

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No.268/2010**

**Coram: Shri S.Jayaraman, Member  
Shri V.S.Verma, Member  
Shri M.Deena Dayalan, Member**

**Date of Hearing: 24.2.2011**

**Date of Order: 4.4.2011**

**In the matter of**

Determination of transmission tariff for assets of Northern Region System Strengthening Scheme-III in Northern Region for the period from 1.4.2009 to 31.3.2014.

**And**

**In the matter of**

Power Grid Corporation of India Limited, Gurgaon

**..Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Jaipur
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Delhi Transco Ltd, New Delhi
11. BSES Yamuna Power Limited, New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi

**.....Respondents**

**The following were present:**

1. Shri M.M. Mondal, PGCIL
2. Shri Rajiv Gupta, PGCIL
3. Shri S. Raju, PGCIL



## ORDER

The petition has been filed for determination of transmission tariff for assets (hereinafter collectively referred to as 'the transmission assets') of Northern Region System Strengthening Scheme-III (hereinafter referred to as 'the transmission scheme') in Northern Region for the period from 1.4.2009 to 31.3.2014, in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 regulations") after accounting for additional capital expenditure incurred/projected to be incurred during 2009-10 and 2010-11. The petitioner has made the following additional prayers:-

- (a) Allow grossing up of base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between the generating company/transmission licensee and the beneficiaries/long-term transmission customers on year to years basis;
- (b) In case of the assets being combined to calculate the transmission charges, allow to recover full depreciation (90% of the gross block) of the asset during its useful life (25 years for sub-station and 35 years for transmission lines) reckoning from its actual date of the commercial operation and also permit to treat the recovery in accordance with para 7.3 of the petition;



- (c) To approve reimbursement of petition filing fee and publication of notices in the newspaper as per the 2009 regulations;
- (d) Allow to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2009-14, if any from the beneficiaries;
- (d) Allow to bill and recover the service tax on transmission charges separately from the respondents, if at any time exemption from service tax is withdrawn and transmission is notified as a taxable service; and
- (e) Allow reimbursement of licence fee separately from the respondents.

2. The investment approval for implementation of transmission scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 13.7.2004 at an estimated cost of ₹23052 lakh, which included IDC of ₹1477 lakh. Subsequently, the approval for revised cost estimate was accorded by Board of Directors vide Memorandum dated 26.2.2008 at an estimated cost of ₹ 32690 lakh which included IDC of ₹1826 lakh.

3. The annual transmission charges up to 31.3.2009 in respect of the transmission scheme were approved vide orders dated 15.2.2010 and 18.6.2010 in Petition Nos. 163/2009 and 65/2010, respectively.



4. The details of transmission assets and their date of commercial operation are as under:

Assets	Name of transmission assets	Date of commercial operation
<b>Asset-I</b>	(a) 50 MVAR Bus Reactor at Hissar sub-station	1.7.2007
	(b) LILO of 400 kV Moga-Hissar line, ICT-I at Fatehabad sub-station, 4 Nos. 220kV line bays (feeders from Fatehabad-1 and Fatehabad-2) and 50 MVAR Bus Reactor bay along with associated bays at Fatehabad sub-station.	1.2.2008
	(c) Total Upstream System including Malerkotla-Ludhiana-Jalandhar transmission line along with associated bays at Ludhiana sub-station, Malerkotla sub-station.	1.6.2008
<b>Asset-II</b>	(a) ICT-I along with associated bays at Ludhiana sub-station.	1.6.2008
	(b) ICT-II along with associated bays at Ludhiana sub-station.	1.7.2008
<b>Asset-III</b>	315 MVA, 400/220kV ICT-II along with associated bays at 400/220kV Fatehabad sub-station.	1.4.2008

5. In accordance with the decision of the Commission in the letter No.C-7/189(204)/2009-CERC, dated 23.10.2009, the transmission assets have been clubbed for the purpose of determination of transmission charges. Accordingly, the following combined assets and their notional date of commercial operation have been considered for determination of transmission tariff in this petition:

Assets	Name of transmission assets	Notional date of commercial operation
<b>Asset-I</b>	(a) 50 MVAR Bus Reactor at Hissar sub-station.	1.6.2008
	(b) LILO of 400 kV Moga-Hissar line, ICT-I at Fatehabad sub-station, 4 Nos. 220kV line bays (feeders from Fatehabad-1 and Fatehabad-2) and 50 MVAR Bus Reactor bay along with associated bays at Fatehabad sub-station.	

	(c) Total Upstream System including Malerkotla-Ludhiana-Jalandhar transmission line along with associated bays at Ludhiana sub-station, Malerkotla sub-station.	
<b>Asset-II</b>	(a) ICT-I along with associated bays at Ludhiana sub-station.	1.7.2008
	(b) ICT-II along with associated bays at Ludhiana sub-station.	
<b>Asset-III</b>	315 MVA, 400/220 kV ICT-II along with associated bays at 400/220 kV Fatehabad sub-station.	1.4.2008

6. The details of apportioned approved cost, capital cost as on 31.3.2009 and projected additional capital expenditure etc. of the transmission assets are as under:

(₹ in lakh)

	Apportioned approved cost as on 31.3.2009	Admitted capital cost as on 31.3.2009	Projected capital expenditure incurred during 2009-10	Projected capital expenditure during 2010-11	Total estimated capital expenditure
Asset-I	22989.88	20709.59	884.14	627.01	22220.74
Asset-II	7359.80	6122.58	143.58	511.32	6777.48
Asset-III	2340.65	1007.42	248.82	122.32	1378.56

7. The petitioner has claimed the transmission charges as under:

(₹ in lakh)

	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1081.60	1111.01	1126.64	1126.64	1126.64
Interest on Loan	1268.01	1214.82	1131.99	1027.22	922.55
Return on Equity	1109.26	1148.88	1165.32	1165.32	1165.32
Interest on Working Capital	110.55	113.08	114.35	114.62	115.04
O & M Expenses	768.87	812.83	859.39	908.53	960.45
<b>Total</b>	<b>4338.29</b>	<b>4400.62</b>	<b>4397.69</b>	<b>4342.33</b>	<b>4290.00</b>
	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	288.94	305.18	318.20	318.20	318.20
Interest on Loan	376.27	369.88	357.66	328.10	298.53
Return on Equity	324.75	341.92	355.33	355.33	355.33
Interest on Working Capital	36.88	38.38	39.66	40.08	40.56
O & M Expenses	324.88	343.48	363.14	383.88	405.84
<b>Total</b>	<b>1351.72</b>	<b>1398.84</b>	<b>1433.99</b>	<b>1425.59</b>	<b>1418.46</b>

	Asset-III				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	59.76	69.56	72.79	72.79	72.79
Interest on Loan	66.71	72.42	69.82	63.11	56.43
Return on Equity	59.36	69.09	72.29	72.29	72.29
Interest on Working Capital	8.33	9.11	9.46	9.60	9.77
O & M Expenses	89.08	94.18	99.57	105.26	111.28
<b>Total</b>	<b>283.24</b>	<b>314.36</b>	<b>323.93</b>	<b>323.05</b>	<b>322.56</b>

8. The details submitted by the petitioner in support of its claim for Interest on Working Capital are given hereunder:

(₹ in lakh)

	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	115.33	121.92	128.91	136.28	144.07
O & M expenses	64.07	67.74	71.62	75.71	80.04
Receivables	723.05	733.44	732.95	723.72	715.00
<b>Total</b>	<b>902.45</b>	<b>923.10</b>	<b>933.48</b>	<b>935.71</b>	<b>939.11</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>110.55</b>	<b>113.08</b>	<b>114.35</b>	<b>114.62</b>	<b>115.04</b>
	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	48.73	51.52	54.47	57.58	60.88
O & M expenses	27.07	28.62	30.26	31.99	33.82
Receivables	225.29	233.14	239.00	237.60	236.41
<b>Total</b>	<b>301.09</b>	<b>313.28</b>	<b>323.73</b>	<b>327.17</b>	<b>331.11</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>36.88</b>	<b>38.38</b>	<b>39.66</b>	<b>40.08</b>	<b>40.56</b>
	Asset-III				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	47.21	52.39	53.99	53.84	53.76
<b>Total</b>	<b>67.99</b>	<b>74.37</b>	<b>77.23</b>	<b>78.40</b>	<b>79.72</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>8.33</b>	<b>9.11</b>	<b>9.46</b>	<b>9.60</b>	<b>9.77</b>

9. No comments or suggestions have been received from the general public in response to the public notice. The petitioner has published the notices on 8.10.2010 as required under Section 64 of the Electricity Act, 2003 (the Act) read with Regulation 3 (6) of the Central Electricity Regulatory

Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004.

10. Reply to the petition has been filed by Haryana Power Purchase Centre (HPPC). HPPC has raised the issue of floating interest rate and licence fee. The issues have been addressed in relevant paras of this order.

### **CAPITAL COST**

11. The Last proviso to clause (2) of Regulation 7 of the 2009 regulations provides as under:

*“In case of the existing projects, capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14 as may be admitted by the Commission, shall form the basis for determination of tariff”.*

12. The petitioner has claimed the tariff after accounting for additional capital expenditure as under:

(₹ in lakh)

	Admitted capital cost as on 31.3.2009	Projected capital expenditure incurred during 2009-10	Projected capital expenditure incurred during 2010-11	Total estimated capital expenditure
Asset-I	20709.59	884.14	627.01	22220.74
Asset-II	6122.58	143.58	511.32	6777.48
Asset-III	1007.42	248.82	122.32	1378.56

### **ADDITIONAL CAPITAL EXPENDITURE**

13. Regulation 9 of the 2009 regulations provides as under:

*“(1) The capital expenditure incurred or projected to be incurred, on the following counts with in 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 regulating 8 ;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law;

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

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

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (ii) Change in law;
- (iii) \*\*\*\*\*
- (iv) \*\*\*\*\*
- (v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of the transmission system."

14. The details submitted by the petitioner in support of its claim for projected additional capital expenditure for the transmission assets is given hereunder:

	Years	Nature and details of expenditure	Amount (₹ in lakh)	
Asset-I	2009-10	Freehold land - Balance and retention payments	340.02	
		Building- Balance and retention payments	69.94	
		Transmission line - Balance and retention payments	247.03	
		Sub-station- Balance and retention payments	209.44	
		Power Line Carrier Communication - Balance and retention payments	17.71	
	2010-11	Building and civil work- Balance and retention payments	95.42	
		Transmission line - Balance and retention payments	6.34	
		Sub-station - Balance and retention payments	525.25	
			<b>Total</b>	<b>1511.15</b>



<b>Asset-II</b>	<b>2009-10</b>	<b>Building and civil work-</b> Balance and retention payments	61.86	
		<b>Sub-station</b> - Balance and retention payments.	76.98	
		<b>Power Line Carrier Communication</b> - Balance and retention payments	4.74	
	<b>2010-11</b>	<b>Building and civil work-</b> Balance and retention payments	49.22	
		<b>Sub-station</b> - Balance and retention payments	462.10	
		<b>Total</b>	<b>654.90</b>	
<b>Asset-III</b>	<b>2009-10</b>	<b>Sub-station</b> - Balance and retention payments	248.82	
		<b>2010-11</b>	<b>Sub-station</b> - Balance and retention payments	122.32
		<b>Total</b>	<b>371.14</b>	

15. The petitioner has claimed the additional capital expenditure under Regulation 9 (1) of the 2009 regulations. The petitioner was directed to explain the admissibility of additional capital expenditure incurred during 2009-10 and 2010-11 on account of balance and retention payments. The petitioner has submitted that the projected additional capital expenditure is on account of balance and retention payments and is within the original scope of work under deferred liabilities in terms of Regulations 9 (1) of the 2009 regulations.

16. In regard to admissibility of undischarged liabilities, it is observed that the cut off date of the transmission assets reckoned from the notional date of commercial operation as per the 2004 tariff regulations is 31.3.2009. As such the expenditure projected to be incurred during 2009-10 and 2010-11 are beyond the cut off date for which there is no provision in Regulation 9 (2) of the 2009 regulations. We have decided in our order dated 8.2.2011 in Petition No. 176/2010 to relax Regulation 9 (2) of the 2009 regulations to admit the expenditure incurred after the cut-off date, particularly the expenditure pertaining to balance and retention payments. Accordingly,

the expenditure projected to be incurred during 2009-10 and 2010-11 is allowed by relaxing the provisions of Regulation 9 (2) of the 2009 regulations.

### **TOTAL CAPITAL COST**

17. Based on the above, gross block as given below, has been considered for the purpose of tariff for the transmission assets, after allowing projected additional capital expenditure on works as claimed by the petitioner:

	(₹ in lakh)			
	Admitted capital cost as on 31.3.2009	Projected capital expenditure incurred during 2009-10	Projected capital expenditure incurred during 2010-11	Total estimated capital expenditure
Asset-I	20709.59	884.14	627.01	22220.74
Asset-II	6122.58	143.58	511.32	6777.48
Asset-III	1007.42	248.82	122.32	1378.56

### **DEBT- EQUITY RATIO**

18. Clause (2) of Regulation 12 of the 2009 regulations *inter-alia* provides that,-

*“(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.”*

19. The petitioner has claimed tariff based on debt-equity ratio of 70:30 for Asset-I and Asset-III and 70.01:29.99 for Asset-II as admitted on 31.3.2009 vide order dated 15.2.2010 and 18.6.2010 in Petition 163/2009 and 65/2010, respectively. The petitioner has further claimed the amount of additional capital expenditure in the debt-equity ratio of 70:30 for the year 2009-10 and

2010-11. For the purpose of tariff, equity considered for the transmission assets is as under:

(₹ in lakh)

Assets	Equity as on 1.4.2009	Notional equity due to additional capital expenditure for the period 2009-10	Average equity for 2009-10	Notional equity due to additional capital expenditure for the period 2010-11	Average equity for 2010-11	Notional equity due to additional capital expenditure for the period 2011-14	Average equity for 2011-14
Asset-I	6212.88	265.24	6345.50	188.10	6572.17	0.00	6666.22
Asset-II	1836.20	43.07	1857.73	153.40	1955.97	0.00	2032.67
Asset-III	302.23	74.65	339.55	36.70	395.22	0.00	413.57

### RETURN ON EQUITY

20. Regulation 15 of the 2009 regulations provides that,-

*"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% to 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 normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:*

*Provided that return on equity with respect to the actual 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 separately for each year of the tariff period along with the tariff petition filed for the next tariff period.*

*(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."*

21. The petitioner has requested to allow grossing up of base rate of return with the applicable tax as per the Finance Act for the relevant year and direct settlement of tax liability between the generating company/transmission licensee and the beneficiaries/long-term transmission customers on year to years basis. It is clarified that the Commission is in the process of amending the regulation to allow grossing up of the ROE as per the applicable MAT rate in accordance with the relevant Finance Act which would take care of the interest of the petitioner. Accordingly, the return on equity has been computed in terms of the existing provision of Regulation 15 (3) of 2009 regulation as under:

(₹ in lakh)

	Asset-I				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity as on 1.4.2009	6212.88	6478.12	6666.22	6666.22	6666.22
Addition due to Additional Capitalisation	265.24	188.10	0.00	0.00	0.00
Closing Equity	6478.12	6666.22	6666.22	6666.22	6666.22
Average Equity	6345.50	6572.17	6666.22	6666.22	6666.22
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>1109.26</b>	<b>1148.88</b>	<b>1165.32</b>	<b>1165.32</b>	<b>1165.32</b>
	Asset-II				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity as on 1.4.2009	1836.20	1879.27	2032.67	2032.67	2032.67
Addition due to Additional Capitalisation	43.07	153.40	0.00	0.00	0.00
Closing Equity	1879.27	2032.67	2032.67	2032.67	2032.67
Average Equity	1857.73	1955.97	2032.67	2032.67	2032.67
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>324.75</b>	<b>341.92</b>	<b>355.33</b>	<b>355.33</b>	<b>355.33</b>
	Asset-III				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity as on 1.4.2009	302.23	376.88	413.57	413.57	413.57
Addition due to Additional	74.65	36.70	0.00	0.00	0.00

Capitalisation					
Closing Equity	376.88	413.57	413.57	413.57	413.57
Average Equity	339.55	395.22	413.57	413.57	413.57
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>59.36</b>	<b>69.09</b>	<b>72.30</b>	<b>72.30</b>	<b>72.30</b>

## **INTEREST ON LOAN**

22. Regulation 16 of the 2009 regulations provides that,-

*"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."*

23. HPPC has suggested that the issue of change in interest due to floating rate of interest applicable on floating interest rate loan may be dealt in the same manner as the issue of change of tax rate as per the relevant Finance Act as decided by the Commission in its order dated 3.8.2010 in Petition No. 38/2010. It is clarified that interest on loan has been calculated on the basis of rate prevailing as on 1.4.2009. Any change in rate of interest subsequent to 1.4.2009 will be considered at the time of truing up.

24. Accordingly, the interest on loan has been worked out as under:

(i) The 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 the petition;

(ii) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that purpose; and

(iii) Weighted average rate of interest on actual average loan has been worked out as per (i) above and applied on the notional average loan during the year to arrive at the interest on loan;

25. The detailed calculations in support of the weighted revised average rate of interest are contained in Annexure-I, Annexure-I and Annexure-I attached to this order. Based on the above, interest on loan has been worked out as under:

(₹ in lakh)

Details of loan	Asset-I					
	Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	14496.71	14496.71	15115.61	15554.52	15554.52	15554.52
Cumulative Repayment up to Previous Year		616.85	1698.46	2809.47	3936.11	5062.75
Net Loan-Opening		13879.86	13417.15	12745.05	11618.41	10491.77
Addition due to Additional Capitalisation		618.90	438.91	0.00	0.00	0.00
Repayment during the year		1081.60	1111.01	1126.64	1126.64	1126.64
Net Loan-Closing		13417.15	12745.05	11618.41	10491.77	9365.13
Average Loan		13648.51	13081.10	12181.73	11055.09	9928.45
Weighted Average Rate of Interest on Loan		9.2905%	9.2868%	9.2925%	9.2919%	9.2920%
<b>Interest</b>		<b>1268.01</b>	<b>1214.81</b>	<b>1131.98</b>	<b>1027.22</b>	<b>922.55</b>
Details of loan	Asset-II					
	Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	4286.38	4286.38	4386.89	4744.81	4744.81	4744.81
Cumulative Repayment up to Previous Year		143.57	432.51	737.69	1055.89	1374.08
Net Loan-Opening		4142.81	3954.38	4007.13	3688.93	3370.73
Addition due to Additional Capitalisation		100.51	357.92	0.00	0.00	0.00
Repayment during the year		288.94	305.18	318.20	318.20	318.20
Net Loan-Closing		3954.38	4007.13	3688.93	3370.73	3052.53
Average Loan		4048.59	3980.75	3848.03	3529.83	3211.63
Weighted Average Rate of Interest on Loan		9.2939%	9.2918%	9.2947%	9.2951%	9.2952%
<b>Interest</b>		<b>376.27</b>	<b>369.88</b>	<b>357.66</b>	<b>328.10</b>	<b>298.53</b>

Details of loan	Asset-III					
	Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	705.19	705.19	879.36	964.99	964.99	964.99
Cumulative Repayment up to Previous Year		36.16	95.92	165.48	238.27	311.06
Net Loan-Opening		669.03	783.44	799.51	726.72	653.93
Addition due to Additional Capitalisation		174.17	85.62	0.00	0.00	0.00
Repayment during the year		59.76	69.56	72.79	72.79	72.79
Net Loan-Closing		783.44	799.51	726.72	653.93	581.14
Average Loan		726.24	791.47	763.11	690.33	617.54
Weighted Average Rate of Interest on Loan		9.1849%	9.1494%	9.1491%	9.1427%	9.1386%
<b>Interest</b>		<b>66.70</b>	<b>72.41</b>	<b>69.82</b>	<b>63.11</b>	<b>56.43</b>

## DEPRECIATION

26. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner:

*"17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

*(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

*xxxx*

*(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(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.*

*(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.*

*(6) 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."*



27. The Asset-I, Asset-II and Asset-III were notionally declared under commercial operation on 1.6.2008, 1.7.2008 and 1.4.2008, respectively and they will complete 12 years beyond 2013-14 and thus, depreciation has been calculated annually based on Straight Line Method and at rate specified in Appendix -III of the 2009 regulations. Accordingly, depreciation has been worked out as under:

( ₹ in lakh)							
Asset-I							
Details of Depreciation		Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per order		20709.59	20709.59	21593.73	22220.74	22220.74	22220.74
Addition during 2009-14 due to projected Additional Capitalisation			884.14	627.01	0.00	0.00	0.00
Gross block as on 31.3.2009			21593.73	22220.74	22220.74	22220.74	22220.74
Average gross block			21151.66	21907.24	22220.74	22220.74	22220.74
Rate of Depreciation			5.1136%	5.0714%	5.0702%	5.0702%	5.0702%
Depreciable Value	90%		18554.74	19081.75	19363.91	19363.91	19363.91
Remaining Depreciable Value			17937.89	17383.29	16554.44	15427.80	14301.16
<b>Depreciation</b>			<b>1081.60</b>	<b>1111.01</b>	<b>1126.64</b>	<b>1126.64</b>	<b>1126.64</b>
Asset-II							
Details of Depreciation		Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per order		6122.58	6122.58	6266.16	6777.48	6777.48	6777.48
Addition during 2009-14 due to projected Additional Capitalisation			143.58	511.32	0.00	0.00	0.00
Gross block as on 31.3.2009			6266.16	6777.48	6777.48	6777.48	6777.48
Average gross block			6194.37	6521.82	6777.48	6777.48	6777.48
Rate of Depreciation			4.6645%	4.6793%	4.6949%	4.6949%	4.6949%
Depreciable Value	90%		5048.36	5343.07	5573.16	5573.16	5573.16
Remaining Depreciable Value			4904.79	4910.55	4835.47	4517.27	4199.08
<b>Depreciation</b>			<b>288.94</b>	<b>305.18</b>	<b>318.20</b>	<b>318.20</b>	<b>318.20</b>
Asset-III							
Details of Depreciation		Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per order		1007.42	1007.42	1256.24	1378.56	1378.56	1378.56
Addition during 2009-14 due to projected Additional Capitalisation			248.82	122.32	0.00	0.00	0.00
Gross block as on 31.3.2009			1256.24	1378.56	1378.56	1378.56	1378.56
Average gross block			1131.83	1317.40	1378.56	1378.56	1378.56
Rate of Depreciation			5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	90%		1018.65	1185.66	1240.70	1240.70	1240.70
Remaining Depreciable Value			982.49	1089.74	1075.22	1002.44	929.65
<b>Depreciation</b>			<b>59.76</b>	<b>69.56</b>	<b>72.79</b>	<b>72.79</b>	<b>72.79</b>

## OPERATION & MAINTENANCE EXPENSES

28. In accordance with clause (g) of Regulation 19 the 2009 regulations, the following norms for transmission assets are prescribed for O & M expenses:

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C, twin conductor transmission line (₹ in lakh/per ckt.km.)	0.627	0.663	0.701	0.741	0.783
400 kV S/C, twin conductor transmission line (₹ in lakh/per ckt.km.)	0.358	0.378	0.400	0.423	0.447
400 kV bay (₹ in lakh per bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ in lakh per bay)	36.68	38.78	41.00	43.34	45.82

29. The petitioner's entitlement to O & M expenses has been worked out as given hereunder:

### **Asset-I**

(₹ in lakh)

Year	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses for 400 kV D/C, twin conductor transmission line (29.226 ckt/km)	18.32	19.38	20.49	21.66	22.88
O&M expenses for 400 kV S/C, twin conductor transmission line (120.505 ckt/km)	43.14	45.55	48.20	50.97	53.87
O&M expenses for 400 kV ( 10 bays)	524.00	554.00	585.70	619.20	654.60
M expenses for 220 kV ( 5 bays)	183.40	193.90	205.00	216.70	229.10
<b>Total</b>	<b>768.87</b>	<b>812.83</b>	<b>859.39</b>	<b>908.53</b>	<b>960.45</b>

### **Asset-II**

(₹ in lakh)

Year	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses for 400 kV ( 2 bays)	104.80	110.80	117.14	123.84	130.92
M expenses for 220 kV ( 5 bays)	220.08	232.68	246.00	260.04	274.92
<b>Total</b>	<b>324.88</b>	<b>343.48</b>	<b>363.14</b>	<b>383.88</b>	<b>405.84</b>

### **Asset-III**

(₹ in lakh)

Year	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses for 400 kV ( 2 bays)	52.40	55.40	58.57	61.92	65.46
M expenses for 220 kV ( 5 bays)	36.68	38.78	41.00	43.34	45.82
<b>Total</b>	<b>89.08</b>	<b>94.18</b>	<b>99.57</b>	<b>105.26</b>	<b>112.28</b>

30. The petitioner has submitted that the compensation of 50% on account of pay revision of the employees of public sector undertaking considered under the O & M charges for 2009-14 periods may not be sufficient to meet the impact of pay revision. The petitioner has further submitted that it would approach the Commission for suitable revision in the norms of O & M expenses in case the impact of wage hike w.e.f. 1.1.2007 is more than 50%. With reference to the submission of the petitioner, it is clarified that if any such application is made, it will be dealt with in accordance with law.

#### **INTEREST ON WORKING CAPITAL**

31. 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 regulations, receivables will be equivalent to two months of annual transmission charges. The petitioner has claimed the receivables on the basis of 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.

(ii) **Maintenance spares:** Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses specified in Regulation 19 of the 2009 regulations. The value of maintenance spares has been accordingly worked out.

(iii) **O & M expenses:** Regulation 18(1)(c)(iii) of the 2009 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 O&M expenses of the respective year which has been considered for computing the working capital.

(iv) **Rate of interest on working capital:** As per Regulation 18(3) of the 2009 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

32. The necessary computations in support of Interest on Working Capital are given as under:

(₹ in lakh)					
	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	115.33	121.92	128.91	136.28	144.07
O & M expenses	64.07	67.74	71.62	75.71	80.04
Receivables	723.05	733.44	732.95	723.72	715.00
<b>Total</b>	<b>902.45</b>	<b>923.10</b>	<b>933.47</b>	<b>935.71</b>	<b>939.11</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>110.55</b>	<b>113.08</b>	<b>114.35</b>	<b>114.62</b>	<b>115.04</b>
	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	48.73	51.52	54.47	57.58	60.88
O & M expenses	27.07	28.62	30.26	31.99	33.82

Receivables	225.29	233.14	239.00	237.60	236.41
<b>Total</b>	<b>301.09</b>	<b>313.29</b>	<b>323.73</b>	<b>327.17</b>	<b>331.11</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>36.88</b>	<b>38.38</b>	<b>39.66</b>	<b>40.08</b>	<b>40.56</b>
	<b>Asset-III</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	47.21	52.39	53.99	53.84	53.76
<b>Total</b>	<b>67.99</b>	<b>74.37</b>	<b>77.22</b>	<b>78.40</b>	<b>79.73</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>8.33</b>	<b>9.11</b>	<b>9.46</b>	<b>9.60</b>	<b>9.77</b>

### TRANSMISSION CHARGES

33. The transmission charges being allowed for the transmission asset are summarised below:

(₹ in lakh)

	<b>Asset-I</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	1081.60	1111.01	1126.64	1126.64	1126.64
Interest on Loan	1268.01	1214.81	1131.98	1027.22	922.55
Return on Equity	1109.26	1148.88	1165.32	1165.32	1165.32
Interest on Working Capital	110.55	113.08	114.35	114.62	115.04
O & M Expenses	768.87	812.83	859.39	908.53	960.45
<b>Total</b>	<b>4338.29</b>	<b>4400.62</b>	<b>4397.69</b>	<b>4342.34</b>	<b>4290.00</b>
	<b>Asset-II</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	288.94	305.18	318.20	318.20	318.20
Interest on Loan	376.27	369.88	357.66	328.10	298.53
Return on Equity	324.75	341.92	355.33	355.33	355.33
Interest on Working Capital	36.88	38.38	39.66	40.08	40.56
O & M Expenses	324.88	343.48	363.14	383.88	405.84
<b>Total</b>	<b>1351.72</b>	<b>1398.84</b>	<b>1433.99</b>	<b>1425.59</b>	<b>1418.46</b>
	<b>Asset-III</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	59.76	69.56	72.79	72.79	72.79
Interest on Loan	66.70	72.41	69.82	63.11	56.43
Return on Equity	59.36	69.09	72.30	72.30	72.30
Interest on Working Capital	8.33	9.11	9.46	9.60	9.77
O & M Expenses	89.08	94.18	99.57	105.26	111.28
<b>Total</b>	<b>283.23</b>	<b>314.35</b>	<b>323.93</b>	<b>323.06</b>	<b>322.57</b>

**Application fee and the publication expenses**

34. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of transmission tariff. In accordance with our decision in order dated 11.9.2008 in Petition No. 129/2005 (*Suo motu*), the petitioner shall be entitled to recover the filing fee from the respondents on *pro rata* basis. The petitioner shall also be entitled for reimbursement from the beneficiaries on *pro rata* basis the publication expenses for issuing public notice in connection with the present petition under Section 64 of the Act.

#### **Service Tax**

35. The petitioner has prayed to allow to bill and recover the service tax on transmission charges separately from the respondents, if at any time exemption from service tax is withdrawn and transmission is notified as a taxable service. We have already decided in our order dated 23.9.2010 in Petition No. 62/2009 that the petitioner is exempted from service tax as per the extant policy of the Government of India. Therefore, the prayer of the petitioner no more survives and is accordingly is rejected.

#### **Licence fee**

36. The petitioner has submitted that licence fee is a new component of cost to the transmission licensee and has become incidental to the petitioner with effect from 2008-09. The normative O & M rates in the 2009 regulations do not capture the cost associated with the licence fee and therefore it should be allowed to be recovered from the respondents. HPPC has submitted

that licence fee is the onus of the licensee therefore, it should not be passed on to the beneficiaries. In this regard, it is clarified that the matter is under consideration of the Commission and any decision on the issue as and when taken will be applicable to this petition.

37. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondents in accordance with Regulation 33 of the 2009 regulations.

38. This order disposes of Petition No. 268/2010.

**Sd/-**  
**(M.Deena Dayalan)**  
**Member**

**Sd/-**  
**(V.S.Verma)**  
**Member**

**Sd/-**  
**(S.Jayaraman)**  
**Member**



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

**Asset-I**

**Annexure-I**

		(₹ in lakh)				
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Bond XX</b>					
	Gross loan opening	4600.00	4600.00	4600.00	4600.00	4600.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	383.33	766.67	1150.00
	Net Loan-Opening	4600.00	4600.00	4216.67	3833.33	3450.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	383.33	383.33	383.33	383.33
	Net Loan-Closing	4600.00	4216.67	3833.33	3450.00	3066.67
	Average Loan	4600.00	4408.33	4025.00	3641.67	3258.33
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	410.78	393.66	359.43	325.20	290.97
	Rep Schedule	12 Annual instalments from 07.09.2010				
<b>2</b>	<b>Bond XXI</b>					
	Gross loan opening	667.00	667.00	667.00	667.00	667.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	55.58	111.17	166.75
	Net Loan-Opening	667.00	667.00	611.42	555.83	500.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	55.58	55.58	55.58	55.58
	Net Loan-Closing	667.00	611.42	555.83	500.25	444.67
	Average Loan	667.00	639.21	583.63	528.04	472.46
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	58.23	55.80	50.95	46.10	41.25
	Rep Schedule	12 Annual instalments from 11.10.2010				
<b>3</b>	<b>Bond XXII</b>					
	Gross loan opening	1505.00	1505.00	1505.00	1505.00	1505.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	125.42	250.83	376.25
	Net Loan-Opening	1505.00	1505.00	1379.58	1254.17	1128.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	125.42	125.42	125.42	125.42
	Net Loan-Closing	1505.00	1379.58	1254.17	1128.75	1003.33
	Average Loan	1505.00	1442.29	1316.88	1191.46	1066.04
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	130.63	125.19	114.30	103.42	92.53
	Rep Schedule	12 Annual Instalments from 7.12.2010				
<b>4</b>	<b>Bond XXIV</b>					
	Gross loan opening	1328.00	1328.00	1328.00	1328.00	1328.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	110.67	221.33	332.00
	Net Loan-Opening	1328.00	1328.00	1217.33	1106.67	996.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	110.67	110.67	110.67	110.67





	Net Loan-Closing	1328.00	1217.33	1106.67	996.00	885.33
	Average Loan	1328.00	1272.67	1162.00	1051.33	940.67
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	132.14	126.63	115.62	104.61	93.60
	Rep Schedule	12 Annual instalments from 26.03.2010				
<b>5</b>	<b>Bond XXV</b>					
	Gross loan opening	2659.00	2659.00	2659.00	2659.00	2659.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	221.58	443.17
	Net Loan-Opening	2659.00	2659.00	2659.00	2437.42	2215.83
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	221.58	221.58	221.58
	Net Loan-Closing	2659.00	2659.00	2437.42	2215.83	1994.25
	Average Loan	2659.00	2659.00	2548.21	2326.63	2105.04
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	268.56	268.56	257.37	234.99	212.61
	Rep Schedule	12 Annual instalments from 12.06.2011				
<b>6</b>	<b>Bond XXVI</b>					
	Gross loan opening	2771.00	2771.00	2771.00	2771.00	2771.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	230.92	461.83
	Net Loan-Opening	2771.00	2771.00	2771.00	2540.08	2309.17
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	230.92	230.92	230.92
	Net Loan-Closing	2771.00	2771.00	2540.08	2309.17	2078.25
	Average Loan	2771.00	2771.00	2655.54	2424.63	2193.71
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	257.70	257.70	246.97	225.49	204.01
	Rep Schedule	12 Annual instalments from 07.03.2012				
<b>7</b>	<b>STBL from BOB 29.09.2008 to 14.12.2008 @12.5% replaced by BOND XXVIII @ 9.33% from 15.12.2008 (Add Cap for 2008-09)</b>					
	Gross loan opening	939.12	939.12	939.12	939.12	939.12
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	78.26
	Net Loan-Opening	939.12	939.12	939.12	939.12	860.86
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	78.26	78.26
	Net Loan-Closing	939.12	939.12	939.12	860.86	782.60
	Average Loan	939.12	939.12	939.12	899.99	821.73
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	87.62	87.62	87.62	83.97	76.67
	Rep Schedule	12 Annual instalments from 15.12.2012				
<b>8</b>	<b>Bond XXX (Add Cap for 2009-10 Drawl on 31.03.2010)</b>					
	Gross loan opening	0.00	403.19	403.19	403.19	403.19
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	403.19	403.19	403.19	403.19
	Additions during the year	403.19	0.00	0.00	0.00	0.00



	Repayment during the year	0.00	0.00	0.00	0.00	33.60
	Net Loan-Closing	403.19	403.19	403.19	403.19	369.59
	Average Loan	201.60	403.19	403.19	403.19	386.39
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	17.74	35.48	35.48	35.48	34.00
	Rep Schedule	12 Annual instalments from 29.09.2013				
<b>9</b>	<b>Bond XXXI (Add Cap for 2009-10 Drwal on 31.03.2010)</b>					
	Gross loan opening	0.00	215.70	215.70	215.70	215.70
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	215.70	215.70	215.70	215.70
	Additions during the year	215.70	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	17.98
	Net Loan-Closing	215.70	215.70	215.70	215.70	197.73
	Average Loan	107.85	215.70	215.70	215.70	206.71
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	9.60	19.20	19.20	19.20	18.40
	Rep Schedule	12 Annual instalments from 25.02.2014				
	<b>Total Loan</b>					
	Gross loan opening	14469.12	15088.01	15088.01	15088.01	15088.01
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	675.00	1802.50	3008.26
	Net Loan-Opening	14469.12	15088.01	14413.01	13285.51	12079.75
	Additions during the year	618.89	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	675.00	1127.50	1205.76	1257.33
	Net Loan-Closing	15088.01	14413.01	13285.51	12079.75	10822.42
	Average Loan	14778.57	14750.51	13849.26	12682.63	11451.08
	<b>Weighted Average Rate of Interest</b>	<b>9.2905%</b>	<b>9.2868%</b>	<b>9.2925%</b>	<b>9.2919%</b>	<b>9.2920%</b>
	<b>Interest</b>	1373.00	1369.85	1286.94	1178.45	1064.03

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

**ANNEXURE-II**

**Asset-II**

		(₹ in lakh)				
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Bond XX</b>					
	Gross loan opening	600.00	600.00	600.00	600.00	600.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	50.00	100.00	150.00
	Net Loan-Opening	600.00	600.00	550.00	500.00	450.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	50.00	50.00	50.00	50.00
	Net Loan-Closing	600.00	550.00	500.00	450.00	400.00
	Average Loan	600.00	575.00	525.00	475.00	425.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	53.58	51.35	46.88	42.42	37.95
	Rep Schedule	12 Annual instalments from 07.09.2010				
<b>2</b>	<b>Bond XXI</b>					
	Gross loan opening	25.00	25.00	25.00	25.00	25.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	2.08	4.17	6.25
	Net Loan-Opening	25.00	25.00	22.92	20.83	18.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	2.08	2.08	2.08	2.08
	Net Loan-Closing	25.00	22.92	20.83	18.75	16.67
	Average Loan	25.00	23.96	21.88	19.79	17.71
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	2.18	2.09	1.91	1.73	1.55
	Rep Schedule	12 Annual instalments from 11.10.2010				
<b>3</b>	<b>Bond XXII</b>					
	Gross loan opening	247.00	247.00	247.00	247.00	247.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	20.58	41.17	61.75
	Net Loan-Opening	247.00	247.00	226.42	205.83	185.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	20.58	20.58	20.58	20.58
	Net Loan-Closing	247.00	226.42	205.83	185.25	164.67
	Average Loan	247.00	236.71	216.13	195.54	174.96
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	21.44	20.55	18.76	16.97	15.19
	Rep Schedule	12 Annual Instalments from 07.12.2010				
<b>4</b>	<b>Bond XXIV</b>					
	Gross loan opening	167.00	167.00	167.00	167.00	167.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	13.92	27.83	41.75
	Net Loan-Opening	167.00	167.00	153.08	139.17	125.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	13.92	13.92	13.92	13.92



	Net Loan-Closing	167.00	153.08	139.17	125.25	111.33
	Average Loan	167.00	160.04	146.13	132.21	118.29
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	16.62	15.92	14.54	13.15	11.77
	Rep Schedule	12 Annual instalments from 26.03.2011				
<b>5</b>	<b>Bond XXV</b>					
	Gross loan opening	<b>273.00</b>	<b>273.00</b>	<b>273.00</b>	<b>273.00</b>	<b>273.00</b>
	Cumulative Repayment up to DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.75</b>	<b>45.50</b>
	Net Loan-Opening	273.00	273.00	273.00	250.25	227.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	22.75	22.75	22.75
	Net Loan-Closing	273.00	273.00	250.25	227.50	204.75
	Average Loan	273.00	273.00	261.63	238.88	216.13
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	27.57	27.57	26.42	24.13	21.83
	Rep Schedule	12 Annual instalments from 12.06.2011				
<b>6</b>	<b>Bond XXVI</b>					
	Gross loan opening	<b>1363.00</b>	<b>1363.00</b>	<b>1363.00</b>	<b>1363.00</b>	<b>1363.00</b>
	Cumulative Repayment up to DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>113.58</b>	<b>227.17</b>
	Net Loan-Opening	1363.00	1363.00	1363.00	1249.42	1135.83
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	113.58	113.58	113.58
	Net Loan-Closing	1363.00	1363.00	1249.42	1135.83	1022.25
	Average Loan	1363.00	1363.00	1306.21	1192.63	1079.04
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	126.76	126.76	121.48	110.91	100.35
	Rep Schedule	12 Annual instalments from 07.03.2012				
<b>7</b>	<b>STBL from BOB 29.09.2008 to 14.12.2008 @12.5% replaced by BOND XXVIII @ 9.33% from 15.12.2008 (Add Cap for 2008-09)</b>					
	Gross loan opening	<b>1850.99</b>	<b>1850.99</b>	<b>1850.99</b>	<b>1850.99</b>	<b>1850.99</b>
	Cumulative Repayment up to DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>154.25</b>
	Net Loan-Opening	1850.99	1850.99	1850.99	1850.99	1696.74
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	154.25	154.25
	Net Loan-Closing	1850.99	1850.99	1850.99	1696.74	1542.49
	Average Loan	1850.99	1850.99	1850.99	1773.87	1619.62
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	172.70	172.70	172.70	165.50	151.11
	Rep Schedule	12 Annual instalments from 15.12.2012				
<b>8</b>	<b>Bond XXX (Add Cap for 2009-10 Drawl on 31.03.2010)</b>					
	Gross loan opening	<b>0.00</b>	<b>21.64</b>	<b>21.64</b>	<b>21.64</b>	<b>21.64</b>
	Cumulative Repayment up to DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	21.64	21.64	21.64	21.64
	Additions during the year	21.64	0.00	0.00	0.00	0.00

	Repayment during the year	0.00	0.00	0.00	0.00	1.80
	Net Loan-Closing	21.64	21.64	21.64	21.64	19.84
	Average Loan	10.82	21.64	21.64	21.64	20.74
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	0.95	1.90	1.90	1.90	1.82
	Rep Schedule	12 Annual instalments from 29.09.2013				
<b>9</b>	<b>Bond XXXI (Add Cap for 2009-10 Drwal on 31.03.2010)</b>					
	Gross loan opening	<b>0.00</b>	<b>78.86</b>	<b>78.86</b>	<b>78.86</b>	<b>78.86</b>
	Cumulative Repayment up to DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	78.86	78.86	78.86	78.86
	Additions during the year	78.86	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	6.57
	Net Loan-Closing	78.86	78.86	78.86	78.86	72.29
	Average Loan	39.43	78.86	78.86	78.86	75.57
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	3.51	7.02	7.02	7.02	6.73
	Rep Schedule	12 Annual instalments from 25.02.2014				
	<b>Total Loan</b>					
	Gross loan opening	4525.99	4626.49	4626.49	4626.49	4626.49
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	86.58	309.50	686.67
	Net Loan-Opening	4525.99	4626.49	4539.91	4316.99	3939.82
	Additions during the year	100.50	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	86.58	222.92	377.17	385.54
	Net Loan-Closing	4626.49	4539.91	4316.99	3939.82	3554.28
	Average Loan	4576.24	4583.20	4428.45	4128.41	3747.05
	<b>Weighted Average Rate of Interest</b>	<b>9.2939%</b>	<b>9.2918%</b>	<b>9.2947%</b>	<b>9.2951%</b>	<b>9.2952%</b>
	<b>Interest</b>	425.31	425.86	411.61	383.74	348.30

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

### Asset-III

### ANNEXURE-III

( ₹ in lakh)

Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1 BOND XX</b>					
Gross loan opening	200.00	200.00	200.00	200.00	200.00
Cumulative Repayment up to DOCO/previous year	0.00	0.00	16.67	33.33	50.00
Net Loan-Opening	200.00	200.00	183.33	166.67	150.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	16.67	16.67	16.67	16.67
Net Loan-Closing	200.00	183.33	166.67	150.00	133.33
Average Loan	200.00	191.67	175.00	158.33	141.67
Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
Interest	17.86	17.12	15.63	14.14	12.65
Rep Schedule	12 Annual instalments from 7.9.2010				
<b>2 BOND XXI</b>					
Gross loan opening	100.00	100.00	100.00	100.00	100.00
Cumulative Repayment up to DOCO/previous year	0.00	0.00	8.33	16.67	25.00
Net Loan-Opening	100.00	100.00	91.67	83.33	75.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	8.33	8.33	8.33	8.33
Net Loan-Closing	100.00	91.67	83.33	75.00	66.67
Average Loan	100.00	95.83	87.50	79.17	70.83
Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
Interest	8.73	8.37	7.64	6.91	6.18
Rep Schedule	12 Annual instalments from 11.10.2010				
<b>3 BOND XXII</b>					
Gross loan opening	100.00	100.00	100.00	100.00	100.00
Cumulative Repayment up to DOCO/previous year	0.00	0.00	8.33	16.67	25.00
Net Loan-Opening	100.00	100.00	91.67	83.33	75.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	8.33	8.33	8.33	8.33
Net Loan-Closing	100.00	91.67	83.33	75.00	66.67
Average Loan	100.00	95.83	87.50	79.17	70.83
Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
Interest	8.68	8.32	7.60	6.87	6.15
Rep Schedule	12 Annual Instalments from 7.12.2010				
<b>4 BOND XXIV</b>					
Gross loan opening	100.00	100.00	100.00	100.00	100.00
Cumulative Repayment up to DOCO/previous year	0.00	0.00	8.33	16.67	25.00
Net Loan-Opening	100.00	100.00	91.67	83.33	75.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	8.33	8.33	8.33	8.33
Net Loan-Closing	100.00	91.67	83.33	75.00	66.67



	Average Loan	100.00	95.83	87.50	79.17	70.83
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	9.95	9.54	8.71	7.88	7.05
	Rep Schedule	12 Annual instalments from 26.3.2011				
<b>5</b>	<b>BOND XXV</b>					
	Gross loan opening	100.00	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
	Cumulative Repayment up to DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>	<b>16.67</b>
	Net Loan-Opening	100.00	100.00	100.00	91.67	83.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33	8.33	8.33
	Net Loan-Closing	100.00	100.00	91.67	83.33	75.00
	Average Loan	100.00	100.00	95.83	87.50	79.17
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	10.10	10.10	9.68	8.84	8.00
	Rep Schedule	12 Annual instalments from 12.6.2011				
<b>6</b>	<b>BOND XXVI</b>					
	Gross loan opening	101.00	<b>101.00</b>	<b>101.00</b>	<b>101.00</b>	<b>101.00</b>
	Cumulative Repayment up to DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>8.42</b>	<b>16.83</b>
	Net Loan-Opening	101.00	101.00	101.00	92.58	84.17
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.42	8.42	8.42
	Net Loan-Closing	101.00	101.00	92.58	84.17	75.75
	Average Loan	101.00	101.00	96.79	88.38	79.96
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	9.39	9.39	9.00	8.22	7.44
	Rep Schedule	12 Annual instalments from 7.3.2012				
<b>7</b>	<b>STBL from BOB 29.09.2008 to 14.12.2008 @12.5% replaced by BOND XXVIII @ 9.33% from 15.12.2008 (Add Cap for 2008-09)</b>					
	Gross loan opening	5.89	<b>5.89</b>	<b>5.89</b>	<b>5.89</b>	<b>5.89</b>
	Cumulative Repayment up to DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.49</b>
	Net Loan-Opening	5.89	5.89	5.89	5.89	5.40
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.49	0.49
	Net Loan-Closing	5.89	5.89	5.89	5.40	4.91
	Average Loan	5.89	5.89	5.89	5.64	5.15
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	0.55	0.55	0.55	0.53	0.48
	Rep Schedule	12 Annual instalments from 15.12.2012				
<b>8</b>	<b>Bond XXX (Add Cap for 2009-10 Drawl on 31.3.2010)</b>					
	Gross loan opening	0.00	<b>174.17</b>	<b>174.17</b>	<b>174.17</b>	<b>174.17</b>
	Cumulative Repayment up to DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	174.17	174.17	174.17	174.17
	Additions during the year	174.17	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	14.51
	Net Loan-Closing	174.17	174.17	174.17	174.17	159.66

Average Loan	87.09	174.17	174.17	174.17	166.91
Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
Interest	7.66	15.33	15.33	15.33	14.69
Rep Schedule	12 Annual instalments from 29.9.2013				
<b>Total Loan</b>					
Gross loan opening	706.89	881.06	881.06	881.06	881.06
Cumulative Repayment up to DOCO/previous year	0.00	0.00	41.67	100.08	158.99
Net Loan-Opening	706.89	881.06	839.39	780.98	722.07
Additions during the year	174.17	0.00	0.00	0.00	0.00
Repayment during the year	0.00	41.67	58.42	58.91	73.42
Net Loan-Closing	881.06	839.39	780.98	722.07	648.65
Average Loan	793.98	860.23	810.19	751.52	685.36
Rate of Interest	<b>9.1849%</b>	<b>9.1494%</b>	<b>9.1491%</b>	<b>9.1427%</b>	<b>9.1386%</b>
<b>Interest</b>	72.93	78.71	74.12	68.71	62.63