

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 429/TT/2014

Coram:

Shri A.S. Bakshi, Member

Dr. M. K. Iyer, Member

Date of Hearing: 16.11.2015

Date of Order: 26.11.2015

In the Matter of:

Approval under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 for determination of (i) Truing up Transmission tariff for 2009-14 tariff block and (ii) Transmission tariff for 2014-19 tariff block for Spare Converter Transformer at Rihand for Rihand-Dadri HVDC, Bipole Terminal in Northern Region

And in the Matter of:

Power Grid Corporation of India Ltd,
SAUDAMINI, Plot No.-2, Sector-29,
Gurgaon-122001 (Haryana)

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur - 302 005.

2. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.

3. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.

4. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla - 171 004.

6. Punjab State Electricity Board,
The Mall, Patiala - 147 001.

7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector - 6
Panchkula (Haryana) - 134 109

8. Power Development Department,
Govt. of Jammu and Kashmir
Mini Secretariat, Jammu .

9. Uttar Pradesh Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001.

10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi - 110 002

11. BSES Yamuna Power Ltd.,
Shakti Kiran Building, Karkardooma,
Delhi – 110 092.

12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place, New Delhi.

13. North Delhi Power Ltd.,
Power Trading & Load Dispatch Group,
Cennet Building, Adjacent to 66/11kV Pitampura -3,
Grid Building, Near PP Jewellers,
Pitampura, New Delhi - 110 034

14. Chandigarh Administration,
Sector - 9, Chandigarh

15. Uttarakhand Power Corporation Ltd.,
Urja Bhawan, Kanwali Road,
Dehradun

16. North Central Railway,
Allahabad

17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi - 110 002

.....Respondent(s)



The following were present:

For Petitioner: Shri S K Niranjana
Shri Jasbir Singh
Shri S S Raju
Ms. Sangeeta Edward
Shri S C Taneja
Shri Rakesh Prasad
Shri S K Venkatesan
Shri Shashi Bhushan
Shri Ved Prakash Rastogi

For Respondents: Shri R B Sharma Adv, BRPL
Shri Tarun Ahuja, JVVNL
Shri B L Sharma, JVVNL

ORDER

The petition has been preferred by Power Grid Corporation of India Limited, ("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 trueing 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 Spare Converter Transformer at Rihand for Rihand-Dadri HVDC, Bipole Terminal (hereinafter referred to as "the transmission asset") in Northern Region.

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

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



(a) Administrative approval and expenditure sanction for the procurement of two nos. of 315 MVA Spare Converter Transformers for Rihand-Dadri HVDC System was accorded by the Board of Directors of the petitioner company vide letter No. C/CP/Spare Conv-Rihand-Dadri dated 11.7.2006 for ₹7230 lakh including an IDC of ₹148 lakh based on 4th quarter 2005 price level. As per the approval, the commissioning schedule of these spare converter transformers was 18 months from the date of letter of award.

(b) The petitioner vide Petition No. 38/2005 had prayed for approval for procurement of two ABB make Converter Transformers under Rihand Transmission System and additional capitalization of cost thereof for the purpose of recovery of tariff.

(c) The Commission vide its order dated 21.6.2005 in Petition No. 38/2005 while giving approval for replacement of two converter transformers directed that cost of one converter transformer would be borne by the petitioner and that of the second converter transformer would be allowed to be capitalized for the purpose of tariff, provided the cost of the replaced transformer is de-capitalized.

(d) Aggrieved by the said order, the petitioner filed Appeal No. 120 of 2005 before the Hon'ble Appellate Tribunal for Electricity (hereinafter referred to as "the Tribunal"). The Tribunal, vide its judgment dated 5.4.2006, modified the decision of this Commission to the extent that the existing spare converter would remain to be in service and not de-capitalized.

(e) Thereafter, the petitioner filed Petition No. 75/TT/2012 for determination of transmission tariff in respect of the transmission asset for the

tariff block 2009-14 and additional capitalization for FY 2011-12 as detailed hereunder:-

(₹ in lakh)

Apportioned approved cost as per FR	Actual cost incurred as on date of commercial operation	Additional capital expenditure 2011-12	Total estimated completion cost
3615.00	2456.43	475.17	2931.60

(f) As the transmission asset was commissioned on 1.12.2011, estimated additional capitalization amounting to ₹475.17 lakh during 2011-12, as claimed was allowed, being within the cut-off date.

(g) However, in view of the time over-run of 41 months, the Commission vide its Order dated 8.7.2013 in Petition No. 75/TT/2012 disallowed 50% of the IDC and IEDC. However, the impact of the LD was not considered because the quantum of LD was not known at that time. It was also decided that the LD would be adjusted on actual realisation at the time of truing up. Consequently, a sum of ₹212.38 lakh and ₹0.28 lakh were deducted from the capital cost towards IDC and IEDC respectively and the capital cost of ₹2243.77 was considered for the purpose of tariff determination.

(h) Accordingly the tariff for the period from the date of commercial operation i.e. 1.12.2011 to 31-3-2014 was determined as detailed hereunder:

(₹ in lakh)

Particulars	2011-12	2012-13	2013-14
Depreciation	43.67	143.56	143.56
Interest on Loan	52.24	163.29	150.09
Return on Equity	43.38	142.59	142.59
Interest on Working Capital	2.78	8.98	8.71
O & M Expenses	0.00	0.00	0.00
Total	142.07	458.41	444.95



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 had submitted that in case Interest on Loan (IoL) was calculated on the basis of prevailing rates for the determination of tariff, any change in the rate of interest subsequently during the tariff period would be considered at the time of truing up.

6. The petitioner has served the petition on 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. The hearing in this matter was held on 16.11.2015. Having heard the representatives of the parties and perused the records we proceed to dispose of the petition.

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

7. 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 auditor”.



8. The petitioner has submitted the information as required under the 2009 Tariff Regulations for trueing up of annual fixed charges for 2009-14 tariff period. The trueing up of tariff for 2009-14 tariff period has been determined in the succeeding paragraphs:-

Capital Cost

9. Last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that:

“Provided also in case of the existing projects, the capital cost admitted by the Commission prior to 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”.

10. The petitioner has intimated the actual capital cost of ₹2484.87 lakh as on the date of commercial operation. As decided vide the Commission’s order dated 8.7.2013, fifty percent of the IDC and IEDC is to be disallowed on account of the delay in commissioning of the transmission asset. Accordingly, a sum of ₹212.66 lakh (being 50% of the IDC and IEDC corresponding to time over-run) has been disallowed from the above. Besides, as stated hereinabove, the petitioner has intimated vide its affidavit dated 13.11.2015 that a sum of ₹110.93 lakh is proposed to be recovered towards LD from the supplier i.e. BHEL against the final bill and 50% of the above sum may be adjusted against capital cost for the purpose of tariff determination as already decided vide para 24 of the Commission’s order dated 8.7.2013.

This being a petition for true up of tariff for 2009-14 tariff period and since the amount of LD to be imposed and recovered from BHEL has been finalized by the petitioner as ₹110.93 lakh and hence as per para 24 of the Commission’s order



dated 8.7.2013, ₹55.47 lakh, being 50% of the above sum is being adjusted against the capital cost. Accordingly, capital cost of ₹2216.75 lakh [₹2484.87 – ₹212.66 – ₹55.47] has been worked out by adjusting the 50% of IDC, IEDC and recoverable LD, as on the date of commercial operation, has been considered for the purpose of tariff calculation for 2009-14 period. In case, there is any variation in the actual recovery/adjustment of LD, the petitioner shall take care to ensure that the share of the beneficiaries is properly passed on by revision of tariff.

Additional Capital Expenditure

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

“(1) 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...”

12. The petitioner has claimed actual additional capital expenditure of ₹292.51 lakh during the 2009-14 tariff period (₹223.52 lakh for 2011-12 and ₹68.99 lakh for 2012-13) against ₹475.17 lakh approved by the Commission vide order dated 8.7.2013.

13. The petitioner has submitted auditors certificate to the effect that it has incurred an additional capital expenditure of ₹223.52 lakh in 2011-12 and ₹68.99 lakh in 2012-13 towards balance/retention payments as depicted below:-

Particulars	Capital cost as on DOCO	Additional Capital Expenditure (During 2009-14)			Capital cost as on 31.3.2014
		2011-12	2012-13	2013-14	
Spare Converter Transformer at Rihand	2216.75	223.52	68.99	-	2509.25

(₹ in lakh)



14. The above additional capitalization, supported by Auditor Certificate, is the actual amount of balance and retention payments towards items already allowed by the Commission vide its order 8.7.2013 and therefore the same is allowed for the purpose of true up of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations.

15. Debt-equity ratio of 70:30 claimed by the petitioner in respect of additional capital expenditure is in accordance with the Regulation 12 (3) of 2009 Tariff Regulations and hence same has been approved towards financing of the additional capital expenditure.

Debt: Equity

16. 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.”

17. The petitioner has considered the debt:equity ratio of 70:30 admitted by the Commission vide order dated 8.7.2013 in Petition No. 75/TT/2012 for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations.



18. Accordingly, with respect to the revised capital cost worked out, the debt:equity ratio in accordance with the Regulation 12 of the 2009 Tariff Regulations, considered for the purpose of truing up of the tariff for 2009-14 tariff period is as given under:-

Funding	Amount (₹ in Lakh)	(%)
Debt	1551.72	70
Equity	665.02	30
Total	2216.75	100

Return on Equity (ROE)

19. Clause (3), (4) and (5) of the 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 trued up in accordance with Regulation 6 of these regulations.”

20. 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 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

21. Regulation 15 of the 2009 Tariff Regulations provides for grossing up of ROE with the actual tax rate for the purpose of ROE. The petitioner has submitted the MAT rate applicable during various years of 2009-14 tariff period. ROE has been worked out by considering year wise MAT rate submitted by the petitioner in accordance with Regulation 15 of the 2009 Tariff Regulations. The ROE allowed is as follows:-

(₹ in lakh)

Return on Equity	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 8.7.2013	43.38	142.59	142.59
Claimed by the petitioner	46.19	147.08	150.88
Allowed after truing up in this order	45.12	143.86	147.62

Interest on Loan (IoL)

22. 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 held that:-

“...any change in the rates of interest subsequent to the date of commercial operation will be considered at the time of true up”.

23. 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 at Annexure-1. The IoL worked out is as follows:-

(₹ in lakh)

Interest on Loan	2011-12	2012-13	2013-14
Approved vide order dated 8.7.2013	52.24	163.29	150.09
Claimed by the petitioner	50.25	151.62	141.35
Allowed after true up in this order	49.08	148.30	138.31

Depreciation

24. 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)

Particulars	2011-12	2012-13	2013-14
Approved vide order dated 8.7.2013	43.67	143.56	143.56
Claimed by the petitioner	41.96	133.6	135.42
Allowed after true up in this order	40.98	130.67	132.49

Interest on Working Capital (“IWC”)

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

(₹ in lakh)

Interest on Working Capital	2011-12	2012-13	2013-14
Approved vide order dated 8.7.2013	2.78	8.98	8.71
Claimed by the petitioner	2.76	8.63	8.54
Allowed after true up in this order	2.70	8.45	8.36

Operation & Maintenance Expenses (O&M Expenses)

26. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M expenses for the transmission system. As this transmission asset is a spare asset, no O&M Expenses have been claimed by the petitioner for the instant asset.



APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

27. Accordingly, the annual fixed charges for the transmission asset have been worked out and allowed as follows:-

Particulars	2011-12	2012-13	2013-14
(₹ in lakh)			
Depreciation			
Opening Gross Block	2216.75	2440.27	2509.26
Additional Capitalisation	223.52	68.99	0.00
Closing Gross Block	2440.27	2509.26	2509.26
Average Gross Block	2328.51	2474.76	2509.26
Rate of Depreciation (%)	5.28	5.28	5.28
Depreciable Value	2095.65	2327.87	2289.38
Balance Useful life of the asset	25	24	23
Remaining Depreciable Value	2095.65	2186.30	2086.68
Depreciation during the year	40.98	130.67	132.49
Cumulative Depreciation	0.00	40.98	171.65
Interest on Loan			
Gross Normative Loan	1551.72	1708.19	1756.48
Cumulative Repayment upto Previous Year	0.00	40.98	171.65
Net Loan-Opening	1551.72	1667.20	1584.83
Additions	156.46	48.29	0.00
Repayment during the year	40.98	130.67	132.49
Net Loan-Closing	1667.20	1584.83	1452.34
Average Loan	1609.46	1626.02	1518.59
Weighted Average Rate of Interest on Loan (%)	9.1477	9.1205	9.1077
Interest on Loan	147.23	148.30	138.31
Pro rate Interest on Normative Loan	49.08	148.30	138.31
Return on Equity			
Opening Equity	665.02	732.08	752.78
Additions	67.06	20.70	0.00
Closing Equity	732.08	752.78	752.78
Average Equity	698.55	742.43	752.78
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
MAT rate for the respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (%)	19.377	19.377	19.610
Return on Equity	135.36	143.86	147.62
Pro rate Return on Equity	45.12	143.86	147.62
Interest on Working Capital			
O & M expenses	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00
Receivables	68.94	71.88	71.13
Total	68.94	71.88	71.13
Rate of Interest (%)	11.75	11.75	11.75



Particulars	2011-12	2012-13	2013-14
Interest on Working Capital	8.10	8.45	8.36
Pro rate Interest on working capital	2.70	8.45	8.36
Annual Transmission Charges			
Depreciation	40.98	130.67	132.49
Interest on Loan	49.08	148.30	138.31
Return on Equity	45.12	143.86	147.62
Interest on Working Capital	2.70	8.45	8.36
O & M Expenses	0.00	0.00	0.00
Total	137.88	431.27	426.78

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD:-

28. The Petitioner has claimed the tariff charges for 2014-19 tariff period as under:-

Particulars	(₹ in Lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	135.56	135.71	135.71	135.71	135.71
Interest on Loan	129.16	116.97	104.6	92.22	79.84
Return on Equity	151.05	151.21	151.21	151.21	151.21
Interest on Working Capital	9.57	9.3	9.01	8.73	8.44
O & M Expenses	-	-	-	-	-
Total	425.34	413.19	400.53	387.87	375.2

Capital Cost

29. Clauses (3) and (6) of Regulation 9 of 2014 Tariff Regulation provide that

“(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;”

30. The capital cost of ₹2509.26 lakh worked out by the Commission 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

31. Clause (1) 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:

32. 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.”

Accordingly, the cut-off date in respect of the instant asset is 31.3.2014.

33. The Commission has approved additional capital expenditure to ₹475.15 lakh for the period 2009-14 vide order dated 8.7.2013 and the petitioner has claimed ₹292.51 lakh for the period 2009-14 and ₹5.53 lakh during 2014-15. The petitioner's claim of ₹5.53 lakh during 2014-15 is towards balance retention payment under Regulation 14(1) of the 2014 Tariff Regulations. The additional capital expenditure claimed by the petitioner is beyond the cut-off date and it is not allowable under the Regulation 14(1) of the 2014 Tariff Regulations. However, the additional capital



expenditure is for the works executed prior to the cut-off date and it is within the approved cost and as such the additional capital expenditure of ₹5.53 during 2014-15 is allowed under Regulation 14(3)(5) of the 2014 Tariff Regulations.

Debt: Equity

34. Clause (1) and Clause (3) of Regulation 19 of the 2014 Tariff Regulations provides 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.”

35. The petitioner has considered the debt: equity ratio of 70:30, which is in line with the 2014 Tariff Regulations. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

Funding	Amount (in ₹ lakh)	(%)
Debt	1760.35	70.00
Equity	754.44	30.00
Total	2514.79	100.00

Return on Equity (ROE)

36. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specifies 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.”

37. It further provides that in case the generating company or transmission licensee paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of ROE. 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 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	752.78	754.44	754.44	754.44	754.44
Additions	1.66	-	-	-	-
Closing Equity	754.44	754.44	754.44	754.44	754.44
Average Equity	753.61	754.44	754.44	754.44	754.44
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	147.79	147.95	147.95	147.95	147.95

Interest on Loan (IoL)

38. Clause 5 and Clause 6 of Regulation 26 of 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.”

39. 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 at Annexure-2. The 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	1756.48	1760.35	1760.35	1760.35	1760.35
Cumulative Repayment upto Previous Year	304.14	436.77	569.55	702.33	835.11
Net Loan-Opening	1452.34	1323.58	1190.80	1058.02	925.24
Additions	3.87	-	-	-	-
Repayment during the year	132.63	132.78	132.78	132.78	132.78
Net Loan-Closing	1323.58	1190.80	1058.02	925.24	792.45
Average Loan	1387.96	1257.19	1124.41	991.63	858.84
Weighted Average Rate of Interest on Loan (%)	9.1058	9.1044	9.1026	9.1003	9.0972
Interest	126.39	114.46	102.35	90.24	78.13

Depreciation

40. Clause (2), (5) and (6) of Regulation 27 of 2014 Tariff Regulations provides 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."

41. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. 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	2509.26	2514.79	2514.79	2514.79	2514.79
Additional Capitalisation	5.53	-	-	-	-
Closing Gross Block	2514.79	2514.79	2514.79	2514.79	2514.79
Average Gross Block	2512.02	2514.79	2514.79	2514.79	2514.79
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	2260.82	2265.80	2263.31	2263.31	2263.31
Balance Useful life of the asset	22	21	20	19	18
Remaining Depreciable Value	1956.68	1826.53	1693.75	1560.97	1428.19
Depreciation	132.63	132.78	132.78	132.78	132.78
Cumulative Depreciation	304.14	436.77	569.55	702.33	835.11

Operation & Maintenance Expenses (O&M Expenses)

42. As the instant asset is a spare asset, no O&M Expenses have been claimed by the petitioner for the instant asset.

Interest on Working Capital (IoWC)

43. The components of the working capital and interest thereon have been worked out in accordance with the 2014 Tariff Regulations and allowed as follows:-

(₹ in lakh)

Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	-	-	-	-	-
O & M expenses	-	-	-	-	-
Receivables	69.36	67.38	65.32	63.25	61.19
Total	69.36	67.38	65.32	63.25	61.19
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	9.36	9.10	8.82	8.54	8.26

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

44. The transmission charges determined for the transmission asset 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	2509.26	2514.79	2514.79	2514.79	2514.79
Additional Capitalisation	5.53	-	-	-	-
Closing Gross Block	2514.79	2514.79	2514.79	2514.79	2514.79
Average Gross Block	2512.02	2514.79	2514.79	2514.79	2514.79
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	2260.82	2265.80	2263.31	2263.31	2263.31
Balance Useful life of the asset	22	21	20	19	18
Remaining Depreciable Value	1956.68	1826.53	1693.75	1560.97	1428.19
Depreciation	132.63	132.78	132.78	132.78	132.78
Cumulative Depreciation	304.14	436.77	569.55	702.33	835.11
Interest on Loan					
Gross Normative Loan	1756.48	1760.35	1760.35	1760.35	1760.35
Cumulative Repayment upto Previous Year	304.14	436.77	569.55	702.33	835.11



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan-Opening	1452.34	1323.58	1190.80	1058.02	925.24
Additions	3.87	0.00	0.00	0.00	0.00
Repayment during the year	132.63	132.78	132.78	132.78	132.78
Net Loan-Closing	1323.58	1190.80	1058.02	925.24	792.45
Average Loan	1387.96	1257.19	1124.41	991.63	858.84
Weighted Average Rate of Interest on Loan (%)	9.1058	9.1044	9.1026	9.1003	9.0972
Interest	126.39	114.46	102.35	90.24	78.13
Return on Equity					
Opening Equity	752.78	754.44	754.44	754.44	754.44
Additions	1.66	-	-	-	-
Closing Equity	754.44	754.44	754.44	754.44	754.44
Average Equity	753.61	754.44	754.44	754.44	754.44
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	147.79	147.95	147.95	147.95	147.95
Interest on Working Capital					
Maintenance Spares	-	-	-	-	-
O & M expenses	-	-	-	-	-
Receivables	69.36	67.38	65.32	63.25	61.19
Total	69.36	67.38	65.32	63.25	61.19
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	9.36	9.10	8.82	8.54	8.26
Annual Transmission Charges					
Depreciation	132.63	132.78	132.78	132.78	132.78
Interest on Loan	126.39	114.46	102.35	90.24	78.13
Return on Equity	147.79	147.95	147.95	147.95	147.95
Interest on Working Capital	9.36	9.10	8.82	8.54	8.26
O & M Expenses	-	-	-	-	-
Total	416.17	404.28	391.90	379.51	367.12

Deferred Tax Liability

45. 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 it is materialized, directly from the beneficiaries or long term transmission customers /DICs.

Filing Fee and the Publication Expenses

46. 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

47. 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

48. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. In our view, the petitioner's prayer is premature.

Sharing of Transmission Charges

49. 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.



50. This order disposes of Petition No. 429/TT/2014.

sd/-

(Dr. M.K. Iyer)
Member

sd/-

(A.S. Bakshi)
Member



CALCUATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Particulars	2011-12	2012-13	2013-14
BOND XXVIII-DOCO DRAWL ON 01-DEC-2011			
Gross Opening Loan	775.00	775.00	775.00
Cumulative Repayments of Loans upto Previous Year	-	-	64.58
Net Loans Opening	775.00	775.00	710.42
Add: Draw(s) during the Year			
Less: Repayments of Loan during the year		64.58	64.58
Net Closing Loan	775.00	710.42	645.84
Average Net Loan	775.00	742.71	678.13
Rate of Interest on Loan	9.33	9.33	9.33
Interest on Loan	72.31	69.29	63.27
BOND XXIX-DOCO DRAWL ON 01-DEC-2011-			
Gross Opening Loan	425.00	425.00	425.00
Cumulative Repayments of Loans upto Previous Year	-	-	35.42
Net Loans Opening	425.00	425.00	389.58
Add: Draw(s) during the Year			
Less: Repayments of Loan during the year		35.42	35.42
Net Closing Loan	425.00	389.58	354.16
Average Net Loan	425.00	407.29	371.87
Rate of Interest on Loan	9.20	9.20	9.20
Interest on Loan	39.10	37.47	34.21
BOND XXX-ADDCAP FOR 2011-2012 LOAN-4-			
Gross Opening Loan		149.45	149.45
Cumulative Repayments of Loans upto Previous Year	-	-	-
Net Loans Opening	-	149.45	149.45
Add: Draw(s) during the Year	149.45		
Less: Repayments of Loan during the year			12.45
Net Closing Loan	149.45	149.45	137.00
Average Net Loan	74.73	149.45	143.23
Rate of Interest on Loan	8.80	8.80	8.80
Interest on Loan	6.58	13.15	12.60
BOND XXX-LOAN-3-			
Gross Opening Loan	390.55	390.55	390.55
Cumulative Repayments of Loans upto Previous Year	-	-	-
Net Loans Opening	390.55	390.55	390.55
Add: Draw(s) during the Year			
Less: Repayments of Loan during the year			32.55
Net Closing Loan	390.55	390.55	358.00
Average Net Loan	390.55	390.55	374.28
Rate of Interest on Loan	8.80	8.80	8.80
Interest on Loan	34.37	34.37	32.94



Particulars	2011-12	2012-13	2013-14
BOND XXXIII-ADDCAP FOR 2011-2012 LOAN-5-			
Gross Opening Loan		7.01	7.01
Cumulative Repayments of Loans upto Previous Year	-	-	-
Net Loans Opening	-	7.01	7.01
Add: Draw(s) during the Year	7.01		
Less: Repayments of Loan during the year			-
Net Closing Loan	7.01	7.01	7.01
Average Net Loan	3.51	7.01	7.01
Rate of Interest on Loan	8.64	8.64	8.64
Interest on Loan	0.30	0.61	0.61
BOND XXXIII-ADDCAP FOR 2012-2012 LOAN-6			
Gross Opening Loan			48.29
Cumulative Repayments of Loans upto Previous Year	-	-	-
Net Loans Opening	-	-	48.29
Add: Draw(s) during the Year		48.29	
Less: Repayments of Loan during the year			-
Net Closing Loan	-	48.29	48.29
Average Net Loan	-	24.15	48.29
Rate of Interest on Loan		8.64	8.64
Interest on Loan	-	2.09	4.17
Summary			
Gross Opening Loan	1590.55	1747.01	1795.30
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	100.00
Net Loans Opening	1590.55	1747.01	1695.30
Add: Draw(s) during the Year	156.46	48.29	0.00
Less: Repayments of Loan during the year	0.00	100.00	145.00
Net Closing Loan	1747.01	1695.30	1550.30
Average Net Loan	1668.78	1721.16	1622.80
Rate of Interest on Loan	9.1477%	9.1205%	9.1077%
Interest on Loan	152.65	156.98	147.80

CALCUATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
BOND XXVIII-DOCO DRAWL ON 01-DEC-2011					
Gross Opening Loan	775.00	775.00	775.00	775.00	775.00
Cumulative Repayments of Loans upto Previous Year	129.16	193.74	258.32	322.90	387.48
Net Loans Opening	645.84	581.26	516.68	452.10	387.52
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	64.58	64.58	64.58	64.58	64.58
Net Closing Loan	581.26	516.68	452.10	387.52	322.94
Average Net Loan	613.55	548.97	484.39	419.81	355.23
Rate of Interest on Loan	9.33	9.33	9.33	9.33	9.33
Interest on Loan	57.24	51.22	45.19	39.17	33.14
BOND XXIX-DOCO DRAWL ON 01-DEC-2011-					
Gross Opening Loan	425.00	425.00	425.00	425.00	425.00
Cumulative Repayments of Loans upto Previous Year	70.84	106.26	141.68	177.10	212.52
Net Loans Opening	354.16	318.74	283.32	247.90	212.48
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	35.42	35.42	35.42	35.42	35.42
Net Closing Loan	318.74	283.32	247.90	212.48	177.06
Average Net Loan	336.45	301.03	265.61	230.19	194.77
Rate of Interest on Loan	9.20	9.20	9.20	9.20	9.20
Interest on Loan	30.95	27.69	24.44	21.18	17.92
BOND XXX-ADDCAP FOR 2011-2012 LOAN-4-					
Gross Opening Loan	149.45	149.45	149.45	149.45	149.45
Cumulative Repayments of Loans upto Previous Year	12.45	24.90	37.35	49.80	62.25
Net Loans Opening	137.00	124.55	112.10	99.65	87.20
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	12.45	12.45	12.45	12.45	12.45
Net Closing Loan	124.55	112.10	99.65	87.20	74.75
Average Net Loan	130.78	118.33	105.88	93.43	80.98
Rate of Interest on Loan	8.80	8.80	8.80	8.80	8.80
Interest on Loan	11.51	10.41	9.32	8.22	7.13



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
BOND XXX-LOAN-3-					
Gross Opening Loan	390.55	390.55	390.55	390.55	390.55
Cumulative Repayments of Loans upto Previous Year	32.55	65.10	97.65	130.20	162.75
Net Loans Opening	358.00	325.45	292.90	260.35	227.80
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	32.55	32.55	32.55	32.55	32.55
Net Closing Loan	325.45	292.90	260.35	227.80	195.25
Average Net Loan	341.73	309.18	276.63	244.08	211.53
Rate of Interest on Loan	8.80	8.80	8.80	8.80	8.80
Interest on Loan	30.07	27.21	24.34	21.48	18.61
BOND XXXIII-ADDCAP FOR 2011-2012 LOAN-5-					
Gross Opening Loan	7.01	7.01	7.01	7.01	7.01
Cumulative Repayments of Loans upto Previous Year	-	0.58	1.16	1.74	2.32
Net Loans Opening	7.01	6.43	5.85	5.27	4.69
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	0.58	0.58	0.58	0.58	0.58
Net Closing Loan	6.43	5.85	5.27	4.69	4.11
Average Net Loan	6.72	6.14	5.56	4.98	4.40
Rate of Interest on Loan	8.64	8.64	8.64	8.64	8.64
Interest on Loan	0.58	0.53	0.48	0.43	0.38
BOND XXXIII-ADDCAP FOR 2012-2012 LOAN-6					
Gross Opening Loan	48.29	48.29	48.29	48.29	48.29
Cumulative Repayments of Loans upto Previous Year	-	4.02	8.04	12.06	16.08
Net Loans Opening	48.29	44.27	40.25	36.23	32.21
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	4.02	4.02	4.02	4.02	4.02
Net Closing Loan	44.27	40.25	36.23	32.21	28.19
Average Net Loan	46.28	42.26	38.24	34.22	30.20
Rate of Interest on Loan	8.64	8.64	8.64	8.64	8.64
Interest on Loan	4.00	3.65	3.30	2.96	2.61
Summary					
Gross Opening Loan	1795.30	1795.30	1795.30	1795.30	1795.30
Cumulative Repayments of Loans upto Previous Year	245.00	394.60	544.20	693.80	843.40
Net Loans Opening	1550.30	1400.70	1251.10	1101.50	951.90
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Less: Repayments of Loan during the year	149.60	149.60	149.60	149.60	149.60
Net Closing Loan	1400.70	1251.10	1101.50	951.90	802.30
Average Net Loan	1475.50	1325.90	1176.30	1026.70	877.10
Rate of Interest on Loan	9.1058%	9.1044%	9.1026%	9.1003%	9.0972%
Interest on Loan	134.36	120.72	107.07	93.43	79.79

