

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 217/TT/2015

Coram:

**Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member**

**Date of Hearing : 20.01.2016
Date of Order : 18.02.2016**

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for 1x80 MVAR, 420kV 3-phase Bus-Reactor at 400kV Bongaigaon Sub-station along with associated bay under transmission system associated with North-East/Northern Western Interconnector-I and transmission system of Kameng HEP in North Eastern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

Versus

1. Assam Electricity Grid Corporation Limited
(Formerly Assam State Electricity Board),
"Bijulee Bhawan", Paltanbazar, Guwahati- 781 001
2. Meghalaya Energy Corporation Ltd.
(Formerly Meghalaya State Electricity Board)
Short Round Road, "Lumjingshai",
Shillong-793 001



3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh
4. Power and Electricity Department,
Govt. of Mizoram,
Aizawl, Mizoram
5. Manipur State Electricity Distribution
Company Ltd. (Formerly Electricity Department,
Government of Manipur)
Keishampat, Imphal
6. Department of Power,
Government of Nagaland
Kohima, Nagaland
7. Tripura State Electricity Corporation Ltd.,
Vidhyut Bhawan, North Banamalipur,
Agartala, Tripura (W) – 799001

.....Respondents

The following were present:-

For Petitioner: Shri M. M. Mondal, PGCIL
 Shri S. K. Venkatesan, PGCIL
 Shri S. C. Taneja, PGCIL
 Shri Y. K. Sehgal, PGCIL
 Shri Nitish Kumar, PGCIL
 Shri G. C. Dhal, PGCIL
 Shri Amit Yadav, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri S. S. Raju, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri Anshul Garg, PGCIL

For Respondent: None



ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”), for trueing up of capital expenditure under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on actual capital expenditure for the period 1.2.2013 to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 for 1x80 MVAR, 420kV 3-phase Bus-Reactor at 400kV Bongaigaon Sub-station along with associated bay under transmission system associated with North-East/Northern Western Interconnector-I and transmission system of Kameng HEP in North Eastern Region (hereinafter referred as “transmission asset”).

2. The respondents are mostly distribution licensees and transmission licensees who are procuring transmission service from the petitioner, mainly beneficiaries of the North Eastern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 20.1.2016. None of the respondents have filed their reply. In response to letter dated 18.1.2016, the



petitioner has submitted the information vide affidavit dated 25.1.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

4. The brief facts of the case are as follows:-

- (a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide Memorandum No C/CP/NER-NR.WR Intr-I dated 27.2.2009, at an estimated cost of ₹1113019 lakh, which included IDC of ₹106605 lakh. The approved apportioned cost for the transmission asset was ₹875.50 lakh. The petitioner has built the transmission asset in the Northern Eastern Region. The date of the commercial operation of the Asset is 1.2.2013.
- (b) The assets have been commissioned on 1.2.2013, within the schedule commissioning date of 1.3.2013.
- (c) The tariff from COD to 31.3.2014 for Asset-I was allowed vide order dated 15.6.2015 in Petition No. 45/2013 in accordance with the 2009 Tariff Regulations. The tariff allowed for the Asset in the tariff period 2009-14 is as under:-

Particulars	(₹ in lakh)	
	2012-13 (pro-rata)	2013-14
Depreciation	3.55	26.46
Interest on Loan	4.32	30.86
Return on equity	3.53	26.28
Interest on Working Capital	0.83	5.54
O & M Expenses	10.32	65.46
Total	22.56	154.60



- (d) The the capital cost of ₹381.60 lakh (excluding excess initial spares and restricting IDC/IEDC) as on COD was considered in order dated 15.6.2015 in Petition No. 45/2013 for determination of tariff for the instant asset for the 2009-14 tariff period .
- (e) The Commission had restricted the IDC on cash basis of ₹8.36 lakh in absence of the details of IDC amount discharged by the petitioner upto date of commercial operation. Similarly, IEDC amount was also restricted to the extent of 5% of hard cost in absence of details of IEDC discharged upto commercial operation date. The petitioner was directed to submit adequate details of IDC and IEDC discharged upto commercial operation date to take final view on admissibility at the time of true up.
- (f) The initial spares was restricted to ₹14.40 lakh by considering capital cost as on the date of commercial operation and the admissible IDC and IEDC.
- (g) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.
- (h) The petitioner was directed vide letter dated 18.1.2016, to submit the approval of the Regional Power Committee (RPC) for the instant transmission asset. In response, vide affidavit dated 25.1.2016, the petitioner submitted the RPC approval for the asset.
- (i) The instant petition was filed on 8.9.2015.



TRUING UP OF ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14

5. The truing up of tariff for the 2009-14 tariff period has been determined as discussed below.

IDC and IEDC

6. The petitioner submitted that in the order dated 15.6.2015 in Petition No. 45/2013, the Commission partly allowed IDC/IEDC and directed to submit the details of actual IDC/IEDC at the time of truing up for consideration of IDC/IEDC. The petitioner has claimed IDC based on Auditor's Certificate dated 16.7.2015, and the total IDC upto COD claimed by the petitioner is ₹26.88 lakh, out of which ₹16.36 lakh were discharged upto COD and the balance IDC of ₹2.62 lakh and ₹7.90 lakh have been discharged during 2012-13 and 2013-14, respectively. The petitioner also submitted that these amounts are not included in additional capitalization claimed in the petition. The petitioner further submitted that the entire IEDC of ₹46.45 lakh has been discharged upto COD. The details of IDC and IEDC are as under:-

(₹ in lakh)

Aggregate IDC and IEDC		Discharged upto cash basis as per Auditor Certificate		Balance to be discharged during 2012-13 and 2013-14	
IDC	IEDC	IDC	IEDC	IDC	IEDC
26.88	46.45	16.36	46.45	10.52	-



7. We have considered the petitioner's submissions. It is observed that the petitioner has considered the entire IDC of ₹26.88 lakh as on COD. However, we have considered IDC and IEDC on cash basis and accordingly allow ₹16.36 lakh as IDC and ₹46.45 lakh as IEDC as on COD. The balance IDC of ₹2.62 lakh and ₹7.90 lakh has been considered in the additional capitalization for 2012-13 and 2013-14, respectively. Accordingly, IDC and IEDC approved and allowed in the instant order are as under:-

(₹ in lakh)

Particulars	IDC (upto COD)	IEDC (upto COD)
Approved in order dated 15.6.2015	8.36	18.02
Claimed by the petitioner	16.36	46.45
Allowed in this order	16.36	46.45

Initial Spares

8. Regulation 8 of the 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

“Transmission line:	0.75%
Transmission sub-station	2.5%
Series compensation devices& HVDC Station:	3.5%”

9. Regulation 3(29) of the 2009 Tariff Regulations provides that:-

“(29) **`original project cost'** means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;”



10. The petitioner has claimed initial spares of ₹30.29 lakh for sub-station as on COD based on estimated completion cost of ₹655.12 lakh as on 31.3.2019. The petitioner has submitted that initial spares are 4.85% for sub-station, which is marginally higher than the ceiling limits for sub-station. The petitioner has not claimed any initial spares for transmission line.

11. The petitioner was directed to submit the amount of initial spares discharged upto COD on cash basis. In response, the petitioner vide affidavit dated 25.1.2016 has submitted that total initial spares of ₹30.29 lakh claimed were discharged upto COD and there is no undischarged liabilities for initial spares.

12. We have considered the capital cost and projected additional capitalization as on cut-off date for computation of allowable initial spares.

13. The excess initial spares worked out and allowed for sub-station as per above regulation is shown in the table below:-

(₹ in lakh)					
Description	Capital cost as on cut off date	Initial Spares claimed	Ceiling limit as per Regulation 8 of 2009 regulations	Initial spares worked out	Excess initial spares claimed
	(a)	(b)	(c)	$(d)=((a-b)*c)/(100-c)\%$	$(e)=(b)-(d)$
Approved in order dated 15.6.2015	581.27	19.50	2.50%	14.40	5.10
Allowed in this order	655.12*	30.29	2.50%	16.02	14.27



*Capital cost upto cut off date i.e.31.3.2016 has been considered by considering add cap considered for 2014-16 in accordance with 2014 Tariff Regulations.

14. The capital cost upto cut off date, i.e., 31.3.2016 has been considered as the petitioner has claimed the additional capitalization beyond 31.3.2014. The additional capitalization beyond 31.3.2014 has been considered after prudence check for truing up of tariff of 2009-14 tariff period in accordance with 2014 Tariff Regulations.

Capital Cost

15. The petitioner has claimed capital cost of ₹433.65 lakh for the instant transmission asset as on COD and submitted the Auditor's Certificate certifying the capital cost and additional capitalization claimed.

16. Clause (1) of Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“(1) Capital cost for a project shall include:

(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:



Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.”

17. We have considered the petitioner’s submissions. The capital cost of ₹408.86 lakh has been considered after restricting initial spares to the ceiling limits specified in the 2009 Tariff Regulations, i.e., reduced by ₹14.27 lakh and considering cash basis IDC of ₹16.36 lakh as on COD. The balance IDC of ₹2.62 lakh and ₹7.90 lakh has been considered in the additional capitalization for 2012-13 and 2013-14, respectively.

Additional Capital Expenditure

18. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations.

19. Clause (1)(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

“Additional Capitalisation. (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Undischarged liabilities; “

20. The petitioner has claimed additional capitalization of ₹45.00 lakh for 2012-13 and ₹93.50 lakh for 2013-14 for the instant transmission asset towards balance and retention payments.

21. We have considered the submissions made by the petitioner. The total capital cost including additional capitalisation is well within the limits of approved apportioned cost and the actual additional capitalisation is lower than the



additional capitalisation approved in previous order. As the additional capitalisation is towards balance and retention payment, the same is allowed for 2012-13 and 2013-14. As discussed earlier, we have included the balance IDC of ₹2.62 lakh and ₹7.90 lakh for 2012-13 and 2013-14, respectively, as part of additional capitalisation. The summary of capital cost and additional capitalisation is as shown in the table below:-

(₹ in lakh)

Particulars	Capital cost up to COD	2012-13	2013-14	Total add cap	Total capital cost including additional capitalization as on 31.3.2014
Approved in order dated 15.6.2015	381.60	44.58	150.00	194.58	576.18
Claimed by the petitioner	433.65	45.00	93.50	138.50	572.15
Allowed in this order	408.86	47.62	101.40	149.02	557.88

The capital cost as on COD is reduced due to the restriction of IDC and IEDC on cash basis and initial spares in accordance with 2009 Tariff Regulations.

Debt: Equity

22. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“(1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

.....



(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

23. The petitioner has claimed true up Annual Fixed Charge based on admitted debt-equity ratio of 70:30 as on COD. The admitted debt:equity ratio of 70:30 as on COD for the instant asset has been considered for the purpose of trueing up of the approved tariff of 2009-14 tariff period. The details are as under:-

(₹ in lakh)

Funding	Claimed		Approved in order dated 15.6.2015		Approved in this order	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	303.56	70.00	267.12	70.00	286.20	70.00
Equity	130.09	30.00	114.48	30.00	122.66	30.00
Capital Cost	433.65	100.00	381.60	100.00	408.86	100.00

24. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2012-13 and 2013-14. The petitioner was directed to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. In response, the petitioner vide affidavit dated 25.1.2016 has submitted that during 2012-13 and 2013-14, the loan deployed is 70% of the additional capitalisation. Hence, 30% equity has been deployed as per Clause 12(3) of the 2009 Tariff Regulations. We have considered debt:equity ratio of 70:30 for additional capitalization. The overall debt equity as on 31.3.2014 for the instant transmission asset including additional capitalization is as under:-



(₹ in lakh)

Funding	Claimed		Approved in order dated 15.6.2015		Approved	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	400.50	70.00	403.33	70.00	390.52	70.00
Equity	171.65	30.00	172.85	30.00	167.36	30.00
Capital Cost	572.15	100.00	576.18	100.00	557.88	100.00

Interest on Loan (“IOL”)

25. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

26. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

27. We have considered the submissions of the petitioner. IOL is calculated based on the actual interest rate, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Approved vide order dated 15.6.2015	4.32	30.86
As claimed by the petitioner	4.73	31.69
Allowed after true up	4.49	30.59



28. The IOL for 2012-13 has increased due to increase in actual weighted average interest rate applicable and the IOL for 2013-14 has reduced due to variation in additional capitalization during the 2009-14 tariff period.

Return on Equity (“ROE”)

29. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide that:-

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

30. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 3.2.2015. However, for truing up purpose, the computation of ROE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has



submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (t) %	Grossed up ROE (Base rate/(1-t)) %
2012-13	20.008	19.377
2013-14	20.961	19.610

31. Accordingly, ROE allowed for the instant asset is shown in the table below:-

Particulars	(₹ in lakh)	
	2012-13 (pro-rata)	2013-14
Approved vide order dated 15.6.2015	3.53	26.28
As claimed by the petitioner	4.42	30.91
Allowed after trued up	4.19	29.84

32. The variation in return on equity is mainly on account of increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

Depreciation

33. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

-
- | | |
|------------------------------|-----------|
| (c) AC and DC sub-station | 25 years |
| (d) Hydro generating station | 35 years |
| (e) Transmission line | 35 years” |



34. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

"17. Depreciation:

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

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets."

35. The depreciation was worked out in order dated 15.6.2015 in Petition No. 45/2013 in accordance with Regulation 17 of the 2009 Tariff Regulations.

36. The weighted average useful life of the transmission asset has been considered as per Regulations 3 (42) and 17 (4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the asset has been considered as 25 years. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under:

Particulars	(₹ in lakh)	
	2012-13 (pro-rata)	2013-14
Approved vide order dated 15.6.2015	3.55	26.46
As claimed by the petitioner	4.01	27.74
Allowed after trued up	3.81	26.78

37. The variation in depreciation is on account of increase in capital cost as on COD.



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

38. The petitioner has computed O&M expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. The O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Approved vide order dated 15.6.2015	10.32	65.46
As claimed by the petitioner	10.32	65.46
Allowed after trued up	10.32	65.46

Interest on working capital (“IWC”)

39. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

40. The petitioner has submitted that the rate of interest on working capital has been considered as 13.50% for the Asset as per clause (3)(ii) of Regulation 18 of the 2009 Tariff Regulations (Second Amendment), and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.



41. As per Clause (3)(ii) of Regulation 18 of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis. Further, in case of transmission assets put under commercial operation after 1.7.2010, it will be equal to SBI Base Rate plus 350 basis points as on 1st April of the year in which the transmission asset was declared under commercial operation. State Bank of India Base Rate as on 1.4.2012 was 10.00%. Therefore, interest rate of 13.50% for the Asset has been considered to work out the interest on working capital in the instant case.

42. The IWC trued up is as under:-

(₹ in lakh)		
Particulars	2012-13 (pro-rata)	2013-14
Maintenance Spares	1.55	9.82
O & M expenses	0.86	5.46
Receivables	3.94	26.38
Total	6.35	41.66
Rate of Interest	13.50	13.50
Interest	0.86	5.62

43. The IWC approved and trued up are given as under:-

(₹ in lakh)		
Particulars	2012-13 (pro-rata)	2013-14
Approved vide order dated 15.6.2015	0.83	5.54
As claimed by the petitioner	0.87	5.70
Allowed after trued up	0.86	5.62



44. The variation in IWC is on account of variation in IOL, depreciation and ROE due to variation in capital cost as on COD and additional capitalization and further increase in ROE on account of applicable MAT rate during the 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

45. The detailed computation of the various components of the trued up annual fixed charges for the asset for the tariff period 2009-14 is summarised below:-

(₹ in lakh)		
Particulars	2012-13 (Pro-rata)	2013-14
Gross Block		
Gross Opening Block	408.86	456.48
Additional Capitalization	47.62	101.40
Gross Closing Block	456.48	557.88
Average Gross Block	432.67	507.18
Depreciation		
Rate of Depreciation (%)	5.280	5.280
Depreciable Value	389.40	456.46
Elapsed Life (Beginning of the year)	0	1
Weighted Balance Useful life of the assets	25	24
Remaining Depreciable Value	389.40	0.00
Depreciation	3.81	26.78
Interest on Loan		
Gross Normative Loan	286.20	319.54
Cumulative Repayment upto Previous Year	0.00	3.81
Net Loan-Opening	286.20	315.73
Additional Capitalisation	33.33	70.98
Repayment during the year	3.81	26.78
Net Loan-Closing	315.73	359.93
Average Loan	300.97	337.83
Weighted Average Rate of Interest on Loan (%)	8.9415	9.0563



Particulars	2012-13 (Pro-rata)	2013-14
Interest	4.49	30.59
Return on Equity		
Opening Equity	122.66	136.94
Additional Capitalisation	14.29	30.42
Closing Equity	136.94	167.36
Average Equity	129.80	152.15
Return on Equity (Base Rate) (%)	15.50	15.50
MAT rate for the year (%)	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.610
Return on Equity (Pre Tax)	4.19	29.84
Interest on Working Capital		
Maintenance Spares	1.55	9.82
O & M expenses	0.86	5.46
Receivables	3.94	26.38
Total	6.35	41.66
Interest	0.86	5.62
Annual Transmission Charges		
Depreciation	3.81	26.78
Interest on Loan	4.49	30.59
Return on Equity	4.19	29.84
Interest on Working Capital	0.86	5.62
O & M Expenses	10.32	65.46
Total	23.66	158.30

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

46. The petitioner has claimed the transmission charges as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	31.36	33.55	34.59	34.59	34.59
Interest on Loan	33.70	33.56	31.72	28.58	25.42
Return on equity	34.94	37.38	38.54	38.54	38.54
Interest on Working Capital	5.63	5.85	5.97	6.02	6.07
O & M Expenses	60.30	62.30	64.37	66.51	68.71
Total	165.93	172.64	175.19	174.24	173.33



47. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
O & M expenses	5.03	5.19	5.36	5.54	5.73
Receivables	27.66	28.77	29.20	29.04	28.89
Total	41.74	43.31	44.22	44.56	44.93
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	5.63	5.85	5.97	6.02	6.07

Capital Cost

48. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

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

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

49. The petitioner has claimed capital expenditure of ₹572.15 lakh as on 31.3.2014 for the 2014-19 tariff period. The trued up capital cost of ₹ 557.88 lakh as on 31.3.2014 is considered to work out the tariff for 2014-19 tariff period.



Additional Capital Expenditure

50. The petitioner has projected additional capitalization of ₹82.97 lakh for 2014-19 tariff period towards balance and retention payments under Regulation 14(1)(i) of 2014 Tariff Regulations. The petitioner was directed vide letter dated 18.1.2016 to submit the amount of balance and retention payment yet to be made along with the details of contracts for which the payment has been retained. In response, the petitioner vide affidavit dated 25.1.2016 has submitted that the projected expenditure of ₹43.64 lakh and ₹39.33 lakh for the year 2014-15 and 2015-16, respectively, is on account of contract closing and final settlement of bills against balance and retention payment of contractor M/s. ICOSA.

51. Additional capitalization of ₹82.97 lakh for 2014-19 tariff period towards balance and retention payments under Regulation 14(1)(i) of the 2014 Tariff Regulations is allowed and considered for tariff computation as the total capital cost including additional capitalization is well within the overall apportioned cost. The details are as follows:-

Admitted capital cost as on 31.3.2014	Additional capitalization projected					Total additional capitalization	Total capital cost including additional capitalization as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19		
557.88	43.64	39.33	0.00	0.00	0.00	82.97	640.85



Debt:Equity Ratio

52. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

53. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. Further, we have considered debt:equity ratio of 70:30 for additional capitalization during 2014-16. The details of the debt:equity as on 31.3.2019 is as follows:-

(₹ in lakh)

Funding	Claimed		Approved	
	Amount	(%)	Amount	(%)
Debt	458.584	70.00	448.60	70.00
Equity	196.536	30.00	192.26	30.00
Capital Cost	655.12	100.00	640.85	100.00

Interest on Loan (“IOL”)

54. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

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

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



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

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

55. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	390.52	421.06	448.60	448.60	448.60
Cumulative Repayment upto COD/previous year	30.59	61.19	93.99	127.83	161.67
Net Loan-Opening	359.93	359.87	354.60	320.77	286.93
Additions during the year	30.55	27.53	0.00	0.00	0.00
Repayment during the year	30.61	32.80	33.84	33.84	33.84
Net Loan-Closing	359.87	354.60	320.77	286.93	253.09
Average Loan	359.90	357.24	337.68	303.85	270.01
Rate of Interest (%)	9.1516	9.1948	9.2048	9.2168	9.2277
Interest	32.94	32.85	31.08	28.01	24.92

Return on Equity (“ROE”)

56. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”



“25. Tax on Return on Equity:

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

57. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

58. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

59. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on



equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE allowed is as given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	167.36	180.46	192.26	192.26	192.26
Additional Capitalization	13.09	11.80	0.00	0.00	0.00
Closing Equity	180.46	192.26	192.26	192.26	192.26
Average Equity	173.91	186.36	192.26	192.26	192.26
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	34.10	36.54	37.70	37.70	37.70

Depreciation

60. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

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



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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.”

61. The petitioner has computed depreciation considering capital expenditure of ₹572.15 lakh as on 31.3.2014 for the Asset in the 2014-19 tariff period.

62. We have considered the submissions of the petitioner and have allowed depreciation considering capital expenditure of ₹557.88 lakh as on 31.3.2014 under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	557.88	601.52	640.85	640.85	640.85
Additional Capitalization	43.64	39.33	0.00	0.00	0.00
Gross block at the end of the year	601.52	640.85	640.85	640.85	640.85
Average gross block	579.70	621.19	640.85	640.85	640.85
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	521.73	559.07	576.77	576.77	576.77
Elapsed Life of the assets at beginning of the year	2	3	4	5	6
Weighted Balance Useful life of the assets	23	22	21	20	19
Remaining Depreciable Value	472.11	478.84	463.74	429.90	396.06
Depreciation	30.61	32.80	33.84	33.84	33.84



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

63. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M Expenses have been worked out as given hereunder:-

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual	400 kV Bays	1	1	1	1	1
Norms as per Regulation	Double Circuit (Bundled conductor with four or more sub-conductors)	1.062	1.097	1.133	1.171	1.21
	400 kV Bays	60.30	62.30	64.37	66.51	68.71
Total		60.30	62.30	64.37	66.51	68.71

64. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.



65. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

66. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Allowed	60.30	62.30	64.37	66.51	68.71

Interest on Working Capital ("IWC")

67. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

"28. Interest on Working Capital

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month"

"(5)Bank Rate' means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;"

68. The petitioner has submitted that it has computed interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.



69. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). Further, there is difference in IWC claimed by the petitioner and approved for 2014-19 tariff period, due to difference in RoE, depreciation, and interest claimed and approved in this order. The interest on working capital worked out is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
O & M Expenses	5.03	5.19	5.36	5.54	5.73
Receivables	27.25	28.38	28.82	28.67	28.53
Total	41.32	42.92	43.84	44.19	44.56
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	5.58	5.79	5.92	5.97	6.02

Annual Transmission Charges

70. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	557.88	601.52	640.85	640.85	640.85
Additional Capitalisation	43.64	39.33	0.00	0.00	0.00
Closing Gross Block	601.52	640.85	640.85	640.85	640.85
Average Gross Block	579.70	621.19	640.85	640.85	640.85
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	521.73	559.07	576.77	576.77	576.77
Elapsed Life (Beginning of	2	3	4	5	6



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
the year)					
Weighted Balance Useful life of the assets	23	22	21	20	19
Remaining Depreciable Value	472.11	478.84	463.74	429.90	396.06
Depreciation	30.61	32.80	33.84	33.84	33.84
Interest on Loan					
Gross Normative Loan	390.52	421.06	448.60	448.60	448.60
Cumulative Repayment upto Previous Year	30.59	61.19	93.99	127.83	161.67
Net Loan-Opening	359.93	359.87	354.60	320.77	286.93
Additions	30.55	27.53	0.00	0.00	0.00
Repayment during the year	30.61	32.80	33.84	33.84	33.84
Net Loan-Closing	359.87	354.60	320.77	286.93	253.09
Average Loan	359.90	357.24	337.68	303.85	270.01
Weighted Average Rate of Interest on Loan (%)	9.1516	9.1948	9.2048	9.2168	9.2277
Interest	32.94	32.85	31.08	28.01	24.92
Return on Equity					
Opening Equity	167.36	180.46	192.26	192.26	192.26
Additions	13.09	11.80	0.00	0.00	0.00
Closing Equity	180.46	192.26	192.26	192.26	192.26
Average Equity	173.91	186.36	192.26	192.26	192.26
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	34.10	36.54	37.70	37.70	37.70
Interest on Working Capital					
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
O & M expenses	5.03	5.19	5.36	5.54	5.73
Receivables	27.25	28.38	28.82	28.67	28.53
Total	41.32	42.92	43.84	44.19	44.56
Interest	5.58	5.79	5.92	5.97	6.02
Annual Transmission					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Charges					
Depreciation	30.61	32.80	33.84	33.84	33.84
Interest on Loan	32.94	32.85	31.08	28.01	24.92
Return on Equity	34.10	36.54	37.70	37.70	37.70
Interest on Working Capital	5.58	5.79	5.92	5.97	6.02
O & M Expenses	60.30	62.30	64.37	66.51	68.71
Total	163.53	170.28	172.91	172.02	171.18

71. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. However, the COD of the asset is after 2009, hence the claim of the petitioner is not maintainable.

Filing Fee and Publication Expenses

72. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

73. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and



charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

74. The petitioner has sought to recover Service Tax on Transmission Charges separately from the Respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

75. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

76. This order disposes of Petition No. 217/TT/2015.

Sd/-
(Dr. M. K. Iyer)
Member

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)****(₹ in lakh)**

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2013	Additions during the tariff period	Total
BOND XXXIII-DOCO FUNDING-	8.64	35.00	0.00	35.00
BOND XXXII-DOCO-FUNDING-	8.84	35.00	0.00	35.00
BOND XXXIV-DOCO FUNDING	8.84	15.00	0.00	15.00
BOND XXXV-DOCO FUNDING	9.64	15.00	0.00	15.00
SBI(21.3.2012)-ADD CAP FOR 2012-13- ADD CAP FUNDING-	10.29	0.00	31.50	31.50
BOND-XLI-DOCO FUNDING	8.85	203.55	0.00	203.55
BOND-XLV-ADD CAP FOR 2013-2014 ADD CAP FUNDING	9.65	0.00	65.45	65.45
SBI(2014-15)-ADD CAP FOR 2014-15 ADD CAP FUNDING-	10.25	0.00	0.00	0.00
Total		303.55	96.95	400.50

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2009-14**(₹ in lakh)**

Particulars	2012-13	2013-14
Gross Opening Loan	303.55	335.05
Cumulative Repayments of Loans upto Previous Year	0.00	0.00
Net Loans Opening	303.55	335.05
Add: Drawal(s) during the year	31.50	65.45
Less: Repayment(s) of Loan during the year	0.00	2.92
Net Closing Loan	335.05	397.58
Average Net Loan	319.30	366.32
Interest on Loan	28.55	33.17
Rate of Interest on Loan (%)	8.9415	9.0563



ANNEXURE-II

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXXIII-DOCO FUNDING-	8.64	35.00	0.00	35.00
BOND XXXII-DOCO-FUNDING-	8.84	35.00	0.00	35.00
BOND XXXIV-DOCO FUNDING	8.84	15.00	0.00	15.00
BOND XXXV-DOCO FUNDING	9.64	15.00	0.00	15.00
SBI(21.3.2012)-ADD CAP FOR 2012-13- ADD CAP FUNDING-	10.29	31.50	0.00	31.50
BOND-XLI-DOCO FUNDING	8.85	203.55	0.00	203.55
BOND-XLV-ADD CAP FOR 2013-2014 ADD CAP FUNDING	9.65	65.45	0.00	65.45
SBI(2014-15)-ADD CAP FOR 2014-15 ADD CAP FUNDING-	10.25	0.00	30.55	30.55
Total		400.50	30.55	431.05

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	400.50	431.05	431.05	431.05	431.05
Cumulative Repayments of Loans upto Previous Year	2.92	10.01	18.35	46.51	80.12
Net Loans Opening	397.58	421.04	412.70	384.54	350.93
Add: Drawal(s) during the year	30.55	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	7.09	8.34	28.16	33.61	33.61
Net Closing Loan	421.04	412.70	384.54	350.93	317.32
Average Net Loan	409.31	416.87	398.62	367.74	334.13
Interest on Loan	37.46	38.33	36.69	33.89	30.83
Rate of Interest on Loan (%)	9.1516	9.1948	9.2048	9.2168	9.2277

