

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 309/TT/2020

Coram:

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

Date of Order: 02.06.2022

In the matter of:

Approval for truing up of fee and charges for 2014-19 period and determination of fee and charges for 2019-24 period for Unified Load Despatch and Communication Scheme (ULDC) (Power Grid Portion i.e. Communication System Portion and State Load Despatch Centers (SLDC) System retained by Power Grid after formation of Power System Operation Corporation Limited POSOCO) in 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,
Shakthi Bhawan, Nayagaon,
Jabalpur-695004.
2. NTPC Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003.
3. Nuclear Power Corporation of India Limited,
Nabhkiya Bhawan, Anu-Shakti Nagar,
Mumbai-400094.
4. Narmada Control Authority, EMC Office,
D ¾, Narmada Colony Scheme, No. 78, Vijayanagar,
Indore-452010.



5. Jindal Power Limited,
O.P. Jindal Super Thermal Power Plant,
Village & P.O. Tamnar, Tehsil-Gharghoda,
Dist. Raigarh, Chattisgarh-496107.
6. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur-492013.
7. LANCO Amarkantak Power Private Limited,
Plot No. 397, Phase-III, Udyog Vihar,
Gurgaon-122016, Haryana.
8. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan, Race Course Road,
Vadodara-390007.
9. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 5th Floor, Bandra East,
Mumbai-400051.
10. Electricity Department,
Government of Goa,
Vidyut Bhavan, 3rd Floor,
Panaji, Goa.
11. Electricity Department,
U.T. of Daman and Diu,
Moti Daman.
12. Electricity Department,
U.T. of Dadra Nagar Haveli,
Silvassa-396230.
13. Western Region Transmission (Maharashtra) Private Limited,
12th Floor, Building No. 10-B, DLF, Cyber city,
Gurgaon, Haryana-122022.
14. Western Region Transmission (Gujarat) Private Limited,
12th Floor, Building No. 1 O-B, DLF, Cyber City,
Gurgaon, Haryana-122022.

.....Respondent(s)

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



For Respondents : Shri Anindya Khare, MPPMCL

ORDER

The Power Grid Corporation of India Limited (PGCIL) has filed the instant petition for truing up of fees and charges for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of fees and charges for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of Unified Load Despatch and Communication Scheme (Power Grid Portion i.e. Communication System Portion and State Load Despatch Centre (SLDC) System retained by the Petitioner after formation of Power System Operation Corporation Limited (POSOCO) in Western Region (hereinafter referred to “communication system”).

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

“1) Approve the Trued-up Fees and charges for the communication system and SLDC system for the period 2014-19 covered under this petition, as per Para-4 above;

2) Approve the Fees and charges for the communication system and SLDC system for the period 2019- 24 covered under this petition, as per Para-5 above;

3) Allow the Petitioner to recover the tax from the beneficiaries separately.

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

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



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

7) Allow the Petitioner to claim O&M expenses as per norms to be notified by Hon'ble Commission at the time of truing up.

8) Allow the Petitioner to bill and recover the charges for 2014-19 and 2019-24, for communication system forming part of transmission system to be shared by beneficiaries or long term transmission customers in accordance with the sharing Regulations.

9) Allow the Petitioner to bill and recover the charges for 2014-19 and 2019-24, for communication system other than Central transmission system to be shared by beneficiaries in proportion to the capital cost belonging to respective beneficiaries.

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

Background

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

(a) The Investment Approval and expenditure sanction was accorded by the Central Government in Ministry of Power vide letter dated 5.2.2001 at an estimated cost of ₹26218 lakh, including IDC of ₹4699 lakh consisting of (i) PGCIL's Portion of ₹25481 lakh, including IDC of ₹4558 lakh and (ii) SEB's Portion of ₹737 lakh, including IDC of ₹141 lakh, based on 2nd quarter 2000 price level. The communication system was declared under commercial operation on 1.2.2006.

(b) The Commission vide order dated 7.11.2008 in Petition No. 11/2007 has approved the fees and charges for the communication system in the Western Region for the period 2004-09 for the expenditure incurred from the date of commercial operation to 31.3.2009. Subsequently, the Commission, vide order dated 15.3.2011 in Petition No. 51/2010, approved the revised charges for the period 2004-09 for the expenditure incurred from 1.4.2006 to 31.3.2009. The



instant petition covers the Communication & SLDC System retained by the Petitioner.

- (c) Tariff of 2009-14 tariff period for the communication system was allowed vide order dated 14.11.2013 in Petition No. 57/TT/2012 and order dated 11.6.2014 in Review Petition No. 3/RP/2014. Further, tariff for 2014-19 period for the assets was allowed vide order dated 14.7.2016 in Petition No. 11/TT/2015. The Commission vide order dated 19.7.2018 in Petition No. 212/TT/2017 had further revised the Fees and Charges for the period 2014-19 tariff period on accelerated depreciation of SCADA/EMS systems of SLDCs for Unified Load Despatch & Communication Scheme.
- (d) As per the directive of Ministry of Power dated 4.7.2008, Power System Operation Corporation Limited (POSOCO), a wholly owned subsidiary of the Petitioner, responsible for operation of National Load Despatch Centre and Regional Load Despatch Centres (RLDCs) was established. The Government of India had constituted a Task Force to look into the financial aspects for augmentation and up-gradation of the State Load Despatch Centres and issues related to emoluments for the personnel's engaged in system operation. The Task Force made certain recommendations with regard to the ownership of the assets. Subsequent to the Task Force's report, PGCIL constituted Committees at the regional level to identify the assets to be transferred to POSOCO. As per the directions of the Committees, the assets directly related to discharge of load despatch functions raised by the Petitioner under the Scheme have been transferred to POSOCO. The Petitioner was left with the



assets associated with the communication system under the Central Portion of the Scheme and assets for SLDCs (the States' Portion).

- (e) The Petitioner filed a Miscellaneous Petition No. 68/2010 under sub-section (4) of Section 28 of Electricity Act, 2003 and Regulations 44 "Power to Relax" of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for fixation of tariff norms for recovery of cost for the assets ("Communication System" and "Sub-Load Dispatch Centre system") to be retained/ to be installed by the Petitioner after formation of POSOCO for the period 2009-14 block.
- (f) Based on the recommendations of the Committees, the assets under the Unified Load Despatch and Communication Scheme were transferred to POSOCO and to the Petitioner vide Commission's order dated 8.12.2011 in Petition No. 68/2010 and the same are as follows:

(A) Assets transferred to POSOCO:

- (i) EMS/SCADA system (computer system, hardware and software)
- (ii) Auxiliary power supply system comprising of uninterrupted power supply, diesel generating set etc.
- (iii) Building and civil works.

(B) Assets which remain with the Petitioner

I. Central Portion

- (i) Fibre Optic Cables (overhead and underground)
- (ii) Fibre Optic Communication Equipment
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment etc.)
- (iv) PABX
- (v) Power Line Carrier Communication System;
- (vi) Auxiliary power supply system.



II. State Portion:

Entire state portion which consists of the following equipment remains with the Petitioner:

- (i) EMS/SCADA system
- (ii) Fibre Optic System
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment etc.)
- (iv) PABX
- (v) Power Line Carrier Communication System
- (vi) Auxiliary power supply system (part)

- (g) The Commission in Petition No. 68/2010 vide order dated 8.12.2011 had observed as follows:

“.....It clearly emerges from the above judgment that the Central Commission can specify the terms and conditions of tariff even in the absence of the regulations. Since no regulation was specified for determination of tariff of the communication system and the ULDC system, the Commission determined the tariff of these assets during the period 2004-09 on levelised basis by adopting some of the parameters of 2004 tariff regulations. We have decided to continue with the levelised tariff for the existing assets in the absence of any provision in 2009 regulations regarding determination of tariff of communication system and ULDC system of the Petitioner. For the new assets, the tariff will be decided as per the regulations for communication systems to be framed. Accordingly, we direct the staff of the Commission to take necessary action to prepare draft regulations for determination of tariff for the communication system and ULDC system of the Petitioner.”

- (h) In the absence of any provision in the 2009 Tariff Regulations pertaining to determination of tariff of communication system and ULDC system of the Petitioner, it was decided to continue with the levelized tariff for the assets. The fees and charges of the communication system and SLDC System retained by the Petitioner were approved vide order dated 14.12.2013 in Petition No. 57/TT/2012 for 2009-14 tariff period based on the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010.



- (i) The Petitioner has also filed Petition No. 188/MP/2014 for recovery of cost of the assets of SCADA/EMS system for SLDCs under Regulation 54 of 2014 Tariff Regulations seeking approval of the unrecovered charges of existing ULDC SCADA/EMS system of SLDCs (retained by the petitioner), which were being recovered considering 15 years of project life, may be allowed to be recovered as accelerated depreciation matching with commissioning schedule of new SCADA/EMS System.
- (j) The Petitioner had submitted that the tariff for similar SCADA/EMS system for RLDCs, commissioned under the same project along with that of SLDCs, are being recovered from the same constituents by POSOCO in terms of the Central Electricity Regulatory Commission (Fee and Charges of RLDC and other related matters) Regulations, 2009 (hereinafter referred to as “2009 RLDC fee and charges regulations”). As per the 2009 RLDC fees and charges regulations, the salvage value for IT equipment and software is required to be considered as nil and 100% value of the assets is required to be considered depreciable along with 15% depreciation rates for IT equipment’s and 30% depreciation rate for software. After replacement of SCADA/EMS system at SLDCs, the existing SCADA system would not be in use.
- (k) The Commission in order dated 2.3.2017 in Petition No. 188/MP/2014, observed that considering the existing SCADA/EMS system for SLDC retained by the Petitioner as 95% depreciable with 5% salvage value, wherever the SCADA/EMS system of SLDC retained by the Petitioner are replaced by new SCADA/EMS system before completion of their useful life, the unrecovered



charges shall be recovered as accelerated depreciation matching with the commissioning schedule of the new SCADA system. The Petitioner was directed to amend the petition, incorporating the input of accelerated depreciation of SCADA/EMS matching with the commissioning of the new SCADA system. Accordingly, the Petitioner had filed Petition No. 212/TT/2017 for revision of fees and charges for the period 2014-19 tariff block on accelerated depreciation of SCADA/EMS systems of SLDCs for Unified Load Despatch & Communication Scheme upto 30.9.2016. The Commission vide order dated 19.7.2018 in Petition No. 212/TT/2017 has approved the revised fees and charges for the 2014-19 tariff period.

- (l) Taking into consideration the aforesaid facts, the truing up and determination of the fee and charges for the 2009-14 tariff period and 2014-19 period respectively is carried out. As per the provisions of the 2014 Tariff Regulations the tariff of the existing communication system forming part of transmission system shall be as per the methodology followed by the Commission prior to 1.4.2014. SCADA system has also been included in the communication system. Communication system portion including SCADA/EMS retained by the Petitioner are existing assets. Therefore, the fee and charges in the present petition have been worked out applying the Capital Recovery Factor (CRF) concept.
- (m) The communication system was put under commercial operation before 1.4.2009 and the capital cost of Microwave system has been fully recovered during 2009-14 period. The asset has completed its 15 years of service on 31.1.2021 and hence in line with order dated 8.12.2011 in Petition No.



68/2010, the total capital cost in respect of Non-microwave system shall be recovered upto 31.1.2021 i.e., during 2020-21. The net capital cost of the instant assets approved vide order dated 19.7.2018 in Petition No. 212/TT/2017 is as follows:

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced SCADA/EMS – State Portion	Remaining “Existing Assets – State Portion”	Total
Retained gross capital cost as on 1.4.2014	Loan	6005.39	2654.90	2574.39	5229.29
	Equity	1973.44	878.58	851.95	1730.53
	Total	7978.83	3533.48	3426.34	6959.82
Salvage value for State portion only (5% of Gross Capital Cost)	Loan	-	132.74	-	132.74
	Equity	-	43.93	-	43.93
	Total	-	176.67	-	176.67
Recoverable capital cost for state portion only (95% of Gross Capital Cost) as on 1.4.2014	Loan	6005.39	2522.15	2574.39	5097.54
	Equity	1973.44	834.66	851.95	1686.61
	Total	7978.83	3356.81	3426.34	6783.15
Pro-rata capital cost recovered up to 31.3.2014	Loan	2803.20	1237.30	1199.78	2437.08
	Equity	559.67	248.63	241.09	489.72
	Total	3362.87	1485.92	1440.87	2926.79
Net capital cost as on 1.4.2014	Loan	3202.19	1284.85	1374.62	2659.47
	Equity	1413.77	586.03	610.86	1196.89
	Total	4615.96	1870.88	1985.47	3856.35

(n) The annual fee and charges for 2014-19 approved vide order dated 19.7.2018 in Petition No. 212/TT/2017 for Non-Microwave system for both Central Portion and State Portion respectively are as follows:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge-Total	841.52	841.52	841.52	841.52	841.52
O&M Expenses	259.98	268.61	277.53	286.74	296.26
Interest on Working Capital	33.73	34.21	34.70	35.21	35.74
Total Fee & Charges	1135.23	1144.34	1153.75	1163.47	1173.52
Particulars	Non-Microwave – State Portion				
Annual Capital Recovery Charge-Total	362.18	362.18	362.18	362.18	362.18



O&M Expenses	-	-	-	-	-
Interest on Working Capital	8.34	8.34	8.34	8.34	8.34
Total Fee & Charges	370.52	370.52	370.52	370.52	370.52
Particulars	Non-Microwave: State SCADA/ EMS Portion				
Annual Capital Recovery Charge-Total	812.80	812.80	406.40	-	-
O&M Expenses	-	-	-	-	-
Interest on Working Capital	18.71	18.71	9.35	-	-
Total Fee & Charges	831.51	831.51	415.76	-	-

4. The Respondents are the generating companies, distribution companies, electricity departments and transmission licensees, which are procuring transmission services (Communication) from the Petitioner and are mainly beneficiaries of the Western Region.

5. The Petitioner has served the petition on the Respondents and notice of this petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No suggestions or objections have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No.1, vide affidavit dated 23.9.2021 had filed its reply in the matter. MPPMCL has *inter alia* submitted that the Petitioner has not submitted reasons of increase in the O&M Expenses for the year 2018-19 and prayed that the Petitioner be asked to submit break-up and reasons of increase in O&M expenses. Besides, the MPPMCL has requested that Madhya Pradesh Power Trading Company Limited (MPPTCL) may be removed from the memo of parties as the same has been changed to MPPMCL. In response, the Petitioner vide affidavit dated 20.10.2021 has filed amended memo of parties and has submitted break-up and reasons of increase in O&M Expenses.



6. The hearing in this matter was held on 26.10.2021 through video conferencing and the order was reserved. This order is issued considering the submissions made by the Petitioner vide affidavit dated 15.1.2020, MPPMCL's affidavit dated 23.9.2021 and Petitioner's rejoinder file vide affidavit dated 20.10.2021.

7. Having heard the representatives of the Petitioner and perusing the materials on record, we proceed to dispose of the petition.

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

8. As per the directions of the Commission in order dated 8.12.2011 in Petition No. 68/2010, the scope of the 2014 Tariff Regulations has been widened to include the communication system used for inter-State transmission of electricity. However, as per Clause (iii) of Regulation 6(1) of the 2014 Tariff Regulations, the tariff of the existing communication system forming part of the transmission system is to be determined as per the methodology followed prior to 1.4.2014. The said Regulation provides as follows:

“(iii) the tariff of the existing communication system forming part of transmission system shall be as per the methodology followed by the Commission prior to 1.4.2014.”

9. The communication system was put into commercial operation before 1.4.2009 and the capital cost of Microwave system has been fully recovered during 2009-14. In view of above provision in the 2014 Tariff Regulations, the tariff of the communication system and ULDC system of the Petitioner, we continue to allow levelised tariff for the Non-Microwave system as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, the annual fee and charges of Non-Microwave system are determined in this order.



10. The Petitioner has submitted its claim for fee and charges in respect of “Non-Microwave: State SCADA/EMS Portion” and “Non-Microwave: State Portion (After replacing SCADA/EMS)” separately.

11. The details of the trued-up transmission charges claimed by the Petitioner in respect of the instant assets are as follows:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge-Total	841.08	843.33	851.61	855.89	862.64
O&M Expenses	205.04	173.77	185.04	255.91	313.13
Interest on Working Capital	30.69	29.01	29.82	33.84	37.15
Total Fee & Charges	1076.81	1046.11	1066.47	1145.64	1212.93
Particulars	Non-Microwave – State Portion - Existing				
Annual Capital Recovery Charge-Total	362.00	362.96	366.52	368.36	371.26
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	8.33	8.35	8.44	8.48	8.55
Total Fee & Charges	370.33	371.32	374.95	376.83	379.80
Particulars	Non-Microwave – State Portion - Replaced				
Annual Capital Recovery Charge-Total	812.63	813.27	407.15	-	-
O&M Expenses	0.00	0.00	0.00	-	-
Interest on Working Capital	18.71	18.72	9.37	-	-
Total Fee & Charges	831.34	831.99	416.53	-	-

12. The details of the trued-up IWC claimed by the Petitioner in respect of the instant assets are as follows:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares (15% of O&M Expenses)	30.76	26.07	27.76	38.39	46.97
O&M Expenses (1 Month)	17.09	14.48	15.42	21.33	26.09
Receivables (2 months)	179.47	174.35	177.75	190.94	202.15
Total Working Capital	227.31	214.90	220.92	250.65	275.22



Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	30.69	29.01	29.82	33.84	37.15
Particulars	Non-Microwave – State Portion - Existing				
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	61.72	61.89	62.49	62.81	63.30
Total Working Capital	61.72	61.89	62.49	62.81	63.30
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	8.33	8.35	8.44	8.48	8.55
Particulars	Non-Microwave – State Portion - Replaced				
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	-	-
O&M Expenses (1 Month)	0.00	0.00	0.00	-	-
Receivables (2 months)	138.56	138.66	138.84	-	-
Total Working Capital	138.56	138.66	138.84		
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	-	-
Total Interest on Working Capital	18.71	18.72	18.74	-	-

Capital Cost

13. The recovery of capital cost corresponding to “Microwave Portion” has been recovered during 2009-14 period and accordingly for the 2014-19 period recovery of only “Non-Microwave Portion” is considered.

14. As regards the recovery of cost for the assets of SCADA/EMS system for SLDCs, the Commission in order dated 2.3.2017 in Petition No. 188/MP/2014 observed as follows:

“14. Considering the existing SCADA/EMS system for SLDC retained by Powergrid as 95% depreciable with 5% salvage value, the Commission is of the view that wherever, the SCADA/EMS system of SLDC retained by Powergrid are replaced by new SCADA/EMS system, before completion of their useful life, the unrecovered charges shall be recovered as accelerated depreciation matching with the commissioning schedule of the new SCADA system.

15. XXXXXXXXX



16. The Petitioner has filed petitions for true-up of the fees and charges for the period 2009-14 and determination of the fee and charges for the period 2014-19 for the ULDC scheme under PGCIL portions. Orders in the petitions pertaining to Southern Region, Western Region and Northern Region (545/TT/2014, 11/TT/2015 and 19/TT/2015) have been issued and orders in the petition for NER and ER (17/TT/2015 and 39/TT/2015) are in the process of being issued. The Petitioner is directed to file fresh petitions in those cases where orders have been issued and amend the petitions where order have not been issued, incorporating the input of accelerated depreciation of SCADA/EMS matching with the commissioning of the new SCADA system covered in the petitions for the respective regions. While filing the petitions/ amended petitions, the Petitioner shall segregate the existing assets where tariff was determined in terms of order in Petition No. 68/2010 and the new assets which have been considered during 2014-19 period in accordance with the 2014 Tariff Regulations.”

15. In view of the above, the Petitioner has submitted that Petition No. 212/TT/2017 was filed for the new SCADA/EMS system in Western Region. The petition involves replacement of existing SCADA system of MPSEB (MPPTCL), CSEB (CSPTCL), GEB (GETCO) and GED. The COD of new SCADA/ EMS System is 1.10.2016 which pertains to the tariff period 2014-19. Accordingly, the revision of true-up Fee & Charges for the period 2009-14, as approved by the Commission vide order dated 14.7.2016 in Petition No.11/TT/2015, is revised to the extent of the Fee & Charges approved for the period 2014-19.

16. The Commission vide order dated 19.7.2018 in Petition No. 212/TT/2017 has observed as under:

“12. The Petitioner has submitted the details regarding capital cost and unrecovered depreciation of SCADA / EMS are under:-

(₹ in Lakh)						
Assets	COD of New SCADA/ EMS System	Total cost as per Auditor's certificate dated 10.7.2009	SCADA/ EMS cost as per Auditor's certificate dated 10.7.2009	Depreciation recovered on complete asset till 1.10.2016	Depreciation Recovered on SCADA/ EMS till 01.10.2016	Unrecovered Depreciation on SCADA/ EMS
MPSEB (MPPTCL)	1.10.2016	3763.52	1336.70	2263.26	803.85	532.85
CSEB (CSPTCL)		899.67	433.61	541.03	260.76	172.85
GEB (GETCO)		1728.22	1344.64	1039.30	808.62	536.02



GED		568.41	418.53	341.82	251.69	166.84
TOTAL		6959.82	3533.48	4185.42	2124.92	1408.56

13. The Petitioner has prayed to allow recovery of the accelerated depreciation of ₹1408.56 lakh on SCADA/EMS for remaining period starting since 1.10.2016 (COD of New SCADNEMS System) as one time recovery.

14. We have considered the methodology applied in order dated 12.12.2017 in Petition No. 39/TT/2015 and order dated 15.12.2017 in Petition No.17/TT/2015 for Eastern Region and North-Eastern Region respectively.

15. Accordingly, the gross capital cost as on 1.4.2014 for the State Portion for "Non-Microwave System", as indicated above, has been segregated into "Replaced SCADA/EMS- State Portion" and the remaining as "Existing Assets - State Portion". Capital Cost recovered up to 31.3.2014 for "Replaced SCADA/EMS - State Portion" and for the "Existing Assets - State Portion" has been worked out on pro-rata basis. Hence, the following capital cost have been calculated as on 1.4.2014 for working out the Fee & Charges for the period 2014-19 for Central as well as "Replaced SCADA / EMS - State Portion" and the remaining "Existing Assets - State Portion" for "Non-Microwave System" only as under:-

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced "SCADA / EMS - State Portion"	Remaining "Existing Assets - State Portion"	Total
Retained Gross Capital Cost as on 1.4.2014	Loan	6005.39	2654.90	2574.39	5229.29
	Equity	1973.44	878.58	851.95	1730.53
	Total	7978.83	3533.48	3426.34	6959.82
Pro-rata Capital Cost Recovered up to 31.3.2014	Loan	2803.20	1237.30	1199.78	2437.08
	Equity	559.67	248.63	241.09	489.72
	Total	3362.87	1485.92	1440.87	2926.79

Xxxxxx

Xxxxxx

56. The Commission in order dated 2.3.2017 in Petition No. 188/MP/2014, had directed to recover 95% of depreciable value of the replacing assets, before completion of their useful life, as accelerated depreciation matching with the commissioning schedule of the new SCADA system. Accordingly, the following Net Capital cost have been considered as on 1.4.2014 for working out the Fee & Charges for the period 2014-19 for Central as well as "Replaced SCADA / EMS - State Portion" and the remaining "Existing Assets - State Portion" for "Non-Microwave System" only as under:-

(₹ in Lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced "SCADA / EMS - State Portion"	Remaining "Existing Assets - State Portion"	Total
Retained Gross Capital Cost as on 1.4.2014	Loan	6005.39	2654.90	2574.39	5229.29
	Equity	1973.44	878.58	851.95	1730.53
	Total	7978.83	3533.48	3426.34	6959.82
	Loan	-	132.74	-	132.74



<i>Particulars</i>	<i>Capital</i>	<i>Central Portion</i>	<i>State Portion</i>		
			<i>Replaced "SCADA / EMS – State Portion"</i>	<i>Remaining "Existing Assets – State Portion"</i>	<i>Total</i>
<i>Salvage Value for state portion only (5% of Gross Capital Cost)</i>	<i>Equity</i>	-	43.93	-	43.93
	Total	-	176.67	-	176.67
<i>Recoverable Capital Cost for state portion only (95% of Gross Capital Cost) as on 1.4.2014</i>	<i>Loan</i>	6005.39	2522.15	2574.39	5097.54
	<i>Equity</i>	1973.44	834.66	851.95	1686.61
	Total	7978.83	3356.81	3426.34	6783.15
<i>Pro-rata Capital Cost Recovered up to 31.3.2014</i>	<i>Loan</i>	2803.20	1237.30	1199.78	2437.08
	<i>Equity</i>	559.67	248.63	241.09	489.72
	Total	3362.87	1485.92	1440.87	2926.79
<i>Net Capital Cost as on 1.4.2014</i>	<i>Loan</i>	3202.19	1284.85	1374.62	2659.47
	<i>Equity</i>	1413.77	586.03	610.86	1196.89
	Total	4615.96	1870.88	1985.47	3856.35

17. The Petitioner has claimed the accelerated depreciation of Replaced SCADA/EMS-State Portion, as per the Commission's order dated 2.3.2017 in Petition No. 188/MP/2014.

18. The "New SCADA / EMS-State Portion" were put into commercial operation on different dates. However, for the purpose of ease of calculation, the E-COD for all New SCADA/EMS assets has been applied instead of calculation of accelerated depreciation up to the individual CODs of the New SCADA/EMS. E-COD for all New SCADA/EMS assets, covered under this petition, has been worked out based on the original gross block of the assets and the COD of individual assets. Accordingly, the E-COD for the combined assets has been worked out as 1.10.2016 as per order dated 19.7.2018 in Petition No. 212/TT/2017.



19. The Petitioner has not claimed any additional capital expenditure during 2014-19 tariff period. Accordingly, the capital cost considered for determining fee and charges for 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced "SCADA / EMS – State Portion"	Remaining "Existing Assets – State Portion"	Total
Retained Gross Capital Cost as on 1.4.2014	Loan	6005.39	2654.90	2574.39	5229.29
	Equity	1973.44	878.58	851.95	1730.53
	Total	7978.83	3533.48	3426.34	6959.82
Pro-rata Capital Cost Recovered up to 31.3.2014	Loan	2803.20	1237.30	1199.78	2437.08
	Equity	559.67	248.63	241.09	489.72
	Total	3362.87	1485.92	1440.87	2926.79
Net Capital Cost as on 1.4.2014*	Loan	3202.19	1284.85	1374.62	2659.47
	Equity	1413.77	586.03	610.86	1196.89
	Total	4615.96	1870.88	1985.47	3856.35

*After excluding the salvage value of 5%

Debt-Equity Ratio

20. The following debt-equity ratio has been considered as on 1.4.2014 for the Central as well as "Replaced SCADA/EMS-State Portion" and the remaining "Existing Assets-State Portion" for "Non-Microwave System":

(₹ in lakh)

Funding	Capital	Central Portion	State Portion		
			Replaced "SCADA / EMS – State Portion"	Remaining "Existing Assets – State Portion"	Total
Net Capital Cost as on 1.4.2014	Loan	3202.19	1284.85	1374.62	2659.47
	Equity	1413.77	586.03	610.86	1196.89
	Total	4615.96	1870.88	1985.47	3856.35
Debt : Equity Ratio (in %)	Debt	69.37	68.68	69.23	68.96
	Equity	30.63	31.32	30.77	31.04
	Total	100.00	100.00	100.00	100.00



Rates for recovery of Loan and Equity

Capital Recovery for Loan

21. The year-wise weighted average rate of interest has been calculated on the basis of the impact due to change in floating rate of interest of loan which have been applied for calculating the capital recovery factor for loan. The details of the weighted average rate of interest are given in Annexure-I.

22. The Capital Recovery Factor for loan in respect of instant assets has been calculated by applying weighted average rate of interest on the basis of the impact due to change in floating rate of interest of loan and it works out to be 2.1571%, 2.3106%, 2.9856%, 3.4182% and 4.3234% for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 in respect of Non-Microwave system respectively. Thus, the rates considered on annual basis, have been converted to monthly rates. Thus, monthly recovery factors for loan for Central Portion and State Portion for instant assets are as follows:

CRF for loan to be considered for Fee & Charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Non-Microwave - Central Portion	0.013127	0.015284	0.018537	0.023225	0.031303
Non-Microwave - State Portion - Existing Assets	0.013127	0.015284	0.018537	0.023225	0.031303
Non-Microwave - State Portion - Replaced SCADA/ EMS	0.034270	0.056577	0.168121	-	-

23. The Capital Recovery Factor for equity has been considered on the same basis as approved vide order dated 19.7.2018 in Petition No. 212/TT/2017 post tax return on equity of 15.50% without grossing has been applied for calculating capital



recovery factor for equity. Thus, monthly recovery factors for equity for Central Portion and State Portion for instant assets are as follows:

CRF for equity to be considered for Fee & Charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Non-Microwave-Central Portion	0.019844	0.021790	0.024605	0.028969	0.036528
Non-Microwave – State Portion – Existing Assets	0.019844	0.021790	0.024605	0.028969	0.036528
Non-Microwave – State Portion – Replaced SCADA/ EMS	0.040420	0.062620	0.174282	-	-

24. In view of the above, the amount of monthly capital recovery charges for loan and equity both for Central and State portions for instant asset have been considered by using respective Capital Recovery Factors and are as follows:

(₹ in lakh)

Monthly capital recovery charges for loan					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Non-Microwave-Central Portion	42.03	42.22	42.91	43.27	43.83
Non-Microwave – State Portion – Existing Assets	18.04	18.12	18.42	18.57	18.82
Non-Microwave – State Portion – Replaced SCADA/ EMS	44.03	44.09	44.17	-	-

(₹ in lakh)

Monthly capital recovery charges for equity					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Non-Microwave- Central Portion	28.06	28.06	28.06	28.06	28.06
Non-Microwave – State Portion - Existing Assets	12.12	12.12	12.12	12.12	12.12
Non-Microwave – State Portion - Replaced SCADA / EMS	23.69	23.69	23.69	-	-

25. Accordingly, the recovery of capital during 2014-19 has been worked out. The details are as follows:



(₹ in lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced “SCADA / EMS – State Portion”	Remaining “Existing Assets – State Portion”	Total
Capital Cost	Loan	2276.72	1284.85	977.34	4538.91
Recovered	Equity	879.47	586.03	380.00	1845.50
during 2014-19	Total	3156.20	1870.88	1357.34	6384.41

Operation & Maintenance Expenses (O&M Expenses)

26. The Petitioner has not submitted any claim for O&M Expenses in case of Microwave system for Central Portion. The Petitioner has submitted claim for O&M Expenses in case of Non-Microwave system for Central Portion on actual basis. The details of O&M Expenses claimed earlier by the Petitioner on projection basis for 2014-19 tariff period and allowed vide order dated 14.7.2016 in Petition No. 11/TT/2015 are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the Petition No. 11/TT/2015	361.17	373.16	385.54	398.34	411.57
Amount allowed vide order dated 14.7.2016 in Petition No. 11/TT/2015	259.98	268.61	277.53	286.74	296.26
Amount disallowed	101.19	104.55	108.01	111.6	115.31

27. The Petitioner vide Auditor’s Certificate dated 4.11.2019 has submitted the detailed breakup of actual O&M Expenses for 2014-19 tariff period. Accordingly, the actual O&M Expenses claimed in the instant Petition are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant Petition	205.04	173.77	185.04	255.91	313.13
Total claim as per Auditor’s certificate dated 4.11.2019	205.04	173.77	185.04	255.91	313.13



28. We have considered the submission of the Petitioner. The Petitioner has submitted the Auditor's Certificate dated 4.11.2019 and has submitted the actual O&M Expenses wherein the Petitioner has claimed the self-insurance, petition filing charges and Advertisement & Publicity charges as part of the O&M Expenses.

29. As regards self-insurance, the Commission vide order dated 29.7.2016 in Petition No. 275/TT/2015 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, the Petitioner vide affidavit dated 29.6.2016 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 reserved as expenses under O&M Expenses which is not allowable as expenses."

30. Therefore, the Petitioner's claim towards self-insurance is not allowed.

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.

33. Accordingly, the O&M Expenses are allowed for the 2014-19 as per the Auditor's Certificate after deducting the self-insurance portion, petition filing fees, advertisement and publicity expenses and fibre leasing charges (pro-rata reduction) from the total cost and approved as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant Petition	205.04	173.77	185.04	255.91	313.13
Total Claim as per Auditor's certificate dated 4.11.2019	205.04	173.77	185.04	255.91	313.13
Self-Insurance reserve	11.10	11.39	10.88	14.72	18.63
CERC Petition filing Fees	3.61	3.11	1.77	5.77	0.00
Advertisement and Publicity	2.15	0.27	0.23	0.00	0.00
O&M Expenses allowed for the Central Portion after excluding self-Insurance, petition filing fees and advertisement and publicity expense.	188.18	159.00	172.16	235.42	294.50

Interest on Working Capital (IWC)

34. The Petitioner has claimed O&M Expenses in the case of Central Portion and accordingly O&M Expenses for one (1) month, Maintenance spares @15% of O&M Expenses, receivables for two months and SBI Base Rate as on 1.4.2014 i.e. 10.00% Plus 350 bps (13.50%) have been considered as the rate of interest on working capital for the Central Portion only.

35. The necessary computations of interest on working capital (annualized) for Non-Microwave system-Central Portion are as follows:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares (15% of O&M Expenses)	28.23	23.85	25.82	35.31	44.18
O&M Expenses (1 Month of O&M Expenses)	15.68	13.25	14.35	19.62	24.54
Receivables (2 months of Annual Charges)	176.50	171.75	175.48	187.34	198.88
Total Working Capital	220.41	208.85	215.65	242.27	267.59
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	29.76	28.20	29.11	32.71	36.13
Particulars	Non-Microwave-State Portion-Existing Assets				



Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months of Annual Charges)	61.72	61.89	62.49	62.81	63.30
Total Working Capital	61.72	61.89	62.49	62.81	63.30
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	8.33	8.35	8.44	8.48	8.55
Particulars	Non-Microwave–State Portion-Replaced SCADA/EMS				
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	-	-
O&M Expenses (1 Month of O&M Expenses)	0.00	0.00	0.00	-	-
Receivables (2 months of Annual Charges)	138.56	138.66	138.84	-	-
Total Working Capital	138.56	138.66	138.84	-	-
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	-	-
Total Interest on Working Capital	18.71	18.72	18.74	-	-

Approved Annual Fee and charges for the 2014-19 Tariff Period

36. The detailed computation of the various components of the trued-up annual fee and charges for the instant assets for the tariff period 2014-19 is summarized as follows:

(₹ in lakh)					
Microwave-Central Portion-fee and charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	7978.83	7978.83	7978.83	7978.83	7978.83
Opening Gross Notional Loan	6005.39	6005.39	6005.39	6005.39	6005.39
Opening Gross Equity	1973.44	1973.44	1973.44	1973.44	1973.44
Recovered Gross Capital Cost (As on 1st April)	3362.87	3928.80	4523.62	5147.39	5810.53
Recovered Gross Notional Loan	2803.20	3242.88	3690.43	4142.40	4605.15
Recovered Gross Equity	559.67	685.92	833.19	1004.99	1205.38
Opening Net Capital Cost	4615.96	4050.03	3455.21	2831.44	2168.30
Opening Net Notional Loan	3202.19	2762.51	2314.96	1862.99	1400.24
Opening Net Equity	1413.77	1287.52	1140.25	968.45	768.06



Recovered Capital Cost (During the Year)	565.93	594.82	623.77	663.14	708.54
Recovered Notional Loan	439.67	447.55	451.98	462.75	474.77
Recovered Equity	126.25	147.27	171.79	200.40	233.76
Closing Net Capital Cost	4050.03	3455.21	2831.44	2168.30	1459.76
Closing Net Notional Loan	2762.51	2314.96	1862.99	1400.24	925.47
Closing Net Equity	1287.52	1140.25	968.45	768.06	534.30
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.1.2021)	6.83	5.83	4.83	3.83	2.83
Months	82.00	70.00	58.00	46.00	34.00
Weighted Average Rate of Interest p.a. (in %)	2.1571	2.3106	2.9856	3.4182	4.3234
Weighted Average Rate of Interest p.m. (in %)	0.1798	0.1926	0.2488	0.2849	0.3603
Monthly Recovery Factors -Loan	0.013127	0.015284	0.018537	0.023225	0.031303
Monthly Capital Recovery Charge - Loan	42.03	42.22	42.91	43.27	43.83
Annual Capital Recovery Charge - Loan	504.42	506.66	514.94	519.22	525.98
Rate of Return on Equity p.a. (in %)	15.500	15.500	15.500	15.500	15.500
Rate of Return on Equity p.m. (in %)	1.292	1.292	1.292	1.292	1.292
Monthly Recovery Factors - Equity	0.019844	0.021790	0.024605	0.028969	0.036528
Monthly Capital Recovery Charge - Equity	28.06	28.06	28.06	28.06	28.06
Annual Capital Recovery Charge - Equity	336.67	336.67	336.67	336.67	336.67
Monthly Capital Recovery Charge - Total	70.09	70.28	70.97	71.32	71.89
Annual Capital Recovery Charge - Total	841.08	843.33	851.61	855.89	862.64
Fee & Charges (2014-19) (Annualized)	Non-Microwave: Central Portion - Charges				
Annual Capital Recovery Charge - Loan	504.42	506.66	514.94	519.22	525.98
Annual Capital Recovery Charge - Equity	336.67	336.67	336.67	336.67	336.67
Annual Capital Recovery Charge - Total	841.08	843.33	851.61	855.89	862.64
O&M Expenses	188.18	159.00	172.16	235.42	294.50
Interest on Working Capital	29.76	28.20	29.11	32.71	36.13
Total Fee & Charges (Annualized)	1059.02	1030.52	1052.88	1124.02	1193.27
Interest on Working Capital					



Maintenance Spares (15% of O&M Expenses)	28.23	23.85	25.82	35.31	44.18
O&M Expenses (1 Month)	15.68	13.25	14.35	19.62	24.54
Receivables (2 months)	176.50	171.75	175.48	187.34	198.88
Total	220.41	208.85	215.65	242.27	267.59
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital (Annualized)	29.76	28.20	29.11	32.71	36.13
Fee & Charges (2014-19) (Applicable)	Non-Microwave: Central Portion - Charges				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge - Loan	504.42	506.66	514.94	519.22	525.98
Annual Capital Recovery Charge - Equity	336.67	336.67	336.67	336.67	336.67
Annual Capital Recovery Charge - Total	841.08	843.33	851.61	855.89	862.64
O&M Expenses	188.18	159.00	172.16	235.42	294.50
Interest on Working Capital	29.76	28.20	29.11	32.71	36.13
Total Fee & Charges (Applicable)	1059.02	1030.52	1052.88	1124.02	1193.27

(₹ in lakh)

Non-Microwave-State Portion- Existing Assets -fee and charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	3426.34	3426.34	3426.34	3426.34	3426.34
Opening Gross Notional Loan	2574.39	2574.39	2574.39	2574.39	2574.39
Opening Gross Equity	851.95	851.95	851.95	851.95	851.95
Recovered Gross Capital Cost (As on 1st April)	1440.87	1684.16	1939.91	2208.16	2493.40
Recovered Gross Notional Loan	1199.78	1388.52	1580.64	1774.66	1973.31
Recovered Gross Equity	241.09	295.64	359.27	433.50	520.09
Opening Net Capital Cost	1985.47	1742.18	1486.43	1218.18	932.94
Opening Net Notional Loan	1374.62	1185.87	993.75	799.73	601.09
Opening Net Equity	610.86	556.31	492.67	418.45	331.86
Recovered Capital Cost (During the Year)	243.29	255.75	268.25	285.23	304.81
Recovered Notional Loan	188.74	192.12	194.02	198.65	203.81
Recovered Equity	54.55	63.63	74.23	86.59	101.00
Closing Net Capital Cost	1742.18	1486.43	1218.18	932.94	628.13
Closing Net Notional Loan	1185.87	993.75	799.73	601.09	397.28
Closing Net Equity	556.31	492.67	418.45	331.86	230.86
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00



Years (Capital to be recovered up to 31.1.2021)	6.83	5.83	4.83	3.83	2.83
Months	82.00	70.00	58.00	46.00	34.00
Weighted Average Rate of Interest p.a. (in %)	2.1571	2.3106	2.9856	3.4182	4.3234
Weighted Average Rate of Interest p.m. (in %)	0.1798	0.1926	0.2488	0.2849	0.3603
Monthly Recovery Factors -Loan	0.013127	0.015284	0.018537	0.023225	0.031303
Monthly Capital Recovery Charge - Loan	18.04	18.12	18.42	18.57	18.82
Annual Capital Recovery Charge - Loan	216.53	217.50	221.05	222.89	225.79
Rate of Return on Equity p.a. (in %)	15.500	15.500	15.500	15.500	15.500
Rate of Return on Equity p.m. (in %)	1.292	1.292	1.292	1.292	1.292
Monthly Recovery Factors -Equity	0.019844	0.021790	0.024605	0.028969	0.036528
Monthly Capital Recovery Charge - Equity	12.12	12.12	12.12	12.12	12.12
Annual Capital Recovery Charge - Equity	145.47	145.47	145.47	145.47	145.47
Monthly Capital Recovery Charge - Total	30.17	30.25	30.54	30.70	30.94
Annual Capital Recovery Charge - Total	362.00	362.96	366.52	368.35	371.25
Fee & Charges (2014-19) (Annualized)	Non-Microwave: State Portion - Charges				
Annual Capital Recovery Charge - Loan	216.53	217.50	221.05	222.89	225.79
Annual Capital Recovery Charge - Equity	145.47	145.47	145.47	145.47	145.47
Annual Capital Recovery Charge - Total	362.00	362.96	366.52	368.35	371.25
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	8.33	8.35	8.44	8.48	8.55
Total Fee & Charges (Annualized)	370.33	371.32	374.95	376.83	379.80
Interest on Working Capital					
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	61.72	61.89	62.49	62.81	63.30
Total	61.72	61.89	62.49	62.81	63.30
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital (Annualized)	8.33	8.35	8.44	8.48	8.55
Fee & Charges (2014-19) (Applicable)	Non-Microwave: State Portion - Charges				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge - Loan	216.53	217.50	221.05	222.89	225.79



Annual Capital Recovery Charge - Equity	145.47	145.47	145.47	145.47	145.47
Annual Capital Recovery Charge - Total	362.00	362.96	366.52	368.35	371.25
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	8.33	8.35	8.44	8.48	8.55
Total Fee & Charges (Applicable)	370.33	371.32	374.95	376.83	379.80

(₹ in lakh)

Non-Microwave-State Portion- Replaced SCADA / EMS -fee and charges			
Particulars	2014-15	2015-16	2016-17
Opening Gross Capital Cost	3356.81	3356.81	3356.81
Opening Gross Notional Loan	2522.15	2522.15	2522.15
Opening Gross Equity	834.66	834.66	834.66
Recovered Gross Capital Cost (As on 1st April)	1485.92	2199.34	2958.15
Recovered Gross Notional Loan	1237.30	1742.95	2259.41
Recovered Gross Equity	248.63	456.39	698.74
Opening Net Capital Cost	1870.88	1157.47	398.65
Opening Net Notional Loan	1284.85	779.20	262.74
Opening Net Equity	586.03	378.27	135.91
Recovered Capital Cost (During the Year)	713.41	758.82	398.65
Recovered Notional Loan	505.65	516.47	262.74
Recovered Equity	207.76	242.35	135.91
Closing Net Capital Cost	1157.47	398.65	0.00
Closing Net Notional Loan	779.20	262.74	0.00
Closing Net Equity	378.27	135.91	0.00
Additional Capital Cost	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00
Years (Capital to be recovered up to 1.10.2016)	2.50	1.50	0.50
Months	30.00	18.00	6.00
Weighted Average Rate of Interest p.a. (in %)	2.1571	2.3106	2.9856
Weighted Average Rate of Interest p.m. (in %)	0.1798	0.1926	0.2488
Monthly Recovery Factors -Loan	0.034270	0.056577	0.168121
Monthly Capital Recovery Charge - Loan	44.03	44.09	44.17
Annual Capital Recovery Charge - Loan	528.39	529.02	530.06
Rate of Return on Equity p.a. (in %)	15.500	15.500	15.500



Rate of Return on Equity p.m. (in %)	1.292	1.292	1.292
Monthly Recovery Factors -Equity	0.040420	0.062620	0.174282
Monthly Capital Recovery Charge - Equity	23.69	23.69	23.69
Annual Capital Recovery Charge - Equity	284.25	284.25	284.25
Monthly Capital Recovery Charge - Total	67.72	67.77	67.86
Annual Capital Recovery Charge - Total	812.63	813.27	814.31
Fee & Charges (2014-19) (Annualized)	Non-Microwave: State Portion - Charges		
Annual Capital Recovery Charge - Loan	528.39	529.02	530.06
Annual Capital Recovery Charge - Equity	284.25	284.25	284.25
Annual Capital Recovery Charge - Total	812.63	813.27	814.31
O&M Expenses	0.00	0.00	0.00
Interest on Working Capital	18.71	18.72	18.74
Total Fee & Charges (Annualized)	831.34	831.99	833.05
Interest on Working Capital			
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00
Receivables (2 months)	138.56	138.66	138.84
Total	138.56	138.66	138.84
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50
Total Interest on Working Capital (Annualized)	18.71	18.72	18.74
Fee & Charges (2014-19) (Applicable)	Non-Microwave: State Portion - Charges		
Particulars	2014-15	2015-16	2016-17
Annual Capital Recovery Charge - Loan	528.39	529.02	265.03
Annual Capital Recovery Charge - Equity	284.25	284.25	142.12
Annual Capital Recovery Charge - Total	812.63	813.27	407.15
O&M Expenses	0.00	0.00	0.00
Interest on Working Capital	18.71	18.72	9.37
Total Fee & Charges (Applicable)	831.34	831.99	416.53

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

37. The Petitioner has submitted that the instant assets were put into commercial operation before 1.4.2009 and capital cost of microwave system has been fully



recovered during 2009-14 tariff period. In terms of Regulation 8(1)(iii) of the 2019 Tariff Regulations, the tariff of the existing communication system forming part of the transmission system is to be determined as per the methodology followed prior to 1.4.2014. The said Regulation provides as follows:

“(iii) Tariff of the associated communication system forming part of transmission system which has achieved commercial operation prior to 1.4.2014 shall be as per the methodology approved by the Commission prior to 1.4.2014.”

38. In view Regulation 8(1)(iii) of the 2019 Tariff Regulations, the tariff of the communication system and ULDC system of the Petitioner, we continue to allow levelised tariff for non-microwave system on the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, fees and charges of non-microwave system are determined in this order.

39. Further, in line with order dated 8.12.2011 in Petition No. 68/2010, the total capital cost in respect of Non-Microwave system shall be recovered up to 31.8.2020 i.e. during 2020-21 and for the remaining period O&M Expenses and Interest on Working Capital for the central portion has been claimed by the Petitioner. The entire recovery of the state portion of the asset has been completed by 31.1.2021 and no charges have been claimed for the remaining period.

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

Particulars	(₹ in lakh)				
	Non-Microwave-Central Portion				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Capital Recovery Charge-Total	862.50	718.75	0.00	0.00	0.00
O&M Expenses	159.58	159.58	159.58	159.58	159.58
Interest on Working Capital	19.92	17.80	6.96	6.96	6.95
Total Fee & Charges	1042.00	896.13	166.54	166.54	166.53



(₹ in lakh)

Particulars	Non-Microwave-State Portion	
	2019-20	2020-21
Annual Capital Recovery Charge-Total	371.19	309.33
O&M Expenses	0.00	0.00
Interest on Working Capital	5.58	4.66
Total Fee & Charges	376.78	313.99

41. The details of the trued-up IWC claimed by the Petitioner are as follows:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares (15% of O&M)	23.94	23.94	23.94	23.94	23.94
O&M Expenses (1 Month)	13.30	13.30	13.30	13.30	13.30
Receivables (45 days)	128.11	110.33	20.42	20.43	20.43
Total Working Capital	165.35	147.57	57.65	57.66	57.66
Rate of Interest on Working Capital (in %)	12.05	12.05	12.05	12.05	12.05
Total Interest on Working Capital	19.92	17.80	6.96	6.96	6.96

(₹ in lakh)

Particulars	Non-Microwave-State Portion	
	2019-20	2020-21
Maintenance Spares (15% of O&M)	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00
Receivables (45 days)	46.32	38.67
Total Working Capital	46.32	38.67
Rate of Interest on Working Capital (in %)	12.05	12.05
Total Interest on Working Capital	5.58	4.66

Capital cost

42. The Petitioner has submitted that in line with order dated 8.12.2011 in Petition No. 68/2010, the total capital cost in respect of Microwave Portion has been recovered during 2009-14 block. Hence, in the instant petition, true up of Microwave Portion has not been carried out. Further, in line with order dated 8.12.2011 in Petition No. 68/2010, the total capital cost in respect of Non-Microwave system shall be recovered up to 31.1.2021 i.e. during 2020-21 and for the remaining period O&M Expenses and IWC for the central portion has been claimed by the Petitioner. The



entire recovery of the State portion of the instant assets has been recovered by 31.1.2021 and no charges have been claimed for the remaining period.

43. The Petitioner has submitted that since the entire cost of Non-Microwave portion of the assets have been recovered by 2020-21 therefore only O&M Expenses and IWC for the Central Portion after 31.1.2021 of Non-microwave portion of the communication system has been claimed. The Petitioner has claimed no additional capital expenditure for 2019-24 tariff period. Keeping in view the opening capital cost and its recovery during 2014-19 period, the following capital cost is being considered as on 1.4.2019 for working out the fee and charges for the period 2019-24 for Central as well as State Portion for “Non-Microwave portion” only:

Particulars	Capital	Non-Microwave	
		Central Portion	State Portion
Retained Gross Capital Cost as on 1.4.2019 - “Non-Microwave”	Loan	6005.39	2574.39
	Equity	1973.44	851.95
	Total	7978.83	3426.34
Capital Cost Recovered up to 31.3.2019 - “Non-Microwave”	Loan	5079.92	2177.12
	Equity	1439.14	621.09
	Total	6519.07	2798.21
Net Capital Cost as on 1.4.2019 - “Non-Microwave”	Loan	925.47	397.28
	Equity	534.30	230.86
	Total	1459.76	628.13

Additional Capital Expenditure

44. The Petitioner has not claimed any additional capital expenditure during 2019-24 period for the Non-microwave portion. We have considered the submission of the Petitioner.

Debt : equity ratio

45. The debt : equity ratio as on 1.4.2019, as approved in the instant order has been considered for the purpose of tariff is as follows:



(₹ in lakh)

Net Capital Cost as on 1.4.2014	Non-Microwave					
	Central portion		State portion		Total	
	Amount	(in %)	Amount	(in %)	Amount	(in %)
Loan/Debt	925.47	63.40	397.28	63.25	1322.74	63.35
Equity	534.30	36.60	230.86	36.75	765.15	36.65
Total	1459.76	100.00	628.13	100.00	2087.90	100.00

Rates for Recovery of loan and equity

46. The Capital Recovery Factor for loan in respect of instant assets has been calculated by applying weighted average rate of interest and it works out to be 4.2942% in case of the instant assets. The details are attached at **Annexure-II** of the order. Thus, the rates considered on annual basis, have been converted to monthly rates which are as follows:

CRF for loan to be considered for Fee & Charges		
Particulars	2019-20	2020-21
Non-Microwave- Central Portion	0.047349	0.101979
Non-Microwave – State Portion - Existing Assets	0.047349	0.101979

47. The Capital Recovery Factor for equity has been considered on the same basis as approved vide order dated 19.7.2018 in Petition No. 212/TT/2017 and Order dated 14.7.2016 in Petition No. 11/TT/2015 and on post-tax return on equity of 15.50%. Thus, monthly recovery factors for equity for Central Portion and State Portion for instant assets are as follows:

CRF for equity to be considered for Fee & Charges		
Particulars	2019-20	2020-21
Non-Microwave - Central Portion	0.052509	0.107241
Non-Microwave - State Portion - Existing Assets	0.052509	0.107241

48. In view of above, the amount of monthly capital recovery charges for loan and equity both for Central and State portions for instant assets have been considered by using respective Capital Recovery Factors and are as follows:



(₹ in lakh)

Monthly capital recovery charges for loan		
Particulars	2019-20	2020-21
Non-Microwave- Central Portion	43.82	43.82
Non-Microwave – State Portion - Existing Assets	18.81	18.81

(₹ in lakh)

Monthly capital recovery charges for equity		
Particulars	2019-20	2020-21
Non-Microwave- Central Portion	28.06	28.06
Non-Microwave – State Portion - Existing Assets	12.12	12.12

49. Accordingly, the capital cost of the Non-Microwave Central Portion and Non-Microwave-State Portion (Existing) have been recovered up to 31.1.2021. Thereafter, the Petitioner has claimed O&M Expenses and IWC in case of Non-Microwave Central Portion only.

Operation & Maintenance Expenses (O&M Expenses)

50. The Petitioner has not claimed O&M Expenses for State Portion.

51. The O&M Expenses claimed by the Petitioner for the instant assets for the 2019- 24 tariff period are as follows:

O&M Expenses					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Capital Cost (₹ in lakh) (2% of ₹₹7978.83 lakh lakh)	159.58	159.58	159.58	159.58	159.58

52. We have considered the submission of the Petitioner. The Petitioner has claimed O&M Expenses of ₹ 797.88 lakh for 2019-24 tariff period. O&M Expenses allowed for 2014-19 Period is ₹1049.26 lakh. Taking into the consideration the fact that O&M Expenses claimed for the 2019-24 tariff period is lower than the O&M Expenses allowed for 2014-19 tariff period, O&M Expenses claimed for 2019-24 tariff period is allowed subject to truing up based on the actual expenditure. The Petitioner is directed to submit actual O&M Expenses in respect of the asset duly



certified by the Auditor at the time of truing up of tariff of 2019-24 period. O&M Expenses allowed in respect of the assets are as follows:

					(₹ in lakh)
O & M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Total O&M Expenses Allowed	159.58	159.58	159.58	159.58	159.58

Interest on Working Capital (IWC)

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

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

.....

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

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

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

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

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

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

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

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

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



54. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, for 2020-21 has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points), for 2021-22 has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points), whereas 2022-23 onwards has been considered as 10.60% (SBI 1 year MCLR applicable as on 1.4.2022 of 7.10% plus 350 basis points).

55. The necessary computations of IWC (annualized) for Non-Microwave System-Central Portion are as follows:

(₹ in lakh)

Non-Microwave System-Central Portion					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	23.94	23.94	23.94	23.94	23.94
Working Capital for Maintenance Spares (15% of O&M Expenses)	13.30	13.30	13.30	13.30	13.30
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	128.11	110.33	20.42	20.43	20.43
Total Working Capital	165.35	147.57	57.65	57.66	57.66
Rate of Interest on Working Capital (in %)	12.05	11.25	10.50	10.60	10.60
Interest on working Capital	19.92	16.60	6.05	6.11	6.11



(₹ in lakh)

Non-Microwave System-State Portion		
Particulars	2019-20	2020-21
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 45 days of annual fixed cost / annual transmission charges)	46.32	38.67
Total Working Capital	46.32	38.67
Rate of Interest on Working Capital (in %)	12.05	11.25
Interest on working capital	5.58	4.35

Annual Fees and Charges for the 2019-24 Tariff Period

56. The detailed calculations of annual fee and charges being allowed for the instant assets are summarized hereinafter:

(₹ in lakh)

Microwave-Central Portion-fee and charges					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Capital Cost	7978.83	7978.83	-	-	-
Opening Gross Notional Loan	6005.39	6005.39	-	-	-
Opening Gross Equity	1973.44	1973.44	-	-	-
Recovered Gross Capital Cost (As on 1st April)	6519.07	7287.53	-	-	-
Recovered Gross Notional Loan	5079.92	5575.70	-	-	-
Recovered Gross Equity	1439.14	1711.83	-	-	-
Opening Net Capital Cost	1459.76	691.30	-	-	-
Opening Net Notional Loan	925.47	429.69	-	-	-
Opening Net Equity	534.30	261.61	-	-	-
Recovered Capital Cost (During the Year)	768.46	691.30	-	-	-
Recovered Notional Loan	495.77	429.69	-	-	-
Recovered Equity	272.68	261.61	-	-	-
Closing Net Capital Cost	691.30	0.00	-	-	-
Closing Net Notional Loan	429.69	0.00	-	-	-
Closing Net Equity	261.61	0.00	-	-	-
Additional Capital Cost	0.00	0.00	-	-	-
Additional Notional Loan	0.00	0.00	-	-	-
Additional Equity	0.00	0.00	-	-	-



Years (Capital to be recovered up to 31.1.2021)	1.83	0.83	-	-	-
Months	22.00	10.00	-	-	-
Weighted Average Rate of Interest p.a. (in %)	4.294	4.294	-	-	-
Weighted Average Rate of Interest p.m. (in %)	0.358	0.358	-	-	-
Monthly Recovery Factors -Loan	0.047349	0.101979	-	-	-
Monthly Capital Recovery Charge - Loan	43.82	43.82	-	-	-
Annual Capital Recovery Charge - Loan	525.83	438.19	-	-	-
Rate of Return on Equity p.a. (in %)	15.500	15.500	-	-	-
Rate of Return on Equity p.m. (in %)	1.292	1.292	-	-	-
Monthly Recovery Factors - Equity	0.052509	0.107241	-	-	-
Monthly Capital Recovery Charge - Equity	28.06	28.06	-	-	-
Annual Capital Recovery Charge - Equity	336.67	280.55	-	-	-
Monthly Capital Recovery Charge - Total	71.87	71.87	-	-	-
Annual Capital Recovery Charge - Total	862.50	718.75	-	-	-
Fee & Charges (2019-24) (Pro-rata)	Non-Microwave: Central Portion - Charges				
Annual Capital Recovery Charge - Loan	525.83	438.19	0.00	0.00	0.00
Annual Capital Recovery Charge - Equity	336.67	280.55	0.00	0.00	0.00
Annual Capital Recovery Charge - Total	862.50	718.75	0.00	0.00	0.00
O&M Expenses	159.58	159.58	159.58	159.58	159.58
Interest on Working Capital	19.92	16.60	6.05	6.11	6.11
Total Fee & Charges (Pro-rata)	1042.00	894.93	165.63	165.69	165.69
Interest on Working Capital					
Maintenance Spares (15% of O&M Expenses)	23.94	23.94	23.94	23.94	23.94
O&M Expenses (1 Month)	13.30	13.30	13.30	13.30	13.30
Receivables (2 months)	128.11	110.33	20.42	20.43	20.43
Total	165.35	147.57	57.65	57.66	57.66
Rate of Interest on Working Capital (in %)	12.05	11.25	10.50	10.60	10.60
Total Interest on Working Capital (Pro-rata)	19.92	16.60	6.05	6.11	6.11
Fee & Charges (2019-24) (Applicable)	Non-Microwave: Central Portion - Charges				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Capital Recovery Charge - Loan	525.83	438.19	0.00	0.00	0.00



Annual Capital Recovery Charge - Equity	336.67	280.55	0.00	0.00	0.00
Annual Capital Recovery Charge - Total	862.50	718.75	0.00	0.00	0.00
O&M Expenses	159.58	159.58	159.58	159.58	159.58
Interest on Working Capital	19.92	16.60	6.05	6.11	6.11
Total Fee & Charges (Applicable)	1042.00	894.93	165.63	165.69	165.69

(₹ in lakh)

Non-Microwave-State Portion- fee and charges		
Particulars	2019-20	2020-21
Opening Gross Capital Cost	3426.34	3426.34
Opening Gross Notional Loan	2574.39	2574.39
Opening Gross Equity	851.95	851.95
Recovered Gross Capital Cost (As on 1st April)	2798.21	3128.85
Recovered Gross Notional Loan	2177.12	2389.94
Recovered Gross Equity	621.09	738.91
Opening Net Capital Cost	628.13	297.49
Opening Net Notional Loan	397.28	184.46
Opening Net Equity	230.86	113.04
Recovered Capital Cost (During the Year)	330.64	297.49
Recovered Notional Loan	212.82	184.46
Recovered Equity	117.82	113.04
Closing Net Capital Cost	297.49	0.00
Closing Net Notional Loan	184.46	0.00
Closing Net Equity	113.04	0.00
Additional Capital Cost	0.00	0.00
Additional Notional Loan	0.00	0.00
Additional Equity	0.00	0.00
Years (Capital to be recovered up to 31.1.2021)	1.83	0.83
Months	22.00	10.00
Weighted Average Rate of Interest p.a. (in %)	4.294	4.294
Weighted Average Rate of Interest p.m. (in %)	0.358	0.358
Monthly Recovery Factors -Loan	0.047349	0.101979
Monthly Capital Recovery Charge - Loan	18.81	18.81
Annual Capital Recovery Charge - Loan	225.73	188.11
Rate of Return on Equity p.a. (in %)	15.500	15.500
Rate of Return on Equity p.m. (in %)	1.292	1.292
Monthly Recovery Factors -Equity	0.052509	0.107241
Monthly Capital Recovery Charge - Equity	12.12	12.12
Annual Capital Recovery Charge - Equity	145.47	121.22



Monthly Capital Recovery Charge - Total	30.93	30.93
Annual Capital Recovery Charge - Total	371.19	309.33
Fee & Charges (2014-19) (Pro-rata)	Non-Microwave: State Portion - Charges	
Annual Capital Recovery Charge - Loan	225.73	188.11
Annual Capital Recovery Charge - Equity	145.47	121.22
Annual Capital Recovery Charge - Total	371.19	309.33
O&M Expenses	0.00	0.00
Interest on Working Capital	5.58	4.35
Total Fee & Charges (Pro-rata)	376.77	313.68
Interest on Working Capital		
Maintenance Spares (15% of O&M Expenses)	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00
Receivables (2 months)	46.32	38.67
Total	46.32	38.67
Rate of Interest on Working Capital (in %)	12.05	11.25
Total Interest on Working Capital (Pro-rata)	5.58	4.35
Fee & Charges (2014-19) (Applicable)	Non-Microwave: State Portion - Charges	
Particulars	2019-20	2020-21
Annual Capital Recovery Charge - Loan	225.73	188.11
Annual Capital Recovery Charge - Equity	145.47	121.22
Annual Capital Recovery Charge - Total	371.19	309.33
O&M Expenses	0.00	0.00
Interest on Working Capital	5.58	4.35
Total Fee & Charges (Applicable)	376.77	313.68

57. Accordingly, the annual fees and charges allowed for the instant assets for the 2019-24 Tariff Period are as follows:

Particulars	(₹ in lakh)				
	Non-Microwave-Central Portion				
	2019-20	2020-21 (Pro-rata)	2021-22	2022-23	2023-24
Annual Capital Recovery Charge-Total	862.50	718.75	0.00	0.00	0.00
O&M Expenses	159.58	159.58	159.58	159.58	159.58
Interest on Working Capital	19.92	16.60	6.05	6.11	6.11
Total Fee & Charges	1042.00	894.93	165.63	165.69	165.69
Particulars	Non-Microwave-State Portion				
	2019-20	2020-21			
Annual Capital Recovery Charge-Total	371.19	309.33			
O&M Expenses	0.00	0.00			
Interest on Working Capital	5.58	4.35			
Total Fee & Charges	376.77	313.68			



Filing Fee and Publication Expenses

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

59. Regulation 70(1) of the 2019 Tariff Regulations provides for reimbursement of filing fees and publication expenses paid by the Petitioner. Accordingly, The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

License Fee and RLDC Fees and Charges

60. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

61. 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.

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



Sharing of Transmission Charges

63. The fees and charges for non-microwave system shall be shared on similar lines as system operation charges by the users in the ratio of 45:45:10 as per Regulation 22 (1) of Fee and Charges of Regional Load Despatch Centre and other related matters Regulations, 2009 as follows:

*"Distribution licensees and buyers : 45% of system operation charges;
Generating stations and sellers : 45% of system operation charges;
Inter-state Transmission licensees: 10% of system operation charges"*

64. The fees and charges for the State Sector for the 2014-19 tariff period shall be recovered from the respective States in accordance with Regulation 43 of the 2014 Tariff Regulations.

65. The fees and charges for the Central Sector shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations for 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

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

67. This order disposes of Petition No. 309/TT/2020 in terms of the above discussions and findings.

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

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

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

**sd/-
(P.K. Pujari)
Chairperson**



Annexure I

Weighted Average Rate of Interest (WAROI) for 2014-19

(₹ in lakh)

Loan	2014-15						
	Opening (Net O/S as on 1.4.2014)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	143.52	35.88	107.64	125.58	8.63	10.84	
Bond XV	293.75	58.75	235.00	264.38	6.68	17.66	
IBRD-II	4159.47	448.62	3710.85	3935.16	1.75	68.79	
IBRD-II (For add cap from COD to 31.03.2006)	467.49	50.42	417.07	442.28	1.75	7.73	
IBRD-II (For add cap during 2006-07)	565.94	61.04	504.90	535.42	1.75	9.36	
Total Loan	5630.17	654.71	4975.46	5302.82		114.38	2.1571

Loan	2015-16						
	Opening (Net O/S as on 1.4.2015)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	107.64	35.88	71.76	89.70	8.63	7.74	
Bond XV	235.00	58.75	176.25	205.63	6.68	13.74	
IBRD-II	3710.85	477.47	3233.38	3472.12	1.97	68.49	
IBRD-II (For add cap from COD to 31.03.2006)	417.07	53.66	363.41	390.24	1.97	7.70	
IBRD-II (For add cap during 2006-07)	504.90	64.96	439.94	472.42	1.97	9.32	
Total Loan	4975.46	690.72	4284.74	4630.10		106.98	2.3106



	2016-17						
Loan	Opening (Net O/S as on 1.4.2016)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	71.76	35.88	35.88	53.82	8.63	4.64	
Bond XV	176.25	58.75	117.50	146.88	6.68	9.81	
IBRD-II	3233.38	508.35	2725.03	2979.21	2.76	82.17	
IBRD-II (For add cap from COD to 31.03.2006)	363.41	57.14	306.27	334.84	2.76	9.23	
IBRD-II (For add cap during 2006-07)	439.94	69.17	370.77	405.36	2.76	11.18	
Total Loan	4284.74	729.29	3555.45	3920.10		117.04	2.9856

	2017-18						
Loan	Opening (Net O/S as on 1.4.2017)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	35.88	35.88	0.00	17.94	8.63	1.55	
Bond XV	117.50	58.75	58.75	88.13	6.68	5.89	
IBRD-II	2725.03	541.11	2183.92	2454.48	3.29	80.85	
IBRD-II (For add cap from COD to 31.03.2006)	306.27	60.82	245.45	275.86	3.29	9.09	
IBRD-II (For add cap during 2006-07)	370.77	73.62	297.15	333.96	3.29	11.00	
Total Loan	3555.45	770.18	2785.27	3170.36		108.37	3.4182

	2018-19						
Loan	Opening (Net O/S as on 1.4.2018)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	0.00	0.00	0.00	0.00	8.63	0.00	
Bond XV	58.75	58.75	0.00	29.38	6.68	1.96	
IBRD-II	2183.92	575.97	1607.95	1895.94	4.29	81.42	
IBRD-II (For add cap from COD to 31.03.2006)	245.45	64.74	180.71	213.08	4.29	9.15	
IBRD-II (For add cap during 2006-07)	297.15	78.37	218.78	257.97	4.29	11.08	
Total Loan	2785.27	777.83	2007.44	2396.36		103.61	4.3234



Annexure II

Weighted Average Rate of Interest (WAROI) for 2019-24

(₹ in lakh)

Loan	2019-20						
	Opening (Net O/S as on 1.4.2018)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	0.00	0.00	0.00	0.00	8.63	0.00	
Bond XV	0.00	0.00	0.00	0.00	6.68	0.00	
IBRD-II	1607.95	613.16	994.79	1301.37	4.29	55.88	
IBRD-II (For add cap from COD to 31.03.2006)	180.71	68.91	111.80	146.25	4.29	6.28	
IBRD-II (For add cap during 2006-07)	218.78	83.43	135.35	177.07	4.29	7.60	
Total Loan	2007.44	765.50	1241.94	1624.69		69.77	4.2942

Loan	2020-21						
	Opening (Net O/S as on 1.4.2018)	Repayment	Closing	Average	Rate of interest (in %)	Interest	Weighted Average Rate of Interest (in %)
Bond XIII (Option-I)	0.00	0.00	0.00	0.00	8.63	0.00	
Bond XV	0.00	0.00	0.00	0.00	6.68	0.00	
IBRD-II	994.79	652.76	342.03	668.41	4.29	28.70	
IBRD-II (For add cap from COD to 31.03.2006)	111.80	73.36	38.43	75.11	4.29	3.23	
IBRD-II (For add cap during 2006-07)	135.35	88.81	46.54	90.95	4.29	3.91	
Total Loan	1241.94	814.94	427.00	834.47		35.83	4.2942

