affidavit dated 8.3.2021 has given details of IEDC in Form-12A in respect of the transmission assets covered in the present petition and has requested to consider the same for determination of tariff.

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

9. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 20.3.2020 and affidavits dated 8.3.2021, 5.8.2021 and 4.7.2022, replies filed by Bihar Discoms and MPPMCL vide affidavits dated 20.7.2021 and 18.2.2021, respectively, and rejoinder of the Petitioner vide affidavits dated 18.8.2021 and 8.7.2021, respectively.



10. It has been placed before us that MPPMCL has been raising the same issue of RoE in other petitions as well despite clear findings of the Commission rejecting the contentions of MPPMCL. The contentions of MPPMCL regarding RoE have been rejected by the Commission in other petitions including Petition No. 348/TT/2019. As MPPMCL has not challenged the findings, the same have attained finality. In view of these, the pleas raised by MPPMCL regarding grossing up of RoE are rejected. Therefore, MPPMCL's submissions, Petitioner's clarifications thereto and the Commission's findings on the issue of RoE have not been repeated here. Other issues of MPPMCL and the Petitioner's clarifications are dealt in the relevant portions of the order.

11. Bihar Discoms has raised the issue of MAT rate and RoE in the instant petition. BSPHCL, the successor of BSEB, Respondent No. 49 raised the issue of MAT rate and RoE earlier in other petitions. The Commission rejected the contentions of BSPHCL in those petitions, including in Petition No. 476/TT/2019 vide order dated 28.5.2021. BSPHCL has not challenged those findings and the same have attained finality. As such, the issue of MAT and RoE raised by the Bihar Discoms in the instant petition are rejected. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant paragraphs of this order.

12. Bihar Discoms have submitted that truing up of transmission tariff for 2014-19 tariff period is being carried out on account of actual ACE during 2014-19 period, change in MAT rate as well as floating rate of interest during 2014-19. Para 10.3 of the petition contains the summarised trued up annual transmission tariff for



2014-19 period and details are provided in Enclosure-4 attached with the petition. Bihar Discoms have further submitted that on perusal of summary of tariff of Enclosure-4, heading under depreciation and O&M Expenses while arriving at final revised AFC based on truing up but details of these two heads are not mentioned in para 6.6 of the petition.

13. In response, the Petitioner has submitted that the truing up of transmission tariff for 2014-19 tariff period is being carried out as per the 2014 Tariff Regulations and the calculation for depreciation and O&M Expenses has already been submitted in prescribed forms i.e. in Form-10A and Form-2.

14. We have considered the submissions of the Petitioner and Bihar Discoms. The contentions raised by Bihar Discoms regarding depreciation and O&M Expenses for truing up of tariff of 2014-19 tariff period and the clarifications given by the Petitioner are dealt in the relevant portions of this order.

### **Truing up of Annual Fixed Charges for 2014-19 Tariff Period**

15. 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:

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	117.51	125.66	127.00	127.31	127.39
Interest on Loan	120.38	119.30	109.46	98.07	86.23
Return on Equity	133.05	143.13	144.59	144.93	145.41
Interest on Working Capital	14.20	14.79	14.82	14.77	14.72
O&M Expenses	102.51	105.91	109.43	113.08	116.81
<b>Total</b>	<b>487.65</b>	<b>508.79</b>	<b>505.30</b>	<b>498.16</b>	<b>490.56</b>

Particulars	Asset-2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	48.06	50.27	51.57	51.60	51.60



<b>Asset-2</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Interest on Loan	49.37	47.56	44.47	39.87	35.28
Return on Equity	53.59	56.31	57.73	57.77	57.92
Interest on Working Capital	6.81	6.99	7.10	7.11	7.13
O&M Expenses	60.30	62.30	64.37	66.51	68.71
<b>Total</b>	<b>218.13</b>	<b>223.43</b>	<b>225.24</b>	<b>222.86</b>	<b>220.64</b>

(₹ in lakh)

<b>Asset-3</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	31.36	36.01	39.50	39.50	39.50
Interest on Loan	33.81	36.38	36.80	32.27	28.49
Return on Equity	34.97	40.33	44.22	44.23	44.34
Interest on Working Capital	5.64	6.04	6.33	6.35	6.38
O&M Expenses	60.30	62.30	64.37	66.51	68.71
<b>Total</b>	<b>166.08</b>	<b>181.06</b>	<b>191.22</b>	<b>188.86</b>	<b>187.42</b>

(₹ in lakh)

<b>Asset-4</b>					
<b>Particulars</b>	<b>2014-15 (pro-rata 145 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	2380.84	6117.41	6178.09	6205.00	6220.10
Interest on Loan	3389.82	8165.41	7544.47	6794.43	6187.55
Return on Equity	1769.77	4582.81	4649.95	4681.59	4711.12
Interest on Working Capital	188.71	473.62	463.57	449.02	437.47
O&M Expenses	274.06	712.77	736.32	760.90	786.15
<b>Total</b>	<b>8003.20</b>	<b>20052.02</b>	<b>19572.40</b>	<b>18890.94</b>	<b>18342.39</b>

(₹ in lakh)

<b>Asset-5</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	54.16	116.15	125.06	128.25
Interest on Loan	83.24	167.90	165.55	157.57
Return on Equity	45.25	100.60	112.16	116.61
Interest on Working Capital	6.79	14.19	14.78	14.96
O & M Expenses	46.73	96.55	99.76	103.07
<b>Total</b>	<b>236.17</b>	<b>495.39</b>	<b>517.31</b>	<b>520.46</b>

(₹ in lakh)

<b>Asset-6</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 181 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	34.17	75.75	83.25	85.07
Interest on Loan	52.90	109.38	108.70	102.60
Return on Equity	28.72	66.32	75.67	78.14
Interest on Working Capital	4.37	9.34	9.83	9.92



<b>Asset-6</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 181 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M Expenses	30.81	64.37	66.51	68.71
<b>Total</b>	<b>150.97</b>	<b>325.16</b>	<b>343.96</b>	<b>344.44</b>

(₹ in lakh)

<b>Asset-7</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 35 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	7.04	79.11	85.03	86.41
Interest on Loan	10.97	117.08	115.77	109.46
Return on Equity	5.92	68.13	75.37	77.26
Interest on Working Capital	0.88	9.64	10.03	10.08
O&M Expenses	5.96	64.37	66.51	68.71
<b>Total</b>	<b>30.77</b>	<b>338.33</b>	<b>352.71</b>	<b>351.92</b>

(₹ in lakh)

<b>Asset-8</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 113 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	100.02	350.70	375.74	381.09
Interest on Loan	144.36	477.32	466.79	436.71
Return on Equity	78.69	285.17	314.55	321.76
Interest on Working Capital	10.73	36.65	38.02	38.00
O& M Expenses	59.61	199.55	206.16	213.01
<b>Total</b>	<b>393.41</b>	<b>1349.39</b>	<b>1401.26</b>	<b>1390.57</b>

(₹ in lakh)

<b>Asset-9</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 172 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	102.70	226.75	230.63	241.99
Interest on Loan	147.36	306.08	281.09	272.23
Return on Equity	82.00	183.99	188.82	203.98
Interest on Working Capital	10.88	23.61	23.47	24.12
O&M Expenses	58.56	128.74	133.02	137.42
<b>Total</b>	<b>401.50</b>	<b>869.17</b>	<b>857.03</b>	<b>879.74</b>

(₹ in lakh)

<b>Asset-10</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	329.71	689.28	714.23	738.67
Interest on Loan	453.33	886.99	824.02	780.74

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<b>Asset-10</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Return on Equity	254.10	541.17	569.59	600.46
Interest on Working Capital	28.50	58.30	58.40	59.00
O&M Expenses	83.76	173.06	178.81	184.74
<b>Total</b>	<b>1149.40</b>	<b>2348.80</b>	<b>2345.05</b>	<b>2363.61</b>

(₹ in lakh)

<b>Asset-11</b>		
<b>Particulars</b>	<b>2017-18 (pro-rata 242 days)</b>	<b>2018-19</b>
Depreciation	46.26	73.39
Interest on Loan	53.42	79.68
Return on Equity	34.83	56.57
Interest on Working Capital	2.88	4.50
O&M Expenses	0.00	0.00
<b>Total</b>	<b>137.39</b>	<b>213.14</b>

(₹ in lakh)

<b>Asset-12</b>		
<b>Particulars</b>	<b>2017-18 (pro-rata 254 days)</b>	<b>2018-19</b>
Depreciation	81.66	124.58
Interest on Loan	107.26	153.63
Return on Equity	66.33	103.63
Interest on Working Capital	7.86	11.73
O&M Expenses	46.28	68.71
<b>Total</b>	<b>309.39</b>	<b>462.28</b>

(₹ in lakh)

<b>Asset-13</b>		
<b>Particulars</b>	<b>2017-18 (pro-rata 111 days)</b>	<b>2018-19</b>
Depreciation	35.72	124.95
Interest on Loan	46.87	155.95
Return on Equity	28.98	103.59
Interest on Working Capital	3.43	11.79
O&M Expenses	20.23	68.71
<b>Total</b>	<b>135.23</b>	<b>464.99</b>





(₹ in lakh)

<b>Asset-14</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 156 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	49.48	126.80	131.82	134.43
Interest on Loan	75.31	182.15	175.65	165.95
Return on Equity	40.04	102.08	105.94	108.48
Interest on Working Capital	10.12	24.80	25.37	25.79
O&M Expenses	114.57	277.71	286.94	296.45
<b>Total</b>	<b>289.52</b>	<b>713.54</b>	<b>725.72</b>	<b>731.10</b>

(₹ in lakh)

<b>Asset-15</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 157 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	165.00	416.05	432.11	450.14
Interest on Loan	231.15	545.08	500.51	475.84
Return on Equity	126.34	317.97	330.07	347.86
Interest on Working Capital	15.26	37.23	37.11	37.63
O&M Expenses	58.53	140.97	145.65	150.48
<b>Total</b>	<b>596.28</b>	<b>1457.30</b>	<b>1445.45</b>	<b>1461.95</b>

(₹ in lakh)

<b>Asset-16</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	66.52	146.08	155.63	161.50
Interest on Loan	100.04	203.82	190.97	180.64
Return on Equity	53.48	116.83	124.12	129.56
Interest on Working Capital	8.62	18.09	18.42	18.70
O&M Expenses	64.32	132.91	137.32	141.91
<b>Total</b>	<b>292.98</b>	<b>617.73</b>	<b>626.46</b>	<b>632.31</b>

(₹ in lakh)

<b>Asset-17</b>				
<b>Particulars</b>	<b>2015-16 (pro-rata 104 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	37.56	141.08	145.88	151.78
Interest on Loan	54.71	195.92	187.29	180.35
Return on Equity	30.11	112.99	116.83	123.51
Interest on Working Capital	4.29	15.69	15.87	16.18
O&M Expenses	26.55	96.55	99.76	103.07
<b>Total</b>	<b>153.22</b>	<b>562.23</b>	<b>565.63</b>	<b>574.89</b>



(₹ in lakh)

Asset-18				
Particulars	2015-16 (pro-rata 152 days)	2016-17	2017-18	2018-19
Depreciation	17572.10	43496.71	44571.50	39495.13
Interest on Loan	13588.80	33611.39	32656.08	28979.47
Return on Equity	13261.54	32834.94	33678.35	30010.93
Interest on Working Capital	1073.79	2660.89	2690.24	2393.72
O&M Expenses	928.24	2357.44	2487.53	2295.16
<b>Total</b>	<b>46424.47</b>	<b>114961.37</b>	<b>116083.70</b>	<b>103174.41</b>

(₹ in lakh)

Asset-19			
Particulars	2016-17 (pro-rata 211 days)	2017-18	2018-19
Depreciation	6359.69	11659.93	10450.71
Interest on Loan	2953.57	5797.79	6015.78
Return on Equity	4935.08	9063.24	8153.98
Interest on Working Capital	342.59	638.02	593.33
O&M Expenses	611.62	1145.05	1082.72
<b>Total</b>	<b>15202.55</b>	<b>28304.03</b>	<b>26296.52</b>

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

(₹ in lakh)

Asset-1					
Particulars	2014-15	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	81.28	84.80	84.22	83.02	81.76
<b>Total of Working Capital</b>	<b>105.20</b>	<b>109.52</b>	<b>109.75</b>	<b>109.40</b>	<b>109.01</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>14.20</b>	<b>14.79</b>	<b>14.82</b>	<b>14.77</b>	<b>14.72</b>

(₹ in lakh)

Asset-2					
Particulars	2014-15	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	9.66	9.98	10.31
Receivables	36.36	37.24	37.54	37.14	36.77
<b>Total of Working Capital</b>	<b>50.44</b>	<b>51.78</b>	<b>52.56</b>	<b>52.66</b>	<b>52.81</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>6.81</b>	<b>6.99</b>	<b>7.10</b>	<b>7.11</b>	<b>7.13</b>



(₹ in lakh)

Asset-3					
Particulars	2014-15	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	9.66	9.98	10.31
Receivables	36.36	37.24	37.54	37.14	36.77
<b>Total of Working Capital</b>	<b>50.44</b>	<b>51.78</b>	<b>52.56</b>	<b>52.66</b>	<b>52.81</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>6.81</b>	<b>6.99</b>	<b>7.10</b>	<b>7.11</b>	<b>7.13</b>

(₹ in lakh)

Asset-4					
Particulars	2014-15 (pro-rata 145 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	57.50	59.40	61.36	63.41	65.51
Maintenance Spares	103.49	106.92	110.45	114.14	117.92
Receivables	3357.68	3342.00	3262.07	3148.49	3057.06
<b>Total of Working Capital</b>	<b>3518.67</b>	<b>3508.32</b>	<b>3433.88</b>	<b>3326.04</b>	<b>3240.49</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>475.02</b>	<b>473.62</b>	<b>463.57</b>	<b>449.02</b>	<b>437.47</b>

(₹ in lakh)

Asset-5				
Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
O&M Expenses	7.79	8.05	8.31	8.59
Maintenance Spares	14.02	14.48	14.96	15.46
Receivables	78.72	82.57	86.22	86.74
<b>Total of Working Capital</b>	<b>100.53</b>	<b>105.10</b>	<b>109.49</b>	<b>110.79</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>13.57</b>	<b>14.19</b>	<b>14.78</b>	<b>14.96</b>

(₹ in lakh)

Asset-6				
Particulars	2015-16 (pro-rata 181 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	50.88	54.20	57.33	57.41
<b>Total of Working Capital</b>	<b>65.42</b>	<b>69.22</b>	<b>72.85</b>	<b>73.45</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>8.83</b>	<b>9.34</b>	<b>9.83</b>	<b>9.92</b>



(₹ in lakh)

Asset-7				
Particulars	2015-16 (pro-rata 35 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	53.62	56.39	58.79	58.66
<b>Total of Working Capital</b>	<b>68.16</b>	<b>71.41</b>	<b>74.31</b>	<b>74.70</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	9.20	9.64	10.03	10.08

(₹ in lakh)

Asset-8				
Particulars	2015-16 (pro-rata 113 days)	2016-17	2017-18	2018-19
O&M Expenses	16.09	16.63	17.18	17.75
Maintenance Spares	28.97	29.93	30.92	31.95
Receivables	212.38	224.90	233.54	231.76
<b>Total of Working Capital</b>	<b>257.44</b>	<b>271.46</b>	<b>281.64</b>	<b>281.46</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	34.75	36.65	38.02	38.00

(₹ in lakh)

Asset-9				
Particulars	2015-16 (pro-rata 172 days)	2016-17	2017-18	2018-19
O&M Expenses	10.38	10.73	11.09	11.45
Maintenance Spares	18.69	19.31	19.95	20.61
Receivables	142.39	144.86	142.84	146.62
<b>Total of Working Capital</b>	<b>171.46</b>	<b>174.90</b>	<b>173.88</b>	<b>178.68</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	23.15	23.61	23.47	24.12

(₹ in lakh)

Asset-10				
Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
O&M Expenses	13.96	14.42	14.90	15.40
Maintenance Spares	25.13	25.96	26.82	27.71
Receivables	383.13	391.47	390.84	393.94
<b>Total of Working Capital</b>	<b>422.22</b>	<b>431.85</b>	<b>432.56</b>	<b>437.05</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	57.00	58.30	58.40	59.00



(₹ in lakh)

Asset-11		
Particulars	2017-18 (pro-rata 242 days)	2018-19
O&M Expenses	0.00	0.00
Maintenance Spares	0.00	0.00
Receivables	34.40	35.69
<b>Total of Working Capital</b>	<b>34.40</b>	<b>35.69</b>
Rate of Interest on working capital (in %)	12.60	12.60
<b>Interest of working Capital</b>	4.33	4.50

(₹ in lakh)

Asset-12		
Particulars	2017-18 (pro-rata 254 days)	2018-19
O&M Expenses	5.54	5.73
Maintenance Spares	9.98	10.31
Receivables	74.10	77.05
<b>Total of Working Capital</b>	<b>89.62</b>	<b>93.09</b>
Rate of Interest on working capital (in %)	12.60	12.60
<b>Interest of working Capital</b>	11.29	11.73

(₹ in lakh)

Asset-13		
Particulars	2017-18 (pro-rata 111 days)	2018-19
O&M Expenses	5.54	5.73
Maintenance Spares	9.98	10.31
Receivables	74.11	77.50
<b>Total of Working Capital</b>	<b>89.63</b>	<b>93.54</b>
Rate of Interest on working capital (in %)	12.60	12.60
<b>Interest of working Capital</b>	11.29	11.79

(₹ in lakh)

Asset-14				
Particulars	2015-16 (pro-rata 156 days)	2016-17	2017-18	2018-19
O&M Expenses	22.40	23.14	23.91	24.70
Maintenance Spares	40.32	41.66	43.04	44.47
Receivables	113.21	118.92	120.95	121.85
<b>Total of Working Capital</b>	<b>175.93</b>	<b>183.72</b>	<b>187.90</b>	<b>191.02</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	23.75	24.80	25.37	25.79



(₹ in lakh)

Asset-15				
Particulars	2015-16 (pro-rata 157 days)	2016-17	2017-18	2018-19
O&M Expenses	11.37	11.75	12.14	12.54
Maintenance Spares	20.46	21.15	21.85	22.57
Receivables	231.68	242.88	240.91	243.66
<b>Total of Working Capital</b>	<b>263.51</b>	<b>275.78</b>	<b>274.90</b>	<b>278.77</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>35.57</b>	<b>37.23</b>	<b>37.11</b>	<b>37.63</b>

(₹ in lakh)

Asset-16				
Particulars	2015-16 (pro-rata 183 days)	2016-17	2017-18	2018-19
O&M Expenses	10.72	11.08	11.44	11.83
Maintenance Spares	19.30	19.94	20.60	21.29
Receivables	97.66	102.96	104.41	105.39
<b>Total of Working Capital</b>	<b>127.68</b>	<b>133.98</b>	<b>136.45</b>	<b>138.51</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>8.62</b>	<b>18.09</b>	<b>18.42</b>	<b>18.70</b>

(₹ in lakh)

Asset-17				
Particulars	2015-16 (pro-rata 104 days)	2016-17	2017-18	2018-19
O&M Expenses	7.79	8.05	8.31	8.59
Maintenance Spares	14.02	14.48	14.96	15.46
Receivables	89.87	93.71	94.27	95.82
<b>Total of Working Capital</b>	<b>111.68</b>	<b>116.24</b>	<b>117.54</b>	<b>119.87</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>4.28</b>	<b>15.69</b>	<b>15.87</b>	<b>16.18</b>

(₹ in lakh)

Asset-18				
Particulars	2015-16 (pro-rata 152 days)	2016-17	2017-18	2018-19
O&M Expenses	186.26	196.45	207.29	218.84
Maintenance Spares	335.27	353.62	373.13	393.92
Receivables	18630.87	19160.23	19347.28	19675.37
<b>Total of Working Capital</b>	<b>19152.40</b>	<b>19710.30</b>	<b>19927.70</b>	<b>20288.13</b>
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>1073.79</b>	<b>2660.89</b>	<b>2690.24</b>	<b>2738.90</b>



(₹ in lakh)

Asset-19			
Particulars	2016-17 (pro-rata 211 days)	2017-18	2018-19
O&M Expenses	88.17	95.42	103.24
Maintenance Spares	158.70	171.76	185.83
Receivables	4383.04	4717.34	5014.75
<b>Total of Working Capital</b>	<b>4629.91</b>	<b>4984.52</b>	<b>5303.82</b>
Rate of Interest on working capital (in %)	12.80	12.80	12.80
<b>Interest of working Capital</b>	<b>342.59</b>	<b>638.02</b>	<b>678.89</b>

### Capital Cost as on 1.4.2014/ COD

17. Asset-1 to Asset-3 were put into commercial operation in 2009-14 tariff period and Asset-4 to Asset-19 in 2014-19 tariff period. The Petitioner has submitted the details of apportioned approved cost as per FR, RCE-I and RCE-II, admitted the capital cost as on COD and Additional Capital Expenditure (ACE) vide order dated 11.3.2016 in Petition No. 391/TT/2014 for Asset-1; vide order dated 28.1.2016 in Petition No.131/TT/2015 for Asset-2; vide order dated 18.2.2016 in Petition No. 217/TT/2015 for Asset-3; vide order dated 14.7.2016 in Petition No. 65/TT/2015 for Asset-4, vide order dated 26.5.2016 in Petition No. 259/TT/2015 for Asset-5 to Asset-10; vide order dated 25.6.2019 in Petition No. 242/TT/2018 for Asset-11 to Asset-13 and vide order dated 17.12.2019 in Petition No. 363/TT/2018 for Asset-14 to Asset-19 as follows:

(₹ in lakh)

Assets	FR Apportioned approved cost	RCE-I Apportioned approved cost	RCE-II Apportioned approved cost	Expenditure up to COD/ 31.3.2014 (as claimed)	Capital cost allowed as on COD/ 31.3.2014	ACE 2014-2019 (as allowed)					Estimated completion cost (as allowed)
						2014-15	2015-16	2016-17	2017-18	2018-19	
<b>Commission's order dated 11.3.2016 in Petition No. 391/TT/2014</b>											
Asset-1	3015.76	2692.86	2734.02	2121.32	2118.89	397.09	0.00	0.00	0.00	0.00	2515.98
<b>Commission's order dated 28.1.2016 in Petition No. 131/TT/2015</b>											
Asset-2	1119.87	1073.94	1048.02	892.38	892.38	35.70	14.43	0.00	0.00	0.00	942.51
<b>Commission's order dated 18.2.2016 in Petition No. 217/TT/2015</b>											
Asset-3	875.50	843.88	915.15	572.15	557.88	43.64	39.33	0.00	0.00	0.00	640.85
<b>Commission's order dated 14.7.2016 in Petition No. 65/TT/2015</b>											
Asset-4	102220.99	115967.79	119828.33	113537.96	111684.25	3215.98	1067.56	0.00	0.00	0.00	115967.79
<b>Commission's order dated 26.5.2016 in Petition No.259/TT/2015</b>											
Asset-5	2430.98	2850.65	3076.94	2266.61	2266.61	0.00	232.00	348.11	0.00	0.00	2846.72
Asset-6	1333.64	1917.41	2065.05	1448.53	1448.53	0.00	199.00	269.88	0.00	0.00	1917.41



Assets	FR Apportioned approved cost	RCE-I Apportioned approved cost	RCE-II Apportioned approved cost	Expenditure up to COD/ 31.3.2014 (as claimed)	Capital cost allowed as on COD/ 31.3.2014	ACE 2014-2019 (as allowed)					Estimated completion cost (as allowed)
						2014-15	2015-16	2016-17	2017-18	2018-19	
						Asset-7	1333.64	1923.49	2079.54	1560.06	
Asset-8	5352.49	7846.08	9947.34	6396.80	6295.39	0.00	1239.99	233.50	75.30	0.00	7844.18
Asset-9	14496.41	5228.96	5252.39	4292.55	4247.93	0.00	404.94	394.55	0.00	0.00	5047.42
Asset-10		13749.77	14750.56	12609.13	12564.93	0.00	737.60	447.24	0.00	0.00	13749.77
<b>Commission's order dated 25.6.2019 in Petition No. 242/TT/2018</b>											
Asset-11	0.00	1452.05	1465.98	1308.94	1060.19	0.00	0.00	0.00	93.54	59.96	1213.69
Asset-12	1169.00	2710.32	2910.32	2420.64	2335.00	0.00	0.00	0.00	118.09	207.93	2661.02
Asset-13	1169.00	2710.32	2910.32	2444.45	2318.91	0.00	0.00	0.00	104.41	238.45	2661.77
<b>Commission's order dated 17.12.2019 in Petition No. 363/TT/2018</b>											
Asset-14	10155.26	11767.82	13210.96	2297.93	2231.37	0.00	295.87	120.35	75.28	87.69	2810.56
Asset-15				7005.64	6949.22	0.00	927.82	269.19	335.25	92.42	8573.90
Asset-16	2281.57	3252.78	3617.44	2565.59	2548.98	0.00	291.80	193.09	158.65	79.02	3271.54
Asset-17	2395.22	3175.08	3421.57	2601.95	2567.54	0.00	239.28	120.07	75.10	206.13	3208.12
Asset-18	641074.53	871003.91	887106.06	806800.85	799945.79	0.00	19337.31	27534.72	15422.38	11989.58	874229.78
Asset-19	194699.17	254374.87	259005.37	209794.48	208789.61	0.00	0.00	15175.16	11413.34	4805.74	240183.85
<b>TOTAL</b>	<b>985123.03</b>	<b>1304541.98</b>	<b>1335345.36</b>	<b>1182937.96</b>	<b>1172376.17</b>	<b>3692.41</b>	<b>25059.39</b>	<b>45443.85</b>	<b>27871.34</b>	<b>17766.92</b>	<b>1292210.08</b>

\*No provision in FR included for RCE

18. The Petitioner in the present petition has claimed the following capital cost in respect of the transmission assets for true-up of tariff for 2014-19 period and has submitted Auditor's certificates of actual expenditure in support of the same for the purpose of true up:

Assets	FR Apportioned approved cost	RCE-I Apportioned approved cost	RCE-II Apportioned approved cost	Expenditure up to COD/ 31.4.2014 (as claimed for true-up)	ACE for 2014-2019					Cost as on 31.3.2019 (as claimed for true-up)
					(As per Auditor's Certificate) (as claimed for true up)					
					2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	3015.76	2692.86	2734.02	2118.89	277.06	43.39	8.24	3.17	0.00	2450.75
Asset-2	1119.87	1073.94	1048.02	892.38	35.7	47.92	1.25	0.00	0.00	977.25
Asset-3	875.50	843.88	915.15	557.88	43.64	132.27	0.09	0.00	0.00	733.88
Asset-4	102220.99	115967.79	119828.33	113537.96	1571.34	1489.71	860.36	210.90	361.40	118031.67
Asset-5	2430.98	2850.65	3076.94	2266.61	0.00	37.75	305.97	85.09	54.89	2750.31
Asset-6	1333.64	1917.41	2065.05	1448.53	0.00	32.38	247.52	68.84	7.74	1805.01
Asset-7	1333.64	1923.49	2079.54	1560.05	0.00	25.17	191.55	53.28	3.81	1833.86
Asset-8	5352.49	7846.08	9947.34	6396.80	0.00	186.78	763.4	212.33	2.36	7561.67
Asset-9	14496.41	5228.96	5252.39	4292.54	0.00	186.70	128.11	35.18	459.28	5101.81
Asset-10		13749.77	14750.56	12448.85	0.00	639.91	430.84	530.65	459.28	14509.53
Asset-11	0.00	1452.05	1465.98	1308.94	0.00	0.00	0.00	46.69	73.09	1428.72
Asset-12	1169.00	2710.32	2910.32	2420.64	0.00	0.00	0.00	38.85	192.00	2651.49
Asset-13	1169.00	2710.32	2910.32	2444.45	0.00	0.00	0.00	35.47	168.63	2648.55
Asset-14	10155.26	11767.82	13210.96	2297.93	0.00	232.46	120.35	75.28	25.97	2751.99
Asset-15				7005.64	0.00	928.44	269.19	344.66	340.65	8888.58
Asset-16	2281.57	3252.78	3617.44	2565.61	0.00	293.86	210.06	160.04	65.46	3295.03
Asset-17	2395.22	3175.08	3421.57	2601.96	0.00	204.88	120.07	75.10	164.79	3166.80
Asset-18	641074.53	871003.91	887106.06	806800.85	0.00	14647.03	25776.83	15383.04	10367.10	872974.85





Asset-19	194699.17	254374.87	259005.37	209794.48	0.00	0.00	14476.69	11385.44	895.06	236551.67
<b>TOTAL</b>	<b>985123.03</b>	<b>1304541.98</b>	<b>1335345.36</b>	<b>1182760.99</b>	<b>1927.74</b>	<b>19128.65</b>	<b>43910.52</b>	<b>28744.01</b>	<b>13641.50</b>	<b>1290113.42</b>

### **Cost Over-run**

19. The Petitioner has submitted that there is cost over-run in case of some of the transmission assets and it has already been settled vide order dated 11.3.2016 in Petition No. 391/TT/2014 for Asset-1; vide order dated 28.1.2016 in Petition No.131/TT/2015 for Asset-2; vide order dated 18.2.2016 in Petition No. 217/TT/2015 for Asset-3; vide order dated 14.7.2016 in Petition No. 65/TT/2015 for Asset-4; vide order dated 26.5.2016 in Petition No. 259/TT/2015 for Asset-5 to Asset-10; vide order dated 25.6.2019 in Petition No. 242/TT/2018 for Asset-11 to Asset-13 and vide order dated 17.12.2019 in Petition No. 363/TT/2018 for Asset-14 to Asset-19. The Petitioner has submitted that there is no cost over-run in case of the transmission assets as on 31.3.2019 as per the RCE-II apportioned approved cost.

20. We have considered the submissions of the Petitioner and perused the record. It is observed that the Commission has already taken into consideration the FR, RCE-I and RCE-II in the previous tariff orders and settled the issue of cost over-run based on the justification given by the Petitioner for variation between estimated completion cost and FR. The apportioned approved cost based on RCE-II for the transmission assets is ₹1335345.36 lakh while the estimated completion cost as on 31.3.2019 as per the Auditor's certificate is ₹1290113.42 lakh. Therefore, the estimated completion cost of the transmission assets is within the RCE-II apportioned approved cost.

### **Time Over-run**

21. The details of the SCOD, COD and the time over-run, if any, in respect of



the transmission assets are as follows:

Assets	SCOD	Actual COD	Time over-run	Time over-run condoned
Asset-1	26.2.2013	1.7.2012	-	-
Asset-2		1.10.2012	-	-
Asset-3		1.3.2013	-	-
Asset-4		7.11.2014	21 months	Not condoned
Asset-5	27.8.2013	1.10.2015	25 months and 4 days	Not condoned
Asset-6		3.10.2015	25 months and 7 days	Not condoned
Asset-7		26.2.2016	29 months and 30 days	Not condoned
Asset-8		10.12.2015	27 months and 13 days	Not condoned
Asset-9		12.10.2015	25 months and 15 days	Not condoned
Asset-10		1.10.2015	25 months and 4 days	Not condoned
Asset-11	December, 2017 (As per RCE, asset was included in scope in RCE)	1.8.2017	-	-
Asset-12	26.2.2013	21.7.2017	52 months and 21 days	Condoned
Asset-13		11.12.2017	57 months and 11 days	Condoned
Asset-14	27.8.2013	28.10.2015	25 Months and 27 days	Condoned
Asset-15		27.10.2015	25 Months and 26 day	Condoned
Asset-16		1.10.2015	25 Months	Condoned
Asset-17		19.12.2015	27 Months and 18 days	Condoned
Asset-18		1.11.2015	26 Months	Condoned
Asset-19		2.9.2016	36 Months	Condoned

22. The time over-run in case of Asset-4 was discussed and settled vide order dated 14.7.2016 in Petition No. 65/TT/2015, Asset-5 to Asset-10 vide order dated 26.5.2016 in Petition No. 259/TT/2015, Asset-11 to Asset-13 vide order dated 25.6.2019 in Petition No. 242/TT/2018, Asset-14 to Asset-18 vide order dated 31.8.2017 in Petition No. 67/TT/2015 and Asset-19 vide order dated 15.12.2017 in Petition No. 184/TT/2016.

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

23. The COD of Asset-1 to Asset-3 is during 2009-14 tariff period and the IDC has already been approved by the Commission in the previous orders. The Petitioner has claimed IDC for the remaining transmission assets i.e. Asset-4 to Asset-19 and has submitted the Auditor's Certificates with IDC statement showing



the loan wise IDC discharged upto COD and IDC discharged after COD.

24. We have considered the submissions of the Petitioner. The allowable IDC has been worked out considering the information submitted by the Petitioner in respect of the transmission assets (Asset-4 to Asset-19). Accordingly, based on the information furnished by the Petitioner, IDC considered for Asset-4 to Asset-19 is as follows:

(₹ in lakh)

Particulars	IDC claimed as per the Auditor's Certificate	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-4	19900.96	20550.19	0.00	1650.31	18250.65
Asset-5	217.68	261.75	0.00	0.00	217.68
Asset-6	143.22	186.76	0.00	0.00	143.22
Asset-7	147.81	196.42	0.00	9.68	138.13
Asset-8	674.93	735.22	0.00	128.04	546.89
Asset-9	479.15	669.15	0.00	15.11	464.04
Asset-10	1555.19	2082.40	0.00	323.43	1231.76
Asset-11	49.98	49.79	0.19	29.72	20.06
Asset-12	473.52	515.53	0.00	61.18	412.34
Asset-13	473.44	513.40	0.00	101.08	372.36
Asset-14	249.81	283.07	0.00	64.09	185.72
Asset-15	948.20	1275.45	0.00	0.00	948.20
Asset-16	303.71	531.15	0.00	0.00	303.71
Asset-17	247.03	297.52	0.00	34.41	212.62
Asset-18	93144.18	92928.89	215.29	6242.53	86686.36
Asset-19	19609.40	19606.71	2.69	792.52	18814.19

25. IEDC in case of Assets-1 to Asset-3 has already been approved by the Commission in previous orders. The Petitioner has claimed IEDC for the remaining transmission assets i.e. Asset-4 to Asset-19 in the present petition and has submitted Form-12A and Auditor's Certificate in support of its claim.

26. APTEL in judgment dated 2.12.2019 in Appeal No. 95 of 2018 and Appeal No. 140 of 2018 observed that IEDC should be computed on actual basis after



prudence check. Therefore, IEDC is allowed in accordance with the APTEL's judgement. The relevant portion of the said judgement is extracted as follows:

*"7.16 In light of the above, we are of the considered opinion that Central Commission has not considered the IEDC for the reference assets correctly in line with provisions of its own regulations which cannot be sustained in the eyes of law. In catena of judgments of Hon'ble Supreme Court and this Tribunal, it has been held that the Regulations framed by the Commissions are binding for all stakeholders including the Commission itself. The Regulations framed under the Act, in no way, mandate the Central Commission to restrict the IEDC to 5% of the original estimated hard cost.*

*7.17 Accordingly, we hold that IEDC should be computed only on actual basis after due prudence check based on the data submitted by the Appellant in accordance with the Tariff Regulations"*

27. As per the APTEL's judgement, we have examined Form-12A along with the Auditor's Certificate submitted by the Petitioner in support of its claim. We have considered the submissions of the Petitioner. IEDC allowed for Assets-4 to Asset-19 is as follows:

(₹ in lakh)		
Assets	IEDC claimed	IEDC allowed
Asset-4	4677.23	4677.23
Asset-5	39.25	39.25
Asset-6	26.81	26.81
Asset-7	27.63	27.63
Asset-8	113.23	113.23
Asset-9	139.04	139.04
Asset-10	572.71	572.71
Asset-11	253.98	253.98
Asset-12	87.14	87.14
Asset-13	87.17	87.17
Asset-14	71.94	71.94
Asset-15	352.92	352.92
Asset-16	101.24	101.24
Asset-17	45.13	45.13
Asset-18	27850.95	27850.95
Asset-19	4694.54	4694.54
<b>Total</b>	39140.91	39140.91

### **Initial Spares**

28. The Petitioner has claimed the following Initial Spares in respect of the transmission assets and has prayed to revise the Initial Spares allowed earlier in



light of the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017. Initial Spares claimed by the Petitioner in respect of the transmission assets are as follows:

### Sub-station

Assets	Estimated completion cost (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (in %) (C)	Initial Spares worked out (₹ in lakh)
				$D = [(A-B)*C / (100-C)]$
Asset-1	2488.59	65.33*	2.5	62.13
Asset-2	997.08	13.49	2.5	25.22
Asset-3	749.60	30.29**	2.5	18.44
Asset-4	9454.51	453.05	6.0	574.56
Asset-5	1907.48	0.00	4.0	79.48
Asset-6	1323.03	31.74	4.0	53.80
Asset-7	1323.03	31.74	4.0	53.80
Asset-8	6085.81	69.46	6.0	384.02
Asset-9	2360.85	134.37	6.0	142.12
Asset-10	2360.85	134.37	6.0	142.12
Asset-11	1124.76	40.01	6.0	69.24
Asset-12	1703.64	8.80	4.0	70.62
Asset-13	1704.43	8.80	4.0	70.65
Asset-14	1464.67	0.00	4.0	61.03
Asset-15	1464.67	0.00	4.0	61.03
Asset-16	1520.07	25.85	4.0	62.26
Asset-17	2461.66	24.30	4.0	101.56
Asset-18	178533.73	7362.84	4.0	7132.12
Asset-19	164152.37	6999.95	4.0	6548.02
<b>Total</b>	<b>383180.83</b>	<b>15434.39</b>		<b>15712.22</b>

\* Original claim ₹65.33 lakh, disallowed ₹2.43 lakh vide order dated 11.3.2016 in Petition No.391/TT/2014.

\*\* Original claim ₹30.29 lakh, disallowed ₹14.27 lakh vide order dated 18.2.2016 in Petition No. 217/TT/2015

### Transmission Line

Assets	Estimated completion cost (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling Limit (in %) (C)	Initial Spares worked out (₹ in lakh)
				$D = [(A-B)*C / (100-C)]$
Asset-4	84970.41	575.37	1.0	852.48
Asset-9	1382.89	0.00	1.0	13.97
Asset-10	9339.52	0.00	1.0	94.34
Asset-14	5905.94	122.50	1.0	58.42
Asset-15	728.03	7.35	1.0	7.28
Asset-16	1093.97	47.27	1.0	10.57
Asset-18	549544.33	4760.17	1.0	5502.94



Asset-19	25590.31	420.58	1.0	254.24
<b>Total</b>	<b>678555.40</b>	<b>5933.24</b>	<b>-</b>	<b>6794.23</b>

29. MPPMCL has submitted that some of the transmission assets were executed during 2009-14 tariff period while some of the transmission assets were executed during 2014-19 tariff period and that the norm for brown field and green field sub-stations is different and as such the Petitioner cannot claim the cost for the transmission project as a whole. The demand of the Petitioner is therefore not in consonance of the provisions of tariff regulations and is liable to be rejected. MPPMCL has also submitted that excess Initial Spares claimed in respect of Asset-1, Asset-3, Asset-18 and Asset-19 may be disallowed keeping in mind the interest of end consumers of the State.

30. In response, the Petitioner has submitted that Initial Spares under sub-station (HVDC & AIS-Green/Brown Filed) and transmission line head for the transmission assets covered under the instant petition are within the specified limit for sub-station and transmission line for the transmission project as per Regulation 13 of the 2014 Tariff Regulations. The Petitioner has further submitted that the details of calculations of Initial Spares for overall project basis have been given and has prayed that Initial Spares may be allowed as claimed in terms of the judgment of APTEL dated 14.9.2019 in Appeal No. 74 of 2017.

31. We have considered the submissions of the Petitioner and MPPMCL. 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-21. Overall project cost of the transmission assets can ideally be arrived



at only when all the transmission assets are combined. Asset-21 i.e. 2x400 kV D/C Lower Subansiri-Biswanath Chariali line with 1x80 MVAR Bus Reactor and 4x63 MVAR Line Reactors along with associated bays has not yet been executed, therefore, the said judgment dated 14.9.2019 of the APTEL cannot be applied to the present case as of now. We, therefore, allow Initial Spares on the basis of individual cost of transmission assets in 2009-14 tariff period for Asset-1 to Asset-3 and in 2014-19 tariff period for Asset-4 to Asset-19. We observe that Initial Spares with respect to Asset-20 has already been allowed for 2019-24 tariff period separately vide order dated 7.10.2022 in Petition No. 165/TT/2022, therefore, its cost shall also be clubbed with other transmission assets at the time of truing up of 2019-24 tariff period. Accordingly, Initial Spares allowed in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Cost for Spare Calculation (A)	Initial Spares Claimed (B)	Ceiling (in %) (C)	Initial Spares worked out	Already allowed in previous petitions	Allowed in current petition	Excess Initial spares disallowed
				$D = \frac{[(A-B)*C]}{(100-C)}$			
Asset-1	2398.38	65.33	2.5	59.82	62.90	(3.08)	3.08
Asset-2	997.08	13.49	2.5	25.22	13.49	0.00	0.00
Asset-3	748.06	30.29	2.5	18.40	16.02	2.38	0.00
Asset-4	9585.63	453.05	6.0	852.93	-	453.05	0.00
Asset-5	1907.48	0.00	4.0	79.48	-	-	0.00
Asset-6	1323.03	31.74	4.0	53.80	-	31.74	0.00
Asset-7	1323.03	31.74	4.0	53.80	-	31.74	0.00
Asset-8	6085.81	69.46	6.0	384.02	-	69.46	0.00
Asset-9	2383.46	134.37	6.0	143.12	-	134.37	0.00
Asset-10	2383.81	134.37	6.0	143.58	-	134.37	0.00
Asset-11	1124.76	40.01	6.0	69.24	-	40.01	0.00
Asset-12	1703.64	8.80	4.0	70.62	-	8.80	0.00
Asset-13	1704.43	8.80	4.0	70.65	-	8.80	0.00
Asset-14	1464.67	0.00	4.0	61.03	-	-	0.00
Asset-15	1464.67	0.00	4.0	61.03	-	-	0.00
Asset-16	1520.07	25.85	4.0	62.26	-	25.85	0.00
Asset-17	2461.66	24.30	4.0	101.56	-	24.30	0.00
Asset-18	178533.73	7362.84	4.0	7132.12	-	7132.12	230.72
Asset-19	164152.37	6999.95	4.0	6548.02	-	6548.02	451.93



**Transmission Line:**

(₹ in lakh)

Assets	Cost for Initial Spares calculation (A)	Initial Spares claimed (B)	Ceiling (in %) (C)	Initial Spares worked out	Allowed in current petition	Excess Initial spares disallowed
				$D = [(A-B)*C / (100-C)]$		
Asset-4	84970.41	575.37	1.0	852.48	575.37	0.00
Asset-9	1382.89	0.00	1.0	13.97	0.00	0.00
Asset-10	9339.52	0.00	1.0	94.34	0.00	0.00
Asset-14	728.03	7.35	1.0	7.28	7.28	0.07
Asset-15	5905.94	122.50	1.0	58.42	58.42	64.08
Asset-16	1093.97	47.27	1.0	10.57	10.57	36.70
Asset-18	549544.33	4760.17	1.0	5502.94	4760.17	0.00
Asset-19	25590.31	420.58	1.0	254.24	254.24	166.34

**Capital Cost Allowed as on COD**

32. The capital cost of the transmission assets allowed as on COD is as follows:

(₹ in lakh)

Assets	Capital cost as on COD as per Auditor's Certificate	Less: IDC as on COD due to		IEDC disallowed on COD	Initial Spares adjusted	Capital cost as on COD
		IDC disallowed	Un-discharged IDC			(on cash basis)
Asset-1	2118.89	0.00	0.00	0.00	3.08	2115.81
Asset-2	892.38	0.00	0.00	0.00	0.00	892.38
Asset-3	557.88	0.00	0.00	0.00	*2.38	560.26
Asset-4	113537.96	0.00	1650.31	0.00	0.00	111887.65
Asset-5	2266.61	0.00	0.00	0.00	0.00	2266.61
Asset-6	1448.53	0.00	0.00	0.00	0.00	1448.53
Asset-7	1560.05	0.00	9.68	0.00	0.00	1550.37
Asset-8	6396.80	0.00	128.04	0.00	0.00	6268.76
Asset-9	4292.54	0.00	15.11	0.00	0.00	4277.43
Asset-10	12448.85	0.00	323.43	0.00	0.00	12125.42
Asset-11	1308.94	0.19	29.72	0.00	0.00	1279.03
Asset-12	2420.64	0.00	61.18	0.00	0.00	2359.46
Asset-13	2444.45	0.00	101.08	0.00	0.00	2343.37
Asset-14	2297.93	0.00	64.09	0.00	0.07	2233.77
Asset-15	7005.64	0.00	0.00	0.00	64.08	6941.56
Asset-16	2565.61	0.00	0.00	0.00	36.70	2528.91
Asset-17	2601.96	0.00	34.41	0.00	0.00	2567.55
Asset-18	806800.85	215.29	6242.53	0.00	230.72	800112.31
Asset-19	209794.48	2.69	792.52	0.00	618.27	208381.00

\*2.38 lakh is added back as excess spares were deducted in previous order.





### Additional Capital Expenditure (“ACE”)

33. The Petitioner has claimed the following ACE in respect of the transmission assets and has submitted the Auditor’s Certificates in support of the same:

(₹ in lakh)

Assets	ACE 2014-2019				
	( As per Auditor’s certificate)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	277.06	43.39	8.24	3.17	0.00
Asset-2	35.70	47.92	1.25	0.00	0.00
Asset-3	43.64	132.27	0.09	0.00	0.00
Asset-4	1571.34	1489.71	860.36	210.9	361.4
Asset-5	0.00	37.75	305.97	85.09	54.89
Asset-6	0.00	32.38	247.52	68.84	7.74
Asset-7	0.00	25.17	191.55	53.28	3.81
Asset-8	0.00	186.78	763.4	212.33	2.36
Asset-9	0.00	186.70	128.11	35.18	459.28
Asset-10	0.00	639.91	430.84	530.65	459.28
Asset-11	0.00	0.00	0.00	46.69	73.09
Asset-12	0.00	0.00	0.00	38.85	192.00
Asset-13	0.00	0.00	0.00	35.47	168.63
Asset-14	0.00	232.46	120.35	75.28	25.97
Asset-15	0.00	928.44	269.19	344.66	340.65
Asset-16	0.00	293.86	210.06	160.04	65.46
Asset-17	0.00	204.88	120.07	75.10	164.79
Asset-18	0.00	14647.03	25776.83	15383.04	10367.10
Asset-19	0.00	0.00	14476.69	11385.44	895.06
Total	1927.74	19128.65	43910.52	28744.01	13641.50

34. The transmission assets have been executed during 2009-14 and 2014-19 tariff periods and accordingly, their cut-off dates with relevant clause under Regulation 14 of the 2014 Tariff Regulations for ACE are as follows:

Assets	COD	Cut-off date	ACE Regulation during 2014-2019				
			2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	1.7.2012	31.3.2015	14(1)(i)	14(3)(v)	14(3)(v)	14(3)(v)	0.00
Asset-2	1.10.2012	31.3.2015	14(1)(i)	14(3)(v)	14(3)(v)	0.00	0.00
Asset-3	1.3.2013	31.3.2016	14(1)(i)	14(1)(i)	14(3)(v)	0.00	0.00
Asset-4	7.11.2014	31.3.2017	14(1)(i)	14(1)(i)	14(1)(i)	14(2)(iv)	14(2)(iv)
Asset-5	1.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-6	3.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)



Assets	COD	Cut-off date	ACE Regulation during 2014-2019				
			2014-15	2015-16	2016-17	2017-18	2018-19
Asset-7	26.2.2016	31.3.2019	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i)
Asset-8	10.12.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-9	12.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-10	1.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-11	1.8.2017	31.3.2020	0.00	0.00	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)
Asset-12	21.7.2017	31.3.2020	0.00	0.00	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)
Asset-13	11.12.2017	31.3.2020	0.00	0.00	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)
Asset-14	28.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-15	27.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-16	1.10.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-17	19.12.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-18	1.11.2015	31.3.2018	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(2)(iv)
Asset-19	2.9.2016	31.3.2019	0.00	0.00	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)	14(1)(i) & 14(1)(ii)

35. The Petitioner vide affidavit dated 8.3.2021 has submitted that ACE claimed for Asset-1 to Asset-19 is within the original scope of work. However, ACE during the year 2018-19, 2019-20 and 2020-21 for Asset-4 and Asset-18 is on account of construction of pile foundation due to the change in river course of Pagladia and Maansiri river and the same has been approved in 17<sup>th</sup> TCC meeting of NERPC held on 4.10.2016. The Petitioner has further submitted that ACE approved by the Commission in earlier order for 2014-19 tariff period was based on projected expenditure as contracts were not closed and liabilities were not finalized. The Petitioner has submitted that in the present petition, ACE is claimed on the basis of actual payments made to the contractors after receipt of final invoices and incorporating the amendments. The Petitioner has provided liability flow statement indicating contractor-wise details of liabilities and balance work for 2014-19 tariff



period for the transmission assets.

36. We have considered the submissions of the Petitioner. Regulation 14 of the 2014 Tariff Regulations provides as follows:

*“(1) The capital expenditure in respect of the 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:*

- (i) Undischarged liabilities recognized to be payable at a future date;*
- (ii) Works deferred for execution;”*

.....

*“(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and”*

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

.....

*(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.”*

*“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

.....

*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.,”*

37. The details of COD and the cut-off date of the transmission assets is indicated in the above table. The Petitioner has submitted that ACE is incurred for work executed within the ‘cut-off’ date on account of balance and retention payment under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and beyond the ‘cut-off’ date under Regulation 14(3)(v) of the 2014 Tariff Regulations in respect of the transmission assets and has submitted the Auditor’s Certificate in support of the same. The Petitioner vide affidavit dated 8.3.2021 has



submitted that ACE claimed for the transmission assets is within the original scope of work. However, ACE during the years 2018-19, 2019-20 and 2020-21 for Asset-4 (400 kV Balipara-Bongaigaon D/C line) and Asset-18 ( $\pm$  800 kV Biswanath Chariali–Agra HVDC line) is on account of construction of pile foundation due to change in river course of Pagladia and Maansiri rivers and the same has been approved in the 17<sup>th</sup> TCC meeting and 17<sup>th</sup> NERPC meeting held on 4.10.2016.

38. The Petitioner has submitted that ACE incurred is inclusive of undischarged IDC. The details of underlying reasons for ACE have been given in Form-7. ACE approved by the Commission during 2014-19 tariff period was based on the projections as at that time contracts were not closed and liabilities were not frozen. However, in the present petition ACE is claimed as per actual payments made to the contractors after receipt of the final invoices and after incorporating the contract amendments.

39. We have considered the submissions of the Petitioner and perused Form-7. The asset wise ACE allowed/ disallowed in case of the transmission assets and the reasons are as follows:

<b>Asset</b>	<b>Justification</b>	<b>Reason for admissibility/non admissibility</b>
Asset-1	The Petitioner has claimed an amount of ₹277.06 lakh, ₹43.48 lakh, ₹8.24 lakh and ₹3.17 lakh for FY 2014-15, FY 2015-16, FY 2016-17 and FY 2017-18, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability for 2014-15 is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations and discharge liability for 2015-16, 2016-17 and 2017-18 is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.
Asset-2	The Petitioner has claimed an amount of ₹35.70 lakh, ₹47.92 lakh and ₹1.25 lakh, for FY 2014-15, FY 2015-16 and FY 2016-17, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability for 2014-15 is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations and discharge liability for 2015-16, 2016-17 is allowed under Regulation



Asset	Justification	Reason for admissibility/non admissibility
		14(3)(v) of the 2014 Tariff Regulations.
Asset-3	The Petitioner has claimed an amount of ₹43.64 lakh, ₹132.27 lakh and ₹0.09 lakh, for FY 2014-15, FY 2015-16 and FY 2016-17, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability for 2014-15 and 2015-16 is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations and discharge liability for 2016-17 is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.
Asset-5	The Petitioner has claimed an amount of ₹15.35 lakh, ₹118.84 lakh, ₹78.96 lakh and ₹54.89 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹22.40 lakh, ₹187.13 lakh and ₹6.13 lakh for un executed work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-6	The Petitioner has claimed an amount of ₹31.01 lakh, ₹79.84 lakh, ₹59.71 lakh and ₹7.73 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹1.37 lakh, ₹167.68 lakh and ₹9.13 lakh for un executed work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-7	The Petitioner has claimed an amount of ₹0.90 lakh, ₹164.55 lakh, ₹30.49 lakh and ₹3.81 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹24.27 lakh, ₹27.00 lakh, ₹22.79 lakh for un executed work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-8	The Petitioner has claimed an amount of ₹6.97 lakh, ₹157.46 lakh, ₹65.41 lakh and ₹2.36 lakh for FY 2015-16, FY 2016-17, FY	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.



<b>Asset</b>	<b>Justification</b>	<b>Reason for admissibility/non admissibility</b>
	2017-18 and FY 2018-19 towards discharge liabilities.	
	The Petitioner has claimed an amount of ₹179.81 lakh, ₹605.94 lakh and ₹146.92 lakh for unexecuted work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-9	The Petitioner has claimed an amount of ₹170.81 lakh, ₹114.65 lakh, ₹25.52 lakh and ₹459.27 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.
	The Petitioner has claimed an amount of ₹15.89 lakh, ₹13.47 lakh and ₹9.66 lakh for unexecuted work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-10	The Petitioner has claimed an amount of ₹624.02 lakh, ₹417.38 lakh, ₹520.99 lakh and ₹459.27 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.
	The Petitioner has claimed an amount of ₹15.89 lakh, ₹13.46 lakh and ₹9.66 lakh for unexecuted work towards Sub-station and civil works	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-11	The Petitioner has claimed an amount of ₹70.41 lakh, ₹77.49 FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
Asset-12	The Petitioner has claimed an amount of ₹0.97 lakh and ₹51.44 lakh, for FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.
	The Petitioner has claimed an amount of ₹37.88 lakh and ₹140.56 lakh for FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-13	The Petitioner has claimed an amount of ₹0.56 lakh and ₹52.00 lakh for FY 2017-18 and FY 2018-	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.





<b>Asset</b>	<b>Justification</b>	<b>Reason for admissibility/non admissibility</b>
	19, respectively, towards discharge liabilities.	
	The Petitioner has claimed an amount of ₹34.91 lakh and ₹116.63 lakh for FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-14	The Petitioner has claimed an amount of ₹63.78 lakh, ₹77.69 lakh, ₹59.82 lakh and ₹26.97 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations.
	The Petitioner has claimed an amount of ₹168.68 lakh, ₹42.66 lakh and ₹15.46 lakh for FY 2015-16, FY 2016-17 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-15	The Petitioner has claimed an amount of ₹759.76 lakh, ₹226.53 lakh, ₹329.20 lakh and ₹340.65 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹168.68 lakh, ₹42.66 lakh and ₹15.46 lakh for FY 2015-16, FY 2016-17 and FY 2017-18, respectively, towards balance Sub-station works, PLCC, Civil works and line comeensation paid.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-16	The Petitioner has claimed an amount of ₹207.08 lakh, ₹97.99 lakh, ₹98.70 lakh and ₹65.46 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹86.78 lakh, ₹112.07 lakh and ₹61.34 lakh for FY 2015-16, FY 2016-17 and FY 2017-18, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-17	The Petitioner has claimed an amount of ₹44.74 lakh, ₹115.14	ACE claimed by the Petitioner towards discharge liability is allowed



Asset	Justification	Reason for admissibility/non admissibility
	lakh, ₹61.50 lakh and ₹164.79 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹160.14 lakh, ₹4.93 lakh and ₹13.60 lakh for FY 2015-16, FY 2016-17 and FY 2017-18, respectively, towards balance Sub-station works and Civil works.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.
Asset-19	The Petitioner has claimed an amount of ₹5684.81 lakh, ₹9114.36 lakh and ₹895.06 lakh for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19, respectively, towards discharge liabilities.	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations.
	The Petitioner has claimed an amount of ₹8791.88 lakh and ₹2271.08 lakh, FY 2016-17 and FY 2017-18, respectively, towards for an executed work towards Sub-station and civil works and compensation towards transmission line	ACE claimed by the Petitioner towards discharge liability is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.

40. As regards Asset-4, the Petitioner has claimed the an amount of ₹1571.34 lakh, ₹1489.71 lakh, ₹860.36 lakh, ₹210.90 lakh and ₹250.93 lakh towards discharge liabilities for 2014-15 to 2018-19 and ₹110.47 lakh towards additional works in 2018-19.

41. In case of Asset-18, the Petitioner has claimed an amount of ₹11455.74 lakh, ₹20143.45 lakh, ₹13972.45 lakh and ₹10118.75 lakh towards discharge liabilities and an amount of ₹3191.30 lakh, ₹5633.38 lakh, ₹1449.91 lakh and ₹248.35 lakh towards additional work for 2015-16, 2016-17, 2017-18 and 2018-19.

42. As regards Asset-4 and Asset-18, the Petitioner has submitted that ACE claimed in 2018-19, 2019-20 and 2020-21 is due to construction of pile foundation





due to the change of the river course. The Petitioner has submitted that the proposal was discussed and approved in the 125<sup>th</sup> OCCM and 17<sup>th</sup> TCC and 17<sup>th</sup> NERPC meetings.

43. We have gone through the submissions of the Petitioner. The proposal of shifting of vulnerable location 118 (DB+0) of  $\pm$  800 kV HVDC biswanath chariali-agra transmission line and loc.495 (DC+0) of 400 kV D/C Balipara-Bongaigaon (quad) transmission line on pile on account of unpredicted change in river course is approved by TCC and RPC in its 17<sup>th</sup> TCC & 17<sup>th</sup> NER Power Committee Meetings held at Imphal and 125<sup>th</sup> of Operation Coordination Sub-Committee meeting of NERPC. Taking into consideration of the approval of TCC, RPC and OCCM, the ACE claimed by the Petitioner for an amount of ₹110.47 lakh towards Asset-4 and ₹248.35 lakh towards Asset-18 has been allowed for tower pile foundation works.

44. ACE claimed by the Petitioner for Asset-4 for 2014-15, 2015-16 and 2016-17 for an amount of ₹1571.34 lakh, ₹1489.71 lakh and ₹860.36 lakh, respectively, is towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 tariff Regulations and ACE of ₹210.90 lakh and ₹250.93 lakh towards un discharge liability is allowed under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

45. ACE claimed by the Petitioner for Asset-18 for 2015-16, 2016-17 and 2017-18 for an amount of ₹11455.74 lakh, ₹20143.45 lakh and ₹13972.45 lakh is towards discharge liability is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations and ACE of ₹10118.75 lakh for 2018-19 is allowed towards deferred works is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.



ACE for 2015-16, 2016-17, 2017-18 for an amount of ₹3191.30 lakh, ₹5633.38 lakh and ₹1449.91 lakh is allowed towards deferred works is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.

46. As discussed above, ACE allowed for 2014-19 tariff period is as follows:

Assets	ACE allowed					Total ACE allowed for 2014-19 for true up
	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	277.06	43.39	8.24	3.17	0.00	331.86
Asset-2	35.70	47.92	1.25	0.00	0.00	84.87
Asset-3	43.64	132.27	0.09	0.00	0.00	176.00
Asset-4	3215.98	1495.38	860.36	210.90	361.40	6144.02
Asset-5	0.00	37.75	305.97	85.09	54.89	483.70
Asset-6	0.00	32.38	247.52	68.84	7.74	356.48
Asset-7	0.00	32.46	193.94	53.28	3.81	283.49
Asset-8	0.00	279.25	798.97	212.33	2.36	1292.91
Asset-9	0.00	201.80	128.12	35.18	459.26	824.36
Asset-10	0.00	720.86	673.32	530.65	459.26	2384.09
Asset-11	0.00	0.00	0.00	70.41	79.09	149.5
Asset-12	0.00	0.00	0.00	99.25	192.77	292.02
Asset-13	0.00	0.00	0.00	131.38	173.80	305.18
Asset-14	0.00	295.86	121.03	75.28	25.95	518.12
Asset-15	0.00	928.44	269.19	344.66	340.64	1882.93
Asset-16	0.00	293.86	210.06	160.04	65.45	729.41
Asset-17	0.00	239.29	120.07	75.10	164.80	599.26
Asset-18	0.00	19314.05	27352.35	15383.04	**9060.56	62049.44
Asset-19	0.00	0.00	15205.98	11448.67	**782.26	26654.65
<b>Total</b>	<b>3572.38</b>	<b>24094.96</b>	<b>46496.46</b>	<b>28987.27</b>	<b>2391.22</b>	<b>105542.29</b>

\*\* ACE for 319 days only and capital cost is as on 13.02.2018.

### **Treatment of PSDF Grants Availed**

47. The Petitioner has submitted that in line with the direction of the Commission vide its order in Petition No. 67/TT/2015, the Petitioner has taken up the matter for PSDF funding for the transmission project with the Ministry of Power (MoP).

48. The Petitioner has submitted that Petitioner has been pursuing with MoP for the disbursement of ₹288900 lakh in quarterly performance review of the Petitioner for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2017-18 and requested Secretary (Power) to



intervene to enable release of PSDF funding. However, in quarterly performance review meeting of the Petitioner for 1<sup>st</sup> quarter of 2018-19 taken by Secretary (Power) on 11.9.2018, Secretary (Power) has advised that *“in view of non-availability of PSDF funds POWERGRID should approach CERC for appropriate orders for tariff”*.

49. The Petitioner has submitted that subsequently, MoP vide letter dated 21.1.2019 has conveyed approval of raising EBRs for the scheme of ‘Power System Development Fund (PSDF)’ during 2018-19 for ₹288900 lakh (Total ₹348753 lakh including the other projects) for meeting loan liabilities (including ₹288900 lakh for the transmission assets for which PSDF grant is applied).

50. The Petitioner has further submitted that out of total EBRs amounting to ₹348753 lakh, EBR’s of ₹288900 lakh for aforesaid projects has been raised and received on 14.2.2019. Accordingly, EBR amount in lieu of PSDF grant has been deployed in the HVDC assets i.e. Asset-I and Asset-VI covered under Petition No. 363/TT/2018 decreasing the domestic loan to the extent applicable.

51. The Petitioner has received a grant of ₹288900 lakh and the grant has been utilized against domestic debt portion of the transmission assets as approved vide letter ref. no: No. 10/1/2014-OM dated: 10.3.2017 (Point-4(vii)). Accordingly, tariff has been calculated and revised for HVDC asset (Asset-I and Asset-VI) in Petition No. 363/TT/2018.

52. The Petitioner has further submitted that domestic loan opening as on 1.4.2018 and actual repayment of the loan during the year upto 13.2.2019 and loan deployed for ACE upto 13.2.2019 has been considered for arriving at the closing



balance on 13.2.2019/ opening balance on 14.2.2019 for grant adjustment from the capital cost of the Asset-18 (HVDC Pole-I) and Asset-19 (HVDC Pole-II).

53. We have considered the submissions of the Petitioner. Regulation 9(6) of the 2014 Tariff Regulations provides as follows:

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

*(a) xxx*

*(b) xxx*

*(c) xxx*

*(d) xxx*

*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;*

*Further, Regulation 19 of the 2014 Tariff Regulations provides as follows.*

*“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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. xxx*

*ii. xxx*

*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.*

*xxxxx”*

54. As stated in Government of India's approval, the Petitioner has received ₹288900 lakh in lieu of PSDF grant and it has been adjusted with Asset-18 and Asset-19 by decreasing the domestic loan deployed for the said assets.

55. COD of Asset-18 is 1.11.2015 and that of Asset-19 is 2.9.2016 whereas EBR of ₹288900 lakh has been received on 14.2.2019. Petitioner has utilised the grant in these two assets, i.e. ₹270045.33 lakh in Asset-18 and ₹18854.67 lakh in Asset-19. Accordingly, while working out the tariff, AFC has been calculated in two parts for both of these transmission assets- first from COD to 13.2.2019 and the other being from 14.2.2019 to 31.3.2019.



56. Application of grant is in line with the terms and conditions specified by the Ministry of Finance (MoF) as well as MoP. As the grant has been received post-COD and for decreasing the domestic debt portion of the transmission project, the same has been reduced from the loan portfolio corresponding to high interest bearing domestic loans. This may be seen as similar to re-financing with zero interest loan.

57. Accordingly, the details of ACE in case of Asset-18 and Asset-19 during 14.2.2019 to 31.3.2019 is as follows:

(₹ in lakh)	
Assets	ACE during 14.2.2019 to 31.3.2019
Asset-18	1306.54
Asset-19	112.80
<b>Total</b>	<b>1419.34</b>

#### **Summary of Capital Cost From COD to 31.3.2019**

58. 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:

Assets	Capital cost allowed as on COD/ 31.3.2014	ACE allowed for true-up in 2014-19					Admitted capital cost as on 31.3.1 (as allowed for true-up)
		2014-15	2015-16	2016-17	2017-18	2018-19	
*Asset-1	2115.81	277.06	43.39	8.24	3.17	0.00	2447.67
*Asset-2	892.38	35.70	47.92	1.25	0.00	0.00	977.25
*Asset-3	560.26	43.64	132.27	0.09	0.00	0.00	736.26
Asset-4	111887.65	3215.98	1495.38	860.36	210.90	361.40	118031.67
Asset-5	2266.61	0.00	37.75	305.97	85.09	54.89	2750.31
Asset-6	1448.53	0.00	32.38	247.52	68.84	7.74	1805.01
Asset-7	1550.37	0.00	32.46	193.94	53.28	3.81	1833.86
Asset-8	6268.76	0.00	279.25	798.97	212.33	2.36	7561.67
Asset-9	4277.43	0.00	201.80	128.12	35.18	459.26	5101.79
Asset-10	12125.42	0.00	720.86	673.32	530.65	459.26	14509.51
Asset-11	1279.03	0.00	0.00	0.00	70.41	79.09	1428.53
Asset-12	2359.46	0.00	0.00	0.00	99.25	192.77	2651.48



Asset-13	2343.37	0.00	0.00	0.00	131.38	173.80	2648.55
Asset-14	2233.77	0.00	295.86	121.03	75.28	25.95	2751.89
Asset-15	6941.56	0.00	928.44	269.19	344.66	340.64	8824.49
Asset-16	2528.91	0.00	293.86	210.06	160.04	65.45	3258.32
Asset-17	2567.55	0.00	239.29	120.07	75.10	164.80	3166.81
Asset-18	800112.31	0.00	19314.05	27352.35	15383.04	**9060.56	871222.31
Asset-19	208381.00	0.00	0.00	15205.98	11448.67	**782.26	235817.91

\*As on 1.4.2014 for Asset-1, Asset-2 & Asset-3 and as on COD for Assets-4 to Asset-19.

\*\* ACE for 319 days only and capital cost is as on 13.02.2018.

59. Details of capital cost for Asset-18 and Asset-19 after adjustment of grants

is as follows:

(₹ in lakh)					
Assets	Capital cost as on 13.2.2018	Grants used	Capital cost as on 14.2.2018	ACE for 46 days	Admitted cost as on 31.3.2019
Asset-18	871222.31	268996.95	602225.36	1306.54	603531.90
Asset-19	235817.91	19903.05	215914.86	112.80	216027.66

### Debt-Equity Ratio

60. The details of debt-equity ratio in respect of the transmission assets as on

COD and 31.3.2019 are as follows:

Asset-1				
Particulars	Capital cost (as on COD) (₹ in lakh)	(in %)	Capital cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	1481.07	70.00	1713.37	70.00
Equity	634.74	30.00	734.30	30.00
<b>Total</b>	<b>2115.81</b>	<b>100.00</b>	<b>2447.67</b>	<b>100.00</b>

Asset-2				
Particulars	Capital cost (as on COD) (₹ in lakh)	(in %)	Capital cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	624.67	70.00	684.08	70.00
Equity	267.71	30.00	293.18	30.00
<b>Total</b>	<b>892.38</b>	<b>100.00</b>	<b>977.25</b>	<b>100.00</b>

Asset-3				
Particulars	Capital cost (as on COD) (₹ in lakh)	(in %)	Capital cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	392.19	70.00	515.39	70.00
Equity	168.08	30.00	220.88	30.00
<b>Total</b>	<b>560.26</b>	<b>100.00</b>	<b>736.26</b>	<b>100.00</b>



<b>Asset-4</b>				
<b>Particulars</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	89510.12	80.00	94132.78	79.75
Equity	22377.53	20.00	23898.89	20.25
<b>Total</b>	<b>111887.65</b>	<b>100.00</b>	<b>118031.67</b>	<b>100.00</b>

<b>Asset-5</b>				
<b>Particulars</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	1813.29	80.00	2151.88	78.24
Equity	453.32	20.00	598.43	21.76
<b>Total</b>	<b>2266.61</b>	<b>100.00</b>	<b>2750.31</b>	<b>100.00</b>

<b>Asset-6</b>				
<b>Particulars</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	1158.83	80.00	1408.36	78.03
Equity	289.71	20.00	396.65	21.97
<b>Total</b>	<b>1448.54</b>	<b>100.00</b>	<b>1805.01</b>	<b>100.00</b>

<b>Asset-7</b>				
<b>Particulars</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	1240.30	80.00	1442.00	78.63
Equity	310.07	20.00	391.86	21.37
<b>Total</b>	<b>1550.37</b>	<b>100.00</b>	<b>1833.86</b>	<b>100.00</b>

<b>Asset-8</b>				
<b>Particulars</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	5015.01	80.00	5932.01	78.45
Equity	1253.75	20.00	1629.66	21.55
<b>Total</b>	<b>6268.76</b>	<b>100.00</b>	<b>7561.67</b>	<b>100.00</b>

<b>Asset-9</b>				
<b>Particulars</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	3421.94	80.00	4000.51	78.41
Equity	855.49	20.00	1101.28	21.59
<b>Total</b>	<b>4277.43</b>	<b>100.00</b>	<b>5101.79</b>	<b>100.00</b>



<b>Asset-10</b>				
<b>Particulars</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	9700.34	80.00	11377.31	78.41
Equity	2425.08	20.00	3132.20	21.59
<b>Total</b>	<b>12125.42</b>	<b>100.00</b>	<b>14509.51</b>	<b>100.00</b>

<b>Asset-11</b>				
<b>Particulars</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	1023.22	80.00	1130.69	79.15
Equity	255.80	20.00	297.84	20.85
<b>Total</b>	<b>1279.02</b>	<b>100.00</b>	<b>1428.53</b>	<b>100.00</b>

<b>Asset-12</b>				
<b>Particulars</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	1887.57	80.00	2098.11	79.13
Equity	471.89	20.00	553.37	20.87
<b>Total</b>	<b>2359.46</b>	<b>100.00</b>	<b>2651.48</b>	<b>100.00</b>

<b>Asset-13</b>				
<b>Particulars</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	1874.70	80.00	2098.44	79.23
Equity	468.67	20.00	550.11	20.77
<b>Total</b>	<b>2343.37</b>	<b>100.00</b>	<b>2648.55</b>	<b>100.00</b>

<b>Asset-14</b>				
<b>Particulars</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	1787.02	80.00	2198.97	79.91
Equity	446.75	20.00	552.92	20.09
<b>Total</b>	<b>2233.77</b>	<b>100.00</b>	<b>2751.89</b>	<b>100.00</b>

<b>Asset-15</b>				
<b>Particulars</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	5553.25	80.00	7025.60	79.61
Equity	1388.31	20.00	1798.89	20.39
<b>Total</b>	<b>6941.56</b>	<b>100.00</b>	<b>8824.49</b>	<b>100.00</b>





<b>Asset-16</b>				
<b>Particulars</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	2023.11	80.00	2600.10	79.80
Equity	505.78	20.00	658.21	20.20
<b>Total</b>	<b>2528.89</b>	<b>100.00</b>	<b>3258.30</b>	<b>100.00</b>

<b>Asset-17</b>				
<b>Particulars</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	2054.05	80.00	2516.98	79.48
Equity	513.51	20.00	649.84	20.52
<b>Total</b>	<b>2567.56</b>	<b>100.00</b>	<b>3166.82</b>	<b>100.00</b>

<b>Asset-18</b>				
<b>Particulars</b>	<b>Capital cost (as on COD) (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost (as on 13.02.2019) (₹ in lakh)</b>	<b>(in %)</b>
Debt	640089.85	80.00	696127.96	79.90
Equity	160022.46	20.00	175094.35	20.10
<b>Total</b>	<b>800112.31</b>	<b>100.00</b>	<b>871222.31</b>	<b>100.00</b>

<b>Asset-19</b>				
<b>Particulars</b>	<b>Capital cost (as on COD) (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost (as on 13.02.2019) (₹ in lakh)</b>	<b>(in %)</b>
Debt	166704.80	80.00	188643.90	80.00
Equity	41676.20	20.00	47174.00	20.00
<b>Total</b>	<b>208381.00</b>	<b>100.00</b>	<b>235817.90</b>	<b>100.00</b>

**Debt Equity Ratio after adjusting grants for Asset-18 and Asset-19**

<b>Asset-18</b>				
<b>Particulars</b>	<b>Capital cost (as on 14.2.2019) (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost (as on 31.3.2019) (₹ in lakh)</b>	<b>(in %)</b>
Debt	427131.01	70.93	428045.59	70.92
Equity	175094.35	29.07	175486.31	29.08
<b>Total</b>	<b>602225.36</b>	<b>100.00</b>	<b>603531.90</b>	<b>100.00</b>

<b>Asset-19</b>				
<b>Particulars</b>	<b>Capital cost (as on 14.2.2019) (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost (as on 31.3.2019) (₹ in lakh)</b>	<b>(in %)</b>
Debt	168740.85	78.15	168819.82	78.15



Equity	47174.00	21.85	47207.84	21.85
<b>Total</b>	<b>215914.85</b>	100.00	<b>216027.66</b>	<b>100.00</b>

### **Depreciation**

61. 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>
A	Opening Gross Block	2115.81	2392.87	2436.26	2444.50	2447.67
B	ACE	277.06	43.39	8.24	3.17	0.00
C	Closing Gross Block (A+B)	2392.87	2436.26	2444.50	2447.67	2447.67
D	Average Gross Block (A+C)/2	2254.34	2414.57	2440.38	2446.09	2447.67
E	Weighted average rate of Depreciation (WAROD) (in %)	5.1998	5.1922	5.1922	5.1924	5.1925
F	Balance useful life at the beginning of the year (Year)	24	23	22	21	20
G	Lapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregated Depreciable Value (D*90%)	2028.91	2173.11	2196.34	2201.48	2202.90
I	<b>Combined Depreciation during the year (D*E)</b>	<b>117.22</b>	<b>125.37</b>	<b>126.71</b>	<b>127.01</b>	<b>127.10</b>
J	Cumulative Depreciation at the end of the year	301.62	426.99	553.70	680.71	807.81
K	Remaining Aggregated Depreciable Value	1727.29	1746.12	1642.64	1520.76	1395.10

(₹ in lakh)

		<b>Asset-2</b>				
	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Gross Block	892.38	928.08	976.00	977.25	977.25
B	ACE	35.70	47.92	1.25	0.00	0.00
C	Closing Gross Block (A+B)	928.08	976.00	977.25	977.25	977.25
D	Average Gross Block (A+C)/2	910.23	952.04	976.63	977.25	977.25



Asset-2						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800	5.2800	5.2800
F	Balance useful life at the beginning of the year (Year)	24	23	22	21	20
G	Lapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregated Depreciable Value (D*90%)	819.21	856.84	878.96	879.53	879.53
I	<b>Combined Depreciation during the year (D*E)</b>	<b>48.06</b>	<b>50.27</b>	<b>51.57</b>	<b>51.60</b>	<b>51.60</b>
J	Cumulative Depreciation at the end of the year	108.05	158.32	209.88	261.48	313.08
K	Remaining Aggregated Depreciable Value	711.16	698.52	669.08	618.04	566.44

(₹ in lakh)

Asset-3						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	560.26	603.90	736.17	736.26	736.26
B	ACE	43.64	132.27	0.09	0.00	0.00
C	Closing Gross Block (A+B)	603.90	736.17	736.26	736.26	736.26
D	Average Gross Block (A+C)/2	582.08	670.04	736.22	736.26	736.26
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800	5.2800	5.2800
F	Balance useful life at the beginning of the year (Year)	24	23	22	21	20
G	Lapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregated Depreciable Value (D*90%)	523.88	603.04	662.60	662.64	662.64
I	<b>Combined Depreciation during the year (D*E)</b>	<b>30.73</b>	<b>35.38</b>	<b>38.87</b>	<b>38.87</b>	<b>38.87</b>
J	Cumulative Depreciation at the end of the year	61.32	96.70	135.57	174.45	213.32
K	Remaining Aggregated Depreciable Value	462.55	506.33	527.02	488.19	449.31

(₹ in lakh)

Asset-4						
	Particulars	2014-15 (Pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	111887.65	115103.63	116599.01	117459.37	117670.27
B	ACE	3215.98	1495.38	860.36	210.90	361.40
C	Closing Gross Block (A+B)	115103.63	116599.01	117459.37	117670.27	118031.67
D	Average Gross Block (A+C)/2	113495.64	115851.32	117029.19	117564.82	117850.97
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2803	5.2803	5.2791	5.2779	5.2779
F	Balance useful life at the beginning of the year (Year)	34	34	33	32	31
G	Lapsed life at the beginning of the year (Year)	0	0	1	2	3



Asset-4						
	Particulars	2014-15 (Pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
H	Aggregated Depreciable Value (D*90%)	102146.07	104266.19	105326.27	105808.34	106065.87
I	<b>Combined Depreciation during the year (D*E)</b>	<b>2380.72</b>	<b>6117.25</b>	<b>6178.09</b>	<b>6205.00</b>	<b>6220.09</b>
J	Cumulative Depreciation at the end of the year	2380.72	8497.97	14676.06	20881.06	27101.15
K	Remaining Aggregated Depreciable Value	99765.35	95768.21	90650.21	84927.28	78964.72

(₹ in lakh)

Asset-5					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	2266.61	2304.36	2610.33	2695.42
B	ACE	37.75	305.97	85.09	54.89
C	Closing Gross Block (A+B)	2304.36	2610.33	2695.42	2750.31
D	Average Gross Block (A+C)/2	2285.49	2457.35	2652.88	2722.87
E	Weighted average rate of Depreciation (WAROD) (in %)	4.7391	4.7266	4.7143	4.7103
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	25	25	24	23
H	Aggregated Depreciable Value (D*90%)	2006.70	2161.37	2337.35	2400.34
I	<b>Combined Depreciation during the year (D*E)</b>	<b>54.16</b>	<b>116.15</b>	<b>125.06</b>	<b>128.26</b>
J	Cumulative Depreciation at the end of the year	54.16	170.30	295.37	423.62
K	Remaining Aggregated Depreciable Value	1952.54	1991.07	2041.98	1976.72

(₹ in lakh)

Asset-6					
	Particulars	2015-16 (Pro-rata for 181 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	1448.54	1480.92	1728.44	1797.28
B	ACE	32.38	247.52	68.84	7.73
C	Closing Gross Block (A+B)	1480.92	1728.44	1797.28	1805.01
D	Average Gross Block (A+C)/2	1464.73	1604.68	1762.86	1801.15
E	Weighted average rate of Depreciation (WAROD) (in %)	4.7179	4.7203	4.7226	4.7230
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	25	25	24	23



Asset-6					
	Particulars	2015-16 (Pro-rata for 181 days)	2016-17	2017-18	2018-19
H	Aggregated Depreciable Value (D*90%)	1268.02	1393.97	1536.34	1570.79
I	<b>Combined Depreciation during the year (D*E)</b>	<b>34.17</b>	<b>75.75</b>	<b>83.25</b>	<b>85.07</b>
J	Cumulative Depreciation at the end of the year	34.17	109.92	193.17	278.24
K	Remaining Aggregated Depreciable Value	1233.84	1284.05	1343.16	1292.55

(₹ in lakh)

Asset-7					
	Particulars	2015-16 (Pro-rata for 35 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	1550.37	1582.83	1776.77	1830.05
B	ACE	32.46	193.94	53.28	3.81
C	Closing Gross Block (A+B)	1582.83	1776.77	1830.05	1833.86
D	Average Gross Block (A+C)/2	1566.60	1679.80	1803.41	1831.96
E	Weighted average rate of Depreciation (WAROD) (in %)	4.6955	4.7062	4.7150	4.7168
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	25	25	24	23
H	Aggregated Depreciable Value (D*90%)	1359.71	1461.58	1572.83	1598.52
I	<b>Combined Depreciation during the year (D*E)</b>	<b>7.03</b>	<b>79.05</b>	<b>85.03</b>	<b>86.41</b>
J	Cumulative Depreciation at the end of the year	7.03	86.09	171.12	257.53
K	Remaining Aggregated Depreciable Value	1352.67	1375.50	1401.71	1340.99

(₹ in lakh)

Asset-8					
	Particulars	2015-16 (Pro-rata for 113 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	6268.76	6548.01	7346.98	7559.31
B	ACE	279.25	798.97	212.33	2.36
C	Closing Gross Block (A+B)	6548.01	7346.98	7559.31	7561.67
D	Average Gross Block (A+C)/2	6408.39	6947.50	7453.15	7560.49
E	Weighted average rate of Depreciation (WAROD) (in %)	5.0487	5.0448	5.0413	5.0405
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	25	25	24	23
H	Aggregated Depreciable Value (D*90%)	5767.55	6252.75	6707.83	6804.44



Asset-8					
	Particulars	2015-16 (Pro-rata for 113 days)	2016-17	2017-18	2018-19
I	<b>Combined Depreciation during the year (D*E)</b>	<b>99.89</b>	<b>350.49</b>	<b>375.73</b>	<b>381.09</b>
J	Cumulative Depreciation at the end of the year	99.89	450.38	826.11	1207.20
K	Remaining Aggregated Depreciable Value	5667.66	5802.37	5881.72	5597.24

(₹ in lakh)

Asset-9					
	Particulars	2015-16 (Pro-rata for 172 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	4277.43	4479.23	4607.35	4642.53
B	ACE	201.80	128.12	35.18	459.26
C	Closing Gross Block (A+B)	4479.23	4607.35	4642.53	5101.79
D	Average Gross Block (A+C)/2	4378.33	4543.29	4624.94	4872.16
E	Weighted average rate of Depreciation (WAROD) (in %)	4.9915	4.9907	4.9866	4.9667
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	29	29	28	27
H	Aggregated Depreciable Value (D*90%)	3890.26	4038.72	4112.21	4334.71
I	<b>Combined Depreciation during the year (D*E)</b>	<b>102.70</b>	<b>226.74</b>	<b>230.63</b>	<b>241.99</b>
J	Cumulative Depreciation at the end of the year	102.70	329.45	560.08	802.06
K	Remaining Aggregated Depreciable Value	3787.56	3709.28	3552.13	3532.64

(₹ in lakh)

Asset-10					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	12125.42	12846.28	13519.60	14050.25
B	ACE	720.86	673.32	530.65	459.26
C	Closing Gross Block (A+B)	12846.28	13519.60	14050.25	14509.51
D	Average Gross Block (A+C)/2	12485.85	13182.94	13784.93	14279.88
E	Weighted average rate of Depreciation (WAROD) (in %)	5.1801	5.1807	5.1813	5.1728
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	33	33	32	31
H	Aggregated Depreciable Value (D*90%)	11187.03	11814.41	12356.19	12801.65
I	<b>Combined Depreciation during the year (D*E)</b>	<b>323.39</b>	<b>682.97</b>	<b>714.23</b>	<b>738.67</b>

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Asset-10					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
J	Cumulative Depreciation at the end of the year	323.39	1006.36	1720.59	2459.26
K	Remaining Aggregated Depreciable Value	10863.64	10808.05	10635.61	10342.39

(₹ in lakh)

Asset-11			
	Particulars	2017-18 (Pro-rata for 242 days)	2018-19
A	Opening Gross Block	1279.02	1349.43
B	ACE	70.41	79.09
C	Closing Gross Block (A+B)	1349.43	1428.53
D	Average Gross Block (A+C)/2	1314.23	1388.98
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800
F	Balance useful life at the beginning of the year (Year)	0	0
G	Lapsed life at the beginning of the year (Year)	25	25
H	Aggregated Depreciable Value (D*90%)	1182.81	1250.08
I	<b>Combined Depreciation during the year (D*E)</b>	<b>46.20</b>	<b>73.34</b>
J	Cumulative Depreciation at the end of the year	46.20	119.54
K	Remaining Aggregated Depreciable Value	1136.61	1130.55

(₹ in lakh)

Asset-12			
	Particulars	2017-18 (Pro-rata for 254 days)	2018-19
A	Opening Gross Block	2359.46	2458.71
B	ACE	99.25	192.77
C	Closing Gross Block (A+B)	2458.71	2651.48
D	Average Gross Block (A+C)/2	2409.09	2555.10
E	Weighted average rate of Depreciation (WAROD) (in %)	4.8715	4.8760
F	Balance useful life at the beginning of the year (Year)	0	0
G	Lapsed life at the beginning of the year (Year)	25	25
H	Aggregated Depreciable Value (D*90%)	2168.18	2299.59
I	<b>Combined Depreciation during the year (D*E)</b>	<b>81.67</b>	<b>124.59</b>
J	Cumulative Depreciation at the end of the year	81.67	206.25



<b>Asset-12</b>			
	<b>Particulars</b>	<b>2017-18 (Pro-rata for 254 days)</b>	<b>2018-19</b>
K	Remaining Aggregated Depreciable Value	2086.51	2093.33

(₹ in lakh)

<b>Asset-13</b>			
	<b>Particulars</b>	<b>2017-18 (Pro-rata for 111 days)</b>	<b>2018-19</b>
A	Opening Gross Block	2343.37	2474.75
B	ACE	131.38	173.80
C	Closing Gross Block (A+B)	2474.75	2648.55
D	Average Gross Block (A+C)/2	2409.06	2561.65
E	Weighted average rate of Depreciation (WAROD) (in %)	4.8751	4.8778
F	Balance useful life at the beginning of the year (Year)	0	0
G	Lapsed life at the beginning of the year (Year)	25	25
H	Aggregated Depreciable Value (D*90%)	2168.15	2305.49
I	<b>Combined Depreciation during the year (D*E)</b>	<b>35.72</b>	<b>124.95</b>
J	Cumulative Depreciation at the end of the year	35.72	160.67
K	Remaining Aggregated Depreciable Value	2132.44	2144.82

(₹ in lakh)

<b>Asset-14</b>					
	<b>Particulars</b>	<b>2015-16 (Pro-rata for 156 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Gross Block	2233.77	2529.63	2650.66	2725.94
B	ACE	295.86	121.03	75.28	25.95
C	Closing Gross Block (A+B)	2529.63	2650.66	2725.94	2751.89
D	Average Gross Block (A+C)/2	2381.70	2590.15	2688.30	2738.91
E	Weighted average rate of Depreciation (WAROD) (in %)	4.8723	4.8947	4.9038	4.9081
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	28	28	27	26
H	Aggregated Depreciable Value (D*90%)	2043.06	2230.66	2319.00	2364.56
I	<b>Combined Depreciation during the year (D*E)</b>	<b>49.46</b>	<b>126.78</b>	<b>131.83</b>	<b>134.43</b>
J	Cumulative Depreciation at the end of the year	49.46	176.24	308.07	442.50
K	Remaining Aggregated Depreciable Value	1993.60	2054.42	2010.93	1922.06

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(₹ in lakh)

Asset-15					
	Particulars	2015-16 (Pro-rata for 157 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	6941.56	7870.00	8139.19	8483.85
B	ACE	928.44	269.19	344.66	340.64
C	Closing Gross Block (A+B)	7870.00	8139.19	8483.85	8824.49
D	Average Gross Block (A+C)/2	7405.78	8004.59	8311.52	8654.17
E	Weighted average rate of Depreciation (WAROD) (in %)	5.1481	5.1553	5.1583	5.1623
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	33	33	32	31
H	Aggregated Depreciable Value (D*90%)	6564.73	7103.67	7379.90	7688.28
I	<b>Combined Depreciation during the year (D*E)</b>	<b>163.55</b>	<b>412.66</b>	<b>428.73</b>	<b>446.75</b>
J	Cumulative Depreciation at the end of the year	163.55	576.21	1004.94	1451.70
K	Remaining Aggregated Depreciable Value	6401.19	6527.46	6374.96	6236.59

(₹ in lakh)

Asset-16					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	2528.89	2822.75	3032.81	3192.85
B	ACE	293.86	210.06	160.04	65.45
C	Closing Gross Block (A+B)	2822.75	3032.81	3192.85	3258.30
D	Average Gross Block (A+C)/2	2675.82	2927.78	3112.83	3225.58
E	Weighted average rate of Depreciation (WAROD) (in %)	4.8984	4.9233	4.9373	4.9465
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	29	29	28	27
H	Aggregated Depreciable Value (D*90%)	2307.77	2534.54	2701.08	2802.55
I	<b>Combined Depreciation during the year (D*E)</b>	<b>65.54</b>	<b>144.14</b>	<b>153.69</b>	<b>159.55</b>
J	Cumulative Depreciation at the end of the year	65.54	209.68	363.37	522.92
K	Remaining Aggregated Depreciable Value	2242.24	2324.86	2337.71	2279.63



(₹ in lakh)

Asset-17					
	Particulars	2015-16 (Pro-rata for 104 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	2567.56	2806.85	2926.92	3002.02
B	ACE	239.29	120.07	75.10	164.80
C	Closing Gross Block (A+B)	2806.85	2926.92	3002.02	3166.82
D	Average Gross Block (A+C)/2	2687.21	2866.89	2964.47	3084.42
E	Weighted average rate of Depreciation (WAROD) (in %)	4.9198	4.9208	4.9209	4.9211
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	25	25	24	23
H	Aggregated Depreciable Value (D*90%)	2368.25	2529.96	2617.79	2725.74
I	<b>Combined Depreciation during the year (D*E)</b>	<b>37.57</b>	<b>141.07</b>	<b>145.88</b>	<b>151.79</b>
J	Cumulative Depreciation at the end of the year	37.57	178.64	324.52	476.31
K	Remaining Aggregated Depreciable Value	2330.68	2351.32	2293.27	2249.43

(₹ in lakh)

Asset-18					
	Particulars	2015-16 (Pro-rata for 152 days)	2016-17	2017-18	2018-19
A	Opening Gross Block	800112.31	819426.36	846778.71	862161.75
B	ACE	19314.05	27352.35	15383.04	9060.56
C	Closing Gross Block (A+B)	819426.36	846778.71	862161.75	871222.31
D	Average Gross Block (A+C)/2	809769.34	833102.53	854470.23	866692.03
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2237	5.2189	5.2135	5.2114
F	Balance useful life at the beginning of the year (Year)	0	0	1	2
G	Lapsed life at the beginning of the year (Year)	33	33	32	31
H	Aggregated Depreciable Value (D*90%)	727148.51	748148.39	767379.31	778378.93
I	<b>Combined Depreciation during the year (D*E)</b>	<b>17567.29</b>	<b>43478.88</b>	<b>44548.04</b>	<b>39474.62</b>
J	Cumulative Depreciation at the end of the year	17567.29	61046.17	105594.22	145068.84
K	Remaining Aggregated Depreciable Value	709581.22	687102.21	661785.09	633310.09



Asset-19				
	Particulars	2016-17 (Pro-rata for 211 days)	2017-18	2018-19
A	Opening Gross Block	208381.00	223586.98	235035.65
B	ACE	15205.98	11448.67	782.26
C	Closing Gross Block (A+B)	223586.98	235035.65	235817.90
D	Average Gross Block (A+C)/2	215983.99	229311.31	235426.77
E	Weighted average rate of Depreciation (WAROD) (in %)	5.0781	5.0702	5.0652
F	Balance useful life at the beginning of the year (Year)	0	0	1
G	Lapsed life at the beginning of the year (Year)	26	26	25
H	Aggregated Depreciable Value (D*90%)	192159.36	204153.95	209657.87
I	<b>Combined Depreciation during the year (D*E)</b>	<b>6340.30</b>	<b>11626.47</b>	<b>10422.06</b>
J	Cumulative Depreciation at the end of the year	6340.30	17966.77	28388.83
K	Remaining Aggregated Depreciable Value	185819.06	186187.17	181269.03

**After adjustment of grants**

Particulars	2018-19 (Pro-rata for 46 days)	2018-19 (Pro-rata for 46 days)
	Asset-18	Asset-19
Opening Gross Block	602225.36	215914.85
ACE	1306.54	112.80
Closing Gross Block (A+B)	603531.90	216027.66
Average Gross Block (A+C)/2	602878.63	215971.25
Weighted average rate of Depreciation (WAROD) (in %)	5.2108%	5.0642%
Balance useful life at the beginning of the year (Year)	2	1
Lapsed life at the beginning of the year (Year)	31	25
Aggregated Depreciable Value (D*90%)	540946.87	192335.79
<b>Combined Depreciation during the year (D*E)</b>	<b>3959.13</b>	<b>1378.38</b>
Cumulative Depreciation at the end of the year	149027.97	29767.22
Remaining Aggregated Depreciable Value	391918.90	162568.58

**Interest on Loan ("IoL")**

62. The Petitioner has prayed for floating rate of IoL for 2014-19 period. The



Petitioner has claimed the weighted average rate of interest based on its actual loan portfolio and actual rate of interest on loan. Bihar Discoms has submitted that the 2014 Tariff Regulations do not permit change in interest rate due to floating rate of interest.

63. In response, the Petitioner has submitted that in the tariff calculation for 2014-19 period, IoL has been calculated on the basis of actual rate of interest of various loans deployed for each year. The change in interest rate due to floating rate of interest applicable, if any, for the transmission project needs to be claimed/adjusted over the tariff period of 5 years directly from/ with the beneficiaries. The Petitioner has further submitted that the floating interest rate mentioned in the cash IDC statement for bank loans varies on daily/monthly/quarterly basis and the IDC calculation has been done by multiplying the particular loan interest rate with applicable number of days (i.e. for the number of days upto which the particular rate is applicable) till COD.

64. We have considered the submissions of the Petitioner and Bihar Discoms. IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed in respect of the transmission assets are 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>
A	Gross Normative Loan	1481.07	1675.01	1705.38	1711.15	1713.37
B	Cumulative Repayments upto Previous Year	184.40	301.62	426.99	553.70	680.71
C	Net Loan-Opening (A-B)	1296.67	1373.39	1278.39	1157.45	1032.66
D	Addition due to ACE	193.94	30.37	5.77	2.22	0.00
E	Repayment during the year	117.22	125.37	126.71	127.01	127.10
F	Net Loan-Closing (C+D-E)	1373.39	1278.39	1157.45	1032.66	905.56
G	Average Loan (C+F)/2	1335.03	1325.89	1217.92	1095.05	969.11



<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>
H	Weighted Average Rate of Interest on Loan (in %)	8.9920	8.9743	8.9647	8.9321	8.8740
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>120.05</b>	<b>118.99</b>	<b>109.18</b>	<b>97.81</b>	<b>86.00</b>

(₹ in lakh)

<b>Asset-2</b>						
	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Gross Normative Loan	624.67	649.66	683.20	684.08	684.08
B	Cumulative Repayments upto Previous Year	59.99	108.05	158.32	209.88	261.48
C	Net Loan-Opening (A-B)	564.68	541.61	524.88	474.19	422.59
D	Addition due to ACE	24.99	33.54	0.88	0.00	0.00
E	Repayment during the year	48.06	50.27	51.57	51.60	51.60
F	Net Loan-Closing (C+D-E)	541.61	524.88	474.19	422.59	370.99
G	Average Loan (C+F)/2	553.14	533.24	499.54	448.39	396.79
H	Weighted Average Rate of Interest on Loan (in %)	8.9250	8.9186	8.9024	8.8928	8.8912
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>49.37</b>	<b>47.56</b>	<b>44.47</b>	<b>39.87</b>	<b>35.28</b>

(₹ in lakh)

<b>Asset-3</b>						
	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Gross Normative Loan	392.19	422.73	515.32	515.39	515.39
B	Cumulative Repayments upto Previous Year	30.59	61.32	96.70	135.57	174.45
C	Net Loan-Opening (A-B)	361.60	361.41	418.62	379.81	340.94
D	Addition due to ACE	30.55	92.59	0.06	0.00	0.00
E	Repayment during the year	30.73	35.38	38.87	38.87	38.87
F	Net Loan-Closing (C+D-E)	361.41	418.62	379.81	340.94	302.06
G	Average Loan (C+F)/2	361.50	390.01	399.22	360.37	321.50
H	Weighted Average Rate of Interest on Loan (in %)	9.1486	9.1537	9.0639	8.0550	8.7130
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>33.07</b>	<b>35.70</b>	<b>36.18</b>	<b>29.03</b>	<b>28.01</b>

(₹ in lakh)

<b>Asset-4</b>						
	<b>Particulars</b>	<b>2014-15 (Pro-rata for 145 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Gross Normative Loan	89510.12	92082.90	93129.67	93731.92	93879.55
B	Cumulative Repayments upto Previous Year	0.00	2380.72	8497.97	14676.06	20881.06
C	Net Loan-Opening (A-B)	89510.12	89702.18	84631.70	79055.86	72998.49
D	Addition due to ACE	2572.78	1046.77	602.25	147.88	252.98
E	Repayment during the year	2380.72	6117.25	6178.09	6205.00	6220.09
F	Net Loan-Closing (C+D-E)	89702.18	84631.70	79055.86	72998.49	67031.38
G	Average Loan (C+F)/2	89606.15	87166.94	81843.78	76027.18	70014.93
H	Weighted Average Rate of Interest on Loan (in %)	9.5223	9.3673	9.2181	8.9368	8.8374



Asset-4						
	Particulars	2014-15 (Pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
I	Interest on Loan (G*H)	3389.65	8165.19	7544.44	6794.41	6187.50

(₹ in lakh)

Asset-5					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	1813.29	1839.71	2053.89	2113.46
B	Cumulative Repayments upto Previous Year	0.00	54.16	170.30	295.37
C	Net Loan-Opening (A-B)	1813.29	1785.56	1883.59	1818.09
D	Addition due to ACE	26.43	214.18	59.56	38.42
E	Repayment during the year	54.16	116.15	125.06	128.26
F	Net Loan-Closing (C+D-E)	1785.56	1883.59	1818.09	1728.25
G	Average Loan (C+F)/2	1799.42	1834.57	1850.84	1773.17
H	Weighted Average Rate of Interest on Loan (in %)	9.2519	9.1518	8.9443	8.8865
I	Interest on Loan (G*H)	83.24	167.90	165.54	157.57

(₹ in lakh)

Asset-6					
	Particulars	2015-16 (Pro-rata for 181 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	1158.83	1181.50	1354.76	1402.95
B	Cumulative Repayments upto Previous Year	0.00	34.17	109.92	193.17
C	Net Loan-Opening (A-B)	1158.83	1147.32	1244.84	1209.78
D	Addition due to ACE	22.67	173.26	48.19	5.41
E	Repayment during the year	34.17	75.75	83.25	85.07
F	Net Loan-Closing (C+D-E)	1147.32	1244.84	1209.78	1130.12
G	Average Loan (C+F)/2	1153.08	1196.08	1227.31	1169.95
H	Weighted Average Rate of Interest on Loan (in%)	9.2773	9.1448	8.8568	8.7698
I	Interest on Loan (G*H)	52.90	109.38	108.70	102.60

(₹ in lakh)

Asset-7					
	Particulars	2015-16 (Pro-rata for 35 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	1240.30	1266.28	1402.04	1439.34
B	Cumulative Repayments upto Previous Year	0.00	7.03	86.09	171.12
C	Net Loan-Opening (A-B)	1240.30	1259.25	1315.95	1268.22
D	Addition due to ACE	25.98	135.76	37.30	2.67



Asset-7					
	Particulars	2015-16 (Pro-rata for 35 days)	2016-17	2017-18	2018-19
E	Repayment during the year	7.03	79.05	85.03	86.41
F	Net Loan-Closing (C+D-E)	1259.25	1315.95	1268.22	1184.47
G	Average Loan (C+F)/2	1249.77	1287.60	1292.08	1226.35
H	Weighted Average Rate of Interest on Loan (in %)	9.1637	9.0859	8.9590	8.9246
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>10.95</b>	<b>116.99</b>	<b>115.76</b>	<b>109.45</b>

(₹ in lakh)

Asset-8					
	Particulars	2015-16 (Pro-rata for 113 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	5015.01	5219.74	5781.73	5930.36
B	Cumulative Repayments upto Previous Year	0.00	99.89	450.38	826.11
C	Net Loan-Opening (A-B)	5015.01	5119.85	5331.36	5104.25
D	Addition due to ACE	204.73	561.99	148.63	1.65
E	Repayment during the year	99.89	350.49	375.73	381.09
F	Net Loan-Closing (C+D-E)	5119.85	5331.36	5104.25	4724.82
G	Average Loan (C+F)/2	5067.43	5225.60	5217.81	4914.53
H	Weighted Average Rate of Interest on Loan (in %)	9.2145	9.1278	8.9452	8.8852
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>144.16</b>	<b>476.98</b>	<b>466.74</b>	<b>436.67</b>

(₹ in lakh)

Asset-9					
	Particulars	2015-16 (Pro-rata for 172 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	3421.94	3564.71	3654.40	3679.02
B	Cumulative Repayments upto Previous Year	0.00	102.70	329.45	560.08
C	Net Loan-Opening (A-B)	3421.94	3462.01	3324.95	3118.95
D	Addition due to ACE	142.77	89.68	24.63	321.48
E	Repayment during the year	102.70	226.74	230.63	241.99
F	Net Loan-Closing (C+D-E)	3462.01	3324.95	3118.95	3198.44
G	Average Loan (C+F)/2	3441.98	3393.48	3221.95	3158.70
H	Weighted Average Rate of Interest on Loan (in %)	9.1120	9.0195	8.7241	8.6185
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>147.39</b>	<b>306.07</b>	<b>281.09</b>	<b>272.23</b>

(₹ in lakh)

Asset-10					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	9700.34	10213.04	10684.37	11055.83

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<b>Asset-10</b>					
	<b>Particulars</b>	<b>2015-16 (Pro-rata for 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
B	Cumulative Repayments upto Previous Year	0.00	323.39	1006.36	1720.59
C	Net Loan-Opening (A-B)	9700.34	9889.65	9678.01	9335.24
D	Addition due to ACE	512.70	471.33	371.46	321.48
E	Repayment during the year	323.39	682.97	714.23	738.67
F	Net Loan-Closing (C+D-E)	9889.65	9678.01	9335.24	8918.05
G	Average Loan (C+F)/2	9794.99	9783.83	9506.62	9126.64
H	Weighted Average Rate of Interest on Loan (in %)	9.0794	8.9745	8.6573	8.5436
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>444.66</b>	<b>878.05</b>	<b>823.02</b>	<b>779.74</b>

(₹ in lakh)

<b>Asset-11</b>			
	<b>Particulars</b>	<b>2017-18 (Pro-rata for 242 days)</b>	<b>2018-19</b>
A	Gross Normative Loan	1023.22	1074.88
B	Cumulative Repayments upto Previous Year	0.00	46.20
C	Net Loan-Opening (A-B)	1023.22	1028.68
D	Addition due to ACE	51.66	55.81
E	Repayment during the year	46.20	73.34
F	Net Loan-Closing (C+D-E)	1028.68	1011.15
G	Average Loan (C+F)/2	1025.95	1019.92
H	Weighted Average Rate of Interest on Loan (in %)	7.8101	7.8066
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>53.35</b>	<b>79.62</b>

(₹ in lakh)

<b>Asset-12</b>			
	<b>Particulars</b>	<b>2017-18 (Pro-rata for 254 days)</b>	<b>2018-19</b>
A	Gross Normative Loan	1887.57	1963.08
B	Cumulative Repayments upto Previous Year	0.00	81.67
C	Net Loan-Opening (A-B)	1887.57	1881.41
D	Addition due to ACE	75.51	135.03
E	Repayment during the year	81.67	124.59
F	Net Loan-Closing (C+D-E)	1881.41	1891.85
G	Average Loan (C+F)/2	1884.49	1886.63
H	Weighted Average Rate of Interest on Loan (in %)	8.1795	8.1432
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>107.27</b>	<b>153.63</b>





(₹ in lakh)

Asset-13			
	Particulars	2017-18 (Pro-rata for 111 days)	2018-19
A	Gross Normative Loan	1874.70	1976.26
B	Cumulative Repayments upto Previous Year	0.00	35.72
C	Net Loan-Opening (A-B)	1874.70	1940.54
D	Addition due to ACE	101.56	122.18
E	Repayment during the year	35.72	124.95
F	Net Loan-Closing (C+D-E)	1940.54	1937.77
G	Average Loan (C+F)/2	1907.62	1939.15
H	Weighted Average Rate of Interest on Loan (in %)	8.0785	8.0422
I	<b>Interest on Loan (G*H)</b>	<b>46.87</b>	<b>155.95</b>

(₹ in lakh)

Asset-14					
	Particulars	2015-16 (Pro-rata for 156 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	1787.02	2023.76	2120.58	2180.80
B	Cumulative Repayments upto Previous Year	0.00	49.46	176.24	308.07
C	Net Loan-Opening (A-B)	1787.02	1974.30	1944.34	1872.73
D	Addition due to ACE	236.74	96.82	60.22	18.17
E	Repayment during the year	49.46	126.78	131.83	134.43
F	Net Loan-Closing (C+D-E)	1974.30	1944.34	1872.73	1756.47
G	Average Loan (C+F)/2	1880.66	1959.32	1908.54	1814.60
H	Weighted Average Rate of Interest on Loan (in %)	9.3923	9.2953	9.2033	9.1448
I	<b>Interest on Loan (G*H)</b>	<b>75.29</b>	<b>182.12</b>	<b>175.65</b>	<b>165.94</b>

(₹ in lakh)

Asset-15					
	Particulars	2015-16 (Pro-rata for 156 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	5553.25	6296.07	6511.42	6787.15
B	Cumulative Repayments upto Previous Year	0.00	163.55	576.21	1004.94
C	Net Loan-Opening (A-B)	5553.25	6132.52	5935.21	5782.20
D	Addition due to ACE	742.82	215.35	275.73	238.45
E	Repayment during the year	163.55	412.66	428.73	446.75
F	Net Loan-Closing (C+D-E)	6132.52	5935.21	5782.20	5573.90
G	Average Loan (C+F)/2	5842.88	6033.86	5858.71	5678.05
H	Weighted Average Rate of Interest on Loan (in %)	9.1433	8.9622	8.4783	8.3198
I	<b>Interest on Loan (G*H)</b>	<b>229.17</b>	<b>540.77</b>	<b>496.72</b>	<b>472.40</b>



(₹ in lakh)

Asset-16					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	2023.11	2258.20	2426.25	2554.28
B	Cumulative Repayments upto Previous Year	0.00	65.54	209.68	363.37
C	Net Loan-Opening (A-B)	2023.11	2192.67	2216.57	2190.91
D	Addition due to ACE	235.09	168.05	128.03	45.82
E	Repayment during the year	65.54	144.14	153.69	159.55
F	Net Loan-Closing (C+D-E)	2192.67	2216.57	2190.91	2077.17
G	Average Loan (C+F)/2	2107.89	2204.62	2203.74	2134.04
H	Weighted Average Rate of Interest on Loan (in %)	9.3631	9.1314	8.5665	8.3724
I	<b>Interest on Loan (G*H)</b>	<b>98.68</b>	<b>201.31</b>	<b>188.78</b>	<b>178.67</b>

(₹ in lakh)

Asset-17					
	Particulars	2015-16 (Pro-rata for 104 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	2054.05	2245.48	2341.54	2401.62
B	Cumulative Repayments upto Previous Year	0.00	37.57	178.64	324.52
C	Net Loan-Opening (A-B)	2054.05	2207.91	2162.90	2077.10
D	Addition due to ACE	191.43	96.06	60.08	115.36
E	Repayment during the year	37.57	141.07	145.88	151.79
F	Net Loan-Closing (C+D-E)	2207.91	2162.90	2077.10	2040.67
G	Average Loan (C+F)/2	2130.98	2185.41	2120.00	2058.88
H	Weighted Average Rate of Interest on Loan (in %)	9.0356	8.9651	8.8345	8.7596
I	<b>Interest on Loan (G*H)</b>	<b>54.71</b>	<b>195.92</b>	<b>187.29</b>	<b>180.35</b>

(₹ in lakh)

Asset-18					
	Particulars	2015-16 (Pro-rata for 152 days)	2016-17	2017-18	2018-19
A	Gross Normative Loan	640089.85	655596.20	677478.76	689785.57
B	Cumulative Repayments upto Previous Year	0.00	17567.29	61046.17	105594.22
C	Net Loan-Opening (A-B)	640089.85	638028.91	616432.58	584191.35
D	Addition due to ACE	15506.36	21882.55	12306.81	6342.39
E	Repayment during the year	17567.29	43478.88	44548.04	39474.62
F	Net Loan-Closing (C+D-E)	638028.91	616432.58	584191.35	551059.12
G	Average Loan (C+F)/2	639059.38	627230.75	600311.96	567625.23
H	Weighted Average Rate of Interest on Loan (in %)	5.1187	5.3565	5.4368	5.8382
I	<b>Interest on Loan (G*H)</b>	<b>13585.12</b>	<b>33597.61</b>	<b>32637.76</b>	<b>28962.66</b>



(₹ in lakh)

<b>Asset-19</b>				
	<b>Particulars</b>	<b>2016-17 (Pro-rata for 211 days)</b>	<b>2017-18</b>	<b>2018-19</b>
A	Gross Normative Loan	166704.80	178869.59	188017.35
B	Cumulative Repayments upto Previous Year	0.00	6340.30	17966.77
C	Net Loan-Opening (A-B)	166704.80	172529.28	170050.57
D	Addition due to ACE	12164.79	9147.76	626.56
E	Repayment during the year	6340.30	11626.47	10422.06
F	Net Loan-Closing (C+D-E)	172529.28	170050.57	160255.07
G	Average Loan (C+F)/2	169617.04	171289.93	165152.82
H	Weighted Average Rate of Interest on Loan (in %)	3.0040	3.3755	4.1570
I	<b>Interest on Loan (G*H)</b>	<b>2945.50</b>	<b>5781.89</b>	<b>6000.17</b>

**After adjustment of grants**

<b>Particulars</b>	<b>(₹ in lakh)</b>	
	<b>2018-19 (prorata 46 days)</b>	<b>2018-19 (prorata 46 days)</b>
	<b>Asset-18</b>	<b>Asset-19</b>
Gross Normative Loan	427131.01	168740.85
Cumulative Repayments upto Previous Year	145068.84	28388.83
Net Loan-Opening (A-B)	282062.17	140352.02
Addition due to ACE	914.58	78.96
Repayment during the year	3959.13	1378.38
Net Loan-Closing (C+D-E)	279017.61	139052.60
Average Loan (C+F)/2	280539.89	139702.31
Weighted Average Rate of Interest on Loan (in %)	3.8438	3.944
<b>Interest on Loan (G*H)</b>	<b>1359.00</b>	<b>694.36</b>

**Return on Equity ("RoE")**

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

<b>Year</b>	<b>Claimed effective tax rate (in %)</b>	<b>Grossed up RoE [(Base Rate)/(1-t)] (in %)</b>
2014-15	21.018	19.624
2015-16	21.382	19.716
2016-17	21.338	19.705



Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2017-18	21.337	19.704
2018-19	21.549	19.758

66. The Commission in 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:

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

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

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

68. The Petitioner has claimed RoE for 2014-19 tariff period after grossing up the RoE @ 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. Accordingly, RoE allowed in respect of the transmission assets is as follows:



(₹ in lakh)

Asset-1						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	634.74	717.86	730.88	733.35	734.30
B	Addition due to Additional Capitalization	83.12	13.02	2.47	0.95	0.00
C	Closing Equity (A+B)	717.86	730.88	733.35	734.30	734.30
D	Average Equity (A+C)/2	676.30	724.37	732.11	733.83	734.30
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>132.62</b>	<b>142.74</b>	<b>144.26</b>	<b>144.60</b>	<b>145.08</b>

(₹ in lakh)

Asset-2						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	267.71	278.42	292.80	293.18	293.18
B	Addition due to Additional Capitalization	10.71	14.38	0.38	0.00	0.00
C	Closing Equity (A+B)	278.42	292.80	293.18	293.18	293.18
D	Average Equity (A+C)/2	273.07	285.61	292.99	293.18	293.18
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>53.55</b>	<b>56.28</b>	<b>57.73</b>	<b>57.77</b>	<b>57.93</b>

(₹ in lakh)

Asset-3						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	168.08	181.17	220.85	220.88	220.88
B	Addition due to Additional Capitalization	13.09	39.68	0.03	0.00	0.00
C	Closing Equity (A+B)	181.17	220.85	220.88	220.88	220.88
D	Average Equity (A+C)/2	174.63	201.01	220.87	220.88	220.88
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>34.24</b>	<b>39.61</b>	<b>43.52</b>	<b>43.52</b>	<b>43.64</b>

(₹ in lakh)

Asset-4						
	Particulars	2014-15 (Pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	22377.53	23020.73	23469.34	23727.45	23790.72
B	Addition due to Additional Capitalization	643.20	448.61	258.11	63.02	108.42
C	Closing Equity (A+B)	23020.73	23469.34	23727.45	23790.47	23899.14
D	Average Equity (A+C)/2	22699.13	23245.03	23598.39	23758.96	23844.93
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.610	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>1768.32</b>	<b>4580.67</b>	<b>4650.30</b>	<b>4681.94</b>	<b>4711.28</b>



(₹ in lakh)

Asset-5					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Opening Equity	453.32	464.65	556.44	581.97
B	Addition due to Additional Capitalization	11.33	91.79	25.53	16.47
C	Closing Equity (A+B)	464.65	556.44	581.97	598.43
D	Average Equity (A+C)/2	458.98	510.54	569.20	590.20
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>45.22</b>	<b>100.61</b>	<b>112.17</b>	<b>116.61</b>

(₹ in lakh)

Asset-6					
	Particulars	2015-16 (Pro-rata for 181 days)	2016-17	2017-18	2018-19
A	Opening Equity	289.71	299.42	373.68	394.33
B	Addition due to Additional Capitalization	9.71	74.26	20.65	2.32
C	Closing Equity (A+B)	299.42	373.68	394.33	396.65
D	Average Equity (A+C)/2	294.57	336.55	384.00	395.49
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>28.71</b>	<b>66.32</b>	<b>75.67</b>	<b>78.14</b>

(₹ in lakh)

Asset-7					
	Particulars	2015-16 (Pro-rata for 35 days)	2016-17	2017-18	2018-19
A	Opening Equity	310.07	316.55	374.73	390.71
B	Addition due to Additional Capitalization	6.48	58.18	15.98	1.14
C	Closing Equity (A+B)	316.55	374.73	390.71	391.86
D	Average Equity (A+C)/2	313.31	345.64	382.72	391.28
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>5.90</b>	<b>68.11</b>	<b>75.42</b>	<b>77.31</b>

(₹ in lakh)

Asset-8					
	Particulars	2015-16 (Pro-rata for 113 days)	2016-17	2017-18	2018-19
A	Opening Equity	1253.75	1328.27	1565.25	1628.95
B	Addition due to Additional Capitalization	74.52	236.98	63.70	0.71
C	Closing Equity (A+B)	1328.27	1565.25	1628.95	1629.66
D	Average Equity (A+C)/2	1291.01	1446.76	1597.10	1629.30



<b>Asset-8</b>					
	<b>Particulars</b>	<b>2015-16 (Pro-rata for 113 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
<b>H</b>	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>78.55</b>	<b>285.10</b>	<b>314.72</b>	<b>321.92</b>

(₹ in lakh)

<b>Asset-9</b>					
	<b>Particulars</b>	<b>2015-16 (Pro-rata for 172 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Equity	855.49	914.52	952.95	963.51
B	Addition due to Additional Capitalization	59.03	38.44	10.55	137.78
C	Closing Equity (A+B)	914.52	952.95	963.51	1101.28
D	Average Equity (A+C)/2	885.00	933.73	958.23	1032.40
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
<b>H</b>	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>81.96</b>	<b>184.00</b>	<b>188.83</b>	<b>203.98</b>

(₹ in lakh)

<b>Asset-10</b>					
	<b>Particulars</b>	<b>2015-16 (Pro-rata for 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Equity	2425.08	2633.24	2835.23	2994.42
B	Addition due to Additional Capitalization	208.16	201.99	159.19	137.78
C	Closing Equity (A+B)	2633.24	2835.23	2994.42	3132.20
D	Average Equity (A+C)/2	2529.16	2734.24	2914.83	3063.31
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
<b>H</b>	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>249.20</b>	<b>538.81</b>	<b>574.40</b>	<b>605.25</b>

(₹ in lakh)

<b>Asset-11</b>			
	<b>Particulars</b>	<b>2017-18 (Pro-rata for 242 days)</b>	<b>2018-19</b>
A	Opening Equity	255.80	274.55
B	Addition due to Additional Capitalization	18.75	23.28
C	Closing Equity (A+B)	274.55	297.84
D	Average Equity (A+C)/2	265.18	286.20
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.758
<b>H</b>	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>34.79</b>	<b>56.55</b>





(₹ in lakh)

Asset-12			
	Particulars	2017-18 (Pro-rata for 254 days)	2018-19
A	Opening Equity	471.89	495.63
B	Addition due to Additional Capitalization	23.74	57.74
C	Closing Equity (A+B)	495.63	553.37
D	Average Equity (A+C)/2	483.76	524.50
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>66.34</b>	<b>103.63</b>

(₹ in lakh)

Asset-13			
	Particulars	2017-18 (Pro-rata for 111 days)	2018-19
A	Opening Equity	468.67	498.49
B	Addition due to Additional Capitalization	29.82	51.62
C	Closing Equity (A+B)	498.49	550.11
D	Average Equity (A+C)/2	483.58	524.30
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>28.98</b>	<b>103.59</b>

(₹ in lakh)

Asset-14					
	Particulars	2015-16 (Pro-rata for 156 days)	2016-17	2017-18	2018-19
A	Opening Equity	446.75	505.87	530.08	545.14
B	Addition due to Additional Capitalization	59.12	24.21	15.06	7.79
C	Closing Equity (A+B)	505.87	530.08	545.14	552.92
D	Average Equity (A+C)/2	476.31	517.98	537.61	549.03
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>40.01</b>	<b>102.07</b>	<b>105.94</b>	<b>108.48</b>

(₹ in lakh)

Asset-15					
	Particulars	2015-16 (Pro-rata for 153 days)	2016-17	2017-18	2018-19
A	Opening Equity	1388.31	1573.93	1627.77	1696.70
B	Addition due to Additional Capitalization	185.62	53.84	68.93	102.19
C	Closing Equity (A+B)	1573.93	1627.77	1696.70	1798.89
D	Average Equity (A+C)/2	1481.12	1600.85	1662.24	1747.80





Asset-15					
	Particulars	2015-16 (Pro-rata for 153 days)	2016-17	2017-18	2018-19
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>125.20</b>	<b>315.46</b>	<b>327.56</b>	<b>345.33</b>

(₹ in lakh)

Asset-16					
	Particulars	2015-16 (Pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Opening Equity	505.78	564.55	606.56	638.57
B	Addition due to Additional Capitalization	58.77	42.01	32.01	19.64
C	Closing Equity (A+B)	564.55	606.56	638.57	658.21
D	Average Equity (A+C)/2	535.16	585.56	622.57	648.39
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>52.73</b>	<b>115.39</b>	<b>122.68</b>	<b>128.11</b>

(₹ in lakh)

Asset-17					
	Particulars	2015-16 (Pro-rata for 104 days)	2016-17	2017-18	2018-19
A	Opening Equity	513.51	561.37	585.38	600.40
B	Addition due to Additional Capitalization	47.86	24.01	15.02	49.44
C	Closing Equity (A+B)	561.37	585.38	600.40	649.84
D	Average Equity (A+C)/2	537.44	573.38	592.89	625.12
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>30.09</b>	<b>112.99</b>	<b>116.84</b>	<b>123.51</b>

(₹ in lakh)

Asset-18					
	Particulars	2015-16 (Pro-rata for 152 days)	2016-17	2017-18	2018-19
A	Opening Equity	160022.46	163830.16	169299.95	172376.18
B	Addition due to Additional Capitalization	3807.69	5469.80	3076.23	2718.17
C	Closing Equity (A+B)	163830.16	169299.95	172376.18	175094.35
D	Average Equity (A+C)/2	161926.31	166565.05	170838.07	173735.27
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>13251.91</b>	<b>32823.31</b>	<b>33665.35</b>	<b>30000.52</b>



(₹ in lakh)

Asset-19				
	Particulars	2016-17 (Pro-rata for 211 days)	2017-18	2018-19
A	Opening Equity	41676.20	44717.39	47018.30
B	Addition due to Additional Capitalization	3041.19	2300.91	155.70
C	Closing Equity (A+B)	44717.39	47018.30	47174.00
D	Average Equity (A+C)/2	43196.80	45867.85	47096.15
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50
F	Tax Rate applicable (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (Pre-tax) (in %)	19.706	19.706	19.758
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>4920.84</b>	<b>9038.72</b>	<b>8132.54</b>

**After adjustment of grants**

(₹ in lakh)		
Particulars	2018-19 (Prorata 46 days)	2018-19 (Prorata 46 days)
	Asset-18	Asset-19
Opening Equity	175094.35	47174.00
Addition due to Additional Capitalization	391.96	33.84
Closing Equity (A+B)	175486.31	47207.84
Average Equity (A+C)/2	175290.33	47190.92
Return on Equity (Base Rate) (in %)	15.50	15.50
Tax Rate applicable (in %)	21.549	21.549
Rate of Return on Equity (Pre-tax) (in %)	19.758	19.758
<b>Return on Equity (Pre-tax) (D*G)</b>	<b>4364.82</b>	<b>1175.08</b>

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

69. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies norms for O&M Expenses for the transmission system based on type of sub-station and transmission line and the same is as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norms as per Regulation</b>					
Single Circuit (Single Conductor) (₹ lakh/km)	0.202	0.209	0.216	0.223	0.230
Single Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
Single Circuit (Bundled Conductor with six or more sub-conductors) (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
Double Circuit (Single Conductor) (km)	0.303	0.313	0.324	0.334	0.346
Double Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
Double Circuit (Bundled Conductor with	1.062	1.097	1.133	1.171	1.210



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
four or more sub-conductors) (₹ lakh/km)					
Multi Circuit (Twin & Triple Conductor) (₹ lakh/km)	1.240	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
2000 MW, Talcher- Kolar HVDC bi-pole scheme (Rs. Lakh)	1173	1271	1378	1493	1617

70. The Petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. O&M Expenses have been worked out as per 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 allowed in respect of the transmission assets are as follows:

**Asset-1**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays (Number)	1	1	1	1	1
220 kV Bays (Number)	1	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>102.51</b>	<b>105.91</b>	<b>109.43</b>	<b>113.06</b>	<b>116.81</b>

**Asset-2**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays (Number)	1	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>60.30</b>	<b>62.30</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

**Asset-3**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays (Number)	1	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>60.30</b>	<b>62.30</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

**Asset-4**

Particulars	2014-15*	2015-16	2016-17	2017-18	2018-19
Double Circuit (Bundled Conductor with four or more sub-conductors) (km)	309.00	309.00	309.00	309.00	309.00



Particulars	2014-15*	2015-16	2016-17	2017-18	2018-19
400 kV Bays (Number)	6	6	6	6	6
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>130.36</b>	<b>338.97</b>	<b>350.10</b>	<b>361.84</b>	<b>373.89</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>143.73</b>	<b>373.80</b>	<b>386.22</b>	<b>399.06</b>	<b>412.26</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>274.09</b>	<b>712.77</b>	<b>736.32</b>	<b>760.90</b>	<b>786.15</b>

\*Pro-rata has been considered from 7.11.2014 to 31.3.2015=145 days

#### Asset-5

Particulars	2014-15	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Number)	-	1	1	1	1
132 kV & below Bays (Number)	-	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>-</b>	<b>46.73</b>	<b>96.55</b>	<b>99.76</b>	<b>103.07</b>

\*Pro-rata has been considered from 1.10.2015 to 31.3.2016= 183 days

#### Asset-6

Particulars	2014-15	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Number)	-	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>-</b>	<b>30.81</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

\*Pro-rata has been considered from 3.10.2015 to 31.3.2016=181 days

#### Asset-7

Particulars	2014-15	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Number)	-	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>-</b>	<b>5.96</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

\*Pro-rata has been considered from 26.2.2016 to 31.3.2016=35 days

#### Asset-8

Particulars	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Number)	1	1	1	1
220 kV Bays (Number)	3	3	3	3
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>59.63</b>	<b>199.55</b>	<b>206.16</b>	<b>213.01</b>

\*Pro-rata has been considered from 10.12.2015 to 31.3.2016=113 days

#### Asset-9

Particulars	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Number)	2	2	2	2
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>58.56</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>

\*Pro-rata has been considered from 12.10.2015 to 31.3.2016=172 days



**Asset-10**

Particulars	2015-16*	2016-17	2017-18	2018-19
Multi Circuit (four or more sub-Conductor) (km)	0.86	0.86	0.86	0.86
Double Circuit (Twin & Triple Conductor) (km)	56.44	56.44	56.44	56.44
400 kV Bays (Number)	2	2	2	2
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>21.46</b>	<b>44.32</b>	<b>45.79</b>	<b>47.32</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>62.30</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>83.76</b>	<b>173.06</b>	<b>178.81</b>	<b>184.74</b>

\*Pro-rata has been considered from 110.2015 to 31.3.2016=183 days

**Asset-12**

Particulars	2015-16	2016-17	2017-18*	2018-19
400 kV Bays (Number)	-	-	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>-</b>	<b>-</b>	<b>46.28</b>	<b>68.71</b>

\*Pro-rata has been considered from 21.7.2017 to 31.3.2018=254 days

**Asset-13**

Particulars	2017-18*	2018-19
400 kV Bays (Number)	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>20.23</b>	<b>68.71</b>

\*Pro-rata has been considered from 11.12.2017 to 31.3.2018=111 days

**Asset-14**

Particulars	2015-16*	2016-17	2017-18	2018-19
Double Circuit (Twin & Triple Conductor) (km)	24.772	24.772	24.772	24.772
400 kV Bays (Numbers)	4	4	4	4
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>7.72</b>	<b>18.70</b>	<b>19.32</b>	<b>19.97</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>106.22</b>	<b>257.48</b>	<b>266.04</b>	<b>274.84</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>113.93</b>	<b>276.18</b>	<b>285.36</b>	<b>294.81</b>

\*Pro-rata has been considered from 28.10.2015 to 31.3.2016=156 day

**Asset-15**

Particulars	2015-16*	2016-17	2017-18	2018-19
Multi Circuit (Twin & Triple Conductor) (km)	1.158	1.158	1.158	1.158
Double Circuit (Twin & Triple Conductor) (km)	24.772	24.772	24.772	24.772
400 kV Bays (Number)	2	2	2	2
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>8.40</b>	<b>20.24</b>	<b>20.91</b>	<b>21.60</b>
<b>Sub-total O&amp;M Expenses for Sub-</b>	<b>53.45</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>



Particulars	2015-16*	2016-17	2017-18	2018-19
station (B) (₹ in lakh)				
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>61.85</b>	<b>148.98</b>	<b>153.93</b>	<b>159.02</b>

\*Pro-rata has been considered from 27.10.2015 to 31.3.2016=157 day

#### Asset-16

Particulars	2015-16*	2016-17	2017-18	2018-19
Double Circuit (single Conductor) (km)	12.931	12.931	12.931	12.931
132 kV & below Bays (Number)	4	4	4	4
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>2.02</b>	<b>4.19</b>	<b>4.32</b>	<b>4.47</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>62.30</b>	<b>128.72</b>	<b>133.00</b>	<b>137.44</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>64.32</b>	<b>132.91</b>	<b>137.32</b>	<b>141.91</b>

\*Pro-rata has been considered from 1.10.2015 to 31.3.2016=183 days

#### Asset-17

Particulars	2015-16*	2016-17	2017-18	2018-19
400 kV Bays (Numbers)	1	1	1	1
132 kV & below Bays (Number)	1	1	1	1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>26.55</b>	<b>96.55</b>	<b>99.76</b>	<b>103.07</b>

\*Pro-rata has been considered from 19.12.2015 to 31.3.2016=104 days

#### Asset-18

Particulars	2015-16*	2016-17	2017-18	**2018-19
HVDC Hexa lapwing line (km)	1753.56	1753.56	1753.56	1753.56
one Pole of 1500 MW of Bi-Pole HVDC station	1	1	1	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>532.35</b>	<b>1323.94</b>	<b>1367.78</b>	<b>1413.37</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>395.89</b>	<b>1033.50</b>	<b>1119.75</b>	<b>1212.75</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>928.24</b>	<b>2357.44</b>	<b>2487.53</b>	<b>2626.12</b>
				<b>2295.16</b>

\*Pro-rata has been considered from 1.11.2015 to 31.3.2016=152 days

\*\* Pro-rata has been considered from 1.4.2018 to 13.2.2019=319 days

#### Asset-19

Particulars	2016-17*	2017-18	**2018-19
Single Circuit (Single Conductor) (km)	113.454	113.454	113.454
One Pole of 1500 MW of Bi-Pole HVDC station	1	1	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>14.17</b>	<b>25.30</b>	<b>26.09</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>597.45</b>	<b>1119.75</b>	<b>1212.75</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>611.61</b>	<b>1145.05</b>	<b>1238.84</b>
			<b>1082.71</b>

\*Pro-rata has been considered from 2.9.2016 to 31.3.2017=211 days

\*\* Pro-rata has been considered from 1.4.2018 to 13.2.2019=319 days



## After adjusting grants

### Asset-18

Particulars	2018-19
HVDC Hexa lapwing line (km)	1753.56
One Pole of 1500 MW of Bi-Pole HVDC station	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>1413.37</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>1212.75</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>2626.12</b>
<b>Pro-rata</b>	<b>330.96</b>

\*Pro-rata has been considered from 14.2.2019 to 31.3.2019=46 days

### Asset-19

Particulars	2018-19
Single Circuit (Single Conductor) (km)	113.454
One Pole of 1500 MW of Bi-Pole HVDC station	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>26.09</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>1212.75</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>1238.84</b>
<b>Pro-rata</b>	<b>156.13</b>

\*Pro-rata has been considered from 14.2.2019 to 31.3.2019=46 days

## Interest on Working Capital ('IWC')

71. The Petitioner has claim claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The trued-up IWC allowed in respect of the transmission assets are as follows:

(₹ in lakh)

		Asset-1				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	8.54	8.83	9.12	9.42	9.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	15.38	15.89	16.41	16.96	17.52
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	81.10	84.63	84.06	82.87	81.61
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>105.02</b>	<b>109.34</b>	<b>109.60</b>	<b>109.25</b>	<b>108.87</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>14.18</b>	<b>14.76</b>	<b>14.80</b>	<b>14.75</b>	<b>14.70</b>





(₹ in lakh)

		Asset-2				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	36.35	37.23	37.54	37.14	36.77
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>50.42</b>	<b>51.77</b>	<b>52.56</b>	<b>52.66</b>	<b>52.81</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>6.81</b>	<b>6.99</b>	<b>7.10</b>	<b>7.11</b>	<b>7.13</b>

(₹ in lakh)

		Asset-3				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	27.32	29.83	31.54	30.70	30.93
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>41.39</b>	<b>44.37</b>	<b>46.56</b>	<b>46.22</b>	<b>46.96</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>5.59</b>	<b>5.99</b>	<b>6.29</b>	<b>6.24</b>	<b>6.34</b>

(₹ in lakh)

		Asset-4				
Particulars		2014-15 (pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	57.50	59.40	61.36	63.41	65.51
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	103.49	106.92	110.45	114.14	117.92
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	3356.93	3341.57	3262.12	3148.55	3057.08





<b>Asset-4</b>						
<b>Particulars</b>		<b>2014-15 (pro-rata for 145 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	3517.92	3507.89	3433.93	3326.09	3240.52
<b>E</b>	<b>Rate of Interest (in %)</b>	13.50	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>188.67</b>	<b>473.56</b>	<b>463.58</b>	<b>449.02</b>	<b>437.47</b>

(₹ in lakh)

<b>Asset-5</b>					
<b>Particulars</b>		<b>2015-16 (pro-rata for 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>A</b>	Working Capital for O&M Expenses (O&M Expenses for one month)	7.79	8.05	8.31	8.59
<b>B</b>	Working Capital for Maintenance Spares (15% of O&M Expenses)	14.02	14.48	14.96	15.46
<b>C</b>	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	78.71	82.56	86.22	86.74
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	100.52	105.09	109.50	110.79
<b>E</b>	<b>Rate of Interest (in %)</b>	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>6.79</b>	<b>14.19</b>	<b>14.78</b>	<b>14.96</b>

(₹ in lakh)

<b>Asset-6</b>					
<b>Particulars</b>		<b>2015-16 (pro-rata for 181 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>A</b>	Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
<b>B</b>	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
<b>C</b>	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	50.88	54.19	57.33	57.41
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	65.41	69.21	72.85	73.44
<b>E</b>	<b>Rate of Interest (in %)</b>	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>4.37</b>	<b>9.34</b>	<b>9.83</b>	<b>9.91</b>



(₹ in lakh)

Asset-7					
Particulars		2015-16 (pro-rata for 35 days)	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.19	5.36	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	53.56	56.36	58.79	58.66
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>68.10</b>	<b>71.38</b>	<b>74.31</b>	<b>74.69</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>0.88</b>	<b>9.64</b>	<b>10.03</b>	<b>10.08</b>

(₹ in lakh)

Asset-8					
Particulars		2015-16 (pro-rata for 113 days)	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	16.09	16.63	17.18	17.75
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	28.97	29.93	30.92	31.95
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	212.12	224.79	233.56	231.78
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>257.19</b>	<b>271.35</b>	<b>281.67</b>	<b>281.48</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>10.72</b>	<b>36.63</b>	<b>38.03</b>	<b>38.00</b>

(₹ in lakh)

Asset-9					
Particulars		2015-16 (pro-rata for 172 days)	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.38	10.73	11.09	11.45
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	18.69	19.31	19.95	20.61
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	142.39	144.86	142.84	146.62
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>171.46</b>	<b>174.90</b>	<b>173.88</b>	<b>178.69</b>

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E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	<b>10.88</b>	<b>23.61</b>	<b>23.47</b>	<b>24.12</b>

(₹ in lakh)

		<b>Asset-10</b>			
<b>Particulars</b>		<b>2015-16 (pro-rata for 183 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	13.96	14.42	14.90	15.40
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	25.13	25.96	26.82	27.71
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	376.35	388.46	391.49	394.58
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>415.44</b>	<b>428.84</b>	<b>433.21</b>	<b>437.69</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>28.04</b>	<b>57.89</b>	<b>58.48</b>	<b>59.09</b>

(₹ in lakh)

		<b>Asset-11</b>	
<b>Particulars</b>		<b>2017-18 (pro-rata for 242 days)</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	34.35	35.67
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>34.35</b>	<b>35.67</b>
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>2.88</b>	<b>4.49</b>

(₹ in lakh)

		<b>Asset-12</b>	
<b>Particulars</b>		<b>2017-18 (pro-rata for 254 days)</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.54	5.73



<b>Asset-12</b>			
<b>Particulars</b>		<b>2017-18 (pro-rata for 254 days)</b>	<b>2018-19</b>
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	74.10	77.05
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	89.62	93.08
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>7.86</b>	<b>11.73</b>

(₹ in lakh)

<b>Asset-13</b>			
<b>Particulars</b>		<b>2017-18 (pro-rata for 111 days)</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.54	5.73
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.98	10.31
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	74.11	77.50
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	89.63	93.53
E	Rate of Interest (in %)	12.60	12.60
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>3.43</b>	<b>11.78</b>

(₹ in lakh)

<b>Asset-14</b>					
<b>Particulars</b>		<b>2015-16 (pro-rata for 156 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	22.27	23.02	23.78	24.57
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	40.09	41.43	42.80	44.22
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	112.92	118.65	120.68	121.56
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	175.29	183.09	187.26	190.35
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50

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Asset-14					
Particulars		2015-16 (pro-rata for 156 days)	2016-17	2017-18	2018-19
F	Interest of Working Capital (D*E)	10.09	24.72	25.28	25.70

(₹ in lakh)

Asset-15					
Particulars		2015-16 (pro-rata for 157 days)	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	12.02	12.42	12.83	13.25
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	21.63	22.35	23.09	23.85
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	231.22	242.55	240.71	243.57
D	<b>Total Working Capital (A+B+C)</b>	264.86	277.31	276.63	280.67
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	15.34	37.44	37.35	37.89

(₹ in lakh)

Asset-16					
Particulars		2015-16 (pro-rata for 183 days)	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.72	11.08	11.44	11.83
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	19.30	19.94	20.60	21.29
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	96.61	101.95	103.46	104.47
D	<b>Total Working Capital (A+B+C)</b>	126.62	132.96	135.50	137.58
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	8.55	17.95	18.29	18.57



(₹ in lakh)

		<b>Asset-17</b>			
<b>Particulars</b>		<b>2015-16 (pro-rata for 104 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	7.79	8.05	8.31	8.59
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	14.02	14.48	14.96	15.46
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	89.86	93.70	94.27	95.82
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>111.66</b>	<b>116.23</b>	<b>117.55</b>	<b>119.87</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>4.28</b>	<b>15.69</b>	<b>15.87</b>	<b>16.18</b>

(₹ in lakh)

		<b>Asset-18</b>			
<b>Particulars</b>		<b>2015-16 (pro-rata for 152 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	186.26	196.45	207.29	218.84
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	335.27	353.62	373.13	393.92
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	18623.43	19152.86	19337.94	19666.06
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>19144.96</b>	<b>19702.93</b>	<b>19918.37</b>	<b>20278.82</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>1073.37</b>	<b>2659.90</b>	<b>2688.98</b>	<b>2392.62</b>

(₹ in lakh)

		<b>Asset-19</b>		
<b>Particulars</b>		<b>2016-17 (pro-rata for 211 days)</b>	<b>2017-18</b>	<b>2018-19</b>
A	Working Capital for O&M Expenses (O&M Expenses for one month)	88.17	95.42	103.24
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	158.70	171.76	185.83
C	Working Capital for Receivables (equivalent to two months of	4370.75	4704.76	5001.95



	Annual Fixed Charges/Annual Transmission Charges)			
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	4617.62	4971.93	5291.01
<b>E</b>	Rate of Interest (in %)	12.80	12.80	12.80
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>341.68</b>	<b>636.41</b>	<b>591.90</b>

**After adjusting grants**

Particulars		(₹ in lakh)	
		2018-19 (pro-rata for 46 days)	2018-19 (pro-rata for 46 days)
		Asset-18	Asset-19
A	Working Capital for O&M Expenses (O&M Expenses for one month)	218.84	103.24
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	393.92	185.83
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	13530.62	4601.03
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>14143.38</b>	<b>4890.09</b>
<b>E</b>	Rate of Interest (in %)	12.20	12.20
<b>F</b>	<b>Interest of Working Capital (D*E)</b>	<b>217.46</b>	<b>75.19</b>

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

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

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	117.22	125.37	126.71	127.01	127.10
Interest on Loan	120.05	118.99	109.18	97.81	86.00
Return on Equity	132.62	142.74	144.26	144.60	145.08
O&M Expenses	102.51	105.91	109.43	113.06	116.81
Interest on Working Capital	14.18	14.76	14.80	14.75	14.70
<b>Total</b>	<b>486.58</b>	<b>507.77</b>	<b>504.38</b>	<b>497.23</b>	<b>489.69</b>

Particulars	Asset-2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	48.06	50.27	51.57	51.60	51.60
Interest on Loan	49.37	47.56	44.47	39.87	35.28
Return on Equity	53.55	56.28	57.73	57.77	57.93
O&M Expenses	60.30	62.30	64.37	66.51	68.71



Particulars	Asset-2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	6.81	6.99	7.10	7.11	7.13
<b>Total</b>	<b>218.09</b>	<b>223.40</b>	<b>225.24</b>	<b>222.86</b>	<b>220.65</b>

(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	30.73	35.38	38.87	38.87	38.87
Interest on Loan	33.07	35.70	36.18	29.03	28.01
Return on Equity	34.24	39.61	43.52	43.52	43.64
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Interest on Working Capital	5.59	5.99	6.29	6.24	6.34
<b>Total</b>	<b>163.93</b>	<b>178.98</b>	<b>189.23</b>	<b>184.17</b>	<b>185.57</b>

(₹ in lakh)

Particulars	Asset-4				
	2014-15 (pro-rata for 145 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	2380.72	6117.25	6178.09	6205.00	6220.09
Interest on Loan	3389.65	8165.19	7544.44	6794.40	6187.50
Return on Equity	1768.32	4580.67	4650.30	4681.96	4711.28
O&M Expenses	274.09	712.77	736.32	760.90	786.15
Interest on Working Capital	188.67	473.56	463.58	449.02	437.47
<b>Total</b>	<b>8001.45</b>	<b>20049.44</b>	<b>19572.73</b>	<b>18891.28</b>	<b>18342.49</b>

(₹ in lakh)

Particulars	Asset-5			
	2015-16 (pro-rata for 183 days)	2016-17	2017-18	2018-19
Depreciation	54.16	116.15	125.06	128.26
Interest on Loan	83.24	167.90	165.54	157.57
Return on Equity	45.22	100.61	112.17	116.61
O&M Expenses	46.73	96.55	99.76	103.07
Interest on Working Capital	6.79	14.19	14.78	14.96
<b>Total</b>	<b>236.14</b>	<b>495.40</b>	<b>517.31</b>	<b>520.47</b>

(₹ in lakh)

Particulars	Asset-6			
	2015-16 (pro-rata for 181 days)	2016-17	2017-18	2018-19
Depreciation	34.17	75.75	83.25	85.07
Interest on Loan	52.90	109.38	108.70	102.60
Return on Equity	28.71	66.32	75.67	78.14
O&M Expenses	30.81	64.37	66.51	68.71
Interest on Working Capital	4.37	9.34	9.83	9.91
<b>Total</b>	<b>150.96</b>	<b>325.16</b>	<b>343.96</b>	<b>344.43</b>





(₹ in lakh)

Particulars	Asset-7			
	2015-16 (pro-rata for 35 days)	2016-17	2017-18	2018-19
Depreciation	7.03	79.05	85.03	86.41
Interest on Loan	10.95	116.99	115.76	109.45
Return on Equity	5.90	68.11	75.42	77.31
O&M Expenses	5.96	64.37	66.51	68.71
Interest on Working Capital	0.88	9.64	10.03	10.08
<b>Total</b>	<b>30.72</b>	<b>338.16</b>	<b>352.75</b>	<b>351.96</b>

(₹ in lakh)

Particulars	Asset-8			
	2015-16 (pro-rata for 113 days)	2016-17	2017-18	2018-19
Depreciation	99.89	350.49	375.73	381.09
Interest on Loan	144.16	476.98	466.74	436.67
Return on Equity	78.55	285.10	314.72	321.92
O&M Expenses	59.63	199.55	206.16	213.01
Interest on Working Capital	10.72	36.63	38.03	38.00
<b>Total</b>	<b>392.95</b>	<b>1348.75</b>	<b>1401.38</b>	<b>1390.69</b>

(₹ in lakh)

Particulars	Asset-9			
	2015-16 (pro-rata for 172 days)	2016-17	2017-18	2018-19
Depreciation	102.70	226.74	230.63	241.99
Interest on Loan	147.39	306.07	281.09	272.23
Return on Equity	81.96	184.00	188.83	203.98
O&M Expenses	58.56	128.74	133.02	137.42
Interest on Working Capital	10.88	23.61	23.47	24.12
<b>Total</b>	<b>401.49</b>	<b>869.16</b>	<b>857.04</b>	<b>879.74</b>

(₹ in lakh)

Particulars	Asset-10			
	2015-16 (pro-rata for 183 days)	2016-17	2017-18	2018-19
Depreciation	323.39	682.97	714.23	738.67
Interest on Loan	444.66	878.05	823.02	779.74
Return on Equity	249.20	538.81	574.40	605.25
O&M Expenses	83.76	173.06	178.81	184.74
Interest on Working Capital	28.04	57.89	58.48	59.09
<b>Total</b>	<b>1129.05</b>	<b>2330.78</b>	<b>2348.94</b>	<b>2367.49</b>



(₹ in lakh)

Particulars	Asset-11	
	2017-18 (pro-rata for 242 days)	2018-19
Depreciation	46.20	73.34
Interest on Loan	53.35	79.62
Return on Equity	34.79	56.55
O&M Expenses	0.00	0.00
Interest on Working Capital	2.88	4.49
<b>Total</b>	<b>137.22</b>	<b>214.00</b>

(₹ in lakh)

Particulars	Asset-12	
	2017-18 (pro-rata for 254 days)	2018-19
Depreciation	81.67	124.59
Interest on Loan	107.27	153.63
Return on Equity	66.34	103.64
O&M Expenses	46.28	68.71
Interest on Working Capital	7.86	11.73
<b>Total</b>	<b>309.42</b>	<b>462.30</b>

(₹ in lakh)

Particulars	Asset-13	
	2017-18 (pro-rata for 111 days)	2018-19
Depreciation	35.72	124.95
Interest on Loan	46.87	155.95
Return on Equity	28.98	103.59
O&M Expenses	20.23	68.71
Interest on Working Capital	3.43	11.78
<b>Total</b>	<b>135.23</b>	<b>464.98</b>

(₹ in lakh)

Particulars	Asset-14			
	2015-16 (pro-rata for 156 days)	2016-17	2017-18	2018-19
Depreciation	49.46	126.78	131.83	134.43
Interest on Loan	75.29	182.12	175.64	165.94
Return on Equity	40.01	102.08	105.95	108.49
O&M Expenses	113.93	276.18	285.36	294.81
Interest on Working Capital	10.09	24.72	25.28	25.70
<b>Total</b>	<b>288.78</b>	<b>711.88</b>	<b>724.06</b>	<b>729.37</b>



(₹ in lakh)

Particulars	Asset-15			
	2015-16 (pro-rata for 157 days)	2016-17	2017-18	2018-19
Depreciation	163.55	412.66	428.73	446.75
Interest on Loan	229.17	540.77	496.72	472.40
Return on Equity	125.20	315.46	327.56	345.33
O&M Expenses	61.85	148.98	153.93	159.02
Interest on Working Capital	15.34	37.44	37.35	37.89
<b>Total</b>	<b>595.11</b>	<b>1455.31</b>	<b>1444.29</b>	<b>1461.39</b>

(₹ in lakh)

Particulars	Asset-16			
	2015-16 (pro-rata for 183 days)	2016-17	2017-18	2018-19
Depreciation	65.54	144.14	153.69	159.55
Interest on Loan	98.68	201.31	188.78	178.67
Return on Equity	52.73	115.39	122.68	128.11
O&M Expenses	64.32	132.91	137.32	141.91
Interest on Working Capital	8.55	17.95	18.29	18.57
<b>Total</b>	<b>289.82</b>	<b>611.70</b>	<b>620.76</b>	<b>626.81</b>

(₹ in lakh)

Particulars	Asset-17			
	2015-16 (pro-rata for 104 days)	2016-17	2017-18	2018-19
Depreciation	37.57	141.07	145.88	151.79
Interest on Loan	54.71	195.92	187.29	180.35
Return on Equity	30.09	112.99	116.84	123.51
O&M Expenses	26.55	96.55	99.76	103.07
Interest on Working Capital	4.28	15.69	15.87	16.18
<b>Total</b>	<b>153.20</b>	<b>562.22</b>	<b>565.64</b>	<b>574.90</b>

(₹ in lakh)

Particulars	Asset-18			
	2015-16 (pro-rata for 152 days)	2016-17	2017-18	2018-19
Depreciation	17567.29	43478.88	44548.04	39474.62
Interest on Loan	13585.12	33597.61	32637.76	28962.66
Return on Equity	13251.91	32823.31	33665.35	30000.52
O&M Expenses	928.24	2357.44	2487.53	2295.16
Interest on Working Capital	1073.37	2659.90	2688.98	2392.62
<b>Total</b>	<b>46405.93</b>	<b>114917.14</b>	<b>116027.67</b>	<b>103125.58</b>



(₹ in lakh)

Particulars	Asset-19		
	2016-17 (pro-rata for 211 days)	2017-18	2018-19
Depreciation	6340.30	11626.47	10422.06
Interest on Loan	2945.50	5781.89	6000.17
Return on Equity	4920.84	9038.72	8132.54
O&M Expenses	611.61	1145.05	1082.71
Interest on Working Capital	341.68	636.41	591.90
<b>Total</b>	<b>15159.93</b>	<b>28228.54</b>	<b>26229.38</b>

**After adjusting grants**

(₹ in lakh)

Particulars	2018-19 (pro-rata for 46 days)	2018-19 (pro-rata for 46 days)
	Asset-18	Asset-19
Depreciation	3959.13	1378.38
Interest on Loan	1359.00	694.36
Return on Equity	4364.82	1175.08
O&M Expenses	330.96	156.13
Interest on Working Capital	217.46	75.19
<b>Total</b>	<b>10231.37</b>	<b>3479.14</b>

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

73. The Petitioner has combined tariff forms for AC assets i.e. Asset-1 to Asset-17 and has claimed their combined tariff for 2019-24 period as a Combined Asset while separate tariff has been claimed for HVDC assets i.e. Asset-18 and Asset-19 for 2019-24 tariff period.

74. The Petitioner has claimed the following transmission charges in respect of the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period:

(₹ in lakh)

Combined Asset (Asset-1 to Asset-17)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	9445.60	9499.85	9514.32	9514.32	9514.32
Interest on Loan	8947.64	8186.20	7371.81	6539.83	5706.04
Return on Equity	7094.32	7168.74	7184.18	7184.18	7184.18
Interest on Working Capital	466.29	461.01	452.19	442.77	432.34
O&M Expenses	1909.23	1976.09	2044.96	2116.79	2189.41



<b>Combined Asset (Asset-1 to Asset-17)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>201-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Total</b>	<b>27863.08</b>	<b>27291.89</b>	<b>26567.46</b>	<b>25797.89</b>	<b>25026.29</b>

(₹ in lakh)

<b>Asset-18</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>201-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	31706.00	31807.93	31865.60	31866.29	31866.29
Interest on Loan	9820.23	8888.12	7827.30	6685.51	5524.56
Return on Equity	33130.12	33349.88	33411.43	33412.16	33412.16
Interest on Working Capital	1278.15	1279.13	1270.63	1259.35	1244.79
O&M Expenses	3599.71	3725.37	3856.04	3991.72	4131.15
<b>Total</b>	<b>79534.21</b>	<b>79050.43</b>	<b>78231.00</b>	<b>77215.03</b>	<b>76178.95</b>

(₹ in lakh)

<b>Asset-19</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>201-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	11094.43	11216.42	11219.72	11219.72	11219.72
Interest on Loan	5256.22	5086.14	4749.80	4297.52	3845.59
Return on Equity	9028.73	9171.09	9174.61	9174.61	9174.61
Interest on Working Capital	438.75	443.30	440.41	435.72	430.06
O&M Expenses	1310.09	1356.00	1403.63	1452.65	1503.79
<b>Total</b>	<b>27128.22</b>	<b>27272.95</b>	<b>26988.17</b>	<b>26580.22</b>	<b>26173.77</b>

75. The Petitioner has claimed the following IWC in respect of the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period:

(₹ in lakh)

<b>Combined Asset (Asset-1 to Asset-17)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses	159.10	164.67	170.41	176.40	182.45
Maintenance Spares	286.38	296.41	306.84	317.52	328.41
Receivables	3424.18	3364.75	3275.44	3180.56	3077.00
<b>Total</b>	<b>3869.66</b>	<b>3825.83</b>	<b>3752.69</b>	<b>3674.48</b>	<b>3587.86</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>

(₹ in lakh)

<b>Asset-18</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses	299.98	310.45	321.34	332.64	344.26
Maintenance Spares	539.96	558.81	578.41	598.76	619.67
Receivables	9767.15	9745.94	9644.92	9519.66	9366.26
<b>Total</b>	<b>10607.09</b>	<b>10615.20</b>	<b>10544.67</b>	<b>10451.06</b>	<b>10330.19</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1278.15</b>	<b>1279.13</b>	<b>1270.63</b>	<b>1259.35</b>	<b>1244.79</b>



(₹ in lakh)

Asset-19					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	109.17	113.00	116.97	121.05	125.32
Maintenance Spares	196.51	203.40	210.54	217.90	225.57
Receivables	3335.44	3362.42	3327.31	3277.01	3218.09
<b>Total</b>	<b>3,641.12</b>	<b>3,678.82</b>	<b>3,654.82</b>	<b>3,615.96</b>	<b>3,568.98</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>438.75</b>	<b>443.30</b>	<b>440.41</b>	<b>435.72</b>	<b>430.06</b>

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

76. The Petitioner has claimed E-COD of the Combined Asset (Asset-1 to Asset-17) as 9.3.2015. Based on the trued-up admitted capital cost and actual COD of all the assets, E-COD has been worked out as follows:

Computed of E-COD					
Assets	Actual COD	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (in %)	No. of days from last COD	Weighted days
Asset-1	1.7.2012	2447.67	1.36	1989	26.97
Asset-2	1.10.2012	977.25	0.54	1897	10.27
Asset-3	1.3.2013	736.26	0.41	1746	7.12
Asset-4	7.11.2014	118031.67	65.40	1130	738.99
Asset-5	1.10.2015	2750.31	1.52	802	12.22
Asset-6	3.10.2015	1805.01	1.00	800	8.00
Asset-7	26.2.2016	1833.86	1.02	654	6.65
Asset-8	10.12.2015	7561.67	4.19	732	30.67
Asset-9	12.10.2015	5101.79	2.83	791	22.36
Asset-10	1.10.2015	14509.51	8.04	802	64.47
Asset-11	1.8.2017	1428.53	0.79	132	1.04
Asset-12	21.7.2017	2651.48	1.47	143	2.10
Asset-13	11.12.2017	2648.55	1.47	0	0.00
Asset-14	28.10.2015	2751.89	1.52	775	11.82
Asset-15	27.10.2015	8824.49	4.89	776	37.94
Asset-16	1.10.2015	3258.30	1.81	802	14.48
Asset-17	19.12.2015	3166.82	1.75	723	12.69
<b>Total</b>		<b>180485.06</b>	<b>100.00</b>		<b>1007.79</b>
<b>E-COD (Latest COD – Total Weighted Days) 9.3.2015</b>					

77. E-COD of AC system is used to determine the lapsed life of the project as a



whole which works out as four (4) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

**Weighted Average Life (“WAL”)**

78. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL. The Combined Asset (Asset-1 to Asset-17) 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.

79. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019, irrespective of life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset (Asset-1 to Asset-17) has been worked out as 32 years and the same is as follows:

<b>Admitted capital cost (Excluding land) as on 31.3.2019)</b>				
<b>Particulars</b>	<b>Combined asset cost (₹ in lakh) (1)</b>	<b>Life in years (2)</b>	<b>Weighted cost (3)=(1) x (2) (₹ in lakh) (3)</b>	<b>Weighted average life of asset (in Years) (4)=(3)/(1)</b>
Building	6623.27	25	165581.68	
Transmission Line	128025.91	35	4480906.73	
Sub-station Equipment	44446.19	25	1111154.70	
PLCC	719.89	15	10798.39	
Land (Lease hold)	0.00	25	0.00	
IT Equipment	0.00	6.67	0.00	
<b>Total</b>	<b>179815.25</b>		<b>5768441.49</b>	<b>32.08 years, rounded off to 32 years</b>



80. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the Combined Asset is 9.3.2015 and the lapsed life of the project as a whole, works out as four years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E- COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 28 years.

### **Capital Cost**

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

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

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

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





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

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly 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 Asset-forming part of the project, but not in use, as declared in the tariff petition;  
(b) De-capitalised Asset-after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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



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

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

82. The trued-up capital cost as on 31.3.2019 for Asset-1 to Asset-17 has been considered as capital cost as on 31.3.2019 for Combined Asset (Asset-1 to Asset-17). 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 (Asset-1 to Asset-17) as on 31.3.2019. Further, with regard to Asset-18 and Asset-19 (being HVDC assets), the Petitioner has claimed the tariff separately as per requirement of Sharing Regulations.

83. Accordingly, the trued-up capital cost of ₹180485.06 lakh, ₹603531.90 lakh and ₹216027.66 lakh for the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19, respectively, is considered as admitted capital cost as on 31.3.2019 for working out tariff for the 2019-24 tariff period. The Petitioner has claimed ACE for 2019-24 tariff period and estimated capital cost as on 31.3.2024 as follows:

					(₹ in lakh)
Assets	FR Apportioned approved cost	RCE-II Apportioned approved cost	Expenditure up to 1.4.2019 (as claimed )	ACE claimed 2019-24	Estimated completion cost as on 31.3.2024 (as claimed)
Combined Asset	154966.52	191684.43	180586.90	2634.93	183221.83



(Asset-1 to 17)					
Asset-18	641074.53	887106.06	872974.85	7755.42	880730.27
Asset-19	194699.17	259005.37	236551.67	5052.94	241604.61
<b>Total</b>	<b>990740.22</b>	<b>1337795.86</b>	<b>1290113.42</b>	<b>15443.29</b>	<b>1305556.71</b>

84. We have considered the submissions of the Petitioner. The cost of Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 is within RCE-II. The capital cost allowed as on 1.4.2019 for the Combined Asset (Asset-1 to 17), Asset-18 and Asset-19 is as follows:

(₹ in lakh)	
Assets	Expenditure up to 1.4.2019
Combined Asset (Asset-1 to 17)	180485.06
Asset-18	603531.90
Asset-19	216027.66

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

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

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

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

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

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

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



future date and the works deferred for execution.”

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

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

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

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

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

86. The Petitioner has claimed projected ACE in respect of the transmission assets and has submitted the Auditor’s Certificate in support of the same. The Petitioner has submitted that claimed ACE is incurred on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and the same is covered under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations.

87. Asset-wise ACE claimed by the Petitioner is as follows:



(₹ in lakh)

Asset details	Projected ACE for 2019-24				Total ACE claimed during 2019-24 tariff period
	2019-20	2020-21	2021-22	2022-23	
Asset-1	37.84	0.00	0.00	0.00	37.84
Asset-2	19.83	0.00	0.00	0.00	19.83
Asset-3	15.72	0.00	0.00	0.00	15.72
Asset-4	1040.51	290.16	0.00	0.00	1330.67
Asset-5	96.41	0.00	0.00	0.00	96.41
Asset-6	112.80	0.00	0.00	0.00	112.80
Asset-7	89.35	0.00	0.00	0.00	89.35
Asset-8	282.51	0.00	0.00	0.00	282.51
Asset-9	57.32	0.00	0.00	0.00	57.32
Asset-10	57.32	58.62	0.00	0.00	115.94
Asset-11	0.00	0.00	0.00	0.00	0.00
Asset-12	33.99	0.00	0.00	0.00	33.99
Asset-13	37.68	0.00	0.00	0.00	37.68
Asset-14	45.62	80.51	0.00	0.00	126.13
Asset-15	45.62	101.20	0.00	0.00	146.82
Asset-16	73.12	17.46	0.00	0.00	90.58
Asset-17	41.34	0.00	0.00	0.00	41.34
Asset-18	5570.85	2158.57	26.00	0.00	7755.42
Asset-19	4927.92	125.02	0.00	0.00	5052.94
<b>Total</b>	<b>12585.75</b>	<b>2831.54</b>	<b>26.00</b>	<b>0.00</b>	<b>15443.29</b>

88. The Petitioner has submitted the details of cut-off date of the transmission assets and with regulation under which the ACE is claimed and the same is as follows:

Assets	COD	Cut-off date	ACE Regulation during 2019-2024				
			2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	1.7.2012	31.3.2015	25(1)(f)	-	-	-	-
Asset-2	1.10.2012	31.3.2015	25(1)(f)	-	-	-	-
Asset-3	1.3.2013	31.3.2016	25(1)(f)	-	-	-	-
Asset-4	7.11.2014	31.3.2017	25(2)(b)	25(2)(b)	-	-	-
Asset-5	1.10.2015	31.3.2018	25(1)(f)	-	-	-	-
Asset-6	3.10.2015	31.3.2018	25(1)(f)	-	-	-	-
Asset-7	26.2.2016	31.3.2019	25(1)(f)	-	-	-	-
Asset-8	10.12.2015	31.3.2018	25(1)(f)	-	-	-	-
Asset-9	12.10.2015	31.3.2018	25(1)(f)	-	-	-	-
Asset-10	1.10.2015	31.3.2018	25(1)(f)	25(1)(f)	-	-	-
Asset-11	1.8.2017	31.3.2020	-	-	-	-	-
Asset-12	21.7.2017	31.3.2020	24(1)(a) & 24(1)(b)	-	-	-	-
Asset-13	11.12.2017	31.3.2020	24(1)(a) & 24(1)(b)	-	-	-	-



Assets	COD	Cut-off date	ACE Regulation during 2019-2024				
			2019-20	2020-21	2021-22	2022-23	2023-24
Asset-14	28.10.2015	31.3.2018	25(1)(f)	25(1)(f)	-	-	-
Asset-15	27.10.2015	31.3.2018	25(1)(f)	25(1)(f)	-	-	-
Asset-16	1.10.2015	31.3.2018	25(1)(f)	25(1)(f)	-	-	-
Asset-17	19.12.2015	31.3.2018	25(1)(f)	25(1)(f)	-	-	-
Asset-18	1.11.2015	31.3.2018	25(1)(f)	25(1)(f)	25(1)(f)	-	-
Asset-19	2.9.2016	31.3.2019	25(1)(f)	25(1)(f)	-	-	-

89. The Petitioner *vide* affidavit dated 8.3.2021 has submitted that ACE claimed for Asset-1 to Asset-19 is within the original scope of work. However, ACE claimed during the year 2019-20 and 2020-21 for Asset-4 and Asset-18 is on account of construction of pile foundation due to change in river course of Pagladia and Maansiri river and the same has been approved in 17<sup>th</sup> TCC meeting of NERPC held on 4.10.2016. Further, the Petitioner has submitted that de-capitalization of Asset-4 and Asset-18 during 2019-20 is on account of shifting of existing tower on new pile foundation and dismantling of tower parts, conductors and insulators.

90. The Petitioner has submitted that ACE claimed by it for 2019-24 tariff period is based on projected expenditure and the actual capital expenditure to be incurred during 2019-24 and will be finalized after the closing of contract which may be higher or lower than the estimated ACE submitted. The payments to be made during 2019-24 period after submission of invoice and after reconciliation in accordance with the provisions of the contract. The Petitioner has provided the liability flow statement indicating contractor-wise details of liabilities and balance work for 2019-24 tariff period for the transmission assets. The Petitioner has clarified that no 'previously recognized liabilities' is to be discharged beyond 2019-24 tariff period.



91. The Petitioner vide affidavit dated 8.3.2021 has submitted that ACE claimed for Asset-1 to Asset-19 is within the original scope of work. However, ACE incurred during the year 2019-20 and 2020-21 for Asset-4 (400 kV Balipara-Bongaigaon D/C line) and Asset-18 ( $\pm$  800 kV Biswanath Chariali–Agra HVDC line) is on account of construction of pile foundation due to the change in the course of Pagladia and Maansiri river and the same has been approved in 17th TCC meeting and 17th NERPC meeting held on 4.10.2016. The ACE towards pile foundation in case of Asset-4 and Asset-18 has been claimed under Regulation 25(2)(b) of the 2019 Tariff Regulations. The Petitioner has also submitted that ACE incurred is inclusive of undischarged IDC.

92. We have considered the submissions of the Petitioner. The ACE in case of Asset-1 to Asset-19 incurred for the work executed within the 'cut-off' date is allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations and the ACE in case of Asset-12 and Asset-13 beyond the 'cut-off' date is allowed under Regulation 25(1)(d) and Regulation 25(1)(f) of the 2019 Tariff Regulations. The ACE towards pile foundation in case of Asset-4 and Asset-18, Balipara-Bongaigaon line and Biswanath Chariali–Agra HVDC line, has become necessary due to change in river course and proximity of the river to the tower foundation and the same was also discussed and approved in the 125<sup>th</sup> OCCM, 17<sup>th</sup> TCC and 17<sup>th</sup> NERPC meetings. The same is allowed under Regulation 25(2)(b) of the 2019 Tariff Regulations.

93. Asset-wise ACE allowed in respect of the transmission assets is as follows:





Asset	ACE allowed/ dis-allowed
Asset-1	The Petitioner has claimed an amount of ₹37.84 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-2	The Petitioner has claimed an amount of ₹19.83 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-3	The Petitioner has claimed an amount of ₹15.72 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-4	Out of the total ACE of ₹1330.67 lakh, an amount of ₹1199.62 is towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed an amount of ₹131.05 lakh towards pile foundation works and the same has been allowed under Regulation 25(2)(b) of the 2019 Tariff Regulations.
Asset-5	The Petitioner has claimed an amount of ₹96.41 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-6	The Petitioner has claimed an amount of ₹112.80 lakh towards outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-7	The Petitioner has claimed an amount of ₹89.35 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-8	The Petitioner has claimed an amount of ₹282.51 lakh towards outstanding liability towards works executed prior to cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-9	The Petitioner has claimed an amount of ₹57.32 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-10	The Petitioner has claimed an amount of ₹57.32 lakh and ₹58.62 lakh for outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.





Asset-12	The Petitioner has claimed an amount of ₹13.60 lakh towards undischarged liabilities and an amount of ₹20.39 lakh for works deferred for execution upto the cut-off date and the same has been allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations.
Asset-13	The Petitioner has claimed an amount of ₹13.59 lakh towards undischarged liabilities and an amount of ₹24.09 lakh for works deferred for execution upto the cut-off date and the same has been allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations.
Asset-14	The Petitioner has claimed an amount of ₹45.62 lakh and ₹80.51 lakh towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-15	The Petitioner has claimed an amount of ₹45.62 lakh and ₹101.2 lakh for outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-16	The Petitioner has claimed an amount of ₹73.12 lakh and ₹17.46 lakh for outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-17	The Petitioner has claimed an amount of ₹41.34 lakh for outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.
Asset-18	Out of the total ACE of ₹7755.42 lakh, an amount of ₹7716.86 lakh is towards outstanding liability for works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed an amount of ₹38.56 lakh towards pile foundation works and the same has been allowed under Regulation 25(2)(b) of the 2019 Tariff Regulations.
Asset-19	The Petitioner has claimed an amount of ₹4927.92 lakh and ₹125.02 lakh towards outstanding liability towards works executed prior to the cut-off date and to be discharged in 2019-20 and 2020-21 and the same has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations.

**De-capitalisation:**

94. The Petitioner has carried out de-capitalisation in respect of Asset-4 and Asset-18 in 2019-20. The Petitioner has provided Form-10B for Asset-4 and Asset-18 and submitted that de-capitalization of Asset-4 and Asset-18 is projected during 2019-20 on account of shifting of existing tower on new pile foundation and



dismantling of tower parts, conductors and insulators. The assets are in use and shifted on new pile foundation tower by availing minimum shut-down of the said lines. The details of shut-down taken for shifting of the transmission lines from existing tower foundations to new pile foundations is as follows:

- (i) **Asset-4:** Shut-down availed from 24.4.2019 to 1.6.2019 for shifting on new pile foundation and line charged on 1.6.2019.
- (ii) **Asset-18:** Shut-down availed from 5.1.2020 to 11.1.2020 for shifting on new pile foundation and line charged on 11.1.2020.

95. The details submitted by the Petitioner in Form-10B in respect of Asset-4 and Asset-18 are as follows:

Assets	Category	Date/ Year of decapitalization	Details of asset decapitalised	Date/ Year of capitalization of asset/ equipment being decapitalised	Original capital cost admitted for tariff for the asset being decapitalised	Debt-Equity ratio considered for tariff on the capital cost	Cummulative depreciation corresponding to decapitalised asset upto the date of decapitalisation	Cummulative repayment of loan corresponding to decapitalised asset upto the date of decapitalisation	Details of petition in which tariff of the asset being decapitalised was approved by Commission
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Asset-4	Transmission Line	1.6.2019 (2019-20)	Conductors & Insulators	7.11.2014 (2014-15)	19.64	80:20	4.56	4.56	Order dated 14.7.2016 in P. No. 65/TT/2015
Asset-18	Transmission Line	11.1.2020 (2019-20)	Towers, Conductors & Insulators	1.11.2015 (2015-16)	213.47(*)	80:20	38.02	38.02	Order dated 17.12.2019 in P. No. 363/TT/2019

(\*) The amount shown in Form-10A is ₹147.59 lakh which is after adjustment of grant amount

96. The Petitioner has further submitted that cumulative depreciation has been adjusted by taking into account the depreciation recovered in tariff by the decapitalized assets during its useful life and has requested to allow to recover the unrecovered depreciation in case of Asset-4 and Asset-18, separately, on account



of de-capitalization. The details of depreciation recovered from de-capitalized asset is as follows:

(₹ in lakh)

Assets	Gross block of de-capitalized asset (A)	Year of de-capitalization	Cumulative depreciation recovered (B)	Unrecovered Depreciation (0.9*A-B)
Asset-4	19.64	2019-20	4.56	13.12
Asset-18	147.59*	2019-20	38.02	94.81

\*The gross block of de-capitalized asset in case of Asset-18 has been considered net of grant.

97. We have considered the submission of the Petitioner. The Petitioner has prayed for allowing the unrecovered depreciation in case of the de-capitalised assets. It is observed that the assets are no more in use and they are to be removed from the capital cost and as they are not part of the capital cost and hence, depreciation cannot be allowed. It is observed that there is no specific provision for recovering unrecovered depreciation in the 2019 Tariff Regulations. Accordingly, we are not inclined to allow the un-recovered depreciation claimed by the Petitioner.

98. The details of ACE allowed is subject to truing up is as follows:

(₹ in lakh)

Assets	ACE 2019-24					Total ACE for 2019-24 (as allowed)
	2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset (Asset-1 to Asset-17)	2086.98	547.95	0.00	0.00	0.00	2634.93
Asset-18	5,636.72	2158.57	26.00	0.00	0.00	7821.29
Asset-19	4927.92	125.02	0.00	0.00	0.00	5052.94

99. Accordingly, capital cost considered for the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period is as follows:



							(₹ in lakh)
Assets	Capital cost as on 1.4.2019	2019-20	2020-21	2021-22	2022-23	2023-24	Capital cost as on 31.3.2024
Combined Asset- (Asset-1 to Asset-17)	180485.06	2086.97	547.95	0.00	0.00	0.00	183119.98
Asset-18	603531.90	5636.72	2158.57	26.00	0.00	0.00	611353.19
Asset-19	216027.66	4927.92	125.02	0.00	0.00	0.00	221080.60

### **Debt-Equity Ratio**

100. Regulations 18 of the 2019 Tariff Regulations provides as follows:

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

*Provided that:*

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

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

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

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

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if*



the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

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

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

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

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

101. The details of debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period in respect of Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 is as follows:

Combined (Asset-1 to Asset-17)	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	143026.48	79.25	144870.93	79.11
Equity	37458.58	20.75	38249.05	20.89
<b>Total</b>	<b>180485.06</b>	<b>100.00</b>	<b>183119.98</b>	<b>100.00</b>
<b>Asset-18</b>				
Debt	428045.59	70.92	433520.48	70.91
Equity	175486.31	29.08	177832.71	29.09
<b>Total</b>	<b>603531.90</b>	<b>100.00</b>	<b>611353.19</b>	<b>100.00</b>
<b>Asset-19</b>				
Debt	168819.82	78.15	172356.87	77.96
Equity	47207.84	21.85	48723.72	22.04
<b>Total</b>	<b>216027.66</b>	<b>100.00</b>	<b>221080.60</b>	<b>100.00</b>

## **Depreciation**

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

**“33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element



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

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

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

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

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

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

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

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

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

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

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





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

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

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

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

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

*a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or*

*b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or*

*c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”*

103. We have considered the submissions of the Petitioner. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed for Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 is as follows:



(₹ in lakh)

Combined Asset (Asset- 1 to Asset-17)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	180485.06	182572.03	183119.98	183119.98	183119.98
B	Addition during the year 2019-24 due to projected ACE	2086.97	547.95	0.00	0.00	0.00
C	Closing Gross Block (A+B)	182572.03	183119.98	183119.98	183119.98	183119.98
D	Average Gross Block (A+C)/2	181528.55	182846.01	183119.98	183119.98	183119.98
E	Weighted average rate of Depreciation (WAROD) (in %)	5.19	5.19	5.19	5.19	5.19
F	Lapsed useful life at the beginning of the year (Year)	4	5	6	7	8
G	Balance useful life at the beginning of the year (Year)	28	27	26	25	24
H	Depreciable value (D*90%)	162772.87	163958.58	164205.16	164205.16	164205.16
I	<b>Combined Depreciation during the year (D*E)</b>	9426.22	9493.60	9508.07	9508.07	9508.07
J	Cumulative Depreciation at the end of the year	46664.77	56158.37	65666.44	75174.50	84682.57
K	Remaining Aggregate Depreciable Value at the end of the year	116108.10	107800.21	98538.72	89030.65	79522.58

(₹ in lakh)

Asset-18						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	603531.90	609168.62	611327.19	611353.19	611353.19
B	Addition during the year 2019-24 due to projected ACE	5636.72	2158.57	26.00	0.00	0.00
C	Closing Gross Block (A+B)	609168.62	611327.19	611353.19	611353.19	611353.19
D	Average Gross Block (A+C)/2	606350.26	610247.90	611340.19	611353.19	611353.19
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2095	5.2085	5.2086	5.2086	5.2086
F	Lapsed useful life at the beginning of the year (Year)	3	4	5	6	7
G	Balance useful life at the beginning of the year (Year)	30	29	28	27	26
H	Depreciable value (D*90%)	544578.90	548086.78	549069.84	549081.54	549081.54
I	<b>Combined Depreciation during the year (D*E)</b>	<b>31587.91</b>	<b>31784.54</b>	<b>31842.22</b>	<b>31842.90</b>	<b>31842.90</b>
J	Cumulative Depreciation at the end of the year	180615.89	212400.43	244242.65	276085.55	307928.45
K	Remaining Aggregate Depreciable Value at the end of the year	363963.02	335686.35	304827.19	272995.99	241153.09





(₹ in lakh)

		Asset-19				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	216027.66	220955.58	221080.60	221080.60	221080.60
B	Addition during the year 2019-24 due to projected ACE	4927.92	125.02	0.00	0.00	0.00
C	Closing Gross Block (A+B)	220955.58	221080.60	221080.60	221080.60	221080.60
D	Average Gross Block (A+C)/2	218491.62	221018.09	221080.60	221080.60	221080.60
E	Weighted average rate of Depreciation (WAROD) (in %)	5.0628	5.0601	5.0602	5.0602	5.0602
F	Lapsed useful life at the beginning of the year (Year)	2	3	4	5	6
G	Balance useful life at the beginning of the year (Year)	24	23	22	21	20
H	Depreciable value (D*90%)	194590.62	196850.94	196907.20	196907.20	196907.20
I	<b>Combined Depreciation during the year (D*E)</b>	<b>11061.75</b>	<b>11183.74</b>	<b>11187.04</b>	<b>11187.04</b>	<b>11187.04</b>
J	Cumulative Depreciation at the end of the year	40828.97	52012.71	63199.76	74386.80	85573.85
K	Remaining Aggregate Depreciable Value at the end of the year	153761.65	144838.23	133707.44	122520.40	111333.35

### **Interest on Loan (“IoL”)**

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

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

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

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

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

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



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

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

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

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

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

105. The Petitioner has prayed for floating rate of IoL for 2019-24 tariff period. Bihar Discosms have submitted that the 2014 Tariff Regulations do not permit change in interest rate due to floating rate of interest.

106. In response, the Petitioner has submitted that IoL has been calculated on the basis of actual rate of interest of various loans deployed for each year. The change in interest rate due to floating rate of interest applicable, if any, for the transmission project needs to be claimed/ adjusted over the tariff period of 5 years directly from/ with the beneficiaries. The Petitioner has further submitted that the floating interest rate mentioned in the cash IDC statement for bank loans varies on daily/monthly/quarterly basis and the IDC calculation has been done by multiplying the particular loan interest rate with applicable number of days (i.e. for the number of days upto which the particular rate is applicable) till COD.

107. We have considered the submissions of the Petitioner and Bihar Discoms. 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, (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period is follows:

(₹ in lakh)

<b>Combined Asset (Asset-1 to Asset-17)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	143026.49	144487.36	144870.93	144870.93	144870.93
B	Cumulative Repayments upto Previous Year	37238.55	46664.77	56158.37	65666.44	75174.50
C	Net Loan-Opening (A-B)	105787.95	97822.59	88712.56	79204.49	69696.42
D	Addition due to ACE	1460.87	383.57	0.00	0.00	0.00
E	Repayment during the year	9426.22	9493.60	9508.07	9508.07	9508.07
F	Net Loan-Closing (C+D-E)	97822.59	88712.56	79204.49	69696.42	60188.35
G	Average Loan (C+F)/2	101805.27	93267.57	83958.52	74450.46	64942.39
H	Weighted Average Rate of Interest on Loan (in %)	8.782	8.770	8.774	8.777	8.779
I	<b>Interest on Loan (G*H)</b>	<b>8940.95</b>	<b>8179.94</b>	<b>7366.10</b>	<b>6534.67</b>	<b>5701.42</b>

(₹ in lakh)

<b>Asset-18</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	428045.59	431991.28	433502.28	433520.48	433520.48
B	Cumulative Repayments upto Previous Year	149027.97	180615.89	212400.43	244242.65	276085.55
C	Net Loan-Opening (A-B)	279017.61	251375.40	221101.85	189277.83	157434.93
D	Addition due to ACE	3945.70	1511.00	18.20	0.00	0.00
E	Repayment during the year	31587.91	31784.54	31842.22	31842.90	31842.90
F	Net Loan-Closing (C+D-E)	251375.40	221101.85	189277.83	157434.93	125592.03
G	Average Loan (C+F)/2	265196.51	236238.62	205189.84	173356.38	141513.48
H	Weighted Average Rate of Interest on Loan (in %)	3.6985	3.7573	3.8092	3.8505	3.8971
I	Interest on Loan (G*H)	9808.29	8876.19	7816.09	6675.09	5514.92

(₹ in lakh)

<b>Asset-19</b>						
	<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	168819.82	172269.36	172356.87	172356.87	172356.87
B	Cumulative Repayments upto Previous Year	29767.22	40828.97	52012.71	63199.76	74386.80
C	Net Loan-Opening (A-B)	139052.60	131440.39	120344.16	109157.12	97970.07
D	Addition due to ACE	3449.54	87.51	0.00	0.00	0.00
E	Repayment during the year	11061.75	11183.74	11187.04	11187.04	11187.04
F	Net Loan-Closing (C+D-E)	131440.39	120344.16	109157.12	97970.07	86783.03
G	Average Loan (C+F)/2	135246.49	125892.27	114750.64	103563.59	92376.55



H	Weighted Average Rate of Interest on Loan (in %)	3.8751	4.0285	4.1274	4.1378	4.1511
I	Interest on Loan (G*H)	5240.94	5071.57	4736.22	4285.25	3834.64

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

108. 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.”*

109. RoE allowed under Regulation 30 of the 2019 Tariff Regulations in respect of Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 is as follows:

(₹ in lakh)

Combined Asset (Asset-1 to Asset-17)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	37458.58	38084.67	38249.05	38249.05	38249.05
B	Addition due to ACE	626.09	164.39	0.00	0.00	0.00
C	Closing Equity (A+B)	38084.67	38249.05	38249.05	38249.05	38249.05
D	Average Equity (A+C)/2	37771.62	38166.86	38249.05	38249.05	38249.05
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>7094.27</b>	<b>7168.50</b>	<b>7183.94</b>	<b>7183.94</b>	<b>7183.94</b>

(₹ in lakh)

Asset-18						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	175486.31	177177.34	177824.91	177832.71	177832.71
B	Addition due to ACE	1691.02	647.57	7.80	0.00	0.00
C	Closing Equity (A+B)	177177.34	177824.91	177832.71	177832.71	177832.71
D	Average Equity (A+C)/2	176331.82	177501.12	177828.81	177832.71	177832.71
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>33118.64</b>	<b>33338.26</b>	<b>33399.81</b>	<b>33400.54</b>	<b>33400.54</b>

(₹ in lakh)

Asset-19						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	47207.84	48686.22	48723.72	48723.72	48723.72
B	Addition due to ACE	1478.38	37.51	0.00	0.00	0.00
C	Closing Equity (A+B)	48686.22	48723.72	48723.72	48723.72	48723.72





D	Average Equity (A+C)/2	47947.03	48704.97	48723.72	48723.72	48723.72
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>9005.41</b>	<b>9147.77</b>	<b>9151.29</b>	<b>9151.29</b>	<b>9151.29</b>

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

110. The Petitioner has claimed the following O&M Expenses for the 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Asset-1 to Asset-17</b>					
Transmission line	502.94	520.50	538.75	557.74	577.16
Sub-station	1391.16	1440.46	1491.08	1543.92	1597.12
PLCC	15.13	15.13	15.13	15.13	15.13
<b>Total O&amp;M for Asset-1 to Asset-17</b>	<b>1909.23</b>	<b>1440.46</b>	<b>1491.08</b>	<b>1543.92</b>	<b>1597.12</b>
<b>Asset-18</b>					
Transmission line	2318.21	2398.87	2483.04	2570.72	2660.15
Sub-station	<b>1281.50</b>	<b>1326.50</b>	<b>1373.00</b>	<b>1421.00</b>	<b>1471.00</b>
<b>Total O&amp;M for Asset-18</b>					
<b>Asset-19</b>					
Transmission line	28.59	29.50	30.63	31.65	32.79
Sub-station	1281.50	1326.50	1373.00	1421.00	1471.00
<b>Total O&amp;M for Asset-19</b>	<b>1310.09</b>	<b>1356.00</b>	<b>1403.63</b>	<b>1452.65</b>	<b>1503.79</b>

111. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations specify the norms for O&M Expenses which are as follows:

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

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

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata





*on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*

- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of  $\pm 500$  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  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of  $\pm 800$  kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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

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

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

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

112. The Petitioner has claimed O&M Expenses as per Regulation 35(3)(a) of the 2019 Tariff Regulations. It is further observed that the Petitioner has claimed O&M Expenses separately for Asset-1 to Asset-17 towards PLCC under Regulation 35(4) of the 2019 Tariff Regulations @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 Tariff Regulations and 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed Asset-1 to Asset-17. The Petitioner has not claimed any O&M towards PLCC for Asset-18&Asset-19. Asset-1 to Asset-17 (AC assets) have been combined for 2019-24 tariff period. Accordingly, combined O&M Expenses have been worked out for Asset-1 to Asset-17. Further, O&M Expenses for Asset-18 and Asset-19, both being HVDC assets, have been calculated separately.

113. Accordingly, O&M Expenses allowed in respect of Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 is as follows:

**Combined Asset (Asset-1 to Asset-17)**

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Double Circuit (bundle conductor with four sub-conductors) (km)	309.00	309.00	309.00	309.00	309.00
Double Circuit (Twin & Triple Conductor) (km)	81.212	81.212	81.212	81.212	81.212
Multi Circuit (Bundled Conductor with four or more sub-conductor) (km)	0.86	0.86	0.86	0.86	0.86
Single Circuit (Twin & Triple Conductor) (km)	24.772	24.772	24.772	24.772	24.772
Multi Circuit (Twin & Triple Conductor)(km)	1.158	1.158	1.158	1.158	1.158
Double Circuit (Single Conductor) (km)	12.931	12.931	12.931	12.931	12.931
400 kV Bays (Numbers)	26	26	26	26	26
220 kV Bays (Numbers)	4	24	24	24	24
132 kV & below Bays (Numbers)	6	12	12	12	12
400 kV ICT (MVA)*	1030	1030	1030	1030	1030
<b>Sub-total O&amp;M Expenses for transmission line (A)</b>	<b>501.16</b>	<b>518.65</b>	<b>536.84</b>	<b>555.77</b>	<b>575.12</b>



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Double Circuit (bundle conductor with four sub-conductors) (km)	309.00	309.00	309.00	309.00	309.00
(₹ in lakh)					
<b>Sub-total O&amp;M Expenses for sub-station (B) (₹ in lakh)</b>	<b>1391.16</b>	<b>1440.45</b>	<b>1491.08</b>	<b>1543.92</b>	<b>1597.11</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>1892.32</b>	<b>1959.10</b>	<b>2027.92</b>	<b>2099.69</b>	<b>2172.23</b>

\*Total 4 numbers ICTs (2x200 MVA+2x315 MVA)=1030 MVA

#### Asset-18

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
HVDC Transmission line (km)	1753.56	1753.56	1753.56	1753.56	1753.56
One Pole (1500 MW) of ±800 kV, Bishwanath Chariali-Agra HVDC bi-pole scheme	1	1	1	1	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>2318.21</b>	<b>2398.87</b>	<b>2483.04</b>	<b>2570.72</b>	<b>2660.15</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>1281.50</b>	<b>1326.50</b>	<b>1373.00</b>	<b>1421.00</b>	<b>1471.00</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>3599.71</b>	<b>3725.37</b>	<b>3856.04</b>	<b>3991.72</b>	<b>4131.15</b>

#### Asset-19

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Single Circuit (Single Conductor) (km)	113.454	113.454	113.454	113.454	113.454
One Pole (1500 MW) of ±800 kV, Bishwanath Chariali-Agra HVDC bipole scheme	1	1	1	1	1
<b>Sub-total O&amp;M Expenses for transmission line (A) (₹ in lakh)</b>	<b>28.59</b>	<b>29.50</b>	<b>30.63</b>	<b>31.65</b>	<b>32.79</b>
<b>Sub-total O&amp;M Expenses for Sub-station (B) (₹ in lakh)</b>	<b>1281.50</b>	<b>1326.50</b>	<b>1373.00</b>	<b>1421.00</b>	<b>1471.00</b>
<b>Total O&amp;M Expenses (A+B) (₹ in lakh)</b>	<b>1310.09</b>	<b>1356.00</b>	<b>1403.63</b>	<b>1452.65</b>	<b>1503.79</b>

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

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

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

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

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



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

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

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

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

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

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

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

115. The components of the working capital and interest allowed thereon with respect to the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 are as follows:

(₹ in lakh)						
Combined Asset (Asset-1 to Asset-17)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M expenses for one month)	157.69	163.26	168.99	174.97	181.02
B	Working Capital for Maintenance Spares (15% of O&M expenses)	283.85	293.87	304.19	314.95	325.83
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	3420.38	3357.15	3264.47	3169.80	3066.50
<b>D</b>	<b>Total of Working Capital</b>	3861.92	3814.28	3737.65	3659.73	3573.35
E	Rate of Interest for Working Capital (in %)	12.05	11.25	10.5	10.5	10.5
<b>F</b>	<b>Interest of working capital</b>	<b>465.36</b>	<b>429.11</b>	<b>392.45</b>	<b>384.27</b>	<b>375.20</b>



(₹ in lakh)

Asset-18						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M expenses for one month)	299.98	310.45	321.34	332.64	344.26
B	Working Capital for Maintenance Spares (15% of O&M expenses)	539.96	558.81	578.41	598.76	619.67
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	9761.31	9729.46	9618.73	9493.75	9340.76
D	<b>Total of Working Capital</b>	<b>10,601.24</b>	<b>10,598.71</b>	<b>10,518.47</b>	<b>10,425.16</b>	<b>10,304.69</b>
E	Rate of Interest for Working Capital (in %)	12.05	11.25	11.25	11.25	11.25
F	<b>Interest of working capital</b>	<b>1277.45</b>	<b>1192.36</b>	<b>1104.44</b>	<b>1094.64</b>	<b>1081.99</b>

(₹ in lakh)

Asset-19						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M expenses for one month)	109.17	113.00	116.97	121.05	125.32
B	Working Capital for Maintenance Spares (15% of O&M expenses)	196.51	203.40	210.54	217.90	225.57
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	3326.54	3349.92	3311.54	3261.49	3202.86
D	<b>Total of Working Capital</b>	<b>3632.23</b>	<b>3666.32</b>	<b>3639.06</b>	<b>3600.44</b>	<b>3553.74</b>
E	Rate of Interest for Working Capital (in %)	12.05	11.25	11.25	11.25	11.25
F	<b>Interest of working capital</b>	<b>437.68</b>	<b>412.46</b>	<b>382.10</b>	<b>378.05</b>	<b>373.14</b>

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

116. The transmission charges allowed in respect of Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period are as follows:

(₹ in lakh)

Combined Asset (Asset-1 to Asset-17)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9426.22	9493.60	9508.07	9508.07	9508.07
Interest on Loan	8940.95	8179.94	7366.10	6534.67	5701.42
Return on Equity	7094.27	7168.50	7183.94	7183.94	7183.94
O&M Expenses	<b>1892.32</b>	<b>1959.10</b>	<b>2027.92</b>	<b>2099.69</b>	<b>2172.23</b>



<b>Combined Asset (Asset-1 to Asset-17)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Interest on Working Capital	465.36	429.11	392.45	384.27	375.20
<b>Total</b>	<b>27819.12</b>	<b>27230.25</b>	<b>26478.48</b>	<b>25710.63</b>	<b>24940.86</b>

(₹ in lakh)

<b>Asset-18</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	31587.91	31784.54	31842.22	31842.90	31842.90
Interest on Loan	9808.29	8876.19	7816.09	6675.09	5514.92
Return on Equity	33118.64	33338.26	33399.81	33400.54	33400.54
O&M Expenses	3599.71	3725.37	3856.04	3991.72	4131.15
Interest on Working Capital	1277.47	1192.38	1104.46	1094.66	1082.01
<b>Total</b>	<b>79392.01</b>	<b>78916.72</b>	<b>78018.59</b>	<b>77004.89</b>	<b>75971.51</b>

(₹ in lakh)

<b>Asset-19</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	11061.75	11183.74	11187.04	11187.04	11187.04
Interest on Loan	5240.94	5071.57	4736.22	4285.25	3834.64
Return on Equity	9005.41	9147.77	9151.29	9151.29	9151.29
O&M Expenses	1310.09	1356.00	1403.63	1452.65	1503.79
Interest on Working Capital	437.68	412.46	382.10	378.05	373.14
<b>Total</b>	<b>27055.87</b>	<b>27171.54</b>	<b>26860.28</b>	<b>26454.28</b>	<b>26049.90</b>

### **Filing Fee and Publication Expenses**

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

118. Bihar Discoms has submitted that grant of filing fee and expenses incurred is strictly the discretion of the Commission and the same is to be exercised as per the facts and circumstances of each case and need not be necessarily allowed in all cases and certainly the present case is the one wherein the said prayer should not be granted. In response, the Petitioner has submitted that the Commission vide order dated 28.3.2016 in Petition No. 137/TT/2015 has rejected similar contention



on the same issue and allowed recovery of petition filing fee and publication of notices from the beneficiaries on pro-rata basis as provided in the regulation and prayed that the same may be allowed.

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

#### **Licence Fee and RLDC Fees and Charges**

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

#### **Goods and Services Tax**

121. 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 has to be borne and additionally paid by the Respondent(s) to the Petitioner and the same will 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. MPPMCL and Bihar Discoms have submitted that the demand of the Petitioner is pre-mature and need not be considered at this juncture.



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

### **Security Expenses**

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

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

### **Capital Spares**

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

### **Sharing of Transmission Charges**

126. The Petitioner has submitted that the transmission charges for the





transmission assets for 2014-19 and 2019-24 tariff periods with respect to Asset-1 to Asset-17 will be shared by the beneficiaries and long term transmission customers under the applicable Sharing Regulations, as provided under Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the Tariff Regulations 2019 respectively. The Petitioner has further submitted that the transmission tariff for Asset-18 and Asset-19 will be shared from the DICs of all regions as per the provisions of the 2010 Sharing Regulations or as amended from time to time.

127. We have considered the submissions of the Petitioner. The transmission charges approved for the transmission assets 1 to 17 covered in the instant order for 2014-19 tariff period and 2019-24 tariff period shall be governed by the applicable Sharing Regulations as provided under Regulation 43 of the 2014 Tariff Regulations and 57 of the 2019 Tariff Regulations respectively.

128. The transmission charges in respect of Asset-18 and Asset-19 shall be shared by the DICs of all regions as per the provisions of the 2010 Sharing Regulations upto 31.10.2020 and from 1.11.2020, 100% of the Yearly Transmission Charges (YTC) shall be part of National Component as provided under Regulation 5(3)(b) of the 2020 Sharing Regulations.

129. To summarise:

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	486.58	507.77	504.38	497.23	489.69



Asset-2	218.09	223.40	225.24	222.86	220.65
Asset-3	163.93	178.98	189.23	184.17	185.57
Asset-4	8001.45	20049.44	19572.73	18891.28	18342.49
Asset-5	0.00	236.14	495.40	517.31	520.47
Asset-6	0.00	150.96	325.16	343.96	344.43
Asset-7	0.00	30.72	338.16	352.75	351.96
Asset-8	0.00	392.95	1348.75	1401.38	1390.69
Asset-9	0.00	401.49	869.16	857.04	879.74
Asset-10	0.00	1129.05	2330.78	2348.94	2367.49
Asset-11	0.00	0.00	0.00	137.22	214.00
Asset-12	0.00	0.00	0.00	309.42	462.30
Asset-13	0.00	0.00	0.00	135.23	464.98
Asset-14	0.00	288.78	711.88	724.06	729.37
Asset-15	0.00	595.11	1455.31	1444.29	1461.39
Asset-16	0.00	289.82	611.70	620.76	626.81
Asset-17	0.00	153.20	562.22	565.64	574.90
Asset-18	0.00	46405.93	114917.14	116027.67	103125.58
Asset-19	0.00	0.00	15159.93	28228.54	26229.38

**After adjustment of grants**

(₹ in lakh)

Particulars	2018-2019
Asset-18	10231.37
Asset-19	3479.14

- (b) AFC allowed in respect of the Combined Asset (Asset-1 to Asset-17), Asset-18 and Asset-19 for 2019-24 tariff period in this order are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Assets (Asset-1 to Asset-17)	27819.12	27230.25	26478.48	25710.63	24940.86
Asset-18	79392.01	78916.72	78018.59	77004.89	75971.51
Asset-19	27055.87	27171.54	26860.28	26454.28	26049.90

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

131. This order disposes of Petition No. 681/TT/2020 in terms of the above discussions and findings.

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

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

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



## Asset-1

	Aggregate admitted cost as on 31.3.2014	Projected ACE						Admitted cost as 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
<b>Capital expenditures as on 31.03.2014</b>														
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	78.35	29.70	2.35	0.00	0.00	0.00	32.05	110.40	3.34	3.11	3.65	3.69	3.69	3.69
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	2037.46	247.36	41.04	8.24	3.17	0.00	299.81	2337.27	5.28	114.11	121.72	123.02	123.32	123.41
PLCC	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>2115.81</b>	<b>277.06</b>	<b>43.39</b>	<b>8.24</b>	<b>3.17</b>	<b>0.00</b>	<b>331.86</b>	<b>2447.67</b>		<b>117.22</b>	<b>125.37</b>	<b>126.71</b>	<b>127.01</b>	<b>127.10</b>
								Weighted average rate of depreciation (in %)		5.1998	5.1922	5.1922	5.1924	5.1925
								<b>Average gross block</b>		2254.34	2414.57	2440.38	2446.09	2447.67



## Asset-2

Previous Tariff Reference	Aggregated admitted cost as on 31.3.2014	Projected ACE						Admitted cost as 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
<b>Capital Expenditures as on 31.3.2014</b>														
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	892.38	35.70	47.92	1.25	0.00	0.00	84.87	977.25	5.28	48.06	50.27	51.57	51.60	51.60
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>892.38</b>	<b>35.70</b>	<b>47.92</b>	<b>1.25</b>	<b>0.00</b>	<b>0.00</b>	<b>84.87</b>	<b>977.25</b>		<b>48.06</b>	<b>50.27</b>	<b>51.57</b>	<b>51.60</b>	<b>51.60</b>
									<b>Weighted average rate of depreciation (in %)</b>	5.2800	5.2800	5.2800	5.2800	5.2800
									<b>Average Gross Block</b>	910.23	952.04	976.625	977.25	977.25



### Asset-3

Previous Tariff Reference	Aggregate admitted cost as on 31.03.2014	Projected ACE						Admitted cost as 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
<b>Capital Expenditures as on 31.3.2014</b>														
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	560.26	43.64	132.27	0.09	0.00	0.00	176.00	736.26	5.28	30.73	35.38	38.87	38.87	38.87
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>560.26</b>	<b>43.64</b>	<b>132.27</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>176.00</b>	<b>736.26</b>		<b>30.73</b>	<b>35.38</b>	<b>38.87</b>	<b>38.87</b>	<b>38.87</b>
								<b>Weighted average rate of depreciation (in %)</b>		5.2800	5.2800	5.2800	5.2800	5.2800
								<b>Average gross block</b>		582.084	670.039	736.219	736.264	736.264



#### Asset-4

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE						Estimated completion cost as 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	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	63.60	0.93	0.00	139.98	1.81	0.00	142.72	206.33	3.34	2.14	2.16	4.49	6.86	6.89
Transmission Line	102480.30	2273.21	1495.38	0.00	0.00	123.45	3892.04	106372.35	5.28	5470.97	5570.46	5609.94	5609.94	5613.20
Sub-Station Equipments	9199.98	937.93	0.00	719.07	209.09	237.95	2104.04	11304.02	5.28	510.52	535.28	554.27	578.77	590.57
PLCC	143.76	3.90	0.00	1.31	0.00	0.00	5.21	148.97	6.33	9.22	9.35	9.39	9.43	9.43
<b>Total</b>	<b>111887.65</b>	<b>3215.98</b>	<b>1495.38</b>	<b>860.36</b>	<b>210.90</b>	<b>361.40</b>	<b>6144.02</b>	<b>118031.67</b>		<b>5992.86</b>	<b>6117.25</b>	<b>6178.09</b>	<b>6205.00</b>	<b>6220.09</b>
								<b>Weighted average rate of depreciation (in %)</b>		5.2803	5.2803	5.2791	5.2779	5.2779
								<b>Average gross block</b>		113495.64	115851.32	117029.19	117564.82	117850.97



### Asset-5

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	478.30	14.01	113.57	31.58	20.37	179.53	657.83	3.34	16.21	18.34	20.76	21.63
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	1732.49	23.74	192.40	53.51	34.52	304.17	2036.66	5.28	92.10	97.81	104.30	106.62
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>2266.61</b>	<b>37.75</b>	<b>305.97</b>	<b>85.09</b>	<b>54.89</b>	<b>483.70</b>	<b>2750.31</b>		<b>108.31</b>	<b>116.15</b>	<b>125.06</b>	<b>128.26</b>
								<b>weighted average rate of depreciation (in %)</b>	4.7391	4.7266	4.7143	4.7103
								<b>Average gross block</b>	2285.49	2457.35	2652.88	2722.87



### Asset-6

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	268.04	8.92	68.18	18.96	2.13	98.19	366.23	3.34	9.10	10.39	11.84	12.20
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	1124.68	23.46	179.34	49.88	5.60	258.28	1382.96	5.28	60.00	65.36	71.41	72.87
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>1448.54</b>	<b>32.38</b>	<b>247.52</b>	<b>68.84</b>	<b>7.73</b>	<b>356.47</b>	<b>1805.01</b>		<b>69.10</b>	<b>75.75</b>	<b>83.25</b>	<b>85.07</b>
							<b>Weighted average rate of depreciation (in %)</b>		4.7179	4.7203	4.7226	4.7230
							<b>average Gross block</b>		1464.73	1604.68	1762.86	1801.15





**Asset-7**

Capital expenditures as on COD / 01.04.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	317.44	5.28	44.46	12.22	0.96	62.91	380.35	3.34	10.69	11.52	12.47	12.69
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	1177.12	27.18	149.48	41.06	2.85	220.57	1397.69	5.28	62.87	67.53	72.56	73.72
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>1550.37</b>	<b>32.46</b>	<b>193.94</b>	<b>53.28</b>	<b>3.81</b>	<b>283.49</b>	<b>1833.86</b>		<b>73.56</b>	<b>79.05</b>	<b>85.03</b>	<b>86.41</b>
								<b>Weighted Average rate of depreciation (in %)</b>	4.6955	4.7062	4.7150	4.7168
								<b>Average gross block</b>	1566.60	1679.80	1803.41	1831.96



**Asset-8**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	807.81	43.20	132.45	35.56	0.40	211.61	1019.42	3.34	27.70	30.64	33.44	34.04
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	5344.13	227.96	639.83	169.53	1.88	1039.20	6383.33	5.28	288.19	311.10	332.46	336.99
PLCC	116.82	8.09	26.68	7.24	0.08	42.10	158.92	6.33	7.65	8.75	9.83	10.06
<b>Total</b>	<b>6268.76</b>	<b>279.25</b>	<b>798.97</b>	<b>212.33</b>	<b>2.36</b>	<b>1292.91</b>	<b>7561.67</b>		<b>323.54</b>	<b>350.49</b>	<b>375.73</b>	<b>381.09</b>
							<b>Weighted average rate of depreciation (in %)</b>		5.0487	5.0448	5.0413	5.0405
							<b>Average Gross block</b>		6408.39	6947.50	7453.15	7560.49



**Asset-9**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	535.95	18.74	35.59	9.90	169.01	233.24	769.19	3.34	18.21	19.12	19.88	22.87
Transmission Line	1631.45	23.25	0.40	0.00	0.00	23.65	1655.10	5.28	86.75	87.38	87.39	87.39
Sub-Station Equipments	1969.73	158.51	90.01	24.69	283.06	556.27	2526.00	5.28	108.19	114.75	117.78	125.90
PLCC	84.48	1.30	2.12	0.59	7.19	11.20	95.68	6.33	5.39	5.50	5.58	5.83
<b>Total</b>	<b>4277.43</b>	<b>201.80</b>	<b>128.12</b>	<b>35.18</b>	<b>459.26</b>	<b>824.36</b>	<b>5101.79</b>		<b>218.54</b>	<b>226.74</b>	<b>230.63</b>	<b>241.99</b>
							<b>Weighted average rate of depreciation (in %)</b>		4.9915	4.9907	4.9866	4.9667
							<b>Average gross block</b>		4378.33	4543.29	4624.94	4872.16



### Asset-10

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	523.83	20.33	46.11	9.90	169.01	245.36	769.19	3.34	17.84	18.95	19.88	22.87
Transmission Line	9555.30	537.18	492.62	495.47	0.00	1525.27	11080.57	5.28	518.70	545.89	571.97	585.05
Sub-Station Equipments	1911.94	161.81	130.89	24.69	283.06	600.45	2512.39	5.28	105.22	112.95	117.06	125.18
PLCC	78.54	1.53	3.70	0.59	7.19	13.00	91.54	6.33	5.02	5.18	5.32	5.57
<b>Total</b>	<b>12125.42</b>	<b>720.86</b>	<b>673.32</b>	<b>530.65</b>	<b>459.26</b>	<b>2384.09</b>	<b>14509.51</b>		<b>646.78</b>	<b>682.97</b>	<b>714.23</b>	<b>738.67</b>
							<b>Weighted average rate of depreciation (in %)</b>		5.1801	5.1807	5.1813	5.1728
							<b>Average gross block</b>		12485.85	13182.94	13784.93	14279.88



**Asset-11**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE			Estimated completion cost as 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	1279.02	70.41	79.09	149.50	1428.53	5.28	69.39	73.34
PLCC	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00
<b>Total</b>	<b>1279.02</b>	<b>70.41</b>	<b>79.09</b>	<b>149.50</b>	<b>1428.53</b>		<b>69.39</b>	<b>73.34</b>
					<b>Weighted average rate of depreciation (in %)</b>		5.2800	5.2800
					<b>Average gross block</b>		1314.23	1388.98



**Asset-12**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE			Estimated completion cost as 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	497.85	18.92	30.69	49.62	547.47	3.34	16.94	17.77
Transmission Line	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00
Sub-Station Equipments	1861.61	80.33	162.08	242.40	2104.01	5.28	100.41	106.81
PLCC	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00
<b>Total</b>	<b>2359.46</b>	<b>99.25</b>	<b>192.77</b>	<b>292.02</b>	<b>2651.48</b>		<b>117.36</b>	<b>124.59</b>
					<b>Weighted average rate of depreciation (in %)</b>		4.8715	4.8760
					<b>Average gross block</b>		2409.09	2555.10



**Asset-13**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE			Estimated completion cost as 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	489.63	26.22	30.45	56.67	546.30	3.34	16.79	17.74
Transmission Line	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00
Sub-Station Equipments	1853.74	105.16	143.35	248.51	2102.25	5.28	100.65	107.21
PLCC	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00
<b>Total</b>	<b>2343.37</b>	<b>131.38</b>	<b>173.80</b>	<b>305.18</b>	<b>2648.55</b>		<b>117.45</b>	<b>124.95</b>
					<b>Weighted average rate of depreciation (in %)</b>		4.8751	4.8778
					<b>Average gross block</b>		2409.06	2561.65



### Asset-14

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	111.63	0.00	0.00	0.00	0.00	0.00	111.63	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	228.04	24.88	11.30	7.02	2.44	45.65	273.69	3.34	8.03	8.64	8.94	9.10
Transmission Line	738.58	59.85	0.24	0.00	0.00	60.09	798.67	5.28	40.58	42.16	42.17	42.17
Sub-Station Equipments	1079.85	200.70	104.42	65.10	22.72	392.93	1472.78	5.28	62.31	70.37	74.84	77.16
PLCC	75.66	10.43	5.07	3.16	0.79	19.46	95.12	6.33	5.12	5.61	5.87	6.00
<b>Total</b>	<b>2233.77</b>	<b>295.86</b>	<b>121.03</b>	<b>75.28</b>	<b>25.95</b>	<b>518.12</b>	<b>2751.89</b>		<b>116.04</b>	<b>126.78</b>	<b>131.83</b>	<b>134.43</b>
							<b>Weighted average rate of depreciation (in %)</b>		4.8723	4.8947	4.9038	4.9081
							<b>average gross block</b>		2381.70	2590.15	2688.30	2738.91





### Asset-15

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	111.63	0.00	0.00	0.00	0.00	0.00	111.63	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	234.93	18.07	11.23	7.02	2.44	38.76	273.69	3.34	8.15	8.64	8.94	9.10
Transmission Line	5404.59	733.76	148.84	269.38	314.68	1466.66	6871.25	5.28	304.73	328.03	339.08	354.49
Sub-Station Equipments	1112.46	168.43	104.07	65.10	22.73	360.33	1472.79	5.28	63.18	70.38	74.84	77.16
PLCC	77.95	8.18	5.05	3.16	0.79	17.18	95.13	6.33	5.19	5.61	5.87	6.00
<b>Total</b>	<b>6941.56</b>	<b>928.44</b>	<b>269.19</b>	<b>344.66</b>	<b>340.64</b>	<b>1882.93</b>	<b>8824.49</b>		<b>381.26</b>	<b>412.66</b>	<b>428.73</b>	<b>446.75</b>
							<b>Weighted average rate of depreciation (in %)</b>		5.1481	5.1553	5.1583	5.1623
							<b>average gross block</b>		7405.78	8004.59	8311.52	8654.17



### Asset-16

Capital Expenditures as on COD 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	111.63	0.00	0.00	0.00	0.00	0.00	111.63	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	229.82	11.56	17.13	10.72	0.22	39.63	269.45	3.34	7.87	8.35	8.81	9.00
Transmission Line	952.78	155.38	29.60	47.16	63.05	295.19	1247.97	5.28	54.41	59.29	61.32	64.23
Sub-Station Equipments	1212.19	123.40	158.12	98.90	2.11	382.53	1594.72	5.28	67.26	74.69	81.48	84.15
PLCC	22.47	3.52	5.21	3.26	0.07	12.06	34.53	6.33	1.53	1.81	2.08	2.18
<b>Total</b>	<b>2528.89</b>	<b>293.86</b>	<b>210.06</b>	<b>160.04</b>	<b>65.45</b>	<b>729.41</b>	<b>3258.30</b>		<b>131.07</b>	<b>144.14</b>	<b>153.69</b>	<b>159.55</b>
								<b>Weighted average rate of depreciation (in %)</b>	4.8984	4.9233	4.9373	4.9465
								<b>Average gross block</b>	2675.82	2927.78	3112.83	3225.58



**Asset-17**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as 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	55.82	0.00	0.00	0.00	0.00	0.00	55.82	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	326.10	41.89	21.93	13.72	30.09	107.63	433.73	3.34	11.59	12.66	13.25	13.98
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	2185.64	197.40	98.14	61.38	134.71	491.63	2677.27	5.28	120.61	128.42	132.63	137.80
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>2567.56</b>	<b>239.29</b>	<b>120.07</b>	<b>75.10</b>	<b>164.80</b>	<b>599.26</b>	<b>3166.82</b>		<b>132.20</b>	<b>141.07</b>	<b>145.88</b>	<b>151.79</b>
							<b>Weighted average rate of depreciation (in %)</b>		4.9198	4.9208	4.9209	4.9211
							<b>Average gross block</b>		2687.21	2866.89	2964.47	3084.42



**Asset-18**

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE					Estimated completion cost as on 13.2.2019	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
					1.4.2018-13.2.2019							
					0.873972603							
Freehold Land	1826.55	0.00	0.00	0.00	0.00	0.00	1826.55	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	17832.14	1365.89	4128.48	1959.64	768.88	8222.89	26055.03	3.34	618.40	710.16	811.83	857.40
Transmission Line	608440.28	14230.92	12844.02	7143.15	5462.19	39680.28	648120.56	5.28	32501.34	33216.12	33743.78	34076.56
Sub-Station Equipments	172013.35	3717.24	10379.84	6280.25	2829.50	23206.83	195220.17	5.28	9180.44	9552.60	9992.43	10232.93
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>800112.31</b>	<b>19314.05</b>	<b>27352.35</b>	<b>15383.04</b>	<b>9060.56</b>	<b>71110.00</b>	<b>871222.31</b>		<b>42300.19</b>	<b>43478.88</b>	<b>44548.04</b>	<b>45166.89</b>
							<b>Weighted average rate of depreciation (in %)</b>		5.2237	5.2189	5.2135	5.2114
							<b>Average gross block</b>		809769.34	833102.53	854470.23	866692.03



**Asset-18 after grants**

Capital Expenditures as on COD / 1.11.2015	Admissible capital cost as on COD for tariff purpose	Projected ACE			Estimated completion cost as on 31.3.2019	Rate of depreciation as per Regulation	2018-19 (14.2.2019-31.3.2019)
		2016-17	2017-18	2018-19			
<b>Pro-rata period</b>				<b>0.126027397</b>			
Freehold Land	1826.55	563.96	1262.59	0.00	1262.59	0.00%	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	3.34%	0.00
Building & Other Civil Works	26055.03	8044.70	18010.33	110.87	18121.20	3.34%	603.40
Transmission Line	648120.56	200112.48	448008.08	787.65	448795.73	5.28%	23675.62
Sub-Station Equipments	195220.17	60275.81	134944.36	408.01	135352.38	5.28%	7135.83
PLCC	0.00	0.00	0.00	0.00	0.00	6.33%	0.00
<b>Total</b>	<b>871222.31</b>	<b>268996.95</b>	<b>602225.36</b>	<b>1306.54</b>	<b>603531.90</b>		<b>31414.85</b>
					<b>Weighted Average rate of depreciation (in %)</b>		5.2108
					<b>Average gross block</b>		602878.63



### Asset-19

Capital expenditures as on COD / 1.4.2014	Admissible capital cost as on COD for tariff purpose	Projected ACE				Estimated completion cost as 13.2.2019	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation		
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19
				<b>0.8740</b>						
Freehold Land	2473.59	0.00	0.00	0.00	0.00	2473.59	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00
Building & Other Civil Works	14676.53	2144.84	2497.32	22.54	4664.70	19341.23	3.34	526.01	603.54	645.62
Transmission Line	21097.16	5430.64	528.14	685.99	6644.77	27741.93	5.28	1257.30	1414.61	1446.66
Sub-Station Equipments	170133.72	7630.50	8423.21	73.73	16127.44	186261.16	5.28	9184.51	9608.32	9832.64
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00
<b>Total</b>	<b>208381.00</b>	<b>15205.98</b>	<b>11448.67</b>	<b>782.26</b>	<b>27436.91</b>	<b>235817.90</b>		<b>10967.82</b>	<b>11626.47</b>	<b>11924.93</b>
							<b>Weighted average rate of depreciation (in %)</b>	5.0781	5.0702	5.0652
							<b>Average gross block</b>	215983.99	229311.31	235426.77



**Asset-19 after grants**

Capital expenditures as on COD / 1.11.2015	Admitted Cost as on 13.2.2019	Capital cost as on 14.2.2019	ACE for 46 days during18- 19	Admitted cost as 31.3.2019	Rate of Depreciation as per Regulation (in %)	2018-19 (from 01.04.2014-13.02.2019)
<b>Prorata period</b>			0.126027397			
Freehold Land	2473.59	2264.82	0.00	2264.82	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
Building & Other Civil Works	19341.23	17708.83	3.25	17712.08	3.34	591.47
Transmission Line	27741.93	25400.51	98.92	25499.43	5.28	1341.15
Sub-Station Equipments	186261.16	170540.70	10.63	170551.33	5.28	9004.55
PLCC	0.00	0.00	0.00	0.00	6.33	0.00
<b>Total</b>	<b>235817.90</b>	<b>215914.85</b>	<b>112.80</b>	<b>216027.66</b>		<b>10937.17</b>
				<b>Weighted average rate of depreciation (in %)</b>		5.0642
				<b>Average gross block</b>		215971.25



**Asset-1-Asset-17 (2019-24)**

Capital Expenditure	Combined admitted capital cost as on 1.4.2014	Projected ACE								Admitted cost as 31.3.2024	Rate of Depreciation as per Regulation (in %)	Depreciation as per Regulation				
		2019-20		2019-2020	2020-21	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	669.81	0.00		0.00	0.00	0.00	0.00	0.00	0.00	669.81	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	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	6623.27	244.94		244.94	0.00	0.00	0.00	0.00	244.94	6868.21	3.34	225.31	229.40	229.40	229.40	229.40
Transmission Line	128025.91	839.71	-19.64	820.07	547.95	0.00	0.00	0.00	1368.02	129393.93	5.28	6781.42	6817.53	6832.00	6832.00	6832.00
Sub-Station Equipments	44446.19	985.57		985.57	0.00	0.00	0.00	0.00	985.57	45431.76	5.28	2372.78	2398.80	2398.80	2398.80	2398.80
PLCC	719.89	36.39		36.39	0.00	0.00	0.00	0.00	36.39	756.28	6.33	46.72	47.87	47.87	47.87	47.87
<b>Total</b>	<b>180485.06</b>	<b>2106.61</b>		<b>2086.97</b>	<b>547.95</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2634.92</b>	<b>183119.98</b>		<b>9426.22</b>	<b>9493.60</b>	<b>9508.07</b>	<b>9508.07</b>	<b>9508.07</b>
											<b>Weighted average rate of depreciation (in %)</b>	5.1927	5.1921	5.1923	5.1923	5.1923
											<b>Average gross block</b>	181528.55	182846.01	183119.98	183119.98	183119.98





**Asset-18 (2019-24)**

Capital expenditures as on COD/ 1.4.2019	Admissible capital cost as on 31.3.2019	Projected ACE								Estimated completion cost as 31.3.2024	Rate of depreciation as per Regulation 33 (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	1262.59	0.00		0.00	0.00	0.00	0.00	0.00	0.00	1262.59	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	0.00	3.34	0.00	0.00	0.00	0.00	
Building & Other Civil Works	18121.20	944.79		944.79	0.00	0.00	0.00	0.00	944.79	19065.99	3.34	621.03	636.80	636.80	636.80	
Transmission Line	448795.73	1362.63	- 147.59	1215.04	2158.57	26.00			3399.61	452195.34	5.28	23728.49	23817.56	23875.23	23875.91	23875.91
Sub-Station Equipments	1,35,352.38	3476.89		3476.89	0.00	0.00	0.00	0.00	3476.89	138829.27	5.28	7238.40	7330.19	7330.19	7330.19	7,330.19
PLCC	0.00	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	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>603531.90</b>	<b>5784.31</b>	<b>147.59</b>	<b>5636.72</b>	<b>2158.57</b>	<b>26.00</b>	<b>-</b>	<b>-</b>	<b>7821.29</b>	<b>611353.19</b>		<b>31587.91</b>	<b>31784.54</b>	<b>31842.22</b>	<b>31842.90</b>	<b>31,842.90</b>
												5.2095	5.2085	5.2086	5.2086	5.2086
												606350.26	610247.90	611340.19	611353.19	611353.19



**Asset-19 (2019-24)**

Capital expenditures as on COD/ 1.4.2019	Admissible capital cost as on 31.3.2019	Projected ACE						Estimated completion cost as 31.3.2024	Rate of depreciation as per Regulation 33 (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	2264.82	30.00	0.00	0.00	0.00	0.00	30.00	2294.82	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	17712.08	1094.36	0.00	0.00	0.00	0.00	1094.36	18806.44	3.34	609.86	628.13	628.13	628.13	628.13
Transmission Line	25499.43	126.38	125.02	0.00	0.00	0.00	251.40	25750.83	5.28	1349.71	1356.34	1359.64	1359.64	1359.64
Sub-Station Equipments	1,70,551.33	3677.18	0.00	0.00	0.00	0.00	3677.18	174228.51	5.28	9,102.19	9199.27	9,199.27	9,199.27	9,199.27
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>2,16,027.66</b>	<b>4,927.92</b>	<b>125.02</b>	-	-	-	<b>5052.94</b>	<b>2,21,080.60</b>		<b>11,061.75</b>	<b>11,183.74</b>	<b>11187.04</b>	<b>11,187.04</b>	<b>11,187.04</b>
								<b>Weighted average rate of depreciation (in %)</b>		5.0628	5.0601	5.0602	5.0602	5.0602
								<b>average gross block</b>		218491.62	221018.09	221080.60	221080.60	221080.60

