

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.10/RP/2018

in

Petition No. 39/TT/2015

Coram:

Shri P. K. Pujari, Chairperson

Dr. M. K. Iyer, Member

Date of Order : 18.6.2019

In the matter of:

Petition for review of order dated 12.12.2017 passed in Petition No. 39/TT/2015 under Section 94 of the Electricity Act, 2003

And in the matter of

Power Grid Corporation of India Limited

"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

..... Review 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,
Kaniha, Angul, Odisha-759 147
NTPC, Talcher



6. NHPC Limited
NHPC Office Complex,
Sector-33, Faridabad, Haryana-121 003
7. Teesta-V Hydro Electric Project
NHPC, Singtam, East Sikkim-737 134
Sikkim
8. Rangeet Hydro Electric Project
NHPC, P.O. Rangit Nagar,
South Sikkim-737 111
9. Orissa Hydro Power Corporation Ltd.
Burla Power House
Dist. Samabalpur, Burla-768017
Odisha
10. Meijia Thermal Power Station, DVC,
P.O.-MTPS, Dist. Bankura-722183
West Bengal
11. West Bengal State Electricity Distribution Co. Ltd.
Bidyut Bhawan, 8th Floor (A Block)
Block DJ, Salt Lake City,
Calcutta-700 091, West Bengal
12. Bihar State Power (Holding Company Limited)
Vidyut Bhawan, Bailey Road,
Patna-800 001, Bihar
13. GRIDCO Limited
Vidyut Bhawan, Janpath,
Bhubaneswar-751007, Odisha
14. Power Department
Government of Sikkim,
Gangtok-727102
15. Jharkhand Urja Vikas Nigam Limited
Engineering Building
HEC Township, Dhurwa, Ranchi-834004
Jharkhand
16. Damodar Valley Corporation
DVC Tower, VIP Road,
Calcutta-700 054, West Bengal
17. Powerlinks Transmission Limited
Vidyut Nagar, P.O. Satellite Township,



For Review Petitioner: Shri M.G. Ramachandran, Advocate, PGCIL
Ms. Poorva Saigal, Advocate, PGCIL
Ms. Anushree Bardhan, Advocate, PGCIL
Shri Shubham Arya, Advocate, PGCIL

For Respondents: None

ORDER

Power Grid Corporation of India Limited (PGCIL) has filed the instant review Petition No. 10/RP/2018 seeking review and modification of order dated 12.12.2017 in 39/TT/2015. The Commission, in the aforesaid order dated 12.12.2017, (i) trued-up of fee and charges for the period 2009-14 block and (ii) determined the fee and charges for the period 2014-19 block for Unified Load Despatch and Communication Scheme (Powergrid Portion i.e. Communication System Portion and SLDC System retained by the petitioner after formation of POSOCO) in Eastern Region.

Brief background

2. The Unified Load Despatch and Communication (ULDC) Scheme in Eastern Region was put under commercial operation w.e.f. 1.9.2005. The Commission, vide order dated 31.12.2013 in Petition No. 56/TT/2012, had approved the fee and charges for the period 2009-14 for the ULDC assets in Eastern Region retained by the review petitioner after formation of POSOCO. Subsequently, the Commission, vide order dated 12.12.2017 in Petition No. 39/TT/2015, approved trued up annual fee and charges of the ULDC assets of the 2009-14 period based on the actual



expenditure for the period 1.4.2009 to 31.3.2014 and determined the fee and charges for 1.4.2014 to 31.3.2019 period.

3. PGCIL has filed the instant review petition praying for modification of the impugned order to the extent of the issues as below:-

a. Non-consideration of the accelerated depreciation on Replaced SCADA/EMS-State Portion as approved in the impugned order dated 12.12.2017;

b. Non-consideration of additional capitalization for the period 2009-10 and 2010-11 which had already been approved vide earlier order dated 31.12.2013 in Petition No. 56/TT/2012;

c. Non-Consideration of Additional Capitalization for the period 2011-12 and 2012-13; and

d. Calculation of O&M Expenses after exclusion of fibre leasing charges and FERV as well as other expenses.

4. The Review Petitioner has made the following prayers:-

a) Admit the Review Petition;

b) Review the order dated 12.12.2017 passed in Petition No. 39/TT/2015 and modify the order to the extent challenged above;

c) Pass any such further order or orders as may deem just and proper in the circumstances of the case.

5. The review petition was admitted vide order dated 12.6.2018 and notice was issued to the respondents. However, none of the respondents have filed any



reply. Further, none of the respondents were represented during the final hearing held on 16.10.2018.

6. The reasons and grounds submitted by the Review petitioner in support of the review of the impugned order as are as follows:-

a. Non-consideration of the accelerated depreciation of Replaced SCADA/EMS-State Portion.

7. The Commission vide order dated 2.3.2017 in Petition No. 188/MP/2014 held that the unrecovered charges towards the replaced SCADA/EMS system shall be recovered as accelerated depreciation matching with scheduled date of commercial operation of the new SCADA system. The relevant portions of the order dated 2.3.2017 is extracted hereunder:-

“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.”

“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.”

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.

- b. Non-consideration of Additional Capitalization for the period 2009-10 and 2010-11.

8. The capital cost as on 31.3.2009, approved in the order dated 31.12.2013 in Petition No. 56/TT/2012, was considered in the impugned order. However, the additional capitalization during the tariff period 2009-14 was not allowed. This is contrary to the order dated 31.12.2013 in which Additional Capitalization during the 2009-10 and 2010-11 was already approved. The relevant portion of the order dated 31.12.2013 is as under:-



“Additional Capital Expenditure

28. The year-wise additional capitalization claimed by the petitioner during 2009-10 to 2011-12 is given below:

(₹ in lakh)

	Central Portion	State Portion
2009-10	160.95	0.00
2010-11	115.35	0.00
2011-12	9.76	0.00

29. The details of additional capital expenditure claimed by the petitioner are given overleaf: -

.....

30. The additional capitalization claimed by the petitioner is on account of retention payment and is allowed.”

Accordingly, the additional capitalization 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 capitalization 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.

c. Non-consideration of Additional Capitalization for the period 2011-12 and 2012-13.

9. The additional capitalization during 2011-12 and 2012-13 was disallowed in the impugned order on the ground that sufficient reasons for the additional capital expenditure were not submitted by the Review Petitioner. The relevant portion of the order is extracted hereunder:-

“25. We have considered the submissions of the petitioner regarding additional capital expenditure. The petitioner has claimed the additional capital expenditure for Central (Microwave) portion as ₹83.84 lakh. The petitioner vide affidavit dated 29.12.2014 in the instant petition has submitted that the charges have been worked out in line with the Commission’s order dated 31.12.2013 in Petition No. 56/TT/2012 and the entire cost of Microwave portion of the assets was recovered by 2012-13. The petitioner, vide affidavit dated 11.8.2017, has submitted the revised ULDC fee and charges for 2009-14 tariff period. As the charges for



microwave portion were recovered during 2012-13, we do not find it prudent to allow additional capital expenditure of ₹ 83.84 lakh during 2012-13. It is further observed that the petitioner has not submitted any explanation regarding the type and justification of expenses for other additional capital expenditure. Therefore, we are not inclined to allow the additional capital expenditure during 2011-12 and 2012-13. Further, we do not agree with the petitioner's claim regarding additional capital expenditure during 2008-09 mentioned in para 24 above, as the additional capital expenditure during 2008-09 has already been included in the capital cost as on 31.3.2009."

The Commission, while coming to the conclusion that the Review Petitioner has not submitted the explanation and justification of such additional capitalization, has not considered the affidavit dated 29.11.2017 filed by the Review Petitioner. The said affidavit clearly provides the justification for additional capitalization 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 inspite of proper justification is an error apparent on the face of the record.

- d. Calculation of O&M Expenses after exclusion of fibre leasing charges and FERV as well as other expenses.



10. The Review Petitioner has submitted that the fibre leasing charges and FERV was not allowed as part of O&M Expenses for the period 2009-14 in the impugned order besides the 'other expenses' component of O&M Expenses. The Review Petitioner has submitted the details of the O&M Expenses claimed and allowed in the impugned order and they are as follows:-

(₹ in lakh)						
Sl. No.	Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
1	O&M Expenses claimed	465.03	465.48	709.86	812.91	1164.22
2	Other Expenses, including FERV and Fibre Leasing	16.92	9.29	105.16	364.26	605.55
3	O&M Expenses after deduction of FERV, Fibre Leasing, other expenses	448.11	456.19	604.70	448.65	558.77
4	O&M Expenditure allowed by the Commission	442.20	455.69	595.90	455.75	556.69
5.	Difference	5.91	0.50	8.80	-7.10	2.08

The Review Petitioner has contended that the 'other expenditure' (excluding FERV and Fiber Leasing) incurred by the Review Petitioner for maintaining the transmission assets was disallowed without giving reasons though relevant documents were placed on record by the Review Petitioner. The Review Petitioner has prayed for reconsideration of the calculation of O&M Expenses.

Analysis and Decision

11. We have considered the submissions of the Review Petitioner and have also gone through the records. The issues raised by the Review Petitioner are considered in the following paragraphs.

12. As regards the Review Petitioner's contention that the capital cost of "Replaced SCADA/EMS-State Portion", was not considered in the impugned order, it is observed the same was considered. However, inadvertently, the



Annual Fee & Charges in respect of “Non-Microwave Replaced SCADA/EMS-State Portion” for the period 2014-19 was not considered of in the impugned order dated 12.12.2017. Non-consideration of fee and charges of the Non-Microwave Replaced SCADA/EMS-State Portion is error and the same is rectified. The revised Fee & Charges in respect of “Non-Microwave Replaced SCADA/EMS- State Portion” for 2014-19 period are as follows:-

Particular	(₹ in lakh)	
	Non-Microwave-Replaced SCADA/EMS-State Portion	
	2014-15	2015-16
Annual Capital Recovery Charge-Total	2172.78	2172.78
O&M Expenses	0.00	0.00
Interest on Working Capital	50.01	50.01
Total Fee & Charges	2222.80	2222.80

These fees and charges are liable to change at the time of true up of 2014-19 period fee and charges, as these depend on the opening capital cost as on 1.4.2014 which in turn is dependent on various other issues raised in the present review petition. The detailed calculations in respect of “Non-Microwave Replaced SCADA/EMS-State Portion” for 2014-19 period are given in Annexure-I of this order.

13. As regards non-consideration of additional capitalization for the period 2009-11 and 2012-13, the Commission in order dated 31.12.2013 in Petition No. 56/TT/2012 had observed as follows:-

“Additional Capital Expenditure

28. The year-wise additional capitalization claimed by the petitioner during 2009-10 to 2011-12 is given below:



(₹ in lakh)

	Central Portion	State Portion
2009-10	160.95	0.00
2010-11	115.35	0.00
2011-12	9.76	0.00

29. The details of additional capital expenditure claimed by the petitioner are given overleaf:-

S.No	Element	Additional Capital Expenditure		
		2009-10	2010-11	2011-12
1	EMS/SCADA System	5.21 Lakh- Release of retention amount to AREVA	0.00	0.00
2	Fibre Optic system	37.50 Lakh- Release of retention amount to LG Cables	0.00	0.00
3	PLCC/PABX	0.50 Lakh- Entry Tax PUNCOM	85.61 Lakh- Release of Retention amount to PUNCOM	9.76 Lakh- Release of Retention amount to PUNCOM
4	Digital Microwave System (Tower)	116.19 Lakh- Release of retention amount to Alstom and additional maintenance as part of contract to Areva	29.68 Lakh- Release of retention amount to PUNCOM	0.00
5	Auxiliary Power Supply system	1.55 Lakh- Release of retention amount to PCL and S.N. Creation	0.06	0.00
	Total	₹ 160.95 Lakh	₹ 115.35 Lakh	₹ 9.76 Lakh

30. The additional capitalization claimed by the petitioner is on account of retention payment and is allowed.”

14. Further, the Commission in order dated 12.12.2017 in Petition No. 39/TT/2015 had observed as below:-

“Additional Capital Expenditure

22. The petitioner in the petition has submitted that there is no additional capital expenditure during 2009-14, and hence truing up on account of additional capital expenditure is not required in the instant case. However, subsequently the petitioner



vide affidavit dated 29.11.2016 has submitted that this was incorrect and in fact truing up on account of additional capital expenditure was required for period 2009-14. The petitioner has apologized for the inadvertent error and requested to condone it.

23. The additional capital expenditure during 2011-12 was considered as ₹9.76 lakh in order dated 31.12.2013 in Petition No. 56/TT/2012 against which the petitioner has now claimed the actual expenditure in 2011-12 and 2012-13 as ₹105.15 lakh and ₹83.84 lakh respectively. The additional capital expenditure claimed by the petitioner vide affidavit dated 29.11.2016 is as follows:-

(₹ in lakh)					
Year	Central (Microwave)	Central (Non-Microwave)	State (Microwave)	State (Non-Microwave)	Total
2011-12	0	105.15	0	18.64	123.79
2012-13	83.84	0	0	0	83.84
Total	83.84	105.15	0	18.64	207.63

24. The petitioner vide affidavit dated 11.8.2017 has submitted that the approved add-cap for 2008-09 was ₹111.88 lakh for central sector and ₹156.78 lakh for State sector vide order dated 3.8.2011 in Petition No. 48/2010. The petitioner has submitted that the approved add-cap for 2008-09 was claimed from 2009-10 in 2009-14 tariff period.

25. We have considered the submissions of the petitioner regarding additional capital expenditure. The petitioner has claimed the additional capital expenditure for Central (Microwave) portion as ₹83.84 lakh. The petitioner vide affidavit dated 29.12.2014 in the instant petition has submitted that the charges have been worked out in line with the Commission's order dated 31.12.2013 in Petition No. 56/TT/2012 and the entire cost of Microwave portion of the assets was recovered by 2012-13. The petitioner, vide affidavit dated 11.8.2017, has submitted the revised ULDC fee and charges for 2009-14 tariff period. As the charges for microwave portion were recovered during 2012-13, we do not find it prudent to allow additional capital expenditure of ₹83.84 lakh during 2012-13. It is further observed that the petitioner has not submitted any explanation regarding the type and justification of expenses for other additional capital expenditure. Therefore, we are not inclined to allow the additional capital expenditure during 2011-12 and 2012-13. Further, we do not agree with the petitioner's claim regarding the additional capital expenditure during 2008-09 mentioned in para 24 above, as the additional capital expenditure during 2008-09 has already been included in the capital cost as on 31.3.2009."

15. In Petition No.39/TT/2015, vide Auditor's certificate dated 30.12.2014, the Review Petitioner had claimed the following additional capitalization for Central Portion:-

(₹ in lakh)						
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Microwave	116.19	29.68	0.00	83.31	0.00	0.00
Non-Microwave	44.76	85.67	105.15	0.53	0.00	21.03
Total	160.95	115.35	105.15	83.84	0.00	21.03



As observed in Para 22 of the order dated 12.12.2017 in Petition No. 39/TT/2015, the Review Petitioner had initially submitted that there was no additional capital expenditure during 2009-14, and hence truing up on account of additional capital expenditure was not required in that case. Subsequently, vide affidavit dated 29.11.2016, the Review Petitioner submitted that this was incorrect and in fact truing up on account of additional capital expenditure was required for period 2009-14. Further, the Review Petitioner had apologized for the inadvertent error and requested to condone it. The Review Petitioner had further, vide affidavit dated 29.11.2016 had claimed the additional capitalization only for the period 2011-12 and 2012-13 and did not submit any material information regarding additional capitalization during 2009-10 and 2010-11. In the absence of any submissions, additional capitalization during 2009-10 and 2010-11 was disallowed in the impugned order and accordingly, to that extent, there is no error. We find that, the additional capitalization during 2011-12 and 2012-13 was disallowed due to inadequacy in justification. However, the Review Petitioner did provide the justification for the said additional capitalization, later, vide affidavit dated 29.11.2017, which was inadvertently not captured in the order dated 12.12.2017. The tariff of the 2009-14 period was trued up in the impugned order and if the information considered in earlier order dated 31.12.2013 in Petition no. 56/TT/2012 and the information filed vide affidavit dated 29.11.2017 is not recognised, the additional capitalization during 2009-10, 2010-11, 2011-12 and 2012-13 would not be included in the capital cost and the Review Petitioner would be deprived of the returns against the expenditure incurred. Hence, the information filed by the Review Petitioner is admitted and we allow the additional



capitalization claimed during 2009-14, now, at the stage of review. Further, in line with paragraphs 11, 31 and 35 of order dated 8.12.2011 in Petition No 68/2010, the Microwave links were to be replaced with the Optical Fibre links by the end of 2011. However, they were actually replaced during 2012-13 and accordingly no charges are to be recovered for Microwave links after 2012-13. Therefore, after careful consideration, we allow additional capital expenditure of ₹83.31 lakh during 2012-13 as part of Central Non-Microwave portion rather than that of Central Microwave Portion. The revised calculations of Fee & Charges in the impugned order are revised in the ensuing paragraphs.

16. As regards the exclusion of fibre leasing charges, FERV and “other expenses”, we recapitulate the break-up of the O&M Expenses claimed vis-à-vis allowed for Central Portion-Non-Microwave System in the impugned order. Following table shows the component wise deduction from the O&M Expenses claimed:-

(₹ in lakh)						
Sl. No.	Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
1	O&M Expenses claimed	465.03	465.48	709.86	812.91	1164.22
2	Lease Charges	-	-	102.41	-	181.52
3	FERV	-	-		344.78	419.56
4	Self Insurance	9.50	9.47	9.76	10.76	6.27
	Other Expenses :					
5	Entertainment Exp	0.24	0.19	0.23	-	0.18
6	Misc. Exp.	13.09	-	-	-	-
7	Professional Exp.	-	0.13	1.56	1.72	-
8	O&M Expenses allowed	442.20	455.69	595.90	455.75	556.79

17. The reasons for not considering lease charges and FERV were clearly elaborated at para 41 and 42 of the impugned order and its disallowance of the



same was a conscious decision of the Commission. We do not find any error is disallowance of the same. However, we do recognize the fact that insurance expenses and other expenses would form part of O&M Expenses, which were left out of O&M Expenses. Accordingly, we allow the self- insurance expenses and other expenses under O&M Expenses. In view of the above, the trued-up Fee and Charges for 2009-14 tariff period in the impugned order are revised in the following paragraphs.

Revised Monthly Capital Recovery Charges

18. In view of the above discussion, paragraphs 30 to 37 in impugned order dated 12.12.2017 are being replaced by the following paragraphs from 14 to 22 as under.

19. The monthly Capital Recovery Factors for loan and equity has been worked out using the following relationship:-

$$\text{Recovery Factor} = \frac{i \times (1+i)^n}{(1+i)^n - 1} \quad n = \text{period, and } i = \text{rate}$$

20. The monthly recovery factors for loan for Central Portion as well as State Portion corresponding to 'Microwave System' & 'Non-Microwave System' are as follows:-

	(₹ in lakh)				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Microwave – Central Portion	0.027038	0.038192	0.067803	0.334769	-
Microwave – State Portion	0.027038	0.038192	0.067803	0.334769	-
Non-Microwave – Central Portion	0.008731	0.009162	0.009962	0.011027	0.012184
Non-Microwave – State Portion	0.008731	0.009162	0.009962	0.011027	0.012184

21. The monthly recovery factors for equity for Central portion as well as State portion corresponding to 'Microwave System' and 'Non-Microwave System' are as follows:-



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Microwave – Central Portion	0.032801	0.044106	0.073762	0.341981	-
Microwave – State Portion	0.032801	0.044106	0.073762	0.341981	-
Non-Microwave – Central Portion	0.015606	0.016167	0.016874	0.017781	0.018970
Non-Microwave – State Portion	0.015606	0.016167	0.016874	0.017781	0.018970

22. Based on the above recovery factors, monthly capital recovery charges for loan for Central as well as State portion corresponding to 'Microwave System' and 'Non-Microwave System' are worked out as below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Microwave – Central Portion	80.57	83.15	84.51	84.51	-
Microwave – State Portion	138.03	137.13	137.04	137.05	-
Non-Microwave – Central Portion	30.15	29.59	30.05	30.91	31.19
Non-Microwave – State Portion	82.61	80.31	79.93	80.06	78.93

23. Similarly, the monthly capital recovery charges for equity for Central as well as State portion corresponding to 'Microwave System' and 'Non-Microwave System' are as follows:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Microwave – Central Portion	15.68	17.21	17.87	17.87	-
Microwave – State Portion	27.80	27.80	27.80	27.80	-
Non-Microwave – Central Portion	8.64	8.86	9.29	9.85	10.33
Non-Microwave – State Portion	24.51	24.51	24.51	24.51	24.51

24. While working out the capital recovery charges for loan, weighted average rate of interest and rate of return on equity have been considered.

25. Accordingly, the following recovery of capital during 2009-14 has been worked out:-

(₹ in lakh)

Particulars	Capital	Central Portion	State Portion
	Capital Cost Recovered during 2009-13 – "Microwave"	Loan	3,082.03
	Equity	521.68	847.46



	Total	3603.72	5952.53
Capital Cost Recovered during 2009-14–“Non-Microwave”	Loan	1438.02	3797.43
	Equity	147.50	379.36
	Total	1585.52	4176.79

26. It is observed that the total capital cost in respect of “Microwave” portion has been recovered during the period in line with order dated 8.12.2011 in Petition No. 68/TT/2010. Accordingly, the capital recovery factors and recovery charges corresponding to ‘Microwave System’ beyond 2012-13 is not worked out.

Operation & Maintenance Expenses (O&M Expenses)

27. As discussed in earlier paragraphs, there is no error apparent on the face of the record in respect of O&M Expenses. Hence, remains unchanged as observed in impugned order.

Revised Interest on Working Capital (IWC)

28. The revised interest on working capital allowed for the instant assets for the 2009-14 tariff period is as follows:-

(₹ in lakh)

Particulars	Microwave-Central Portion			
	2009-10	2010-11	2011-12	2012-13
Maintenance Spares	-	-	-	
O & M Expenses	-	-	-	
Receivables	196.51	204.92	209.02	209.03
Total	196.51	204.92	209.02	209.03
Rate of Interest	12.25%	12.25%	12.25%	12.25%
Interest	24.07	25.10	25.60	25.61

(₹ in lakh)

Particulars	Microwave-State Portion			
	2009-10	2010-11	2011-12	2012-13
Maintenance Spares	-	-	-	-
O & M Expenses	-	-	-	-
Receivables	338.57	336.73	336.55	336.56
Total	338.57	336.73	336.55	336.56
Rate of Interest	12.25%	12.25%	12.25%	12.25%
Interest	41.48	41.25	41.23	41.23



(₹ in lakh)

Particulars	Non-Microwave-Central Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	69.75	69.82	91.12	70.22	84.47
O & M Expenses	38.75	38.79	50.62	39.01	46.93
Receivables	160.57	159.97	186.64	165.15	183.32
Total	269.08	268.58	328.38	274.38	314.72
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	32.96	32.90	40.23	33.61	38.55

(₹ in lakh)

Particulars	Non-Microwave-State Portion				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	-	-	-	-	-
O & M Expenses	-	-	-	-	-
Receivables	218.71	214.01	213.25	213.50	211.19
Total	218.71	214.01	213.25	213.50	211.19
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	26.79	26.22	26.12	26.15	25.87

Revised Annual Fees and Charges

29. The revised annual fees and charges allowed for the instant assets are provided in Annexure II and III and are summarized below:-

(₹ in lakh)

Microwave Assets

Particulars	2009-10	2010-11	2011-12	2012-13 (Pro-rata)
Central Portion				
Annual Capital Recovery Charges – Loan	966.87	997.84	1014.07	253.53
Annual Capital Recovery Charges – Equity	188.12	206.57	214.45	53.61
Annual Capital Recovery Charges – Total	1154.99	1204.40	1228.52	307.14
O&M	0.00	0.00	0.00	0.00
Interest on Working Capital	24.07	25.10	25.60	6.40
TOTAL ANNUAL CHARGES	1179.06	1229.50	1254.12	313.55
States' Portion				
Annual Capital Recovery Charges – Loan	1656.40	1645.59	1644.48	411.15
Annual Capital Recovery Charges – Equity	333.57	333.57	333.57	83.39
Annual Capital Recovery Charges – Total	1989.97	1979.16	1978.05	494.54
O&M	0.00	0.00	0.00	0.00
Interest on Working Capital	41.48	41.25	41.23	10.31
TOTAL ANNUAL CHARGES	2031.44	2020.41	2019.28	504.85



(₹ in lakh)

Non-Microwave Assets

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Central Portion					
Annual Capital Recovery Charges – Loan	361.75	355.11	360.64	370.93	374.27
Annual Capital Recovery Charges – Equity	103.71	106.31	111.52	118.25	123.98
Annual Capital Recovery Charges – Total	465.46	461.42	472.15	489.18	498.25
O&M	465.03	465.48	607.45	468.13	563.14
Interest on Working Capital	32.96	32.90	40.23	33.61	38.55
TOTAL ANNUAL CHARGES	963.45	959.80	1119.83	990.93	1099.94
States' Portion					
Annual Capital Recovery Charges – Loan	991.31	963.67	959.22	960.70	947.13
Annual Capital Recovery Charges – Equity	294.16	294.16	294.16	294.16	294.16
Annual Capital Recovery Charges – Total	1285.47	1257.83	1253.38	1254.86	1241.29
O&M	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	26.79	26.22	26.12	26.15	25.87
TOTAL ANNUAL CHARGES	1312.26	1284.04	1279.50	1281.02	1267.16

30. Review Petition No. 10/RP/2018 is disposed of in terms of the above decisions.

Sd-

(Dr. M. K. Iyer)
Member

Sd-

(P. K. Pujari)
Chairperson



Annexure-I

(₹ in lakh)

Non-Microwave: Replaced SCODA / EMS - State Portion Charges		
Particulars	2014-15	2015-16
Recoverable Opening Gross Capital Cost	8259.73	8259.73
Recoverable Opening Gross Notional Loan	7175.49	7175.49
Recoverable Opening Gross Equity	1084.24	1084.24
Recovered Gross Capital Cost (As on 1st April)	4113.26	6140.49
Recovered Gross Notional Loan	3768.03	5454.15
Recovered Gross Equity	345.23	686.34
Opn.Net Capital Cost	4146.47	2119.24
Opn. Net Notional Loan	3407.46	1721.34
Opn. Net Equity	739.01	397.90
Recovered Capital Cost (During the Year)	2027.23	2119.24
Recocered Notional Loan	1686.12	1721.34
Recovered Equity	341.11	397.90
Cl. Net Capital Cost	2119.24	0.00
Cl. Net Notional Loan	1721.34	0.00
Cl. Net Equity	397.90	0.00
Additional Capital Cost	0.00	0.00
Additional Notional Loan	0.00	0.00
Additional Equity	0.00	0.00
Years (Capital to be recovered one day before Effective COD (02.04.2016) i.e 01.04.2016. However, for the purpose of ease of calculation, 31st March 2016 is taken into consideration)	2.00	1.00
Months	24.00	12.00
Weighted Average Rare of Interest p.a.	2.0690%	2.0690%
Weighted Average Rare of Interest p.m.	0.1724%	0.1724%
Monthly Recovery Factors -Loan	0.042571	0.084270
Monthly Capital Recovery Charge - Loan	145.06	145.06
Annual Capital Recovery Charge - Loan	1740.69	1740.69
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
Annual Capital Recovery Charge - Equity	432.09	432.09
Monthly Capital Recovery Charge - Total	181.07	181.07
Annual Capital Recovery Charge - Total	2172.78	2172.78
Allowable Fee & Charges		
Particulars	2014-15	2015-16
Annual Capital Recovery Charge-Loan	1740.69	1740.69
Annual Capital Recovery Charge-Equity	432.09	432.09
Annual Capital Recovery Charge-Total	2172.78	2172.78
O&M Expenses	0.00	0.00
Interest on Working Capital	50.01	50.01
Total Fee & Charges (Annualized)	2222.80	2222.80



(₹ in lakh)

Microwave-Central Portion-fee and charges				
Particulars	2009-10	2010-11	2011-12	2012-13
Opening Gross Capital Cost	4087.22	4203.41	4233.09	4233.09
Opening Gross Notional Loan	3566.42	3647.75	3668.52	3668.52
Opening Gross Equity	520.80	555.66	564.57	564.57
Recovered Gross Capital Cost (As on 1st April)	629.37	1635.88	2744.48	3928.39
Recovered Gross Notional Loan	586.49	1470.49	2422.19	3416.08
Recovered Gross Equity	42.88	165.38	322.29	512.31
Opening Net Capital Cost	3457.85	2567.53	1488.61	304.70
Opening Net Notional Loan	2979.92	2177.25	1246.33	252.45
Opening Net Equity	477.92	390.28	242.27	52.26
Recovered Capital Cost (During the Year)	1006.50	1108.61	1183.91	304.70
Recovered Notional Loan	884.00	951.70	993.89	252.45
Recovered Equity	122.50	156.91	190.02	52.26
Closing Net Capital Cost	2451.34	1458.93	304.70	0.00
Closing Net Notional Loan	2095.92	1225.56	252.45	0.00
Closing Net Equity	355.42	233.37	52.26	0.00
Additional Capital Cost	116.19	29.68	0.00	0.00
Additional Notional Loan	81.33	20.78	0.00	0.00
Additional Equity	34.86	8.90	0.00	0.00
Years (Capital to be recovered up to 30.6.2012)	3.25	2.25	1.25	0.25
Months	39.00	27.00	15.00	3.00
Weighted Average Rate of Interest p.a.	3.2155%	2.6469%	2.5452%	2.5830%
Weighted Average Rate of Interest p.m.	0.2680%	0.2206%	0.2121%	0.2153%
Monthly Recovery Factors-Loan	0.027038	0.038192	0.067803	0.334769
Monthly Capital Recovery Charge-Loan	80.57	83.15	84.51	84.51
Annual Capital Recovery Charge-Loan	966.87	997.84	1014.07	1014.13
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	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	15.68	17.21	17.87	17.87
Annual Capital Recovery Charge-Equity	188.12	206.57	214.45	214.45
Monthly Capital Recovery Charge-Total	96.25	100.37	102.38	102.38
Annual Capital Recovery Charge-Total	1154.99	1204.40	1228.52	1228.58
O&M Expenses (Annualized)	0.00	0.00	0.00	0.00
Allowable Fee & Charges				
Particulars	2009-10	2010-11	2011-12	2012-13
Annual Capital Recovery Charge-Loan	966.87	997.84	1014.07	1014.13
Annual Capital Recovery Charge-Equity	188.12	206.57	214.45	214.45
Annual Capital Recovery Charge-Total	1154.99	1204.40	1228.52	1228.58
O&M Expenses	0.00	0.00	0.00	0.00



Interest on Working Capital	24.07	25.10	25.60	25.61
Total Fee & Charges (Annualized)	1179.06	1229.50	1254.12	1254.19
Microwave-State Portion-fee and charges				
Particulars	2009-10	2010-11	2011-12	2012-13
Opening Gross Capital Cost	7020.23	7020.23	7020.23	7020.23
Opening Gross Notional Loan	6098.70	6098.70	6098.70	6098.70
Opening Gross Equity	921.53	921.53	921.53	921.53
Recovered Gross Capital Cost (As on 1st April)	1067.70	2799.35	4622.24	6529.56
Recovered Gross Notional Loan	993.62	2508.06	4077.56	5689.31
Recovered Gross Equity	74.08	291.29	544.68	840.25
Opening Net Capital Cost	5952.53	4220.88	2397.99	490.67
Opening Net Notional Loan	5105.07	3590.64	2021.14	409.38
Opening Net Equity	847.46	630.24	376.86	81.28
Recovered Capital Cost (During the Year)	1731.65	1822.88	1907.33	490.67
Recovered Notional Loan	1514.44	1569.50	1611.76	409.38
Recovered Equity	217.22	253.38	295.57	81.28
Closing Net Capital Cost	4220.88	2397.99	490.67	0.00
Closing Net Notional Loan	3590.64	2021.14	409.38	0.00
Closing Net Equity	630.24	376.86	81.28	0.00
Additional Capital Cost	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.3.2012)	3.25	2.25	1.25	0.25
Months	39.00	27.00	15.00	3.00
Weighted Average Rate of Interest p.a.	3.2155%	2.6469%	2.5452%	2.5830%
Weighted Average Rate of Interest p.m.	0.2680%	0.2206%	0.2121%	0.2153%
Monthly Recovery Factors-Loan	0.027038	0.038192	0.067803	0.334769
Monthly Capital Recovery Charge-Loan	138.03	137.13	137.04	137.05
Annual Capital Recovery Charge-Loan	1656.40	1645.59	1644.48	1644.59
Rate of Return on Equity p.a.	15.500%	15.500%	15.500%	15.500%
Rate of Return on Equity p.m.	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	27.80	27.80	27.80	27.80
Annual Capital Recovery Charge-Equity	333.57	333.57	333.57	333.57
Monthly Capital Recovery Charge-Total	165.83	164.93	164.84	164.85
Annual Capital Recovery Charge-Total	1989.97	1979.16	1978.05	1978.16
O&M Expenses (Annualized)	0.00	0.00	0.00	0.00
Allowable Fee & Charges				
Particulars	2009-10	2010-11	2011-12	2012-13
Annual Capital Recovery Charge-Loan	1656.40	1645.59	1644.48	1644.59
Annual Capital Recovery Charge-Equity	333.57	333.57	333.57	333.57
Annual Capital Recovery Charge-Total	1989.97	1979.16	1978.05	1978.16
O&M Expenses	0.00	0.00	0.00	0.00
Interest on Working Capital	41.48	41.25	41.23	41.23
Total Fee & Charges (Annualized)	2031.44	2020.41	2019.28	2019.38



Annexure-III

(₹ in lakh)

Non-Microwave: Central Portion-fee and Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Capital Cost	4735.95	4780.71	4866.38	4971.53	5055.37
Opening Gross Notional Loan	4132.48	4163.81	4223.78	4297.39	4356.08
Opening Gross Equity	603.47	616.90	642.60	674.14	699.29
Recovered Gross Capital Cost (As on 1st April)	729.27	1002.92	1298.79	1614.07	1950.90
Recovered Gross Notional Loan	679.58	934.03	1206.94	1494.12	1796.21
Recovered Gross Equity	49.69	68.89	91.85	119.94	154.69
Opening Net Capital Cost	4006.68	3777.79	3567.59	3357.46	3104.47
Opening Net Notional Loan	3452.90	3229.79	3016.84	2803.26	2559.87
Opening Net Equity	553.78	548.01	550.75	554.20	544.60
Recovered Capital Cost (During the Year)	273.65	295.87	315.28	336.83	363.89
Recovered Notional Loan	254.45	272.91	287.19	302.08	321.39
Recovered Equity	19.20	22.96	28.09	34.75	42.50
Closing Net Capital Cost	3733.03	3481.92	3252.31	3020.63	2740.58
Closing Net Notional Loan	3198.45	2956.87	2729.66	2501.18	2238.48
Closing Net Equity	534.58	525.05	522.66	519.45	502.11
Additional Capital Cost	44.76	85.67	105.15	83.84	0.00
Additional Notional Loan	31.33	59.97	73.61	58.69	0.00
Additional Equity	13.43	25.70	31.55	25.15	0.00
Years (Capital to be recovered up to 31.7.2017)	11.42	10.42	9.42	8.42	7.42
Months	137.00	125.00	113.00	101.00	89.00
Weighted Average Rate of Interest p.a.	3.2155%	2.6469%	2.5452%	2.5830%	2.1915%
Weighted Average Rate of Interest p.m.	0.2680%	0.2206%	0.2121%	0.2153%	0.1826%
Monthly Recovery Factors-Loan	0.008731	0.009162	0.009962	0.011027	0.012184
Monthly Capital Recovery Charge-Loan	30.15	29.59	30.05	30.91	31.19
Annual Capital Recovery Charge-Loan	361.75	355.11	360.64	370.93	374.27
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	0.015606	0.016167	0.016874	0.017781	0.018970
Monthly Capital Recovery Charge-Equity	8.64	8.86	9.29	9.85	10.33
Annual Capital Recovery Charge-Equity	103.71	106.31	111.52	118.25	123.98



Monthly Capital Recovery Charge-Total	38.79	38.45	39.35	40.77	41.52
Annual Capital Recovery Charge-Total	465.46	461.42	472.15	489.18	498.25
O&M Expenses (Annualized)	465.03	465.48	607.45	468.13	563.14
Allowable Fee & Charges					
Particulars	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
Total Fee & Charges	963.45	959.80	1119.83	990.93	1099.94
Non-Microwave: State Portion-fee and Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Capital Cost	13011.77	13011.77	13011.77	13011.77	13011.77
Opening Gross Notional Loan	11303.74	11303.74	11303.74	11303.74	11303.74
Opening Gross Equity	1708.03	1708.03	1708.03	1708.03	1708.03
Recovered Gross Capital Cost (As on 1st April)	1978.95	2730.68	3534.82	4372.78	5241.60
Recovered Gross Notional Loan	1841.65	2538.92	3279.53	4043.39	4825.77
Recovered Gross Equity	137.30	191.76	255.28	329.39	415.83
Opening Net Capital Cost	11032.82	10281.09	9476.95	8638.99	7770.17
Opening Net Notional Loan	9462.09	8764.82	8024.21	7260.35	6477.96
Opening Net Equity	1570.73	1516.27	1452.75	1378.64	1292.20
Recovered Capital Cost (During the Year)	751.73	804.14	837.96	868.83	914.14
Recovered Notional Loan	697.27	740.61	763.86	782.39	813.31
Recovered Equity	54.46	63.53	74.10	86.44	100.83
Closing Net Capital Cost	10281.09	9476.95	8638.99	7770.17	6856.03
Closing Net Notional Loan	8764.82	8024.21	7260.35	6477.96	5664.66
Closing Net Equity	1516.27	1452.75	1378.64	1292.20	1191.37
Additional Capital Cost	0.00	0.00	0.00	0.00	0.00
Additional Notional Loan	0.00	0.00	0.00	0.00	0.00
Additional Equity	0.00	0.00	0.00	0.00	0.00
Years (Capital to be recovered up to 31.7.2017)	11.42	10.42	9.42	8.42	7.42
Months	137.00	125.00	113.00	101.00	89.00
Weighted Average Rate of Interest p.a.	3.2155%	2.6469%	2.5452%	2.5830%	2.1915%
Weighted Average Rate of	0.2680%	0.2206%	0.2121%	0.2153%	0.1826%



Interest p.m.					
Monthly Recovery Factors - Loan	0.008731	0.009162	0.009962	0.011027	0.012184
Monthly Capital Recovery Charge-Loan	82.61	80.31	79.93	80.06	78.93
Annual Capital Recovery Charge-Loan	991.31	963.67	959.22	960.70	947.13
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	0.015606	0.016167	0.016874	0.017781	0.018970
Monthly Capital Recovery Charge-Equity	24.51	24.51	24.51	24.51	24.51
Annual Capital Recovery Charge-Equity	294.16	294.16	294.16	294.16	294.16
Monthly Capital Recovery Charge-Total	107.12	104.82	104.45	104.57	103.44
Annual Capital Recovery Charge-Total	1285.47	1257.83	1253.38	1254.86	1241.29
O&M Expenses (Annualized)	0.00	0.00	0.00	0.00	0.00
Allowable Fee & Charges					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
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	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	26.79	26.22	26.12	26.15	25.87
Total Fee & Charges	1312.26	1284.04	1279.50	1281.02	1267.16

