

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 105/TT/2011

Coram:

Shri S. Jayaraman, Member

Shri M. Deena Dayalan, Member

Date of Hearing: 15.05.2012

Date of Order : 02.05.2013

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 for determination of transmission tariff of Asset I: 400 kV D/C Mundra-Bachchau (Triple Snowbird) transmission line along with associated bays at Bachchau sub-station (extension), Asset-II: New 400/220 kV Bachchau sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau sub-station (New) along with associated bays; Asset-III: 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV lines bays; (iv) Asset-IV: Combined Asset of 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV bays and 400/220 kV ICT-II at Bachchau sub-station along with associated 400 kV and 220 kV bays under ATS for Mundra (4000 MW) UMPP for the period from date of commercial operation to 31.3.2014

And

In the matter of:

Power Grid Corporation of India Limited, Gurgaon

...**Petitioner**

Vs

1. Madhya Pradesh Power Trading Co. Ltd., Jabalpur
2. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Vadodara
4. Electricity Department, Government of Goa, Panaji
5. Electricity Department, Administration of Daman & Diu, Daman
6. Electricity Department, Administration of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd., Indore



9. Punjab State Electricity Board, Patiala
10. Haryana Power Purchase Centre, Panchkula
11. Rajasthan Power Procurement Centre, Jaipur
12. Ajmer Vidyut Vitran Nigam Ltd., Jaipur
13. Jodhpur Vidyut Vitran Nigam Ltd., Jaipur
14. Jaipur Vidyut Vitran Nigam Ltd., Jaipur

...Respondents

The following were present:

1. Shri S S Raju, PGCIL
2. Shri M.M. Mondal, PGCIL
3. Shri R.K. Arora, PGCIL
4. Shri Padamjit Singh, PSPCL
5. Shri T.P.S. Bawa, PSPCL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) for determination of transmission tariff of Asset I: 400 kV D/C Mundra-Bachchau (Triple Snowbird) transmission line along with associated bays at Bachchau sub-station (extension), Asset-II: New 400/220 kV Bachchau sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau sub-station (New) along with associated bays; Asset-III: 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV lines bays; (iv) Asset-IV: Combined Asset of 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV bays and 400/220 kV ICT-II at Bachchau sub-station along with associated 400 kV and 220 kV bays under ATS for Mundra (4000 MW) UMPP (hereinafter referred to as “the transmission system) for tariff block 2009-2014 period under Regulation 86 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. The administrative approval and expenditure sanction to the project was accorded by the Board of Directors of PGCIL vide Memorandum No. C/CP/Mundra, dated 15.10.2008 at a total cost of ₹482412 lakh, including interest during construction of ₹44686 lakh, based on 1st Quarter 2008 price level.

3. The scope of work covered under the project broadly includes following transmission lines and sub-stations:-

Transmission System of Mundra (4000 MW) UMPP

Transmission Lines

- i) Mundra- Limbdi 400 kV D/C (Triple snowbird)
- ii) Mundra- Bachchau- Ranchodpura 400 kV D/C (Triple snowbird)
- iii) Mundra- Jetpur 400 kV D/C (Triple snowbird)

Regional System Strengthening in WR for Mundra UMPP

Transmission Lines

- i) Gandhar- Navsari 400 kV D/C
- ii) Navsari- Mumbai (New location) 400 kV D/C
- iii) LILO of both circuits of Kawas- Navsari 220 kV D/C at Navsari
- iv) Wardha- Aurangabad 400 kV D/C (Quad) along with 40% Fixed Series Compensation with provision to upgrade the line to 1200 kV S/C at a later date
- v) Aurangabad- Aurangabad (MSETCL) 400 kV D/C (quad) line

Sub-stations

- i) Establishment of new 400/220 kV, 2x315 MVA sub-stations at Bachchau
- ii) Establishment of new 400/220 kV, 2x315 MVA GIS sub-stations at Navsari
- iii) Establishment of new 400 GIS switching station at Mumbai (New location)
- iv) Establishment of new 765/400 kV, 3x1500 MVA sub-stations at Wardha
- v) 765 kV line bays for operation of Seoni-Wardha 2xS/C lines at 765 kV level
- vi) Establishment of 400/220 kV, 2x315 MVA sub-stations at Aurangabad

4. In its petition filed on 6.4.2011, the petitioner has sought determination of tariff for the following assets:-

- a) Asset-I: 400 kV D/C Mundra-Bachchau (Triple Snowbird) transmission line along with associated bays at Bachchau sub-station (extension);
- b) Asset-II: New 400/220 kV Bachchau sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau sub-station (New) along with associated bays;
- c) Asset-III: 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV lines bays; and
- d) Asset-IV: Combined Assets of 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV lines bays and 400/220 kV ICT-II at Bachchau sub-station along with associated 400 kV and 220 kV bays.

5. The petitioner has submitted that anticipated date of commercial operation at the time of filing this petition was 1.6.2011 for Asset I, II & III, and 1.7.2011 for Asset IV. However, as per affidavit dated 19.12.2011, all the assets under this petition have been commissioned on 1.10.2011. The petitioner has combined Asset III and Asset IV, and has worked out the tariff for Assets-III & IV in a single set of calculations for Asset-IV. The petitioner has further submitted, vide affidavit dated 14.5.2012, the revised capital expenditure incurred upto date of commercial operation, projected additional capital expenditure and corresponding information for Asset-I, Asset-II, and Asset-IV from the actual date of commercial operation. Accordingly, transmission tariff is being determined in this order for Asset-I, Asset-II and Asset-IV from the actual date of commercial operation, i.e., 1.10.2011, to 31.3.2014 as per details given overleaf:-

- a) Asset-I: 400 kV D/C Mundra-Bachchau (Triple Snowbird) transmission line along with associated bays at Bachchau sub-station (extension);
- b) Asset-II: New 400/220 kV Bachchau sub-station (Gujarat) and 1x63 MVAR Bus Reactor at Bachchau sub-station (New) along with associated bays;
- c) Asset-IV: Combined Assets 400/220 kV ICT-I at Bachchau sub-station along with associated 400 kV and 220 kV lines bays, and 400/220 kV ICT-II at Bachchau sub-station along with associated 400 kV and 220 kV bays.

6. The details of apportioned approved cost as on the date of commercial operation, and estimated additional capital expenditure to be incurred for the assets covered in the instant petition, claimed by the petitioner, are summarized below:-

(₹ in lakh)

Sl. No.	Name of Asset	Apportioned approved cost	Actual Expenditure incurred as on DOCO *	Projected additional capital expenditure			Total Estimated Completion cost
				2011-12	2012-13	2013-14	
1.	Asset I	17860.68	15383.97	471.27	605.88	0.00	16461.12
2.	Asset II	4579.73	3837.75	343.11	393.67	488.51	5063.04
3.	Asset IV	7043.86	4002.34	1876.65	484.52	282.09	6645.60

*Inclusive of initial spares amount pertaining to sub-station.

7. Details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Asset-I			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	706.20	890.73	900.35
Interest on Loan	784.54	921.89	855.27
Return on equity	723.24	912.20	922.02
Interest on Working Capital	57.31	70.84	70.40
O & M Expenses	155.72	197.55	208.80
Total	2427.01	2993.21	2956.84

(₹ in lakh)

Asset-II			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	103.22	141.87	154.94
Interest on Loan	184.38	237.49	243.52
Return on equity	167.21	224.59	241.49
Interest on Working Capital	12.67	16.67	17.65
O & M Expenses	48.81	61.92	65.46
Total	516.29	682.54	723.06

(₹ in lakh)

Asset-IV			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	172.47	277.12	294.05
Interest on Loan	193.37	292.75	287.29
Return on equity	176.65	283.81	301.13
Interest on Working Capital	26.49	39.31	41.12
O & M Expenses	272.36	383.88	405.84
Total	841.34	1276.87	1329.43

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

(₹ in lakh)

Asset-I			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Maintenance Spares	28.03	29.63	31.32
O & M expenses	15.57	16.46	17.40
Receivables	485.40	498.87	492.81
Total	529.00	544.96	541.53
Interest	57.31	70.84	70.40
Rate of Interest	13.00%	13.00%	13.00%

(₹ in lakh)

Asset-II			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	8.79	9.29	9.82
O & M expenses	4.88	5.16	5.46
Receivables	103.26	113.76	120.51
Total	116.93	128.21	135.79
Interest	12.67	16.67	17.65
Rate of Interest	13.00%	13.00%	13.00%

(₹ in lakh)

Asset-IV			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	54.47	57.58	60.88
O & M expenses	30.26	31.99	33.82
Receivables	186.96	212.81	221.57
Total	271.69	302.38	316.27
Interest	26.49	39.31	41.12
Rate of Interest	13.00%	13.00%	13.00%

9. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003. Ajmer Vidyut Vitaran Nigam Ltd. (AVVNL), Respondent No. 12, and Jodhpur Vidyut Vitaran Nigam Ltd, (Jd.VVNL), Respondent No. 13, have filed their replies vide affidavits dated 26.5.2011, and 27.5.2011 respectively. Jaipur Vidyut Vitaran Nigam Ltd, (JVVNL), Respondent No. 14, has filed its reply vide affidavit dated 30.5.2011. Punjab State Power Corporation Ltd. (PSPCL), Respondent No. 9, has filed its reply vide affidavit dated 1.8.2011. Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL), Respondent No. 2, has filed its reply vide affidavit dated 18.2.2012. The respondents have raised the issue of additional return on equity, O&M charges, procedure/ method of sharing of transmission charges and initial spares. The objections have been dealt with in relevant paragraphs of this order.

10. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition. While doing so, we also take care of the submissions of the respondents in their replies and address them in the relevant paragraphs.

Capital cost

11. Regulation 7(1) (a) of the 2009 Tariff Regulations provides as under:-

“The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.”

12. Accordingly, capital costs of ₹15383.97 lakh, ₹3837.75 lakh and ₹4002.34 lakh (inclusive of cost of initial spares) for Asset I, Asset II, and Asset IV respectively, as claimed by the petitioner, as on 1.10.2011, i.e., actual date of commercial operation, as per Management Certificates dated 12.5.2012, has been considered for further treatment of capital cost.

Treatment of initial spares

13. The petitioner has claimed ₹46.29 lakh for initial spares in respect of sub-station and PLCC for Asset-I, ₹57.36 lakh for initial spares in respect of sub-station and PLCC for Asset II, and ₹197.64 lakh for initial spares in respect of sub-station and PLCC for Asset-IV. MSEDCL has submitted that the petitioner's prayer for relaxing the norms for allowing higher initial spares may not be allowed. MSEDCL has further submitted that the cost of colony may be included in the original project cost for working out the initial spares only after prudence check.

14. We find that in respect of Asset I and Asset IV, the claim exceeds the ceiling norms of 2.5% specified in the 2009 Tariff Regulations. The same is

being reduced from the cost of sub-station in Asset I and Asset IV. The initial spares claimed by the petitioner in respect of sub-station and PLCC for Asset II is within ceiling norms of 2.5%, and hence it is being allowed. It is also observed that there are many more assets in the scope of work which have not yet come up, and it is not possible to work out the actually allowable initial spares (with reference to the total project cost) for the complete transmission system. The allowable initial spares for the complete transmission system shall be worked out at the time of truing-up or completion of the project, whichever is earlier. Initial spares for sub-station have been calculated by considering the cost of land, building, civil works and PLCC, if any, as per details given below:-

(₹ in lakh)

Particulars	Capital cost except transmission line as on cut-off date	Initial spares claimed	Ceiling limit as per Regulation 8 2009	Initial spares worked out	Excess initial spares claimed
Asset I	681.08	46.29	2.50%	16.28	30.01
Asset II	3966.22	57.36	2.50%	100.23	0.00
Asset IV	6645.60	197.64	2.50%	165.33	32.31

15. Accordingly, the excess initial spares, as above, has been deducted from the expenditure as on the date of commercial operation to arrive at the capital cost as per details given below:-

(₹ in lakh)

Particulars	Capital cost as on 1.10.2011 (DOCO)
Asset I	15353.96
Asset II	3837.75
Asset IV	3970.03

Additional capital expenditure

16. Regulation 9(1) of the 2009 Tariff Regulations provides as under:-

Additional Capitalisation: (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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law".

17. Further, the 2009 Tariff Regulations defines cut-off date as follows:-

"cut-off date means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation".

Based on the above definition, cut-off date for Asset I, Asset II, and Asset IV is 31.3.2014.

18. The petitioner has claimed additional capital expenditure as below:-

(₹ in lakh)					
Sl. No.	Particulars	2011-12	2012-13	2013-14	Total
1	Asset I	471.27	605.88	0.00	1077.15
2	Asset II	343.11	393.67	488.51	1225.29
3	Asset IV	1876.65	484.52	282.09	2643.26

The additional capital expenditure claimed by the petitioner is within the cut-off date. Hence, the same has been considered for the purpose of determination of tariff.

Debt- equity ratio

19. Regulation 12 of the 2009 Tariff Regulations provides as under:-

"(1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

20. Details of the debt-equity in respect of the transmission assets as on date of commercial operation is given hereunder:-

Asset I	Admitted capital cost as on date of commercial operation	
	Amount (₹ in lakh)	%
Particulars		
Debt	10747.77	70.00
Equity	4606.19	30.00
Total	15353.96	100.00

Asset II	Admitted capital cost as on date of commercial operation	
	Amount (₹ in lakh)	%
Particulars		
Debt	2686.43	70.00
Equity	1151.33	30.00
Total	3837.75	100.00

Asset IV	Admitted capital cost as on date of commercial operation	
	Particulars	Amount (₹ in lakh)
Debt	2779.02	70.00
Equity	1191.01	30.00
Total	3970.03	100.00

Return on equity

21. Regulation 15 of the 2009 Tariff Regulations provides as under:-

15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(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 financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations."

22. The petitioner has claimed additional return on equity of 0.5% for completing the project within timeline specified in Regulation 15 of the 2009 Tariff Regulations.

23. JVVNL and AVVNL have submitted in their reply that if the commissioning was advanced at the request of Coastal Gujarat Power Limited (CGPL), the burden of additional return on equity should be borne only by CGPL.

24. As per Appendix-II to the 2009 Tariff Regulations, the time schedule for 400 kV (Triple Conductor) Transmission Line is 30 months from the date of investment approval. Hence, the assets should have been commissioned on 1.5.2011, whereas the assets were actually commissioned on 1.10.2011. The claim of additional return on equity is hence not admissible.

25. PSPCL has raised a question regarding the declaration of commercial operation of the asset, and requested for a copy of PGCIL letter declaring date of commercial operation. PSPCL has also requested PGCIL to confirm the utilization of this line and the status of down below lines at Bachchau Sub-station, and also the status of commissioning of Mundra UMPP.

26. The petitioner in its rejoinder to the PSPCL's reply has submitted that AC transmission elements are such that once successfully test charged the elements are immediately available for transmission of power @ 100% of its rated capacity. Power flow through any AC element is dependent on grid condition and demand and supply situation of the grid which is beyond the control of the petitioner. In the transmission system, generally transmission elements are static while in service and no rotating is involved. Unlike generating stations where one unit is connected with the grid at a certain load and with further additional input the load is increased to its rated capacity, whereas in case of AC transmission elements no additional input is required for transmission of power at rated capacity. All the relevant tests/ checks are carried out before charging and once successfully test charged, the transmission elements are available for regular service @ 100% of its rated capacity, and accordingly, the asset is declared for commercial operation from 1st day of next calendar month. As the 2009 Tariff Regulations does not define 'trial run' in case of transmission element, successful test charging is considered as completion of trial run.

27. We have considered the submissions of both PSPCL and the petitioner. As submitted by the petitioner, the 2009 Tariff Regulations do not define the trial operation in case of transmission elements and the successful test charging is considered as trial operation. The explanation of the petitioner is found to be satisfactory and accordingly, successful test charging by the petitioner is considered as completion of trial operation. However, we direct the RPCs to discuss the issue of trial operation of transmission elements and

submit the proposals to CEA who in turn shall submit a consolidated proposal regarding trial operation of transmission elements to the Commission. The staff of the Commission shall study the proposal made by CEA and make suitable changes to the existing Regulations to deal with all such cases in future.

28. The petitioner has computed return on equity on pre-tax basis on 11.33% MAT in accordance with the tax rate applicable for 2008-09 and has claimed return on equity @ 17.481%.

29. The petitioner's request to allow grossing up the base rate of return on equity based on the tax rates viz. , MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations as amended from time to time.

30. The following amount of equity has been considered for calculation of return of equity:-

(₹ in lakh)

Asset I			
Particulars	2011-12	2012-13	2013-14
Opening Equity	4606.19	4747.57	4929.33
Addition due to additional capital expenditure	141.38	181.76	0.00
Closing Equity	4747.57	4929.33	4929.33
Average Equity	4676.88	4838.45	4929.33
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	408.78	845.81	861.70

(₹ in lakh)

Asset II			
Particulars	2011-12	2012-13	2013-14
Opening Equity	1151.33	1254.26	1372.36
Addition due to Additional Capital Expenditure	102.93	118.10	146.55
Closing Equity	1254.26	1372.36	1518.91
Average Equity	1202.79	1313.31	1445.64
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	105.13	229.58	252.71

(₹ in lakh)

Asset IV			
Particulars	2011-12	2012-13	2013-14
Opening Equity	1191.01	1754.00	1899.36
Addition due to Additional Capital Expenditure	563.00	145.36	84.63
Closing Equity	1754.00	1899.36	1983.99
Average Equity	1472.51	1826.68	1941.67
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	128.70	319.32	339.42

Interest on loan

31. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

32. In these calculations, interest on loan has been worked out as per details given hereunder:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per affidavit dated 14.5.2012;

(b) Tariff is worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the tariff period 2009-14;

(c) Weighted average rate of interest on actual average loan worked out as above is applied on the notional average loan during the year to arrive at the interest on loan;

33. Detailed calculation of the weighted average rate of interest has been given in the Annexure I, II and III to this order.

34. Details of the interest on loan worked on the above basis is as under:-

(₹ in lakh)

Asset I			
Particulars	2011-12	2012-13	2013-14
Gross Normative Loan	10747.77	11077.66	11501.77
Cumulative Repayment upto Previous Year	0.00	412.00	1264.50
Net Loan-Opening	10747.77	10665.66	10237.27
Addition due to additional capital expenditure	329.89	424.12	0.00
Repayment during the year	412.00	852.51	868.57
Net Loan-Closing	10665.66	10237.27	9368.70
Average Loan	10706.72	10451.47	9802.98
Weighted Average Rate of Interest on Loan	8.6928%	8.7009%	8.7004%
Interest	465.36	909.37	852.90

(₹ in lakh)

Asset II			
Particulars	2011-12	2012-13	2013-14
Gross Normative Loan	2686.43	2926.60	3202.17
Cumulative Repayment upto Previous Year	0.00	71.07	228.86
Net Loan-Opening	2686.43	2855.53	2973.31
Addition due to additional capital expenditure	240.18	275.57	341.96
Repayment during the year	71.07	157.79	174.44
Net Loan-Closing	2855.53	2973.31	3140.83
Average Loan	2770.98	2914.42	3057.07
Weighted Average Rate of Interest on Loan	8.8266%	8.8435%	8.8424%
Interest	122.29	257.74	270.32

(₹ in lakh)

Asset IV			
Particulars	2011-12	2012-13	2013-14
Gross Normative Loan	2779.02	4092.68	4431.84
Cumulative Repayment upto Previous Year	0.00	129.58	451.14
Net Loan-Opening	2779.02	3963.10	3980.70
Addition due to additional capital expenditure	1313.66	339.16	197.46
Repayment during the year	129.58	321.56	341.97
Net Loan-Closing	3963.10	3980.70	3836.19
Average Loan	3371.06	3971.90	3908.45
Weighted Average Rate of Interest on Loan	9.0774%	9.1048%	9.1055%
Interest	153.00	361.64	355.88

Depreciation

35. Regulation 17 (4) of the 2009 Tariff Regulations provides as under:-

(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.

36. Asset I, Asset II, and Asset IV in the instant petition were put on commercial operation on 1.10.2011, and will complete 12 years beyond 2013-14. Hence, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III. Details of the depreciation worked out are as under:-

(₹ in lakh)

Asset I			
Particulars	2011-12	2012-13	2013-14
Opening Gross Block (As on date of commercial operation)	15353.96	15825.23	16431.11
Addition during 2009-14 due to projected additional capital expenditure	471.27	605.88	0.00
Closing Gross Block	15825.23	16431.11	16431.11
Average Gross Block	15589.59	16128.17	16431.11
Rate of Depreciation	5.29%	5.29%	5.29%
Depreciable Value	14030.63	14515.35	14788.00
Remaining Depreciable Value	14030.63	14103.35	13523.49
Depreciation	412.00	852.51	868.57

(₹ in lakh)

Asset II			
	2011-12	2012-13	2013-14
Opening Gross Block (As on date of commercial operation)	3837.75	4180.86	4574.53
Addition during 2009-14 due to projected additional capital expenditure	343.11	393.67	488.51
Closing Gross Block	4180.86	4574.53	5063.04
Average Gross Block	4009.31	4377.70	4818.79
Rate of Depreciation	3.55%	3.60%	3.62%
Depreciable Value	2621.24	2952.79	3349.77
Remaining Depreciable Value	2621.24	2881.71	3120.91
Depreciation	71.07	157.79	174.44

(₹ in lakh)

Asset IV			
Particulars	2011-12	2012-13	2013-14
Opening Gross Block (As on date of commercial operation)	3970.03	5846.68	6331.20
Addition during 2009-14 due to projected additional capital expenditure	1876.65	484.52	282.09
Closing Gross Block	5846.68	6331.20	6613.29
Average Gross Block	4908.36	6088.94	6472.25
Rate of Depreciation	5.28%	5.28%	5.28%
Depreciable Value	4417.52	5480.05	5825.02
Remaining Depreciable Value	4417.52	5350.47	5373.88
Depreciation	129.58	321.56	341.97

Operation & maintenance expenses

37. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and transmission line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C triple conductor T/L (₹lakh/ kms)	0.627	0.663	0.701	0.741	0.783
400 kV bays (₹lakh per bay)	52.40	55.40	58.57	61.92	65.46
400 kV bays(₹ lakh/ bay)	36.68	38.78	41.00	43.34	45.82

38. Based on the above norms, the petitioner has calculated the following operation and maintenance expenses which is allowed:-

(₹ in lakh)			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Asset I			
99.468 km 400 kV D/C, triple conductor T/L	34.86	73.71	77.88
2 nos. 400 kV bays	58.57	123.84	130.92
Total O & M	93.43	197.55	208.80
Asset II			
1 no. 400 kV bay	29.29	61.92	65.46
Total O & M	29.29	61.92	65.46
Asset- IV			
2 nos. 400 kV bays	58.57	123.84	130.92
6 nos. 220 kV bays	123.00	260.04	274.92
Total O & M	181.57	383.88	405.84
Total O & M (Asset I+ Asset II+ Asset IV)	304.29	643.35	680.10

39. The petitioner has submitted that O & M expenses for the year 2009-14 had been arrived on the basis of normalized actual O & M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for suitable revision in the norms for O & M expenses in case the impact of wage revision. JVVNL and AVVNL have submitted that O&M expenses prescribed in the 2009 Tariff Regulations are on normative basis and hence, the prayer of the petitioner should not be allowed. PSPCL in its affidavit dated 28.5.2012 has submitted that O&M expenses should be allowed as per 2009 Tariff Regulations only and any excess claim may not be considered.

40. The Commission has given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the

employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employees cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

Interest on working capital

41. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' transmission charges in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 18(1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for

1 month of the respective year in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital

The rate of interest on working capital has been considered according to the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011. The SBI Base Rate of 8.25% on 1.4.2011 plus 350 basis points, i.e., 11.75% is considered as the rate of interest on working capital for Asset I, Asset II, and Asset IV.

42. Necessary computations in support of interest on working capital are given hereunder:-

(₹ in lakh)

Asset I			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	28.03	29.63	31.32
O & M expenses	15.57	16.46	17.40
Receivables	469.91	477.80	475.60
Total	513.51	523.89	524.32
Rate of Interest	11.75%	11.75%	11.75%
Interest	30.17	61.56	61.61

(₹ in lakh)

Asset II			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	8.79	9.29	9.82
O & M expenses	4.88	5.16	5.46
Receivables	111.72	120.48	130.00
Total	125.39	134.93	145.27
Rate of Interest	11.75%	11.75%	11.75%
Interest	7.37	15.85	17.07

(₹ in lakh)

Asset IV			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	54.47	57.58	60.88
O & M expenses	30.26	31.99	33.82
Receivables	203.26	237.47	247.21
Total	287.99	327.04	341.91
Rate of Interest	11.75%	11.75%	11.75%
Interest	16.92	38.43	40.17

Transmission charges

43. The transmission charges being allowed for the transmission assets are summarized hereunder:-

(₹ in lakh)

Asset I			
Particulars	2011-12	2012-13	2013-14
Depreciation	412.00	852.51	868.57
Interest on Loan	465.36	909.37	852.90
Return on equity	408.78	845.81	861.70
Interest on Working Capital	30.17	61.56	61.61
O & M Expenses	93.43	197.55	208.80
Total	1409.74	2866.80	2853.57

(₹ in lakh)

Asset II			
Particulars	2011-12	2012-13	2013-14
Depreciation	71.07	157.79	174.44
Interest on Loan	122.29	257.74	270.32
Return on equity	105.13	229.58	252.71
Interest on Working Capital	7.37	15.85	17.07
O & M Expenses	29.29	61.92	65.46
Total	335.15	722.88	780.00

(₹ in lakh)

Asset IV			
Particulars	2011-12	2012-13	2013-14
Depreciation	129.58	321.56	341.97
Interest on Loan	153.00	361.64	355.88
Return on equity	128.70	319.32	339.42
Interest on Working Capital	16.92	38.43	40.17
O & M Expenses	181.57	383.88	405.84
Total	609.78	1424.83	1483.29

Filing fee and publication expenses

44. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009 applicable for the tariff period 2009-14, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

Licence fee

45. The petitioner has submitted that in O&M expenses norms for tariff block 2009-14, the cost associated with licence fees had not been captured and the licence fee may be allowed to be recovered separately from the respondents. We have considered the submissions of the petitioner. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

Service tax

46. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. We consider petitioner's prayer premature and accordingly this prayer is rejected.

Sharing of transmission charges

47. The petitioner has submitted that the transmission tariff shall be shared by Gujarat, Maharashtra, Punjab, Rajasthan, and Haryana in ratio of their allocated power from Mundra UMPP as mentioned in BPTA, and shall be recovered on monthly basis in accordance with Regulation 23 of the 2009 Tariff Regulations. JVVNL, AVVNL and Jd.VVNL in their respective affidavits have submitted that the all the beneficiaries in this petition are not signatories to the Bulk Power Transmission Agreement (BPTA). PSPCL in its affidavit has submitted that in case respondents other than GUVNL have agreed to the BPTA, the necessary documents should be supplied by the petitioner.

48. We have considered the submissions of the petitioner and all the respondents. The billing, collection and disbursement of the transmission charges 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.

49. This order disposes of Petition No. 105/TT/2011.

(M. Deena Dayalan)
Member

(S. Jayaraman)
Member

Annexure I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
		Asset I		
		(₹ in lakh)		
	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67
	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	8.90	8.90	8.53
	Rep Schedule	12 annual installments from 25.02.2014		
2	Bond XXXIII			
	Gross loan opening	9823.00	9823.00	9823.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	9823.00	9823.00	9823.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	9823.00	9823.00	9823.00
	Average Loan	9823.00	9823.00	9823.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	848.71	848.71	848.71
	Rep Schedule	12 annual installments from 08.07.2014		
3	Bond XXXIV			
	Gross loan opening	170.00	170.00	170.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	170.00	170.00	170.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	170.00	170.00	170.00
	Average Loan	170.00	170.00	170.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	15.03	15.03	15.03
	Rep Schedule	12 annual installments from 21.10.2014		
4	Bond XXX			

	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67
	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	8.80	8.80	8.43
	Rep Schedule	12 annual installments from 29.09.2013		
5	Bond XXIX			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	8.33
	Net Loan-Closing	100.00	91.67	83.33
	Average Loan	100.00	95.83	87.50
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	9.20	8.82	8.05
	Rep Schedule	12 annual installments from 12.03.2013		
6	Bond XXXII			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67
	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	8.84	8.84	8.47
	Rep Schedule	12 annual installments from 29.03.2014		
7	Bond XXXV			
	Gross loan opening	200.00	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	200.00	200.00	200.00
	Additions during the year	0.00	0.00	0.00

	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	200.00	200.00	200.00
	Average Loan	200.00	200.00	200.00
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	19.28	19.28	19.28
	Rep Schedule	12 annual installments from 31.05.2015		
8	Bond XXXVI			
	Gross loan opening	175.78	175.78	175.78
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	175.78	175.78	175.78
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	175.78	175.78	175.78
	Average Loan	175.78	175.78	175.78
	Rate of Interest	9.35%	9.35%	9.35%
	Interest	16.44	16.44	16.44
	Rep Schedule	12 annual installments from 29.08.2016		
9	Bond XXXVII			
	Gross loan opening	0.00	329.90	329.90
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	329.90	329.90
	Additions during the year	329.90	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	329.90	329.90	329.90
	Average Loan	164.95	329.90	329.90
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	15.26	30.52	30.52
	Rep Schedule	12 annual installments from 26.12.2015		
	Total Loan			
	Gross loan opening	10768.78	11098.68	11098.68
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	10768.78	11098.68	11090.35
	Additions during the year	329.90	0.00	0.00
	Repayment during the year	0.00	8.33	33.33
	Net Loan-Closing	11098.68	11090.35	11057.01
	Average Loan	10933.73	11094.51	11073.68
	Rate of Interest	8.6928%	8.7009%	8.7004%
	Interest	950.45	965.32	963.45

Annexure II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
		Asset II		(₹ in lakh)
	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67
	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	8.90	8.90	8.53
	Rep Schedule	12 annual installments from 25.02.2014		
2	Bond XXXIII			
	Gross loan opening	1874.00	1874.00	1874.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1874.00	1874.00	1874.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1874.00	1874.00	1874.00
	Average Loan	1874.00	1874.00	1874.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	161.91	161.91	161.91
	Rep Schedule	12 annual installments from 08.07.2014		
3	Bond XXXIV			
	Gross loan opening	36.00	36.00	36.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	36.00	36.00	36.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	36.00	36.00	36.00
	Average Loan	36.00	36.00	36.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	3.18	3.18	3.18
	Rep Schedule	12 annual installments from 21.10.2014		
4	Bond XXX			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67

	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	8.80	8.80	8.43
	Rep Schedule	12 annual installments from 29.09.2013		
5	Bond XXIX			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	8.33
	Net Loan-Closing	100.00	91.67	83.33
	Average Loan	100.00	95.83	87.50
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	9.20	8.82	8.05
	Rep Schedule	12 annual installments from 12.03.2013		
6	Bond XXXII			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33
	Net Loan-Closing	100.00	100.00	91.67
	Average Loan	100.00	100.00	95.83
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	8.84	8.84	8.47
	Rep Schedule	12 annual installments from 29.03.2014		
7	Bond XXXV			
	Gross loan opening	200.00	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	200.00	200.00	200.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	200.00	200.00	200.00
	Average Loan	200.00	200.00	200.00
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	19.28	19.28	19.28
	Rep Schedule	12 annual installments from 31.05.2015		
8	Bond XXXVI			

	Gross loan opening	176.43	176.43	176.43
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	176.43	176.43	176.43
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	176.43	176.43	176.43
	Average Loan	176.43	176.43	176.43
	Rate of Interest	9.35%	9.35%	9.35%
	Interest	16.50	16.50	16.50
	Rep Schedule	12 annual installments from 29.08.2016		
9	Bond XXXVII			
	Gross loan opening	0.00	240.18	240.18
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	240.18	240.18
	Additions during the year	240.18	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	240.18	240.18	240.18
	Average Loan	120.09	240.18	240.18
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	11.11	22.22	22.22
	Rep Schedule	12 annual installments from 26.12.2015		
	Total Loan			
	Gross loan opening	2686.43	2926.61	2926.61
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	2686.43	2926.61	2918.28
	Additions during the year	240.18	0.00	0.00
	Repayment during the year	0.00	8.33	33.33
	Net Loan-Closing	2926.61	2918.28	2884.94
	Average Loan	2806.52	2922.44	2901.61
	Rate of Interest	8.8266%	8.8435%	8.8424%
	Interest	247.72	258.45	256.57

Annexure III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
		Asset IV		
		(₹ in lakh)		
	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	125.00	125.00	125.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	125.00	125.00	125.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	10.42
	Net Loan-Closing	125.00	125.00	114.58
	Average Loan	125.00	125.00	119.79
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	11.13	11.13	10.66
	Rep Schedule	12 annual installments from 25.02.2014		
2	Bond XXXIII			
	Gross loan opening	1377.00	1377.00	1377.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1377.00	1377.00	1377.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1377.00	1377.00	1377.00
	Average Loan	1377.00	1377.00	1377.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	118.97	118.97	118.97
	Rep Schedule	12 annual installments from 08.07.2014		
3	Bond XXX			
	Gross loan opening	125.00	125.00	125.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	125.00	125.00	125.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	10.42
	Net Loan-Closing	125.00	125.00	114.58
	Average Loan	125.00	125.00	119.79
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	11.00	11.00	10.54
	Rep Schedule	12 annual installments from 29.09.2013		
4	Bond XXIX			

	Gross loan opening	125.00	125.00	125.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	10.42
	Net Loan-Opening	125.00	125.00	114.58
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	10.42	10.42
	Net Loan-Closing	125.00	114.58	104.17
	Average Loan	125.00	119.79	109.38
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	11.50	11.02	10.06
	Rep Schedule	12 annual installments from 12.03.2013		
5	Bond XXXII			
	Gross loan opening	75.00	75.00	75.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	75.00	75.00	75.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	6.25
	Net Loan-Closing	75.00	75.00	68.75
	Average Loan	75.00	75.00	71.88
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	6.63	6.63	6.35
	Rep Schedule	12 annual installments from 29.03.2014		
6	Bond XXXV			
	Gross loan opening	974.64	974.64	974.64
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	974.64	974.64	974.64
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	974.64	974.64	974.64
	Average Loan	974.64	974.64	974.64
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	93.96	93.96	93.96
	Rep Schedule	12 annual installments from 31.05.2015		
7	Bond XXXVII			
	Gross loan opening	0.00	1313.66	1313.66
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	1313.66	1313.66
	Additions during the year	1313.66	0.00	0.00
	Repayment during the year	0.00	0.00	0.00

	Net Loan-Closing	1313.66	1313.66	1313.66
	Average Loan	656.83	1313.66	1313.66
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	60.76	121.51	121.51
	Rep Schedule	12 annual installments from 26.12.2015		
	Total Loan			
	Gross loan opening	2801.64	4115.30	4115.30
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	10.42
	Net Loan-Opening	2801.64	4115.30	4104.88
	Additions during the year	1313.66	0.00	0.00
	Repayment during the year	0.00	10.42	37.50
	Net Loan-Closing	4115.30	4104.88	4067.38
	Average Loan	3458.47	4110.09	4086.13
	Rate of Interest	9.0774%	9.1048%	9.1055%
	Interest	313.94	374.22	372.06