

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 358/TT/2014

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

Date of Hearing: 21.12.2015
Date of Order : 31.12.2015

In the Matter of:

Truing up of transmission tariff for 2009-14 tariff block and determination of transmission tariff for 2014-19 tariff block for 400 kV S/C Vindhyachal-Korba Ckt. II transmission line along with associated bay equipment at Vindhyachal and Korba (DOCO: 1.6.2007) under Korba-Vindhyachal Transmission System in Western Region 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

And in the Matter of:

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

.....Petitioner

Versus

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur - 482008
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th Floor,
Andheri (East), Mumbai - 400052
3. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara - 390007
4. Electricity Department,



Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403001

5. Electricity Department,
Administration of Daman Diu,
Daman -- 396210
6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T. Silvassa - 396230
7. Chhattisgarh State Electricity Board,
P.O. Sundernagar, Dangania, Raipur,
Chhattisgarh - 492013
8. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore – 452008

.....Respondent(s)

The following were present:

For Petitioner: Shri S.K. Niranjana, PGCIL
Shri S.S. Raju, PGCIL
Shri Anshul Garg, PGCIL
Shri Rakesh Prasad, PGCIL
Shri M.M. Mondal, PGCIL
Shri S.K Venkatesan, PGCIL
Shri Avinash M Pavgi, PGCIL
Shri Piyush Awasthi, PGCIL
Shri Mohd. Mohsin, 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 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 400 kV S/C Vindhyachal-Korba Ckt. II transmission line along with associated bay equipment at Vindhyachal and Korba (DOCO: 1.6.2007) under Korba-Vindhyachal Transmission System in Western 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 Western Region.

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

a) The investment approval for the transmission line was accorded by Board of Directors of the petitioner company vide Memorandum dated 19.2.2004 at an estimated cost of ₹16402.00 lakh, which included IDC of ₹878.00 lakh. The transmission line was to be completed by February 2007. Subsequently, approval for the revised cost estimate was accorded by Board of Directors of the petitioner company vide letter dated 10.7.2007 for an estimated cost of ₹21253.00 lakh, which included IDC of ₹1447.00 lakh.

b) The transmission asset was put to commercial operation on 1.6.2007. The Commission vide its order dated 17.9.2010 in Petition No. 167/2010 had approved the capital cost of ₹18621.19 lakh as on 31.3.2009 as under:-

Admitted as on 31.3.2009	Amount (₹ in lakh)	Percentage (%)
Debt	13034.83	70.00
Equity	5586.36	30.00
Capital Cost	18621.19	100.00



c) The commission had allowed the additional capital expenditure of ₹62.43 lakh in 2009-10 and ₹42.43 lakh in 2010-11 in its order in Petition No. 167/2010.

d) The Commission determined the tariff for the transmission asset for tariff period 2009-14, based on admitted capital cost of ₹18621.19 lakh as on 31.3.2009 and estimated additional capital expenditure of ₹62.43 lakh in 2009-10 and ₹42.43 lakh in 2010-11 as given below:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	985.78	988.55	989.67	989.67	989.67
Interest on Loan	923.64	851.9	776.6	699.53	622.36
Return on Equity	978.19	980.94	982.05	982.05	982.05
Interest on Working Capital	70.6	69.81	68.92	67.98	67.08
O & M Expenses	208.26	220.04	232.74	246.08	260.1
Total	3166.47	3111.24	3049.98	2985.31	2921.26

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. In this context, the petitioner has filed the instant petition on 11.8.2014, 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. No submissions have been made by the respondents. The hearing in this matter was held on 21.12.2015. The Commission had directed the petitioner to furnish details of the judicial proceedings along with the break-up of the amounts paid towards balance and retention payment in respect of the petitioner's claim towards revision of MP Government Entry Tax. The Commission had also directed the petitioner to submit an undertaking duly depicting the un-discharged liabilities if any and confirm whether the balance work is completed or not, providing details of the balance/ retention payments. In response to the Commission's directions the petitioner has submitted its replies vide affidavit dated 28.12.2015. Having heard the representatives of 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:-

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 auditors”.

8. 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

9. The petitioner has claimed admitted capital cost of ₹18621.19 lakh as on 31.3.2009 for the purpose of tariff determination.

10. 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”.

11. The capital cost of ₹18621.19 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

12. 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”

13. The petitioner has submitted that it has incurred an additional capital expenditure of ₹61.26 lakh in 2009-10, ₹42.05 lakh in 2010-11, ₹4.41 lakh in 2011-12, and ₹38.56 lakh in 2012-13 towards final payment of undischarged liabilities as depicted below:-

(₹ in lakh)

Capital cost admitted as on 31.3.2009	Particulars	Additional capital expenditure during 2009-14					Total cost as on 31.3.2014
		2009-10	2010-11	2011-12	2012-13	2013-14	
18621.19	Approved vide order dated 17.9.2010	62.43	42.43	-	-	-	18726.05



Capital cost admitted as on 31.3.2009	Particulars	Additional capital expenditure during 2009-14					Total cost as on 31.3.2014
		2009-10	2010-11	2011-12	2012-13	2013-14	
	Actual incurred during 2009-14	61.26	42.05	4.41	38.56	-	18767.47

14. The petitioner has submitted the Auditor's Certificate dated 6.8.2014 certifying the actual capital cost. The petitioner has submitted that the actual expenditure incurred is on account of balance and retention payments of transmission line and liabilities to meet entry tax claims made by MP Government.

15. The Commission had directed the petitioner to furnish details of the judicial proceedings along with the break-up of the amounts paid towards balance and retention payment in respect of the petitioner's claim towards revision of MP Government Entry Tax.

16. The petitioner has submitted its replies through affidavit dated 28.12.2015. The petitioner has submitted the details of the judicial proceedings along with the order dated 15.9.2015 issued by Hon'ble High Court of Madhya Pradesh in writ Petition No. 179 of 2015, writ Petition No. 182 of 2015 and writ Petition No. 4111 of 2015 in the matter of appeal filed by PGCIL challenging the order dated 8.7.2014 passed in Case No. 33/2012 (Entry Tax) assessing entry tax for the year 2011-12. The petitioner has also submitted that it has paid the entire amount towards revision of MP entry tax under assessment in respect of various cases.



17. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14 tariff period. Since the capital addition of ₹61.26 lakh in 2009-10, ₹42.05 lakh in 2010-11, ₹4.41 lakh in 2011-12, and ₹38.56 lakh in 2012-13 is based on actual capital expenditure on account of revision of MP Entry tax and balance & retention payments incurred as per the Auditor Certificate dated 6.8.2014, and is within the original scope of work and the total capital expenditure during 2009-14 is within the limits of the total approved capital expenditure, the same is allowed for the purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations. However, the MP Entry tax allowed shall be suitably refunded if the appeal is decided in favour of the petitioner.

18. 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.

Debt: Equity

19. 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.”

20. The debt:equity ratio of 70:30 admitted by the Commission vide order dated 17.9.2010 in Petition No. 167/2010 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 capitalization, debt: equity ratio of 70:30 has been considered in line with the 2009 Tariff Regulations.

21. 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	13034.83	70.00	102.40	70.00	13137.23	70.00
Equity	5586.36	30.00	43.88	30.00	5630.24	30.00
Total	18621.19	100.00	146.28	100.00	18767.47	100.00

Return on Equity (ROE)

22. 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.”

23. 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%

24. The petitioner has claimed the additional capital expenditure in the debt:equity ratio of 70:30, which is in line with Regulation 12 of the 2009 Tariff Regulations.

25. 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
As approved vide Order dated 17.9.2010	978.19	980.94	982.05	982.05	982.05
Claimed by the petitioner	1044.91	1086.19	1088.60	1089.85	1104.09
Allowed after true up in this order	1044.89	1086.20	1088.60	1089.85	1104.12

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.



Interest on Loan (IoL)

26. 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”.

27. 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 is 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
As approved vide Order dated 17.9.2010	923.64	851.90	776.60	699.53	622.36
Claimed by the petitioner	923.60	851.86	776.70	700.80	624.57
Allowed after true up in this order	923.60	851.86	776.70	700.79	624.57

The difference in the approved IoL and that allowed after true 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

28. 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
As approved vide Order dated 17.9.2010	985.78	988.55	989.67	989.67	989.67
Claimed by the petitioner	985.75	988.47	989.70	990.83	991.85
Allowed after true up in this order	985.75	988.48	989.70	990.84	991.85



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

Interest on Working Capital (IWC)

29. 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
As approved vide Order dated 17.9.2010	70.60	69.81	68.92	67.98	67.08
Claimed by the petitioner	71.99	72.00	71.15	70.28	69.71
Allowed after true up in this order	71.99	72.00	71.15	70.28	69.71

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.

Operation & Maintenance Expenses (O&M Expenses)

30. 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
As approved vide Order dated 17.9.2010	208.26	220.04	232.74	246.08	260.10
Claimed by the petitioner	208.26	220.04	232.74	246.08	260.10
Allowed after true up in this order	208.26	220.04	232.74	246.08	260.10



APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

31. 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:-

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
(₹ in lakh)					
Depreciation					
Opening Gross Block	18621.19	18682.45	18724.50	18728.91	18767.47
Additional Capitalisation	61.26	42.05	4.41	38.56	0.00
Closing Gross Block	18682.45	18724.50	18728.91	18767.47	18767.47
Average Gross Block	18651.82	18703.48	18726.71	18748.19	18767.47
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	16786.64	16860.69	16872.96	16875.36	16908.08
Balance useful life of the asset	33	32	31	30	29
Elapsed life	1	2	3	4	5
Remaining Depreciable Value	15894.04	14954.78	13987.21	13016.84	12043.36
Depreciation during the year	985.75	988.48	989.70	990.84	991.85
Cumulative depreciation (incl. of AAD)	1878.35	2866.82	3856.53	4847.36	5839.22
Interest on Loan					
Gross Normative Loan	13034.83	13077.71	13107.15	13110.23	13137.23
Cumulative Repayments upto Previous Year	892.60	1878.35	2866.82	3856.53	4847.36
Net Loan-Opening	12142.23	11199.36	10240.32	9253.71	8289.86
Additions	42.88	29.44	3.09	26.99	0.00
Repayment during the year	985.75	988.48	989.70	990.84	991.85
Net Loan-Closing	11199.36	10240.32	9253.71	8289.86	7298.01
Average Loan	11670.80	10719.84	9747.02	8771.79	7793.94
Weighted Average Rate of Interest on Loan (%)	7.9138	7.9466	7.9686	7.9892	8.0135
Interest on Loan	923.60	851.86	776.70	700.79	624.57
Return on Equity					
Opening Equity	5586.36	5604.74	5617.35	5618.68	5630.24
Additions	18.38	12.62	1.32	11.57	0.00
Closing Equity	5604.74	5617.35	5618.68	5630.24	5630.24
Average Equity	5595.55	5611.05	5618.01	5624.46	5630.24



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for 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	1044.89	1086.20	1088.60	1089.85	1104.12
Interest on Working Capital					
O & M Expenses	17.35	18.33	19.39	20.50	21.67
Maintenance Spares	31.24	33.01	34.91	36.91	39.02
Receivables	539.08	536.43	526.48	516.31	508.39
Total Working Capital	587.67	587.77	580.78	573.72	569.07
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest of working capital	71.99	72.00	71.15	70.28	69.71
Annual Transmission Charges					
Depreciation	985.75	988.48	989.70	990.84	991.85
Interest on Loan	923.60	851.86	776.70	700.79	624.57
Return on Equity	1044.89	1086.20	1088.60	1089.85	1104.12
Interest on Working Capital	71.99	72.00	71.15	70.28	69.71
O & M Expenses	208.26	220.04	232.74	246.08	260.10
Total	3234.49	3218.58	3158.89	3097.84	3050.35

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

32. 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	991.85	991.85	991.85	991.85	991.85
Interest on Loan	547.35	470.33	393.74	318.08	245.38
Return on Equity	1104.09	1104.09	1104.09	1104.09	1104.09
Interest on Working Capital	73.95	72.63	71.32	70.04	68.84
O & M Expenses	237.35	245.40	253.59	261.91	270.65
Total	2954.59	2884.30	2814.59	2745.97	2680.81

33. 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	19.78	20.45	21.13	21.83	22.55
Maintenance Spares	35.60	36.81	38.04	39.29	40.60
Receivables	492.43	480.72	469.10	457.66	446.80
Total working capital	547.81	537.98	528.27	518.78	509.95
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest of working capital	73.95	72.63	71.32	70.04	68.84

Capital Cost

34. 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 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.”

“(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;”

35. The capital cost of ₹ 18767.47 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

36. The petitioner has not claimed any additional capital expenditure for 2014-19 tariff period.

Debt: Equity

37. 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 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.”

38. The petitioner has considered the debt:equity ratio of 70.00:30.00 as on 31.3.2014, which is in line with the 2014 Tariff Regulations.

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

(₹ in lakh)

Funding	Total Cost as on 31.3.2014	(%)	Additional Capital Expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	13137.23	70.00	-	-	13137.23	70.00
Equity	5630.24	30.00	-	-	5630.24	30.00
Total	18767.47	100.00	-	-	18767.47	100.00

Return on Equity (ROE)

40. 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.”

41. 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	5630.24	5630.24	5630.24	5630.24	5630.24
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	5630.24	5630.24	5630.24	5630.24	5630.24
Average Equity	5630.24	5630.24	5630.24	5630.24	5630.24
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	1104.12	1104.12	1104.12	1104.12	1104.12

Interest on Loan (IoL)

42. 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.”

43. 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 and 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	13137.23	13137.23	13137.23	13137.23	13137.23
Cumulative Repayment upto Previous Year	5839.22	6831.07	7822.93	8814.78	9806.64
Net Loan-Opening	7298.01	6306.15	5314.30	4322.44	3330.59
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	991.85	991.85	991.85	991.85	991.85
Net Loan-Closing	6306.15	5314.30	4322.44	3330.59	2338.74
Average Loan	6802.08	5810.23	4818.37	3826.52	2834.66
Weighted Average Rate of Interest on Loan (%)	8.0466	8.0949	8.1716	8.3125	8.6561
Interest on Loan	547.34	470.33	393.74	318.08	245.37

Depreciation

44. 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.”

45. 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 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	18767.47	18767.47	18767.47	18767.47	18767.47
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	18767.47	18767.47	18767.47	18767.47	18767.47
Average Gross Block	18767.47	18767.47	18767.47	18767.47	18767.47
Freehold Land (Av. Cost)	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Elapsed life	6	7	8	9	10
Balance Useful life of the asset	28	27	26	25	24
Remaining Depreciable Value	11051.51	10059.65	9067.80	8075.94	7084.09
Depreciation during the year	991.85	991.85	991.85	991.85	991.85

Operation & Maintenance Expenses (O&M Expenses)

46. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify 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	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Line: S/C (Twin/Triple Conductor):					
Line Length (km)	288.994	288.994	288.994	288.994	288.994
Norms (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
Total O&M Expenses (₹ lakh)	237.35	245.40	253.59	261.91	270.65

47. 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)

48. 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;”



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

50. 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	19.77	20.44	21.12	21.82	22.54
Maintenance Spares	35.60	36.81	38.04	39.29	40.60
Receivables	492.44	480.72	469.10	457.67	446.81
Total	547.81	537.97	528.26	518.77	509.95
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	73.95	72.63	71.32	70.03	68.84

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

51. 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	18767.47	18767.47	18767.47	18767.47	18767.47
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	18767.47	18767.47	18767.47	18767.47	18767.47
Average Gross Block	18767.47	18767.47	18767.47	18767.47	18767.47
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	16890.72	16890.72	16890.72	16890.72	16890.72
Balance useful life of the asset	28	27	26	25	24
Elapsed life	6	7	8	9	10
Remaining Depreciable Value	11051.51	10059.65	9067.80	8075.94	7084.09
Depreciation during the year	991.85	991.85	991.85	991.85	991.85
Cumulative depreciation (incl. of AAD)	6831.07	7822.93	8814.78	9806.64	10798.49



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	13137.23	13137.23	13137.23	13137.23	13137.23
Cumulative Repayments upto Previous Year	5839.22	6831.07	7822.93	8814.78	9806.64
Net Loan-Opening	7298.01	6306.15	5314.30	4322.44	3330.59
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	991.85	991.85	991.85	991.85	991.85
Net Loan-Closing	6306.15	5314.30	4322.44	3330.59	2338.74
Average Loan	6802.08	5810.23	4818.37	3826.52	2834.66
Weighted Average Rate of Interest on Loan (%)	8.0466	8.0949	8.1716	8.3125	8.6561
Interest on Loan	547.34	470.33	393.74	318.08	245.37
Return on Equity					
Opening Equity	5630.24	5630.24	5630.24	5630.24	5630.24
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	5630.24	5630.24	5630.24	5630.24	5630.24
Average Equity	5630.24	5630.24	5630.24	5630.24	5630.24
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	1104.12	1104.12	1104.12	1104.12	1104.12
Interest on Working Capital					
O & M Expenses	19.77	20.44	21.12	21.82	22.54
Maintenance Spares	35.60	36.81	38.04	39.29	40.60
Receivables	492.44	480.72	469.10	457.67	446.81
Total Working Capital	547.81	537.97	528.26	518.77	509.95
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	73.95	72.63	71.32	70.03	68.84
Annual Transmission Charges					
Depreciation	991.85	991.85	991.85	991.85	991.85
Interest on Loan	547.34	470.33	393.74	318.08	245.37
Return on Equity	1104.12	1104.12	1104.12	1104.12	1104.12
Interest on Working Capital	73.95	72.63	71.32	70.03	68.84
O & M Expenses	237.35	245.40	253.59	261.91	270.65
Total	2954.62	2884.33	2814.61	2745.99	2680.83

Deferred Tax Liability

52. 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

53. 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

54. 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

55. 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

56. 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.

57. This order disposes of Petition No. 358/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



Annexure – 1

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2009-14

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XVII-DOCO-	7.39	9416.00	0.00	9416.00
BOND XX-DOCO-	8.93	2000.00	0.00	2000.00
BOND XXII-DOCO-	8.68	100.00	0.00	100.00
BOND XXIII-DOCO-	9.25	700.00	0.00	700.00
BOND XXV-ADDCAP FOR 2007-2008-	10.10	67.00	0.00	67.00
BOND XXVI-ADDCAP FOR 2007-2008 DRAWL ON 07-MAR-2008-	9.30	720.00	0.00	720.00
BOND XXVIII-ADDCAP FOR 2008-2009 DRAWL ON 15-DEC-2008-	9.33	210.00	0.00	210.00
BOND XXIX-ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009-	9.20	140.00	0.00	140.00
BOND XXX-ADDCAP FOR 2009-2010 Loan-1-	8.80	0.00	42.88	42.88
BOND XXX-ADDCAP FOR 2010-2011 Loan-2-	8.80	0.00	1.12	1.12
BOND XXXI-ADDCAP FOR 2010-2011 Loan-3-	8.90	0.00	7.00	7.00
Total		13353.00	51.00	13404.00

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	13353.00	13395.88	13404.00	13404.00	13404.00
Cumulative Repayments of Loans upto Previous Year	0.00	941.60	2116.53	3357.04	4626.72
Net Loans Opening	13353.00	12454.28	11287.47	10046.96	8777.28
Add: Draw(s) during the Year	42.88	8.12	0.00	0.00	0.00
Less: Repayments of Loan during the year	941.60	1174.93	1240.51	1269.68	1273.92
Net Closing Loan	12454.28	11287.47	10046.96	8777.28	7503.36
Average Net Loan	12903.64	11870.88	10667.22	9412.12	8140.32
Rate of Interest on Loan (%)	7.9138	7.9466	7.9686	7.9892	8.0135
Interest on Loan	1021.17	943.33	850.03	751.95	652.33



Annexure – 2

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XVII-DOCO-	7.39	9416.00	0.00	9416.00
BOND XX-DOCO-	8.93	2000.00	0.00	2000.00
BOND XXII-DOCO-	8.68	100.00	0.00	100.00
BOND XXIII-DOCO-	9.25	700.00	0.00	700.00
BOND XXV-ADDCAP FOR 2007-2008-	10.10	67.00	0.00	67.00
BOND XXVI-ADDCAP FOR 2007-2008 DRAWL ON 07-MAR-2008-	9.30	720.00	0.00	720.00
BOND XXVIII-ADDCAP FOR 2008-2009 DRAWL ON 15-DEC-2008-	9.33	210.00	0.00	210.00
BOND XXIX-ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009-	9.20	140.00	0.00	140.00
BOND XXX-ADDCAP FOR 2009-2010 Loan-1-	8.80	42.88	0.00	42.88
BOND XXX-ADDCAP FOR 2010-2011 Loan-2-	8.80	1.12	0.00	1.12
BOND XXXI-ADDCAP FOR 2010-2011 Loan-3-	8.90	7.00	0.00	7.00
Total		13404.00	0.00	13404.00

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	13404.00	13404.00	13404.00	13404.00	13404.00
Cumulative Repayments of Loans upto Previous Year	5900.64	7174.56	8448.48	9722.40	10996.32
Net Loans Opening	7503.36	6229.44	4955.52	3681.60	2407.68
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	1273.92	1273.92	1273.92	1273.92	1273.92
Net Closing Loan	6229.44	4955.52	3681.60	2407.68	1133.76
Average Net Loan	6866.40	5592.48	4318.56	3044.64	1770.72
Rate of Interest on Loan (%)	8.0466	8.0949	8.1716	8.3125	8.6561
Interest on Loan	552.52	452.71	352.89	253.08	153.27

