

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 42/TT/2020**

**Coram:**

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

**Date of Order: 27.06.2022**

**In the matter of:**

Miscellaneous petition for approval under Sub-section 4 of Section 28 of the Electricity Act, 2003 for (i) truing up of fees and charges for 2014-19 tariff period and (ii) fees and charges for 2019-24 tariff period for Unified Load Despatch and Communication Scheme (ULDC) (Powergrid Portion i.e. Communication System Portion and State Load Despatch Centers (SLDCs) System retained by Powergrid after formation of Powergrid System Operation Corporation Limited (POSOCO) in Southern Region.

**And in the matter of:**

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

**.....Petitioner**

**Vs.**

1. NTPC Limited,  
NTPC Bhawan, Core-7, Scope Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110 003.
2. Farakka Super Thermal Power Plant,  
NTPC Farakka, P.O. Nabarun,  
Dist.-Murshidabad, Farakka-742236  
West Bengal.
3. Kahalgaon Super Thermal Power Plant-I,  
NTPC Kahalgaon, Kahalgaon,  
Bhagalpur -813 214, Bihar.
4. Kahalgaon Super Thermal Power Plant-II,  
NTPC Kahalgaon, Kahalgaon,  
Bhagalpur -813 214, Bihar.



5. Talcher Super Thermal Power Plant Stage-II,  
NTPC, Talchar Kaniha, Angul, Odisha-759 147.
6. National Hydro Power Corporation (NHPC) Limited,  
NHPC Office Complex,  
Lodhi Road, New Delhi.
7. Teesta-V Hydro Electric Project,  
NHPC, Singtam, East Sikkim-737 134  
Sikkim.
8. Rangit Hydro Electric Project,  
NHPC, P.O. Rangit Nagar,  
South Sikkim-737 111.
9. Orissa Hydro Power Corporation Limited,  
Burla Power House,  
Dist. Samabalpur, Burla-768017  
Odisha.
10. Mejia Thermal Power Station, DVC,  
P.O.-MTPS, Dist. Bankura-722183  
West Bengal.
11. West Bengal State Electricity Distribution Company Limited,  
Bidyut Bhawan, 8th Floor (A Block)  
Block DJ, Salt Lake City,  
Calcutta-700 091, West Bengal.
12. Bihar State Electricity Board,  
Vidyut Bhawan, Bailey Road,  
Patna-800 001, Bihar.
13. Grid Corporation of Orissa Limited,  
Vidyut Bhawan, Janpath,  
Bhubaneshwar-751007,  
Odisha.
14. Power Department  
Government of Sikkim,  
Gangtok-727102.
15. Jharkhand State Electricity Board,  
Engineering Building  
HEC Township, Dhurwa, Ranchi-834004  
Jharkhand.



16. Damordar Valley Corporation,  
DVC Tower, VIP Road,  
Calcutta-700054.

17. Powerlinks Transmission Limited  
Vidyut Nagar, P.O. Satellite Township,  
Siliguri-734 015, West Bengal

.....Respondent(s)

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

**For Respondents:** None

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Limited under sub-Section (4) of Section 28 of the Electricity Act, 2003 for trueing up of annual fees and charges for Communication System Portion and State Load Despatch Centre (SLDC) System retained by the Petitioner in Eastern Region for 2014-19 tariff period based on actual expenditure from 1.4.2014 to 31.3.2019 and for determination of tariff from 1.4.2019 to 31.3.2024.

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-7 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-8 above;*

*3) 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.*



4) 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.

5) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

6) 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 8.8 above.

7) Allow the petitioner to bill actual tax payment separately since tariff is being claimed on "Levelised" basis (DOCO of asset is before 01.04.2014).

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 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.

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

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 Unified Load Despatch & Communication (ULDC) Scheme in Eastern Region was put under commercial operation w.e.f. 1.9.2005. The Commission vide order dated 28.7.2009 in Petition No. 74/2006 and vide order dated 3.8.2011 in Petition No. 48/2010 approved the charges from COD to 31.3.2009. The details of the assets covered in the instant petition are as follows:

- i. EMS /SCADA System
- ii. Fibre Optic System



- iii. Digital Microwave Communication System
  - iv. PLCC/PABX System
  - v. Auxiliary Power Supply System
  - vi. Building and Civil Works.
- (b) Tariff for 2009-14 period in respect of the assets was allowed vide order dated 31.12.2013 in Petition No. 56/TT/2012. The tariff was for 2014-19 tariff period in respect of the assets was further allowed vide order dated 12.12.2017 in Petition No. 39/TT/2015. Aggrieved with the Commission's order dated 12.12.2017 in Petition No. 39/TT/2015, the Petitioner filed Review Petition No. 10/RP/2018 in respect of the following issues:
- a. Non-consideration of accelerated depreciation on replaced SCADA/ EMS-State Portion as approved in the impugned order dated 12.12.2017.
  - b. Non-consideration of additional capitalisation for 2009-10 and 2010-11 periods which had already been approved vide earlier order dated 31.12.2013 in Petition No. 56/TT/2012.
  - c. Non-consideration of additional capitalisation for 2011-12 and 2012-13 periods; and
  - d. Calculation of O&M Expenses after exclusion of fibre leasing charges and FERV as well as other expenses.
- (c) The Commission vide order dated 18.6.2019 in Petition No. 10/RP/2018 approved the revised fees and charges for 2009-14 tariff period.
- (d) The Petitioner had conceptualized a scheme called the Unified Load Despatch and Communication Scheme for all the five Regions with the objective of strengthening the load despatch infrastructure and augmenting



Communication System for efficient discharge of load despatch functions.

- (e) The Petitioner while claiming the cost of Unified Load Despatch & Communication (ULDC) Scheme during the earlier tariff control periods submitted that the tariff regulations framed by the Commission were not suitable for recovery of cost of the ULDC Scheme from beneficiaries and proposed a levelised tariff meaning thereby that a uniform amount would be recovered for a period of 15 years. Accordingly, the Commission approved the recovery of loan and equity corresponding to 2001-04 and 2004-09 tariff periods and subsequent additional capital expenditure during these periods, based on Weighted Average Rate of Interest and Return on Equity using Capital Recovery Factor for loan and equity respectively for 15 years.
- (f) As per the directives of Government of India, Ministry of Power vide order dated 4.7.2008, Power System Operation Corporation Limited (POSOCO), a wholly owned subsidiary of Power Grid Corporation of India Limited was created. POSOCO is responsible for System Operations of National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs). Pursuant to Satnam Singh Committee's Report, the assets pertaining to system operations were transferred to POSOCO for which separate tariff orders had been issued by the Commission.
- (g) Government of India had also 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 of the personnels engaged in the



System Operation. The Task Force made certain recommendations with regard to the ownership of the assets. The Petitioner constituted Committees at regional level subsequent to the Task Force's report, to identify the assets to be transferred to POSOCO. As per the directions of the Committees, the assets directly related to discharge of load dispatch functions raised by the Petitioner under the Scheme were 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). Based on the recommendations of the Committees, the assets under the ULDC Scheme were transferred to POSOCO and to the Petitioner in the following manner:

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's 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 remain 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)
- (h) Thereafter, 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 to be retained/to be installed by the Petitioner after formation of POSOCO for 2009-14 period tariff.
- (i) The Commission in Petition No. 68/2010 vide order dated 8.12.2011 observed as follows:

*“9.....Since the communication system and SLDC system form part of the assets of the CTU, there is a requirement to specify regulations for determination of tariff of these assets. We direct the staff of the Commission to undertake the exercise separately and include these assets of CTU in the tariff regulations applicable for the next tariff period i.e. 2014-19. As regards the tariff of these assets for the period 2009-14, we are not inclined to determine the tariff of these assets by exercising our power to relaxation under Regulation 44 of the 2009 regulations since there is no provision for determination of tariff for the assets covered under the communication system and ULDC system. We are of the view that the tariff of these assets shall be determined under our general power of determination of tariff for inter-State transmission system under section 79(1)(d) of the Act.....”*

*“.....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.”*

*“21. We have considered the submission of the Petitioner and the respondents. We are of the view that replacement of microwave links with fibre optic links should be implemented as agreed by the beneficiaries to ensure safe and reliable operation of the power system. Moreover, the Petitioner has submitted that surrender of the microwave frequencies would save substantial cost and the fibre optic system would be beneficial in the long run as the fibre optic communication network is required for implementation of new technologies like Wide Area Measurement System (WAMS), Special Protection Schemes (SPS) etc. in view of fast development and complexity of the power system in the country. As regards the regulatory approval, we are of the view that since the project has been agreed to be implemented by the constituents of each of the regions, regulatory approval is not considered necessary. The Petitioner is granted liberty to approach the Commission for determination of tariff for the fibre optic network being installed in lieu of microwave links for each of the region separately. As regards the submission of UPPTCL, it is clarified that if the state portion is not being implemented by it separately as proposed earlier, the same shall be implemented by the Petitioner and UPPTCL would be required to share the tariff in proportion to the assets being utilised by it. It is however made clear that the timeline for replacement of the digital microwave by optical fibre should be strictly complied with.”*

- (j) In the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of Communication System and ULDC System of the Petitioner and it was decided by the Commission to continue with the levelised tariff for the assets. Accordingly, the annual fee and charges of the Communication System and SLDC System retained were approved vide order dated 31.12.2013 in Petition No. 56/TT/2012 as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010.
- (k) The Petitioner also filed Petition No. 32/MP/2011 for approval of implementation of expansion/replacement of SCADA/EMS System for SLDCs in Northern Region. The Commission while approving the replacement/up-



gradation of SCADA/EMS System for SLDC System further observed in its order dated 28.12.2011 in Petition No. 32/MP/2011 that the Petitioner can implement the schemes in accordance with agreements with the beneficiaries in the respective Regional Power Committees. Accordingly, the Petitioner obtained the approval of RPCs for expansion/up-gradation of SCADA/EMS System in WRPC, SRPC, ERPC and NERPC. However, while granting approval of up-gradation project for Northern Region, the Commission directed PGCIL to ensure that the projects for RLDC and SLDCs in respective regions be implemented in an integrated and compatible manner to obviate any operational difficulties in future. The Commission further directed the Petitioner to implement all the schemes in a coordinated manner within the same time frame to achieve optimisation of cost and economies of scale.

- (l) The Petitioner 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 execution schedule of new SCADA/EMS System.
- (m) The Petitioner had submitted that the tariff for similar SCADA/EMS System for RLDCs, executed 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 (Fees and Charges of RLDC and other



related matters) Regulations, 2009 (hereinafter referred to as “2009 RLDC fees 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 and 30% depreciation rate for software. After replacement of SCADA/EMS System at SLDCs, the existing SCADA system would not be in use.

- (n) In continuation of Petition No. 188/MP/2014, the Petitioner filed Petition No. 232/TT/2016 seeking determination of transmission tariff from COD to 31.3.2019 of the main SCADA/EMS System (5 assets) under Project “Expansion/Up-gradation of SCADA/EMS System of SLDCs of Eastern Region. 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 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 execution of the new SCADA System. Accordingly, the Petitioner vide affidavit dated 11.8.2017 has submitted the details of accelerated depreciation of SCADA/EMS.
- (o) Taking into consideration the aforesaid facts, the truing up and determination



of the fees and charges for 2009-14 tariff period and 2014-19 period respectively was 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 fees and charges in the present petition have been worked out applying the Capital Recovery Factor (CRF) concept.

- (p) The present petition has been filed for truing up of the fees and charges of ULDC Scheme in Eastern Region for 2014-19 period which was earlier approved in Petition No. 39/TT/2015 and determination of fees and charges for 2019-24 period of the Communication System Portion and SLDC System retained by the Petitioner after formation of POSOCO.
- (q) The net capital cost in respect of the assets as on 1.4.2009 approved vide order dated 12.12.2017 in Petition No. 39/TT/2017 and order dated 18.6.2019 in Review Petition No. 10/RP/2018 is as follows:

(₹ in lakh)

Particulars	Capital	Microwave		Non-Microwave	
		Central Portion	State Portion	Central Portion	State Portion
Retained Gross Capital Cost as on 31.3.2009	Loan	3566.42	6098.70	4132.48	11303.74
	Equity	520.80	921.53	603.47	1708.03
	<b>Total</b>	<b>4087.22</b>	<b>7020.23</b>	<b>4735.95</b>	<b>13011.77</b>
Capital Cost Recovered up to 31.3.2009	Loan	586.49	993.62	679.58	1841.65
	Equity	42.88	74.08	49.69	137.30
	<b>Total</b>	<b>629.37</b>	<b>1067.70</b>	<b>729.27</b>	<b>1978.95</b>
Net Capital Cost as on 1.4.2009	Loan	2979.92	5105.07	3452.90	9462.09
	Equity	477.92	847.46	553.78	1570.73
	<b>Total</b>	<b>3457.85</b>	<b>5952.53</b>	<b>4006.68</b>	<b>11032.82</b>



- (r) The annual fees and charges approved for 2009-14 tariff period after taking into consideration additional capital expenditure during 2009-14 vide order dated 12.12.2017 in Petition No. 39/TT/2017 and order dated 18.6.2019 in Review Petition No. 10/RP/2018 for Microwave System and for Non-Microwave System for both Central Portion and State Portion respectively are as follows:

(₹ in lakh)				
Particulars	Microwave-Central Portion			
	2009-10	2010-11	2011-12	2012-13 (Pro-rata)
Annual Capital Recovery Charge-Loan	966.87	997.84	1014.07	253.53
Annual Capital Recovery Charge-Equity	188.12	206.57	214.45	53.61
Annual Capital Recovery Charge-Total	1154.99	1204.40	1228.52	307.14
O&M Expenses	-	-	-	-
Interest on Working Capital	24.07	25.10	25.60	6.40
<b>Total Fee &amp; Charges</b>	<b>1179.06</b>	<b>1229.50</b>	<b>1254.12</b>	<b>313.55</b>
Particulars	Microwave – State Portion			
Annual Capital Recovery Charge-Loan	1656.40	1645.59	1644.48	411.15
Annual Capital Recovery Charge-Equity	333.57	333.57	333.57	83.39
Annual Capital Recovery Charge-Total	1989.97	1979.16	1978.05	494.54
O&M Expenses	-	-	-	-
Interest on Working Capital	41.48	41.25	41.23	10.31
<b>Total Fee &amp; Charges</b>	<b>2031.44</b>	<b>2020.41</b>	<b>2019.28</b>	<b>504.85</b>

(₹ in lakh)					
Particulars	Non-Microwave-Central Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Capital Recovery Charge-Loan	361.75	355.11	360.64	370.93	374.27
Annual Capital Recovery Charge-Equity	103.71	106.31	111.52	118.25	123.98
Annual Capital Recovery Charge-Total	465.46	461.42	472.15	489.18	498.25
O&M Expenses	465.03	465.48	607.45	468.13	563.14
Interest on Working Capital	32.96	32.90	40.23	33.61	38.55
<b>Total Fee &amp; Charges</b>	<b>963.45</b>	<b>959.80</b>	<b>1119.83</b>	<b>990.93</b>	<b>1099.94</b>
Particulars	Non-Microwave – State Portion				



Annual Capital Recovery Charge-Loan	991.31	963.67	959.22	960.70	947.13
Annual Capital Recovery Charge-Equity	294.16	294.16	294.16	294.16	294.16
Annual Capital Recovery Charge-Total	1285.47	1257.83	1253.38	1254.86	1241.29
O&M Expenses	-	-	-	-	-
Interest on Working Capital	26.79	26.22	26.12	26.15	25.87
<b>Total Fee &amp; Charges</b>	<b>1312.26</b>	<b>1284.04</b>	<b>1279.50</b>	<b>1281.02</b>	<b>1267.16</b>

- (s) The assets were put under commercial operation before 1.4.2009 and the capital cost of Microwave System has been fully recovered during 2009-14 tariff period. The remaining asset has completed its 15 years of service on 31.8.2020 and as such 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 31.8.2020 i.e., during 2020-21 period. The net capital cost of the assets as approved vide order dated 12.12.2017 in Petition No. 39/TT/2015 and order dated 18.6.2019 in Review Petition No. 10/RP/2018 is as follows:

(₹ in lakh)

Particulars	Capital	Non-Microwave	
		Central Portion	State Portion
Retained Gross Capital Cost as on 1.4.2014 - "Non-Microwave"	Loan	4356.08	11303.74
	Equity	699.29	1708.03
	<b>Total</b>	<b>5055.37</b>	<b>13011.77</b>
Capital Cost Recovered up to 31.3.2014 - "Non-Microwave"	Loan	2117.60	5639.08
	Equity	197.19	516.66
	<b>Total</b>	<b>2314.79</b>	<b>6155.74</b>
Net Capital Cost as on 1.4.2014 - "Non-Microwave"	Loan	2238.48	5664.66
	Equity	502.11	1191.37
	<b>Total</b>	<b>2740.58</b>	<b>6856.03</b>

- (t) The annual fees and charges for 2014-19 as approved vide order dated 12.12.2017 in Petition No. 39/TT/2015 and vide order dated 18.6.2019 in Review Petition No. 10/RP/2018 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-Loan	344.29	344.29	344.29	344.29	344.29
Annual Capital Recovery Charge-Equity	103.71	103.71	103.71	103.71	103.71
Annual Capital Recovery Charge-Total	448.00	448.00	448.00	448.00	448.00
O&M Expenses	575.17	594.27	614.00	634.38	655.44
Interest on Working Capital	42.09	43.14	44.23	45.36	46.52
<b>Total Fee &amp; Charges</b>	<b>1065.26</b>	<b>1085.41</b>	<b>1106.23</b>	<b>1127.74</b>	<b>1149.96</b>
Particulars	Non-Microwave – State Portion				
Annual Capital Recovery Charge-Loan	313.04	313.04	313.04	313.04	313.04
Annual Capital Recovery Charge-Equity	97.60	97.60	97.60	97.60	97.60
Annual Capital Recovery Charge-Total	410.64	410.64	410.64	410.64	410.64
O&M Expenses	-	-	-	-	-
Interest on Working Capital	9.45	9.45	9.45	9.45	9.45
<b>Total Fee &amp; Charges</b>	<b>420.10</b>	<b>420.10</b>	<b>420.10</b>	<b>420.10</b>	<b>420.10</b>

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 Eastern 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. None of the respondents have filed any reply in the matter.

6. The hearing in this matter was held on 6.7.2021 through video conference and order was reserved. This order is issued considering the submissions made by the Petitioner in the petition accompanied by affidavit dated 3.12.2019.



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

**TRUING UP OF ANNUAL FIXED CHARGES FOR 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 assets were put into commercial operation before 1.4.2009 and the capital cost of Microwave System has been fully recovered during 2009-14 tariff period. In view of above, for the purpose of tariff of the Communication System and ULDC System of the Petitioner, we continue to allow levelised tariff for Non-Microwave System as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, annual fees and charges of Non-Microwave System are determined in this order.

10. The Petitioner has submitted its claim for fees 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 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	496.14	497.04	502.68	506.01	510.73
O&M Expenses	397.21	297.58	329.64	342.78	634.99
Interest on Working Capital	33.36	27.88	29.78	30.58	46.83
<b>Total Fee &amp; Charges</b>	<b>926.71</b>	<b>822.50</b>	<b>862.10</b>	<b>879.38</b>	<b>1192.56</b>
Particulars	Non-Microwave – State Portion - Existing				
Annual Capital Recovery Charge-Total	410.09	410.84	415.58	418.38	422.34
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	9.44	9.46	9.57	9.63	9.72
<b>Total Fee &amp; Charges</b>	<b>419.53</b>	<b>420.30</b>	<b>425.14</b>	<b>428.01</b>	<b>432.07</b>
Particulars	Non-Microwave – State Portion - Replaced				
Annual Capital Recovery Charge-Total	2171.78	2172.62			
O&M Expenses	0.00	0.00			
Interest on Working Capital	49.99	50.01			
<b>Total Fee &amp; Charges</b>	<b>2221.77</b>	<b>2222.63</b>			

12. The details of the trued-up IWC claimed by the Petitioner in respect of the 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)	59.58	44.64	49.45	51.42	95.25
O&M Expenses (One month)	33.10	24.80	27.47	28.57	52.92
Receivables (Two months)	154.45	137.08	143.68	146.56	198.76
<b>Total Working Capital</b>	<b>247.13</b>	<b>206.52</b>	<b>220.60</b>	<b>226.54</b>	<b>346.92</b>
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total Interest on Working Capital</b>	<b>33.36</b>	<b>27.88</b>	<b>29.78</b>	<b>30.58</b>	<b>46.83</b>
Particulars	Non-Microwave – State Portion - Existing				
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (One month)	0.00	0.00	0.00	0.00	0.00
Receivables (Two months)	69.92	70.05	70.86	71.34	72.01
<b>Total Working Capital</b>	<b>69.92</b>	<b>70.05</b>	<b>70.86</b>	<b>71.34</b>	<b>72.01</b>



Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total Interest on Working Capital</b>	<b>9.44</b>	<b>9.46</b>	<b>9.57</b>	<b>9.63</b>	<b>9.72</b>
<b>Particulars</b>	<b>Non-Microwave – State Portion - Replaced</b>				
Maintenance Spares (15% of O&M)	0.00	0.00			
O&M Expenses (One month)	0.00	0.00			
Receivables (Two months)	370.30	370.44			
<b>Total Working Capital</b>	<b>370.30</b>	<b>370.44</b>			
Rate of Interest on Working Capital (in %)	13.50	13.50			
<b>Total Interest on Working Capital</b>	<b>49.99</b>	<b>50.01</b>			

### Capital Cost

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

14. Keeping in view the opening capital cost and its recovery during 2009-14 period as considered vide order dated 18.6.2019 in Review Petition No. 10/RP/2018, the following capital cost is being considered as on 1.4.2014 for working out the fees and charges for 2014-19 period 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 1.4.2014 - “Non-Microwave”	Loan	4356.08	11303.74
	Equity	699.29	1708.03
	<b>Total</b>	<b>5055.37</b>	<b>13011.77</b>
Capital Cost Recovered up to 31.3.2014 - “Non-Microwave”	Loan	2117.60	5639.08
	Equity	197.19	516.66
	<b>Total</b>	<b>2314.79</b>	<b>6155.74</b>
Net Capital Cost as on 1.4.2014 - “Non-Microwave”	Loan	2238.48	5664.66
	Equity	502.11	1191.37
	<b>Total</b>	<b>2740.58</b>	<b>6856.03</b>



15. As regards the recovery of the cost 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.”*

16. In view of the above, the Petitioner has submitted that Petition No. 232/TT/2016 was filed for new SCADA/EMS System in Eastern Region. The petition involves replacement of existing SCADA System of DVC, JUSNL, Sikkim and BSPTCL and the establishment of new SLDCs at DVC, JUSNL, Sikkim and BSPTCL.

17. The Commission vide order dated 12.12.2017 in Petition No. 39/TT/2015 observed as follows:

*“54. The Petitioner has submitted the following details regarding SCADA/ EMS:*



Name of SCADA /EMS State	Commissioning of SCADA / EMS system (New)	Corresponding Replaced SCADA / EMS covered under the current petition		
		Original Gross block	Recovered Depreciation up to COD of New SCADA	Unrecovered depreciation (Claimed as Accelerated depreciation)
Asset	COD			
BSPTCL	8.1.2016	1299.28	958.91	340.37
JUSNL	8.1.2016	1070.86	790.33	280.53
Sikkim	8.1.2016	70.94	52.36	18.58
DVC	8.1.2016	633.23	467.34	165.88
DVC Howrah	31.3.2016	599.69	449.30	150.40
RTUs corresponding to each state	1.7.2017	RTUs Gross block amount has already been considered in the original gross block of the main equipment while calculating recovered depreciation of SCADA B/ EMS corresponding to state i.e BSPTCL, JUSNL, Sikkim, DVC, DVC Howrah.		
Balance RTUs	Not commissioned yet			
GRIDCO #	21.4.2016	3009.82	2263.82	746.00
WBSEB #	14.7.2016	2010.63	1535.92	474.71
		8694.45	6517.78	2176.47

# SCADA / EMS replacement done by respective state.

55. The Petitioner has further submitted that the remaining depreciation of ₹ 2176.47 lakh, given above, is claimed as accelerated depreciation in the instant petition. In view of the above, the gross capital cost as on 1.4.2014 for the State Portion for "Non-Microwave System" 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" have been worked out on pro-rata basis. Hence, the following capital cost has been calculated as on 1.4.2014 for working out the fee and 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":-

(₹ 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	4132.48	7553.15	3750.59	11303.74
	Equity	603.47	1141.30	566.73	1708.03
	<b>Total</b>	<b>4735.95</b>	<b>8694.45</b>	<b>4317.32</b>	<b>13011.77</b>
Pro-rata Capital Cost	Loan	2,065.34	3768.03	1871.05	5,639.08
	Equity	183.44	345.23	171.43	516.66
	<b>Total</b>	<b>2248.77</b>	<b>4113.26</b>	<b>2042.48</b>	<b>6155.74</b>



Particulars	Capital	Central Portion	State Portion		
			Replaced SCADA / EMS – State Portion	Remaining “Existing Assets – State Portion	Total
Recovered up to 31.3.2014					

56. As per the directions of the Commission in order dated 2.3.2017 in Petition No. 188/MP/2014 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, the following net capital cost have been considered as on 1.4.2014 for working out the fee and 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”:-

(₹ 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	4132.48	7553.15	3750.59	11303.74
	Equity	603.47	1141.30	566.73	1708.03
	<b>Total</b>	<b>4735.95</b>	<b>8694.45</b>	<b>4317.32</b>	<b>13011.77</b>
Salvage Value for state portion only (5% of Gross Capital Cost)	Loan	-	377.66	-	377.66
	Equity	-	57.06	-	57.06
	<b>Total</b>	<b>-</b>	<b>434.72</b>	<b>-</b>	<b>434.72</b>
Recoverable Capital Cost for state portion only (95% of Gross Capital Cost) as on 1.4.2014	Loan	4132.48	7175.49	3750.59	10926.08
	Equity	603.47	1084.24	566.73	1650.97
	<b>Total</b>	<b>4735.95</b>	<b>8259.73</b>	<b>4317.32</b>	<b>12577.05</b>
Pro-rata Capital Cost Recovered up to 31.3.2014	Loan	2065.34	3768.03	1871.05	5639.08
	Equity	183.44	345.23	171.43	516.66
	<b>Total</b>	<b>2248.77</b>	<b>4113.26</b>	<b>2042.48</b>	<b>6155.74</b>
Net Capital Cost as on 1.4.2014 -	Loan	2067.15	3407.46	1879.54	5287.00
	Equity	420.03	739.01	395.30	1134.31
	<b>Total</b>	<b>2487.18</b>	<b>4146.47</b>	<b>2274.84</b>	<b>6421.31</b>



18. The Petitioner has claimed accelerated depreciation of replaced SCADA/EMS-State Portion as per the Commission's order dated 2.3.2017 in Petition No. 188/MP/2014. Aggrieved with the Commission's order dated 12.12.2017 in Petition No. 39/TT/2015, the Petitioner filed Review Petition for non-consideration of accelerated depreciation of replaced SCADA/EMS-State Portion. The Commission vide its order dated 18.6.2019 in Review Petition No.10/RP/2018 observed as follows:

*"7.....Accordingly, the Review Petitioner had submitted the requisite details vide affidavit dated 11.8.2017. The Commission has considered the above affidavit and allowed the capital cost for replaced SCADA/EMS-State Portion at paragraphs 52 to 56 of the impugned order. Similarly, the Commission has considered the above in the monthly capital recovery charges as ₹181.07 lakh (₹145.06 lakh for loan and ₹36.01 lakh for equity) to be recovered in 2014-15 and 2015-16 (paras 63 to 68). Thus, the Commission in the impugned order has allowed the cost for replaced SCADA/EMS-State Portion. This was in addition to the Non-Microwave – Remaining Existing Assets – State Portion of ₹34.22 lakhs (₹26.09 lakhs for loan and ₹8.13 lakhs for equity). However, in the calculation of annual fee and charges at para 77 of the impugned order, the Commission has considered the annual capital recovery charge for the State Portion as Non-Microwave – Remaining Existing Assets only (being annual charges of ₹410.64) for 2014-15 and 2015-16 and not considered the cost of Replaced SCADA/EMS. After due consideration of the Replaced SCADA/EMS, the annual capital recovery charge for 2014-15 and 2015-16 would be ₹2172.84 lakhs (excluding the interest on working capital). This is an error apparent on the face of the record."*

19. Further, the Commission had also agreed with the contention of the Petitioner with regard to non-consideration of additional capitalisation in 2009-10 to 2012-13 periods. The relevant extracts of the order dated 18.6.2019 in Review Petition No. 10/RP/2018 are as follows:

*"8.....Accordingly, the additional capitalisation during 2009-11 should have been considered in the impugned order for determination of capital cost as on 31.3.2014 and also computation of tariff. The details of the said additional capitalisation were submitted alongwith the affidavit dated 11.8.2017 filed in the main petition and non-consideration is an error apparent on the face of the record.*

*9..... The Commission, while coming to the conclusion that the Review Petitioner has not submitted the explanation and justification of such additional capitalisation, has not considered the affidavit dated 29.11.2017 filed by the Review Petitioner. The said affidavit clearly provides the justification for additional capitalisation for 2011-12 and*





*2012-13. The additional capital expenditure was incurred on account of balance/retention payment against which work was already executed within the cut-off date and which was withheld as per terms and conditions of the contract and was to be released subsequently. The Review Petitioner had also provided the details of the parties to whom the payment was made. Further, the entire fees and charges of Microwave Portion was recovered only to the extent tariff was admitted by the Commission excluding additional capital expenditure incurred during 2009-14 block. Such retention payment during 2009-10 and 2010-11 was allowed by the Commission in order dated 31.12.2013. Further, the charges for the Microwave Portion of ₹83.84 lakh dealt by the Commission in para 25 of the impugned order were not recovered in 2012-13. Disallowance of additional capitalisation during 2011-12 and 2012-13 in spite of proper justification is an error apparent on the face of the record.”*

20. The “New SCADA/EMS-State Portion” were put into commercial operation on different dates. However, for ease of calculation, E-COD of all the new SCADA/EMS assets has been applied instead of calculations of accelerated depreciation up to the individual CODs of the new SCADA/EMS. E-COD of all the new SCADA/EMS assets covered in this petition has been worked out based on the original gross block of the assets and COD of individual assets. Accordingly, E-COD of the combined asset has been worked out as 2.4.2016 as per order dated 12.12.2017 in Petition No. 39/TT/2015. Further, net capital cost as on 1.4.2014 for the “Replaced SCADA/EMS-State Portion” is to be recovered one day before the effective COD i.e. by 1.4.2016. However, for ease of calculations and un-ambiguity in presentation, the date of 31.3.2016 has been adopted as the date for the recovery of accelerated depreciation of “Replaced SCADA/EMS-State Portion”.

21. Accordingly, as per the Commission’s view in Review Petition No. 10/RP/2018, the Petitioner has claimed truing-up of annual fees and charges in respect of State Portion–Non-Microwave remaining existing assets only and State-Portion–Non-Microwave -replaced SCADA/EMS. The net capital cost as approved vide order dated 12.12.2017 in Petition No. 39/TT/2015 and in order dated 18.6.2019 in Review



Petition No. 10/RP/2018 has been considered as on 1.4.2014 for the purpose of truing up of fees and charges for the assets. The Petitioner has not claimed any additional capital expenditure during 2014-19 tariff period. Accordingly, the capital cost considered for determining fees 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	4356.08	7175.49	3750.59	11303.74
	Equity	699.30	1084.24	566.73	1708.03
	<b>Total</b>	<b>5055.38</b>	<b>8259.73</b>	<b>4317.32</b>	<b>13011.77</b>
Pro-rata Capital Cost Recovered up to 31.3.2014	Loan	2117.60	3768.03	1871.05	5,639.08
	Equity	197.19	345.23	171.43	516.66
	<b>Total</b>	<b>2314.79</b>	<b>4113.26</b>	<b>2042.48</b>	<b>6155.74</b>
Net Capital Cost as on 1.4.2014*	Loan	2238.48	3407.46	1879.54	5287.00
	Equity	502.11	739.01	395.30	1134.31
	<b>Total</b>	<b>2740.58</b>	<b>4146.47</b>	<b>2274.84</b>	<b>6421.31</b>

\*After Excluding the salvage value of 5%

### **Debt-Equity Ratio**

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

(₹ 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	2238.48	3407.46	1879.54	5287.00
	Equity	502.11	739.01	395.30	1134.31
	<b>Total</b>	<b>2740.58</b>	<b>4146.47</b>	<b>2274.84</b>	<b>6421.31</b>





Debt: Equity Ratio	Debt	81.68%	82.18%	82.62%	82.34%
	Equity	18.32%	17.82%	17.38%	17.66%
	<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**Rates for recovery of loan and equity**

**Capital recovery for loan**

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

24. The Capital Recovery Factor (CRF) for loan in respect of 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 2.0131%, 2.1026%, 2.7827%, 3.2939% and 4.2942% 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 the assets are as follows:

<b>CRF for loan to be considered for Fees &amp; Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Non-Microwave- Central Portion	0.013855	0.016291	0.020073	0.025822	0.036365
Non-Microwave – State Portion - Existing Assets	0.013855	0.016291	0.020073	0.025822	0.036365
Non-Microwave – State Portion-Replaced SCADA/ EMS	0.042546	0.084285			

25. The Capital Recovery Factor for equity has been considered on the same basis as was approved vide order dated 12.12.2017 in Petition No. 39/TT/2015 and order



dated 18.6.2019 in Review Petition No. 10/RP/2018 and that on post-tax return on equity of 15.50%. Thus, capital recovery factors for equity of Central Portion and State Portion for the assets are as follows:

<b>CRF for equity to be considered for Fees &amp; Charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Non-Microwave- Central Portion	0.020576	0.022830	0.026174	0.031570	0.041563
Non-Microwave – State Portion - Existing Assets	0.020576	0.022830	0.026174	0.031570	0.041563
Non-Microwave – State Portion - Replaced SCADA / EMS	0.048725	0.090494			

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

(₹ in lakh)

<b>Monthly capital recovery charges for loan</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Non-Microwave- Central Portion	31.01	31.09	31.56	31.84	32.23
Non-Microwave – State Portion - Existing Assets	26.04	26.10	26.50	26.73	27.06
Non-Microwave – State Portion - Replaced SCADA / EMS	144.97	145.04			

(₹ in lakh)

<b>Monthly capital recovery charges for equity</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Non-Microwave- Central Portion	10.33	10.33	10.33	10.33	10.33
Non-Microwave – State Portion - Existing Assets	8.13	8.13	8.13	8.13	8.13
Non-Microwave – State Portion - Replaced SCADA / EMS	36.01	36.01			

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



(₹ in lakh)

Particulars	Capital	Central Portion	State Portion		
			Replaced SCADA / EMS – State Portion	Remaining “Existing Assets – State Portion	Total
Net Capital Cost as on 31.3.2019	Loan	524.05	0.00	440.02	964.06
	Equity	156.78	0.00	123.43	280.21
	<b>Total</b>	<b>680.83</b>	<b>0.00</b>	<b>563.45</b>	<b>1244.28</b>

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

28. The details of O&M Expenses claimed earlier by the Petitioner on projected basis for 2014-19 tariff period and allowed vide order dated 12.12.2017 in Petition No. 39/TT/2015 are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in Petition No. 39/TT/2015	1202.87	1242.81	1284.07	1326.70	1370.75
Amount allowed vide order dated 12.12.2017 in Petition No. 39/TT/2015.	575.17	594.27	614.00	634.38	655.44
<b>Amount disallowed</b>	<b>627.70</b>	<b>648.54</b>	<b>670.07</b>	<b>692.32</b>	<b>715.31</b>

29. The Petitioner vide Auditor’s certificate has submitted the detailed break-up 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	397.21	297.58	329.64	342.78	634.99
Total claim as per Auditor’s certificate dated 7.11.2019 including other projects	438.45	348.64	422.53	442.19	819.13

30. The Petitioner vide Auditor’s certificate dated 7.11.2019 has submitted the detailed break-up of actual O&M Expenses for 2014-19 tariff period. The Petitioner



has submitted expenses on account of fibre leasing charges. However, the Commission vide order dated 12.12.2017 in Petition No. 39/TT/2015 observed as follows:

*“41. In case of fibre leasing charges and FERV included in O&M Expenses, the Commission in order dated 15.7.2016 in Petition No.19/TT/2015, has stipulated as below:*

*“23. The claim of the Petitioner for (-) ₹0.71 lakh and ₹0.07 lakh for 2012-13 and 2013-14 respectively on account of FERV and ₹269.65 lakh on account of one time lease charges for 2013-14 was further examined. As per principles laid down vide order dated 8.12.2011 in Petition No. 68/2010, such non-recurring expenditure is not allowable as O&M Expenses as it would make them a part of actual O&M Expenses and hence will broaden the base for O&M Expenses to be allowed/ escalated for the purpose of determination of fee and charges during 2014-19.*

*24. However, we allow the amount of ₹269.65 lakh on account of one time lease charges for 2013-14 separately to be recovered directly from the beneficiaries or the long term transmission customers/DICs, as the case maybe.*

*25. As regards FERV, Regulation 41 of the 2009 Tariff Regulations specifies as follows:-*

*“41. Recovery of cost of hedging Foreign Exchange Rate Variation. Recovery of cost of hedging and foreign exchange rate variation shall be made directly by the generating company or the transmission licensee, as the case may be, from the beneficiaries or the transmission customers, as the case may be, without making any application before the Commission:*

*Provided that in case of any objections by the beneficiaries to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the generating company or the transmission licensee, as the case may be, may make an appropriate application before the Commission for its decision.”*

*26. Drawing analogy from Regulation 41 of the 2009 Tariff Regulations, the Petitioner is allowed to recover amounts of (-) ₹0.71 lakh and ₹0.07 lakh for 2012-13 and 2013-14 respectively, on account of FERV directly from the beneficiaries or the long term transmission customers/DICs, as the case may be, without making any application before the Commission.”*

*42. Accordingly, we have not considered fibre leasing charges and FERV as part of O&M Expenses and have excluded the expenses from the O&M Expenses claimed by the Petitioner.”*

31. In view of the above decision of the Commission, the expenses towards fibre leasing charges shall be recovered directly from beneficiaries by the Petitioner.



32. The Petitioner has submitted Auditor's certificate dated 21.11.2019 and has submitted the actual O&M Expenses wherein the Petitioner has claimed self-insurance, petition filing charges and advertisement and publicity charges as part of the O&M Expenses.

33. As regards self-insurance, the Commission in 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."*

34. In view of above, the Petitioner's claim towards self-insurance is disallowed.

35. Further, the Petitioner has also claimed the petition filing charges as part of the O&M Expenses. With regard to the claim of petition filing fees, we are of the view that it should be claimed directly from the beneficiaries. Therefore, the claim of the Petitioner for filing fees cannot be allowed under O&M Expenses. Accordingly, the same is rejected.

36. The Petitioner has also claimed advertisement and publicity charges as part of the O&M Expenses. The claim for advertisement and publicity charges as part of the O&M Expenses cannot be allowed as O & M Expenses. Hence, the same is rejected.

37. Accordingly, O&M Expenses are allowed for 2014-19 tariff period as per the



Auditor's Certificate after deducting self-insurance, petition filing fees, advertisement and publicity expenses and fibre leasing charges (pro-rata reduction) from the total cost approved in respect of the assets and the same are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant Petition	397.21	297.58	329.64	342.78	634.99
Total Claim as per Auditor's certificate dated 7.11.2019 including other projects	438.45	348.64	422.53	442.19	819.13
Self-Insurance reserve	1.62	1.73	1.92	2.39	2.93
CERC Petition filing Fees	10.07	5.31	2.86	9.07	3.00
Advertisement and Publicity	5.49	4.04	3.92	6.40	3.30
Fibre leasing charges	0.00	1.86	5.62	4.88	0.00
<b>Pro-rata Reduction</b>					
Self-Insurance reserve	1.47	1.48	1.50	1.85	2.27
CERC Petition filing Fees	9.12	4.53	2.23	7.03	2.33
Advertisement and Publicity	4.97	3.45	3.06	4.96	2.56
Fibre leasing charges	0.00	1.59	4.38	3.78	0.00
<b>O&amp;M Expenses allowed for the Central Portion</b>	<b>381.65</b>	<b>286.54</b>	<b>318.47</b>	<b>325.15</b>	<b>627.83</b>

38. O&M Expenses allowed in respect of the assets for 2014-19 tariff period and the same are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses claimed by the Petitioner	397.21	297.58	329.64	342.78	634.99
O&M Expenses allowed	<b>381.65</b>	<b>286.54</b>	<b>318.47</b>	<b>325.15</b>	<b>627.83</b>

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

39. The Petitioner has claimed O&M Expenses in the case of Central Portion and accordingly O&M Expenses for one 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.



40. 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)	57.25	42.98	47.77	48.77	94.18
O&M Expenses (one month of O &M Expenses)	31.80	23.88	26.54	27.10	52.32
Receivables (two months of annual charges months)	151.71	135.14	141.72	143.46	197.50
<b>Total Working Capital</b>	<b>240.77</b>	<b>202.00</b>	<b>216.03</b>	<b>219.33</b>	<b>344.00</b>
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total Interest on Working Capital</b>	<b>32.50</b>	<b>27.27</b>	<b>29.16</b>	<b>29.61</b>	<b>46.44</b>
Particulars	<b>Non-Microwave – State Portion - Existing Assets</b>				
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (one month of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Receivables (two months of annual charges)	69.92	70.05	70.86	71.34	72.01
<b>Total Working Capital</b>	<b>69.92</b>	<b>70.05</b>	<b>70.86</b>	<b>71.34</b>	<b>72.01</b>
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Total Interest on Working Capital</b>	<b>9.44</b>	<b>9.46</b>	<b>9.57</b>	<b>9.63</b>	<b>9.72</b>
Particulars	<b>Non-Microwave – State Portion - Replaced SCADA / EMS</b>				
Maintenance Spares (15% of O&M Expenses)	0.00	0.00			
O&M Expenses (one month)	0.00	0.00			
Receivables (two months)	370.30	370.44			
<b>Total Working Capital</b>	<b>370.30</b>	<b>370.44</b>			
Rate of Interest on Working Capital (in %)	13.50	13.50			
<b>Total Interest on Working Capital</b>	<b>49.99</b>	<b>50.01</b>			

### Annual Fee and Charges

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



(₹ in lakh)

<b>Non-Microwave-Central Portion-fee and charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Opening Gross Capital Cost</b>	<b>5055.38</b>	<b>5055.38</b>	<b>5055.38</b>	<b>5055.38</b>	<b>5055.38</b>
Opening Gross Notional Loan	4356.08	4356.08	4356.08	4356.08	4356.08
Opening Gross Equity	699.30	699.30	699.30	699.30	699.30
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>2314.79</b>	<b>2694.50</b>	<b>3088.49</b>	<b>3495.20</b>	<b>3920.51</b>
Recovered Gross Notional Loan	2117.60	2447.73	2783.90	3123.16	3469.78
Recovered Gross Equity	197.19	246.76	304.59	372.04	450.73
<b>Opening Net Capital Cost</b>	<b>2740.59</b>	<b>2360.88</b>	<b>1966.89</b>	<b>1560.18</b>	<b>1134.87</b>
Opening Net Notional Loan	2238.48	1908.35	1572.18	1232.93	886.30
Opening Net Equity	502.11	452.54	394.71	327.25	248.57
<b>Recovered Capital Cost (During the Year)</b>	<b>379.71</b>	<b>393.99</b>	<b>406.71</b>	<b>425.31</b>	<b>454.04</b>
Recovered Notional Loan	330.14	336.16	339.26	346.63	362.25
Recovered Equity	49.57	57.83	67.45	78.69	91.79
<b>Closing Net Capital Cost</b>	<b>2360.88</b>	<b>1966.89</b>	<b>1560.18</b>	<b>1134.87</b>	<b>680.83</b>
Closing Net Notional Loan	1908.35	1572.18	1232.93	886.30	524.05
Closing Net Equity	452.54	394.71	327.25	248.57	156.78
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
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 31.8.2020)	6.42	5.42	4.42	3.42	2.42
Months	77.00	65.00	53.00	41.00	29.00
Weighted Average Rate of Interest p.a.	2.0131%	2.1026%	2.7827%	3.2939%	4.2942%
Weighted Average Rate of Interest p.m.	0.1678%	0.1752%	0.2319%	0.2745%	0.3579%
Monthly Recovery Factors -Loan	0.013855	0.016291	0.020073	0.025822	0.036365
Monthly Capital Recovery Charge - Loan	31.01	31.09	31.56	31.84	32.23
<b>Annual Capital Recovery Charge - Loan</b>	<b>372.16</b>	<b>373.06</b>	<b>378.70</b>	<b>382.04</b>	<b>386.76</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.020576	0.022830	0.026174	0.031570	0.041563
Monthly Capital Recovery Charge - Equity	10.33	10.33	10.33	10.33	10.33
<b>Annual Capital Recovery Charge - Equity</b>	<b>123.98</b>	<b>123.98</b>	<b>123.98</b>	<b>123.98</b>	<b>123.98</b>
Monthly Capital Recovery Charge - Total	41.34	41.42	41.89	42.17	42.56
<b>Annual Capital Recovery Charge - Total</b>	<b>496.14</b>	<b>497.04</b>	<b>502.68</b>	<b>506.01</b>	<b>510.73</b>
<b>Fee &amp; Charges (2014-19) (Annualized)</b>	<b>Non-Microwave: Central Portion - Charges</b>				
Annual Capital Recovery Charge - Loan	372.16	373.06	378.70	382.04	386.76
Annual Capital Recovery Charge - Equity	123.98	123.98	123.98	123.98	123.98
<b>Annual Capital Recovery Charge - Total</b>	<b>496.14</b>	<b>497.04</b>	<b>502.68</b>	<b>506.01</b>	<b>510.73</b>
<b>O&amp;M Expenses</b>	<b>381.65</b>	<b>286.54</b>	<b>318.47</b>	<b>325.15</b>	<b>627.83</b>
<b>Interest on Working Capital</b>	<b>32.50</b>	<b>27.27</b>	<b>29.16</b>	<b>29.61</b>	<b>46.44</b>





<b>Non-Microwave-Central Portion-fee and charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>910.29</b>	<b>810.84</b>	<b>850.31</b>	<b>860.78</b>	<b>1185.01</b>
<b>Interest on Working Capital</b>					
Maintenance Spares (15% of O&M Expenses)	57.25	42.98	47.77	48.77	94.18
O&M Expenses (one month)	31.80	23.88	26.54	27.10	52.32
Receivables (two months)	151.71	135.14	141.72	143.46	197.50
<b>Total</b>	<b>240.77</b>	<b>202.00</b>	<b>216.03</b>	<b>219.33</b>	<b>344.00</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>32.50</b>	<b>27.27</b>	<b>29.16</b>	<b>29.61</b>	<b>46.44</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>	<b>Non-Microwave: Central Portion - Charges</b>				
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	372.16	373.06	378.70	382.04	386.76
Annual Capital Recovery Charge - Equity	123.98	123.98	123.98	123.98	123.98
<b>Annual Capital Recovery Charge - Total</b>	<b>496.14</b>	<b>497.04</b>	<b>502.68</b>	<b>506.01</b>	<b>510.73</b>
<b>O&amp;M Expenses</b>	<b>381.65</b>	<b>286.54</b>	<b>318.47</b>	<b>325.15</b>	<b>627.83</b>
<b>Interest on Working Capital</b>	<b>32.50</b>	<b>27.27</b>	<b>29.16</b>	<b>29.61</b>	<b>46.44</b>
<b>Total Fee &amp; Charges (Applicable)</b>	<b>910.29</b>	<b>810.84</b>	<b>850.31</b>	<b>860.78</b>	<b>1185.01</b>

(₹ in lakh)

<b>Non-Microwave-State Portion- Existing Assets -fee and charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Opening Gross Capital Cost</b>	<b>4317.32</b>	<b>4317.32</b>	<b>4317.32</b>	<b>4317.32</b>	<b>4317.32</b>
Opening Gross Notional Loan	3750.59	3750.59	3750.59	3750.59	3750.59
Opening Gross Equity	566.73	566.73	566.73	566.73	566.73
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>2042.48</b>	<b>2358.71</b>	<b>2686.49</b>	<b>3024.45</b>	<b>3377.45</b>
Recovered Gross Notional Loan	1871.05	2148.25	2430.51	2715.36	3006.41
Recovered Gross Equity	171.43	210.46	255.98	309.09	371.04
<b>Opening Net Capital Cost</b>	<b>2274.84</b>	<b>1958.61</b>	<b>1630.83</b>	<b>1292.87</b>	<b>939.87</b>
Opening Net Notional Loan	1879.54	1602.34	1320.08	1035.23	744.18
Opening Net Equity	395.30	356.27	310.75	257.64	195.69
<b>Recovered Capital Cost (During the Year)</b>	<b>316.23</b>	<b>327.79</b>	<b>337.96</b>	<b>352.99</b>	<b>376.43</b>
Recovered Notional Loan	277.20	282.26	284.86	291.05	304.16
Recovered Equity	39.03	45.53	53.11	61.95	72.26
<b>Closing Net Capital Cost</b>	<b>1958.61</b>	<b>1630.83</b>	<b>1292.87</b>	<b>939.87</b>	<b>563.45</b>
Closing Net Notional Loan	1602.34	1320.08	1035.23	744.18	440.02
Closing Net Equity	356.27	310.75	257.64	195.69	123.43
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
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



<b>Non-Microwave-State Portion- Existing Assets -fee and charges</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Years (Capital to be recovered up to 31.8.2020)	6.42	5.42	4.42	3.42	2.42
Months	77.00	65.00	53.00	41.00	29.00
Weighted Average Rate of Interest p.a.	2.0131%	2.1026%	2.7827%	3.2939%	4.2942%
Weighted Average Rate of Interest p.m.	0.1678%	0.1752%	0.2319%	0.2745%	0.3579%
Monthly Recovery Factors -Loan	0.013855	0.016291	0.020073	0.025822	0.036365
Monthly Capital Recovery Charge - Loan	26.04	26.10	26.50	26.73	27.06
<b>Annual Capital Recovery Charge - Loan</b>	<b>312.49</b>	<b>313.24</b>	<b>317.98</b>	<b>320.78</b>	<b>324.74</b>
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors -Equity	0.020576	0.022830	0.026174	0.031570	0.041563
Monthly Capital Recovery Charge - Equity	8.13	8.13	8.13	8.13	8.13
<b>Annual Capital Recovery Charge - Equity</b>	<b>97.60</b>	<b>97.60</b>	<b>97.60</b>	<b>97.60</b>	<b>97.60</b>
Monthly Capital Recovery Charge - Total	34.17	34.24	34.63	34.87	35.20
<b>Annual Capital Recovery Charge - Total</b>	<b>410.09</b>	<b>410.84</b>	<b>415.58</b>	<b>418.38</b>	<b>422.34</b>
<b>Fee &amp; Charges (2014-19) (Annualized)</b>	<b>Non-Microwave: State Portion - Charges</b>				
Annual Capital Recovery Charge - Loan	312.49	313.24	317.98	320.78	324.74
Annual Capital Recovery Charge - Equity	97.60	97.60	97.60	97.60	97.60
<b>Annual Capital Recovery Charge - Total</b>	<b>410.09</b>	<b>410.84</b>	<b>415.58</b>	<b>418.38</b>	<b>422.34</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>9.44</b>	<b>9.46</b>	<b>9.57</b>	<b>9.63</b>	<b>9.72</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>419.53</b>	<b>420.30</b>	<b>425.14</b>	<b>428.01</b>	<b>432.07</b>
<b>Interest on Working Capital</b>					
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (One month)	0.00	0.00	0.00	0.00	0.00
Receivables (Two months)	69.92	70.05	70.86	71.34	72.01
<b>Total</b>	<b>69.92</b>	<b>70.05</b>	<b>70.86</b>	<b>71.34</b>	<b>72.01</b>
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>9.44</b>	<b>9.46</b>	<b>9.57</b>	<b>9.63</b>	<b>9.72</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>	<b>Non-Microwave: State Portion - Charges</b>				
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Capital Recovery Charge - Loan	312.49	313.24	317.98	320.78	324.74
Annual Capital Recovery Charge - Equity	97.60	97.60	97.60	97.60	97.60
<b>Annual Capital Recovery Charge - Total</b>	<b>410.09</b>	<b>410.84</b>	<b>415.58</b>	<b>418.38</b>	<b>422.34</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>9.44</b>	<b>9.46</b>	<b>9.57</b>	<b>9.63</b>	<b>9.72</b>
<b>Total Fee &amp; Charges (Applicable)</b>	<b>419.53</b>	<b>420.30</b>	<b>425.14</b>	<b>428.01</b>	<b>432.07</b>



(₹ in lakh)

<b>Non-Microwave-State Portion- Replaced SCADA / EMS -fee and charges</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Opening Gross Recoverable Capital Cost (after salvage value)</b>	<b>8259.73</b>	<b>8259.73</b>
Opening Gross Notional Loan	7175.49	7175.49
Opening Gross Equity	1084.24	1084.24
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>4113.26</b>	<b>6140.96</b>
Recovered Gross Notional Loan	3768.03	5454.63
Recovered Gross Equity	345.23	686.34
<b>Opening Net Capital Cost</b>	<b>4146.47</b>	<b>2118.77</b>
Opening Net Notional Loan	3407.46	1720.86
Opening Net Equity	739.01	397.90
<b>Recovered Capital Cost (During the Year)</b>	<b>2027.70</b>	<b>2118.76</b>
Recovered Notional Loan	1686.60	1720.86
Recovered Equity	341.11	397.90
<b>Closing Net Capital Cost</b>	<b>2118.77</b>	<b>0.00</b>
Closing Net Notional Loan	1720.86	0.00
Closing Net Equity	397.90	0.00
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00
Additional Equity	0.00	0.00
Years (Capital to be recovered up to 31.08.2020)	2.00	1.00
Months	24.00	12.00
Weighted Average Rate of Interest p.a.	2.0131%	2.1026%
Weighted Average Rate of Interest p.m.	0.1678%	0.1752%
Monthly Recovery Factors -Loan	0.042546	0.084285
Monthly Capital Recovery Charge - Loan	144.97	145.04
<b>Annual Capital Recovery Charge - Loan</b>	<b>1739.69</b>	<b>1740.53</b>
Rate of Return on Equity p.a.	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%
Monthly Recovery Factors -Equity	0.048725	0.090494
Monthly Capital Recovery Charge - Equity	36.01	36.01
<b>Annual Capital Recovery Charge - Equity</b>	<b>432.10</b>	<b>432.10</b>
Monthly Capital Recovery Charge - Total	180.98	181.05
<b>Annual Capital Recovery Charge - Total</b>	<b>2171.78</b>	<b>2172.62</b>
<b>Fee &amp; Charges (2014-19) (Annualized)</b>	<b>Non-Microwave: State Portion - Charges</b>	
Annual Capital Recovery Charge - Loan	1739.69	1740.53
Annual Capital Recovery Charge - Equity	432.10	432.10
<b>Annual Capital Recovery Charge - Total</b>	<b>2171.78</b>	<b>2172.62</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>49.99</b>	<b>50.01</b>



<b>Non-Microwave-State Portion- Replaced SCADA / EMS -fee and charges</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Total Fee &amp; Charges (Annualized)</b>	<b>2221.77</b>	<b>2222.63</b>
<b>Interest on Working Capital</b>		
Maintenance Spares (15% of O&M Expenses)	0.00	0.00
O&M Expenses (One month)	0.00	0.00
Receivables (2 months)	370.30	370.44
<b>Total</b>	<b>370.30</b>	<b>370.44</b>
Rate of Interest on Working Capital	13.50%	13.50%
<b>Total Interest on Working Capital (Annualized)</b>	<b>49.99</b>	<b>50.01</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>	<b>Non-Microwave: State Portion - Charges</b>	
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
Annual Capital Recovery Charge - Loan	1739.69	1740.53
Annual Capital Recovery Charge - Equity	432.10	432.10
<b>Annual Capital Recovery Charge - Total</b>	<b>2171.78</b>	<b>2172.62</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>49.99</b>	<b>50.01</b>
<b>Total Fee &amp; Charges (Applicable)</b>	<b>2221.77</b>	<b>2222.63</b>

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

42. As per the directions of the Commission in order dated 8.12.2011 in Petition No.68/2010, the scope of the 2019 Tariff Regulations has been widened to include the Communication System used for inter-State transmission of electricity. However, as per clause (iii) of Regulation 8(1) 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.”*

43. The assets were put into commercial operation before 1.4.2009 and the capital cost of microwave system has been fully recovered during 2009-14 tariff period. In view of above provision in the 2019 Tariff Regulations for tariff in respect of



Communication System and ULDC System of the Petitioner, we continue to allow levelised tariff for non-microwave system as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, the fees and charges of Non-Microwave System are determined in this order.

44. 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 upto 31.8.2020 i.e. during 2020-21 period 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 assets has been completed by 31.8.2020 and no charges have been claimed for the remaining period.

45. The Petitioner has claimed the following transmission charges in respect of the assets for 2019-24 tariff period:

(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Capital Recovery Charge-Total	510.73	212.81	0.00	0.00	0.00
O&M Expenses	101.11	101.11	101.11	101.11	101.11
Interest on Working Capital	12.09	7.62	4.41	4.41	4.41
<b>Total Fees &amp; Charges</b>	<b>623.93</b>	<b>321.53</b>	<b>105.52</b>	<b>105.52</b>	<b>105.51</b>

(₹ in lakh)

Particulars	Non-Microwave-State Portion (Existing)	
	2019-20	2020-21
Annual Capital Recovery Charge-Total	422.34	175.98
O&M Expenses	0.00	0.00
Interest on Working Capital	6.35	2.65
<b>Total Fee &amp; Charges</b>	<b>428.70</b>	<b>178.63</b>

46. The details of the trued-up IWC claimed by the Petitioner in respect of the assets 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 Expenses)	15.17	15.17	15.17	15.17	15.17
O&M Expenses (one month)	8.43	8.43	8.43	8.43	8.43
Receivables (45 days)	76.71	39.64	13.01	13.01	13.01
<b>Total Working Capital</b>	<b>100.30</b>	<b>63.23</b>	<b>36.60</b>	<b>36.60</b>	<b>36.60</b>
Rate of Interest on Working Capital (in %)	12.05	12.05	12.05	12.05	12.05
<b>Total Interest on Working Capital</b>	<b>12.09</b>	<b>7.62</b>	<b>4.41</b>	<b>4.41</b>	<b>4.41</b>

(₹ in lakh)

Particulars	Non-Microwave-State Portion (Existing)	
	2019-20	2020-21
Maintenance Spares (15% of O&M Expenses)	23.29	23.29
O&M Expenses (One month)	12.94	12.94
Receivables (45 days)	19.92	19.92
<b>Total Working Capital</b>	<b>56.15</b>	<b>56.15</b>
Rate of Interest on Working Capital (in %)	12.05	12.05
<b>Total Interest on Working Capital</b>	<b>6.77</b>	<b>6.77</b>

### Capital cost

47. The Petitioner in its petition 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 tariff period. Hence, in the instant petition, truing 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 upto 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 assets has been completed by 31.8.2020 and no charges have been claimed for the remaining period.



48. The Petitioner has submitted that entire cost of non-microwave portion of the assets have been recovered by 2020-21. Therefore, only O&M Expenses and Interest on Working Capital for the Central Portion after 31.8.2020 of Non-Microwave Portion of the Communication System has been claimed. The Petitioner has claimed no additional capital expenditure in 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 fees and charges for 2019-24 period for Central as well as State Portion for “Non-Microwave portion” only:

Particulars	Capital	(₹ in lakh)	
		Non-Microwave	
		Central Portion	State Portion (Existing)
Retained Gross Capital Cost as on 1.4.2019 - “Non-Microwave”	Loan	4356.08	3750.59
	Equity	699.30	566.73
	<b>Total</b>	<b>5055.38</b>	<b>4317.32</b>
Capital Cost Recovered up to 31.3.2019 - “Non-Microwave”	Loan	<b>3832.04</b>	<b>3310.57</b>
	Equity	<b>542.51</b>	<b>443.30</b>
	<b>Total</b>	<b>4374.55</b>	<b>3753.87</b>
Net Capital Cost as on 1.4.2019 - “Non-Microwave”	Loan	524.05	440.02
	Equity	156.78	123.43
	<b>Total</b>	<b>680.83</b>	<b>563.45</b>

### **Additional Capital Expenditure**

49. The Petitioner has not claimed any additional capital expenditure during 2019-24 tariff period for the non-microwave portion.

### **Debt-equity ratio**

50. The debt:equity ratio as on 1.4.2019, as approved in the instant order has been considered for the purpose of tariff in respect of Non-Microwave Central Portion and State Portion and the same are as follows:



Particulars	Non-Microwave					
	Central portion		State portion		Total	
	Amount (₹ in lakh)	In %	Amount (₹ in lakh)	In %	Amount (₹ in lakh)	In %
<b>Loan/Debt</b>	524.05	76.97	440.02	78.09	964.06	77.48
<b>Equity</b>	156.78	23.03	123.43	21.91	280.21	22.52
<b>Total</b>	<b>680.83</b>	<b>100.00</b>	<b>563.45</b>	<b>100.00</b>	<b>1244.28</b>	<b>100.00</b>

### Rates for Recovery of Loan and Equity

51. The Capital Recovery Factor for loan in respect of assets has been calculated by applying weighted average rate of interest and it works out to be 4.294% in case of the assets whose details are given at **Annexure-II** of this order. Thus, the rates considered on annual basis, have been converted to monthly rates and the same are as follows:

(₹ in lakh)

CRF for loan to be considered for Fee & Charges					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Non-Microwave- Central Portion	0.060736	0.202152	-	-	-
Non-Microwave – State Portion - Existing Assets	0.060736	0.202152	-	-	-

52. The Capital Recovery Factor for equity has been considered on the same basis as was approved vide order dated 12.12.2017 in Petition No. 39/TT/2015 and order dated 18.6.2019 in Review Petition No. 10/RP/2018 and that on post-tax return on equity of 15.50%. Thus, monthly recovery factors for equity in respect of Central Portion and State Portion for the assets are as follows:

(₹ in lakh)

CRF for equity to be considered for Fees & Charges					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Non-Microwave- Central Portion	0.065896	0.207816	-	-	-
Non-Microwave – State Portion - Existing Assets	0.065896	0.207816	-	-	-

53. In view of above, the amount of monthly capital recovery charges for loan and





equity both for Central and State Portions for the assets has been considered by using respective Capital Recovery Factors and the same are as follows:

(₹ in lakh)

Monthly capital recovery charges for loan					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Non-Microwave-Central Portion	31.83	30.37	-	-	-
Non-Microwave–State Portion - Existing Assets	26.72	25.50	-	-	-

(₹ in lakh)

Monthly capital recovery charges for equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Non-Microwave- Central Portion	10.33	10.33	-	-	-
Non-Microwave – State Portion - Existing Assets	8.13	8.13	-	-	-

54. Accordingly, the capital cost of the Non-Microwave Central portion has been recovered by 31.8.2020 after which only O&M Expenses and IWC have been claimed and that for State-Portion no expenses have been claimed after 31.8.2020.

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

55. The Petitioner has not claimed O&M Expenses for State Portion. The Petitioner has submitted the claim of the O&M Expenses for Central Portion as 2% of the capital cost subject to actual expenditure at the time of truing-up. The capital cost for the Central Portion is ₹5055.38 lakh. O&M Expenses claimed by the Petitioner in respect of the assets are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed by the Petitioner in the instant Petition	101.11	101.11	101.11	101.11	101.11
Allowed in the instant Petition	101.11	101.11	101.11	101.11	101.11

56. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses of ₹505.55 lakh for 2019-24 tariff period. O&M Expenses



allowed for 2014-19 tariff period is ₹1939.64 lakh. Taking into the consideration the fact that O&M Expenses claimed for 2019-24 tariff period are lower than the O&M Expenses allowed for 2014-19 tariff period, the O&M Expenses claimed for 2019-24 tariff period are allowed subject to truing up based on the actual expenditure. The Petitioner is directed to submit actual O&M Expenses in respect of the assets 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:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Total O&M Expenses Allowed	101.11	101.11	101.11	101.11	101.11

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

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

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

.....

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

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

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

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

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

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



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

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

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

58. The Petitioner has submitted that it has computed IWC for 2019-24 tariff 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 it has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) whereas 2021-22 onwards it has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points).

59. The necessary computations of interest on working capital (annualized) for non-microwave system-Central Portion are as follows:

(₹ in lakh)

<b>Non-Microwave system-Central Portion</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21 (Pro-rata)</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M Expenses for one month)	15.17	15.17	15.17	15.17	15.17
Working Capital for Maintenance Spares (15% of O&M Expenses)	8.43	8.43	8.43	8.43	8.43
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/annual transmission charges)	76.11	38.41	12.94	12.94	12.94
<b>Total Working Capital</b>	<b>99.70</b>	<b>62.01</b>	<b>36.53</b>	<b>36.53</b>	<b>36.53</b>
Rate of Interest on Working Capital (in %)	12.05%	11.25%	10.50%	10.50%	10.50%



<b>Interest on working Capital</b>	<b>12.01</b>	<b>6.98</b>	<b>3.84</b>	<b>3.84</b>	<b>3.84</b>
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(₹ in lakh)

<b>Non-Microwave System-State Portion (Existing)</b>		
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>
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)	52.20	21.02
<b>Total Working Capital</b>	<b>52.20</b>	<b>21.02</b>
Rate of Interest on Working Capital (in %)	12.05%	11.25%
<b>Interest on working capital</b>	<b>6.29</b>	<b>2.37</b>

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

60. The detailed calculations of fees and charges being allowed for the assets are summarized as follows:

(₹ in lakh)

<b>Particulars</b>	<b>Non-Microwave-Central Portion</b>				
	<b>2019-20</b>	<b>2020-21 (Pro-rata)</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge-Total	505.92	203.50	0.00	0.00	0.00
O&M Expenses	101.11	101.11	101.11	101.11	101.11
Interest on Working Capital	12.01	6.98	3.84	3.84	3.84
<b>Total Fees &amp; Charges</b>	<b>619.04</b>	<b>311.58</b>	<b>104.94</b>	<b>104.94</b>	<b>104.94</b>
<b>Particulars</b>	<b>Non-Microwave-State Portion Existing Assets</b>				
	<b>2019-20</b>	<b>2020-21</b>			
Annual Capital Recovery Charge-Total	418.30	168.16			
O&M Expenses	0.00	0.00			
Interest on Working Capital	6.29	2.37			
<b>Total Fees &amp; Charges</b>	<b>424.59</b>	<b>170.53</b>			

61. The details of fees and charges approved in respect of the assets for 2019-24 tariff period are as follows:



(₹ in lakh)

Non-Microwave-Central Portion-fees and charges					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Opening Gross Capital Cost</b>	<b>5055.38</b>	<b>5055.38</b>	-	-	-
Opening Gross Notional Loan	4356.08	4356.08	-	-	-
Opening Gross Equity	699.30	699.30	-	-	-
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>4374.55</b>	<b>4855.44</b>	-	-	-
Recovered Gross Notional Loan	<b>3832.04</b>	4205.86	-	-	-
Recovered Gross Equity	<b>542.51</b>	649.58	-	-	-
<b>Opening Net Capital Cost</b>	<b>680.83</b>	<b>199.94</b>	-	-	-
Opening Net Notional Loan	524.05	150.22	-	-	-
Opening Net Equity	156.78	49.71	-	-	-
<b>Recovered Capital Cost (During the Year)</b>	<b>480.89</b>	<b>199.94</b>	-	-	-
Recovered Notional Loan	373.83	150.22	-	-	-
Recovered Equity	107.07	49.71	-	-	-
<b>Closing Net Capital Cost</b>	<b>199.94</b>	<b>0.00</b>	-	-	-
Closing Net Notional Loan	150.22	0.00	-	-	-
Closing Net Equity	49.71	0.00	-	-	-
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>	-	-	-
Additional Notional Loan	0.00	0.00	-	-	-
Additional Equity	0.00	0.00	-	-	-
Years (Capital to be recovered up to 31.8.2020)	1.42	0.42	-	-	-
Months	17.00	5.00	-	-	-
Weighted Average Rate of Interest p.a.	4.294%	4.294%	-	-	-
Weighted Average Rate of Interest p.m.	0.358%	0.358%	-	-	-
Monthly Recovery Factors -Loan	0.060736	0.202152	-	-	-
Monthly Capital Recovery Charge - Loan	31.83	30.37	-	-	-
<b>Annual Capital Recovery Charge - Loan</b>	<b>381.94</b>	<b>151.84</b>	-	-	-
Rate of Return on Equity p.a.	15.500%	15.500%	-	-	-
Rate of Return on Equity p.m.	1.292%	1.292%	-	-	-
Monthly Recovery Factors -Equity	0.065896	0.207816	-	-	-
Monthly Capital Recovery Charge - Equity	10.33	10.33	-	-	-
<b>Annual Capital Recovery Charge - Equity</b>	<b>123.98</b>	<b>51.66</b>	-	-	-
Monthly Capital Recovery Charge - Total	42.16	40.70	-	-	-
<b>Annual Capital Recovery Charge - Total</b>	<b>505.92</b>	<b>203.50</b>	-	-	-
<b>Fee &amp; Charges (2019-24) (Pro-rata)</b>	<b>Non-Microwave: Central Portion - Charges</b>				
Annual Capital Recovery Charge - Loan	381.94	151.84	0.00	0.00	0.00
Annual Capital Recovery Charge - Equity	123.98	51.66	0.00	0.00	0.00
<b>Annual Capital Recovery Charge - Total</b>	<b>505.92</b>	<b>203.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>O&amp;M Expenses</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>
<b>Interest on Working Capital</b>	<b>12.01</b>	<b>6.98</b>	<b>3.84</b>	<b>3.84</b>	<b>3.84</b>



<b>Non-Microwave-Central Portion-fees and charges</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>Total Fee &amp; Charges (Pro-rata)</b>	<b>619.04</b>	<b>311.58</b>	<b>104.94</b>	<b>104.94</b>	<b>104.94</b>
<b>Interest on Working Capital</b>					
Maintenance Spares (15% of O&M)	15.17	15.17	15.17	15.17	15.17
O&M Expenses (1 Month)	8.43	8.43	8.43	8.43	8.43
Receivables (2 months)	76.11	38.41	12.94	12.94	12.94
<b>Total</b>	<b>99.70</b>	<b>62.01</b>	<b>36.53</b>	<b>36.53</b>	<b>36.53</b>
Rate of Interest on Working Capital	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working Capital (Pro-rata)</b>	<b>12.01</b>	<b>6.98</b>	<b>3.84</b>	<b>3.84</b>	<b>3.84</b>
<b>Fee &amp; Charges (2019-24) (Applicable)</b>	<b>Non-Microwave: Central Portion - Charges</b>				
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Capital Recovery Charge - Loan	381.94	151.84	0.00	0.00	0.00
Annual Capital Recovery Charge - Equity	123.98	51.66	0.00	0.00	0.00
<b>Annual Capital Recovery Charge - Total</b>	<b>505.92</b>	<b>203.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>O&amp;M Expenses</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>	<b>101.11</b>
<b>Interest on Working Capital</b>	<b>12.01</b>	<b>6.98</b>	<b>3.84</b>	<b>3.84</b>	<b>3.84</b>
<b>Total Fee &amp; Charges (Applicable)</b>	<b>619.04</b>	<b>311.58</b>	<b>104.94</b>	<b>104.94</b>	<b>104.94</b>

(₹ in lakh)

<b>Non-Microwave-State Portion (Existing)- fees and charges</b>		
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>
<b>Opening Gross Capital Cost</b>	<b>4317.32</b>	<b>4317.32</b>
Opening Gross Notional Loan	3750.59	3750.59
Opening Gross Equity	566.73	566.73
<b>Recovered Gross Capital Cost (As on 1st April)</b>	<b>3753.87</b>	<b>4152.05</b>
Recovered Gross Notional Loan	3310.57	3624.46
Recovered Gross Equity	443.30	527.59
<b>Opening Net Capital Cost</b>	<b>563.45</b>	<b>165.27</b>
Opening Net Notional Loan	440.02	126.13
Opening Net Equity	123.43	39.14
<b>Recovered Capital Cost (During the Year)</b>	<b>398.18</b>	<b>165.27</b>
Recovered Notional Loan	313.88	126.13
Recovered Equity	84.29	39.14
<b>Closing Net Capital Cost</b>	<b>165.27</b>	<b>0.00</b>
Closing Net Notional Loan	126.13	0.00
Closing Net Equity	39.14	0.00
<b>Additional Capital Cost</b>	<b>0.00</b>	<b>0.00</b>
Additional Notional Loan	0.00	0.00
Additional Equity	0.00	0.00



<b>Non-Microwave-State Portion (Existing)- fees and charges</b>		
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>
Years (Capital to be recovered up to 31.08.2020)	1.42	0.42
Months	17.00	5.00
Weighted Average Rate of Interest p.a.	4.294%	4.294%
Weighted Average Rate of Interest p.m.	0.358%	0.358%
Monthly Recovery Factors -Loan	0.060736	0.202152
Monthly Capital Recovery Charge - Loan	26.72	25.50
<b>Annual Capital Recovery Charge - Loan</b>	<b>320.70</b>	<b>127.49</b>
Rate of Return on Equity p.a.	15.500%	15.500%
Rate of Return on Equity p.m.	1.292%	1.292%
Monthly Recovery Factors -Equity	0.065896	0.207816
Monthly Capital Recovery Charge - Equity	8.13	8.13
<b>Annual Capital Recovery Charge - Equity</b>	<b>97.60</b>	<b>40.67</b>
Monthly Capital Recovery Charge - Total	34.86	33.63
<b>Annual Capital Recovery Charge - Total</b>	<b>418.30</b>	<b>168.16</b>
<b>Fee &amp; Charges (2014-19) (Pro-rata)</b>	<b>Non-Microwave: State Portion - Charges</b>	
Annual Capital Recovery Charge - Loan	320.70	127.49
Annual Capital Recovery Charge - Equity	97.60	40.67
<b>Annual Capital Recovery Charge - Total</b>	<b>418.30</b>	<b>168.16</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>6.29</b>	<b>2.37</b>
<b>Total Fee &amp; Charges (Pro-rata)</b>	<b>424.59</b>	<b>170.53</b>
<b>Interest on Working Capital</b>		
Maintenance Spares (15% of O&M)	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00
Receivables (2 months)	52.20	21.02
<b>Total</b>	<b>52.20</b>	<b>21.02</b>
Rate of Interest on Working Capital	12.05%	11.25%
<b>Total Interest on Working Capital (Pro-rata)</b>	<b>6.29</b>	<b>2.37</b>
<b>Fee &amp; Charges (2014-19) (Applicable)</b>	<b>Non-Microwave: State Portion - Charges</b>	
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>
Annual Capital Recovery Charge - Loan	320.70	127.49
Annual Capital Recovery Charge - Equity	97.60	40.67
<b>Annual Capital Recovery Charge - Total</b>	<b>418.30</b>	<b>168.16</b>
<b>O&amp;M Expenses</b>	<b>0.00</b>	<b>0.00</b>
<b>Interest on Working Capital</b>	<b>6.29</b>	<b>2.37</b>
<b>Total Fee &amp; Charges (Applicable)</b>	<b>424.59</b>	<b>170.53</b>

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

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



63. 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 Fees and RLDC Fees and Charges**

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

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

65. 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.

#### **Security Expenses**

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

67. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it 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.

### **Sharing of Transmission Charges**

68. 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 Fees and Charges of Regional Load Despatch Centre and other related matters Regulations, 2009 and the same are 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".*

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

70. 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 2019-24 tariff period.

71. Annexure-I to this order forms part of the order.



72. This order disposes of Petition No. 42/TT/2020 in terms of the above discussions and findings.

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

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

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



## Annexure I

	2014-15						
Loan	Opening (Net O/S as on 01.04.2014)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	154.83	77.42	77.42	116.13	10.90%	12.66	
Bond XI-(Option -1)	179.25	59.75	119.50	149.38	9.80%	14.64	
Bond XII	12.50	4.17	8.33	10.42	9.70%	1.01	
OBC	55.00	27.50	27.50	41.25	12.35%	5.09	
PNB II	66.00	33.00	33.00	49.50	11.60%	5.74	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	11012.70	1187.77	9824.93	10418.82	1.75%	182.14	
IBRD-II (for additional capitalization from COD to 31.3.2006)	496.96	53.60	443.36	470.16	1.75%	8.22	
IBRD-II (for additional capitalization during 2006-07)	1164.63	125.61	1039.02	1101.83	1.75%	19.26	
<b>Total Loan</b>	<b>13141.87</b>	<b>1568.81</b>	<b>11573.06</b>	<b>12357.47</b>		<b>248.77</b>	<b>2.013085%</b>
	2015-16						
Loan	Opening (Net O/S as on 01.04.2015)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	77.42	77.42	0.00	38.71	10.90%	4.22	
Bond XI-(Option -1)	119.50	59.75	59.75	89.63	9.80%	8.78	
Bond XII	8.33	4.17	4.17	6.25	9.70%	0.61	
OBC	27.50	27.50	0.00	13.75	12.35%	1.70	
PNB II	33.00	33.00	0.00	16.50	11.60%	1.91	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	9824.93	1264.16	8560.77	9192.85	1.97%	181.34	
IBRD-II (for additional capitalization from COD to 31.3.2006)	443.36	57.05	386.31	414.84	1.97%	8.18	
IBRD-II (for additional capitalization during 2006-07)	1039.02	133.69	905.33	972.18	1.97%	19.18	
<b>Total Loan</b>	<b>11573.06</b>	<b>1656.73</b>	<b>9916.33</b>	<b>10744.69</b>		<b>225.92</b>	<b>2.102611%</b>



	2016-17						
Loan	Opening (Net O/S as on 01.04.2016)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	0.00	0.00	0.00	0.00	10.90%	0.00	
Bond XI-(Option -1)	59.75	59.75	0.00	29.88	9.80%	2.93	
Bond XII	4.17	4.17	0.00	2.08	9.70%	0.20	
OBC	0.00	0.00	0.00	0.00	12.35%	0.00	
PNB II	0.00	0.00	0.00	0.00	11.60%	0.00	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	8560.77	1345.92	7214.85	7887.81	2.76%	217.55	
IBRD-II (for additional capitalization from COD to 31.3.2006)	386.31	60.74	325.57	355.94	2.76%	9.82	
IBRD-II (for additional capitalization during 2006-07)	905.33	142.33	763.00	834.17	2.76%	23.01	
<b>Total Loan</b>	<b>9916.33</b>	<b>1612.91</b>	<b>8303.42</b>	<b>9109.87</b>		<b>253.50</b>	<b>2.782681%</b>
	2017-18						
Loan	Opening (Net O/S as on 01.04.2017)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	0.00	0.00	0.00	0.00	10.90%	0.00	
Bond XI-(Option -1)	0.00	0.00	0.00	0.00	9.80%	0.00	
Bond XII	0.00	0.00	0.00	0.00	9.70%	0.00	
OBC	0.00	0.00	0.00	0.00	12.35%	0.00	
PNB II	0.00	0.00	0.00	0.00	11.60%	0.00	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	7214.85	1432.65	5782.20	6498.53	3.29%	214.05	
IBRD-II (for additional capitalization from COD to 31.3.2006)	325.57	64.65	260.92	293.25	3.29%	9.66	
IBRD-II (for additional capitalization during 2006-07)	763.00	151.51	611.49	687.25	3.29%	22.64	



<b>Total Loan</b>	<b>8303.42</b>	<b>1648.81</b>	<b>6654.61</b>	<b>7479.02</b>		<b>246.35</b>	<b>3.293900%</b>
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Loan	2018-19						
	Opening (Net O/S as on 01.04.2018)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	0.00	0.00	0.00	0.00	10.90%	0.00	
Bond XI-(Option -1)	0.00	0.00	0.00	0.00	9.80%	0.00	
Bond XII	0.00	0.00	0.00	0.00	9.70%	0.00	
OBC	0.00	0.00	0.00	0.00	12.35%	0.00	
PNB II	0.00	0.00	0.00	0.00	11.60%	0.00	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	5782.20	1524.96	4257.24	5019.72	4.29%	215.56	
IBRD-II (for additional capitalization from COD to 31.3.2006)	260.92	68.81	192.11	226.52	4.29%	9.73	
IBRD-II (for additional capitalization during 2006-07)	611.49	161.27	450.22	530.86	4.29%	22.80	
<b>Total Loan</b>	<b>6654.61</b>	<b>1755.04</b>	<b>4899.57</b>	<b>5777.09</b>		<b>248.08</b>	<b>4.294200%</b>



## Annexure II

2019-20							
Loan	Opening (Net O/S as on 01.04.2014)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	0.00	0.00	0.00	0.00	10.90%	0.00	
Bond XI-(Option -1)	0.00	0.00	0.00	0.00	9.80%	0.00	
Bond XII	0.00	0.00	0.00	0.00	9.70%	0.00	
OBC	0.00	0.00	0.00	0.00	12.35%	0.00	
PNB II	0.00	0.00	0.00	0.00	11.60%	0.00	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	4257.24	1623.42	2633.82	3445.53	4.29%	147.96	
IBRD-II (for additional capitalization from COD to 31.3.2006)	192.11	73.26	118.85	155.48	4.29%	6.68	
IBRD-II (for additional capitalization during 2006-07)	450.22	171.68	278.54	364.38	4.29%	15.65	
<b>Total Loan</b>	<b>4899.57</b>	<b>1868.36</b>	<b>3031.21</b>	<b>3965.39</b>		<b>170.28</b>	<b>4.294200%</b>
2020-21							
Loan	Opening (Net O/S as on 01.04.2015)	Repayment	Closing	Average	Rate of interest	Interest	Weighted Average Rate of Interest
Bond IX	0.00	0.00	0.00	0.00	12.25%	0.00	
Bond X	0.00	0.00	0.00	0.00	10.90%	0.00	
Bond XI-(Option -1)	0.00	0.00	0.00	0.00	9.80%	0.00	
Bond XII	0.00	0.00	0.00	0.00	9.70%	0.00	
OBC	0.00	0.00	0.00	0.00	12.35%	0.00	
PNB II	0.00	0.00	0.00	0.00	11.60%	0.00	
IBRD-I	0.00	0.00	0.00	0.00	0.00%	0.00	
IBRD-II	2633.82	1728.25	905.57	1769.69	4.29%	75.99	
IBRD-II (for additional capitalization from COD to 31.3.2006)	118.85	77.99	40.86	79.86	4.29%	3.43	
IBRD-II (for additional capitalization during 2006-07)	278.54	182.77	95.77	187.15	4.29%	8.04	
<b>Total Loan</b>	<b>3031.21</b>	<b>1989.01</b>	<b>1042.20</b>	<b>2036.70</b>		<b>87.46</b>	<b>4.294200%</b>

