

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 478/TT/2014

Coram:

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

Date of Hearing : 27.01.2016

Date of Order : 14.03.2016

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 of 80 MVAR Bus Reactor at Kaithal Sub-station under Northern Region system strengthening scheme-XIX of Northern 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. Rajasthan Rajya Vidyut Prasaran Nigam Limited.
Vidyut Bhawan, Vidyut Marg,
Jaipur-302 005
2. Ajmer Vidyut Vitran Nigam Limited.
400 kV GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited.
400 kV GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur



4. Jodhpur Vidyut Vitran Nigam Limited.
400 kV GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan,
Kumar House Complex Building II
Shimla-171004
6. Punjab State Power Corporation Limited.
Thermal Shed T1 A, Near 22 Phatak
Patiala-147001
7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) 134 109
8. Power Development Deptt.
Govt. of Jammu & Kashmir
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited.
Shakti Bhawan, 14, Ashok Marg
Lucknow- 226001
10. Delhi Transco Limited.
Shakti Sadan, Kotla Road
New Delhi- 110002
11. BSES Yamuna Power Limited.
BSES Bhawan, Nehru Place
New Delhi
12. BSES Rajdhani Power Limited.
BSES Bhawan, Nehru Place
New Delhi
13. North Delhi Power Limited.
Power Trading & Load Dispatch Group
Cennet Building
Pitampura, New Delhi-110034
14. Chandigarh Administration
Sector-9, Chandigarh



15. Uttarakhand Power Corporation Limited.
Urja Bhawan, Kanwali Road
Dehradun
16. North Central Railway
Allahabad
17. New Delhi Municipal Council
Palika Kendra, Sansad Marg
New Delhi-110002

....Respondents

The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL
 Shri Anshul Garg, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri M. M. Mondal, PGCIL
 Shri S. K. Venkatesan, PGCIL
 Shri Rakesh Prasad, PGCIL
 Mrs. Sangeeta Edwards, PGCIL
 Shri S. C. Taneja, PGCIL

For Respondent: None.

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner"), for truing 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 from COD 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 80 MVAR Bus



Reactor at Kaithal Sub-station under Northern Region system strengthening scheme-XIX of Northern Region.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern 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 the 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 27.1.2016. None of the respondents have filed their reply. Further the petitioner has submitted replies to ROP vide affidavit dated 27.1.2016. The petitioner has also submitted Revised Cost Estimates (RCE) vide affidavit dated 11.3.2016. 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 C/CP/NRSS-XIX, dated 16.2.2009 at an estimated cost of ₹41029 lakh, which included IDC of ₹3155 lakh. Subsequently, the RCE of the project was accorded by Board of Directors of the petitioner company dated 11.3.2016 at an estimated cost of ₹47741 lakh including IDC of ₹9056 lakh. The approved



apportioned cost for the instant asset is ₹1094.00 lakh. The petitioner has built the transmission asset in the Northern Region. The date of the commercial operation of the Transmission Asset is 1.7.2011.

- (b) The tariff from 1.7.2011 to 31.3.2014 for the asset was allowed vide order dated 25.4.2012 in Petition No. 69/TT/2011 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

Particulars	(₹ in lakh)		
	2011-12 (pro-rata)	2012-13	2013-14
Depreciation	33.27	44.36	44.36
Interest on Loan	37.74	46.90	42.99
Return on Equity	33.04	44.06	44.06
Interest on Working Capital	4.18	5.67	5.76
O&M Expenses	43.93	61.92	65.46
Total	152.17	202.91	202.64

- (c) Tariff was allowed vide order dated 25.4.2012 in Petition No. 69/TT/2011, from COD to 31.3.2014 restricting the capital cost as on COD to approved apportioned cost of ₹840.13 lakh in the absence of RCE. The petitioner's claim of additional ROE of 0.5% for completion of element within time was rejected on the ground that it is not justified.
- (d) 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.



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

5. Clause (3) of the Regulation 6 of the 2009 Tariff Regulations provides as under:-

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors”.

6. The petitioner has submitted the information as required under the 2009 Tariff Regulations for truing up of annual fixed charges for 2009-14 tariff period. The tariff for 2009-14 tariff period has been trued up in the subsequent paragraphs.

Capital Cost

7. The petitioner has claimed capital cost of ₹967.86 lakh for the instant asset as on COD as per Auditor’s Certificate for the purpose of truing up of tariff.

8. Regulation 7(1) 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.”



9. The petitioner has submitted the Auditor Certificate dated 11.8.2014 certifying the capital cost as on COD and additional capitalization claimed thereafter. Further it is observed that the claimed capital cost as on COD for the instant asset has exceeded the approved apportioned cost. In this regard, the petitioner was directed to submit approval for RCE. The petitioner has submitted RCE vide affidavit dated 11.3.2016.. We have considered the revised capital cost of ₹954.29 lakh as on COD after adjusting the excess initial spares of ₹13.57 lakh from ₹967.86 lakh.

Treatment of Initial Spares

10. Regulation 8 of the 2009 tariff Regulations provides as follows:-

“Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

- i) Transmission system
 - (a) Transmission line - 0.75%
 - (b) Transmission Sub-station - 2.5%
 - (c) Series Compensation devices and HVDC Station - 3.5%”

11. The petitioner has claimed excess initial spares and has not adjusted the same in the capital cost as on COD. We have considered capital cost as on cut-off date for computation of allowable initial spares. The excess initial spares worked out and allowed for Sub-station as per above regulation is shown in 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)	$(d)=((a-b)*c)/(100-c)\%$	$(e)=(b)-(d)$
Asset	1093.57	40.57	2.50%	27.00	13.57

12. Accordingly, the capital cost as on COD considered for the purpose of tariff computation is as follows:-

(₹ in lakh)	
Particulars	Asset
Capital cost as on COD	967.86
Less: Excess initial spares	13.57
Capital cost as on COD considered for tariff determination	954.29

Additional Capital Expenditure

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

14. Regulation 9(1)(i) of the 2009 Tariff Regulations provides as follows:-

“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...;”

15. The petitioner has claimed additional capitalization of ₹125.71 lakh for the instant transmission asset from COD to 31.3.2014 towards balance and retention payment for works executed within cut-off date.



11. The total capital cost of ₹1093.57 lakh for the asset including actual additional capitalisation claimed by the petitioner is well within the approved apportioned cost of ₹1094.00 lakh as per revised cost estimates. Hence, considering the submissions made by the petitioner, we have allowed total capital cost including additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

(₹ in lakh)

Cost as per Investment Approval is ₹1094.00 lakh						
Particulars	Capital cost upto COD	2011-12	2012-13	2013-14	Total add cap	Total capital cost including additional capitalisation as on 31.3.2014
Approved in order dated 25.4.2012	840.13	0.00	0.00	0.00	0.00	840.13
Allowing in this order	954.29	78.46	34.82	12.43	125.71	1080.00

Debt: Equity

16. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provide 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.”

17. The petitioner has claimed true up Annual Fixed Charge based on admitted debt-equity ratio of 70:30 as on 1.7.2011, i.e. as on COD. The same has been considered for the purpose of true up of the tariff of 2009-14 tariff period, as given under:-

(₹ in lakh)		
Funding	Amount	(%)
Debt	668.00	70.00
Equity	286.29	30.00
Capital Cost	954.29	100.00

18. With respect to additional capitalization, the petitioner has claimed the debt:equity ratio of 70:30 for 2009-14 tariff period. The petitioner was directed to confirm 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 27.1.2016 has submitted that the actual equity infused for the additional capitalization during the tariff period 2009-14 is 30% of the capital cost. The overall debt equity ratio as on 31.3.2014 for the instant transmission set including additional capitalization is as under:-



(₹ in lakh)		
Funding	Amount	(%)
Debt	756.00	70.00
Equity	324.00	30.00
Total	1080.00	100.00

Interest on Loan (“IOL”)

19. 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 29.1.2015 in Petition No. 165/TT/2013 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”.

20. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, 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	2011-12 (pro-rata)	2012-13	2013-14
Approved vide order dated 25.4.2012	37.74	46.90	42.99
As claimed by the petitioner	45.39	60.04	56.52
Allowed after trued up	44.79	59.28	55.83

21. The interest on loan has increased due to increase in actual weighted average rate of interest during 2009-14 tariff period.



Return on Equity (“ROE”)

22. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provides 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 may be, 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 trueed up in accordance with Regulation 6 of these regulations.”

23. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 25.4.2012. 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)) %
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.691



24. We have considered the revised MAT rate for grossing up ROE and the approved ROE is as shown in the table below:-

Particulars	(₹ in lakh)		
	2011-12 (pro-rata)	2012-13	2013-14
Approved vide order dated 25.4.2012	33.04	44.06	44.06
As claimed by the petitioner	43.91	61.84	63.97
Allowed after trued up	43.32	61.05	63.17

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

Depreciation

26. 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”

27. 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 yearclosing after a period of 12 years from date of commercial operation shall bespread over the balance useful life of the assets.”



28. The depreciation was allowed in accordance with Regulation 17 of the 2009 Tariff Regulations in its order dated 25.4.2012 in Petition No. 69/TT/2011.

29. The 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 useful life of the asset as on COD 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)		
	2011-12 (pro-rata)	2012-13	2013-14
Approved vide order dated 25.4.2012	33.27	44.36	44.36
As claimed by the petitioner	39.88	56.16	57.41
Allowed after trued up	39.35	55.45	56.70

30. The variation in depreciation is on account of difference in capital cost as on COD and additional capitalization considered from COD to 31.3.2014.

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

31. 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 for tariff period 2009-14 are same as that approved in the tariff order dated 25.4.2012 in Petition No. 69/TT/2011. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-



Particulars	(₹ in lakh)		
	2011-12 (pro-rata)	2012-13	2013-14
Approved vide order dated 25.4.2012	43.93	61.92	65.46
As claimed by the petitioner	43.93	61.92	65.46
Allowed after trued up	43.93	61.92	65.46

Interest on working capital("IWC")

32. 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.

33. The petitioner submitted the rate of interest on working capital as 11.75% as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations 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.

34. The Commission in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, has considered the rate of interest on working capital on normative basis, i.e., equal to State Bank of India Base Rate as applicable as on 1.4.2011 plus 350 basis points. State Bank of India Base Rate on 1.4.2011 was 8.25%. Therefore, interest rate of 11.75% (8.25% plus 350 basis points) has been considered to work out the interest on working capital in the instant case.

35. The IWC trued up is as under:-



(₹ in lakh)

Particulars	2011-12 (pro-rata)	2012-13	2013-14
Maintenance Spares	6.59	9.29	9.82
O & M expenses	3.66	5.16	5.46
Receivables	29.34	40.70	41.30
Total	39.59	55.14	56.57
Rate of Interest (%)	11.75	11.75	11.75
Interest	4.65	6.48	6.65

(₹ in lakh)

Particulars	2011-12 (pro-rata)	2012-13	2013-14
Approved vide order dated 25.4.2012	4.18	5.67	5.76
As claimed by the petitioner	4.69	6.52	6.69
Allowed after trued up	4.65	6.48	6.65

36. The variation in IWC is on account of variation in IOL, depreciation and ROE and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

37. The detailed computation of the various components of the trued up annual fixed charges of the instant asset for the 2013-14 tariff period is summarised below:-

(₹ in lakh)

Particulars	2011-12 (pro-rata)	2012-13	2013-14
Gross Block			
Gross Opening Block	954.29	1032.75	1067.57
Additional Capitalization	78.46	34.82	12.43
Gross Closing Block	1032.75	1067.57	1080.00



Particulars	2011-12 (pro-rata)	2012-13	2013-14
Average Gross Block	993.52	1050.16	1073.79
Depreciation			
Rate of Depreciation (%)	5.280	5.280	5.280
Depreciable Value	894.17	945.14	966.41
Elapsed Life (Beginning of the year)	0	1	2
Weighted Balance Useful life of the assets	25	24	23
Remaining Depreciable Value	894.17	905.80	871.61
Depreciation	39.35	55.45	56.70
Interest on Loan			
Gross Normative Loan	668.00	722.92	747.30
Cumulative Repayment upto Previous Year	0.00	39.35	94.79
Net Loan-Opening	668.00	683.58	652.50
Additional Capitalization	54.92	24.37	8.70
Repayment during the year	39.35	55.45	56.70
Net Loan-Closing	683.58	652.50	604.51
Average Loan	675.79	668.04	628.51
Weighted Average Rate of Interest on Loan (%)	8.8360	8.8732	8.8823
Interest	44.79	59.28	55.83
Return on Equity			
Opening Equity	286.29	309.83	320.27
Additional Capitalization	23.54	10.45	3.73
Closing Equity	309.83	320.27	324.00
Average Equity	298.06	315.05	322.14
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the year (%)	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610
Return on Equity (Pre Tax)	43.32	61.05	63.17
Interest on Working Capital			
Maintenance Spares	6.59	9.29	9.82
O & M expenses	3.66	5.16	5.46
Receivables	29.34	40.70	41.30
Total	39.59	55.14	56.57
Interest	4.65	6.48	6.65



Particulars	2011-12 (pro-rata)	2012-13	2013-14
Annual Transmission Charges			
Depreciation	39.35	55.45	56.70
Interest on Loan	44.79	59.28	55.83
Return on Equity	43.32	61.05	63.17
Interest on Working Capital	4.65	6.48	6.65
O & M Expenses	43.93	61.92	65.46
Total	176.03	244.17	247.80

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	57.74	57.74	57.74	57.74	57.74
Interest on Loan	51.84	46.74	41.62	36.48	31.35
Return on Equity	64.34	64.34	64.34	64.34	64.34
Interest on Working Capital	7.34	7.33	7.32	7.32	7.33
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Total	241.56	238.45	235.39	232.39	229.47

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

Particulars	(₹ in lakh)				
	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	40.26	39.74	39.23	38.73	38.25
Total	54.34	54.28	54.25	54.25	54.29
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	7.34	7.33	7.32	7.32	7.33



Capital Cost

40. 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.”

41. The petitioner has claimed capital cost of ₹1093.57 lakh as on 31.3.2014 and no additional capitalization for the 2014-19 tariff period. We have considered capital cost of ₹1080.00 lakh as on 31.3.2014 for the tariff determination for the 2014-19 tariff period.

Additional Capital Expenditure

42. The petitioner has not proposed any additional capitalization for the 2014-19 tariff period. Accordingly, we have not considered any additional capitalization for the 2014-19 tariff period.

Debt:Equity Ratio

43. 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.”

44. 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. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)		
Particulars	Amount	(%)
Debt	756.00	70.00
Equity	324.00	30.00
Total	1080.00	100.00

Interest on Loan (“IOL”)

45. 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.”



46. We have considered the weighted average rate of IOL 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	756.00	756.00	756.00	756.00	756.00
Cumulative Repayment upto previous year	151.49	208.51	265.54	322.56	379.59
Net Loan-Opening	604.51	547.48	490.46	433.44	376.41
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	57.02	57.02	57.02	57.02	57.02
Net Loan-Closing	547.48	490.46	433.44	376.41	319.39
Average Loan	576.00	518.97	461.95	404.92	347.90
Rate of Interest (%)	8.8891	8.8958	8.8978	8.9009	8.9027
Interest	51.20	46.17	41.10	36.04	30.97

Return on Equity("ROE")

47. 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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."

48. The petitioner has submitted ROE at the rate of 20.961% after grossing up the ROE of 15.5% 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.

49. 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.

50. 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 determined by the Commission is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	324.00	324.00	324.00	324.00	324.00
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	324.00	324.00	324.00	324.00	324.00
Average Equity	324.00	324.00	324.00	324.00	324.00
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax 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)	63.54	63.54	63.54	63.54	63.54

Depreciation

51. 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.”

52. The petitioner has computed depreciation considering capital expenditure of ₹1093.57 lakh as on 31.3.2014 as opening capital cost as on 1.4.2014 with no additional capitalization for the 2014-19 tariff period.

53. We have computed depreciation considering capital expenditure of ₹1080.00 lakh as on 31.3.2014 as opening capital cost as on 1.4.2014. 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	1080.00	1080.00	1080.00	1080.00	1080.00
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	1080.00	1080.00	1080.00	1080.00	1080.00
Average Gross block	1080.00	1080.00	1080.00	1080.00	1080.00
Rate of Depreciation(%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	972.00	972.00	972.00	972.00	972.00
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	22	21	20	19	18
Remaining Depreciable Value	820.51	763.49	706.46	649.44	592.41
Depreciation	57.02	57.02	57.02	57.02	57.02



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

54. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. The petitioner has computed O&M Expenses for the assets mentioned in the petition, in accordance with the O&M norms specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M Expenses has been worked out as given hereunder:-

Particulars(Asset-A)	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expense					
Norm (₹lakh/bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
Number of Bays					
400 kV	1	1	1	1	1
Total O&M Expense (Bay) (₹lakh)	60.30	62.30	64.37	66.51	68.71

55. 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 the 2014-19 tariff period 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.



56. 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, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

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

Particulars	Year				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed	60.30	62.30	64.37	66.51	68.71

Interest on Working Capital ("IWC")

58. 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;"

59. 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 is considered as 13.50%.

60. 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). The interest on working capital allowed 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	39.89	39.38	38.89	38.40	37.92
Total	53.96	53.92	53.90	53.92	53.95
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	7.28	7.28	7.28	7.28	7.28

Annual Transmission Charges

61. 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	1080.00	1080.00	1080.00	1080.00	1080.00
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	1080.00	1080.00	1080.00	1080.00	1080.00
Average Gross Block	1080.00	1080.00	1080.00	1080.00	1080.00
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	972.00	972.00	972.00	972.00	972.00
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	22	21	20	19	18
Remaining Depreciable Value	820.51	763.49	706.46	649.44	592.41
Depreciation	57.02	57.02	57.02	57.02	57.02
Interest on Loan					
Gross Normative Loan	756.00	756.00	756.00	756.00	756.00
Cumulative Repayment upto Previous Year	151.49	208.51	265.54	322.56	379.59



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan-Opening	604.51	547.48	490.46	433.44	376.41
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	57.02	57.02	57.02	57.02	57.02
Net Loan-Closing	547.48	490.46	433.44	376.41	319.39
Average Loan	576.00	518.97	461.95	404.92	347.90
Weighted Average Rate of Interest on Loan (%)	8.8891	8.8958	8.8978	8.9009	8.9027
Interest	51.20	46.17	41.10	36.04	30.97
Return on Equity					
Opening Equity	324.00	324.00	324.00	324.00	324.00
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	324.00	324.00	324.00	324.00	324.00
Average Equity	324.00	324.00	324.00	324.00	324.00
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 (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	63.54	63.54	63.54	63.54	63.54
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	39.89	39.38	38.89	38.40	37.92
Total	53.96	53.92	53.90	53.92	53.95
Interest	7.28	7.28	7.28	7.28	7.28
Annual Transmission Charges					
Depreciation	57.02	57.02	57.02	57.02	57.02
Interest on Loan	51.20	46.17	41.10	36.04	30.97
Return on Equity	63.54	63.54	63.54	63.54	63.54
Interest on Working Capital	7.28	7.28	7.28	7.28	7.28
O & M Expenses	60.30	62.30	64.37	66.51	68.71
Total	239.35	236.31	233.31	230.39	227.53

Deferred Tax Liability

62. 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

63. 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

64. 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

65. 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 of Service Tax is premature.



Sharing of Transmission Charges

66. 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.

67. This order disposes of Petition No. 478/TT/2014.

**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 COD	Additions during the tariff period	Total
BOND XXX-DOCO DRAWL ON 01-JUL-2011	8.80%	20.00	0.00	20.00
BOND XXXI-DOCO DRAWL ON 01-JUL-2011	8.90%	25.00	0.00	25.00
BOND XXXIII-DOCO DRAWL ON 01-JUL-2011	8.64%	300.00	0.00	300.00
BOND-XXXIV-DOCO DRAWL ON 01-JUL-2011	8.84%	290.00	0.00	290.00
BOND XXXV-ADDCAP FOR 2011-2012 ADD CAP	9.64%	0.00	54.92	54.92
BOND-XXXV-DOCO	9.64%	42.50	0.00	42.50
BOND XL-ADDCAP FOR 2012-2013 ADD CAP	0.00%	0.00	0.00	0.00
BOND XL-ADDCAP FOR 2013-2014 ADD CAP	0.00%	0.00	0.00	0.00
Total		677.50	54.92	732.42

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

Particulars	2011-12	2012-13	2013-14
Gross Opening Loan	677.50	732.42	756.79
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	677.50	732.42	756.79
Add: Drawal(s) during the year	54.92	24.37	8.70
Less: Repayment(s) of Loan during the year	0.00	0.00	3.75
Net Closing Loan	732.42	756.79	761.74
Average Net Loan	704.96	744.61	759.27
Rate of Interest on Loan (%)	8.8360%	8.8732%	8.8823%
Interest on Loan	62.29	66.07	67.44



ANNEXURE-II**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXX-DOCO DRAWL ON 01-JUL-2011	8.80%	20.00	0.00	20.00
BOND XXXI-DOCO DRAWL ON 01-JUL-2011	8.90%	25.00	0.00	25.00
BOND XXXIII-DOCO DRAWL ON 01-JUL-2011	8.64%	300.00	0.00	300.00
BOND-XXXIV-DOCO DRAWL ON 01-JUL-2011	8.84%	290.00	0.00	290.00
BOND XXXV-ADDCAP FOR 2011-2012 ADD CAP	9.64%	54.92	0.00	54.92
BOND-XXXV-DOCO	9.64%	42.50	0.00	42.50
BOND XL-ADDCAP FOR 2012-2013 ADD CAP	9.30%	24.37	0.00	24.37
BOND XL-ADDCAP FOR 2013-2014 ADD CAP	9.30%	8.70	0.00	8.70
Total		765.49	0.00	765.49

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2009-14

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	765.49	765.49	765.49	765.49	765.49
Cummulative Repayment of loan upto previous year	3.75	56.67	117.71	181.51	245.31
Net Loan Opening	761.74	708.82	647.78	583.98	520.18
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	52.92	61.04	63.80	63.80	63.80
Net Loan Closing	708.82	647.78	583.98	520.18	456.38
Average Loan	735.28	678.30	615.88	552.08	488.28
Rate of Interest	8.8891%	8.8958%	8.8978%	8.9009%	8.9027%
Interest	65.36	60.34	54.80	49.14	43.47

