

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 395/TT/2014

Coram:

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

**Date of Hearing : 13.01.2015
Date of Order : 29.01.2016**

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for Special Protection Scheme for Rihand- Dadri HVDC Bi-pole and Gorakhpur-Muzzafarpur 400 kV line in Northern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....**Petitioner**

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam 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-171004
6. Punjab State Electricity Board
Thermal Shed T1 A, Near 22 Phatak
Patiala-147001
7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) 134 109
8. Power Development Deptt.
Govt. of Jammu & Kashmir
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashok Marg
Lucknow- 226001
10. Delhi Transco Ltd.
Shakti Sadan, Kotla Road
New Delhi- 110002
11. BSES Yamuna Power Ltd.
BSES Bhawan, Nehru Place
New Delhi
12. BSES Rajdhani Power Ltd.
BSES Bhawan, Nehru Place
New Delhi
13. North Delhi Power Ltd.
Power Trading & Load Dispatch Group
Cennet Building
Pitampura, New Delhi-110034
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-110002

.....Respondents

The following were present:

For Petitioner: Shri Vivek Kumar Singh, PGCIL
 Shri S.S Raju, PGCIL
 Shri D.K Karma, PGCIL
 Smt. Sonam Gangwar, PGCIL
 Shri M.M Mondal, PGCIL
 Shri S.K Venkatesan, PGCIL
 Shri Rakesh Prasad, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ('the petitioner'), a transmission licensee, for truing up of capital expenditure for 2009-14 tariff period and determination of tariff for 2014-19 tariff period for Special Protection Scheme for Rihand- Dadri HVDC Bi-pole and Gorakhpur-Muzzafarpur 400 kV line(hereinafter referred as "the transmission asset") under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") 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. The transmission assets were commissioned prior 1.4.2009.



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

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 13.1.2016. None of the respondents have filed any reply to the petition. The petitioner was directed to file on affidavit on additional information sought with copy to respondents by 20.1.2016. In response the petitioner has submitted the information vide affidavit dated 22.1.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

- a. The investment approval for execution of transmission asset associated with Special Protection Scheme for Rihand- Dadri HVDC Bi-pole and Gorakhpur-Muzzafarpur 400 kV line in Northern Region was accorded by Board of Directors of the petitioner's company vide letter dated 21.9.2006 at an estimated cost of ₹375.00 lakh, which included IDC of ₹9.00 lakh. The date of commercial operation of the Asset is 1.8.2008.



- b. The tariff from COD to 31.3.2009 was allowed vide order dated 26.4.2010 in Petition No. 249/2009 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.
- c. The tariff for 2009-14 tariff period was allowed vide order dated 27.6.2011 in Petition No. 302/2010 based on admitted capital cost of ₹217.19 lakh for the Asset as on 31.3.2009 in accordance with the 2009 Tariff Regulations. The tariff allowed vide order dated 27.6.2011 for the tariff period 2009-14 is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	15.18	16.76	16.83	16.83	16.83
Interest on Loan	14.26	14.40	12.92	11.35	9.78
Return on Equity	12.57	13.87	13.94	13.94	13.94
Interest on Working Capital	0.88	1.19	1.66	1.63	1.60
O & M Expenses	0.00	5.00	15.00	15.00	15.00
Total	42.88	51.22	60.35	58.75	57.15

- d. The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the 2009-14 tariff period, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for the 2009-14 tariff period.
- e. The instant petition was filed on 19.9.2014.

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

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



Capital Cost

6. The petitioner has claimed admitted capital cost of ₹217.19lakh for the Asset as on 31.3.2009 for the purpose of tariff.

7. Last proviso to Clause (2) of Regulation 7 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”.

8. The capital cost admitted as on 31.3.2009 vide order dated 26.4.2010 has been considered as the opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations. Accordingly, trued up annual transmission charges for 2009-14 tariff period has been worked out by considering admitted capital cost of ₹217.19lakh for the Asset as on 1.4.2009.

Additional Capital Expenditure

9. The Commission in its order dated 27.6.2011 in Petition No. 302/2010 allowed the additional capitalization of ₹49.83 lakh during 2009-14 period. The petitioner has claimed actual additional capitalization of ₹38.54 lakh, in 2009-10 and ₹7.22 lakh in 2010-11. The petitioner has also submitted the Auditor's Certificate for the cost incurred towards the additional capitalization..

10. The petitioner has claimed that additional capitalization in 2009-10 and 2010-11 are on account of balance and retention payments for PLCC works



which have been executed within cut-off date in accordance with Clause (1) sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations.

11. Clause (1) sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations provides as follows:

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

(i) Undischarged liabilities;

.....

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff”

12. As per the order dated 27.6.2011, Petition No.302/2010, additional capitalization during 2010-11 was admissible under Clause 2, sub-clause (viii) of Regulation 9 of the 2009 Tariff Regulation. However, it is observed that, the petitioner has claimed additional capitalization for 2010-11 under Clause 1 of Regulation 9 of the 2009 Tariff Regulations instead of Clause 2, sub-clause (viii) of Regulation 9 of the 2009 Tariff Regulation.

13. Clause 2 of sub-clause (viii) of Regulation 9 of the 2009 Tariff Regulation provides as follows:

“(2) The capital expenditure incurred on the following counts after the cut-off-date, in its discretion, be admitted by the Commission, subject to prudence check:

(viii) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.”



14. The Commission has considered the additional capitalisation for 2010-11 as per the above regulation. As the overall capital cost is within approved cost of original scope and is within the cut-off date, the additional capitalization of ₹38.54 lakh has been considered in accordance to Clause (1), sub-clause (i) of Regulation 9 of the 2009 Tariff Regulations and additional capitalization of ₹7.22 lakh in 2010-11 in accordance with Clause 2, sub-clause (viii) of Regulation 9 of the 2009 Tariff Regulation. Accordingly, the actual additional capital expenditure for the purpose of true up of tariff of 2009-14 tariff period has been allowed as shown in table below:-

(₹ in lakh)

Apportioned Approved Cost as per Investment Approval is 375.00 lakh								
Particulars	Admitted capital cost as on 31.3.2009	Additional capitalization					Total additional capitalization	Total capital cost including additional capitalization
		2009-10	2010-11	2011-12	2012-13	2013-14		
Approved in order dated 27.6.2011	217.19	47.35	2.48	0.00	0.00	0.00	49.83	267.02
Actual	217.19	38.54	7.22	0.00	0.00	0.00	45.76	262.95

Debt: Equity

15. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“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.”

16. The petitioner has claimed true up Annual Fixed Charge based on debt:equity ratio of 70.17:29.83 as on 31.3.2009 as considered by the Commission in its order dated 27.6.2011 in Petition No.302/2010. The



transmission assets covered in the instant petition were commissioned prior to 1.4.2009.

17. The petitioner was directed to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30% for the asset covered under the subject transmission system. The petitioner vide affidavit dated 22.1.2016 has submitted that for additional capitalization during 2009-10 and 2010-11, no loan has been deployed as indicated in Form-13 of the petition. The entire funding has been done through equity. The petitioner further submitted that, as per Clause (1) & (3) of Regulation 12 of the 2009 Tariff Regulations excess equity over 30% shall be treated as deemed loan. Hence, return on equity has been claimed only for 30% of additional capitalization in Form- 1A on normative basis.

18. The admitted debt:equity ratio 70.17:29.83 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff for tariff period 2009-14 as given under:-

(₹in lakh)		
Funding	Amount	(%)
Debt	152.40	70.17
Equity	64.79	29.83
Capital Cost	217.19	100.00

19. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2009-10 to 2010-11 which is in line with the debt:equity ratio is allowed in accordance with Clause 2 of Regulation 12 of the 2009



Tariff Regulations. The overall debt equity as on 31.3.2014 including additional capitalization is as under:-

(₹ in lakh)		
Funding	Amount	(%)
Debt	184.43	70.14
Equity	78.52	29.86
Capital Cost	262.95	100.00

Interest on Loan (“IOL”)

20. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

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

(₹in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 27.6.2011	14.26	14.40	12.92	11.35	9.78
As claimed by the petitioner	13.99	14.02	12.73	11.18	9.64
Allowed after trued up	13.99	14.02	12.73	11.18	9.64

Return on Equity (“ROE”)

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



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

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

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

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 petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 27.6.2011. However, for truing up purpose, the computation of ROE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate(%)	Grossed up RoE (Base rate/(1-t))(%)
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. Accordingly, the ROE as trued up is as shown in the table below:-



(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 27.6.2011	12.57	13.87	13.94	13.94	13.94
As claimed by the petitioner	13.18	15.00	15.22	15.22	15.40
Allowed after tried up	13.18	14.99	15.21	15.21	15.40

25. The variation in return on equity worked out with reference to the return on equity allowed vide order 27.6.2011 is due to variation in additional capitalisation and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

Depreciation

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

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

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

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

"17. Depreciation:

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

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

28. The Commission, vide order dated 27.6.2011, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations. As per Regulations 3(42) and 17 (4) of the 2009 Tariff Regulations, useful life for transmission line and sub-station is 35 years and 25 years, respectively. For the



purpose of calculation, the useful life of Buildings and Civil Works, Sub-station and PLCC has been considered as 25 years. The weighted average of the life is considered as 25 years for the Asset.

29. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure and additional capitalization as under:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 27.6.2011	15.18	16.76	16.83	16.83	16.83
As claimed by the petitioner	14.90	16.35	16.58	16.58	16.58
Allowed after tried up	14.90	16.35	16.58	16.58	16.58

30. There is a variation in allowed depreciation on account of variation in actual capitalization claimed for the 2009-14 tariff period.

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

31. In order dated 27.6.2011, the Commission stated as follows:

“It is clarified that the Special Protection Scheme has been considered as separate transmission asset. Therefore, O & M expenses of ₹ 5.0 lakh, ₹15.0 lakh, ₹15.0 lakh and ₹15.00 lakh to be incurred during 2010-11, 2011-12, 2012-13 and 2013-14, respectively claimed by the petitioner are allowed subject to adjustment as per actual at the time of trying up.”

32. The petitioner has however submitted NIL O&M Expenses for 2009-14 tariff period. We have therefore approved NIL O&M Expenses.

Interest on working capital (“IWC”)

33. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission



system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest on working capital.

34. The petitioner has submitted that the rate of interest on working capital has been considered as 12.25% as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

35. The Commission, vide order dated 27.6.2011 in Petition No. 226/2010 approved rate of interest on working capital of 12.25% applicable for 2008-09. In accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation prior to 1.4.2009, shall be equal to short-term Prime Lending Rate as applicable as on 1.4.2009. State Bank of India short-term Prime Lending Rate on 1.4.2009 was 12.25%. Therefore, interest rate of 12.25% has been considered to workout the interest on working capital in the instant case.

36. The IWC trued up is as under:-

(₹in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	7.16	7.72	7.57	7.31	7.08
Total	7.16	7.72	7.57	7.31	7.08
Rate of Interest(%)	12.25	12.25	12.25	12.25	12.25
Interest	0.88	0.95	0.93	0.90	0.87



37. The summary of IWC as approved in the Order, as claimed by the petitioner after true up and as approved after true up is as under:-

Particulars	(₹in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 27.6.2011	0.88	1.19	1.66	1.63	1.60
As claimed by the petitioner	0.88	0.95	0.93	0.90	0.87
Allowed after trued up	0.88	0.95	0.93	0.90	0.87

38. The variation in IWC is on account of change in receivables due to variation in Depreciation, Interest and ROE on account of variation in additional capital expenditure and due to variation in ROE on account of applicable MAT rate during the 2009-14 and additional capitalization incurred in the tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

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

Particulars	(₹in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block					
Opening Gross Block	217.19	255.73	262.95	262.95	262.95
Additional Capitalization	38.54	7.22	0.00	0.00	0.00
Closing Gross block	255.73	262.95	262.95	262.95	262.95
Average Gross block	236.46	259.34	262.95	262.95	262.95
Depreciation					
Rate of Depreciation (%)	6.301	6.304	6.304	6.304	6.304
Depreciable Value	212.81	233.41	236.66	236.66	236.66
Elapsed Life of the assets at beginning of	0	1	2	3	4



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
the year					
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	204.76	210.46	197.36	180.78	164.20
Depreciation	14.90	16.35	16.58	16.58	16.58
Interest on Loan					
Gross Normative Loan	152.40	179.38	184.43	184.43	184.43
Cumulative Repayment upto Previous Year	8.05	22.95	39.30	55.88	72.45
Net Loan-Opening	144.35	156.43	145.13	128.56	111.98
Additions	26.98	5.05	0.00	0.00	0.00
Repayment during the year	14.90	16.35	16.58	16.58	16.58
Net Loan-Closing	156.43	145.13	128.56	111.98	95.40
Average Loan	150.39	150.78	136.84	120.27	103.69
Weighted Average Rate of Interest on Loan (%)	9.3000	9.3000	9.3000	9.3000	9.3000
Interest	13.99	14.02	12.73	11.18	9.64
Return on Equity					
Opening Equity	64.79	76.35	78.52	78.52	78.52
Additions	11.56	2.17	0.00	0.00	0.00
Closing Equity	76.35	78.52	78.52	78.52	78.52
Average Equity	70.57	77.44	78.52	78.52	78.52
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	13.18	14.99	15.21	15.21	15.40
Interest on Working Capital					
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Receivables	7.16	7.72	7.57	7.31	7.08
Total	7.16	7.72	7.57	7.31	7.08
Interest	0.88	0.95	0.93	0.90	0.87



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Transmission Charges					
Depreciation	14.90	16.35	16.58	16.58	16.58
Interest on Loan	13.99	14.02	12.73	11.18	9.64
Return on Equity	13.18	14.99	15.21	15.21	15.40
Interest on Working Capital	0.88	0.95	0.93	0.90	0.87
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Total	42.94	46.31	45.45	43.87	42.49

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16.58	16.58	16.58	16.58	16.58
Interest on Loan	8.10	6.56	5.02	3.47	1.93
Return on Equity	15.40	15.40	15.40	15.40	15.40
Interest on WC	2.01	2.01	2.01	2.02	2.02
O&M Expenses	19.72	20.38	21.05	21.75	22.47
Total	61.81	60.93	60.06	59.22	58.40

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.96	3.06	3.16	3.26	3.37
O & M expenses	1.64	1.70	1.75	1.81	1.87
Receivables	10.30	10.16	10.01	9.87	9.73
Total	14.90	14.92	14.92	14.94	14.97
Rate of Interest(%)	13.50	13.50	13.50	13.50	13.50
Interest	2.01	2.01	2.01	2.02	2.02



Capital Cost

42. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations provide as follows:-

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

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

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

43. The trued up capital cost of ₹262.95 lakh for the Asset as on 31.3.2014 is considered for the purpose of tariff for 2014-19.

Additional Capital Expenditure

44. The petitioner has not claimed any additional expenditure for the tariff period 2014-19. No additional capital expenditure has been considered for the tariff period 2014-19.

Debt: Equity Ratio

45. Clause 3 and 4 of Regulation 19 of the 2014 Tariff Regulations provides as under:-

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

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equity ratio based on actual information



provided by the generating company or the transmission licensee as the case may be.”

46. The petitioner has considered debt:equity ratio as 70.14:29.86 as on 31.3.2014. Debt equity ratio of 70.17:29.83 as on 31.3.2009 was considered by the Commission in its order dated 27.6.2011 in Petition No. 302/2010. The debt equity ratio of 70.14:29.86 for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. Further, since there is no additional capitalization proposed for the period the debt:equity ratio remains the same as on 31.3.2019. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	Admitted as on 31.3.2014	(%)
Funding	Amount	
Debt	184.43	70.14
Equity	78.52	29.86
Total	262.95	100.00

Interest on Loan (“IOL”)

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

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

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

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



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

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	184.43	184.43	184.43	184.43	184.43
Cumulative Repayment upto Previous Year	89.03	105.61	122.18	138.76	155.34
Net Loan-Opening	95.40	78.82	62.25	45.67	29.09
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	16.58	16.58	16.58	16.58	16.58
Net Loan-Closing	78.82	62.25	45.67	29.09	12.52
Average Loan	87.11	70.54	53.96	37.38	20.80
Weighted Average Rate of Interest on Loan(%)	9.3000	9.3000	9.3000	9.3000	9.3000
Interest	8.10	6.56	5.02	3.48	1.93

Return on Equity (“ROE”)

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

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

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

.....”

“25. Tax on Return on Equity:

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

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



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

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

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

52. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity.



The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of allowing return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE determined by the Commission is given below:-

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	78.52	78.52	78.52	78.52	78.52
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	78.52	78.52	78.52	78.52	78.52
Average Equity	78.52	78.52	78.52	78.52	78.52
Return on Equity Base Rate (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of Equity(Pre-Tax)	19.610	19.610	19.610	19.610	19.610
Return on Equity(Pre-Tax)	15.40	15.40	15.40	15.40	15.40

Depreciation

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

"27. Depreciation:

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

...

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

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial



operation of the station shall be spread over the balance useful life of the assets.

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

54. The petitioner has computed depreciation considering capital expenditure of ₹262.95lakh for the Asset as on 31.3.2014. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as per the methodology provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	262.95	262.95	262.95	262.95	262.95
Additions during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	262.95	262.95	262.95	262.95	262.95
Rate of Depreciation	6.304	6.304	6.304	6.304	6.304
Depreciable Value	236.66	236.66	236.66	236.66	236.66
Remaining Depreciable Value	147.62	131.05	114.47	97.89	81.32
Depreciation	16.58	16.58	16.58	16.58	16.58

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

55. The petitioner has submitted that as per the order dated 27.6.2011 the O&M Expenses of ₹5.0 lakh, ₹15.0 lakh, ₹15.0 lakh and ₹15.00 lakh to be incurred during 2010-11, 2011-12, 2012-13 and 2013-14, respectively was approved. However, the actual O&M Expenses is NIL during the period. Accordingly, the petitioner’s has computed O&M Expenses at the rate of 7.5% of capital cost for 2014-15 and has considered escalation rate of 3.32% for subsequent years as per Regulation 29(3)(c) of the 2014 Tariff Regulations as given hereunder:-



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Special Protection Scheme for Rihand- Dadri HVDC Bi-pole and Gorakhpur-Muzzafarpur 400 kV line in Northern Region.	19.72	20.38	21.05	21.75	22.47

56. The petitioner vide letter dated 14.1.2016 was directed to submit a copy of annual maintenance contract for carrying out the O&M activities. In reply, the petitioner vide affidavit dated 22.1.2016 submitted that, there is no O&M Annual Maintenance contract for carrying out O&M activities and actual O&M expenses shall be submitted at the time of truing up for 2014-19 tariff period.

57. We have observed that the petitioner has not incurred any O&M expenses during 2009-14 tariff period, however, has projected O&M Expenses for 2014-19 tariff period at the rate of 7.50% of the capital cost. The petitioner has not submitted any basis for such assumption. We are of the view that since the petitioner has not incurred any O&M Expenses in the 2009-14 tariff period and in absence of any justification and basis towards projected O&M Expenses, we are not inclined to allow O&M Expenses for 2014-19 tariff period in the instant petition. The O&M Expenses shall be considered on the basis of submission of actual incurred at the time of truing up subject to prudence check.

Interest on Working Capital (“IWC”)

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

“28. Interest on Working Capital

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



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

(iii) Operation and maintenance expenses for one month”

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

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

60. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Receivables	6.83	6.57	6.31	6.04	5.78
Total	6.83	6.57	6.31	6.04	5.78
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest	0.92	0.89	0.85	0.82	0.78

Annual Transmission Charges

61. The Annual Transmission Charges allowed for the transmission asset is given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16.58	16.58	16.58	16.58	16.58
Interest on Loan	8.10	6.56	5.02	3.48	1.93



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	15.40	15.40	15.40	15.40	15.40
Interest on WC	0.92	0.89	0.85	0.82	0.78
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	41.00	39.42	37.84	36.27	34.69

62. The detailed computation of various components of annual fixed charges for the tariff period 2014-19 is summarized below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
As on 31.03.2014	262.95	262.95	262.95	262.95	262.95
Addition during 2014-19 Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Gross Block	262.95	262.95	262.95	262.95	262.95
Average Gross Block	262.95	262.95	262.95	262.95	262.95
Depreciation					
Rate of Depreciation	6.3043%	6.3043%	6.3043%	6.3043%	6.3043%
Depreciable Value	236.66	236.66	236.66	236.66	236.66
Elapsed Life (Beginning of the year)	5	6	7	8	9
Weighted Balance Useful life of the assets	20	19	18	17	16
Remaining Depreciable Value	147.62	131.05	114.47	97.89	81.32
Depreciation	16.58	16.58	16.58	16.58	16.58
Interest on Loan					
Gross Normative Loan	184.43	184.43	184.43	184.43	184.43
Cumulative Repayment upto Previous Year	89.03	105.61	122.18	138.76	155.34
Net Loan-Opening	95.40	78.82	62.25	45.67	29.09
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	16.58	16.58	16.58	16.58	16.58
Net Loan-Closing	78.82	62.25	45.67	29.09	12.52
Average Loan	87.11	70.54	53.96	37.38	20.80
Weighted Average Rate of Interest on Loan	9.30	9.30	9.30	9.30	9.30
Interest	8.10	6.56	5.02	3.48	1.93
Return on Equity					
Opening Equity	78.52	78.52	78.52	78.52	78.52
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Equity	78.52	78.52	78.52	78.52	78.52



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Equity	78.52	78.52	78.52	78.52	78.52
Return on Equity (Base Rate)(%)	15.50	15.50	15.50	15.50	15.50
Tax rate for the year 2008-09(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	15.40	15.40	15.40	15.40	15.40
Interest on Working Capital					
Maintenance Spares	-	-	-	-	-
O & M expenses	-	-	-	-	-
Receivables	6.83	6.57	6.31	6.04	5.78
Total	6.83	6.57	6.31	6.04	5.78
Interest	0.92	0.89	0.85	0.82	0.78
Annual Transmission Charges					
Depreciation	16.58	16.58	16.58	16.58	16.58
Interest on Loan	8.10	6.56	5.02	3.48	1.93
Return on Equity	15.40	15.40	15.40	15.40	15.40
Interest on Working Capital	0.92	0.89	0.85	0.82	0.78
O & M Expenses	-	-	-	-	-
Total	41.00	39.42	37.84	36.27	34.69

Filing Fee and Publication Expenses

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



Licence Fee and RLDC Fees and Charges

64. The petitioner has requested to allow the petitioner to bill and recover licence fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

65. The petitioner has sought to recover service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Deferred Tax Liability

66. 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 under Regulation 49 of the 2014 Tariff Regulations. 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 materializes, directly from the beneficiaries or long term transmission customers /DICs.

Sharing of Transmission Charges

67. 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.

68. This order disposes of Petition No. 395/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO DURING TARIFF
PERIOD 2009-14**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XXVI-DOCO 01 AUG 2008	9.30	139.00	0.00	139.00
Total		139.00	0.00	139.00

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	139.00	139.00	139.00	139.00	139.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	11.58	23.16
Net Loans Opening	139.00	139.00	139.00	127.42	115.84
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	11.58	11.58	11.58
Net Closing Loan	139.00	139.00	127.42	115.84	104.26
Average Net Loan	139.00	139.00	133.21	121.63	110.05
Interest on Loan	12.93	12.93	12.39	11.31	10.23
Rate of Interest on Loan (%)	9.3000	9.3000	9.3000	9.3000	9.3000



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO DURING TARIFF
PERIOD 2014-19**

(₹in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXVI-DOCO 01 AUG 2008	9.30	139.00	0.00	139.00
Total	9.30	139.00	0.00	139.00

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

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	139.00	139.00	139.00	139.00	139.00
Cumulative Repayments of Loans upto Previous Year	34.74	46.32	57.90	69.48	81.06
Net Loans Opening	104.26	92.68	81.10	69.52	57.94
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	11.58	11.58	11.58	11.58	11.58
Net Closing Loan	92.68	81.10	69.52	57.94	46.36
Average Net Loan	98.47	86.89	75.31	63.73	52.15
Interest on Loan	9.16	8.08	7.00	5.93	4.85
Rate of Interest on Loan (%)	9.3000	9.3000	9.3000	9.3000	9.3000

