

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.442/TT/2014

Coram:
Shri A.S. Bakshi, Member
Dr. M. K. Iyer, Member

Date of Hearing: 13.01.2016
Date of Order : 28.01.2016

In the Matter of:

Truing up of transmission tariff for 2009-14 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and determination of transmission tariff for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 of 2nd 315 (3X105) MVA, 400/220 kV Transformer at Indravati (OHPC) Switchyard in 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-122001 (Haryana)

.....Petitioner

Versus

1. Bihar State Electricity Board
Vidyut Bhawan, Bailey Road,
Patna-800001.
2. West Bengal State Electricity Distribution Company,
Bidyut Bhawan, Bidhan Nagar,
Block- DJ, Sector-II, Salt Lake City,
Calcutta - 700091.
3. Grid Corporation of Orrisa Limited,
Shahid Nagar, Bhubaneswar- 751007.
4. Damodar Valley Corporation,
DVC Tower, Maniktala, Civic Centre,
VIP Road, Calcutta-700054.



5. Power Department,
Govt. of Sikkim, Gangtok- 73710.1

6. Jharkhand State Electricity Board,
In front of Main Secretariat,
Doranda, Ranchi-834002.

.....Respondent(s)

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL
Shri M.M. Mondal, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri S.S. Raju, PGCIL
Shri D.K. Varma, PGCIL

For Respondents: None

ORDER

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”), a transmission licensee, for revision of tariff 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 truing up of capital expenditure for the period 1.4.2009 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 in respect of 2nd 315 (3X105) MVA, 400/220 kV Transformer at Indravati (OHPC) Switchyard in Eastern Region (hereinafter referred to as “the transmission asset”).

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



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

a) The Investment approval of the transmission asset was accorded by the Board of Directors of the petitioner company vide Memorandum dated 26.2.2003 at an estimated cost of ₹1905.00 lakh including IDC of ₹152.00 lakh. The transmission asset was declared under commercial operation w.e.f. 1.5.2006.

b) The annual transmission charges for 2009-14 tariff period were determined vide order dated 13.4.2011 in Petition No. 227/2010 based on admitted capital cost of the transmission asset and debt:equity as on 31.3.2009 as under:-

Admitted as on 31.3.2009	Amount (₹ in lakh)	Percentage (%)
Debt	1063.23	73.04
Equity	392.44	26.96
Capital Cost	1455.67	100.00

c) In addition to the above, the Commission had also allowed estimated additional capital expenditure amounting to ₹41.29 lakh towards balance and retention payments during 2009-11 for determination of tariff for 2009-14 tariff period.

d) The Commission determined the tariff for the transmission asset for 2009-14 tariff period, based on admitted capital cost of ₹1455.67 lakh and estimated additional capital expenditure of ₹41.29 lakh during 2009-14 as given below:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	77.43	78.52	79.04	79.04	79.04
Interest on Loan	66.86	62.29	57.02	51.14	45.28
Return on Equity	69.17	70.25	70.77	70.77	70.77
Interest on Working Capital	8.90	9.11	9.29	9.45	9.63
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	311.44	314.35	315.69	315.66	316.00

4. As per Regulation 6 of the 2009 Tariff Regulations, the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up. Further, as per Regulation 15 of the 2009 Tariff Regulations, the petitioner is required to adjust the yearly impact of MAT rate in the truing up petition for 2009-14 tariff period.

5. The petitioner has filed the instant petition on 17.9.2014, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.

6. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/objections have been received from the public in response to the notice in newspaper. None of the respondents have filed any reply in the matter.

7. The hearing in this matter was held on 13.1.2016. The Commission, through its letter dated 14.1.2016, asked the petitioner to submit the details of undischarged liabilities and actual equity infused during 2009-14 and 2014-19 tariff periods. The petitioner has filed the rejoinder vide affidavit dated 21.1.2016.

8. Having heard the petitioner and perused the material on record, we proceed to dispose of the petition.

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

9. 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”.

10. 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

11. The petitioner has claimed capital cost of ₹1455.67 lakh as on 31.3.2009 in respect of the transmission asset for the purpose of tariff determination.

12. The last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that:-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff”.

13. Accordingly, the capital cost of ₹1455.67 lakh admitted by the Commission as on 31.3.2009 has been considered as opening capital cost as on 1.4.2009 for determination of trued up tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

Additional Capital Expenditure

14. Regulation 6(1) of the 2009 Regulations provides that:-



“The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014”

15. The petitioner has submitted that it has actually incurred an additional capital expenditure of ₹39.47 lakh during 2009-14 towards balance and retention payments, for the works completed before the cut-off date, as depicted below:-

(₹ in lakh)

Apportioned approved cost	Admitted cost as on 31.3.2009	Additional capital expenditure			Capital cost as on 31.3.2014
		2009-10	2011-12	Total	
1905.00	1455.67	21.53	17.94	39.47	1495.14

16. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14. The above mentioned additional capital expenditure is towards balance and retention payments and the same has been certified by the Auditor vide Certificate dated 1.8.2014. Further, the total capital expenditure during 2009-14 is within the limits of the total approved capital expenditure. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations.

Debt: Equity

17. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio. (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:

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the

Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(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.”

18. The debt:equity ratio of 73.04:26.96 admitted by the Commission vide order dated 13.4.2011 in Petition No. 227/2010 as on 31.3.2009 has been considered as on 1.4.2009 for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. In respect of the additional capital expenditure, debt: equity ratio of 70:30 has been considered in line with the 2009 Tariff Regulations.

19. The debt: equity ratio of 70:30 for additional capital expenditure as claimed by the petitioner is in accordance with the Regulation 12 (3) of the 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

20. The details of the debt:equity considered for the purpose of tariff for 2009-14 tariff period is as follows:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2009	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	1063.23	73.04	27.63	70.00	1090.86	72.96
Equity	392.44	26.96	11.84	30.00	404.28	27.04
Total	1455.67	100.00	39.47	100.00	1495.14	100.00

Return on Equity (“ROE”)

21. Clause (3), (4) and (5) of the 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:

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

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 trued up in accordance with Regulation 6 of these regulations.”

22. The variation in the tax rate during the 2009-14 tariff period applicable to the petitioner as per the Finance Act of the relevant year for the purpose of grossing up of return on equity (ROE) has been furnished as follows:-

Year	MAT Rate claimed in the current petition (%)	Grossed up ROE (Base Rate/(1-t)) claimed in the current petition (%)
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

23. The ROE as trued up and allowed is as follows:-

	(₹ in lakh)				
Return on Equity	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.4.2011	69.17	70.25	70.77	70.77	70.77
Claimed by the petitioner	73.89	77.22	77.82	78.34	79.28



Return on Equity	2009-10	2010-11	2011-12	2012-13	2013-14
Allowed after truing up in this order	73.89	77.22	77.82	78.34	79.28

The difference in the approved ROE and that allowed after truing up is on account of actual grossed up ROE based on actual MAT rate and increase due to actual additional capital expenditure.

Interest on Loan (“IoL”)

24. Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has dealt with similar issue and 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”.

25. The petitioner has submitted the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, the IoL has been calculated based on actual interest rate submitted by the petitioner, in accordance with the Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed in Annexure-1. The IoL worked out is as follows:-

	(₹ in lakh)				
Interest on Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.4.2011	66.86	62.29	57.02	51.14	45.28
Claimed by the petitioner	66.86	61.79	56.51	51.13	45.27
Allowed after truing up in this order	66.86	61.79	56.51	51.13	45.27

The difference in the approved IoL and that allowed after truing up is on account of change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.

Depreciation

26. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations. The depreciation allowed is as follows:-

(₹ in lakh)

Depreciation	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.4.2011	77.43	78.52	79.04	79.04	79.04
Claimed by the petitioner	77.43	78.00	78.47	78.94	78.94
Allowed after truing up in this order	77.43	78.00	78.47	78.94	78.94

The difference in the approved depreciation and that allowed after truing up is on account of change in gross block during the 2009-14 tariff period.

Operation & Maintenance Expenses (O&M Expenses)

27. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The normative O&M Expenses are not required to be trued up. Accordingly, the total allowable O&M expenses for the instant assets have been worked out based on norms of O&M Expenses and the details are as follows:-

(₹ in lakh)

O&M Expenses	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.4.2011	89.08	94.18	99.57	105.26	111.28
Claimed by the petitioner	89.08	94.18	99.57	105.26	111.28
Allowed after truing up in this order	89.08	94.18	99.57	105.26	111.28

Interest on Working Capital (IWC)

28. The IWC has been worked out as per the methodology provided in the Regulation 18 of the 2009 Tariff Regulations and allowed as under:-

(₹ in lakh)

Interest on Working Capital	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.4.2011	8.90	9.11	9.29	9.45	9.63
Claimed by the petitioner	9.00	9.23	9.42	9.61	9.81
Allowed after truing up in this order	9.00	9.23	9.42	9.61	9.81

The difference in the approved IWC and that allowed after truing up is on account of change in the receivables during the 2009-14 tariff period.

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

29. The detailed computation of the various components of the trued up annual fixed charges for the instant transmission assets for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation					
Opening Gross Block	1455.67	1477.20	1477.20	1495.14	1495.14
Additional Capitalisation	21.53	0.00	17.94	0.00	0.00
Closing Gross Block	1477.20	1477.20	1495.14	1495.14	1495.14
Average Gross Block	1466.44	1477.20	1486.17	1495.14	1495.14
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	1319.79	1339.17	1337.55	1353.70	1345.63
Balance Useful life of the asset	23	22	21	20	19
Elapsed Life	2	3	4	5	6
Remaining Depreciable Value	1175.13	1107.39	1037.47	967.07	888.13
Depreciation during the year	77.43	78.00	78.47	78.94	78.94
Interest on Loan					
Gross Normative Loan	1063.23	1078.30	1078.30	1090.86	1090.86
Cumulative Repayment upto Previous Year	144.66	222.09	300.08	378.55	457.50
Net Loan-Opening	918.57	856.21	778.22	712.31	633.36
Additions	15.07	0.00	12.56	0.00	0.00
Repayment during the year	77.43	78.00	78.47	78.94	78.94
Net Loan-Closing	856.21	778.22	712.31	633.36	554.42
Average Loan	887.39	817.22	745.26	672.83	593.89



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Weighted Average Rate of Interest on Loan (%)	7.5349	7.5610	7.5821	7.5996	7.6232
Interest on Loan	66.86	61.79	56.51	51.13	45.27
Return on Equity					
Opening Equity	392.44	398.90	398.90	404.28	404.28
Additions	6.46	0.00	5.38	0.00	0.00
Closing Equity	398.90	398.90	404.28	404.28	404.28
Average Equity	395.67	398.90	401.59	404.28	404.28
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity	18.674	19.358	19.377	19.377	19.610
Return on Equity	73.89	77.22	77.82	78.34	79.28
Interest on Working Capital					
O & M expenses	7.42	7.85	8.29	8.77	9.27
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
Receivables	52.71	53.40	53.63	53.88	54.10
Total	73.49	75.38	76.86	78.44	80.06
Rate of Interest	12.25	12.25	12.25	12.25	12.25
Interest on Working Capital	9.00	9.23	9.42	9.61	9.81
Annual Transmission Charges					
Depreciation	77.43	78.00	78.47	78.94	78.94
Interest on Loan	66.86	61.79	56.51	51.13	45.27
Return on Equity	73.89	77.22	77.82	78.34	79.28
Interest on Working Capital	9.00	9.23	9.42	9.61	9.81
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	316.26	320.42	321.78	323.28	324.59

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

30. The petitioner has claimed the tariff charges for 2014-19 tariff period as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	79.43	79.91	79.91	79.91	79.91
Interest on Loan	39.90	34.53	28.70	23.05	17.68
Return on Equity	79.82	80.36	80.36	80.36	80.36
Interest on Working Capital	10.25	10.34	10.39	10.47	10.55
O & M Expenses	102.51	105.91	109.43	113.06	116.81
Total	311.91	311.05	308.79	306.85	305.31

31. 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
O & M Expenses	8.54	8.83	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
Receivables	51.99	51.84	51.47	51.14	50.89
Total	75.91	76.56	77.00	77.52	78.14
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	10.25	10.34	10.39	10.47	10.55

Capital Cost

32. Clause (3) and (6) of Regulation 9 of 2014 Tariff Regulation provide as follows:-

“(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 tried 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.”

“(6) The following shall be excluded or removed from the capital cost of the existing and new project:

- (a) The assets forming part of the project, but not in use; (b) Decapitalisation of Asset;”

33. The capital cost of ₹1495.14 lakh worked out as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

Additional Capital Expenditure

34. Clause (1) and (2) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) The capital expenditure in respect of the new project or an existing project 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 recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law.”

(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and
- (iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.

35. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines

“Cut - off Date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31st March of the year closing after three years of the year of commercial operation.”

36. The petitioner has submitted, vide Auditor's Certificate dated 1.8.2014, that the additional capital expenditure estimated during 2014-19 tariff period is ₹18.33 lakh on account of balance and retention payments. The details of additional capital expenditure is given as below:

Year	Nature and details of estimated Additional capital expenditure	Amount (₹ in lakh)
2014-15	Sub-station- Balance and retention payments	18.33

37. The petitioner has submitted that the above additional capitalisation of ₹18.33 lakh is projected to be incurred during 2014-15 on account of balance and retention payment towards contract closing in which works had already been executed before the cut-off date. The petitioner has submitted, vide affidavit dated 21.1.2016, that the additional capital expenditure projected during 2014-15 is on account of contract closing and final settlement of bill against M/s BHEL and M/s Biroj chotray. The petitioner has also submitted that the actual equity infused during 2014-19 is not less than 30%.

38. We have considered the submission of the petitioner. The instant asset was commissioned on 1.5.2006 and the petitioner has projected additional capital expenditure after a period of 8 years towards balance and retention payments. We are of the view that all contracts should be closed within a period of 3 years from the date of commercial operation and all payments should be made within the said period. In the instant petition the additional capital expenditure of ₹18.33 lakh during 2014-15 is allowed as a special case, subject to true up on actual basis. However, the petitioner is directed to take steps to close all the contracts pending beyond 3 years, not only in this case but for all the other assets.

Debt: Equity

39. Clause (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provide as under:-

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:”

“(3) In case of the generating station and the transmission system including communication 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.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe 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.”

40. The petitioner has considered the debt:equity ratio of 72.96:27.04 as on 31.3.2014, which is in line with the 2014 Tariff Regulations.

41. In respect of the additional capital expenditure, normative debt:equity ratio of 70:30 has been adopted as mandated by clause (5) read with clause (1) of Regulation 19 of the 2014 Tariff Regulations. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period are as follows:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	1090.86	72.96	12.83	70.00	409.78	72.92
Equity	404.28	27.04	5.50	30.00	1103.69	27.08
Total	1495.14	100.00	18.33	100.00	1513.47	100.00

Return on Equity (“ROE”)

42. Clause (1) and (2) of Regulations 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.”

43. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

(₹ in lakh)

Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	404.28	409.78	409.78	409.78	409.78
Additions	5.50	0.00	0.00	0.00	0.00
Closing Equity	409.78	409.78	409.78	409.78	409.78
Average Equity	407.03	409.78	409.78	409.78	409.78
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	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	79.82	80.36	80.36	80.36	80.36

Interest on Loan (“IoL”)

44. Clause 5 and Clause 6 of Regulation 26 of the 2014 Tariff Regulations provides that:-

“(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.”

45. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure 2. IoL has been worked out and allowed as follows:-

(₹ in lakh)

Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1090.86	1103.69	1103.69	1103.69	1103.69
Cumulative Repayment upto Previous Year	536.44	615.87	695.78	775.69	855.60
Net Loan-Opening	554.42	487.82	407.91	328.00	248.09
Additions	12.83	0.00	0.00	0.00	0.00
Repayment during the year	79.43	79.91	79.91	79.91	79.91
Net Loan-Closing	487.82	407.91	328.00	248.09	168.18
Average Loan	521.12	447.87	367.96	288.04	208.13
Weighted Average Rate of Interest on Loan (%)	7.6569	7.7091	7.8004	8.0016	8.4927
Interest on Loan	39.90	34.53	28.70	23.05	17.68

Depreciation

46. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide that:-

"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."

47. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The transmissions asset will be completing 12 years on 30.4.2018; hence depreciation up to 2014-19 tariff period has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of the 2014 Tariff Regulations. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1495.14	1513.47	1513.47	1513.47	1513.47
Additional Capitalisation	18.33	0.00	0.00	0.00	0.00
Closing Gross Block	1513.47	1513.47	1513.47	1513.47	1513.47
Average Gross Block	1504.31	1513.47	1513.47	1513.47	1513.47
Rate of Depreciation	5.28	5.28	5.28	5.28	5.28
Depreciable Value	1353.87	1370.37	1362.12	1362.12	1362.12

Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Balance Useful life of the asset	18	17	16	15	14
Elapsed Life	7	8	9	10	11
Remaining Depreciable Value	817.43	746.26	666.34	586.43	506.52
Depreciation	79.43	79.91	79.91	79.91	79.91
Cumulative depreciation	615.87	695.78	775.69	855.60	935.51

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

48. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets have been worked out and allowed are as follows:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays:					
No. of Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays:					
No. of Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
Total O&M Expenses (₹ lakh)	102.51	105.91	109.43	113.06	116.81

49. The petitioner has further submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also prayed that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission asset as per prevailing norms.

Interest on Working Capital (IWC)

50. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff

Regulations specifies 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;”

51. The petitioner has considered the rate of interest on working capital to be 13.50%.

52. 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 components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)

Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses	8.54	8.82	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
Receivables	51.98	51.84	51.47	51.14	50.88
Total	75.90	76.55	77.00	77.52	78.14
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	10.25	10.33	10.39	10.46	10.55

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

53. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	1495.14	1513.47	1513.47	1513.47	1513.47
Additional Capitalisation	18.33	0.00	0.00	0.00	0.00
Closing Gross Block	1513.47	1513.47	1513.47	1513.47	1513.47
Average Gross Block	1504.31	1513.47	1513.47	1513.47	1513.47
Rate of Depreciation	5.28	5.28	5.28	5.28	5.28
Depreciable Value	1353.87	1370.37	1362.12	1362.12	1362.12
Balance Useful life of the asset	18	17	16	15	14
Elapsed Life	7	8	9	10	11
Remaining Depreciable Value	817.43	746.26	666.34	586.43	506.52
Depreciation	79.43	79.91	79.91	79.91	79.91
Cumulative depreciation	615.87	695.78	775.69	855.60	935.51
Interest on Loan					
Gross Normative Loan	1090.86	1103.69	1103.69	1103.69	1103.69
Cumulative Repayment upto Previous Year	536.44	615.87	695.78	775.69	855.60
Net Loan-Opening	554.42	487.82	407.91	328.00	248.09
Additions	12.83	0.00	0.00	0.00	0.00
Repayment during the year	79.43	79.91	79.91	79.91	79.91
Net Loan-Closing	487.82	407.91	328.00	248.09	168.18
Average Loan	521.12	447.87	367.96	288.04	208.13
Weighted Average Rate of Interest on Loan	7.6569	7.7091	7.8004	8.0016	8.4927
Interest	39.90	34.53	28.70	23.05	17.68
Return on Equity					
Opening Equity	404.28	409.78	409.78	409.78	409.78
Additions	5.50	0.00	0.00	0.00	0.00
Closing Equity	409.78	409.78	409.78	409.78	409.78
Average Equity	407.03	409.78	409.78	409.78	409.78
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	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	79.82	80.36	80.36	80.36	80.36
Interest on Working Capital					
O & M expenses	8.54	8.82	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Receivables	51.98	51.84	51.47	51.14	50.88
Total	75.90	76.55	77.00	77.52	78.14
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	10.25	10.33	10.39	10.46	10.55
Annual Transmission Charges					
Depreciation	79.43	79.91	79.91	79.91	79.91
Interest on Loan	39.90	34.53	28.70	23.05	17.68
Return on Equity	79.82	80.36	80.36	80.36	80.36
Interest on Working Capital	10.25	10.33	10.39	10.46	10.55
O & M Expenses	102.51	105.91	109.43	113.06	116.81
Total	311.91	311.04	308.80	306.84	305.31

Deferred Tax Liability

54. 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. The deferred tax liability shall be dealt as per Regulations 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same gets materialized directly from the beneficiaries or long term transmission customers /DICs.

Filing Fee and the Publication Expenses

55. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 52 (1) of the 2014 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

56. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 52 (2) (b) of the 2014 Tariff Regulations for 2014-19 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 52 (2) (a) of the 2014 Tariff Regulations for 2014-19 tariff period.

Service Tax

57. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

58. 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.

59. This order disposes of Petition No.442/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XV-DOCO 01-MAY-2006-	6.68	130.00	0.00	130.00
BOND XVI-DOCO 01-MAY-2006-	7.10	304.00	0.00	304.00
BOND XVII-DOCO 01-MAY-2006-	7.39	440.00	0.00	440.00
BOND XVIII-DOCO 01-MAY-2006-	8.15	80.00	0.00	80.00
BOND XXIV-ADDCAP FOR 2006-2007-	9.95	20.39	0.00	20.39
BOND XXVII-ADDCAP FOR 2007-2008 DRAWL ON 31-MAR-2008-	9.47	85.00	0.00	85.00
Total		1059.39	0.00	1059.39

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	1059.39	1059.39	1059.39	1059.39	1059.39
Cumulative Repayments of Loans up to Previous Year	52.07	143.97	237.57	338.25	438.93
Net Loans Opening	1007.32	915.42	821.82	721.14	620.46
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	91.90	93.60	100.68	100.68	100.68
Net Closing Loan	915.42	821.82	721.14	620.46	519.78
Average Net Loan	961.37	868.62	771.48	670.8	570.12
Rate of Interest on Loan (%)*	7.5349%	7.5610%	7.5821%	7.5996%	7.6232%
Interest on Loan	72.44	65.68	58.49	50.98	43.46

*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.

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 XV-DOCO 01-MAY-2006-	6.68	130.00	0.00	130.00
BOND XVI-DOCO 01-MAY-2006-	7.10	304.00	0.00	304.00
BOND XVII-DOCO 01-MAY-2006-	7.39	440.00	0.00	440.00
BOND XVIII-DOCO 01-MAY-2006-	8.15	80.00	0.00	80.00
BOND XXIV-ADDCAP FOR 2006-2007-	9.95	20.39	0.00	20.39
BOND XXVII-ADDCAP FOR 2007-2008 DRAWL ON 31-MAR-2008-	9.47	85.00	0.00	85.00
Total		1059.39	0.00	1059.39

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1059.39	1059.39	1059.39	1059.39	1059.39
Cumulative Repayments of Loans up to previous year	539.61	640.29	740.97	841.65	942.33
Net Loans Opening	519.78	419.10	318.42	217.74	117.06
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	100.68	100.68	100.68	100.68	70.28
Net Closing Loan	419.10	318.42	217.74	117.06	46.78
Average Net Loan	469.44	368.76	268.08	167.40	81.92
Rate of Interest on Loan (%)*	7.6569%	7.7091%	7.8004%	8.0016%	8.4927%
Interest on Loan	35.94	28.43	20.91	13.39	6.96

*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.