

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 433/TT/2014**

**Coram:**

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

**Date of Hearing : 23.11.2015  
Date of Order : 11.12.2015**

**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 2<sup>nd</sup> 400 kV D/C Kahalgaon – Biharsharif Transmission Line in Eastern 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. Bihar State Electricity Board, Vidyut Bhawan,  
Bailey Road, Patna-800001
2. West Bengal State Electricity Distribution Company  
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II,  
Salt Lake City, Calcutta-700091
3. Grid Corporation of Orissa Ltd., Shahid Nagar,  
Bhubaneshwar-751007
4. Damodar Valley Corporation, DVC Tower, Maniktala  
Civic Centre, VIPO Road, Calcutta-700054
5. Power Department, Govt. of Sikkim,  
Gangtok-737101



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

.....Respondents

The following were present:

For Petitioner: Shri Jasbir Singh, PGCIL  
Shri Anshul Garg, PGCIL  
Shri S.S. Raju, PGCIL  
Shri S. K. Niranjana, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesan, PGCIL

For Respondent: None

### **ORDER**

The present petition has been preferred by Power Grid Corporation of India Ltd. ('the petitioner'), a transmission licensee, for trueing up of capital expenditure and tariff for 2<sup>nd</sup> 400 kV D/C Kahalgaon – Biharsharif Transmission Line in Eastern 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 distribution licensees, who are procuring transmission service from the petitioner, mainly beneficiaries of Eastern 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. None of the respondents have filed any reply to the petition. 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 6.12.2001 at an estimated cost of ₹13577 lakh (which included IDC of ₹1263 lakh (2<sup>nd</sup> quarter 2001 price level)). The asset was put under commercial operation w.e.f. 1.12.2004.
- b. The tariff for the period from 1.12.2004 to 31.3.2009 was allowed vide order dated 6.2.2007 in Petition No. 137/2006 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 15.3.2011 in Petition No. 240/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed vide order dated 15.3.2011 for the tariff period 2009-14 is as under:-



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	651.54	653.24	653.24	653.24	653.24
Interest on Loan	487.73	438.97	388.41	337.82	287.16
Return on Equity	597.25	598.94	598.94	598.94	598.94
Interest on Working Capital	47.93	47.65	47.31	47.01	46.74
O & M Expenses	234.59	248.04	262.25	277.23	293.00
<b>Total</b>	<b>2019.04</b>	<b>1986.84</b>	<b>1950.15</b>	<b>1914.23</b>	<b>1879.08</b>

- d. The Commission, in its order dated 15.3.2011 in Petition No. 240/2010, has determined the tariff based on admitted capital cost of ₹12292.45 lakh as on 31.3.2009 and additional capital expenditure of ₹64.24 lakh proposed during 2009-10 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 28.10.2014.

#### **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 ₹12292.45 lakh as on 31.3.2009 for the purpose of tariff. In addition to this, the petitioner has claimed



additional capitalisation of ₹64.24 lakh during 2009-10, on account of expenses towards Bihar Entry Tax.

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 15.3.2011 in Petition No. 240/2010 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 ₹12292.45 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**

9. The petitioner has claimed additional capitalisation of ₹64.24 lakh during 2009-10, on account of expenses towards Bihar entry tax under Regulation 9(2)(viii) of the 2009 Tariff Regulations.

10. Clause 2(viii) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

"(2) The capital expenditure incurred on the following counts after the cut-off date may, 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."



11. The total actual additional capitalisation of ₹64.24 lakh claimed during the tariff period 2009-14 is same as the additional capitalisation approved by the Commission vide order dated 15.3.2011 as extracted below:

"12. With regard to admissibility of undischarged liability of ₹64.24 lakh during 2009-10, it is observed that the expenditure has been incurred after the cut-off date for payment of Bihar Entry Tax under the provisions of Bihar Entry Tax Rules, 1993. The expenditure has been incurred for discharging a statutory obligation and is therefore, covered under 'change of law'. Accordingly, the expenditure has been allowed to be capitalized under Regulation 9 (2) (ii) of the 2009 regulations."

12. The total capital cost of the transmission asset including additional capitalisation incurred during 2009-10 works out to ₹12356.69 lakh, which is within the overall approved cost of ₹13577.00 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 as approved in order dated 15.3.2011, the additional capitalisation of ₹64.24 lakh during 2009-10 is allowed in accordance with Clause 2(viii) 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 6.12.2001:- ₹ 13577.00 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 vide order dated 15.3.2011	12292.45	64.24	0.00	0.00	0.00	0.00	64.24	12356.69
Actual	12292.45	64.24	0.00	0.00	0.00	0.00	64.24	12356.69



### Debt: Equity

13. 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.”

14. The petitioner has claimed trued up Annual Fixed Charge based on debt:equity ratio of 72.28:27.72 considered by the Commission in its order dated 15.3.2011 in Petition No. 240/2010. The transmission assets covered in the instant petition were commissioned prior to 1.4.2009. In Petition No. 240/2010, the Commission has considered admitted debt:equity ratio as on 31.3.2009 vide order dated 6.2.2007. The admitted debt:equity ratio of 72.28:27.72 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:-

Funding	Amount (₹ in lakh)	(%)
Debt	8885.50	72.28
Equity	3406.95	27.72
<b>Total</b>	<b>12292.45</b>	<b>100.00</b>

15. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2009-10. 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	8930.47	72.27
Equity	3426.22	27.73
<b>Total</b>	<b>12356.69</b>	<b>100.00</b>



### **Interest on Loan (“IOL”)**

16. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

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

18. 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 15.3.2011	487.73	438.97	388.41	337.82	287.16
As claimed by the petitioner	487.56	439.24	389.69	338.85	287.88
Allowed after trued up	487.56	439.24	389.69	338.85	287.88

19. The IOL allowed herein is marginally more than IOL allowed vide order dated 15.3.2011 due to increase in actual weighted average interest rate.





## **Return on Equity (“ROE”)**

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

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

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

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.”

21. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 15.3.2011. 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%



22. Accordingly, the ROE as trued up is shown in the table below:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 15.3.2011	597.25	598.94	598.94	598.94	598.94
As claimed by the petitioner	638.01	663.25	663.90	663.90	671.88
Allowed after trued up	638.01	663.25	663.90	663.90	671.88

23. The return on equity allowed in the instant order is more than the return on equity allowed vide order dated 15.3.2011 due to increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

24. 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”

25. 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.”



26. The Commission, in its order dated 15.3.2011, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

27. 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 (1.12.2004) has been considered to work out the weighted average life of the transmission system as 35 years.

28. 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)**

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 15.3.2011	651.54	653.24	653.24	653.24	653.24
As claimed by the petitioner	651.53	653.23	653.23	653.23	653.23
Allowed after trued up	651.54	653.24	653.24	653.24	653.24

29. The depreciation allowed in the instant order is same as the depreciation allowed vide order dated 15.3.2011 for the tariff period 2009-14.

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

30. 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)	207	207	207	207	207
Actual (No. of bays)	400 kV Bays	2	2	2	2	2
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
<b>Total (₹ in lakh)</b>		234.59	248.04	262.25	277.23	293.00

31. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 15.3.2011 in Petition No. 240/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued 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 15.3.2011	234.59	248.04	262.25	277.23	293.00
As claimed by the petitioner	234.59	248.04	262.25	277.23	293.00
Allowed after trued up	234.59	248.04	262.25	277.23	293.00

### **Interest on working capital (“IWC”)**

32. 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.



33. 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.

34. The Commission in its order dated 15.3.2011 in Petition No. 240/2010 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.

35. 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	35.19	37.21	39.34	41.58	43.95
O & M Expenses	19.55	20.67	21.85	23.10	24.42
Receivables	343.41	342.13	336.29	330.26	325.71
Total	398.15	400.00	397.48	394.95	394.08
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>48.77</b>	<b>49.00</b>	<b>48.69</b>	<b>48.38</b>	<b>48.27</b>

36. 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 15.3.2011	47.93	47.65	47.31	47.01	46.74
As claimed by the petitioner	48.77	49.00	48.69	48.38	48.27
Allowed after true up	48.77	49.00	48.69	48.38	48.27

37. 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**

38. 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
<b>Gross Block</b>					
Opening Gross Block	12292.45	12356.69	12356.69	12356.69	12356.69
Additional Capitalization	64.24	0.00	0.00	0.00	0.00
Closing Gross block	12356.69	12356.69	12356.69	12356.69	12356.69
Average Gross block	12324.57	12356.69	12356.69	12356.69	12356.69
<b>Depreciation</b>					
Rate of Depreciation (%)	5.287	5.286	5.286	5.286	5.286
Depreciable Value	11092.11	11121.02	11121.02	11121.02	11121.02
Elapsed Life of the assets at beginning of the year	4	5	6	7	8
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	8921.84	8299.21	7645.98	6992.74	6339.51
Depreciation	651.54	653.24	653.24	653.24	653.24
<b>Interest on Loan</b>					
Gross Normative Loan	8885.50	8930.47	8930.47	8930.47	8930.47



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Cumulative Repayment upto Previous Year	2180.18	2831.72	3484.95	4138.19	4791.42
Net Loan-Opening	6705.32	6098.75	5445.51	4792.28	4139.04
Additions	44.97	0.00	0.00	0.00	0.00
Repayment during the year	651.54	653.24	653.24	653.24	653.24
Net Loan-Closing	6098.75	5445.51	4792.28	4139.04	3485.81
Average Loan	6402.03	5772.13	5118.90	4465.66	3812.43
Weighted Average Rate of Interest on Loan (%)	7.6157	7.6097	7.6127	7.5878	7.5511
Interest	487.56	439.24	389.69	338.85	287.88
<b>Return on Equity</b>					
Opening Equity	3406.95	3426.22	3426.22	3426.22	3426.22
Additions	19.3	0.0	0.0	0.0	0.0
Closing Equity	3426.22	3426.22	3426.22	3426.22	3426.22
Average Equity	3416.59	3426.22	3426.22	3426.22	3426.22
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)	638.01	663.25	663.90	663.90	671.88
<b>Interest on Working Capital</b>					
Maintenance Spares	35.19	37.21	39.34	41.58	43.95
O & M Expenses	19.55	20.67	21.85	23.10	24.42
Receivables	343.41	342.13	336.29	330.26	325.71
Total	398.15	400.00	397.48	394.95	394.08
Interest	48.77	49.00	48.69	48.38	48.27
<b>Annual Transmission Charges</b>					
Depreciation	651.54	653.24	653.24	653.24	653.24
Interest on Loan	487.56	439.24	389.69	338.85	287.88
Return on Equity	638.01	663.25	663.90	663.90	671.88
Interest on Working Capital	48.77	49.00	48.69	48.38	48.27
O & M Expenses	234.59	248.04	262.25	277.23	293.00
<b>Total</b>	<b>2060.47</b>	<b>2052.77</b>	<b>2017.76</b>	<b>1981.59</b>	<b>1954.27</b>



## **DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19**

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

**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	653.23	653.23	653.23	162.03	162.03
Interest on Loan	236.86	185.60	134.35	101.24	86.84
Return on Equity	671.88	671.88	671.88	671.88	671.88
Interest on Working Capital	50.70	50.02	49.34	37.79	38.00
O&M Expenses	266.95	275.92	285.03	294.48	304.26
<b>Total</b>	<b>1879.62</b>	<b>1836.65</b>	<b>1793.83</b>	<b>1267.42</b>	<b>1263.01</b>

40. 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	40.04	41.39	42.75	44.17	45.64
O & M Expenses	22.25	22.99	23.75	24.54	25.36
Receivables	313.27	306.11	298.97	211.24	210.50
Total	375.56	370.49	365.47	279.95	281.50
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>50.70</b>	<b>50.02</b>	<b>49.34</b>	<b>37.79</b>	<b>38.00</b>

### **Capital Cost**

41. 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.”





42. The petitioner has claimed capital expenditure of ₹12356.69 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.

43. The trued up capital cost of ₹12356.69 lakh as on 1.4.2014 is considered for the purpose of tariff for tariff period 2014-19.

#### **Additional Capital Expenditure**

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

45. The petitioner has shown ₹172.52 lakh as balance estimated expenditure towards Bihar Entry Tax, appeal for which is pending before the Hon'ble Supreme Court, and the petitioner has not claimed tariff for the same. In this regard, the Commission vide its letter dated 16.11.2015 asked the petitioner to provide updated status of the appeal. Accordingly, the petitioner vide its affidavit dated 19.11.2015 has submitted that the matter is still sub-judice in Hon'ble Supreme Court. The petitioner has further submitted that it will approach the Commission on the basis of the outcome of the appeal before the Hon'ble Supreme Court.

#### **Debt: Equity Ratio**

46. 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.”

47. The admitted debt:equity ratio of 72.27:27.73 after true-up 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 as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

Particulars	Amount (in ₹ lakh)	(%)
Debt	8930.47	72.27
Equity	3426.22	27.73
<b>Total</b>	<b>12356.69</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

48. 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.”

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

50. 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	8930.47	8930.47	8930.47	8930.47	8930.47
Cumulative Repayment upto COD/previous year	5444.66	6097.89	6751.13	7404.36	7566.39
Net Loan-Opening	3485.81	2832.57	2179.34	1526.10	1364.08
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	653.24	653.24	653.24	162.02	162.02
Net Loan-Closing	2832.57	2179.34	1526.10	1364.08	1202.05
Average Loan	3159.19	2505.96	1852.72	1445.09	1283.07
Rate of Interest (%)	7.4973	7.4065	7.2514	7.0060	6.7690
<b>Interest</b>	<b>236.85</b>	<b>185.60</b>	<b>134.35</b>	<b>101.24</b>	<b>86.85</b>

### **Return on Equity (“ROE”)**

51. 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.”

52. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE with MAT rate as per the above Regulations. 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.

53. 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.

54. 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:-

<b>(₹ in lakh)</b>					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	3426.22	3426.22	3426.22	3426.22	3426.22
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Equity	3426.22	3426.22	3426.22	3426.22	3426.22



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Equity	3426.22	3426.22	3426.22	3426.22	3426.22
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
<b>Return on Equity (Pre Tax)</b>	<b>671.88</b>	<b>671.88</b>	<b>671.88</b>	<b>671.88</b>	<b>671.88</b>

### **Depreciation**

55. 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."

56. The petitioner has computed depreciation considering capital expenditure of ₹12356.69 lakh as on 31.3.2014.

57. 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	12356.69	12356.69	12356.69	12356.69	12356.69
Additions during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	12356.69	12356.69	12356.69	12356.69	12356.69
Rate of Depreciation (%)	5.286	5.286	5.286	5.286	5.286
Depreciable Value	11121.02	11121.02	11121.02	11121.02	11121.02
Elapsed Life of the assets at beginning of the year	9	10	11	12	13
Weighted Balance Useful life of the assets	26	25	24	23	22
Remaining Depreciable Value	5686.27	5033.04	4379.80	3726.57	3564.54
<b>Depreciation</b>	<b>653.24</b>	<b>653.24</b>	<b>653.24</b>	<b>162.02</b>	<b>162.02</b>

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

58. 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)	270	270	270	270	270
Actual (No. of bays)	400 kV	2	2	2	2	2
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
<b>Total (₹ in lakh)</b>		<b>266.95</b>	<b>275.92</b>	<b>285.03</b>	<b>294.48</b>	<b>304.26</b>



59. 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.

60. 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.

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

Particulars	Year				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>O&amp;M Expenses allowed</b>	<b>266.95</b>	<b>275.92</b>	<b>285.03</b>	<b>294.48</b>	<b>304.26</b>

(₹ in lakh)

### **Interest on Working Capital (“IWC”)**

62. 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;”

63. 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%.

64. 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	40.04	41.39	42.75	44.17	45.64
O & M expenses	22.25	22.99	23.75	24.54	25.36
Receivables	313.27	306.11	298.97	211.24	210.50
Total	375.56	370.49	365.48	279.95	281.50
Rate of Interest	13.500%	13.500%	13.500%	13.500%	13.500%
<b>Interest</b>	<b>50.70</b>	<b>50.02</b>	<b>49.34</b>	<b>37.79</b>	<b>38.00</b>

### **Annual Transmission Charges**

65. 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	653.24	653.24	653.24	162.02	162.02





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Int on Loan	236.85	185.60	134.35	101.24	86.85
Return on Equity	671.88	671.88	671.88	671.88	671.88
Int on WC	50.70	50.02	49.34	37.79	38.00
O&M Expenses	266.95	275.92	285.03	294.48	304.26
<b>Total</b>	<b>1879.62</b>	<b>1836.65</b>	<b>1793.83</b>	<b>1267.42</b>	<b>1263.02</b>

66. 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
<b>Gross Block</b>					
Opening Gross Block	12356.69	12356.69	12356.69	12356.69	12356.69
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	12356.69	12356.69	12356.69	12356.69	12356.69
Average Gross Block	12356.69	12356.69	12356.69	12356.69	12356.69
<b>Depreciation</b>					
Rate of Depreciation (%)	5.286	5.286	5.286	1.311	1.311
Depreciable Value	11121.02	11121.02	11121.02	11121.02	11121.02
Elapsed life of the assets at beginning of the year	9	10	11	12	13
Weighted Balance Useful life of the assets	26	25	24	23	22
Remaining Depreciable Value	5686.27	5033.04	4379.80	3726.57	3564.54
Depreciation	653.24	653.24	653.24	162.02	162.02
<b>Interest on Loan</b>					
Gross Normative Loan	8930.47	8930.47	8930.47	8930.47	8930.47
Cumulative Repayment upto Previous Year	5444.66	6097.89	6751.13	7404.36	7566.39
Net Loan-Opening	3485.81	2832.57	2179.34	1526.10	1364.08
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	653.24	653.24	653.24	162.02	162.02
Net Loan-Closing	2832.57	2179.34	1526.10	1364.08	1202.05
Average Loan	3159.19	2505.96	1852.72	1445.09	1283.07
Weighted Average Rate of Interest on Loan (%)	7.4973	7.4064	7.2513	7.0059	6.7686
Interest	236.85	185.60	134.35	101.24	86.85



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Return on Equity</b>					
Opening Equity	3426.22	3426.22	3426.22	3426.22	3426.22
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	3426.22	3426.22	3426.22	3426.22	3426.22
Average Equity	3426.22	3426.22	3426.22	3426.22	3426.22
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)	671.88	671.88	671.88	671.88	671.88
<b>Interest on Working Capital</b>					
Maintenance Spares	40.04	41.39	42.75	44.17	45.64
O & M expenses	22.25	22.99	23.75	24.54	25.36
Receivables	313.27	306.11	298.97	211.24	210.50
Total	375.56	370.49	365.48	279.95	281.50
Interest	50.70	50.02	49.34	37.79	38.00
<b>Annual Transmission Charges</b>					
Depreciation	653.24	653.24	653.24	162.02	162.02
Interest on Loan	236.85	185.60	134.35	101.24	86.85
Return on Equity	671.88	671.88	671.88	671.88	671.88
Interest on Working Capital	50.70	50.02	49.34	37.79	38.00
O & M Expenses	266.95	275.92	285.03	294.48	304.26
<b>Total</b>	<b>1879.62</b>	<b>1836.65</b>	<b>1793.83</b>	<b>1267.42</b>	<b>1263.02</b>

### **Filing Fee and Publication Expenses**

67. 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**

68. 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), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

69. 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**

70. 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**

71. 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.

72. This order disposes of Petition No. 433/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
<b>BOND X- DOCO 1</b>					
Gross Opening Loan	119.00	119.00	119.00	119.00	119.00
Cumulative Repayments of Loans upto Previous Year	49.58	59.50	69.42	79.34	89.26
Net Loans Opening	69.42	59.50	49.58	39.66	29.74
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	9.92	9.92	9.92	9.92	9.92
Net Closing Loan	59.50	49.58	39.66	29.74	19.82
Average Net Loan	64.46	54.54	44.62	34.70	24.78
Rate of Interest on Loan (%)	10.90	10.90	10.90	10.90	10.90
Interest on Loan	7.03	5.94	4.86	3.78	2.70
<b>BOND XI - option-I- DOCO 2</b>					
Gross Opening Loan	127.00	127.00	127.00	127.00	127.00
Cumulative Repayments of Loans upto Previous Year	42.33	52.91	63.49	74.07	84.65
Net Loans Opening	84.67	74.09	63.51	52.93	42.35
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	10.58	10.58	10.58	10.58	10.58
Net Closing Loan	74.09	63.51	52.93	42.35	31.77
Average Net Loan	79.38	68.80	58.22	47.64	37.06
Rate of Interest on Loan (%)	9.80	9.80	9.80	9.80	9.80
Interest on Loan	7.78	6.74	5.71	4.67	3.63
<b>BOND XII - DOCO 3</b>					
Gross Opening Loan	885.00	885.00	885.00	885.00	885.00
Cumulative Repayments of Loans upto Previous Year	295.00	368.75	442.50	516.25	590.00
Net Loans Opening	590.00	516.25	442.50	368.75	295.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	73.75	73.75	73.75	73.75	73.75
Net Closing Loan	516.25	442.50	368.75	295.00	221.25
Average Net Loan	553.13	479.38	405.63	331.88	258.13
Rate of Interest on Loan (%)	9.70	9.70	9.70	9.70	9.70



Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Interest on Loan	53.65	46.50	39.35	32.19	25.04
<b>BOND-XIII - option-I - DOCO 4</b>					
Gross Opening Loan	2560.00	2560.00	2560.00	2560.00	2560.00
Cumulative Repayments of Loans upto Previous Year	640.00	853.33	1066.66	1279.99	1493.32
Net Loans Opening	1920.00	1706.67	1493.34	1280.01	1066.68
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	213.33	213.33	213.33	213.33	213.33
Net Closing Loan	1706.67	1493.34	1280.01	1066.68	853.35
Average Net Loan	1813.34	1600.01	1386.68	1173.35	960.02
Rate of Interest on Loan (%)	8.63	8.63	8.63	8.63	8.63
Interest on Loan	156.49	138.08	119.67	101.26	82.85
<b>BOND XV - DOCO 5</b>					
Gross Opening Loan	4750.00	4750.00	4750.00	4750.00	4750.00
Cumulative Repayments of Loans upto Previous Year	791.67	1187.50	1583.33	1979.16	2374.99
Net Loans Opening	3958.33	3562.50	3166.67	2770.84	2375.01
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	395.83	395.83	395.83	395.83	395.83
Net Closing Loan	3562.50	3166.67	2770.84	2375.01	1979.18
Average Net Loan	3760.42	3364.59	2968.76	2572.93	2177.10
Rate of Interest on Loan (%)	6.68	6.68	6.68	6.68	6.68
Interest on Loan	251.20	224.75	198.31	171.87	145.43
<b>BOND XVIII - ADDCAP FOR 2005-2006 AC 1</b>					
Gross Opening Loan	60.00	60.00	60.00	60.00	60.00
Cumulative Repayments of Loans upto Previous Year	0.00	5.00	10.00	15.00	20.00
Net Loans Opening	60.00	55.00	50.00	45.00	40.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	5.00	5.00	5.00	5.00	5.00
Net Closing Loan	55.00	50.00	45.00	40.00	35.00
Average Net Loan	57.50	52.50	47.50	42.50	37.50
Rate of Interest on Loan (%)	8.15	8.15	8.15	8.15	8.15
Interest on Loan	4.69	4.28	3.87	3.46	3.06



Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Oriental Bank of Commerce - DOCO 6</b>					
Gross Opening Loan	58.00	58.00	58.00	58.00	58.00
Cumulative Repayments of Loans upto Previous Year	24.17	29.00	33.83	38.66	43.49
Net Loans Opening	33.83	29.00	24.17	19.34	14.51
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	4.83	4.83	4.83	4.83	4.83
Net Closing Loan	29.00	24.17	19.34	14.51	9.68
Average Net Loan	31.42	26.59	21.76	16.93	12.10
Rate of Interest on Loan (%)	9.60	10.22	12.32	12.37	12.35
Interest on Loan	3.02	2.72	2.68	2.09	1.49
<b>Punjab National Bank-II - DOCO 7</b>					
Gross Opening Loan	70.00	70.00	70.00	70.00	70.00
Cumulative Repayments of Loans upto Previous Year	29.17	35.00	40.83	46.66	52.49
Net Loans Opening	40.83	35.00	29.17	23.34	17.51
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	5.83	5.83	5.83	5.83	5.83
Net Closing Loan	35.00	29.17	23.34	17.51	11.68
Average Net Loan	37.92	32.09	26.26	20.43	14.60
Rate of Interest on Loan (%)	8.89	9.65	11.80	11.84	11.60
Interest on Loan	3.37	3.10	3.10	2.42	1.69
<b>Summary</b>					
Gross Opening Loan	8629.00	8629.00	8629.00	8629.00	8629.00
Cumulative Repayments of Loans upto Previous Year	1871.92	2590.99	3310.06	4029.13	4748.20
Net Loans Opening	6757.08	6038.01	5318.94	4599.87	3880.80
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	719.07	719.07	719.07	719.07	719.07
Net Closing Loan	6038.01	5318.94	4599.87	3880.80	3161.73
Average Net Loan	6397.55	5678.48	4959.41	4240.34	3521.27
Rate of Interest on Loan (%)	7.6157	7.6097	7.6127	7.5878	7.5511
Interest on Loan	487.22	432.11	377.55	321.75	265.89



**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
<b>BOND X- DOCO 1</b>					
Gross Opening Loan	119.00	119.00	119.00	119.00	119.00
Cumulative Repayments of Loans upto Previous Year	99.18	109.10	119.00	119.00	119.00
Net Loans Opening	19.82	9.90	0.00	0.00	0.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	9.92	9.90	0.00	0.00	0.00
Net Closing Loan	9.90	0.00	0.00	0.00	0.00
Average Net Loan	14.86	4.95	0.00	0.00	0.00
Rate of Interest on Loan (%)	10.90	10.90	10.90	10.90	10.90
Interest on Loan	1.62	0.54	0.00	0.00	0.00
<b>BOND XI - option-I- DOCO 2</b>					
Gross Opening Loan	127.00	127.00	127.00	127.00	127.00
Cumulative Repayments of Loans upto Previous Year	95.23	105.81	116.39	126.97	126.97
Net Loans Opening	31.77	21.19	10.61	0.03	0.03
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	10.58	10.58	10.58	0.00	0.00
Net Closing Loan	21.19	10.61	0.03	0.03	0.03
Average Net Loan	26.48	15.90	5.32	0.03	0.03
Rate of Interest on Loan (%)	9.80	9.80	9.80	9.80	9.80
Interest on Loan	2.60	1.56	0.52	0.00	0.00
<b>BOND XII - DOCO 3</b>					
Gross Opening Loan	885.00	885.00	885.00	885.00	885.00
Cumulative Repayments of Loans upto Previous Year	663.75	737.50	811.25	885.00	885.00
Net Loans Opening	221.25	147.50	73.75	0.00	0.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	73.75	73.75	73.75	0.00	0.00
Net Closing Loan	147.50	73.75	0.00	0.00	0.00
Average Net Loan	184.38	110.63	36.88	0.00	0.00
Rate of Interest on Loan (%)	9.70	9.70	9.70	0.00	0.00
Interest on Loan	17.88	10.73	3.58	0.00	0.00





Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
<b>BOND-XIII - option-I - DOCO 4</b>					
Gross Opening Loan	2560.00	2560.00	2560.00	2560.00	2560.00
Cumulative Repayments of Loans upto Previous Year	1706.65	1919.98	2133.31	2346.64	2559.97
Net Loans Opening	853.35	640.02	426.69	213.36	0.03
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	213.33	213.33	213.33	213.33	0.00
Net Closing Loan	640.02	426.69	213.36	0.03	0.03
Average Net Loan	746.69	533.36	320.03	106.70	0.03
Rate of Interest on Loan (%)	8.63	8.63	8.63	8.63	8.63
Interest on Loan	64.44	46.03	27.62	9.21	0.00
<b>BOND XV - DOCO 5</b>					
Gross Opening Loan	4750.00	4750.00	4750.00	4750.00	4750.00
Cumulative Repayments of Loans upto Previous Year	2770.82	3166.65	3562.48	3958.31	4354.14
Net Loans Opening	1979.18	1583.35	1187.52	791.69	395.86
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	395.83	395.83	395.83	395.83	395.83
Net Closing Loan	1583.35	1187.52	791.69	395.86	0.03
Average Net Loan	1781.27	1385.44	989.61	593.78	197.95
Rate of Interest on Loan (%)	6.68	6.68	6.68	6.68	6.68
Interest on Loan	118.99	92.55	66.11	39.66	13.22
<b>BOND XVIII - ADDCAP FOR 2005-2006 AC 1</b>					
Gross Opening Loan	60.00	60.00	60.00	60.00	60.00
Cumulative Repayments of Loans upto Previous Year	25.00	30.00	35.00	40.00	45.00
Net Loans Opening	35.00	30.00	25.00	20.00	15.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	5.00	5.00	5.00	5.00	5.00
Net Closing Loan	30.00	25.00	20.00	15.00	10.00
Average Net Loan	32.50	27.50	22.50	17.50	12.50
Rate of Interest on Loan (%)	8.15	8.15	8.15	8.15	8.15
Interest on Loan	2.65	2.24	1.83	1.43	1.02
<b>Oriental Bank of Commerce - DOCO 6</b>					
Gross Opening Loan	58.00	58.00	58.00	58.00	58.00
Cumulative Repayments of Loans upto Previous Year	48.32	53.15	57.98	57.98	57.98



Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loans Opening	9.68	4.85	0.02	0.02	0.02
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	4.83	4.83	0.00	0.00	0.00
Net Closing Loan	4.85	0.02	0.02	0.02	0.02
Average Net Loan	7.27	2.44	0.02	0.02	0.02
Rate of Interest on Loan (%)	12.35	12.35	12.35	12.35	12.35
Interest on Loan	0.90	0.30	0.00	0.00	0.00
<b>Punjab National Bank-II - DOCO 7</b>					
Gross Opening Loan	70.00	70.00	70.00	70.00	70.00
Cumulative Repayments of Loans upto Previous Year	58.32	64.15	69.98	69.98	69.98
Net Loans Opening	11.68	5.85	0.02	0.02	0.02
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	5.83	5.83	0.00	0.00	0.00
Net Closing Loan	5.85	0.02	0.02	0.02	0.02
Average Net Loan	8.77	2.94	0.02	0.02	0.02
Rate of Interest on Loan (%)	11.60	11.60	11.60	11.60	11.60
Interest on Loan	1.02	0.34	0.00	0.00	0.00
<b>Summary</b>					
Gross Opening Loan	8629.00	8629.00	8629.00	8629.00	8629.00
Cumulative Repayments of Loans upto Previous Year	5467.27	6186.34	6905.41	7603.90	8218.06
Net Loans Opening	3161.73	2442.66	1723.59	1025.10	410.94
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	719.07	719.07	698.49	614.16	400.83
Net Closing Loan	2442.66	1723.59	1025.10	410.94	10.11
Average Net Loan	2802.20	2083.13	1374.35	718.02	210.53
Rate of Interest on Loan (%)	7.4973	7.4065	7.2514	7.0060	6.7690
Interest on Loan	210.09	154.29	99.66	50.30	14.25

