

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 692/TT/2020

Coram:

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

Date of Order: 19.05.2022

In the matter of:

Petition under sub-Section 4 of Section 28 of the Electricity Act, 2003 for truing up of fee and charges for 2014-19 period and determination of fee and charges for 2019-24 period for Unified Load Despatch and Communication Scheme (ULDC) [PGCIL Portion i.e. Communication System Portion and State Load Despatch Centers] (SLDC) System retained by Powergrid after formation of Power 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. Neyvelli Lignite Corporation Limited,
P.O. Neyvelli-607 801,
Cuddalore District, Tamil Nadu.
3. Nuclear Power Corporation of India Limited,
Nabhkiya Bhawan, Anu-Shakti Nagar,
Mumbai-400 094.
4. LANCO-Kondapalli Power Private Limited,
Plot No. 4, Software Units Layout,
Hitech City, Madhapur,
Hyderabad-500 081.
5. NTPC Tamil Nadu Energy Company Limited,



Vallur Thermal Power Station,
Vellivoyalchavadi P.O, Ponneri Taluk,
Thiruvallur District, Chennai-600 103.

6. Simhapuri Energy Private Limited,
Madhucon Green Lands,
6-3-866/2, 3rd Floor, Begumpet,
Hyderabad-500 016.
7. Meenakshi Energy Private Limited,
8-2-418, Meenakshi House,
Road No. 7, Banjara Hills,
Hyderabad-500 034.
8. Andhra Pradesh Power Co-ordination Committee,
APTRANSCO, Vidyut Soudha,
Hyderabad-500 082.
9. Telangana State Power Co-ordination Committee,
TSTRANSCO, Vidyut Soudha,
Hyderabad-500 082.
10. Power Company of Karnataka Limited,
Room No. 503, KPTCL Building, Kaveri Bhavan,
Bangalore-560 009, Karnataka.
11. Kerala State Electricity Board,
Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004.
12. TANGEDCO,
7th Floor, Eastern Wing,
144, Anna Salai,
Chennai-600 002.
13. Electricity Department,
Government of Puducherry,
Poducherry-605 001.
14. Electricity Department,
Government of Goa,
Curti-Ponda,
Goa-403 401.

.....Respondent(s)

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

For Respondents: None



ORDER

Instant petition has been filed by Power Grid Corporation of India Limited under sub-Section (4) of Section 28 and Section 79(1)(d) of Electricity Act, 2003, for trueing up of fees and charges for 2014-19 period and determination of fees and charges for 2019-24 period in respect of Unified Load Despatch and Communication Scheme (Powergrid Portion i.e. Communication System Portion and State Load Despatch Centre (SLDC) System retained by the Petitioner after formation of Power System Operation Corporation Limited (POSOCO) in Southern Region.

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-8 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-9 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 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 claim the capital spares at the end of tariff block as per actual.



8) 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.

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

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

11) Allow the Petitioner to bill and recover the Charges for 2014-19, for communication system other than central transmission system to be shared by beneficiaries in proportion to the capital cost belonging to respective beneficiaries.

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

Background

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

(a) Central Electricity Authority had accorded techno-economic clearance for the Scheme vide letter dated 27.1.1994 at an estimated cost of ₹55234 lakh, including IDC of ₹7065 lakh based on 4th quarter 1992 price level. The Investment Approval and expenditure sanction was accorded by the Central Government in Ministry of Power vide letter dated 16.2.1995 at an estimated cost of ₹62157 lakh, including IDC of ₹12598 lakh. During execution of the Scheme there has been an increase in the cost on account of change in scope of approved items of work, Foreign Exchange Rate Variation and other reasons. As such, based on the recommendations of Public Investment Board, the Central Government vide letter dated 5.2.2002, accorded its fresh approval to the Revised Cost Estimates of ₹68380 lakh including IDC of ₹11809 lakh, consisting of (i) Powergrid's Portion of ₹55904 lakh including IDC of ₹9224 lakh



and (ii) States' Portion of ₹12475 lakh including IDC of ₹2585 lakh, based on 2nd quarter 2001 price level. As per the revised approval, the Unified Load Despatch and Communication (ULDC) Scheme was to be declared under commercial operation by June, 2002 and it was in fact declared under commercial operation on 1.7.2002.

- (b) The Commission vide order dated 27.1.2009 in Petition No.143/2005 and order dated 18.3.2011 in Petition No.36/2010 had approved the fees and charges for 2004-09 period with respect to expenditure incurred up to 31.3.2009. The details of the assets (hereinafter referred to as the 'assets') covered in the instant petition is as follows:

Details of the Assets
Communication & SLDC System retained by PGCIL

- (c) Tariff of 2009-14 period in respect of the assets was allowed vide order dated 24.12.2013 in Petition No. 60/TT/2012. Further, tariff for 2014-19 period of the assets was allowed vide order dated 15.7.2016 in Petition No. 545/TT/2014.
- (d) As per the directive of Ministry of Power dated 4.7.2008, Power System Operation Corporation Limited (POSOCO), a wholly owned subsidiary of the Petitioner, responsible for operation of National Load Despatch Centre and Regional Load Despatch Centres (RLDCs) was established. The Government of India had constituted a Task Force to look into the financial aspects for augmentation and up-gradation of the State Load Despatch Centres and issues related to emoluments for the personnel engaged in system operation. The Task Force made certain recommendations with regard to the ownership of the assets. Subsequent to the Task Force's report, Powergrid constituted Committees at the regional level to identify the assets to be transferred to



POSOCO. As per the directions of the Committees, the assets directly related to discharge of load despatch functions raised by the Petitioner under the Scheme have been transferred to POSOCO. The Petitioner was left with the assets associated with the communication system under the Central Portion of the Scheme and assets for SLDCs (the States' Portion).

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

(A) Assets transferred to POSOCO

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

(B) Assets which remain with the Petitioner

I. Central Portion

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



(vi) Auxiliary power supply system.

II. State Portion

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

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

(g) 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 Central Transmission Utility (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 utilized by it. It is however made clear that the timeline for replacement of the digital microwave by optical fibre should be strictly complied with.”

- (h) 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 to continue with the levelized tariff for the assets, the fees and charges of the communication system and SLDC System retained by the Petitioner were approved vide order dated 24.12.2013 in Petition No. 60/TT/2012 for 2009-14 period based on the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010.
- (i) 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 period. The assets have completed 15 years of their useful life on 30.6.2017. Accordingly, in line with order dated 8.12.2011 in Petition No. 68/2010, total capital cost in respect of non-microwave system shall be recovered up to 30.6.2017 i.e. during 2017-18 period. The net capital cost of the assets as approved vide order dated 15.7.2016 in Petition No. 545/TT/2014 is as under:

Particulars	Capital	Non-Microwave	
		Central Portion	State Portion
Retained Gross Capital Cost as on 1.4.2014 - "Non-Microwave"	Loan	6928.72	28067.08
	Equity	834.89	3794.62
	Total	7763.62	31861.70
Capital Cost Recovered up to	Loan	4882.67	19691.13



Particulars	Capital	Non-Microwave	
		Central Portion	State Portion
31.3.2014 -“Non-Microwave”	Equity	473.27	2144.10
	Total	5355.94	21835.23
Net Capital Cost as on 1.4.2014- “Non-Microwave”	Loan	2046.05	8375.95
	Equity	361.63	1650.52
	Total	2407.68	10026.47

- (j) The fees and charges for 2014-19 period as approved vide order dated 15.7.2016 in Petition No. 545/TT/2014 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 (Pro-rata)
Annual Capital Recovery Charge- Loan	653.90	653.90	653.90	163.47
Annual Capital Recovery Charge- Equity	142.34	142.34	142.34	35.59
Annual Capital Recovery Charge- Total	796.24	796.24	796.24	199.06
O&M Expenses	166.31	171.84	177.54	45.86
Interest on Working Capital	27.52	27.82	28.14	7.12
Total Fee & Charges	990.07	995.90	1001.92	252.03
Particulars	Non-Microwave – State Portion			
Annual Capital Recovery Charge- Loan	2676.88	2676.88	2676.88	669.22
Annual Capital Recovery Charge- Equity	649.67	649.67	649.67	162.42
Annual Capital Recovery Charge- Total	3326.55	3326.55	3326.55	831.64
O&M Expenses	-	-	-	-
Interest on Working Capital	76.57	76.57	76.57	19.14
Total Fee & Charges	3403.12	3403.12	3403.12	850.78

4. The Commission in Record of Proceedings for the hearing dated 24.9.2021, directed the Petitioner to submit details of the assets covered under Unified Load Despatch and Communication Scheme (ULDC).

5. The Petitioner vide affidavit dated 14.10.2021 has submitted the details of assets covered under Unified Load Despatch and Communication Scheme (ULDC) of Southern Region as under:

EMS/SCADA System



(a) Establishment of Control Centers in States and at Regional level for SCADA (Supervisory Control and Data Acquisition) and EMS (Energy Management Systems).

- RLDC (Regional Load Despatch Center) at Bangalore.
- CPCC (Central Project Coordination Center) at Bangalore
- SLDC/Sub-LDC (State Load Despatch Centers/Sub-Load Despatch Centers at Hyderabad, Warangal, Vijaywada and Cuddapah (Andhra Pradesh), Bangalore, Hubli and Davangere (Karnataka), Chennai, Erode and Madurai (Tamilnadu), Kalamassery, Kannur and Trivandrum (Kerala), Pondichery (UT of Pondichery).

Remote Terminal Units

(a) Supply and Installation of 201 number of RTU's for Central and State Sector.

(b) Adaptation work at sub-stations and generating stations to meet the requirement of data acquisition through RTUs.

Fibre Optic Links

(a) Out of 2324 km of OFC under SR ULDC, three lines were taken up in central sector viz,

- a) Salem-Somanahalli (OPGW 182 km);
- b) Gooty-Somanahalli (Wrap cable 301 km);
- c) Udumalpet-Trichur (Wrap 128 km)

(b) It also includes supply and installation of FO Equipment.

Microwave links

(a) Initially, microwave network comprising of 35 hops was implemented in SR-ULDC project. However, the microwave network was vacated/ upgraded as per directive of DoT.

PLCC System

(a) Establishment of PLCC system for Central Sector and State Sector.

Auxiliary Power Supply System

(a) Supply and installation of equipment for Auxiliary Power Supply System for Central Sector and State Sector



(b) Included items: UPS, Uninterrupted Power Supply (9 numbers), DG set (9 numbers) and DC power supply system (24 numbers) etc.

(c) Other infrastructure related facilities such as air-conditioning, fire-fighting, construction/renovation of buildings, etc.

6. On the issue of assets under ULDC whether upgraded/replaced, details of new assets and details of tariff petition, the Petitioner has submitted that subsequent to formation of POSOCO, assets under instant scheme were divided into two categories viz assets transferred to POSOCO and assets retained by Powergrid. The arrangement of transfer and retention was approved by the Commission vide order dated 8.12.2011 in Petition No. 68/2010. The details of the assets are as under:

(A) Assets transferred to POSOCO

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

(B) Assets which remain with the Petitioner

I. Central Portion:

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

II. State Portion:

Entire State portion which consists of the following equipment 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)



7. Subsequently, microwave network was also vacated/ upgraded by the end of March, 2012 as per directive of DoT. The microwave links were replaced by Fibre Optic communication system under the following scheme:

“Fibre Optic Communication System (847.124 km) in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links” in Southern Region

8. The details of the assets covered under the instant scheme as is follows:

Asset No.	Asset's Name	COD	Petition No.
Asset-1	384.474 km of Fiber Optic Communication System in lieu of existing Microwave (State Sector)	1.2.2013	169/TT/2018
Asset-2	31.80 km of Fiber Optic Communication system in lieu of existing Microwave (State Sector)	1.4.2013	169/TT/2018
Asset-3	906.04 km of Fiber Optic Communication System in lieu of existing Microwave (central Sector)	1.4.2013	169/TT/2018
Asset-4	168.46 km of Fiber Optic Communication system in lieu of existing microwave (Central Sector)	1.1.2014	169/TT/2018
Asset-5	3.26 km of Fiber Optic Communication system in lieu of existing microwave (State Sector)	1.1.2014	169/TT/2018
Asset-6	19.50 km Optic Fiber under TSTRANSCO SECTOR (Erstwhile APTRANSCO) (State Sector)	1.6.2015	255/TT/2015
Asset-7	0.697 km Optic Fiber under KSEBL SECTOR (State Sector)	1.6.2015	255/TT/2015
Asset-8	39.006 km Optic Fibre for Neelamangla-Yelahanka (Central Sector)	28.3.2018	143/TT/2019

9. Further, with regard to SCADA/EMS, the Petitioner has submitted that entire EMS/SCADA portion of State is scrapped and are replaced by the State utilities i.e. States have built their own SCADA/EMS system and there is no upgradation of SCADA/EMS in Southern region undertaken by Powergrid.

10. On the issue of the assets under ULDC whether in use, the Petitioner has submitted that the assets under SRULDC have completed their useful life of 15 years on 30.6.2017 and the entire cost of the assets under Central Sector and State Sector has been recovered by 30.6.2017. However, certain assets such as RTUs, Fibre Optic Links, PLCC System and Auxiliary Power Supply System have not yet been upgraded and they are currently in use. However, only O&M Expenses and corresponding Interest



on Working Capital (IWC) for the Central Sector portion is now claimed in the instant true up petition w.e.f. 1.7.2017

11. 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 Southern Region.

12. 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.

13. The hearing in this matter was held on 24.9.2021 and order was reserved.

14. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 31.12.2019 and 14.10.2021.

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

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

16. The Commission vide order dated 8.12.2011 in Petition No.68/2010, enlarged the scope of 2009-14 Tariff Regulations 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.”

17. The instant assets were put into commercial operation before 1.4.2009 and capital cost of microwave system has been fully recovered during 2009-14 period. Accordingly, we continue to allow levelised tariff for non-microwave system based on the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010. Accordingly, truing-up of annual fees and charges of non-microwave system for 2014-19 period is considered in this order.

18. The details of the trued-up fees and 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	795.39	795.48	797.80	199.58	0.00
O&M Expenses	174.07	313.92	303.50	194.51	180.59
Interest on Working Capital	27.92	35.65	35.13	15.34	9.98
Total Fee & Charges	997.38	1145.06	1136.43	409.43	190.57
Particulars	Non-Microwave – State Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Capital Recovery Charge-Total	3323.06	3323.44	3332.91	833.76	0.00
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	76.49	76.50	76.72	19.19	0.00
Total Fee & Charges	3399.55	3399.94	3409.63	852.95	0.00

19. 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)	26.11	47.09	45.53	29.18	27.09
O&M Expenses (1 Month)	14.51	26.16	25.29	16.21	15.05
Receivables (2 months)	166.23	190.84	189.40	68.24	31.76
Total Working Capital	206.85	264.09	260.22	113.62	73.90



Rate of Interest on Working Capital (%)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	27.92	35.65	35.13	15.34	9.98
Particulars	Non-Microwave – State Portion				
Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00	0.00
O&M Expenses (1 Month)	0.00	0.00	0.00	0.00	0.00
Receivables (2 months)	566.59	566.66	568.27	568.63	0.00
Total Working Capital	566.59	566.66	568.27	568.63	0.00
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	76.49	76.50	76.72	76.77	0.00

Capital Cost

20. The Petitioner has submitted that in line with order dated 8.12.2011 in Petition No. 68/2010, total capital cost in respect of microwave portion has been recovered during 2009-14 tariff period. Hence, in the instant petition, true up of microwave portion has not been carried out. Further, in line with Commission's order dated 15.7.2016 in Petition No. 545/TT/2014, the Petitioner has recovered the cost of microwave portion during 2009-14 tariff period. The date of commercial operation of the asset is 1.7.2002. Hence, the asset has completed 15 years as on 30.6.2017. In terms of Commission's order dated 8.12.2011 in Petition No. 68/2010, total capital cost in respect of non-microwave system shall be recovered up to 30.6.2017 i.e. during 2017-18 period and for the remaining period O&M Expenses and Interest on Working Capital (IWC) for the Central Portion has been claimed by the Petitioner. Entire recovery of the State Portion of the asset has been completed by 30.6.2017 and no charges have been claimed for the remaining period.

21. Net capital cost as approved vide order dated 15.7.2016 in Petition No. 545/TT/2014 has been considered as on 1.4.2014 for the purpose of trueing up of fees and charges for the assets. The Petitioner has not claimed any additional capital expenditure during 2014-19 tariff period. Accordingly, capital cost considered for



determining fees and charges for 2014-19 tariff period in respect of the assets 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	6928.72	28067.08
	Equity	834.89	3794.62
	Total	7763.62	31861.70
Capital cost recovered up to 31.3.2014-"Non-Microwave"	Loan	4882.67	19691.13
	Equity	473.27	2144.10
	Total	5355.94	21835.23
Net capital cost as on 1.4.2014- "Non-Microwave"	Loan	2046.05	8375.95
	Equity	361.63	1650.52
	Total	2407.68	10026.47

Debt-Equity Ratio

22. The debt: equity ratio as on 1.4.2014 in respect of the assets, as approved vide order dated 15.7.2016 in Petition No. 545/TT/2014 has been considered for the purpose of truing up and same is as follows:

(₹ in lakh)

Particulars	Non-Microwave					
	Central portion		State portion		Total	
	Amount	In %	Amount	In %	Amount	In %
Loan/Debt	2046.05	84.98	8375.95	83.54	10421.99	83.82
Equity	361.63	15.02	1650.52	16.46	2012.15	16.18
Total	2407.68	100.00	10026.47	100.00	12434.15	100.00

Rates for Recovery of loan and equity

23. The Petitioner has not submitted the details of repayment of the loans. However, the Petitioner has submitted the rates of interests corresponding to the loans. We have taken into consideration the rates of the loans as submitted by the Petitioner. The Petitioner has considered Weighted Average Rate of Interest (WAROI) in respect of the assets and the same is given in Annexure-I to this order. We have considered and allowed the same in respect of the assets.



24. Capital Recovery Factor (CRF) for loans in respect of the assets has been calculated by applying weighted average rate of interest on the basis of impact due to change in floating rate of interest of loan and it works out to be 2.2132%, 2.2257%, 2.7598% and 3.2374% for 2014-15, 2015-16, 2016-17 and 2017-18 respectively in respect of non-microwave system. Thus, the rates considered on annual basis, have been converted to monthly rates. Thus, monthly recovery factors for loans for Central Portion and State Portion for the assets are as follows:

Capital Recovery Factors for loans to be considered for Fee & Charges				
Particulars	2014-15	2015-16	2016-17	2017-18
Non-Microwave- Central Portion	0.026598	0.038006	0.067900	0.335134
Non-Microwave – State Portion	0.026598	0.038006	0.067900	0.335134

25. Capital Recovery Factor for equity has been considered as was approved vide order dated 15.7.2016 in Petition No. 545/TT/2014 and post tax return on equity of 15.50% without grossing has been applied for calculating capital recovery factor for equity. Thus, monthly recovery factors for equity of Central Portion and State Portion in respect of the assets is as follows:

Capital Recovery Factors for equity to be considered for Fee & Charges				
Particulars	2014-15	2015-16	2016-17	2017-18
Non-Microwave- Central Portion	0.032801	0.044106	0.073762	0.341981
Non-Microwave – State Portion	0.032801	0.044106	0.073762	0.341981

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

(₹ in lakh)

Monthly Capital Recovery Charges for loan				
Particulars	2014-15	2015-16	2016-17	2017-18 (Pro-rata)
Non-Microwave- Central Portion	54.42	54.43	54.62	54.66
Non-Microwave – State Portion	222.78	222.81	223.60	223.78



(₹ in lakh)

Monthly Capital Recovery Charges for equity				
Particulars	2014-15	2015-16	2016-17	2017-18 (Pro-rata)
Non-Microwave- Central Portion	11.86	11.86	11.86	11.86
Non-Microwave – State Portion	54.14	54.14	54.14	54.14

27. Accordingly, the recovery of capital during 2014-19 has been worked out. The date of commercial operation of the assets is 1.7.2002. Hence, the assets have completed 15 years as on 30.6.2017. In terms of Commission's order dated 8.12.2011 in Petition No. 68/2010, total capital cost in respect of non-microwave system shall be recovered upto 30.6.2017 i.e. during 2017-18 period and the details of the same are as follows:

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
Capital cost recovered during 2014-19 - "Non-Microwave"	Loan	2046.05	8375.95
	Equity	361.63	1650.52
	Total	2407.68	10026.47

Operation & Maintenance Expenses (O&M Expenses)

28. The Petitioner has not submitted any claim for O&M Expenses of microwave system for Central Portion. The Petitioner has submitted claim for O&M Expenses of non-microwave system for Central Portion on actual basis. The details of O&M Expenses claimed earlier by the Petitioner on projection basis for 2014-19 tariff period and allowed vide order dated 15.7.2016 in Petition No. 545/TT/2014 are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18
Claimed by the Petitioner in Petition No. 545/TT/2014	775.44	801.18	827.78	213.82
Amount allowed vide order dated 15.7.2016 in Petition No. 545/TT/2014.	166.31	171.84	177.54	45.86
Amount disallowed	609.13	629.34	650.24	167.96

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:



Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	174.07	313.92	303.50	194.51	180.59
Total claim as per Auditor's certificate dated 21.11.2019 including other projects	207.92	365.03	411.00	409.74	437.76

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

31. The Commission vide order dated 29.7.2016 in Petition No. 275/TT/2015 disallowed the Petitioner's claim for self-insurance. 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."

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

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

34. 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.



35. Accordingly, O&M Expenses allowed for 2014-19 period as per the Auditor's Certificate after deducting self-insurance portion and also by pro-rata reduction from the total cost approved in respect of the asset and the same is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	174.07	313.92	303.50	194.51	180.59
Total claim as per Auditor's Certificate dated 21.11.2019 including other projects	207.92	365.03	411.00	409.74	437.76
Self-insurance reserve	17.12	19.70	28.59	33.20	40.00
Petition filing fees	8.57	0.13	0.00	0.00	0.00
Advertisement and Publicity	4.31	9.28	1.06	0.00	6.51
Pro-rata reduction					
Self-insurance reserve	14.33	16.94	21.11	15.76	16.50
Petition filing Fees	7.17	0.11	0.00	0.00	0.00
Advertisement and Publicity	3.61	7.98	0.78	0.00	2.69
O&M Expenses allowed for Central Portion	148.95	288.89	281.61	178.75	161.40

Interest on Working Capital (IWC)

36. The Petitioner has claimed O&M Expenses in the case of Central Portion and accordingly O&M Expenses for one month of O&M Expenses, maintenance spares @15% of O&M Expenses, receivables for two months of Fees and Charges 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 calculating Interest on Working Capital on the Central Portion only.

37. The necessary computations of Interest on Working Capital (annualized) for non-microwave system-Central Portion are as follows:

Particulars	(₹ in lakh)				
	Non-Microwave-Central Portion				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares (15% of O&M Expenses)	22.34	43.33	42.24	26.81	24.21
O&M Expenses (one month of O&M Expenses)	12.41	24.07	23.47	14.90	13.45
Receivables	161.81	186.44	185.55	65.47	28.39



(two months of annual Charges)					
Total Working Capital	196.57	253.85	251.26	107.17	66.05
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	26.54	34.27	33.92	14.47	8.92
Particulars	Non-Microwave – State Portion				
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)	566.59	566.66	568.27	568.63	0.00
Total Working Capital	566.59	566.66	568.27	568.63	0.00
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Total Interest on Working Capital	76.49	76.50	76.72	76.77	0.00

Annual Fee and charges

38. Detailed computation of various components of the tried up annual fees and charges for the assets for 2014-19 tariff period is summarized as follows:

(₹ in lakh)

Microwave-Central Portion-fee and charges					
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	7763.61	7763.61	7763.61	7763.61	7763.61
Opening Gross Notional Loan	6928.72	6928.72	6928.72	6928.72	6928.72
Opening Gross Equity	834.89	834.89	834.89	834.89	834.89
Recovered Gross Capital Cost (As on 1st April)	5355.94	6062.59	6798.36	7565.82	7763.61
Recovered Gross Notional Loan	4882.67	5496.64	6124.28	6765.61	6928.72
Recovered Gross Equity	473.27	565.96	674.08	800.21	834.89
Opening Net Capital Cost	2407.68	1701.02	965.25	197.80	0.00
Opening Net Notional Loan	2046.05	1432.08	804.44	163.11	0.00
Opening Net Equity	361.63	268.94	160.81	34.69	0.00
Recovered Capital Cost (During the Year)	706.66	735.77	767.45	197.80	0.00
Recovered Notional Loan	613.97	627.64	641.33	163.11	0.00
Recovered Equity	92.69	108.12	126.13	34.69	0.00
Closing Net Capital Cost	1701.02	965.25	197.80	0.00	0.00
Closing Net Notional Loan	1432.08	804.44	163.11	0.00	0.00
Closing Net Equity	268.94	160.81	34.69	0.00	0.00
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00



Years (Capital to be recovered up to 30.06.2017)	3.25	2.25	1.25	0.25	0.00
Months	39.00	27.00	15.00	3.00	0.00
Weighted Average Rate of Interest (Per annum)	2.2132%	2.2257%	2.7598%	3.2374%	3.2374%
Weighted Average Rate of Interest (Per month)	0.1844%	0.1855%	0.2300%	0.2698%	0.2698%
Monthly Recovery Factors – Loan	0.026598	0.038006	0.067900	0.335134	-
Monthly Capital Recovery Charge – Loan	54.42	54.43	54.62	54.66	0.00
Annual Capital Recovery Charge – Loan	653.05	653.14	655.45	655.97	0.00
Rate of Return on Equity (Per annum)	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity (Per month)	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors – Equity	0.032801	0.044106	0.073762	0.341981	-
Monthly Capital Recovery Charge – Equity	11.86	11.86	11.86	11.86	0.00
Annual Capital Recovery Charge – Equity	142.34	142.34	142.34	142.34	0.00
Monthly Capital Recovery Charge – Total	66.28	66.29	66.48	66.53	0.00
Annual Capital Recovery Charge - Total	795.39	795.48	797.80	798.32	0.00
Fee & Charges (2014-19(Annualized))	Non-Microwave: Central Portion – Charges				
Annual Capital Recovery Charge – Loan	653.05	653.14	655.45	655.97	0.00
Annual Capital Recovery Charge – Equity	142.34	142.34	142.34	142.34	0.00
Annual Capital Recovery Charge - Total	795.39	795.48	797.80	798.32	0.00
O&M Expenses	148.95	288.89	281.61	178.75	161.40
Interest on Working Capital	26.54	34.27	33.92	14.47	8.92
Total Fee & Charges (Annualized)	970.88	1118.64	1113.32	392.80	170.32
Interest on Working Capital					
Maintenance Spares (15% of O&M Expenditure)	22.34	43.33	42.24	26.81	24.21
O&M Expenses (One Month of O&M Expenditure)	12.41	24.07	23.47	14.90	13.45
Receivables (Two months of annual Charges)	161.81	186.44	185.55	65.47	28.39
Total	196.57	253.85	251.26	107.17	66.05
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working Capital (Annualized)	26.54	34.27	33.92	14.47	8.92
Fee & Charges (2014-19) (Applicable)	Non-Microwave: Central Portion - Charges				
Particulars	2014-15	2015-16	2016-17	2017-18 (Pro-rata)	2018-19
Annual Capital Recovery Charge – Loan	653.05	653.14	655.45	163.99	0.00
Annual Capital Recovery Charge –	142.34	142.34	142.34	35.59	0.00



Equity					
Annual Capital Recovery Charge - Total	795.39	795.48	797.80	199.58	0.00
O&M Expenses	148.95	288.89	281.61	178.75	161.40
Interest on Working Capital	26.54	34.27	33.92	14.47	8.92
Total Fee & Charges (Applicable)	970.88	1118.64	1113.32	392.80	170.32

(₹ in lakh)

Non-Microwave-State Portion- fee and charges					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Capital Cost	31861.70	31861.70	31861.70	31861.70	31861.70
Opening Gross Notional Loan	28067.08	28067.08	28067.08	28067.08	28067.08
Opening Gross Equity	3794.62	3794.62	3794.62	3794.62	3794.62
Recovered Gross Capital Cost (As on 1st April)	21835.23	24771.69	27834.58	31035.65	31861.70
Recovered Gross Notional Loan	19691.13	22204.54	24773.94	27399.34	28067.08
Recovered Gross Equity	2144.10	2567.15	3060.65	3636.31	3794.62
Opening Net Capital Cost	10026.47	7090.01	4027.12	826.05	0.00
Opening Net Notional Loan	8375.95	5862.54	3293.14	667.74	0.00
Opening Net Equity	1650.52	1227.47	733.97	158.31	0.00
Recovered Capital Cost (During the Year)	2936.46	3062.89	3201.07	826.05	0.00
Recovered Notional Loan	2513.41	2569.40	2625.41	667.74	0.00
Recovered Equity	423.06	493.50	575.66	158.31	0.00
Closing Net Capital Cost	7090.01	4027.12	826.05	0.00	0.00
Closing Net Notional Loan	5862.54	3293.14	667.74	0.00	0.00
Closing Net Equity	1227.47	733.97	158.31	0.00	0.00
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 30.6.2017)	3.25	2.25	1.25	0.25	0.00
Months	39.00	27.00	15.00	3.00	0.00
Weighted Average Rate of Interest (Per Annum)	2.2132%	2.2257%	2.7598%	3.2374%	3.2374%
Weighted Average Rate of Interest (Per Month)	0.1844%	0.1855%	0.2300%	0.2698%	0.2698%
Monthly Recovery Factors – Loan	0.026598	0.038006	0.067900	0.335134	-
Monthly Capital Recovery Charge – Loan	222.78	222.81	223.60	223.78	0.00
Annual Capital Recovery Charge – Loan	2673.39	2673.77	2683.25	2685.38	0.00
Rate of Return on Equity (Per Annum)	15.500%	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity (Per Month)	1.292%	1.292%	1.292%	1.292%	1.292%
Monthly Recovery Factors – Equity	0.032801	0.044106	0.073762	0.341981	-
Monthly Capital Recovery Charge –	54.14	54.14	54.14	54.14	0.00



Equity					
Annual Capital Recovery Charge – Equity	649.67	649.67	649.67	649.67	0.00
Monthly Capital Recovery Charge – Total	276.92	276.95	277.74	277.92	0.00
Annual Capital Recovery Charge - Total	3323.06	3323.44	3332.91	3335.04	0.00
Fee & Charges (2014-19) (Annualized)	Non-Microwave: State Portion - Charges				
Annual Capital Recovery Charge – Loan	2673.39	2673.77	2683.25	2685.38	0.00
Annual Capital Recovery Charge – Equity	649.67	649.67	649.67	649.67	0.00
Annual Capital Recovery Charge - Total	3323.06	3323.44	3332.91	3335.04	0.00
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	76.49	76.50	76.72	76.77	0.00
Total Fee & Charges (Annualized)	3399.55	3399.94	3409.63	3411.81	0.00
Interest on Working Capital					
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)	566.59	566.66	568.27	568.63	0.00
Total	566.59	566.66	568.27	568.63	0.00
Rate of Interest on Working Capital	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working Capital (Annualized)	76.49	76.50	76.72	76.77	0.00
Fee & Charges (2014-19) (Applicable)	Non-Microwave: State Portion - Charges				
Particulars	2014-15	2015-16	2016-17	2017-18 (Pro-rata)	2018-19
Annual Capital Recovery Charge – Loan	2673.39	2673.77	2683.25	671.34	0.00
Annual Capital Recovery Charge – Equity	649.67	649.67	649.67	162.42	0.00
Annual Capital Recovery Charge - Total	3323.06	3323.44	3332.91	833.76	0.00
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	76.49	76.50	76.72	19.19	0.00
Total Fee & Charges (Applicable)	3399.55	3399.94	3409.63	852.95	0.00

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

39. The Petitioner has submitted that the assets were put into commercial operation before 1.4.2009 and capital cost of microwave system has been fully recovered during 2009-14 tariff period. 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.”

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

41. Further, in line with order dated 8.12.2011 in Petition No. 68/2010, the total capital cost in respect of non-microwave system was to be recovered up to 30.6.2017 i.e. during 2017-18 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 asset has been completed by 30.6.2017 and no charges have been claimed for the remaining period.

42. The Petitioner has claimed the following charges in respect of the asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	Non-Microwave-Central Portion				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Capital Recovery Charge-Total	0.00	0.00	0.00	0.00	0.00
O&M Expenses	155.27	155.27	155.27	155.27	155.27
Interest on Working Capital	6.77	6.77	6.77	6.77	6.77
Total Fee & Charges	162.04	162.04	162.04	162.04	162.04

43. The details of the IWC claimed by the Petitioner in respect of the asset is 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)	23.29	23.29	23.29	23.29	23.29
O&M Expenses (One Month)	12.94	12.94	12.94	12.94	12.94
Receivables (45 days)	19.92	19.92	19.92	19.92	19.92
Total Working Capital	56.15	56.15	56.15	56.15	56.15
Rate of Interest on Working Capital (in %)	12.05	12.05	12.05	12.05	12.05
Total Interest on Working Capital	6.77	6.77	6.77	6.77	6.77

Capital cost

44. The Petitioner has submitted that entire cost of non-microwave portion of the asset has been recovered by 2017-18, therefore, only O&M Expenses and Interest on working Capital for the Central Portion of non-microwave portion of the communication system has been claimed. As the expenditure on account of non-microwave portion of the asset has been recovered by 2017-18, we have considered the same and have allowed fees and charges based on the O&M Expenditure and IWC claimed by the Petitioner for 2019-24 tariff period. The Petitioner has claimed no additional capital expenditure for 2019-24 tariff period. As all the recovery of loans and equity has been completed, therefore, the Commission is only dealing with the O&M Expenses and IWC as claimed by the Petitioner in the instant petition.

Operation & Maintenance Expenses (O&M Expenses)

45. The Petitioner has not claimed O&M Expenses for State Portion. The Petitioner has submitted the claim of 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 ₹7763.61 lakh. O&M Expenses claimed by the Petitioner in respect of the asset are as follows:



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed by the Petitioner in the instant petition	155.27	155.27	155.27	155.27	155.27

46. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses of ₹ 776.35 lakh for 2019-24 tariff period. O&M Expenses allowed for 2014-19 Period is ₹1059.6 lakh. Taking into the consideration the fact that O&M Expenses claimed for the 2019-24 tariff period is lower than the O&M Expenses allowed for 2014-19 tariff period, O&M Expenses claimed for 2019-24 tariff period 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 asset duly certified by the Auditor at the time of truing up of tariff of 2019-24 period. O&M Expenses allowed in respect of the asset are as follows:

(₹ in lakh)					
O& M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Total O&M Expenses Allowed	155.27	155.27	155.27	155.27	155.27

Interest on Working Capital (IWC)

47. 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;”

48. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI base rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of interest 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).

49. Necessary computations of Interest on Working Capital (annualized) for non-microwave system-Central Portion is as follows:

(₹ in lakh)

Non-Microwave System-Central Portion					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for One month)	12.94	12.94	12.94	12.94	12.94
Working Capital for Maintenance Spares (15% of O&M Expenses)	23.29	23.29	23.29	23.29	23.29
Working Capital for Receivables (Equivalent to 45 days of annual charges)	19.92	19.92	19.87	19.87	19.87
Total Working Capital	56.15	56.15	56.10	56.10	56.10



Rate of Interest on Working Capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest on working capital	6.77	6.32	5.89	5.89	5.89

Annual Fixed Charges for the 2019-24 Tariff Period

50. The annual fees and charges allowed for the asset for 2019-24 period are as follows:

Particulars	(₹ in lakh)				
	Non-Microwave-Central Portion				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Capital Recovery Charge-Total	0.00	0.00	0.00	0.00	0.00
O&M Expenses	155.27	155.27	155.27	155.27	155.27
Interest on Working Capital	6.77	6.32	5.89	5.89	5.89
Total Fee & Charges	162.04	161.59	161.16	161.16	161.16

Filing Fee and Publication Expenses

51. 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.

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

License Fee and RLDC Fees and Charges

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

Goods and Services Tax

54. 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.

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

Security Expenses

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

57. 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 the 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 Charges

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

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



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

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

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

62. This order disposes of Petition No. 692/TT/2020 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P.K. Pujari)
Chairperson



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

(₹ in lakh)

Loan	2014-15			
	Opening (Net O/S as on 1.4.2014)	Rate of interest	Interest	Weighted Average Rate of Interest
Bond VII	0.00	13.64%	0.00	
Bond IX	0.00	12.25%	0.00	
Bond XII	18.50	9.70%	1.79	
Bond XIII-II	0.00	7.85%	0.00	
Bond XVIII	67.73	8.15%	5.52	
ICICI	0.00	7.32%	0.00	
PNB I	0.00	0.00%	0.00	
PNB II	97.67	11.60%	11.33	
OBC	81.33	12.35%	10.04	
Corporation Bank	0.00	13.00%	0.00	
BOI(FC)	2680.92	1.94%	52.01	
IBRD-I	0.00	8.68%	0.00	
IBRD-II	2473.67	1.75%	44.14	
EIB-Tr. I	0.00	7.43%	0.00	
EIB-Tr. II	0.00	7.20%	0.00	
EIB-Tr. III	0.00	7.19%	0.00	
EIB-Tr. IV	0.00	6.56%	0.00	
EIB-Tr. V	0.00	6.59%	0.00	
EIB-Tr. VI	0.00	6.33%	0.00	
Total Loan	5419.82		124.83	2.213200%
Loan	2015-16			
	Opening (Net O/S as on 1.4.2014)	Rate of interest	Interest	Weighted Average Rate of Interest
Bond VII	0.00	13.64%	0.00	
Bond IX	0.00	12.25%	0.00	
Bond XII	18.50	9.70%	1.79	
Bond XIII-II	0.00	7.85%	0.00	
Bond XVIII	67.73	8.15%	5.52	
ICICI	0.00	7.32%	0.00	
PNB I	0.00	0.00%	0.00	
PNB II	97.67	11.60%	11.33	
OBC	81.33	12.35%	10.04	
Corporation Bank	0.00	13.00%	0.00	
BOI(FC)	2680.92	2.12%	56.72	
IBRD-I	0.00	8.68%	0.00	
IBRD-II	2473.67	1.97%	48.80	
EIB-Tr. I	0.00	7.43%	0.00	
EIB-Tr. II	0.00	7.20%	0.00	
EIB-Tr. III	0.00	7.19%	0.00	
EIB-Tr. IV	0.00	6.56%	0.00	
EIB-Tr. V	0.00	6.59%	0.00	
EIB-Tr. VI	0.00	6.33%	0.00	



Total Loan	5419.82		134.21	2.225700%
2016-17				
Loan	Opening (Net O/S as on 1.4.2014)	Rate of interest	Interest	Weighted Average Rate of Interest
Bond VII	0.00	13.64%	0.00	
Bond IX	0.00	12.25%	0.00	
Bond XII	18.50	9.70%	1.79	
Bond XIII-II	0.00	7.85%	0.00	
Bond XVIII	67.73	8.15%	5.52	
ICICI	0.00	7.32%	0.00	
PNB I	0.00	0.00%	0.00	
PNB II	97.67	11.60%	11.33	
OBC	81.33	12.35%	10.04	
Corporation Bank	0.00	13.00%	0.00	
BOI(FC)	2680.92	2.57%	68.99	
IBRD-I	0.00	8.68%	0.00	
IBRD-II	2473.67	2.76%	68.22	
EIB-Tr. I	0.00	7.43%	0.00	
EIB-Tr. II	0.00	7.20%	0.00	
EIB-Tr. III	0.00	7.19%	0.00	
EIB-Tr. IV	0.00	6.56%	0.00	
EIB-Tr. V	0.00	6.59%	0.00	
EIB-Tr. VI	0.00	6.33%	0.00	
Total Loan	5419.82		165.90	2.759800%
2017-18				
Loan	Opening (Net O/S as on 1.4.2014)	Rate of interest	Interest	Weighted Average Rate of Interest
Bond VII	0.00	13.64%	0.00	
Bond IX	0.00	12.25%	0.00	
Bond XII	18.50	9.70%	1.79	
Bond XIII-II	0.00	7.85%	0.00	
Bond XVIII	67.73	8.15%	5.52	
ICICI	0.00	7.32%	0.00	
PNB I	0.00	0.00%	0.00	
PNB II	97.67	11.60%	11.33	
OBC	81.33	12.35%	10.04	
Corporation Bank	0.00	13.00%	0.00	
BOI(FC)	2680.92	3.11%	83.25	
IBRD-I	0.00	8.68%	0.00	
IBRD-II	2473.67	3.29%	81.48	
EIB-Tr. I	0.00	7.43%	0.00	
EIB-Tr. II	0.00	7.20%	0.00	
EIB-Tr. III	0.00	7.19%	0.00	
EIB-Tr. IV	0.00	6.56%	0.00	
EIB-Tr. V	0.00	6.59%	0.00	
EIB-Tr. VI	0.00	6.33%	0.00	
Total Loan	5419.82		193.42	3.237400%

