

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 203/TT/2014

Coram:

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

**Date of Hearing : 23.11.2015
Date of Order : 08.12.2015**

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period and determination of transmission tariff for 2014-19 tariff period for 400 kV D/C Kota-Merta Transmission Line (ckt-I and II) along with associated bays under system strengthening in South West part of Northern Grid (Part-A) Transmission System in Northern 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 -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 Jasbir Singh, PGCIL
 Shri Anshul Garg, PGCIL,
 Shri S.S Raju, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri S.K Niranjan, PGCIL
 Shri M.M Mondal, PGCIL
 Shri S.K Venkatesan, PGCIL
 Smt. Sangeeta Edwards, 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 and tariff for 400 kV D/C Kota-Merta Transmission Line (ckt-I and II) along with associated bays under system strengthening in South West part of Northern Grid (Part-A) Transmission System in Northern Region (hereinafter referred as "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") based on actual 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.

2. The respondents are mostly distribution licensees or centralised power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the 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. Reply has been filed by Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. vide affidavit dated 5.11.2014. The concerns expressed by respondents are being addressed in the respective paras of this order. The hearing in this matter was held on 23.11.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

- a. The investment approval for the transmission assets was accorded by Board of Directors of the petitioner company vide Memorandum dated 21.10.2006 at an estimated cost of ₹ 38128.00 lakh (which included IDC of ₹1763 lakh (2nd quarter 2006 price level)). The asset was put under commercial operation w.e.f 1.2.2009.



- b. The tariff for period from 1.2.2009 to 31.3.2009 was allowed vide order dated 10.5.2010 in Petition No. 251/2009 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.
- c. The tariff for tariff period 2009-14 was allowed vide order dated 28.3.2011 in Petition No. 273/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed vide order dated 28.3.2011 for the tariff period 2009-14 is as under:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1583.55	1614.46	1622.45	1622.45	1622.45
Interest on Loan	1887.91	1774.14	1631.42	1478.33	1325.59
Return on Equity	1571.46	1602.16	1610.09	1610.09	1610.09
Interest on Working Capital	123.61	123.58	122.06	120.05	118.12
O & M Expenses	369.94	391.15	413.55	437.18	462.08
Total	5536.47	5505.49	5399.57	5268.10	5138.33

- d. The Commission, in its order dated 28.3.2011 in Petition No. 273/2010, has determined the tariff based on admitted capital cost of ₹29532.57 lakh as on 31.3.2009 and additional capital expenditure of ₹868.04 lakh and ₹302.59 lakh proposed during 2009-10 and 2010-11, respectively, for the tariff period 2009-14.
- e. The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.
- f. The instant petition was filed on 31.7.2014.



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.

6. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that the revised transmission tariff as submitted by the petitioner at para 13 is on higher side as compared to tariff approved by the Commission. Accordingly, it is requested that the Commission should scrutinize the petition thoroughly and should not allow the higher expenses. Further, the Commission should scrutinize the various components of tariff such as O&M expenses, Interest on Working Capital and accordingly allow the components as per the norms mentioned in the regulations.

Capital Cost

7. The petitioner has claimed admitted capital cost of ₹29532.57 lakh as on 31.3.2009 for the purpose of tariff. In addition to this, the petitioner has claimed additional capitalisation of ₹421.84 lakh, ₹11.60 lakh, and ₹74.45 lakh during 2009-10, 2010-11 and 2011-12, respectively, on account of undischarged liability towards Balance and Retention payment due to contractual exigencies for works executed within the cut-off date against transmission line.

8. 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 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”.

9. The capital cost admitted as on 31.3.2009 vide order dated 28.3.2011 in Petition No. 273/2010 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. The admitted capital cost of ₹29532.57 lakh as on 1.4.2009 has been considered to work out the trued up tariff for the tariff period 2009-14.

Additional Capital Expenditure

10. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that the additional capital cost as submitted by the petitioner should be checked prudently and any additional capitalization after the cut-off date, which is not covered in the 2009 Tariff Regulations, should not be allowed.

11. The petitioner has claimed additional capitalisation of ₹421.84 lakh, ₹11.60 lakh, and ₹74.45 lakh during 2009-10, 2010-11 and 2011-12, respectively, totalling ₹507.89 lakh towards Balance and Retention payment due to contractual exigencies for works executed within the cut-off date against transmission line under Clause (1)(i) of Regulation 9 of the 2009 Tariff Regulations.

12. Clause 1(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."

13. The total actual additional capitalisation of ₹507.89 lakh claimed during the tariff period 2009-14 is less than the approved additional capitalisation of ₹1170.63 lakh (i.e., ₹868.04 lakh in 2009-10 and ₹302.59 lakh in 2010-11) for the tariff period 2009-14 by the Commission vide order dated 28.3.2011 in Petition No. 273/2010.

14. The total capital cost of the transmission asset including additional capitalisation incurred during 2009-10 to 2011-12 works out to ₹30040.46 lakh, which is within the overall approved cost of ₹38128.00 lakh given in the investment approval. As the total capital cost is within the overall approved cost and additional capitalisation is on account of balance and retention payment, the additional capitalisation of ₹421.84 lakh, ₹11.60 lakh, and ₹74.45 lakh during 2009-10, 2010-11 and 2011-12, respectively is allowed in accordance with Clause 1(i) of Regulation 9 of the 2009 Tariff Regulations. The summary of capital cost including additional capitalization is shown in table below:-



(₹ in lakh)

Cost as per Investment Approval dated 21.10.2006:- ₹ 38128.00 lakh								
Particulars	Admitted capital cost as on 31.3.2009	Additional capitalisation					Total additional capitalisation	Total capital cost including additional capitalisation
		2009-10	2010-11	2011-12	2012-13	2013-14		
Approved in order dated 28.3.2011	29532.57	868.04	302.59	0.00	0.00	0.00	1170.63	30703.20
Actual	29532.57	421.84	11.60	74.45	0.00	0.00	507.89	30040.46

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 70:30 as considered by the Commission in its order dated 28.3.2011 in Petition No. 273/2010. The transmission assets covered in the instant petition were commissioned prior to 1.4.2009. In Petition No. 273/2010, the Commission has considered admitted debt:equity ratio as on 31.3.2009 vide order dated 10.5.2010. The admitted debt:equity ratio of 70:30 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of true up of the approved tariff for tariff period 2009-14, as given under:-

Funding	Amount (₹ in lakh)	(%)
Debt	20673.25	70.00
Equity	8859.33	30.00
Total	29532.57	100.00



17. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2009-10, 2010-11 and 2011-12. 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:-

Funding	Amount (in ₹ lakh)	(%)
Debt	21028.77	70.00
Equity	9011.69	30.00
Total	30040.46	100.00

Interest on Loan (“IOL”)

18. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan.

19. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

20. It is observed that the debt funding in the instant case is through bonds, which bear a fixed interest rate. 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:-.

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 28.3.2011	1887.91	1774.14	1631.42	1478.33	1325.59
As claimed by the petitioner	1874.69	1739.43	1592.54	1445.12	1295.60
Allowed after trued up	1874.69	1739.43	1592.54	1445.12	1295.61



21. The IOL allowed is less than IOL allowed vide order dated 28.3.2011 due to reduction in actual weighted average interest rate.

Return on Equity ("ROE")

22. 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."

23. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 28.3.2011. 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 shown in the table below:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 28.3.2011	1571.46	1602.16	1610.09	1610.09	1610.09
As claimed by the petitioner	1666.21	1739.82	1744.03	1746.19	1767.19
Allowed after trued up	1666.21	1739.82	1744.03	1746.20	1767.19

25. The return on equity allowed in the instant order is more than the return on equity allowed vide order dated 28.3.2011 due to 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. Further, Clause (4) of Regulation 17 of the 2009 Tariff Regulations provide 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, in its order dated 28.3.2011, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

29. 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 life of PLCC has been considered as 25 years. In the present case, weighted average value of asset as on COD (1.2.2009) has been considered to work out the weighted average life of the transmission system as 33 years.

30. 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 capitalisation as under:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 28.3.2011	1583.55	1614.46	1622.45	1622.45	1622.45
As claimed by the petitioner	1571.77	1583.22	1585.49	1587.46	1587.46
Allowed after trued up	1571.77	1583.22	1585.49	1587.45	1587.45



31. The depreciation allowed in the instant order is less than the depreciation allowed vide order dated 28.3.2011 due to reduced additional capitalization for 2009-14. The total actual additional capitalisation of ₹507.89 lakh is less than the approved additional capitalisation of ₹1170.63 lakh for the tariff period 2009-14.

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

32. The petitioner has computed O&M Expenses for the assets mentioned in the petition, in accordance with the O&M norms for 400 kV D/C twin conductor transmission line and 400 kV bay specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses have been worked out as given below:-

Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual line length (km)	400 kV D/C (Twin conductor)	255.73	255.73	255.73	255.73	255.73
Actual (No. of bays)	400 kV Bays	4	4	4	4	4
Norms as per Regulation	400 kV D/C (Twin & Triple Conductor) (₹ lakh/km)	0.627	0.663	0.701	0.741	0.783
	400 kV Bays (₹ lakh/bay)	52.40	55.40	58.57	61.92	65.46
Total (₹ in lakh)		369.94	391.15	413.55	437.18	462.08

33. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 28.3.2011 in Petition No. 273/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and tried up are the same, and are as follows:-



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 28.3.2011	369.94	391.15	413.55	437.18	462.08
As claimed by the petitioner	369.94	391.15	413.55	437.18	462.08
Allowed after trued up	369.94	391.15	413.55	437.18	462.08

Interest on working capital (“IWC”)

34. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

35. 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 Regulations.

36. The Commission in its order dated 28.3.2011 in Petition No. 273/2010 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 work out the interest on working capital in the instant case.

37. The IWC trued up is as under:-

(₹ in lakh)

Interest on Working Capital	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	55.49	58.67	62.03	65.58	69.31
O & M Expenses	30.83	32.60	34.46	36.43	38.51
Receivables	934.61	929.79	909.81	889.57	872.07
Total	1020.93	1021.05	1006.30	991.58	979.89
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	125.06	125.08	123.27	121.47	120.04

38. The IWC claimed by the petitioner, allowed and trued up are as shown in the table below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 28.3.2011	123.61	123.58	122.06	120.05	118.12
As claimed by the petitioner	125.06	125.08	123.27	121.47	120.04
Allowed after true up	125.06	125.08	123.27	121.47	120.04

39. The IWC has increased on account of increase in receivables due to variation in ROE on account of applicable MAT rate during the 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

40. 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:-



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block					
Opening Gross Block	29532.57	29954.41	29966.01	30040.46	30040.46
Additional Capitalization	421.84	11.60	74.45	0.00	0.00
Closing Gross block	29954.41	29966.01	30040.46	30040.46	30040.46
Average Gross block	29743.49	29960.21	30003.24	30040.46	30040.46
Depreciation					
Rate of Depreciation (%)	5.284	5.284	5.284	5.284	5.284
Depreciable Value	26769.14	26964.19	27002.91	27036.41	27036.41
Weighted Balance Useful life of the assets (yrs)	33	32	31	30	29
Remaining Depreciable Value	26633.02	25256.29	23711.80	22159.81	20572.36
Depreciation	1571.77	1583.22	1585.49	1587.45	1587.45
Interest on Loan					
Gross Normative Loan	20673.25	20968.53	20976.65	21028.77	21028.77
Cumulative Repayment upto Previous Year	136.12	1707.89	3291.11	4876.60	6464.05
Net Loan-Opening	20537.13	19260.64	17685.54	16152.17	14564.71
Additions	295.29	8.12	52.12	0.00	0.00
Repayment during the year	1571.77	1583.22	1585.49	1587.45	1587.45
Net Loan-Closing	19260.64	17685.54	16152.17	14564.71	12977.26
Average Loan	19898.88	18473.09	16918.85	15358.44	13770.99
Weighted Average Rate of Interest on Loan (%)	9.4211	9.4160	9.4128	9.4093	9.4082
Interest	1874.69	1739.43	1592.54	1445.12	1295.61
Return on Equity					
Opening Equity	8859.33	8985.88	8989.36	9011.69	9011.69
Additions	126.6	3.5	22.3	0.0	0.0
Closing Equity	8985.88	8989.36	9011.69	9011.69	9011.69
Average Equity	8922.60	8987.62	9000.52	9011.69	9011.69
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



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity (Pre Tax) (%)	1666.21	1739.82	1744.03	1746.20	1767.19
Interest on Working Capital					
Maintenance Spares	55.49	58.67	62.03	65.58	69.31
O & M Expenses	30.83	32.60	34.46	36.43	38.51
Receivables	934.61	929.79	909.81	889.57	872.07
Total	1020.93	1021.05	1006.30	991.58	979.89
Interest	125.06	125.08	123.27	121.47	120.04
Annual Transmission Charges					
Depreciation	1571.77	1583.22	1585.49	1587.45	1587.45
Interest on Loan	1874.69	1739.43	1592.54	1445.12	1295.61
Return on Equity	1666.21	1739.82	1744.03	1746.20	1767.19
Interest on Working Capital	125.06	125.08	123.27	121.47	120.04
O & M Expenses	369.94	391.15	413.55	437.18	462.08
Total	5607.68	5578.70	5458.88	5337.42	5232.36

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1587.46	1587.46	1587.46	1587.46	1587.46
Interest on Loan	1146.17	996.72	847.29	697.86	548.45
Return on Equity	1767.19	1767.19	1767.19	1767.19	1767.19
Interest on Working Capital	126.91	124.25	121.61	119.00	116.41
O & M Expenses	422.00	436.14	450.56	465.51	480.96
Total	5049.73	4911.76	4774.11	4637.02	4500.47

42. 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
Maintenance Spares	63.30	65.42	67.58	69.83	72.14
O & M Expenses	35.17	36.35	37.55	38.79	40.08



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Receivables	841.62	818.63	795.69	772.84	750.08
Total	940.09	920.39	900.82	881.46	862.30
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	126.91	124.25	121.61	119.00	116.41

Capital Cost

43. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations provides 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.”

44. The petitioner has claimed capital expenditure of ₹30040.46 lakh as on 31.3.2014 including additional capitalisation during tariff period 2009-14. Further, the petitioner has not projected any additional capital expenditure during the tariff period 2014-19.

45. The trued up capital cost of ₹30040.46 lakh as on 1.4.2014 is considered for the purpose of tariff for tariff period 2014-19.

Additional Capital Expenditure

46. The petitioner has not claimed any additional expenditure for the tariff period 2014-19.



Debt: Equity Ratio

47. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(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.”

48. The petitioner has considered debt:equity ratio as 70:30, which was approved vide order dated 28.3.2011 in Petition No. 273/2010 and the same was allowed for determination of tariff for the period ending 31.3.2014. The admitted debt:equity ratio of 70:30 for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

Particulars	Amount (in ₹ lakh)	(%)
Debt	21028.77	70.00
Equity	9011.69	30.00
Total	30040.46	100.00

Interest on Loan (“IOL”)

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

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

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

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



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

50. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014.

51. It is observed that the debt funding in the instant case is through bonds, which bear a fixed interest rate. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	21028.77	21028.77	21028.77	21028.77	21028.77
Cumulative Repayment upto COD/previous year	8051.51	9638.96	11226.42	12813.87	14401.33
Net Loan-Opening	12977.26	11389.80	9802.35	8214.90	6627.44
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1587.45	1587.45	1587.45	1587.45	1587.45
Net Loan-Closing	11389.80	9802.35	8214.90	6627.44	5039.99
Average Loan	12183.53	10596.08	9008.62	7421.17	5833.71
Rate of Interest (%)	9.4075	9.4065	9.4053	9.4037	9.4015
Interest	1146.16	996.72	847.29	697.87	548.45

Return on Equity (“ROE”)

52. Clause (1) and (2) of Regulation 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.”

53. 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.

54. 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.

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



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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	9011.69	9011.69	9011.69	9011.69	9011.69
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Equity	9011.69	9011.69	9011.69	9011.69	9011.69
Average Equity	9011.692	9011.692	9011.692	9011.692	9011.692
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 on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1767.19	1767.19	1767.19	1767.19	1767.19

Depreciation

56. 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.”

57. The petitioner has computed depreciation considering capital expenditure of ₹ 30040.46 lakh as on 31.3.2014.

58. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Details of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	30040.46	30040.46	30040.46	30040.46	30040.46
Additions during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	30040.46	30040.46	30040.46	30040.46	30040.46
Rate of Depreciation	5.284%	5.284%	5.284%	5.284%	5.284%
Depreciable Value	27036.41	27036.41	27036.41	27036.41	27036.41
Remaining Depreciable Value	18984.90	17397.45	15810.00	14222.54	12635.09
Depreciation	1587.45	1587.45	1587.45	1587.45	1587.45

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

59. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that the 2014 Tariff Regulations have been framed after detailed discussion and consultation. Thus, sanctity of the regulations should be maintained and any request by the petitioner for revision in O&M norms should not be entertained.



Further, the Commission should properly scrutinize the expected wage rise in future and, accordingly, allow the additional changes in accordance with the law.

60. The petitioner has computed normative O&M Expenses as per sub clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner's entitlement to O&M Expenses has been worked out as given hereunder:-

Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual line length (km)	400 kV D/C (Twin conductor)	255.73	255.73	255.73	255.73	255.73
Actual (No. of bays)	400 kV	4	4	4	4	4
Norms as per Regulation	400 kV Double Circuit (Twin & Triple Conductor) (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
	400 kV Bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total (₹ in lakh)		422.00	436.14	450.56	465.51	480.96

61. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.



62. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

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

(₹ in lakh)

Particulars	Year				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses allowed	422.00	436.14	450.56	465.51	480.96

Interest on Working Capital (“IWC”)

64. 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;”

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



66. 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	63.30	65.42	67.58	69.83	72.14
O & M expenses	35.17	36.34	37.55	38.79	40.08
Receivables	841.63	818.63	795.69	772.84	750.09
Total	940.09	920.40	900.82	881.46	862.31
Rate of Interest	13.500%	13.500%	13.500%	13.500%	13.500%
Interest	126.91	124.25	121.61	119.00	116.41

Annual Transmission Charges

67. 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	1587.45	1587.45	1587.45	1587.45	1587.45
Interest on Loan	1146.16	996.72	847.29	697.87	548.45
Return on Equity	1767.19	1767.19	1767.19	1767.19	1767.19
Interest on WC	126.91	124.25	121.61	119.00	116.41
O&M Expenses	422.00	436.14	450.56	465.51	480.96
Total	5049.72	4911.76	4774.10	4637.02	4500.47

68. 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					
Opening Gross Block	30040.46	30040.46	30040.46	30040.46	30040.46
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Closing Gross Block	30040.46	30040.46	30040.46	30040.46	30040.46
Average Gross Blcok	30040.46	30040.46	30040.46	30040.46	30040.46
Depreciation					
Rate of Depreciation (%)	5.284	5.284	5.284	5.284	5.284
Depreciable Value	27036.41	27036.41	27036.41	27036.41	27036.41
Weighted Balance Useful life of the assets	28	27	26	25	24
Remaining Depreciable Value	18984.90	17397.45	15810.00	14222.54	12635.09
Depreciation	1587.45	1587.45	1587.45	1587.45	1587.45
Interest on Loan					
Gross Normative Loan	21028.77	21028.77	21028.77	21028.77	21028.77
Cumulative Repayment upto Previous Year	8051.51	9638.96	11226.42	12813.87	14401.33
Net Loan-Opening	12977.26	11389.80	9802.35	8214.90	6627.44
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1587.45	1587.45	1587.45	1587.45	1587.45
Net Loan-Closing	11389.80	9802.35	8214.90	6627.44	5039.99
Average Loan	12183.53	10596.08	9008.62	7421.17	5833.71
Weighted Average Rate of Interest on Loan (%)	9.4075	9.4065	9.4053	9.4037	9.4015
Interest	1146.16	996.72	847.29	697.87	548.45
Return on Equity					
Opening Equity	9011.69	9011.69	9011.69	9011.69	9011.69
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	9011.69	9011.69	9011.69	9011.69	9011.69
Average Equity	9011.69	9011.69	9011.69	9011.69	9011.69
Return on Equity (Base Rate %)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1767.19	1767.19	1767.19	1767.19	1767.19
Interest on Working Capital					
Maintenance Spares	63.30	65.42	67.58	69.83	72.14
O & M expenses	35.17	36.34	37.55	38.79	40.08
Receivables	841.63	818.63	795.69	772.84	750.09



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Total	940.09	920.40	900.82	881.46	862.31
Interest	126.91	124.25	121.61	119.00	116.41
Annual Transmission Charges					
Depreciation	1587.45	1587.45	1587.45	1587.45	1587.45
Interest on Loan	1146.16	996.72	847.29	697.87	548.45
Return on Equity	1767.23	1767.23	1767.23	1767.23	1767.23
Interest on Working Capital	126.91	124.25	121.61	119.00	116.41
O & M Expenses	422.00	436.14	450.56	465.51	480.96
Total	5049.72	4911.76	4774.10	4637.02	4500.47

Filing Fee and the Publication Expenses

69. 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

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



Service Tax

71. 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

72. 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

73. 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.

74. This order disposes of Petition No. 203/TT/2014.

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

sd/-
(A.S. Bakshi)
Member



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

Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Bond XXIV-DOCO Drawal on 26-Mar-2007					
Gross Opening Loan	452.00	452.00	452.00	452.00	452.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	37.67	75.34	113.01
Net Loans Opening	452.00	452.00	414.33	376.66	338.99
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	37.67	37.67	37.67	37.67
Net Closing Loan	452.00	414.33	376.66	338.99	301.32
Average Net Loan	452.00	433.17	395.50	357.83	320.16
Rate of Interest on Loan (%)	9.95	9.95	9.95	9.95	9.95
Interest on Loan	44.97	43.10	39.35	35.60	31.86
Bond XXVII-DOCO Drawal on 31-Mar-2008					
Gross Opening Loan	11875.00	11875.00	11875.00	11875.00	11875.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	989.58	1979.16
Net Loans Opening	11875.00	11875.00	11875.00	10885.42	9895.84
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	989.58	989.58	989.58
Net Closing Loan	11875.00	11875.00	10885.42	9895.84	8906.26
Average Net Loan	11875.00	11875.00	11380.21	10390.63	9401.05
Rate of Interest on Loan (%)	9.47	9.47	9.47	9.47	9.47
Interest on Loan	1124.56	1124.56	1077.71	983.99	890.28
Bond XXVIII-Add cap for 2008-09 drawal on 2-Feb-2009					
Gross Opening Loan	79.00	79.00	79.00	79.00	79.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	6.58
Net Loans Opening	79.00	79.00	79.00	79.00	72.42
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	0.00	6.58	6.58
Net Closing Loan	79.00	79.00	79.00	72.42	65.84
Average Net Loan	79.00	79.00	79.00	75.71	69.13
Rate of Interest on Loan (%)	9.33	9.33	9.33	9.33	9.33



Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Interest on Loan	7.37	7.37	7.37	7.06	6.45
Bond XXVIII-Add cap for 2008-09 drawal on 15-Dec-2008					
Gross Opening Loan	7912.00	7912.00	7912.00	7912.00	7912.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	659.33
Net Loans Opening	7912.00	7912.00	7912.00	7912.00	7252.67
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	0.00	659.33	659.33
Net Closing Loan	7912.00	7912.00	7912.00	7252.67	6593.34
Average Net Loan	7912.00	7912.00	7912.00	7582.34	6923.01
Rate of Interest on Loan (%)	9.33	9.33	9.33	9.33	9.33
Interest on Loan	738.19	738.19	738.19	707.43	645.92
Bond XXX-Add cap for 2009-10 Loan 2009-14					
Gross Opening Loan	0.00	295.29	295.29	295.29	295.29
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loans Opening	0.00	295.29	295.29	295.29	295.29
Add: Drawl(s) during the year	295.29	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	0.00	24.61
Net Closing Loan	295.29	295.29	295.29	295.29	270.68
Average Net Loan	147.65	295.29	295.29	295.29	282.99
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	12.99	25.99	25.99	25.99	24.90
Bond XXX-Add cap for 2010-11 Loan 2009-14					
Gross Opening Loan	0.00	0.00	8.12	8.12	8.12
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loans Opening	0.00	0.00	8.12	8.12	8.12
Add: Drawl(s) during the year	0.00	8.12	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	0.00	0.68
Net Closing Loan	0.00	8.12	8.12	8.12	7.44
Average Net Loan	0.00	4.06	8.12	8.12	7.78
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	0.00	0.36	0.71	0.71	0.68
Bond XXX-Add cap for 2011-12					



Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Loan 2009-14					
Gross Opening Loan	0.00	0.00	0.00	52.12	52.12
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loans Opening	0.00	0.00	0.00	52.12	52.12
Add: Drawl(s) during the year	0.00	0.00	52.12	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	0.00	4.34
Net Closing Loan	0.00	0.00	52.12	52.12	47.78
Average Net Loan	0.00	0.00	26.06	52.12	49.95
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	0.00	0.00	2.29	4.59	4.40
Summary					
Gross Opening Loan	20318.00	20613.29	20621.41	20673.53	20673.53
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	37.67	1064.92	2758.08
Net Loans Opening	20318.00	20613.29	20583.74	19608.61	17915.45
Add: Drawl(s) during the year	295.29	8.12	52.12	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	37.67	1027.25	1693.16	1722.79
Net Closing Loan	20613.29	20583.74	19608.61	17915.45	16192.66
Average Net Loan	20465.65	20598.52	20096.18	18762.03	17054.06
Rate of Interest on Loan (%)	9.4211	9.4160	9.4128	9.4093	9.4082
Interest on Loan	1928.09	1939.57	1891.61	1765.38	1604.48



ANNEXURE-II

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

(₹ in lakh)

Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Bond XXIV-DOCO Drawal on 26-Mar-2007					
Gross Opening Loan	452.00	452.00	452.00	452.00	452.00
Cumulative Repayments of Loans upto Previous Year	150.68	188.35	226.02	263.69	301.36
Net Loans Opening	301.32	263.65	225.98	188.31	150.64
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	37.67	37.67	37.67	37.67	37.67
Net Closing Loan	263.65	225.98	188.31	150.64	112.97
Average Net Loan	282.49	244.82	207.15	169.48	131.81
Rate of Interest on Loan (%)	9.95	9.95	9.95	9.95	9.95
Interest on Loan	28.11	24.36	20.61	16.86	13.11
Bond XXVII-DOCO Drawal on 31-Mar-2008					
Gross Opening Loan	11875.00	11875.00	11875.00	11875.00	11875.00
Cumulative Repayments of Loans upto Previous Year	2968.74	3958.32	4947.90	5937.48	6927.06
Net Loans Opening	8906.26	7916.68	6927.10	5937.52	4947.94
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	989.58	989.58	989.58	989.58	989.58
Net Closing Loan	7916.68	6927.10	5937.52	4947.94	3958.36
Average Net Loan	8411.47	7421.89	6432.31	5442.73	4453.15
Rate of Interest on Loan (%)	9.47	9.47	9.47	9.47	9.47
Interest on Loan	796.57	702.85	609.14	515.43	421.71
Bond XXVIII-Add cap for 2008-09 drawal on 2-Feb-2009					
Gross Opening Loan	79.00	79.00	79.00	79.00	79.00
Cumulative Repayments of Loans upto Previous Year	13.16	19.74	26.32	32.90	39.48
Net Loans Opening	65.84	59.26	52.68	46.10	39.52
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	6.58	6.58	6.58	6.58	6.58
Net Closing Loan	59.26	52.68	46.10	39.52	32.94
Average Net Loan	62.55	55.97	49.39	42.81	36.23
Rate of Interest on Loan (%)	9.33	9.33	9.33	9.33	9.33
Interest on Loan	5.84	5.22	4.61	3.99	3.38



Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Bond XXVIII-Add cap for 2008-09 drawl on 15-Dec-2008					
Gross Opening Loan	7912.00	7912.00	7912.00	7912.00	7912.00
Cumulative Repayments of Loans upto Previous Year	1318.66	1977.99	2637.32	3296.65	3955.98
Net Loans Opening	6593.34	5934.01	5274.68	4615.35	3956.02
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	659.33	659.33	659.33	659.33	659.33
Net Closing Loan	5934.01	5274.68	4615.35	3956.02	3296.69
Average Net Loan	6263.68	5604.35	4945.02	4285.69	3626.36
Rate of Interest on Loan (%)	9.33	9.33	9.33	9.33	9.33
Interest on Loan	584.40	522.89	461.37	399.85	338.34
Bond XXX-Add cap for 2009-10 Loan 2009-14					
Gross Opening Loan	295.29	295.29	295.29	295.29	295.29
Cumulative Repayments of Loans upto Previous Year	24.61	49.22	73.83	98.44	123.05
Net Loans Opening	270.68	246.07	221.46	196.85	172.24
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	24.61	24.61	24.61	24.61	24.61
Net Closing Loan	246.07	221.46	196.85	172.24	147.63
Average Net Loan	258.38	233.77	209.16	184.55	159.94
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	22.74	20.57	18.41	16.24	14.07
Bond XXX-Add cap for 2010-11 Loan 2009-14					
Gross Opening Loan	8.12	8.12	8.12	8.12	8.12
Cumulative Repayments of Loans upto Previous Year	0.68	1.36	2.04	2.72	3.40
Net Loans Opening	7.44	6.76	6.08	5.40	4.72
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.68	0.68	0.68	0.68	0.68
Net Closing Loan	6.76	6.08	5.40	4.72	4.04
Average Net Loan	7.10	6.42	5.74	5.06	4.38
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	0.62	0.56	0.51	0.45	0.39
Bond XXX-Add cap for 2011-12 Loan 2009-14					



Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	52.12	52.12	52.12	52.12	52.12
Cumulative Repayments of Loans upto Previous Year	4.34	8.68	13.02	17.36	21.70
Net Loans Opening	47.78	43.44	39.10	34.76	30.42
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	4.34	4.34	4.34	4.34	4.34
Net Closing Loan	43.44	39.10	34.76	30.42	26.08
Average Net Loan	45.61	41.27	36.93	32.59	28.25
Rate of Interest on Loan (%)	8.80	8.80	8.80	8.80	8.80
Interest on Loan	4.01	3.63	3.25	2.87	2.49
Summary					
Gross Opening Loan	20673.53	20673.53	20673.53	20673.53	20673.53
Cumulative Repayments of Loans upto Previous Year	4480.87	6203.66	7926.45	9649.24	11372.03
Net Loans Opening	16192.66	14469.87	12747.08	11024.29	9301.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	1722.79	1722.79	1722.79	1722.79	1722.79
Net Closing Loan	14469.87	12747.08	11024.29	9301.50	7578.71
Average Net Loan	15331.27	13608.48	11885.69	10162.90	8440.11
Rate of Interest on Loan (%)	9.4075	9.4065	9.4053	9.4037	9.4015
Interest on Loan	1442.29	1280.09	1117.89	955.69	793.49

