

# CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 37/TT/2021

**Coram:**

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

**Date of order: 09.01.2023**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of Asset-1: 14 numbers OPGW links (1513.362 km) under Central Sector; Asset-2: 27 numbers OPGW links (1892.58 km) under Central Sector; Asset-3: 14 numbers OPGW links (1423.69 km) under Central Sector; Asset-4: 3 numbers OPGW links (123.33 km) under Central Sector; Asset-5: 2 numbers OPGW links (9.22 km) under State Sector (MPPTCL); Asset-6: 6 numbers OPGW links (191.421 km) under State Sector (MPPTCL); Asset-7: 3 numbers OPGW links (392.63 km) under Central Sector; Asset-8: 2 numbers OPGW links (546 km) under Central Sector; and Asset-9: 2 numbers OPGW links (274 km) under Central Sector under Establishment of Fibre Optic Communication System under Master Communication Plan in the Western Region.

**And in the matter of:**

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

**.....Petitioner**

**Vs.**

1. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008, Madhya Pradesh.
2. Madhya Pradesh Power Transmission Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008, Madhya Pradesh.



3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452008, Madhya Pradesh.
4. Maharashtra State Electricity Distribution Company Limited,  
Hongkong Bank Building,  
3rd Floor, M.G. Road, Fort,  
Mumbai-400 001, Maharashtra.
5. Maharashtra State Electricity Transmission Company Limited,  
Prakashganga, 6th Floor,  
Plot No. C-19, E-Block,  
Bandra Kurla Complex, Bandra (East)  
Mumbai-400051, Maharashtra.
6. Gujarat Urja Vikas Nigam Limited,  
Sardar Patel Vidyut Bhawan, Race Course Road,  
Vadodara-390007, Gujarat.
7. Electricity Department,  
Government of Goa, Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,  
Administration of Daman & Diu,  
Daman-396210.
9. DNH Power Distribution Corporation Limited,  
Vidyut Bhawan, 66 kV Road, Near Secretariat Amla,  
U.T. Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,  
State Load Despatch Building, Dangania,  
Raipur-492013, Chattisgarh.
11. Chhattisgarh State Power Distribution Company Limited,  
P.O. Sunder Nagar, Dangania,  
Raipur, Chhattisgarh.

...Respondent(s)

**For Petitioner:**

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

**For Respondent:**

Ms. Poorva Saigal, Advocate, MPPTCL  
Ms. Reeha Singh, Advocate, MPPTCL  
Shri Anindya Khare, MPPMCL



## ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for trueing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for 2019-24 tariff period in respect of the following assets under Central Sector under Establishment of Fibre Optic Communication System under Master Communication Plan in the Western Region (hereinafter referred to as “the transmission project”):

**Asset-1:** 14 numbers OPGW links (1513.362 km) under Central Sector;

**Asset-2:** 27 numbers OPGW links (1892.58 km) under Central Sector;

**Asset-3:** 14 numbers OPGW links (1423.69 km) under Central Sector;

**Asset-4:** 3 numbers OPGW links (123.33 km) under Central Sector;

**Asset-5:** 2 numbers OPGW links (9.22 km) under State Sector (MPPTCL);

**Asset-6:** 6 numbers OPGW links (191.421 km) under State Sector (MPPTCL);

**Asset-7:** 3 numbers OPGW links (392.63 km) under Central Sector;

**Asset-8:** 2 numbers OPGW links (546 km) under Central Sector; and

**Asset-9:** 2 numbers OPGW links (274 km)

The subject assets have been collectively referred to as "the communication assets" in the 2014-19 tariff period. Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9 pertaining to Central Sector have been combined as on 1.4.2019 and have been collectively referred to as "Combined Asset-Central Sector" for 2019-24 tariff



period whereas Asset-5 and Asset-6 pertaining to State Sector have been combined as on 1.4.2019 and have been collectively referred to as "Combined Asset-State Sector".

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

- "1) Allow the addcap for 2014-19 and 2019-24 tariff block as claimed as per Para 6 and 8 above.*
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 7 and 8 above.*
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 6 and 7 above for respective block.*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.6 above.*
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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



## **Background**

3. The brief facts of the case are as follows:
- a. The Petitioner was entrusted with the implementation of “Establishment of Fibre Optic Communication System under Master Communication Plan in Western Region”. The scheme was discussed and deliberated in the 14<sup>th</sup>, 18<sup>th</sup> and 21<sup>st</sup> WRPC meetings held on 19.8.2010, 1.10.2011 and 9.11.2012, respectively.
  - b. The Investment Approval (IA) for implementation of the transmission project was accorded by the Board of Directors (vide Memorandum Ref.: C/CP/Master Comm. in WR dated 9.2.2012) of the Petitioner’s Company in its 267<sup>th</sup> meeting held on 8.2.2012, at an estimated cost of ₹21807 lakh including IDC of ₹1305 lakh, based on 4<sup>th</sup> Quarter, 2011 price level.
  - c. Subsequently, the Revised Cost Estimate (RCE) has been accorded by the Board of Directors (vide Memorandum Ref.: PA2021-06-0K-RCE005 dated 21.9.2020) of the Petitioner’s Company in its 378<sup>th</sup> meeting held on 10.8.2020, at an estimated cost of ₹24061 lakh including IDC of ₹2710 lakh, based on December, 2019 price level.
  - d. Initially, the scope of the work covered under the transmission project as per IA was as follows:
    - (i) Installation of OPGW fiber optic cable on the existing EHV transmission line of the Petitioner and constituents, the estimated length of such cable is approximately 5536 km.
    - (ii) Installation of OPGW fiber optic cable on the new EHV transmission line of the Petitioner, the estimated length of such cable is approximately 1355 km.



- (iii) Utilization of six (6) numbers of fibres from existing OPGW cable of the Petitioner Telecom network (535 km) for 2 numbers of links on cost sharing basis.
- (iv) 72 numbers of terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology shall be installed in the substations of the Petitioner mostly and few on the constituents. The project would also involve installation of 117 numbers of Multiplexer (Mux.) / Drop and Insert (D&I) / Digital Access Cross Connect Switch (DACS) at wideband nodes. To monitor the network, Network Management System (NMS) is also envisaged.
- (v) For MPPTCL, 15 numbers of terminal equipment for communication based upon SDH technology, 14 numbers of Mux / D&I at and one set of NMS system is also envisaged.
- (vi) Presently DC Power Supply has been envisaged at all the wideband locations. However, the requirement shall be optimized during detailed engineering.
- e. The item wise breakup of the scope of the work for Central Sector and MPPTCL is as follows:

Sl. No	Description	Central Sector	MPPTCL
1.	OPGW cable on existing lines (in km)	5297	239
2.	OPGW cable on new lines (in km)	1355	Nil
3.	SDH Equipment (in numbers)	72	15
	Mux/D&I/DACS ( numbers)	117	14
5	DC Power Supply (numbers)	72	Nil

- f. Subsequently, the scope of work covered under the transmission project was revised and was given in RCE submitted vide affidavit dated 23.9.2021 and the same is as follows:
- (i) Installation of OPGW fibre optic cable on EHV transmission line of POWERGRID and constituents, the estimated length of such cable is approximately 7109 km.



- (ii) Utilization of six (06) numbers of fibers from existing OPGW cable of POWERGRID Telecom network (approx.1465 km) for 6 numbers of links on cost sharing basis.
- (iii) 103 numbers of terminal equipment for communication based upon Synchronous Digital Hierarchy (SOH) technology being installed in the sub-stations of POWERGRID mostly and few on the constituents. Installation of 155 numbers of Multiplexer (Mux.) / Drop & Insert (0&1) / Digital Access Cross Connect Switch (DACS) at wideband nodes. To monitor the network, Network Management System (NMS) is also being installed.
- (iv) For MPPTCL, 16 numbers of terminal equipment for communication based upon Synchronous Digital Hierarchy (SOH) technology, 39 numbers of MuxID&1 are being implemented.
- (v) Installation of 41 numbers of DC Power Supply systems.
- (vi) Installation of 07 numbers of Repeater Shelters and Hot-line speech communication system.
- g. The item-wise break-up of the scope of the work for Central Sector and MPPTCL is as follows:

Sl.No	Description	Central Sector	MPPTCL
1	OPGW cable on EHV lines (in km)	6912	197
2.	SDH Equipment (in numbers)	103	16
3.	Mux/D&I/DACS (numbers)	155	39
4.	DC Power Supply (numbers)	37	4

- h. The details of the communication assets covered in instant petition is as follows:

Asset Nomenclature in the instant petition	Asset nomenclature in previous order	Asset	COD
Asset-1	Asset-1	14 numbers OPGW links (1513.362 km) under Central Sector	22.9.2015
Asset-2	Asset-2	27 numbers OPGW links (1892.58 km) under Central Sector	21.10.2016
Asset-3	Asset-3A	14 numbers OPGW links (1423.69 km) under Central Sector	30.11.2017
Asset-4	Asset-3B	3 nnumbers OPGW links (123.33 km) under Central Sector	1.7.2018



Asset Nomenclature in the instant petition	Asset nomenclature in previous order	Asset	COD
Asset-5	Asset-4A	2 numbers OPGW links (9.22 km) under State Sector (MPPTCL)	30.11.2017
Asset-6	Asset-4B	6 numbers OPGW links (191.421 km) under State Sector (MPPTCL)	1.7.2018
Asset-7	Asset-5A	3 numbers OPGW links (392.63 km) under Central Sector	1.5.2017
Asset-8	Asset-5B	2 numbers OPGW links (546 km) under Central Sector	1.9.2017
Asset-9	Asset-5C	2 numbers OPGW links (274 km) under Central Sector	1.3.2018

- i. The Petitioner *vide* affidavit dated 23.9.2021 has submitted the status of the transmission project/the communication assets covered under various petitions and the same is as follows:

Assets	Asset Name	COD	Covered under Petition No.
Asset-1	14 numbers OPGW links (1513.362 km) under Central Sector	22.9.2015	<b>Covered under instant petition (order dated 22.2.2019 under Petition No. 5/TT/2018)</b>
Asset-2	27 numbers OPGW links (1892.58 km) under Central Sector	21.10.2016	
Asset-3	14 numbers OPGW links (1423.69 km) under Central Sector	30.11.2017	
Asset-4	3 numbers OPGW links (123.33 km) under Central Sector	1.7.2018	
Asset-5	2 numbers OPGW links (9.22 km) under State Sector (MPPTCL)	30.11.2017	
Asset-6	6 numbers OPGW links (191.421 km) under State Sector (MPPTCL)	1.7.2018	
Asset-7	3 numbers. OPGW links (392.63 km) under Central Sector	1.5.2017	
Asset-8	2 numbers OPGW links (546 km) under Central Sector	1.9.2017	
Asset-9	2 numbers OPGW links (274 km) under Central Sector	1.3.2018	
Asset-1	OPGW link (242 km) for 765 kV Sasan-Satna Ckt-1 under Central Sector	16.1.2019	Covered in order dated 10.6.2022 in Petition No. 645/TT/2020 for 2014-19 tariff period
Asset-2	OPGW link (36 km) for 220 kV Indore-Pithampura (MPPTCL) under State Sector	1.3.2019	
Asset-3	OPGW link (336 km) for Satna Gwalior Ckt-1 under Central Sector	30.3.2019	
Asset-1	OPGW link for LILO of Lonikhand-Kalwa at Navi Mumbai Transmission Line (Central sector)	13.5.2019 (Proposed)	Covered under Diary No.24/2021 for





Asset-2	OPGW link for Vapi-Kudus (upto LILO of Kala from Vapi) (Central sector)	26.5.2019 (Actual)	2019-24 tariff period (petition number to be allotted)
Asset-3	OPGW link for 220 kV Kawas-Vav and 220 kV Kawas – Navsari (Central sector)	21.6.2019 (Actual)	
Asset-4	OPGW link for 220 kV Bhopal-Govindpur SLDC (MPPTCL) (State sector)	24.1.2020 (Actual)	

- j. The tariff for 2014-19 period for the communication assets was determined vide order dated 22.2.2019 in Petition No. 5/TT/2018 in accordance with the 2014 Tariff Regulations. The Commission *vide* order dated 22.2.2019 in Petition No. 5/TT/2018 directed the Petitioner to submit confirmation from Central Electricity Authority (CEA) that there is no requirement of certification by CEA in case of OPGW links. The Petitioner in this regard has submitted that the Communication/ system under ULDC projects comprising of Fiber optic and Microwave Systems was established for providing connection connectivity between control centers and from data concentrator nodes for handling large data volumes. The operation voltage for communication system operation is 24/48 volt DC supply. The Petitioner has further submitted that as per Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations 2010, minimum 650 volt is required for inspection. Further, Central Government specified the notified voltage for the purpose of self-certification under Regulation 30 and Regulation 43 of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 is 11 kV, that is upto 11 kV no inspection is required by CEA inspector. Hence, CEA clearance letter is not applicable in case of communication system.



4. The Respondents are distribution licensees, transmission licensees, power utilities and power departments, which are procuring transmission service from the Petitioner, mainly beneficiaries of the Western Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. Madhya Pradesh Power Transmission Company Limited (MPPTCL), Respondent No. 2, *vide* affidavit dated 10.9.2021 has filed its reply and has raised the issues of time over-run, IDC and IEDC. Madhya Pradesh Power Management Company Ltd. (MPPMCL), Respondent No. 1, *vide* affidavit dated 14.9.2021 has filed its reply and has raised the issues of time over-run, grossing up of RoE, Additional Capital Expenditure (ACE) and effect of CGST. The Petitioner *vide* affidavits dated 22.9.2021 has filed its rejoinder to the replies of MPPTCL and MPPMCL.

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



7. This order is issued considering the submissions made by the Petitioner *vide* affidavits dated 28.1.2020, 21.9.2021, 23.9.2021 and 12.10.2021, MPPTCL's and MPPMCL's reply *vide* affidavits dated 10.9.2021 and 14.9.2021, respectively and Petitioner's rejoinder thereto filed *vide* separate affidavits dated 22.9.2021 to the replies of MPPTCL and MPPMCL.

8. The hearing in this matter was held on 24.9.2021 through video conference and the order was reserved. However, the order could not be passed before Shri P.K.Pujari, former Chairperson, demitted office. Therefore, the matter was again heard on 23.6.2022.

9. During the hearing on 23.6.2022, the representative of the Petitioner submitted that all the information for determination of tariff has been submitted which may be considered for determination of transmission tariff. The learned counsel for MPPTCL submitted that their reply is already on record. After hearing the parties, the Commission reserved the order in the petition.

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

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

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



(₹ in lakh)

Particulars	Asset-1			
	2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
Depreciation	62.62	129.40	154.59	171.06
Interest on Loan	60.63	115.34	123.75	123.43
Return on Equity	58.51	120.85	144.37	160.18
O&M Expenses	40.52	70.88	58.44	51.17
Interest on Working Capital	6.42	12.33	12.96	13.29
<b>Total</b>	<b>228.70</b>	<b>448.80</b>	<b>494.11</b>	<b>519.13</b>

(₹ in lakh)

Particulars	Asset-2		
	2016-17 (Pro-rata 162 days)	2017-18	2018-19
Depreciation	108.53	272.18	305.44
Interest on Loan	102.34	229.99	230.01
Return on Equity	101.35	254.19	286.01
O&M Expenses	9.15	24.24	12.98
Interest on Working Capital	7.28	17.76	18.59
<b>Total</b>	<b>328.65</b>	<b>798.36</b>	<b>853.03</b>

(₹ in lakh)

Particulars	Asset-3	
	2017-18 (Pro-rata 122 days)	2018-19
Depreciation	73.51	191.30
Interest on Loan	63.00	152.15
Return on Equity	68.65	179.14
O&M Expenses	69.80	61.12
Interest on Working Capital	8.00	14.36
<b>Total</b>	<b>282.96</b>	<b>598.07</b>

(₹ in lakh)

Particulars	Asset-4
	2018-19 (Pro-rata 274 days)
Depreciation	15.76
Interest on Loan	12.09
Return on Equity	14.76
O&M Expenses	5.51
Interest on Working Capital	1.16
<b>Total</b>	<b>49.28</b>



(₹ in lakh)

Particulars	Asset-5	
	2017-18 (Pro-rata 122 days)	2018-19
Depreciation	1.26	4.24
Interest on Loan	1.10	3.49
Return on Equity	1.17	3.97
O&M Expenses	0.00	0.00
Interest on Working Capital	0.08	0.25
<b>Total</b>	<b>3.61</b>	<b>11.95</b>

(₹ in lakh)

Particulars	Asset-6	
	2018-19 (Pro-rata 274 days)	
Depreciation	25.90	
Interest on Loan	20.33	
Return on Equity	24.25	
O&M Expenses	0.00	
Interest on Working Capital	1.46	
<b>Total</b>	<b>71.94</b>	

(₹ in lakh)

Particulars	Asset-7	
	2017-18 (Pro-rata 335 days)	2018-19
Depreciation	40.48	44.81
Interest on Loan	35.30	35.30
Return on Equity	37.81	41.96
O&M Expenses	3.28	1.76
Interest on Working Capital	2.61	2.71
<b>Total</b>	<b>119.48</b>	<b>126.54</b>

(₹ in lakh)

Particulars	Asset-8	
	2017-18 (Pro-rata 212 days)	2018-19
Depreciation	44.49	81.87
Interest on Loan	37.89	65.02
Return on Equity	41.55	76.66
O&M Expenses	6.12	3.28
Interest on Working Capital	2.97	4.96
<b>Total</b>	<b>133.02</b>	<b>231.79</b>



(₹ in lakh)

Particulars	Asset-9	
	2017-18 (Pro-rata 31 days)	2018-19
Depreciation	3.90	47.68
Interest on Loan	3.46	40.10
Return on Equity	3.65	44.65
O&M Expenses	3.76	2.01
Interest on Working Capital	0.43	2.94
<b>Total</b>	<b>15.20</b>	<b>137.38</b>

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

(₹ in lakh)

Particulars	Asset-1			
	2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	6.44	5.91	4.87	4.26
Working Capital for Maintenance Spares (15% of O&M Expenses)	11.59	10.63	8.77	7.68
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	72.66	74.80	82.35	86.52
<b>Total Working Capital</b>	<b>90.69</b>	<b>91.34</b>	<b>95.99</b>	<b>98.46</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>6.42</b>	<b>12.33</b>	<b>12.96</b>	<b>13.29</b>

(₹ in lakh)

Particulars	Asset-2		
	2016-17 (Pro-rata 162 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	1.72	2.02	1.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	3.09	3.64	1.95
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	123.42	133.06	142.17
<b>Total Working Capital</b>	<b>128.23</b>	<b>138.72</b>	<b>145.20</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Interest on Working Capital</b>	<b>7.28</b>	<b>17.76</b>	<b>18.59</b>



(₹ in lakh)

Particulars	Asset-3	
	2017-18 (Pro-rata 122 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	17.40	5.09
Working Capital for Maintenance Spares (15% of O&M Expenses)	31.32	9.17
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	141.09	99.68
<b>Total Working Capital</b>	<b>189.81</b>	<b>113.94</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>8.00</b>	<b>14.36</b>

(₹ in lakh)

Particulars	Asset-4
	2018-19 (Pro-rata 274 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	0.61
Working Capital for Maintenance Spares (15% of O&M Expenses)	1.10
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	10.94
<b>Total Working Capital</b>	<b>12.65</b>
Rate of Interest (in %)	12.20
<b>Interest on Working Capital</b>	<b>1.16</b>

(₹ in lakh)

Particulars	Asset-5	
	2017-18 (Pro-rata 122 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	1.80	1.99
<b>Total Working Capital</b>	<b>1.80</b>	<b>1.99</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>0.08</b>	<b>0.25</b>

(₹ in lakh)

Particulars	Asset-6
	2018-19 (Pro-rata 274 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	0.00



Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	15.97
<b>Total Working Capital</b>	<b>15.97</b>
Rate of Interest (in %)	12.20
<b>Interest on Working Capital</b>	<b>1.46</b>

(₹ in lakh)

Particulars	Asset-7	
	2017-18 (Pro-rata 335 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	0.30	0.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.54	0.26
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	21.70	21.09
<b>Total Working Capital</b>	<b>22.54</b>	<b>21.50</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>2.61</b>	<b>2.71</b>

(₹ in lakh)

Particulars	Asset-8	
	2017-18 (Pro-rata 212 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	0.88	0.27
Working Capital for Maintenance Spares (15% of O&M Expenses)	1.58	0.49
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	38.17	38.63
<b>Total Working Capital</b>	<b>40.63</b>	<b>39.39</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>2.97</b>	<b>4.96</b>

(₹ in lakh)

Particulars	Asset-9	
	2017-18 (Pro-rata 31 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	3.69	0.17
Working Capital for Maintenance Spares (15% of O&M Expenses)	6.64	0.30
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	29.83	22.90
<b>Total Working Capital</b>	<b>40.16</b>	<b>23.37</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>0.43</b>	<b>2.94</b>





## Capital Cost

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

14. The Commission *vide* order dated 22.2.2019 in Petition No. 5/TT/2018 has allowed the following capital cost as on COD in respect of the communication assets:

(₹ in lakh)

Assets	AppORTIONED approved cost	Capital cost allowed as on COD	ACE				Capital cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-1	4280.29	1738.59	34.17	265.22	467.43	0.00	2505.41
Asset-2	6066.52	3426.47	0.00	358.54	621.90	264.59	4671.50
Asset-3	4280.29	3535.40	0.00	0.00	(1416.19)	68.19	2187.40
Asset-4	767.20	307.25	0.00	0.00	0.00	(76.53)	230.72
Asset-5	157.68	52.48	0.00	0.00	0.00	13.09	65.57
Asset-6	623.05	435.78	0.00	0.00	0.00	67.73	503.51
Asset-7	830.70	666.08	0.00	0.00	(53.08)	12.64	625.64
Asset-8	1446.01	1087.03	0.00	0.00	27.13	63.58	1177.74
Asset-9	844.86	685.19	0.00	0.00	(29.70)	49.50	704.99

15. The Petitioner in the instant true-up petition has claimed the following trued up capital cost for 2014-19 tariff period:

(₹ in lakh)

Assets	FR AppORTIONED Approved Cost	Capital cost as on COD	ACE				Capital cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-1	4280.29	1884.49	34.17	263.22	520.50	0.00	2702.38
Asset-2	6066.52	3715.34	0.00	358.54	479.00	544.66	5097.54
Asset-3	4280.29	4212.11	0.00	0.00	(1449.02)	526.32	3289.41
Asset-4	767.20	361.86	0.00	0.00	0.00	(55.90)	305.96
Asset-5	157.68	61.14	0.00	0.00	0.00	13.09	74.23
Asset-6	623.05	506.09	0.00	0.00	0.00	94.19	600.28
Asset-7	830.70	731.99	0.00	0.00	(53.08)	58.11	737.02
Asset-8	1446.01	1206.75	0.00	0.00	27.13	121.48	1355.36
Asset-9	844.86	758.95	0.00	0.00	(29.70)	65.84	795.09



### Cost over-run

16. The Petitioner *vide* affidavit dated 23.9.2021 has submitted that the Commission *vide* order dated 22.2.2019 in Petition No. 5/TT/2018 has restricted the amount of ₹302.35 lakh and ₹65.82 lakh with respect to Asset-3A and Asset-5A (nomenclature as per previous order) respectively due to cost over-run, considering net cash outflow transferred to telecom towards sharing of fiber optic OPGW. Further, the Petitioner has submitted that RCE has been approved *vide* memorandum dated 21.9.2020 and has submitted the apportioned approved cost as per FR and RCE of all the communication assets covered in the instant petition and the same is as follows:

(₹ in lakh)				
Assets	Asset	Apportioned approved cost (as per FR)	Apportioned approved cost (as per RCE)	Completed Cost
Asset-1	14 numbers OPGW links (1513.362 km) under Central Sector	4280.29	4280.29	2579.83
Asset-2	27 numbers OPGW links (1892.58 km) under Central Sector	6066.52	6066.52	5098.15
Asset-3	14 numbers OPGW links (1423.69 km) under Central Sector	4280.29	4643.32	3148.65
Asset-4	3 numbers OPGW links (123.33 km) under Central Sector	767.2	767.2	304.24
Asset-5	2 numbers OPGW links (9.22 km) under State Sector (MPPTCL)	157.68	157.68	74.23
Asset-6	6 numbers OPGW links (191.421 km) under State Sector (MPPTCL)	623.05	623.05	600.28
Asset-7	3 numbers OPGW links (392.63 kms) under Central Sector	830.7	950	737.02
Asset-8	2 numbers OPGW links (546 km) under Central Sector	1446.01	1446.01	1355.36
Asset-9	2 numbers OPGW links (274 km) under Central Sector	844.86	844.86	795.09
<b>Total</b>		<b>19296.60</b>	<b>19778.93</b>	<b>14692.85</b>

17. The Petitioner has submitted that the total estimated completion cost of the communications assets is ₹14692.85 lakh as against RCE apportioned approved cost of ₹19778.93 lakh. The estimated capital costs of individual assets are also within the



apportioned revised cost. Therefore, the Petitioner has prayed to allow the capital cost and tariff as claimed in the instant petition.

18. We have considered the submission of the Petitioner and has observed that the total estimated completion cost as on 31.3.2019 for the communication assets is within the apportioned approved cost and the same is allowed.

**Time over-run**

19. As per IA dated 8.2.2012, the communication asset were scheduled to be put into commercial operation (SCOD) within 30 months from the date of IA i.e. by 8.8.2014. However, there is time over-run in declaring the COD of the communication assets. The details of SCOD, COD and time over-run with respect to the communication assets are as follows:

<b>Assets</b>	<b>SCOD</b>	<b>COD</b>	<b>Time over-run</b>
Asset-1	8.8.2014	22.9.2015	410 days
Asset-2		21.10.2016	805 days
Asset-3		30.11.2017	1210 days
Asset-4		1.7.2018	1423 days
Asset-5		30.11.2017	1210 days
Asset-6		1.7.2018	1423 days
Asset-7		1.5.2017	997 days
Asset-8		1.9.2017	1120 days
Asset-9		1.3.2018	1301 days

20. The Commission vide order dated 22.2.2019 in Petition No. 5/TT/2018 had directed the details of time over-run at the time of truing-up. The relevant portion of the order dated 22.2.2019 is as follows:

*“21. As stated above, SCOD of the assets is 08.08.2014 and considering the actual COD's the delay in commissioning of assets ranges from 410 days to 1423 days for assets under consideration. Though the petitioner vide affidavit dated 30.11.2018 has submitted the asset-wise details of reasons for delay, however it has not stated the actual periodicity being affected by such events causing the delay, so as to prudently analyse the admissibility of time over-run. As such, for the present no delay has been allowed for the purpose of tariff. However, the petitioner is at liberty to approach the Commission, at the time of truing up, with proper details as to time over-run like periods being affected by each events causing the delay.”*



21. Thus, the Commission did not condone the time over-run but granted liberty to the Petitioner to approach the Commission at the time of truing up, with proper details like periods being affected by each events causing the delay.

22. The Petitioner has submitted that there is a time over-run ranging between 410 days to 1423 days in execution of the communication assets and has attributed the delay in execution of the communication assets to (i) addition of extra links (changes from awarded scope of work), (ii) delay in issuance of permit to work at certain sites / locations and rescheduling of outages on various occasions, (iii) severe Right of Way (RoW) issues at various sites/locations, (iv) delay in execution of new lines and (v) construction of back-up SLDC building in Bhopal and addition of an additional link viz. Bhopal-Govindpur of MPPTCL.

23. The Petitioner has submitted the following to substantiate its claim:

**(i) Addition of Extra Links (changes from awarded Scope of Work):**

(a) As per the original LOA, total 44 links were to be executed. MPPTCL and Kawas system were added in Amendment 1. Optical fibre cable was to be supplied from Korea which took time for construction, testing, dispatch and custom clearance. Thus, after amendment of quantities, it took time for material to reach at site.

(b) Due to addition of new links, survey work was commenced again. Relevant letters, correspondences and record notes of discussion with the executing agency LS Cable and Systems Limited has been attached to the petition. After IA, LOA was awarded on 25.6.2012. Amendments took place as per following dates:



Amendment 1 – 25.6.2013  
 Amendment 2 – 16.6.2014  
 Amendment 3 – 24.8.2015

(c) The addition of links, deletion of links and further addition (change in scope in the Project) has been discussed and ratified in various WRPC Meetings elaborated as follows:

Sl. No.	Meeting Reference and date	Summary of discussion
1	21 <sup>st</sup> WRPC dated 13.12.2012	<p>The Master Communication Plan in WR which involved implementation of 6710 km of Fiber Optics was approved in 14th WRPC meeting held on 19th August, 2010. Accordingly, Communication System consisting of 6652 km for Central Sector and 239 km for MPPTCL is under implementation. LOA for this requirement has already been placed and survey work is in progress.</p> <p>However, some of the stations such as Gwalior 765 kV, Indore 765 kV, Jabalpur Pooling, Damoh, Birsinghpur &amp; Dharamjaygarh could not be planned with physical redundancy as appropriate route was not available and Sipat, Bilaspur, Kawas, Kakrapar Betul &amp; Mauda were not included in the network. Considering the subsequent development in power system network and communication related problems faced during the recent grid disturbance, connectivity with physical path redundancy has been planned for balance stations which shall require installation of 2672 km of OPGW. This requirement was discussed in the SCADA committee meeting held on 12th September 2012 at WRLDC Mumbai. During the discussions in the SCADA committee meeting, WRLDC &amp; other constituents opined that Fiber connectivity to SLDCs (Planned) of DD &amp; DNH, existing SLDC at Goa &amp; Kalwa, Kawas, RGPPL and Bina (JAYPEE) power plants may also be provided in order to establish wide band connectivity for these sub-stations and control centers. To meet this requirement, in addition to 2672 km of OPGW mentioned above, the following links are required:</p> <ol style="list-style-type: none"> <li>SLDC (DNH) – Bhilad S/S – Vapi</li> <li>SLDC (Varkoond) – Magarwada – Vapi</li> <li>SLDC (Panjim) – Ponda – Mapusa</li> <li>Navsari GIS – Navsari (GETCO) - Kawas</li> <li>Kawas – Vav</li> <li>RGPPL – New Koyna</li> <li>Bina (JAYPEE) – Bina(PG)</li> <li>CGPL Mundra – Jetpur</li> </ol> <p>Furrther, MPPTCL vide their letter dated 31.7.2012, has requested for inclusion of approximately 14 km of OFC along with wideband communication equipment of adequate capacity for setting up of back-up SLDC at Govindpura,</p>



		Bhopal in the Master Communication Plan of WR under central sector portion, adopting the guidelines of ULDC project and guidelines adopted for sharing of wide band communication cost for shifting of SLDC CSPTCL from Bhilai to Raipur. This was discussed and agreed during SCADA committee meeting held on 12.9.2012 at WRLDC Mumbai						
2	23 <sup>rd</sup> WRPC dated 12.7.2013	<p>During 21<sup>st</sup> WRPC 2013 meeting, additional requirement of approximately 3666 km of Fiber Optic Cable along with communication equipment was approved for implementation under Master Communication plan. Procurement process for the same has already been initiated. Subsequently MPTCL vide their letter ref no 04- 01/SIV/2224 dated 20.03.13 (copy enclosed) have requested the Petitioner to implement additional 723 km of OPGW and associated equipment under Master communication to connect their sub-stations. MPTCL requirement was also to be implemented along with the requirement approved in 21st WRPC meeting and the investment will be recovered as per tariff to be determined by Commission.</p> <p><b>TCC deliberations:</b> MSETCL representative enquired whether the implementation of additional 723 km of OPGW and associated equipment would have financial implications on other beneficiaries. Further, he informed that 239 km OPGW for MPPTCL was approved in the 14th WRPC meeting. CTU representative intimated that this is a State specific communication network and MPPTCL would be charged for this additional OPGW network and associated equipment and this additional network and its associated equipments do not have any financial implications on other beneficiaries/ States. WRPC agreed for inclusion of additional 725 km of OPGW and associated equipment for MPPTCL in master communication plan.</p>						
2	26 <sup>th</sup> WRPC dated 21.6.2014	<p>The Master communication plan of MP is being implemented by the Petitioner, LD&amp;C along with Master communication plan of WR. The Master Communication plan was approved in 14th WRPC accordingly 239 km of OPGW for MPPTCL network along with associated communication was considered for implementation.</p> <p>Further, during 23rd WRPC meeting held 12.6.2013 at Silvasa, the additional requirement of 723 km of OPGW and associated equipment for MPPTCL network has been approved by WRPC. However, with regard to changes in the transmission system, the following modifications were required in the approved Master Communication plan of MP. The following links of the approved plan were to be deleted:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of line/link</th> <th>OPGW Route length in km</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Rewa 220 kV Sub-station - Satna 220 kV Sub-station</td> <td>67</td> </tr> </tbody> </table>	S. No.	Name of line/link	OPGW Route length in km	1	Rewa 220 kV Sub-station - Satna 220 kV Sub-station	67
S. No.	Name of line/link	OPGW Route length in km						
1	Rewa 220 kV Sub-station - Satna 220 kV Sub-station	67						



		<b>2</b>	Itarsi 220 kV Sub-station – Sarni 220 kV Sub-station	72
		<b>3</b>	Ratlam 220 kV Sub-station – Pithampur 400 kV Sub-station	150
		<b>4</b>	<b>Total</b>	<b>289</b>

**(ii) Delay in issuance of permit to work at certain sites/ locations and re-scheduling of outages on various occasions**

(a) Due to non-issuance of permit to work as per real time grid condition from WRLDC, work progress was hampered. Outage of Gwalior-Agra link was not provided for 5 months and outage of Sasan-Vindhyachal link was not provided for 4 months.

(b) The Petitioner has submitted the chronology of events/ correspondence/ mail between 15.4.2016 to 15.10.2016 regarding non-availability of shutdown for diamond formation between 400 kV Sasan-Vindhyachal ckt 1 and 765 kV Sasan-Vindhyachal and 400 kV Sasan-Vindhyachal ckt 1 and 765 kV Sasan-Satna ckt 1. Similarly, the Petitioner has submitted the correspondence from 26.4.2016 to 4.5.2016 regarding non-availability of shutdown for Gwalior-Agra ckt 2 for diamond formation between 765 kV Gwalior-Agra Transmission Line and 765 kV Agra-Meerut Transmission Line.

**(iii) Severe RoW issues at various locations/sites:**

(a) The Petitioner has submitted that RoW issues were encountered while installation of OPGW links in various lines such as Mundra-Bachau, Bachau-Ranchodpura, Bina-Gwalior-Agra and Sasan-Satna-Gwalior lines. The Petitioner has submitted the chronology of events/ correspondence/ mail





between 10.10.2013 to 10.3.2017 in support of time over-run due to RoW issues.

**(iv) Construction of back-up SLDC building and addition of Additional link Bhopal-Govindpur for MPPTCL portion:**

(a) MPPTCL had requested the Petitioner for construction of back-up SLDC building at Bhopal which is covered under the Project “Expansion/Upgradation of SCADA/EMS System at SLDCs of Western Region”. Investment Approval of the same was accorded on 5.4.2013.

(b) Further, in the 21<sup>st</sup> WRPC Meeting dated 9.11.2012, MPPTCL had requested as follows:

*“MPPTCL vide their letter dated 31.7.12, has requested for inclusion of approximately 14 kms of OFC along with wideband communication equipment of adequate capacity for setting up of back-up SLDC at Govindpura, Bhopal in the Master Communication Plan of WR under central sector portion, adopting the guidelines of ULDC project and guidelines adopted for sharing of wideband communication cost for shifting of SLDC CSPTCL from Bhilai to Raipur. This was discussed and agreed during SCADA committee meeting held on 12<sup>th</sup> September 2012 at WRLDC Mumbai.”*

(c) Thus, an additional link of Bhopal (PG)-Govindpur (SLDC, MPPTCL) was added which could only be executed after the completion of Sub-SLDC building at Bhopal. The Petitioner has also provided supporting documentary evidence in the matter.

**(v) Commissioning of links in a collective manner:**

(a) The Petitioner has submitted that as per the directives from the Commission and greater utility of the Communication System, CODs of a number of links were to be declared collectively. Following this principle, some links, even though ready for putting into commercial operation were not put to commercial operation individually and, thus, the delay in execution





of the link which becomes ready at last becomes the delay of the entire bunch of links to be into commercial operation on a certain date.

24. The Petitioner has submitted the following asset-wise activity summary:

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset- 1	LOA	6.4.2012		28.5.2012		RoW issues on 400 kV Bhopal-Damoh.
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	3.1.2013	27.4.2015	
	SAT	6.5.2013	7.8.2014	11.6.2014	22.9.2015	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-2	LOA	6.4.2012		28.5.2012		OPGW Network Changes due to denying Permission by RPTL on their ISTS Lines i.e Solapur – Kolhapur, Solapur – Parli & Pune (400 kV) – Pune (765 kV) (Relevant extract of MoM of 25 <sup>th</sup> WRPC MoM is submitted). Pursuant to continuous follow up, RETL agreed for laying of OPGW on Transmission Lines owned by them. (relevant extract of MoM of 28 <sup>th</sup> WRPC MoM is enclosed). Solapur – Parli, Pune 400 – Pune 765 which are very much needed on way to WRLDC for Data Transfer & Voice Transfer upto WRLDC from remaining Part of Network i.e Chhattisgarh Area.
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	12.12.2012	4.10.2016	
	SAT	6.5.2013	7.8.2014	18.12.2015	19.10.2016	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-3	LOA	6.4.2012		28.5.2012		Severe RoW issues on Mundra-Bhachau, Bhachau-Ranchhodpura and Agra-Gwalior
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	8.1.2013	27.4.2015	
	SAT	6.5.2013	7.8.2014	11.6.2014	30.11.2017	



Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-4	LOA	6.4.2012		28.5.2012		Severe RoW issues on Vindhyachal Pooling-Sasan
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	28.1.2013	25.11.2017	
	SAT	6.5.2013	7.8.2014	15.8.2017	1.7.2018	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-5	LOA	6.4.2012		28.5.2012		Shut-down issues on multiple line crossings
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	31.1.2013	5.10.2017	
	SAT	6.5.2013	7.8.2014	25.10.2013	30.11.2017	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-6	LOA	6.4.2012		28.5.2012		Shut-down issues on multiple line crossings on Indore-Barwaha, Khandwa-Chhegaon
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	25.1.2013	20.11.2017	
	SAT	6.5.2013	7.8.2014	15.10.2017	1.7.2018	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-7	LOA	6.4.2012		28.5.2012		Severe RoW in Solapur – Kolhapur Line. Construction of Kolhapur (MSETCL) – Kolhapur (PG) which forms after LILO of Kolhapur – Mapusa is delayed. LILO of Kolhapur – Mapusa is not yet completed.
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	13.1.2013	15.9.2017	
	SAT	6.5.2013	7.8.2014	30.12.2016	29.4.2017	

Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-8	LOA	6.4.2012		28.5.2012		Severe RoW Issues in Wardha – Aurangabad Link. Severe RoW Issues in 12 km Section of Wardha – Seoni (Upto Repeater)
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	13.1.2013	11.8.2016	
	SAT	6.5.2013	7.8.2014	15.5.2017	29.8.2017	



Asset	Activity	Period of activity				Reason (s) for delay
		Planned		Achieved		
		From	To	From	To	
Asset-9	LOA	7.3.2012		28.5.2012		Delay in construction of Transmission Lines
	Supplies	6.12.2012	7.3.2014	18.11.2012	14.12.2015	
	Installation	5.2.2013	6.6.2014	13.1.2013	11.8.2016	
	SAT	6.5.2013	7.8.2014	1.2.2018	27.6.2018	

25. In view of above submissions, the Petitioner has submitted that the delay in execution of the OPGW links depends upon various factors such as addition/ deletion of links as per beneficiaries requirements in subsequent periods even after award is placed, issues in getting work permits/ outages of charged lines, RoW issues, collective charging of links for optimal utility of the system and inordinate and uncontrollable delay in execution of various new lines over which OPGW links are to be installed. Further, the changes in the scope (addition/ deletion of links) have taken place and ratified in the WRPC as late as 21.6.2014 i.e. even after 28 months from IA, thus shifting the zero date and hence, the completion schedule. Thus, the delay in execution of the transmission project is not attributable to the Petitioner and has requested to consider the same and allow the entire cost and tariff as claimed.

26. MPPTCL has submitted that the Petitioner has not provided any details with regard to the delay in achieving the commercial operation of the Asset-5 and Asset-6. MPPTCL has further submitted that the Petitioner has provided vague justifications/ documentation for the delay in the implementation of the completion of the project and the alleged reasons/ events are attributable to the Petitioner and/ or its sub-contractors. MPPTCL has further submitted that a perusal of the documents establish that there has been slackness on the part of the Petitioner in executing the project and there were issues between the Petitioner and its sub-contractors. Therefore, the same does not constitute grounds for grant of Interest During Construction (IDC) and Incidental



Expenses during Construction (IEDC) for the period of delay. MPPTCL has further submitted that the Petitioner has not given any explanation as to the works/ requisitioning done during the period falling between 28.5.2012 (LoA) and 18.11.2012 in respect of Asset-5 and Asset-6. Further, as per the Petitioner's submissions, the supplies should have been completed over a period of 15 months i.e. from December, 2012 to March, 2014. However, the supplies were completed only in December, 2015. MPPTCL has further submitted that the Petitioner has stated that the installation activity commenced with effect from January, 2013. It is unclear, therefore, as to the start date regarding the installation activities. Even if June, 2013 is taken as the starting date for installation activities, it ought to have been completed at least within a time period of 30 months i.e. by December, 2015. However, the Petitioner has completed the installation process on 5.10.2017 in respect of Asset-5 and 20.11.2017 in respect of Asset-6. MPPTCL has further submitted that the Petitioner has not given any information or document to establish the timelines between the award of LoA to completion of the project. MPPTCL has further submitted that the Petitioner has attached some letters/ communications raising isolated RoW issues in respect of certain assets without any justification or the steps taken by the Petitioner in order to mitigate the delay. As regard the issue of shutdown, it is submitted that the date and duration of such shutdowns were required to be intimated one month prior to such shutdowns. A perusal of the shutdowns sought by the Petitioner or its sub-contractors reveals that the shutdowns were sought with a week or 2/3 days' notice which are not in compliance with the conditions of notice as set out in the meeting dated 16.10.2012. MPPTCL has further submitted that in the absence of the documentary evidence and in terms of the applicable regulations and



settled principles, MPPTCL submitted that the extension of time sought by the Petitioner should not to be granted.

27. MPPMCL has made the following submissions in respect of time over-run:

- (i) **Addition of extra links:** - The Petitioner has submitted only partial facts. The facts along with documentary evidence like date of issue of award considering the works proposed to be additionally covered in 21<sup>st</sup> WRPC meeting dated 13.12.2012 and same for 23<sup>rd</sup> and 26<sup>th</sup> WRPC meeting has not been submitted. The copies of Award having detailed terms and condition of Contract (including details of time line given for original completion of works and new time line for additional works) has also not been submitted by the Petitioner. However considering the Amendment 1 (issued on 25.6.2013) has been issued after 21<sup>st</sup> WRPC meeting held on 13.12.2012, it shows the delay of about six months on the Petitioner's side. Similarly, delay of 11 months and 14 months took place in issuing award (Amendment 2 and 3) from the date of 23<sup>rd</sup> and 26<sup>th</sup> WRPC meetings.
- (ii) **Delay in issue of permit to work at certain sites:** - The delay in permit could easily be avoided by proper planning. The Petitioner is a CTU and is well aware that the permit / shut down of transmission line and sub-station cannot be given immediately and a proper planning is required to obtain the same. The lack of co-ordination and improper planning is only the main reason of not getting shutdowns. This is the inefficiency of the Petitioner and delay on this ground should not be granted.
- (iii) **Severe RoW issues:-** The delay on completion is basically due to lethargic approach of the Petitioner, if the District Administration was approached timely and regularly, the RoW issues would have been resolved earlier. The Petitioner is a company engaged in this work and has a vast experience of encountering problems of RoW while erection of lines. It is the negligence on part of Petitioner which resulted in delay in



execution. Had the Petitioner acted on time, just after investment approval, the matter would have been solved in 6 months from then, as it was solved later and no time over-run would have occurred, hence, plea of the Petitioner is liable to be rejected.

- (iv) **Construction of back up SLDC building at Bhopal & addition of an additional link i.e Bhopal – Govindpur of MPPTCL:-** The Petitioner has not shared complete facts. The Petitioner has not submitted any details about the time line decided to complete the SLDC building work and actual date of completion of building work by the Petitioner. In the absence of above details, it is not possible to make any comment on the delay occurred for this reason.

28. MPPMCL has further submitted that the reasons given by the Petitioner are solely attributable to the Petitioner, hence, plea of the Petitioner is liable to be rejected to consider time over-run.

29. In response to the submissions of MPPTCL and MPPMCL, the Petitioner *vide* affidavit dated 22.9.2021 has submitted that the time over-run is mainly due to addition of extra links, delay in issuance of permit to work at certain sites/ locations and re-scheduling of outages on various occasions and RoW issues at various sites/ locations, which were beyond the control of the Petitioner and has requested to condone the entire time over-run and allow full cost and tariff as claimed in the instant petition.

30. The Commission *vide* TV letter dated 15.9.2021 directed the Petitioner to submit Form-12 for all the assets having time over-run. In response, the Petitioner *vide* affidavit dated 21.9.2021 has submitted the Form-12 along with documentary evidence in support of time over-run. The Petitioner has submitted specific reasons affecting the



execution of the communication assets. The asset wise reasons submitted by the Petitioner in Form-12 is as follows:

**Common reasons affecting the execution of assets (Asset-1 to Asset-9)**

- a. WRLDC restricted issuance of Permission to Work (PTW) simultaneously on 765 kV lines originating from single source, post grid failure in July, 2012. Thus, PTW for working simultaneously on 765 kV Bina-Gwalior and 765 kV Agra-Gwalior links was not granted by WRLDC. Similarly, PTW was not issued for simultaneous working on 765 kV Sasan-Satna and 765 kV Satna-Gwalior link. Permission was granted for one link at a time leading to delay.
- b. The transmission project was discussed and approved in the 14<sup>th</sup> meeting of WRPC held on 19.8.2010. Whereas, addition/ deletion of links were approved in 21<sup>st</sup> meeting of WRPC on 9.11.2012 (addition of new link of 765 kV Agra-Gwalior and 220 kV Bhopal-Govindpura link of MPPTCL). Further, modifications were approved in 25<sup>th</sup> meeting of WRPC held on 4.2.2014 (Addition of 765 kV Satna-Gwalior and 765 kV Sasan-Satna links and deletion of 400 kV Vindhyachal-Satna link).
- c. Area covering about 25 km radius around Satna Sub-station was severely affected by RoW issues, with work interrupted in the months of March, 2017, October, 2017 and April, 2018 with almost no work progress achieved. Thus, a period of about 1 year between March, 2017 to April, 2018 was severely hampered due to RoW issues around Satna causing delay in execution of Sasan-Satna and Satna-Gwalior links.



- d. Execution of the links of Sasan-Satna, Bina-Gwalior, Dehgam-Ranchodpura and Satna-Gwalior required a repeater station. The repeater station can only be placed in safe and secure location owned by the State Transmission Utilities (STUs). Repeater station for Sasan-Satna was finalized at 132 kV Rampur Naikin Sub-station of MPPTCL and MoU signed on 1.10.2016 with 11 km OPGW installation on 132 kV Rampur Naikin-Beohari line with cable design specific for suitability on 132 kV line. Whereas, the repeater station for Satna-Gwalior was finalized at 132 kV Sub-station of UPPTCL at Mahoba in February, 2017. Repeater at Mahoba required laying of 3.5 Km underground cable from nearest tower to Mahoba Sub-station.
- e. There was delay in case of initial 14 No. links pertaining to Asset-1, as no direct communication to WRLDC was not available and trial run certificate from RLDC is issue only on establishment of data link from concerned station to RLDC.
- f. Execution of OPGW links under master communication plan may not be seen in isolation as the COD of the link is declared only when the data through this link starts reporting to nearest RLDC/ SLDC. As the communication network during the beginning of this project was only in form of backbone starting from 400 kV VSTPP-Jabalpur, 400 kV Itarsi-Bhopal-Bina and 400 kV Itarsi-Indore-Asoj, (though OPGW was laid on the link and SAT was completed) the link could not be executed as the connecting link to main backbone was not available immediately. The Agra-Gwalior and 765 kV Gwalior-220 kV Gwalior link were ready as per SAT dates but the execution in form of data establishment to SLDC/RLDC could not be declared as the connecting link





to main backbone, i.e. Gwalior (765 kV Sub-station)-Pichhore repeater-Bina (765 kV Sub-station)- Bina (400 kV Sub-station) was not ready.

**Specific Reasons affecting the Execution of assets (Asset-1 to Asset-9)**

1. **Asset-1:** RoW issues on 400 kV Bhopal-Damoh.
2. **Asset-2:** OPGW network changes due to denying permission by Reliance Power Transmission Limited (RETL) on their ISTS Lines i.e. Solapur-Kolhapur, Solapur-Parli and Pune (400 kV)-Pune (765 kV). Matter was discussed in 25<sup>th</sup> WRPC meeting held on 4.2.2014. Pursuant to continuous follow up, RETL agreed for laying of OPGW on Transmission Lines owned by them in the 28<sup>th</sup> WRPC meeting dated 4.3.2015. Solapur – Parli, Pune (400 kV)- Pune (765 kV) are very much needed on way to WRLDC for Data Transfer and Voice Transfer upto WRLDC from remaining Part of Network i.e. Chhattisgarh Area. The Petitioner has provided relevant extract of MoM of 25<sup>th</sup> and 28<sup>th</sup> WRPC meetings.
3. **Asset-3:** Severe RoW issues on Mundra-Bachau, Bachau-Ranchorpura and Agra-Gwalior links.
4. **Asset-4:** Severe RoW issues on Vindhyachal Pooling-Sasan link due to non-issuance of permission by Sasan Generation for diamond formation of OPGW on account of hampering of Sasan generation.
5. **Asset-5:** Severe RoW issues on multiple line crossings.
6. **Asset-6:** Severe RoW issues on multiple line crossings on Indore-Barwaha, Khandwa-Chhegaon links.



7. **Asset-7:** Severe RoW issues in Solapur-Kolhapur Line. Delay in Construction of Kolhapur (MSETCL)-Kolhapur (PGCIL) line which forms after LILO of Kolhapur-Mapusa which is under construction. The Petitioner has provided documentary evidence in support of the above.

8. **Asset-8:** Severe RoW issues in Wardha-Aurangabad link. Severe RoW faced in 12 km section of Wardha-Seoni (upto Repeater). The Petitioner has provided documentary evidence in support of the above.

9. **Asset-9:** Delay in construction of 765 kV D/C Aurangabad-Phadge transmission line.

31. We have considered the submissions made by the Petitioner regarding time over-run. The reasons submitted by the Petitioner for time over-run are as follows:

**Delay due to common issue of Addition of Extra Links (changes from awarded Scope of Work) and amendments issued thereof:-**

- a. The subject scheme was discussed and approved in 14<sup>th</sup> WRPC meeting dated 19.8.2010. Accordingly, Investment Approval was obtained on 8.2.2012 and LoA was issued on 28.5.2012. Subsequently, various additions/ deletions were discussed and approved in the subsequent WRPC meetings. Additional new links of 765 kV Agra-Gwalior and 220 kV Bhopal-Govindpura link of MPPTCL were approved in 21<sup>st</sup> WRPC meeting held on 9.11.2012. Further, modifications such as addition of 765 kV Satna-Gwalior and 765 kV Sasan-Satna links and deletion of 400 kV Vindhyaachal-Satna link were approved in the 25<sup>th</sup> WRPC meeting held on 4.2.2014. Similarly,



addition/ deletion were also approved in the 26<sup>th</sup> WRPC meeting held on 21.6.2014.

- b. These addition/ deletion of links required various contract amendments. The Ammendment-1 to LoA dated 28.5.2012 was done on 25.6.2013 and subsequent Amendment-2 and Amendment-3 were issued on 16.6.2014 and 24.8.2015 respectively.
- c. As per the original LoA, a total 44 links were to be executed. MPPTCL and Kawas system were added in Amendment-1. Optical fibre cable was to be supplied from Korea which took time for construction, testing, dispatch and custom clearance. Thus, after amendment of quantities, it took time for material to reach at site. Further, due to addition of new links, survey work was commenced again. The Petitioner has provided relevant letters, correspondences and Record Notes of Discussion with the executing agency as documentary evidence in support of time over-run condonation.

32. We have considered the submissions of the Petitioner, MPPTCL and MPPMCL. The Petitioner has submitted that the time over-run was due to addition/ deletion of scope of OPGW, both in terms of additional links and additional quantities. The Petitioner awarded the work *vide* LoA dated 28.5.2012 against a schedule of 6.4.2012. Thereby causing a delay of about 50 days on the part of the Petitioner. However, the Petitioner commenced the actual supplies on 18.11.2012 against the schedule of 6.12.2012 i.e. within the scheduled commencement of supply date. Therefore, for the purpose of time over-run, the delay of 50 days in placement of LoA is ignored.



33. Further, various amendments to the LoA were required to be issued as per actual system requirement at the instance of State Utilities duly discussed and approved in WRPC meetings dated 4.2.2014 (25<sup>th</sup> WRPC) and 21.6.2014 (26<sup>th</sup> WRPC). The amendments were progressively issued upto 24.8.2015 against the project SCOD of 8.8.2014, i.e. about 12 months beyond the SCOD. As per the original schedule, about 2 months time was provided from Investment Approval (IA) to LOA, about 8 months time was provided from LOA to commencement of supplies, about 15 months time from commencement to completion of supplies and about 2 months time for execution after completion of supplies. Thereby, about 10 months time is required for commencement of supply, about 25 months time is required for completion of supplies and about 27 months time is required for execution of asset from the date of IA.

34. Therefore, the issue of amendment had a direct bearing on the completion of supplies in respect of instant communication assets. MPPMCL has submitted that the Petitioner took about 14 months in issuing Amendment-3 after 26<sup>th</sup> Meeting of WRPC was held on 21.6.2014. The Petitioner has submitted that addition of new links, survey work was commenced again. Thereafter, the quantities were finalised and amendment to LOA was issued. Further, Optical fibre cable was to be supplied from Korea which took time for construction, testing, dispatch and custom clearance. Thus, after amendment of quantities, it took time for material to reach at site. The Petitioner has provided relevant letters, correspondences and record notes of discussion with the executing agency as documentary evidence in support of time over-run condonation.

35. We have observed that the Petitioner requires about 25 months to complete the supply from date of IA. The additional of links has been discussed and agreed in 21<sup>st</sup> WRPC dated 13.12.2012, 23<sup>rd</sup> WRPC dated 12.7.2013 and 26<sup>th</sup> WRPC dated



21.6.2014. Considering the 26<sup>th</sup> WRPC meeting date of 21.6.2014 the time period of about 25 months from 21.6.2014 (26<sup>th</sup> WRPC) for completion of supplies is considered reasonable and justified. It is seen that the supplies have been completed on 14.12.2015, which is about 18 months from the 26<sup>th</sup> WRPC meeting dated 21.6.2014 against the aforesaid derived schedule of 25 months. Hence, the submission of the Petitioner that the delay occurred due to LoA amendments is justified. The time period of about 541 days from 21.6.2014 (26<sup>th</sup> WRPC) to 14.12.2015 (completion of supply) has a cascading effect on the completion of the communication assets and is beyond the control of the Petitioner. Therefore, the time over-run of 541 days from 21.6.2014 (26<sup>th</sup> WRPC) to 14.12.2015 (completion of supply) due to amendments in the LoA is condoned. The delay condonation of 541 days is common to all the assets herein, therefore, it is applicable to all the assets covered in the instant petition (i.e. Asset-1 to Asset-9).

**Delay due to common issue of non-issuance of shut down for some links from WRLDC:**

- a. There were restrictions by WRLDC for issuance of PTW simultaneously on 765 kV lines originating from single source. For instance, post grid failure in July, 2012, PTW for working simultaneously on 765 kV Bina-Gwalior and 765 kV Agra-Gwalior was not issued. Thus, OPGW erection work could not be carried out simultaneously, leading to additional execution time. Similar situation was encountered during installation of OPGW in 765 kV Sasan-Satna and 765 kV Satna-Gwalior links. Due to non-issuance of permit to work as per real time grid condition from WRLDC, work progress was



hampered. Outage of Gwalior-Agra link was not provided for 5 months and outage of Sasan-Vindhyachal link was not provided for 4 months.

- b. The Petitioner has submitted the chronology of events/ correspondence/ mail between 15.4.2016 to 15.10.2016 regarding non-availability of shutdown for diamond formation between 400 kV Sasan-Vindhyachal ckt 1 and 765 kV Sasan-Vindhyachal and 400 kV Sasan-Vindhyachal ckt 1 and 765 kV Sasan-Satna ckt 1. Similarly, the Petitioner has submitted the correspondence from 26.4.2016 to 4.5.2016 regarding non-availability of shutdown for Gwalior-Agra ckt 2 for diamond formation between 765 kV Gwalior-Agra transmission line and 765 kV Agra-Meerut transmission line.

36. We have considered the rival submissions.. The Petitioner has submitted that the time over-run was due to WRLDC's restricted issuance of PTW simultaneously on 765 kV lines originating from single source, post grid failure in July, 2012. Thus, PTW for working simultaneously on 765 kV Bina-Gwalior and 765 kV Agra-Gwalior links was not given. Similarly, PTW was not issued for simultaneous working on 765 kV Sasan-Satna and 765 kV Satna-Gwalior link. In fact the PTW was granted for installation of OPGW in one link at a time causing delay of 4 to 5 months on this count in several 765 kV and 400 kV lines. MPPMCL and MPPTCL have submitted that the delay in permit could have been easily avoided by proper planning and delay was caused due to lack of co-ordination. The Petitioner has submitted the chronology of events/correspondence/mail between 15.4.2016 to 15.10.2016 regarding non-availability of shutdown. The above reasons pertain to specific lines namely, 765 kV Bina-Gwalior, 765 kV Gwalior-Agra, 765 kV Agra-Meerut, 765 kV Sasan-Satna, 765 kV Satna-Gwalior, 765 kV Sasan-Vindhyachal, 400 kV Sasan-Vindhyachal etc.



Accordingly, the time over-run in above lines is being discussed on case to case basis.

The reasons submitted by the Petitioner for time over-run are as follows:

### **Asset-1**

#### **Delay due to RoW issues on 400 kV Bhopal-Damoh line**

37. The Petitioner has submitted that the delay in completion of Asset-1 has been caused due to severe RoW issues on 400 kV Bhopal-Damoh line. The Petitioner has submitted that OPGW installation of 209.224 km out of 213.960 km has been completed in 400 kV Bhopal-Damoh line. However, remaining work of 4.737 km is pending since December, 2013 due to RoW problems caused by the local farmers on the issue of compensation. The Petitioner has submitted copy of document dated 3.2.2014 in support of time over-run. On the contrary, MPPMCL has submitted that the Petitioner has a vast experience in dealing RoW issues and with proper planning and coordination, the time over-run could have been avoided and hence the Petitioner's plea is liable to be rejected.

38. We have considered the submissions of the Petitioner, MPPTCL and MPPMCL. The Petitioner has submitted the chronology of events/correspondence/mail between December, 2013 to 3.2.2014 regarding hindrance in work due to severe RoW issues and non-availability of shutdown. We agree that the hinderance in execution of work due to RoW issues were beyond the control of the Petitioner. However, we have already condoned the time over-run of 541 days upto 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the RoW up to 3.2.2014 gets subsumed in the delay due to issuance of amendments to the contract.



39. In view of the above, the COD of Asset-1 is 22.9.2015 against the SCOD of 8.8.2014 has resulted into a time over-run of 410 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues. We have already observed in this order that the time over-run of 541 days due to amendments to LoA was beyond the control of the Petitioner. We further find that additional time of 541 days due to LoA amendments had a cascading effect on the execution of line. However, the Petitioner compressed the execution time due to which the overall delay comes to 410 days. Therefore, we hold that the time over-run of 410 days in respect of Asset-1 due to LoA amendments was beyond the control of the Petitioner and is condoned. The other issue of delay due to PTW and RoW issues etc. is subsumed in the delay due to LoA amendments.

## **Asset-2**

### **Delay due to non-permission by RETL on their ISTS lines namely, Solapur-Kolhapur, Solapur-Parli and Pune (400 kV Sub-station)-Pune (765 kV Sub-station) lines**

40. The Petitioner has submitted that the delay in completion of Asset-2 has been caused due to introduction of OPGW network changes due to denying permission by RETL on their ISTS Lines i.e. Solapur-Kolhapur, Solapur-Parli and Pune (400 kV)-Pune (765 kV). The matter was discussed in 25<sup>th</sup> WRPC meeting held on 4.2.2014. Pursuant to continuous follow up, RETL agreed for laying of OPGW on transmission lines owned by them in the 28<sup>th</sup> WRPC meeting dated 4.3.2015. Solapur-Parli, Pune (400 kV)-Pune (765 kV) are needed on way to WRLDC for data transfer and voice transfer upto WRLDC from remaining part of network i.e. Chhattisgarh area. The Petitioner has provided relevant extract of MoM of 25<sup>th</sup> and 28<sup>th</sup> WRPC held on 4.2.2014 and 4.3.2015 respectively.





41. We have considered the submissions of the Petitioner, MPPTCL and MPPMCL. The Petitioner has submitted there was a delay in getting permission for carrying out OPGW installation by the Petitioner in the ISTS lines owned by RETL. The matter was resolved in the 28<sup>th</sup> WRPC meeting held on 4.3.2015. We agree with the submission of the Petitioner that there was time over-run due to delay in granting permission by RETL. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the time over-run up to 4.3.2015 due to permission granted in 28<sup>th</sup> WRPC dated 4.3.2015 gets subsumed in the delay due to issuance of amendments to the contract.

42. In view of the above, COD of 21.10.2016 against the SCOD of 8.8.2014 in respect of Asset-2 has resulted into a time over-run of 805 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues. We have observed in this order that the time over-run of 541 days due to amendments to LoA is beyond the control of the Petitioner. This additional time of 541 days due to LoA amendments had a cascading effect on the execution of line. Therefore, the time over-run of 541 days in respect of Asset-2 due to LoA amendments is beyond the control of the Petitioner and is condoned. Asset-2 has consists of 27 no.of OPGW and the Petitioner has not explained shutdown The Commission observes from the submissions of the petitioner that it is not clear when the petitioner required shut down and when he got shutdown approval. Further, the timely application for shutdown and coordination are important for obtaining shutdown. We are of the view that the delay due to shutdown is not condonable.. Accordingly, out of total delay of 805 days, the time over-run of 541 days is condoned and time over-run of 264 days is not condoned in respect of Asset-2.



### **Asset-3**

#### **Delay due to RoW issues on 400 kV Mundra-Bachau, Bachau-Ranchirpura and Agra-Gwalior lines**

43. The Petitioner has submitted that the delay in completion of Asset-3 has been caused due to severe RoW issues on 400 kV Mundra-Bachau, Bachau-Ranchorpur and Agra-Gwalior lines. The RoW problem caused by the local farmers on the issue of compensation. The Petitioner has submitted the chronology of events/correspondence/mail between 10.10.2013 to 26.5.2016 in support of time over-run due to RoW issues. The Petitioner has submitted copy of documents dated 10.10.2013, 4.11.2013, 9.11.2013, 19.11.2013, 29.11.2013 and 28.4.2014 in support of time over-run. MPPMCL has submitted that the Petitioner has not approached the District Authority on a regular basis resulting in the time over-run. Therefore, the Petitioner's request for condonation of delay may be rejected.

44. We have considered the submissions of the Petitioner, MPPTCL and MPPMCL. The Petitioner has submitted the chronology of events/correspondence/mail between 10.10.2013 to 28.4.2014 regarding hindrance in work due to severe RoW issues. We agree that the hinderance in execution of work due to RoW issues were beyond the control of the Petitioner. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the RoW up to 28.4.2014 gets subsumed in the delay due to issuance of amendments to the contract.

45. In view of above, COD of 30.11.2017 against the SCOD of 8.8.2014 in respect of Asset-3 has resulted into a time over-run of of 805 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues. We have observed that



the time over-run of 541 days due to amendments to LoA is beyond the control of the Petitioner. This additional time of 541 days due to LoA amendments had a cascading effect on the execution of line. Therefore, the time over-run of 541 days in respect of Asset-3 due to LoA amendments is beyond the control of the Petitioner and is condoned. Accordingly, out of the total time over-run of 1210 days, time over-run of 541 days is condoned.

#### **Asset-4**

#### **Delay due to RoW issues on 400 kV Vindhyachal Pooling-Sasan line/ Delay in issuance of PTW at certain sites/locations and re-scheduling of outages on various occasions**

46. The Petitioner has submitted that the delay in completion of Asset-4 has been caused due to RoW issues on 765 kV Sasan-Satna and Satna-Gwalior lines and non-issuance of shut down of 2 numbers diamond formation of OPGW on 25.4.2016 and 26.4.2016 by WRLDC on the insistence of Sasan UMPP Generation as they disagreed to restrict their generation due to proposed shutdown and proposed to carry out the work online.

47. Regarding the issue of PTW/ outage of Sasan-Vindhyachal link the Petitioner has submitted the chronology of events/correspondence/mail between 15.4.2016 to 15.10.2016 regarding non-availability of shutdown for diamond formation between (i) 400 kV Sasan-Vindhyachal (ckt-1) and 765 kV Sasan-Vindhyachal and (ii) 400 kV Sasan-Vindhyachal (ckt-1) and 765 kV Sasan-Satna (ckt-1). Similarly, the Petitioner has submitted the correspondence from 26.4.2016 to 4.5.2016 regarding non-availability of shutdown for Gwalior-Agra (ckt-2) for diamond formation between 765 kV



Gwalior–Agra and 765 kV Agra–Meerut. The Petitioner has submitted documentary evidence in support of its claim for condonation of delay in Asset-4.

48. The details of communication on different dates regarding the request for allowing shutdown of Vindhyachal-Sasan from WRLDC/ Sasan generation is as follows:

Srl. No.	Date of letter/ mail	Description
1	15.4.2016	Mail from Sasan stating that they disagree to restrict their generation for shutdown on 25.4.2016 and 26.4.2016 for diamond formation of OPGW and rather asked to perform the work online (if possible) or plan shut down such that the generation does not have to be restricted.
2	22.4.2016	Mail from WRLDC that to avail shut down on 25.4.2016 and 26.4.2016 for diamond formation of OPGW, Sasan may restrict its generation for which Sasan is not agreeing.
3	24.4.2016	Mail from WRLDC stating "CPCC informed WRLDC that shutdown is required since OPGW work cannot be done offline." WRLDC replied that shutdown cannot be availed till 20.5.2016 and same may be planned in coming OCC.
4	5.5.2016	Mail from WRLDC stating that OCC approved outages dated 25.4.2016 and 26.04.2016 for diamond formation of OPGW were deferred by Sasan and same will not be available at least for next 2 days.
5	13.6.2016	Mail from RTAMC, Vadodara to WRLDC requesting them to provide outage of lines on 16.6.2016 and 17.6.2016 for diamond formation of OPGW.
6	12.10.2016	Mail from RTAMC, Vadodara to WRLDC requesting them to provide outage of lines on 15.10.2016 and 16.10.2016 for diamond formation of OPGW.
7	12.10.2016	Mail from Sasan requesting RTAMC, Vadodara to carry out shutdown on 13.10.2016 and 14.10.2016 instead of 15.10.2016 and 16.10.2016 if possible.
8	13.10.2016	WRLDC forwarded mail regarding shutdown to Sasan asking for their consent regarding generation restriction.
9	15.10.2016	Letter from RTAMC to WRLDC requesting them to postpone shut down of 15.10.2022 and 16.10.2022 to 16.10.2022 and 17.10.2022 due to severe ROW.

49. MPPTCL and MPPMCL have submitted that the reasons given by the Petitioner are solely attributable to the Petitioner as the Petitioner has not given sufficient notice for approval of shutdown proposal. Therefore, the Petitioner's request for condonation of delay may be rejected.



50. We have considered the submissions of the Petitioner, MPPTCL and MPPMCL. We observe that the Petitioner's request for obtaining shutdown of 765 kV Vindhyachal PS-Sasan and 400 kV Vindhyachal PS-Sasan transmission lines on 25.4.2016 was agreed in 481<sup>st</sup> OCC meeting and circulated on 4.4.2016. The same was also approved in 482<sup>nd</sup> meeting of Operation & Coordination (OCC) sub-committee of WRPC held on 12.4.2016. Thus, sufficient notice appears to have been given for outage of line affected by the diamond formation. However, the shutdown was continuously denied on the grounds that Sasan UMPP did not agree to restrict its generation. It was also suggested to carry out the work online. However, WRLDC *vide* email dated 24.4.2016 intimated that CPCC informed that in order to carry out the work, simultaneous shutdown is required in both the lines crossing each other as the work cannot be carried out online. Finally, the shutdown was allowed on 16.10.2022 and 17.10.2016. Accordingly, the delay of about 175 days between 25.4.2016 (initial shutdown request) to 17.10.2016 (final shutdown) is not attributable to the Petitioner. Accordingly, time over-run of 175 days on this count is condoned.

51. Regarding RoW issues on 765 kV Sasan-Satna and Satna-Gwalior lines, the Petitioner has submitted chronology of events of hindrance caused by local farmers/villagers and submitted documentary evidence in support of the same. Further, the Petitioner has submitted that an area covering about 25 km radius around Satna Sub-station was severely affected by RoW issues, with work interrupted in the months of March, 2017, October, 2017 and April, 2018 with almost no work progress achieved. Same is apparent from the letters issues by the Petitioner and its Contractors to the District Administration on 12.5.2015, 10.3.2017, 25.3.2017, 28.10.2017 and 25.3.2018. Thus, a period of about one year between March, 2017 to April, 2018 was severely



hampered due to RoW issues around Satna causing delay in execution of Sasan-Satna and Satna-Gwalior links.

52. The details of communication on different dates regarding the request for resolving RoW issues with the help of local Police and District Authorities are as follows:

Sl. No.	Date of letter	Addressed to	Addressed from	Brief Description of letter
1	24.9.2015	DM, Jhansi, UP	Chief Manager (TL), PGCIL, Gwalior	For providing assistance to resolve RoW issues created by farmers/ villagers for past 2 months
2	9.11.2015	DC, Panna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
3	20.11.2015	SHO, Ramnagar PS, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
4	23.4.2016	DC, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
5	25.4.2016	SHO, Maihar/ Uchehara, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
6	21.5.2016	SHO, Maihar/ Uchehara, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
7	26.5.2016	DC, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable compensation
8	26.5.2016	SHO, Uchehara, Satna, MP	SDM, Uchehara, Satna, MP	For providing assistance to resolve RoW issues created by farmers/ villagers
9	10.3.2017	SHO, Uchehra PS, Satna, MP	Chief Manager (TL), PGCIL, Satna	For providing assistance to resolve RoW issues created by farmers/ villagers demanding unreasonable and exorbitant compensation
10	25.3.2017	SHO, Uchehra, Satna, MP	SDM, Uchehra, Satna, MP	For extending support to the Petitioner to clear RoW issues around Satna Sub-station.
11	28.10.2017	SHO, Uchehra, Satna, MP	Chief Manager (TL), PGCIL, Satna	For extending support to the Petitioner to clear RoW issues in Sasan-Satna link.



53. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted the chronology of events/correspondence regarding hindrance in work due to severe RoW issues and has submitted documentary evidence *vide* letters dated 24.9.2015, 9.11.2015, 20.11.2015, 23.4.2016, 25.4.2016, 21.5.2016, 26.5.2016, 26.5.2016, 10.3.2017, 25.3.2017 and 28.10.2017. We observe that the Petitioner has taken up the matter with the local Police and District Administration for resolving the RoW issues on regular basis. We are of the view that the hinderance in execution of work due to RoW issues between 24.9.2015 to 28.10.2017 was beyond the control of the Petitioner. The RoW persisted upto 28.10.2017. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Further, we have also condoned the time over-run of 175 days up from 25.4.2016 to 17.10.2016 on account of delay in grant of shutdown for carrying out the OPGW diamond formation work in 2 numbers line crossings. Therefore, the RoW issues up to 17.10.2016 gets subsumed in the delay in grant of shutdown for carrying out the OPGW diamond formation work. Accordingly, the additional time of about 375 days between 18.10.2016 to 28.10.2017 was beyond the control of the Petitioner. Thus, additional time over-run of 375 days due to RoW is condoned.

54. The COD of 1.7.2018 against the SCOD of 8.8.2014 in respect of Asset-4 has resulted into a time over-run of 1423 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues etc. We have already observed in this order that the time over-run of 541 days due to amendments to LoA, 175 days on account of delay in grant of shutdown for carrying out the OPGW diamond formation work in 2 numbers line crossings and 375 days due to RoW issues is beyond the control



of the Petitioner. The combined effect of time over-run on the above three counts of LoA amendment, PTW and RoW etc. in respect of Asset-4 is 1091 days. This additional time of 1091 days had a cascading effect on the execution of line. Therefore, the time over-run of 1091 days in respect of Asset-4 due to LoA amendments, issues PTW and RoW etc. is beyond the control of the Petitioner and is condoned. Accordingly, out of total delay of 1423 days, the time over-run of 1091 days is condoned and time over-run of 332 days is not condoned in respect of Asset-4.

### **Asset-5**

#### **Delay due to shut-down issues on multiple line crossings**

55. The Petitioner has submitted that the delay in completion of Asset-5 has been caused due to severe RoW issues on multiple line crossings. The scope of Asset-5 includes 2 numbers OPGW links (9.22 km) under State Sector covering (i) 220 kV Damoh (PGCIL)-Damoh (MPPTCL) and (ii) 220 kV Satna (PGCIL)-Satna (MPPTCL) lines of MPPTCL. Further, the Petitioner has submitted that an area covering about 25 km radius around Satna Sub-station was severely affected by RoW issues, with work interrupted in the months of March, 2017, October, 2017 and April, 2018 with almost no work progress achieved. Same is apparent from the letters issues by the Petitioner and its contractors to the District Administration on 12.5.2015, 10.3.2017, 25.3.2017, 28.10.2017 and 25.3.2018. Thus, a period of about one year between March, 2017 to April, 2018 was severely hampered due to RoW issues around Satna.

56. MPPTCL and MPPMCL have submitted that the Petitioner has not taken timely and regular action to resolve the RoW issues. Further, the Petitioner has not given sufficient notice for approval of shutdown proposal. Thus, the reasons given by the





Petitioner are solely attributable to the Petitioner. Therefore, the Petitioner's request for condonation of delay may be rejected.

57. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted the chronology of events/correspondence regarding hindrance in work due to severe RoW issues around Satna and has submitted documentary evidence. The letters have already been deliberated in the aforesaid para in this order regarding time over-run in respect of Asset-4, hence, the same is not repeated here. We are of the view that the hinderance in execution of work due to RoW issues between 24.9.2015 to 28.10.2017 were beyond the control of the Petitioner. The RoW continued upto 28.10.2017 in and around about 25 km area around Satna. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the RoW up to 14.12.2015 gets subsumed in the delay on account of addition of work and issuance of amendment to the LoA. Accordingly, the additional time of about 682 days between 15.12.2015 to 28.10.2017 was beyond the control of the Petitioner. Thus, additional time over-run of 682 days due to RoW is condoned.

58. In view of the above, COD of 30.11.2017 against the SCOD of 8.8.2014 in respect of Asset-5 has resulted into a time over-run of of 1210 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues etc. We have observed in this order that the time over-run of 541 days due to amendments to LoA and 682 days due to RoW issues is beyond the control of the Petitioner. The combined effect of time over-run on the above counts of LoA amendment and RoW etc. in respect of Asset-5 is 1223 days. This additional time of 1223 days had a cascading effect on the execution of line. However, the Petitioner compressed the execution time due to



which the overall delay is 1210 days. Therefore, the time over-run of 1210 days in respect of Asset-5 due to LoA amendments, issues of PTW and RoW etc. is beyond the control of the Petitioner and is condoned.

### **Asset-6**

#### **Delay due to shut-down issues/ severe RoW issues on multiple line crossings on Indore-Barwaha, Khandwa-Chhegaon links.**

59. The Petitioner has submitted that the delay in completion of Asset-6 has been caused due to shut down issues/ severe RoW issues on multiple line crossings. The scope of Asset-6 includes 6 numbers OPGW links (191.421 km) under State Sector covering (i) 220 kV Gwalior (PGCIL)-Gwalior (MPPTCL), (ii) 220 kV Indore (MPPTCL)-Barwaha (MPPTCL), (iii) 220 kV Bina (PGCIL)-Bina (MPPTCL), (iv) 220 kV Seoni (PGCIL)-Seoni (MPPTCL), (v) 220 kV Barwaha (MPPTCL)-Chhegaon (MPPTCL) and (vi) 220 kV Khandwa (PGCIL)-Chhegaon (MPPTCL) lines of MPPTCL. The Petitioner has submitted that there were delay in getting shutdown while laying the optic fibre on multiple line crossing of 220 kV Indore (MPPTCL)-Barwaha (MPPTCL) and 220 kV Khandwa (PG)-Chhegaon (MPPTCL) lines.

60. Further, the Petitioner *vide* letter dated 5.9.2016 has brought out that in the 220 kV Khandwa (PG)-Chhegaon (MPPTCL) line of MPPTCL, the OPGW installation completed in 31.387 km out of total route length of 40.964 km due to pending issues of installation of KHCH-08,10,11 as earthwire is not present in several spans (Tower No. 163-164, 154-157, 137-138, T6-T7). Similarly, in the 220 kV Barwaha (MPPTCL)-Chhegaon (MPPTCL) line of MPPTCL, the OPGW installation completed in 40.205 km out of total route length of 41.151 km. The balance installation of 0.946 km is pending



as shut down required for balance work (T4-Barwaha gantry/ BHCG-01 and 40-41/BHCG-03) was not given.

61. A study of various meetings of OCC of WRPC suggests that the outage schedule in respect of the above lines of MPPTCL were deferred at several occasions is as follows:

Sl. No.	OCC of WRPC	Voltage level	Period of Outage (From-To)	Name of transmission line
1	482 <sup>nd</sup> OCC dated 12.4.2016	220 kV	20.4.2016-19.5.2016	(i)Barwatha-Chhegaon ckt 1, 2 (ii)Indore-Barwatha ckt 1, 2 (iii)Seoni-Seoni etc.
2	487 <sup>th</sup> OCC dated 16.9.2016	220 kV	20.9.2016-19.10.2016	(i)Barwatha-Chhegaon ckt 1, 2 (ii)Khandwa-Chhegaon ckt 1, 2 (iii)Seoni-Seoni etc.
3	489 <sup>th</sup> OCC dated 11.11.2016	220 kV	20.11.2016 - 19.12.2016	(i)Barwatha-Chhegaon ckt1 , 2 (ii)Khandwa-Chhegaon ckt1 , 2 (iii)Seoni-Seoni etc.
4	492 <sup>nd</sup> OCC dated 17.2.2017	220 kV	1.3.2017-31.3.2017	(i)Barwatha-Chhegaon ckt 1, 2 (ii)Khandwa-Chhegaon ckt 1, 2 (iii)Seoni-Seoni etc.
5	494 <sup>th</sup> OCC dated 12.4.2017	220 kV	1.5.2017-31.5.2017	(i)Barwatha-Chhegaon ckt 1, 2 (ii)Khandwa-Chhegaon ckt 1, 2 (iii)Seoni-Seoni etc.
6	498 <sup>th</sup> OCC dated 28.8.2017	220 kV	1.9.2017-30.9.2017	(i)Khandwa-Chhegaon ckt 2 (ii)Seoni-Seoni etc.
7	500 <sup>th</sup> OCC dated 12.10.2017	220 kV	1.11.2017-30.11.2017	(i)Khandwa-Chhegaon ckt 2
8	502 <sup>nd</sup> OCC dated 12.12.2017	220 kV	1.12.2018-31.1.2018	(i)Khandwa-Chhegaon ckt 2 (ii)Seoni-Seoni etc.

62. MPPTCL and MPPMCL have submitted that the Petitioner has not taken timely and regular action to resolve the RoW issues. Further, Petitioner has not given sufficient notice for approval of shutdown proposal. Thus, the reasons given by the Petitioner are solely attributable to the Petitioner. Therefore, the Petitioner's request for condonation of delay may be rejected.



63. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted letter dated 5.9.2016 as per which the installation of OPGW in 220 kV Barwatha-Chhegaon and 220 kV Khandwa-Chhegaon lines of MPPTCL could not be completed due to non-availability of PTW/ shut down. It is also evident from the records of various OCC meeting of WRPC held between 12.4.2016 to 12.12.2017 that outages were rescheduled at several occasions ranging from 20.4.2016 to 31.1.2018. We are of the view that the hinderance in execution of work due to non-availability of outages for carrying out the work of replacement of Earth Wire with OPGW between 20.4.2016 to 31.1.2018 were beyond the control of the Petitioner. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the PTW issues up to 14.12.2015 gets subsumed in the delay on account of addition of work and issuance of amendment to the LoA. Accordingly, the additional time of about 778 days between 15.12.2015 to 31.1.2018 was beyond the control of the Petitioner as it was mainly due to non-availability of PTW/ shut-down.

64. In view of above, the COD of 1.7.2018 against the SCOD of 8.8.2014 in respect of Asset-5 has resulted into a time over-run of of 1423 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues etc. We have already observed in this order that the time over-run of 541 days due to amendments to LOA and 778 days due to RoW issues is beyond the control of the Petitioner. The combined effect of time over-run on the above counts of LOA amendment and PTW/ shut-down etc. in respect of Asset-6 comes to 1319 days. This additional time of 1319 days had a cascading effect on the execution of line. Therefore, the time over-run of 1319 days in respect of Asset-6 due to LoA amendments, issues PTW and RoW etc. is beyond the



control of the Petitioner and is condoned. The other issue of delay due to PTW and RoW issues etc. is partially subsumed/ not condoned. Accordingly, out of total delay of 1423 days, the time over-run of 1319 days is condoned and time over-run of 104 days is not condoned in respect of Asset-6.

### **Asset-7**

#### **Delay due to RoW issues on Solapur-Kolhapur Line, Kolhapur (MSETCL)-Kolhapur (PGCIL) and Kolhapur-Mapusa lines**

65. The Petitioner has submitted that the delay in completion of Asset-7 has been caused due to severe RoW issues in Solapur-Kolhapur Line and delay in construction of Kolhapur (MSETCL)-Kolhapur (PGCIL) line which forms after LILO of Kolhapur-Mapusa at Kolhapur (PGCIL). The LILO of Kolhapur-Mapusa at Kolhapur (PGCIL) itself is under construction. The Petitioner has provided letter dated 8.9.2017 as documentary evidence in support of the above.

66. MPPTCL and MPPMCL have submitted that the reasons given by the Petitioner are solely attributable to the Petitioner as the Petitioner has not given sufficient notice for approval of shutdown proposal. Therefore, the Petitioner's request for condonation of delay may be rejected.

67. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted that the delay in completion of Asset-7 has been caused due to severe RoW issues in Solapur-Kolhapur Line. There was RoW issues as on 8.9.2017 as per the document supplied by the Petitioner. Further, there was delay in execution of Kolhapur (MSETCL)-Kolhapur (PGCIL) line which forms after LILO of Kolhapur-Mapusa at Kolhapur (PGCIL). The LILO of Kolhapur-Mapusa at Kolhapur (PGCIL) itself is under construction. The said line is part of SRSS-XVII transmission



system. As per the Commission's order dated 25.5.2016 in Petition No. 283/TT/2016, the LILO of Kolhapur-Mapusa at Kolhapur (PGCIL) achieved COD on 12.11.2015. Although the SCOD for installing the OPGW is 8.8.2014 but due to delay in the COD of associate transmission line i.e. LILO of Kolhapur-Mapusa at Kolhapur (PGCIL), the delay upto 12.11.2015 was beyond the control of the Petitioner.

68. The RoW issues continued upto 8.9.2017. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Therefore, the RoW up to 14.12.2015 gets subsumed in the delay in grant of shutdown for carrying out the OPGW diamond formation work. Accordingly, the additional time of about 633 days between 15.12.2015 to 8.9.2017 was beyond the control of the Petitioner. Thus, additional time over-run of 663 days due to RoW issues is condoned.

69. In view of above, the COD of 1.5.2017 against the SCOD of 8.8.2014 in respect of Asset-7 has resulted into a time over-run of 997 days due to multiple events of addition to the scope, delay in grant of PTW and RoW issues etc. We have observed in this order that the time over-run of 541 days due to amendments to LoA and 663 days due to RoW issues is beyond the control of the Petitioner. The combined effect of time over-run on the above counts of LoA amendment, PTW and RoW etc. in respect of Asset-7 comes to 1174 days. This additional time of 1174 days had a cascading effect on the execution of line. However, the Petitioner compressed the execution time due to which the overall delay comes to 997 days. Therefore, the time over-run of 997 days in respect of Asset-7 due to LoA amendments and RoW etc. being beyond the control of the Petitioner and is hereby condoned.



## **Asset-8**

### **Delay due to RoW issues on 765 kV Wardha-Aurangabad line**

70. The Petitioner has submitted that the delay in completion of Asset-8 has been caused due to RoW issues on 765 kV Wardha-Aurangabad line specially in a stretch of 12 km section of Wardha-Seoni (up to Repeater). The Petitioner has submitted that the 765 kV Wardha-Aurangabad line was first energised in July, 2014 for transmission of about 3600-4500 MW power generated in Chattisgarh to Maharashtra. Further, the Petitioner has submitted chronology of events of hindrance caused by local farmers/villagers and submitted documentary evidence in support of the same.

71. The details of communication on different dates regarding the request for resolving RoW issues with the help of local Police and District Authorities is as follows:

<b>Sl. No.</b>	<b>Date of letter</b>	<b>Addressed to</b>	<b>Addressed from</b>	<b>Brief Description of letter</b>
1	6.9.2016	SDM, Aurangabad, Maharashtra	Addl. GM, PGCIL, Aurangabad	For providing assistance to resolve RoW issues created by farmers/villagers demanding unreasonable compensation in a stretch of 12 km
2	12.9.2016	SP (Rural), Aurangabad, Maharashtra	SDM, Aurangabad, Maharashtra	For providing assistance to resolve RoW issues created by farmers/villagers in a stretch of 12 km
3	12.10.2016	SP (Rural), Aurangabad, Maharashtra	Addl. GM, PGCIL, Aurangabad	For providing Police assistance/protection for carrying out work being disturbed by certain miscreants.

72. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted the chronology of events/ correspondence regarding hindrance in work due to severe RoW issues and has submitted documentary evidence *vide* letters dated 6.9.2016, 12.9.2016 and 12.10.2016. We observe that the Petitioner has taken up the matter, with the local Police and District Administration, for resolving the RoW issues on regular basis. In the letter dated 12.10.2016 the Petitioner has intimated the Superintendent of Police (Rural) of Aurangabad district of Maharashtra that



the concerned 765 kV Wardha-Aurangabad line (COD-5.3.2015) was a very important line for transfer of about 3600-4500 MW power generated in Chattisgarh to Maharashtra. Further, the Petitioner has requested the SP (Rural), Aurangabad to provide Police assistance and protection to carry out the work of replacement of existing earth wire with the OPGW, which is being severely hampered by the miscreants. Since there is high risk in this line which is required to be attended on priority for safety of human beings in the vicinity of the lines, the SDM, Aurangabad has also advised for police protection from 18.10.2016 to 21.10.2016 for carrying out the urgent work. Accordingly, the Petitioner has requested that a large number of police force may be provided since the Petitioner could not carry out the work in earlier two attempts with less police force. The Petitioner was to provide necessary assistance and formalities for deployment of 20 numbers Officers, 100 numbers HC/Pcs, 20 numbers LPCs and 2 numbers vehicles.

73. We are of the view that the hinderance in execution of work due to RoW issues between 6.9.2016 to 21.10.2016 was beyond the control of the Petitioner, which required huge deployment of police force to mitigate the RoW issues. The RoW persisted upto 21.10.2016. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Accordingly, the additional time of about 45 days between 6.9.2016 to 21.10.2016 was beyond the control of the Petitioner. Thus, additional time over-run of 45 days due to RoW is condoned.

74. In view of above, the COD of 1.7.2018 against the SCOD of 8.8.2014 in respect of Asset-8 has resulted into a time over-run of of 1120 days due to multiple events of addition to the scope, RoW issues etc. We have already condoned the time over-run of 541 days due to amendments to LoA and 45 days due to RoW issues as it is beyond





the control of the Petitioner. The combined effect of time over-run on the above three counts of LoA amendment, RoW etc. in respect of Asset-8 comes to 586 days. This additional time of 586 days had a cascading effect on the execution of line. Therefore, the time over-run of 586 days in respect of Asset-8 due to LoA amendments and RoW etc. is beyond the control of the Petitioner and is condoned. Accordingly, out of total delay of 1120 days, the time over-run of 586 days is condoned and time over-run of 534 days is not condoned in respect of Asset-8.

### **Asset-9**

#### **Tiem over-run due to delay in construction of Associated Aurangabad-Phadge Transmission Lines**

75. The Petitioner has submitted that the delay in completion of Asset-9 has been caused due to delay in construction of associated transmission line. The scope of Asset-9 covered replacement of earthwire with OPGW in 765 kV D/C Aurangabad (PG)-Phadge(PG) line. There were RoW problems during the implementation Aurangabad-Phadge line due to which the line has been executed and declared under commercial operation w.e.f. 31.12.2017 against the SCOD of 27.8.2014 with a delay of 40 months and 4 days. The delay has been fully condoned by the Commission *vide* order dated 5.2.2019 in Petition No. 147/TT/2018 observing that the time over-run in declaring the COD of 765 kV D/C Aurangabad-Padge transmission line are beyond the control of the Petitioner.

76. MPPTCL and MPPMCL have submitted that the Petitioner has not taken timely and regular action to resolve the RoW issues. Thus, the reasons given by the Petitioner are solely attributable to the Petitioner. Therefore, the Petitioner's request for condonation of delay may be rejected.



77. We have considered the submissions of the Petitioner MPPTCL and MPPMCL. The Petitioner has submitted the OPGW work in the Aurangabad-Phadge link, covered in the scope of Asset-9, was delayed since the associated 765 kV D/C Aurangabad-Phadge line itself was delayed by about 40 months due to RoW issues. However, the approval of COD of 31.12.2017 and condonation of delay up to COD was allowed by the Commission *vide* order dated 5.2.2019 in Petition No. 147/TT/2018. The matter of time over-run due to RoW has already been deliberated by the Commission in the aforesaid order dated 5.2.2019. Since, this order has not been challenged it has attained finality. Therefore, we are not deliberating the issue of time over-run of Aurangabad-Phadge again in this order.

78. We are of the view that the delay in installation of OPGW in Aurangabad-Phadge line under Asset-9, due to non availability of work front upto 31.12.2017, was beyond the control of the Petitioner. However, we have already condoned the time over-run of 541 days up to 14.12.2015 on account of addition of work and issuance of amendment to the LoA. Accordingly, the additional time of about 747 days between 15.12.2015 to 31.12.2017 was beyond the control of the Petitioner. Thus, additional time over-run of 747 days due to delay in availability of associated line due to RoW is condoned.

79. In view of above, the COD of 1.3.2018 against the SCOD of 8.8.2014 in respect of Asset-9 has resulted into a time over-run of of 1301 days due to multiple events of addition to the scope, RoW issues etc. We have already observed in this order that the time over-run of 541 days due to amendments to LoA and 747 days due to RoW issues is beyond the control of the Petitioner. The combined effect of time over-run on the above two counts of LoA amendment and RoW etc. in respect of Asset-9 is 1288 days. This additional time of 1288 days had a cascading effect on the execution of line.



Therefore, the time over-run of 1288 days in respect of Asset-9 due to LoA amendments and RoW etc. is beyond the control of the Petitioner and is condoned. Accordingly, out of total delay of 1301 days, the time over-run of 1288 days is condoned and time over-run of 13 days is not condoned in respect of Asset-9.

80. Accordingly, the details of time over-run condoned and not condoned in respect of the communication assets covered in the instant petition is as follows:

Assets	SCOD	COD	Time over-run (days)	Time over-run condoned (days)	Time over-run not condoned (days)
Asset-1	8.8.2014	22.9.2015	410	410	0
Asset-2		21.10.2016	805	541	264
Asset-3		30.11.2017	1210	541	669
Asset-4		1.7.2018	1423	1091	332
Asset-5		30.11.2017	1210	1210	0
Asset-6		1.7.2018	1423	1319	104
Asset-7		1.5.2017	997	997	0
Asset-8		1.9.2017	1120	586	534
Asset-9		1.3.2018	1301	1288	13

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

81. The Petitioner has claimed following IDC in respect of the communication assets and has submitted the statement showing IDC claim, discharge of IDC liability as on COD as follows:

Assets	IDC as per Auditor’s Certificate	IDC discharged upto COD	Accrual IDC discharged in				
			2015-16	2016-17	2017-18	2018-19	2019-20
			(₹ in lakh)				
Asset-1	167.44	147.74	7.71	11.99	0.00	0.00	0.00
Asset-2	297.01	260.50	0.00	9.47	27.04	0.00	0.00
Asset-3	572.88	554.83	0.00	0.00	9.81	8.24	0.00
Asset-4	45.86	42.86	0.00	0.00	0.00	1.41	1.58
Asset-5	8.74	6.74	0.00	0.00	0.60	1.40	0.00
Asset-6	63.02	46.72	0.00	0.00	0.00	16.15	0.15
Asset-7	60.82	43.92	0.00	0.00	16.67	0.22	0.00



Assets	IDC as per Auditor's Certificate	IDC discharged upto COD	Accrual IDC discharged in				
			2015-16	2016-17	2017-18	2018-19	2019-20
Asset-8	112.82	94.82	0.00	0.00	15.59	2.40	0.00
Asset-9	70.28	52.41	0.00	0.00	0.00	17.87	0.00

82. The Petitioner has submitted IDC computation statement which contains name of the loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in IDC statement. Further, loan amount as on COD has been mentioned in Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC disallowed due to time overrun not condoned	IDC disallowed due to computational difference	IDC allowed
	(A)	(B)	(C)	(D=A-B-C)
Asset-1	167.44	0.00	0.22	167.22
Asset-2	297.01	146.95	0.00	150.06
Asset-3	572.88	380.66	0.00	192.22
Asset-4	45.86	18.25	0.00	27.61
Asset-5	8.74	0.00	0.01	8.73
Asset-6	63.02	7.63	0.00	55.39
Asset-7	60.82	0.00	0.09	60.73
Asset-8	112.82	84.29	0.00	28.53
Asset-9	70.28	1.66	0.00	68.62

83. Discharge details of IDC is as follows:

(₹ in lakh)

Asset	IDC discharged upto COD/ 31.3.2014	IDC undis-charged as on COD	Accrual IDC discharged in					Total IDC
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	147.74	19.48	0.00	7.71	11.77	0.00	0.00	167.22
Asset-2	145.76	4.31	0.00	0.00	4.31	0.00	0.00	150.06
Asset-3	184.65	7.57	0.00	0.00	0.00	7.57	0.00	192.22



Asset	IDC discharged upto COD/ 31.3.2014	IDC undis-charged as on COD	Accrual IDC discharged in					Total IDC
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-4	27.59	0.02	0.00	0.00	0.00	0.00	0.02	27.61
Asset-5	6.74	1.99	0.00	0.00	0.00	0.60	1.39	8.73
Asset-6	46.53	8.86	0.00	0.00	0.00	0.00	8.86	55.39
Asset-7	43.92	16.81	0.00	0.00	0.00	16.67	0.14	60.73
Asset-8	27.19	1.34	0.00	0.00	0.00	1.34	0.00	28.53
Asset-9	52.41	16.21	0.00	0.00	0.00	0.00	16.21	68.62

84. The Petitioner has claimed the following IEDC in respect of communication assets. IEDC has been disallowed due to time over-run not condoned. IEDC claimed and considered as on COD and summary of discharge of IEDC liability up to COD for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IEDC claimed as per Auditor's Certificate	IEDC and disallowed due to time over-run not condoned	IEDC considered as on COD	IEDC discharged up to COD
Asset-1	79.63	0.00	79.63	79.63
Asset-2	11.96	1.84	10.12	10.12
Asset-3	262.34	82.71	179.63	179.63
Asset-4	14.35	2.04	12.31	12.31
Asset-5	2.82	0.00	2.82	2.82
Asset-6	23.35	1.04	22.31	22.31
Asset-7	9.93	0.00	9.93	9.93
Asset-8	112.82	29.65	83.17	83.17
Asset-9	70.28	0.41	69.87	69.87

### Initial Spares

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

“(d) Transmission System

(i) Transmission line: 1.00%

(ii) Transmission Sub-station (Green Field): 4.00%



- (iii) Transmission Sub-station (Brown Field): 6.00%
- (iv) Series Compensation devices and HVDC Station: 4.00%
- (v) Gas Insulated Sub-station (GIS): 5.00%
- (vi) Communication system: 3.5%

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

(₹ in lakh)

Assets	Elements	Estimated completion cost (A)	Initial Spares claimed (B)	Ceiling limit (in %) (C)	Initial Spares worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D
Asset-1	PLCC	2469.34	80.65	3.50	86.64	0.00
Asset-2	PLCC	4789.18	102.32	3.50	169.99	0.00
Asset-3	PLCC	2491.78	78.74	3.50	87.52	0.00
Asset-4	PLCC	245.75	7.88	3.50	8.63	0.00
Asset-5	PLCC	62.67	2.12	3.50	2.20	0.00
Asset-6	PLCC	513.91	17.06	3.50	18.02	0.00
Asset-8	PLCC	1224.29	10.28	3.50	44.03	0.00

87. Initial Spares allowed in respect of the communication assets are as follows:

(₹ in lakh)

Assets	Elements	Estimated completion cost (A)	Initial Spares claimed (B)	Ceiling limit (in %) (C)	Initial Spares worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D	Initial spares allowed
Asset-1	PLCC	2469.34	80.65	3.50	86.64	0.00	80.65
Asset-2	PLCC	4789.18	102.32	3.50	169.99	0.00	102.32
Asset-3	PLCC	2491.78	78.74	3.50	87.52	0.00	78.74
Asset-4	PLCC	245.75	7.88	3.50	8.63	0.00	7.88
Asset-5	PLCC	62.67	2.12	3.50	2.20	0.00	2.12
Asset-6	PLCC	513.91	17.06	3.50	18.02	0.00	17.06
Asset-8	PLCC	1224.29	10.28	3.50	44.03	0.00	10.28

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



(₹ in lakh)

Asset	Capital cost claimed as on COD	IDC disallowed due to time over-run not condoned	IDC disallowed due to computational difference	IDC undischarged as on COD	IEDC Disallowed	Capital cost allowed as on COD
	(A)	(B)	(C)	(D)	(E)	(F) = (A-B-C-D-E)
Asset-1	1884.49	0.00	0.22	19.48	0.00	1864.79
Asset-2	3715.34	146.95	0.00	4.31	1.84	3562.25
Asset-3	4212.11	380.66	0.00	7.57	82.71	3741.17
Asset-4	361.86	18.25	0.00	0.02	2.04	341.55
Asset-5	61.14	0.00	0.01	1.99	0.00	59.14
Asset-6	506.09	7.63	0.00	8.86	1.04	488.56
Asset-7	731.99	0.00	0.09	16.81	0.00	715.09
Asset-8	1206.75	84.29	0.00	1.34	29.65	1091.47
Asset-9	758.95	1.66	0.00	16.21	0.41	740.67

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

89. The Commission *vide* order dated 22.2.2019 in Petition No. 5/TT/2018 had allowed the following ACE for 2014-19 tariff period:

(₹ in lakh)

Assets	ACE			
	2015-16	2016-17	2017-18	2018-19
Asset-1	34.17	265.22	467.43	0.00
Asset-2	0.00	358.54	621.90	264.59
Asset-3	0.00	0.00	(1416.19)	68.19
Asset-4	0.00	0.00	0.00	(76.53)
Asset-5	0.00	0.00	0.00	13.09
Asset-6	0.00	0.00	0.00	67.73
Asset-7	0.00	0.00	(53.08)	12.64
Asset-8	0.00	0.00	27.13	63.58
Asset-9	0.00	0.00	(29.70)	49.50

90. The Petitioner has claimed the following ACE based on actual expenditure in the instant petition:



(₹ in lakh)

Assets	ACE			
	2015-16	2016-17	2017-18	2018-19
Asset-1	34.17	263.22	520.50	0.00
Asset-2	0.00	358.54	479.00	544.66
Asset-3	0.00	0.00	(1449.02)	526.32
Asset-4	0.00	0.00	0.00	(55.90)
Asset-5	0.00	0.00	0.00	13.09
Asset-6	0.00	0.00	0.00	94.19
Asset-7	0.00	0.00	(53.08)	58.11
Asset-8	0.00	0.00	27.13	121.48
Asset-9	0.00	0.00	(29.70)	65.84

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

92. MPPMCL has submitted that the Petitioner has not given any details of such undischarged liability, reasons of withholding of payment and release of payments etc., details of work deferred and in the absence of essential documents, it is not possible to scrutinize the claim of the Petitioner in a proper way. In response, the Petitioner has submitted a summary of the asset-wise details of cost as on COD and ACE incurred during 2014-10 period as per the Auditor's Certificates. The Petitioner has further submitted that ACE incurred during 2015-19 period is on account of balance and retention payments due to undischarged liability for the works executed within cut-off date and work deferred for execution and has been claimed under the 2014 Tariff Regulations and the same may be considered.

93. ACE claimed by the Petitioner has been verified from the Auditor's Certificate. Accordingly, ACE within the cut-off date has been allowed under Regulation 14(1)(i)





and Regulation 14(1)(ii) and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations, as applicable. The capital cost allowed for 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	Apportioned approved cost (RCE)	Capital cost allowed as on COD	ACE (including IDC discharge)				Capital cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-1	4280.29	1864.79	41.88	274.99	520.50	0.00	2702.16
Asset-2	6066.52	3562.25	0.00	362.85	479.00	544.66	4948.75
Asset-3	4643.32	3741.17	0.00	0.00	(1441.45)	526.32	2826.05
Asset-4	767.20	341.55	0.00	0.00	0.00	(55.88)	285.66
Asset-5	157.68	59.14	0.00	0.00	0.60	14.48	74.22
Asset-6	623.05	488.56	0.00	0.00	0.00	103.05	591.61
Asset-7	950.00	715.09	0.00	0.00	(36.41)	58.25	736.93
Asset-8	1446.01	1091.47	0.00	0.00	28.47	121.48	1241.42
Asset-9	844.86	740.67	0.00	0.00	(29.70)	82.05	793.01

### Debt-Equity ratio

94. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio applicable as on COD shall be considered. The details of the debt-equity ratio as on COD and 31.3.2019 are as follows:

Asset-1						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	1305.35	70.00	586.16	70.00	1891.51	70.00
Equity	559.44	30.00	251.21	30.00	810.65	30.00
<b>Total</b>	<b>1864.79</b>	<b>100.00</b>	<b>837.37</b>	<b>100.00</b>	<b>2702.16</b>	<b>100.00</b>

Asset-2						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2493.57	70.00	970.56	70.00	3464.13	70.00



Equity	1068.67	30.00	415.95	30.00	1484.63	30.00
<b>Total</b>	<b>3562.25</b>	<b>100.00</b>	<b>1386.51</b>	<b>100.00</b>	<b>4948.75</b>	<b>100.00</b>

Asset-3						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	2618.82	70.00	(640.59)	70.00	1978.23	70.00
Equity	1122.35	30.00	(274.54)	30.00	847.81	30.00
<b>Total</b>	<b>3741.17</b>	<b>100.00</b>	<b>(915.13)</b>	<b>100.00</b>	<b>2826.05</b>	<b>100.00</b>

Asset-4						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	239.08	70.00	(39.12)	70.00	199.97	70.00
Equity	102.46	30.00	(16.77)	30.00	85.70	30.00
<b>Total</b>	<b>341.55</b>	<b>100.00</b>	<b>(55.88)</b>	<b>100.00</b>	<b>285.66</b>	<b>100.00</b>

Asset-5						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	41.40	70.00	10.55	70.00	51.95	70.00
Equity	17.74	30.00	4.52	30.00	22.26	30.00
<b>Total</b>	<b>59.14</b>	<b>100.00</b>	<b>15.08</b>	<b>100.00</b>	<b>74.22</b>	<b>100.00</b>

Asset-6						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	341.99	70.00	72.14	70.00	414.13	70.00
Equity	146.57	30.00	30.92	30.00	177.48	30.00
<b>Total</b>	<b>488.56</b>	<b>100.00</b>	<b>103.05</b>	<b>100.00</b>	<b>591.61</b>	<b>100.00</b>

Asset-7						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	500.56	70.00	15.29	70.00	515.85	70.00
Equity	214.53	30.00	6.55	30.00	221.08	30.00
<b>Total</b>	<b>715.09</b>	<b>100.00</b>	<b>21.84</b>	<b>100.00</b>	<b>736.93</b>	<b>100.00</b>



Asset-8						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	764.03	70.00	104.96	70.00	868.99	70.00
Equity	327.44	30.00	44.98	30.00	372.43	30.00
<b>Total</b>	<b>1091.47</b>	<b>100.00</b>	<b>149.95</b>	<b>100.00</b>	<b>1241.42</b>	<b>100.00</b>

Asset-9						
Particulars	Capital Cost as on COD	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)	
Debt	518.47	70.00	36.64	70.00	555.11	70.00
Equity	222.20	30.00	15.70	30.00	237.90	30.00
<b>Total</b>	<b>740.67</b>	<b>100.00</b>	<b>52.35</b>	<b>100.00</b>	<b>793.01</b>	<b>100.00</b>

### Depreciation

95. Depreciation has been allowed considering capital expenditure as on COD and approved ACE during 2014-19 tariff period. Since the communication assets consists of only one element of PLCC, the gross block during 2014-19 tariff period has been depreciated at rate of 6.33% as provided for communication equipment in the 2014 Tariff Regulations. Depreciation for 2014-19 tariff period is trued-up in respect of the communication assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations and the same is as follows:

		(₹ in lakh)			
	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
	<b>Depreciation</b>				
A	Opening Gross Block	1864.79	1906.67	2181.66	2702.16
B	ACE	41.88	274.99	520.50	0.00
C	Closing Gross Block (A+B)	1906.67	2181.66	2702.16	2702.16
D	Average Gross Block (A+C)/2	1885.73	2044.16	2441.91	2702.16
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33	6.33	6.33
F	Aggregate Depreciable Value	1697.15	1839.75	2197.72	2431.94



G	Balance useful life of the asset (Year)	15.00	15.00	14.00	13.00
H	Lapsed life (Year)	0.00	0.00	1.00	2.00
I	<b>Depreciation during the year</b>	<b>62.62</b>	<b>129.40</b>	<b>154.57</b>	<b>171.05</b>
J	Cumulative depreciation	62.62	192.01	346.59	517.63
K	Remaining Depreciable Value (F-J)	1634.53	1647.73	1851.13	1914.31

(₹ in lakh)

	Particulars	Asset-2		
		2016-17 (Pro-rata 162 days)	2017-18	2018-19
	<b>Depreciation</b>			
A	Opening Gross Block	3562.25	3925.09	4404.09
B	ACE	362.85	479.00	544.66
C	Closing Gross Block (A+B)	3925.09	4404.09	4948.75
D	Average Gross Block (A+C)/2	3743.67	4164.59	4676.42
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33	6.33
F	Aggregate Depreciable Value	3369.30	3748.14	4208.78
G	Balance useful life of the asset (Year)	15.00	15.00	14.00
H	Lapsed life (Year)	0.00	0.00	1.00
I	<b>Depreciation during the year</b>	<b>105.18</b>	<b>263.62</b>	<b>296.02</b>
J	Cumulative depreciation	105.18	368.80	664.81
K	Remaining Depreciable Value (F-J)	3264.13	3379.34	3543.97

(₹ in lakh)

	Particulars	Asset-3	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	3741.17	2299.73
B	ACE	(1441.45)	526.32
C	Closing Gross Block (A+B)	2299.73	2826.05
D	Average Gross Block (A+C)/2	3020.45	2562.89
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33
F	Aggregate Depreciable Value	2718.41	2306.60
G	Balance useful life of the asset (Year)	15.00	15.00
H	Lapsed life (Year)	0.00	0.00
I	<b>Depreciation during the year</b>	<b>63.91</b>	<b>162.23</b>
J	Cumulative depreciation	63.91	226.14
K	Remaining Depreciable Value (F-J)	2654.50	2080.46

(₹ in lakh)

	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
	<b>Depreciation</b>	
A	Opening Gross Block	341.55



B	ACE	(55.88)
C	Closing Gross Block (A+B)	285.66
D	Average Gross Block (A+C)/2	313.61
E	Weighted Average Rate of Depreciation (in %)	6.33
F	Aggregate Depreciable Value	282.25
G	Balance useful life of the asset (Year)	15.00
H	Lapsed life (Year)	0.00
<b>I</b>	<b>Depreciation during the year</b>	<b>14.90</b>
J	Cumulative depreciation	14.90
K	Remaining Depreciable Value (F-J)	267.34

(₹ in lakh)

	Particulars	Asset-5	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	59.14	59.74
B	ACE	0.60	14.48
C	Closing Gross Block (A+B)	59.74	74.22
D	Average Gross Block (A+C)/2	59.44	66.98
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33
F	Aggregate Depreciable Value	53.50	60.28
G	Balance useful life of the asset (Year)	15.00	15.00
H	Lapsed life (Year)	0.00	0.00
<b>I</b>	<b>Depreciation during the year</b>	<b>1.26</b>	<b>4.24</b>
J	Cumulative depreciation	1.26	5.50
K	Remaining Depreciable Value (F-J)	52.24	54.78

(₹ in lakh)

	Particulars	Asset-6
		2018-19 (Pro-rata 274 days)
	<b>Depreciation</b>	
A	Opening Gross Block	488.56
B	ACE	103.05
C	Closing Gross Block (A+B)	591.61
D	Average Gross Block (A+C)/2	540.09
E	Weighted Average Rate of Depreciation (in %)	6.33
F	Aggregate Depreciable Value	486.08
G	Balance useful life of the asset (Year)	15.00
H	Lapsed life (Year)	0.00
<b>I</b>	<b>Depreciation during the year</b>	<b>25.66</b>
J	Cumulative depreciation	25.66
K	Remaining Depreciable Value (F-J)	460.41



(₹ in lakh)

	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	715.09	678.68
B	ACE	(36.41)	58.25
C	Closing Gross Block (A+B)	678.68	736.93
D	Average Gross Block (A+C)/2	696.89	707.80
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33
F	Aggregate Depreciable Value	627.20	637.02
G	Balance useful life of the asset (Year)	15.00	15.00
H	Lapsed life (Year)	0.00	0.00
I	<b>Depreciation during the year</b>	<b>40.49</b>	<b>44.80</b>
J	Cumulative depreciation	40.49	85.29
K	Remaining Depreciable Value (F-J)	586.71	551.73

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata 212 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	1091.47	1119.94
B	ACE	28.47	121.48
C	Closing Gross Block (A+B)	1119.94	1241.42
D	Average Gross Block (A+C)/2	1105.71	1180.68
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33
F	Aggregate Depreciable Value	995.14	1062.61
G	Balance useful life of the asset (Year)	15.00	15.00
H	Lapsed life (Year)	0.00	0.00
I	<b>Depreciation during the year</b>	<b>40.65</b>	<b>74.74</b>
J	Cumulative depreciation	40.65	115.39
K	Remaining Depreciable Value (F-J)	954.48	947.22

(₹ in lakh)

	Particulars	Asset-9	
		2017-18 (Pro-rata 31 days)	2018-19
	<b>Depreciation</b>		
A	Opening Gross Block	740.67	710.97
B	ACE	(29.70)	82.05
C	Closing Gross Block (A+B)	710.97	793.01
D	Average Gross Block (A+C)/2	725.82	751.99
E	Weighted Average Rate of Depreciation (in %)	6.33	6.33
F	Aggregate Depreciable Value	653.24	676.79
G	Balance useful life of the asset (Year)	15.00	15.00



H	Lapsed life (Year)	0.00	0.00
I	<b>Depreciation during the year</b>	<b>3.90</b>	<b>47.60</b>
J	Cumulative depreciation	3.90	51.50
K	Remaining Depreciable Value (F-J)	649.33	625.29

96. The details of depreciation approved vide order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner in the instant petition and true-up depreciation in the instant order are as follows:

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018	58.30	120.61	143.80	158.59
Claimed by the Petitioner in the instant petition	62.62	129.40	154.59	171.06
Allowed after true-up in this order	62.62	129.40	154.57	171.05
<b>Asset-2</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018		101.30	259.27	287.33
Claimed by the Petitioner in the instant petition		108.53	272.18	305.44
Allowed after true-up in this order		105.18	263.62	296.02
<b>Asset-3</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018			59.82	136.30
Claimed by the Petitioner in the instant petition			73.51	191.30
Allowed after true-up in this order			63.91	162.23
<b>Asset-4</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018				12.78
Claimed by the Petitioner in the instant petition				15.76
Allowed after true-up in this order				14.90
<b>Asset-5</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018			1.11	3.74
Claimed by the Petitioner in the instant petition			1.26	4.24
Allowed after true-up in this order			1.26	4.24
<b>Asset-6</b>				
Approved vide order dated 22.2.2019 in Petition No. 5/TT/2018				22.32
Claimed by the Petitioner in the instant petition				25.90
Allowed after true-up in this order				25.66



Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			37.16	39.20
Claimed by the Petitioner in the instant petition			40.48	44.81
Allowed after true-up in this order			40.49	44.80
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			40.46	72.54
Claimed by the Petitioner in the instant petition			44.49	81.87
Allowed after true-up in this order			40.65	74.74
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			3.60	43.06
Claimed by the Petitioner in the instant petition			3.90	47.68
Allowed after true-up in this order			3.90	47.60

### **Interest on Loan (“IoL”)**

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

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

		(₹ in lakh)			
	Particulars	<b>Asset-1</b>			
		<b>2015-16 (Pro-rata 192 days)</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	<b>Interest on Loan</b>				
A	Gross Normative Loan	1305.35	1334.67	1527.16	1891.51
B	Cumulative Repayments upto Previous Year	0.00	62.62	192.01	346.59
C	Net Loan-Opening (A-B)	1305.35	1272.05	1335.15	1544.92
D	Additions	29.32	192.49	364.35	0.00
E	Repayment during the year	62.62	129.40	154.57	171.05
F	Net Loan-Closing (C+D-E)	1272.05	1335.15	1544.92	1373.88
G	Average Loan (C+F)/2	1288.70	1303.60	1440.03	1459.40
H	Weighted Average Rate of Interest on Loan (in %)	8.9685	8.8472	8.5924	8.4568





	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>60.63</b>	<b>115.33</b>	<b>123.73</b>	<b>123.42</b>

(₹ in lakh)

	Particulars	Asset-2		
		2016-17 (Pro-rata 162 days)	2017-18	2018-19
	<b>Interest on Loan</b>			
A	Gross Normative Loan	2493.57	2747.57	3082.87
B	Cumulative Repayments upto Previous Year	0.00	105.18	368.80
C	Net Loan-Opening (A-B)	2493.57	2642.39	2714.07
D	Additions	253.99	335.30	381.26
E	Repayment during the year	105.18	263.62	296.02
F	Net Loan-Closing (C+D-E)	2642.39	2714.07	2799.31
G	Average Loan (C+F)/2	2567.98	2678.23	2756.69
H	Weighted Average Rate of Interest on Loan (in %)	8.7026	8.3170	8.0870
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>99.19</b>	<b>222.75</b>	<b>222.93</b>

(₹ in lakh)

	Particulars	Asset-3	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	2618.82	1609.81
B	Cumulative Repayments upto Previous Year	0.00	63.91
C	Net Loan-Opening (A-B)	2618.82	1545.90
D	Additions	(1009.01)	368.42
E	Repayment during the year	63.91	162.23
F	Net Loan-Closing (C+D-E)	1545.90	1752.10
G	Average Loan (C+F)/2	2082.36	1649.00
H	Weighted Average Rate of Interest on Loan (in %)	7.8294	7.8172
<b>I</b>	<b>Interest on Loan (G*H)</b>	<b>54.49</b>	<b>128.91</b>

(₹ in lakh)

	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
	<b>Interest on Loan</b>	
A	Gross Normative Loan	239.08
B	Cumulative Repayments upto Previous Year	0.00
C	Net Loan-Opening (A-B)	239.08
D	Additions	(39.12)
E	Repayment during the year	14.90
F	Net Loan-Closing (C+D-E)	185.06
G	Average Loan (C+F)/2	212.07



	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
H	Weighted Average Rate of Interest on Loan (in %)	7.1845
I	<b>Interest on Loan (G*H)</b>	<b>11.44</b>

(₹ in lakh)

	Particulars	Asset-5	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	41.40	41.82
B	Cumulative Repayments upto Previous Year	0.00	1.26
C	Net Loan-Opening (A-B)	41.40	40.56
D	Additions	0.42	10.13
E	Repayment during the year	1.26	4.24
F	Net Loan-Closing (C+D-E)	40.56	46.45
G	Average Loan (C+F)/2	40.98	43.51
H	Weighted Average Rate of Interest on Loan (in %)	7.9955	8.0179
I	<b>Interest on Loan (G*H)</b>	<b>1.10</b>	<b>3.49</b>

(₹ in lakh)

	Particulars	Asset-6
		2018-19 (Pro-rata 274 days)
	<b>Interest on Loan</b>	
A	Gross Normative Loan	341.99
B	Cumulative Repayments upto Previous Year	0.00
C	Net Loan-Opening (A-B)	341.99
D	Additions	72.14
E	Repayment during the year	25.66
F	Net Loan-Closing (C+D-E)	388.46
G	Average Loan (C+F)/2	365.23
H	Weighted Average Rate of Interest on Loan (%)	7.3493
I	<b>Interest on Loan (G*H)</b>	<b>20.15</b>

(₹ in lakh)

	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	500.56	475.08
B	Cumulative Repayments upto Previous Year	0.00	40.49
C	Net Loan-Opening (A-B)	500.56	434.59
D	Additions	(25.49)	40.77
E	Repayment during the year	40.49	44.80
F	Net Loan-Closing (C+D-E)	434.59	430.56

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	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
G	Average Loan (C+F)/2	467.58	432.57
H	Weighted Average Rate of Interest on Loan (in %)	8.2254	8.1590
I	<b>Interest on Loan (G*H)</b>	<b>35.30</b>	<b>35.29</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata 212 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	764.03	783.96
B	Cumulative Repayments upto Previous Year	0.00	40.65
C	Net Loan-Opening (A-B)	764.03	743.31
D	Additions	19.93	85.04
E	Repayment during the year	40.65	74.74
F	Net Loan-Closing (C+D-E)	743.31	753.60
G	Average Loan (C+F)/2	753.67	748.46
H	Weighted Average Rate of Interest on Loan (%)	7.9085	7.9299
I	<b>Interest on Loan (G*H)</b>	<b>34.62</b>	<b>59.35</b>

(₹ in lakh)

	Particulars	Asset-9	
		2017-18 (Pro-rata 31 days)	2018-19
	<b>Interest on Loan</b>		
A	Gross Normative Loan	518.47	497.68
B	Cumulative Repayments upto Previous Year	0.00	3.90
C	Net Loan-Opening (A-B)	518.47	493.77
D	Additions	(20.79)	57.43
E	Repayment during the year	3.90	47.60
F	Net Loan-Closing (C+D-E)	493.77	503.61
G	Average Loan (C+F)/2	506.12	498.69
H	Weighted Average Rate of Interest on Loan (in %)	8.0467	8.0272
I	<b>Interest on Loan (G*H)</b>	<b>3.46</b>	<b>40.03</b>

99. The details of IoL approved vide order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018	56.45	107.50	117.13	118.25
Claimed by the Petitioner in the instant petition	60.63	115.34	123.75	123.43
Allowed after true-up in this order	60.63	115.33	123.73	123.42
<b>Asset-2</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018		96.87	230.64	233.76
Claimed by the Petitioner in the instant petition		102.34	229.99	230.01
Allowed after true-up in this order		99.19	222.75	222.93
<b>Asset-3</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			53.03	112.42
Claimed by the Petitioner in the instant petition			63.00	152.15
Allowed after true-up in this order			54.49	128.91
<b>Asset-4</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				11.32
Claimed by the Petitioner in the instant petition				12.09
Allowed after true-up in this order				11.44
<b>Asset-5</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.97	3.07
Claimed by the Petitioner in the instant petition			1.10	3.49
Allowed after true-up in this order			1.10	3.49
<b>Asset-6</b>				



<b>Particulars</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				18.78
Claimed by the Petitioner in the instant petition				20.33
Allowed after true-up in this order				20.15
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			32.39	30.73
Claimed by the Petitioner in the instant petition			35.30	35.30
Allowed after true-up in this order			35.30	35.29
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			35.85	59.54
Claimed by the Petitioner in the instant petition			37.89	65.02
Allowed after true-up in this order			34.62	59.35
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			3.19	36.17
Claimed by the Petitioner in the instant petition			3.46	40.10
Allowed after true-up in this order			3.46	40.03

### **Return on Equity (“RoE”)**

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



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

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

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	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

102. The same MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff 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 %)
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

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



(₹ in lakh)

	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
	<b>Return on Equity</b>				
A	Opening Equity	559.44	572.00	654.50	810.65
B	Additions	12.56	82.50	156.15	0.00
C	Closing Equity (A+B)	572.00	654.50	810.65	810.65
D	Average Equity (A+C)/2	565.72	613.25	732.57	810.65
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>58.48</b>	<b>120.84</b>	<b>144.35</b>	<b>160.17</b>

(₹ in lakh)

	Particulars	Asset-2		
		2016-17 (Pro-rata 162 days)	2017-18	2018-19
	<b>Return on Equity</b>			
A	Opening Equity	1068.67	1177.53	1321.23
B	Additions	108.85	143.70	163.40
C	Closing Equity (A+B)	1177.53	1321.23	1484.63
D	Average Equity (A+C)/2	1123.10	1249.38	1402.93
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>98.22</b>	<b>246.19</b>	<b>277.19</b>

(₹ in lakh)

	Particulars	Asset-3	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	1122.35	689.92
B	Additions	(432.43)	157.90
C	Closing Equity (A+B)	689.92	847.81
D	Average Equity (A+C)/2	906.14	768.87
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>59.68</b>	<b>151.91</b>



(₹ in lakh)

	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
	<b>Return on Equity</b>	
A	Opening Equity	102.46
B	Additions	(16.77)
C	Closing Equity (A+B)	85.70
D	Average Equity (A+C)/2	94.08
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity (in %)	19.758
H	<b>Return on Equity (D*G)</b>	<b>13.95</b>

(₹ in lakh)

	Particulars	Asset-5	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	17.74	17.92
B	Additions	0.18	4.34
C	Closing Equity (A+B)	17.92	22.26
D	Average Equity (A+C)/2	17.83	20.09
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>1.17</b>	<b>3.97</b>

(₹ in lakh)

	Particulars	Asset-6
		2018-19 (Pro-rata 274 days)
	<b>Return on Equity</b>	
A	Opening Equity	146.57
B	Additions	30.92
C	Closing Equity (A+B)	177.48
D	Average Equity (A+C)/2	162.03
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity (in %)	19.758
H	<b>Return on Equity (D*G)</b>	<b>24.03</b>

(₹ in lakh)

	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	214.53	203.60





B	Additions	(10.92)	17.47
C	Closing Equity (A+B)	203.60	221.08
D	Average Equity (A+C)/2	209.07	212.34
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>37.81</b>	<b>41.95</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata 212 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	327.44	335.98
B	Additions	8.54	36.44
C	Closing Equity (A+B)	335.98	372.43
D	Average Equity (A+C)/2	331.71	354.20
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>37.96</b>	<b>69.98</b>

(₹ in lakh)

	Particulars	Asset-9	
		2017-18 (Pro-rata 31 days)	2018-19
	<b>Return on Equity</b>		
A	Opening Equity	222.20	213.29
B	Additions	(8.91)	24.61
C	Closing Equity (A+B)	213.29	237.90
D	Average Equity (A+C)/2	217.75	225.60
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>3.64</b>	<b>44.57</b>

104. The details of RoE approved vide order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018	54.18	112.09	133.64	147.39
Claimed by the Petitioner in the instant petition	58.51	120.85	144.37	160.18
Allowed after true-up in this order	58.48	120.84	144.35	160.17
<b>Asset-2</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018		94.15	240.97	267.04
Claimed by the Petitioner in the instant petition		101.35	254.19	286.01
Allowed after true-up in this order		98.22	246.19	277.19
<b>Asset-3</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			55.60	126.68
Claimed by the Petitioner in the instant petition			68.65	179.14
Allowed after true-up in this order			59.68	151.91
<b>Asset-4</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				11.88
Claimed by the Petitioner in the instant petition				14.76
Allowed after true-up in this order				13.95
<b>Asset-5</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			1.03	3.47
Claimed by the Petitioner in the instant petition			1.17	3.97
Allowed after true-up in this order			1.17	3.97
<b>Asset-6</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				20.74



Particulars	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition				24.25
Allowed after true-up in this order				24.03
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			34.53	36.43
Claimed by the Petitioner in the instant petition			37.81	41.96
Allowed after true-up in this order			37.81	41.95
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			37.61	67.42
Claimed by the Petitioner in the instant petition			41.55	76.66
Allowed after true-up in this order			37.96	69.98
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			3.35	40.02
Claimed by the Petitioner in the instant petition			3.65	44.65
Allowed after true-up in this order			3.64	44.57

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

105. The Petitioner has submitted that O&M Expenses only for the assets under the Central portion are claimed and has submitted the Auditor’s Certificate in support of the same. O&M Expenses claimed by the Petitioner in respect of the communication assets for 2014-19 period are as follows:

(₹ in lakh)				
Assets	2015-16	2016-17	2017-18	2018-19
Asset-1	40.52	70.88	58.44	51.17
Asset-2		9.15	24.24	12.98
Asset-3			69.80	61.12
Asset-4				5.51
Asset-7			3.28	1.76



Asset-8			6.12	3.28
Asset-9			3.76	2.01

106. The O&M Expenses norms applicable for the communication assets as per the 2014 Tariff Regulations are as follows:

**“29 (4) Transmission System**

*(c) The operation and maintenance expenses of communication system forming part of inter-state transmission system shall be derived on the basis of the actual O&M expenses for the period of 2008-09 to 2012-13 based on audited accounts excluding abnormal variations if any after prudence check by the Commission. The normalized O&M expenses after prudence check, for the years 2008-09 to 2012-13 shall be escalated at the rate of 3.02% for computing base year expenses for FY 2012-13 and 2013-14 and at the rate of 3.32% for escalation from 2014-15 onwards.”*

107. We have considered the submission of the Petitioner. The Petitioner has claimed expenditure towards self insurance, petition filing charges and advertisement and publicity charges as expenses under O&M Expenses.

108. As regards self insurance, the Commission vide order dated 29.7.2016 in Petition No. 275/TT/2015 has considered the Petitioner’s claim towards self insurance and disallowed the same. The relevant portion of the said order is as follows:

*“45. The petitioner was directed vide ROP dated 22.3.2016, to submit the actual O&M Expenses year wise along with details. In response, petitioner vide affidavit Order in Petition No. 275/TT/2015 has submitted that actual O&M Expenses for 2014-15 towards Asset-I and II are ₹5.75 lakh and ₹4.46 lakh respectively. Break up of O&M Expenses has also been provided vide Auditor's Certificate dated 15.6.2016. The petitioner has claimed self-insurance reserve as expenses under O&M Expenses which is not allowable as expenses.....”*

109. As regards the petition filing charges and advertisement and publicity charges, the Commission vide order dated 26.4.2022 in Petition No. 272/TT/2020 considered the Petitioner’s claim towards petition filing charges and advertisement and publicity charges and disallowed the same. The relevant portion of the said order is as follows:

*“31. Further, the Petitioner has also claimed the petition filing charges as part of the O&M Expenses, which has to be claimed directly from the beneficiaries, therefore, the same is not allowable under O&M Expenses and accordingly has been disallowed.*



32. The Petitioner has also claimed the Advertisement & Publicity charges as part of the O&M Expenses, which is not allowable as O&M Expenses and therefore has been disallowed.”

110. In line with the above order, the expenditure is not allowable for self insurance, petition filing charges and advertisement and publicity charges as expenses under O&M Expenses, therefore, the proportionate share self insurance reserve, entertainment, advertisement and publicity, brokerage and commission and out of pocket expenses pertaining to communication assets covered in the instant petitions have been disallowed. The self insurance, petition filing charges and advertisement and publicity charges disallowed and the same is as follows:

(₹ in lakh)				
Assets	2015-16	2016-17	2017-18	2018-19
Asset-1	2.70	3.67	2.51	2.81
Asset-2		0.61	1.69	0.71
Asset-3			3.00	3.36
Asset-4				0.30
Asset-7			0.23	0.10
Asset-8			0.43	0.18
Asset-9			0.26	0.11

111. O&M Expenses allowed in respect of the communication assets as per norms specified in the 2014 Tariff Regulations are as follows:

(₹ in lakh)				
Assets	2015-16	2016-17	2017-18	2018-19
Asset-1	37.82	67.21	55.93	48.36
Asset-2		8.54	22.55	12.27
Asset-3			66.80	57.76
Asset-4				5.21
Asset-7			3.05	1.66
Asset-8			5.69	3.10
Asset-9			3.50	1.90

112. The details of O&M Expenses approved *vide* order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner in the instant petition and trued-up O&M Expenses in the instant order are as follows:



(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018	0.00	0.00	0.00	0.00
Claimed by the Petitioner in the instant petition	40.52	70.88	58.44	51.17
Allowed after true-up in this order	37.82	67.21	55.93	48.36
<b>Asset-2</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018		0.00	0.00	0.00
Claimed by the Petitioner in the instant petition		9.15	24.24	12.98
Allowed after true-up in this order		8.54	22.55	12.27
<b>Asset-3</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.00	0.00
Claimed by the Petitioner in the instant petition			69.80	61.12
Allowed after true-up in this order			66.80	57.76
<b>Asset-4</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				0.00
Claimed by the Petitioner in the instant petition				5.51
Allowed after true-up in this order				5.21
<b>Asset-5</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.00	0.00
Claimed by the Petitioner in the instant petition			0.00	0.00
Allowed after true-up in this order			0.00	0.00
<b>Asset-6</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				0.00



Particulars	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition				0.00
Allowed after true-up in this order				0.00
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.00	0.00
Claimed by the Petitioner in the instant petition			3.28	1.76
Allowed after true-up in this order			3.05	1.66
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.00	0.00
Claimed by the Petitioner in the instant petition			6.12	3.28
Allowed after true-up in this order			5.69	3.10
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.00	0.00
Claimed by the Petitioner in the instant petition			3.76	2.01
Allowed after true-up in this order			3.50	1.90

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

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

		(₹ in lakh)			
	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
	<b>Interest on Working Capital</b>				
A	Working Capital for O&M Expenses (O&M Expenses for one month)	6.01	5.60	4.66	4.03
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	10.81	10.08	8.39	7.25



	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	71.74	74.15	81.90	86.02
D	<b>Total Working Capital (A+B+C)</b>	<b>88.57</b>	<b>89.83</b>	<b>94.95</b>	<b>97.30</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	<b>Interest of Working Capital (D*E)</b>	<b>6.27</b>	<b>12.13</b>	<b>12.82</b>	<b>13.14</b>

(₹ in lakh)

	Particulars	Asset-2		
		2016-17 (Pro-rata 162 days)	2017-18	2018-19
	<b>Interest on Working Capital</b>			
A	Working Capital for O&M Expenses (O&M Expenses for one month)	1.60	1.88	1.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	2.89	3.38	1.84
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	119.48	128.71	137.73
D	<b>Total Working Capital (A+B+C)</b>	<b>123.97</b>	<b>133.97</b>	<b>140.60</b>
E	Rate of Interest (in %)	12.80	12.80	12.80
F	<b>Interest of Working Capital (D*E)</b>	<b>7.04</b>	<b>17.15</b>	<b>18.00</b>

(₹ in lakh)

	Particulars	Asset-3	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for one month)	16.65	4.81
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	29.98	8.66
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	125.72	85.55
D	<b>Total Working Capital (A+B+C)</b>	<b>172.36</b>	<b>99.03</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of Working Capital (D*E)</b>	<b>7.26</b>	<b>12.48</b>





(₹ in lakh)

	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
	<b>Interest on Working Capital</b>	
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.58
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	1.04
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	10.35
D	<b>Total Working Capital (A+B+C)</b>	<b>11.96</b>
E	Rate of Interest (in %)	12.20
F	<b>Interest of Working Capital (D*E)</b>	<b>1.10</b>

(₹ in lakh)

	Particulars	Asset-5	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for onemonth)	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)	1.80	1.99
D	<b>Total Working Capital (A+B+C)</b>	<b>1.80</b>	<b>1.99</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of Working Capital (D*E)</b>	<b>0.08</b>	<b>0.25</b>

(₹ in lakh)

	Particulars	Asset-6
		2018-19 (Pro-rata 274 days)
	<b>Interest on Working Capital</b>	
A	Working Capital for O&M Expenses (O&M Expenses for onemonth)	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	15.94
D	<b>Total Working Capital (A+B+C)</b>	<b>15.94</b>
E	Rate of Interest (in %)	12.20
F	<b>Interest of Working Capital (D*E)</b>	<b>1.46</b>



(₹ in lakh)

	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.28	0.14
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.50	0.25
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	21.65	21.07
D	<b>Total Working Capital (A+B+C)</b>	<b>22.43</b>	<b>21.46</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of Working Capital (D*E)</b>	<b>2.59</b>	<b>2.70</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata 212 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.82	0.26
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	1.47	0.46
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	34.91	35.28
D	<b>Total Working Capital (A+B+C)</b>	<b>37.19</b>	<b>36.01</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of Working Capital (D*E)</b>	<b>2.72</b>	<b>4.54</b>

(₹ in lakh)

	Particulars	Asset-9	
		2017-18 (Pro-rata 31 days)	2018-19
	<b>Interest on Working Capital</b>		
A	Working Capital for O&M Expenses (O&M Expenses for one month)	3.43	0.16
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	6.18	0.28
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	29.28	22.84
D	<b>Total Working Capital (A+B+C)</b>	<b>38.88</b>	<b>23.28</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest of Working Capital (D*E)</b>	<b>0.42</b>	<b>2.93</b>



114. The details of IWC approved *vide* order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner in the instant petition and true-up IWC in the instant order are as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018	3.89	7.83	9.08	9.76
Claimed by the Petitioner in the instant petition	6.42	12.33	12.96	13.29
Allowed after true-up in this order	6.27	12.13	12.82	13.14
<b>Asset-2</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018		6.37	15.93	17.18
Claimed by the Petitioner in the instant petition		7.28	17.76	18.59
Allowed after true-up in this order		7.04	17.15	18.00
<b>Asset-3</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			3.61	8.05
Claimed by the Petitioner in the instant petition			8.00	14.36
Allowed after true-up in this order			7.26	12.48
<b>Asset-4</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				0.75
Claimed by the Petitioner in the instant petition				1.16
Allowed after true-up in this order				1.10
<b>Asset-5</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.07	0.22
Claimed by the Petitioner in the instant petition			0.08	0.25



<b>Particulars</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Allowed after true-up in this order			0.08	0.25
<b>Asset-6</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				1.28
Claimed by the Petitioner in the instant petition				1.46
Allowed after true-up in this order				1.46
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			2.23	2.28
Claimed by the Petitioner in the instant petition			2.61	2.71
Allowed after true-up in this order			2.59	2.70
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			2.44	4.28
Claimed by the Petitioner in the instant petition			2.97	4.96
Allowed after true-up in this order			2.72	4.54
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			0.22	2.56
Claimed by the Petitioner in the instant petition			0.43	2.94
Allowed after true-up in this order			0.42	2.93

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

115. The trued up AFC in respect of the communication assets for 2014-19 tariff period is as follows:



(₹ in lakh)

	Particulars	Asset-1			
		2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
	<b>Annual Transmission Charges</b>				
A	Depreciation	62.62	129.40	154.57	171.05
B	Interest on Loan	60.63	115.33	123.73	123.42
C	Return on Equity	58.48	120.84	144.35	160.17
D	O&M Expenses	37.82	67.21	55.93	48.36
E	Interest on Working Capital	6.27	12.13	12.82	13.14
F	<b>Total (A+B+C+D+E)</b>	<b>225.82</b>	<b>444.91</b>	<b>491.40</b>	<b>516.14</b>

(₹ in lakh)

	Particulars	Asset-2		
		2016-17 (Pro-rata 162 days)	2017-18	2018-19
	<b>Annual Transmission Charges</b>			
A	Depreciation	105.18	263.62	296.02
B	Interest on Loan	99.19	222.75	222.93
C	Return on Equity	98.22	246.19	277.19
D	O&M Expenses	8.54	22.55	12.27
E	Interest on Working Capital	7.04	17.15	18.00
F	<b>Total (A+B+C+D+E)</b>	<b>318.17</b>	<b>772.26</b>	<b>826.41</b>

(₹ in lakh)

	Particulars	Asset-3	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	63.91	162.23
B	Interest on Loan	54.49	128.91
C	Return on Equity	59.68	151.91
D	O&M Expenses	66.80	57.76
E	Interest on Working Capital	7.26	12.48
F	<b>Total (A+B+C+D+E)</b>	<b>252.14</b>	<b>513.29</b>

(₹ in lakh)

	Particulars	Asset-4
		2018-19 (Pro-rata 274 days)
	<b>Annual Transmission Charges</b>	
A	Depreciation	14.90
B	Interest on Loan	11.44
C	Return on Equity	13.95
D	O & M Expenses	5.21
E	Interest on Working Capital	1.10
F	<b>Total (A+B+C+D+E)</b>	<b>46.60</b>



(₹ in lakh)

	Particulars	Asset-5	
		2017-18 (Pro-rata 122 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	1.26	4.24
B	Interest on Loan	1.10	3.49
C	Return on Equity	1.17	3.97
D	O&M Expenses	0.00	0.00
E	Interest on Working Capital	0.08	0.25
F	<b>Total (A+B+C+D+E)</b>	<b>3.61</b>	<b>11.95</b>

(₹ in lakh)

	Particulars	Asset-6	
		2018-19 (Pro-rata 274 days)	
	<b>Annual Transmission Charges</b>		
A	Depreciation		25.66
B	Interest on Loan		20.15
C	Return on Equity		24.03
D	O&M Expenses		0.00
E	Interest on Working Capital		1.94
F	<b>Total (A+B+C+D+E)</b>		<b>71.78</b>

(₹ in lakh)

	Particulars	Asset-7	
		2017-18 (Pro-rata 335 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	40.49	44.80
B	Interest on Loan	35.30	35.29
C	Return on Equity	37.81	41.95
D	O&M Expenses	3.05	1.66
E	Interest on Working Capital	2.59	2.70
F	<b>Total (A+B+C+D+E)</b>	<b>119.24</b>	<b>126.40</b>

(₹ in lakh)

	Particulars	Asset-8	
		2017-18 (Pro-rata 212 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	40.65	74.74
B	Interest on Loan	34.62	59.35
C	Return on Equity	37.96	69.98
D	O&M Expenses	5.69	3.10
E	Interest on Working Capital	2.72	4.54
F	<b>Total (A+B+C+D+E)</b>	<b>121.64</b>	<b>211.71</b>



(₹ in lakh)

	Particulars	Asset-9	
		2017-18 (Pro-rata 31 days)	2018-19
	<b>Annual Transmission Charges</b>		
A	Depreciation	3.90	47.60
B	Interest on Loan	3.46	40.03
C	Return on Equity	3.64	44.57
D	O&M Expenses	3.50	1.90
E	Interest on Working Capital	0.42	2.93
F	<b>Total (A+B+C+D+E)</b>	<b>14.92</b>	<b>137.03</b>

116. Accordingly, the comparison between Annual Transmission Charges as approved *vide* order dated 22.2.2019 in Petition No. 5/TT/2018, claimed by the Petitioner and as approved after truing up in the instant order is as follows:

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
<b>Asset-1</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018	172.82	348.03	403.66	434.00
Claimed by the Petitioner in the instant petition	228.70	448.80	494.11	519.13
Allowed after true-up in this order	225.82	444.91	491.40	516.14
<b>Asset-2</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018		298.70	746.81	805.32
Claimed by the Petitioner in the instant petition		328.65	798.36	853.03
Allowed after true-up in this order		318.17	772.26	826.41
<b>Asset-3</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			172.06	383.45
Claimed by the Petitioner in the instant petition			282.96	598.07
Allowed after true-up in this order			252.14	513.29
<b>Asset-4</b>				



<b>Particulars</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				36.73
Claimed by the Petitioner in the instant petition				49.28
Allowed after true-up in this order				46.60
<b>Asset-5</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			3.18	10.49
Claimed by the Petitioner in the instant petition			3.61	11.95
Allowed after true-up in this order			3.61	11.95
<b>Asset-6</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018				63.12
Claimed by the Petitioner in the instant petition				71.94
Allowed after true-up in this order				71.78
<b>Asset-7</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			106.32	108.65
Claimed by the Petitioner in the instant petition			119.48	126.54
Allowed after true-up in this order			119.24	126.40
<b>Asset-8</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			116.37	203.77
Claimed by the Petitioner in the instant petition			133.02	231.79
Allowed after true-up in this order			121.64	211.71
<b>Asset-9</b>				
Approved <i>vide</i> order dated 22.2.2019 in Petition No. 5/TT/2018			10.37	121.81
Claimed by the Petitioner in the instant petition			15.20	137.38





Particulars	2015-16	2016-17	2017-18	2018-19
Allowed after true-up in this order			14.92	137.03

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

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

(₹ in lakh)

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	895.68	887.36	887.36	887.36	887.36
Interest on Loan	630.39	547.83	476.86	405.73	332.51
Return on Equity	797.28	789.88	789.88	789.88	789.88
O&M Expenses	280.37	280.37	280.37	280.37	280.37
Interest on Working Capital	47.16	45.78	44.71	43.64	42.44
<b>Total</b>	<b>2650.88</b>	<b>2551.22</b>	<b>2479.18</b>	<b>2406.98</b>	<b>2332.56</b>

(₹ in lakh)

<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	42.69	42.70	42.70	42.70	42.70
Interest on Loan	32.97	29.62	26.50	23.39	19.89
Return on Equity	38.00	38.01	38.01	38.01	38.01
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.71	1.66	1.62	1.57	1.51
<b>Total</b>	<b>115.37</b>	<b>111.99</b>	<b>108.83</b>	<b>105.67</b>	<b>102.11</b>

118. The details of the IWC claimed by the Petitioner for 2019-24 period are as follows:

(₹ in lakh)

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	23.36	23.36	23.36	23.36	23.36
Working Capital for Maintenance Spares (15% of O&M Expenses)	42.06	42.06	42.06	42.06	42.06



Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	325.93	314.53	305.65	296.75	286.79
<b>Total Working Capital</b>	<b>391.35</b>	<b>379.95</b>	<b>371.07</b>	<b>362.17</b>	<b>352.21</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>47.16</b>	<b>45.78</b>	<b>44.71</b>	<b>43.64</b>	<b>42.44</b>

(₹ in lakh)

<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	14.18	13.81	13.42	13.03	12.55
<b>Total Working Capital</b>	<b>14.18</b>	<b>13.81</b>	<b>13.42</b>	<b>13.03</b>	<b>12.55</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1.71</b>	<b>1.66</b>	<b>1.62</b>	<b>1.57</b>	<b>1.51</b>

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

119. The Petitioner has claimed that E-COD of the Combined Asset-Central Sector works out to be 28.1.2017 and Combined Asset-State Sector works out to be 8.6.2018. E-COD has been worked out based on the trued-up capital cost and COD of the individual assets which is as follows:



Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)						
Assets	Capital Cost as on 31.3.2019	COD	No. of days from COD of Asset from COD of Project	Weight of the cost (in %)	Weighted days	E-COD COD – (Latest COD- Total weighted Days)
	(₹ in lakh)					
Asset-1	2702.16	22.9.2015	1013	19.97	202.25	16.1.2017
Asset-2	4948.75	21.10.2016	618	36.57	225.97	
Asset-3	2826.05	30.11.2017	213	20.88	44.48	
Asset-4	285.66	1.7.2018	0	2.11	0.00	
Asset-7	736.93	1.5.2017	426	5.45	23.20	
Asset-8	1241.42	1.9.2017	303	9.17	27.79	
Asset-9	793.01	1.3.2018	122	5.86	7.15	
<b>Total</b>	<b>13548.01</b>				<b>530.84</b>	

Combined Asset-State Sector (Asset-5 and Asset-6)						
Assets	Capital Cost as on 31.3.2019	Actual COD	No. of days from COD of Asset from COD of Project	Weight of the cost (in %)	Weighted days	E-COD (latest COD – total weighted Days)
	(₹ in lakh)					
Asset-5	74.22	30.11.2017	213	11.15	23.74	7.6.2018
Asset-6	591.61	1.7.2018	0	88.85	0.00	
<b>Total</b>	<b>665.83</b>				<b>23.74</b>	

120. The E-COD is used to determine the lapsed life of the project as a whole which works out as 2 (two) years for Combined Asset-Central Sector and 0 (zero) year for Combined Asset-State Sector as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

### **Capital Cost**

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

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

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



- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*



- (f) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*
- (4) *The capital cost in case of existing or new hydro generating station shall also include:*
- (a) *cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
  - (b) *cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*
- (5) *The following shall be excluded from the capital cost of the existing and new projects:*
- (a) *The assets forming part of the project, but not in use, as declared in the tariff petition;*
  - (b) *De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

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

*Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
  - (c) *In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*
  - (d) *Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
  - (e) *Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."*

122. The Petitioner has claimed capital cost of ₹14281.18 lakh as on 31.3.2019 for Combined Asset-Central Sector and capital cost of ₹674.36 lakh as on 31.3.2019 for Combined Asset-State Sector. Trued up capital cost of ₹13533.99 lakh as on 31.3.2019 for Combined Asset-Central Sector and admitted capital cost of ₹665.83 lakh as on 31.3.2019 for Combined Asset-State Sector has been considered as opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.



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

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

### **“24. Additional Capitalisation within the original scope and upto the cut-off date**

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

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

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

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

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

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

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

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



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

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

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

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

124. The Petitioner has not claimed ACE for Combined Asset-State whereas the Petitioner has submitted the following ACE for the Combined Asset-Central for the 2019-24 tariff period:

Assets	Projected ACE
	2019-20
Asset-1	(122.55)
Asset-2	0.61
Asset-3	(140.76)
Asset-4	(1.72)
<b>Total for Combined Asset-Central Sector</b>	<b>(264.42)</b>

125. The Petitioner has further submitted that the ACE projected to be incurred during 2019-24 upto the cut-off date is claimed under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. Whereas ACE claimed beyond cut-off date and is claimed as per Regulation 25(1)(d) of the 2019 Tariff Regulations.

126. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner projected to be incurred during 2019-24 upto the cut-off date is claimed under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. Whereas ACE claimed beyond cut-off date and is claimed as per Regulation 25(1)(d) of the 2019 Tariff Regulations. Accordingly, the ACE claimed has been allowed subject to truing up.





127. The capital cost considered for the Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Assets	Apportioned approved cost as per RCE	Capital Cost as on 1.4.2019	ACE					Capital Cost as on 31.3.2024
			2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)	18998.20	13533.99	(264.42)	0.00	0.00	0.00	0.00	13269.57
Combined Asset-State Sector (Asset-5 and Asset-6)	780.73	665.83	0.00	0.00	0.00	0.00	0.00	665.83

### Debt-Equity ratio

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

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

*Provided that:*

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

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

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





generating station or the transmission system including communication system, as the case may be.

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

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

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

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

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

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

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

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>						
<b>Particulars</b>	<b>Capital Cost as on 1.4.2019 (₹ in lakh)</b>	<b>(in %)</b>	<b>ACE 2019-24 (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital Cost as on 31.3.2024 (₹ in lakh)</b>	<b>(in %)</b>
Debt	9473.79	70.00	(185.09)	70.00	9288.70	70.00
Equity	4060.20	30.00	(79.33)	30.00	3980.87	30.00
<b>Total</b>	<b>13533.99</b>	<b>100.00</b>	<b>(264.42)</b>	<b>100.00</b>	<b>13269.57</b>	<b>100.00</b>



Combined Asset-State Sector (Asset-5 and Asset-6)						
Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	466.08	70.00	0.00	N/A	466.08	70.00
Equity	199.75	30.00	0.00	N/A	199.75	30.00
<b>Total</b>	<b>665.83</b>	<b>100.00</b>	<b>0.00</b>	<b>N/A</b>	<b>665.83</b>	<b>100.00</b>

### Depreciation

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

*c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof*



has completed its useful life.”

131. 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. Since the communication assets consists of only one element of PLCC, the Gross Block during 2019-24 tariff period has been depreciated at rate of 6.33% as provided for communication equipment in the 2019 Tariff Regulations. The depreciation allowed for the Combined Asset-Central Sector and State Sector is as follows:

(₹ in lakh)

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Depreciation</b>					
A	Opening Gross Block	13533.99	13269.57	13269.57	13269.57	13269.57
B	ACE	(264.42)	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	13269.57	13269.57	13269.57	13269.57	13269.57
E	Average Gross Block (A+C)/2	13401.78	13269.57	13269.57	13269.57	13269.57
D	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life of the asset	13	12	11	10	9
G	Lapsed life	2	3	4	5	6
H	Aggregate Depreciable Value	12061.60	11942.61	11942.61	11942.61	11942.61
I	<b>Depreciation during the year</b>	<b>848.33</b>	<b>839.96</b>	<b>839.96</b>	<b>839.96</b>	<b>839.96</b>
J	Cumulative Depreciation	2524.00	3363.97	4203.93	5043.89	5883.86
K	Remaining Depreciable Value (H-J)	9537.60	8578.64	7738.68	6898.72	6058.75

(₹ in lakh)

<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Depreciation</b>					
A	Opening Gross Block	665.83	665.83	665.83	665.83	665.83
B	ACE	0.00	0.00	0.00	0.00	0.00



<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
C	Closing Gross Block (A+B)	665.83	665.83	665.83	665.83	665.83
E	Average Gross Block (A+C)/2	665.83	665.83	665.83	665.83	665.83
D	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life of the asset	15	14	13	12	11
G	Lapsed life	0	1	2	3	4
H	Aggregate Depreciable Value	599.24	599.24	599.24	599.24	599.24
I	<b>Depreciation during the year</b>	<b>42.15</b>	<b>42.15</b>	<b>42.15</b>	<b>42.15</b>	<b>42.15</b>
J	Cumulative Depreciation	73.31	115.46	157.60	199.75	241.90
K	Remaining Depreciable Value (H-J)	525.94	483.79	441.64	399.50	357.35

### **Interest on Loan (“IoL”)**

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

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

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

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

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

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

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



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

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

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

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

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

134. We have considered the submissions of the Petitioner. 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 2019-24 tariff period is as follows:

(₹ in lakh)

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Interest on Loan</b>					
A	Gross Normative Loan	9473.79	9288.70	9288.70	9288.70	9288.70
B	Cumulative Repayments upto Previous Year	1675.67	2524.00	3363.97	4203.93	5043.89
C	Net Loan-Opening (A-B)	7798.12	6764.69	5924.73	5084.77	4244.80
D	Additions	(185.09)	0.00	0.00	0.00	0.00
E	Repayment during the year	848.33	839.96	839.96	839.96	839.96
F	Net Loan-Closing (C+D-E)	6764.69	5924.73	5084.77	4244.80	3404.84
G	Average Loan (C+F)/2	7281.41	6344.71	5504.75	4664.79	3824.82
H	Weighted Average Rate of Interest on Loan (in %)	8.1769	8.1451	8.1676	8.1947	8.1824
I	<b>Interest on Loan (G*H)</b>	<b>595.40</b>	<b>516.79</b>	<b>449.61</b>	<b>382.26</b>	<b>312.96</b>





(₹ in lakh)

Combined Asset-State Sector (Asset-5 and Asset-6)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Loan</b>					
A	Gross Normative Loan	466.08	466.08	466.08	466.08	466.08
B	Cumulative Repayments upto Previous Year	31.16	73.31	115.46	157.60	199.75
C	Net Loan-Opening (A-B)	434.92	392.77	350.62	308.48	266.33
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	42.15	42.15	42.15	42.15	42.15
F	Net Loan-Closing (C+D-E)	392.77	350.62	308.48	266.33	224.18
G	Average Loan (C+F)/2	413.84	371.70	329.55	287.40	245.26
H	Weighted Average Rate of Interest on Loan (in %)	7.8631	7.8623	7.9343	8.0303	8.0019
I	<b>Interest on Loan (G*H)</b>	<b>32.54</b>	<b>29.22</b>	<b>26.15</b>	<b>23.08</b>	<b>19.63</b>

### Return on Equity (“RoE”)

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

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

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

*Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 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.”

136. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, the MAT rate applicable for 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed is as follows:

(₹ in lakh)

Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Return on Equity</b>					
A	Opening Equity	4060.20	3980.87	3980.87	3980.87	3980.87
B	Additions	(79.33)	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	3980.87	3980.87	3980.87	3980.87	3980.87
D	Average Equity (A+C)/2	4020.53	3980.87	3980.87	3980.87	3980.87
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>755.14</b>	<b>747.69</b>	<b>747.69</b>	<b>747.69</b>	<b>747.69</b>



(₹ in lakh)

Combined Asset-State Sector (Asset-5 and Asset-6)						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
<b>Return on Equity</b>						
A Opening Equity	199.75	199.75	199.75	199.75	199.75	
B Additions	0.00	0.00	0.00	0.00	0.00	
C Closing Equity (A+B)	199.75	199.75	199.75	199.75	199.75	
D Average Equity (A+C)/2	199.75	199.75	199.75	199.75	199.75	
E Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500	
F MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472	
G Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782	
H <b>Return on Equity (D*G)</b>	<b>37.52</b>	<b>37.52</b>	<b>37.52</b>	<b>37.52</b>	<b>37.52</b>	

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

137. The Petitioner has not claimed O&M Expenses for Combined Asset-State Sector. The O&M Expenses claimed by the Petitioner for the Combined Asset-Central Sector for the 2019-24 period are as follows:

Particulars	Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>PLCC (@ 2% of capital cost)</b>					
Capital cost for PLCC	14018.34	14018.34	14018.34	14018.34	14018.34
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>

138. The norms under Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations for O&M Expenses as follows:

#### **“35. Operation and Maintenance Expenses:**

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (Rs 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 (Rs Lakh per MVA)</b>					
765 kV	0.491	0.508	0.526	0.545	0.564



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
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 (Rs 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 (Rs. 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 (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*

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

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

*(vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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

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

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

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



139. We have considered the submission of the Petitioner. The Petitioner is directed to submit details of actual O&M Expenses at the time of true-up. O&M Expenses for Combined Asset-State Sector are NIL. The O&M Expenses for Combined Asset-Central Sector have been worked out as per the norms specified in the 2019 Tariff Regulations and are as follows:

Particulars	Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>PLCC (@ 2% of capital cost)</b>					
Capital cost for PLCC	14018.34	14018.34	14018.34	14018.34	14018.34
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>	<b>280.37</b>

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

140. Regulation 34 and Regulation 3(7) of the 2019 Tariff Regulations specifies as follows:

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

**(a) For Coal-based/lignite-fired thermal generating stations:**

- (i) *Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*
- (ii) *Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;*
- (iii) *Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
- (iv) *Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;*
- (v) *Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and*
- (vi) *Operation and maintenance expenses, including water charges and security expenses, for one month.*

**(aa) For emission control system of coal or lignite based thermal generating stations:**

- (i) *Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor;*
- (ii) *Advance payment for 30 days towards cost of reagent for generation*



corresponding to the normative annual plant availability factor;  
(iii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor;  
(iv) Operation and maintenance expenses in respect of emission control system for one month;  
(v) Maintenance spares @20% of operation and maintenance expenses in respect of emission control system.

**(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:**

(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;  
(ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;  
(iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;  
(iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and  
(v) Operation and maintenance expenses, including water charges and security expenses, for one month.

**(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.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

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





declared under commercial operation, whichever is later:

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

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

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

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

141. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)

Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for 1 month)	23.36	23.36	23.36	23.36	23.36
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	42.06	42.06	42.06	42.06	42.06
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	310.39	299.07	290.34	281.93	272.52



<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>375.81</b>	<b>364.49</b>	<b>355.76</b>	<b>347.35</b>	<b>337.93</b>
<b>E</b>	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital (D*E)</b>	<b>45.29</b>	<b>41.01</b>	<b>37.35</b>	<b>36.47</b>	<b>35.48</b>

(₹ in lakh)

<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Interest on Working Capital</b>					
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	14.00	13.61	13.22	12.83	12.37
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>14.00</b>	<b>13.61</b>	<b>13.22</b>	<b>12.83</b>	<b>12.37</b>
<b>E</b>	Rate of Interest (in%)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital (D*E)</b>	<b>1.69</b>	<b>1.53</b>	<b>1.39</b>	<b>1.35</b>	<b>1.30</b>

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

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

(₹ in lakh)

<b>Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	<b>Annual Transmission Charges</b>					
A	Depreciation	848.33	839.96	839.96	839.96	839.96
B	Interest on Loan	595.40	516.79	449.61	382.26	312.96
C	Return on Equity	755.14	747.69	747.69	747.69	747.69
D	O & M Expenses	280.37	280.37	280.37	280.37	280.37
E	Interest on Working Capital	45.29	41.01	37.35	36.47	35.48
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>2524.53</b>	<b>2425.82</b>	<b>2354.98</b>	<b>2286.75</b>	<b>2216.46</b>





(₹ in lakh)

<b>Combined Asset-State Sector (Asset-5 and Asset-6)</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Annual Transmission Charges</b>						
A	Depreciation	42.15	42.15	42.15	42.15	42.15
B	Interest on Loan	32.54	29.22	26.15	23.08	19.63
C	Return on Equity	37.52	37.52	37.52	37.52	37.52
D	O&M Expenses	0.00	0.00	0.00	0.00	0.00
E	Interest on Working Capital	1.69	1.53	1.39	1.35	1.30
<b>F</b>	<b>Total (A+B+C+D+E)</b>	<b>113.90</b>	<b>110.42</b>	<b>107.21</b>	<b>104.10</b>	<b>100.60</b>

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

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

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

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

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

### **Goods and Services Tax**

146. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by



the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

147. MPPMCL has submitted that the demand of the Petitioner is premature and need not to be considered at this juncture. In response, the Petitioner has submitted that currently transmission of electricity by an electric transmission utility is exempted from GST. Hence, the transmission charges currently charged are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately.

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

### **Security Expenses**

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

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



### **Capital Spares**

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

### **Sharing of Transmission Charges**

#### **Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)**

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

#### **Combined Asset-State Sector (Asset-5 and Asset-6)**

153. The transmission charges approved in this order for Combined Asset-State Sector shall be borne by MPPTCL, Respondent No. 2.



154. To summarize:

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

(₹ in lakh)

Particulars	Asset-1			
	2015-16 (Pro-rata 192 days)	2016-17	2017-18	2018-19
Annual Transmission Charges	225.82	444.91	491.40	516.14

(₹ in lakh)

Particulars	Asset-2		
	2016-17 (Pro-rata 162 days)	2017-18	2018-19
Annual Transmission Charges	318.17	772.26	826.41

(₹ in lakh)

Particulars	Asset-3	
	2017-18 (Pro-rata 122 days)	2018-19
Annual Transmission Charges	252.14	513.29

(₹ in lakh)

Particulars	Asset-4
	2018-19 (Pro-rata 274 days)
Annual Transmission Charges	46.40

(₹ in lakh)

Particulars	Asset-5	
	2017-18 (Pro-rata 122 days)	2018-19
Annual Transmission Charges	3.61	11.95

(₹ in lakh)

Particulars	Asset-6
	2018-19 (Pro-rata 274 days)
Annual Transmission Charges	71.78

(₹ in lakh)

Particulars	Asset-7	
	2017-18 (Pro-rata 335 days)	2018-19
Annual Transmission Charges	119.24	126.40

(₹ in lakh)

Particulars	Asset-8	
	2017-18 (Pro-rata 212 days)	2018-19
Annual Transmission Charges	121.64	211.71



(₹ in lakh)

Particulars	Asset-9	
	2017-18 (Pro-rata 31 days)	2018-19
Annual Transmission Charges	14.92	137.03

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC claimed for Combined Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)	2650.88	2551.22	2479.18	2406.98	2332.56
AFC allowed for Asset-Central Sector (Asset-1, Asset-2, Asset-3, Asset-4, Asset-7, Asset-8 and Asset-9)	2524.53	2425.82	2354.98	2286.75	2216.46
AFC claimed for Combined Asset-State Sector (Asset-5 and Asset-6)	115.37	111.99	108.83	105.67	102.11
AFC allowed for Combined Asset-State Sector (Asset-5 and Asset-6)	113.90	110.42	107.21	104.10	100.60

155. This order disposes of Petition No. 37/TT/2021 in terms of the above discussion and findings.

sd/-  
(P. K. Singh)  
Member

sd/-  
(Arun Goyal)  
Member

sd/-  
(I.S. Jha)  
Member

