

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 22/TT/2012**

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

**Date of Hearing: 6.3.2012**

**Date of Order:25.4.2012**

**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 (a) Combined elements of LILO of both circuits of Madurai-Trivandrum 400 kV D/C line at Tirunelveli, bus reactor-II and 3 no line reactors at Tirunelveli, Kudankulam-Tirunelveli 400 kV D/C line- I&II, 400 kV Tirunelveli-Udumalpet D/C line & 1X63 MVAR Reactors at Tirunelveli S/S (notional DOCO 1.2.2010),and (b) Combined element of ICT I&II at Tirunelveli & ICT-III at Udumalpet (notional DOCO 1.4.2009), under Transmission System associated with Kudankulam project from date of commercial operation to 31.3.2014 in Southern Region for tariff block 2009-14 period.

**And**

**In the matter of:**

PowerGrid Corporation of India Ltd., Gurgaon

**.....Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Generation and Distribution Corporation, Chennai
5. Electricity Department, Goa
6. Electricity Department, Pondicherry
7. Eastern Power Distribution Company of Andhra Pradesh Ltd, Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Ltd, Andhra Pradesh



9. Central Power Distribution Company of Andhra Pradesh Ltd, Andhra Pradesh
10. Northern Power Distribution Company of Andhra Pradesh Ltd, Andhra Pradesh
11. Bangalore Electricity Supply Company Limited, Karnataka
12. Gulbarga Electricity Supply Company Limited, Karnataka
13. Hubli Electricity Supply Company Limited, Karnataka
14. MESCOM Corporate office, Karnataka
15. Chamundeswari Electricity Supply Company Limited, Karnataka

## **..Respondents**

### **The following were present:**

1. Shri Mukesh Khanna, PGCIL
2. Shri P. Sharma, PGCIL
3. Shri S.S. Raju, PGCIL
4. Shri M.M. Mondal, PGCIL
5. Shri Rajeev Gupta, PGCIL

## **ORDER**

This petition has been filed by Powergrid Corporation of India Limited (PGCIL) seeking approval for transmission tariff from date of commercial operation to 31.3.2014 for (a) Combined elements of LILO of both circuits of Madurai-Trivandrum 400 kV D/C line at Tirunelveli, bus Reactor-II and 3 no line reactors at Tirunelveli, Kudankulam-Tirunelveli 400 kV D/C line- I&II, 400 kV Tirunelveli-Udumalpet D/C line & 1X63 MVAR Reactors at Tirunelveli sub-station (notional date of commercial operation 1.2.2010),and (b) Combined element of ICT I&II at Tirunelveli & ICT-III at Udumalpet (notional date of commercial operation 1.4.2009) under Transmission System associated with Kudankulam Atomic Power Project (hereinafter referred to as "transmission assets"), for tariff block 2009-14 period in Southern Region, under Regulation 86 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 (hereinafter referred to as "2009 regulations").

2. The assets covered in the petition and dates of their commercial operation are as under:-

Srl. No.	(A) Combined Asset	Notional DOCO
I	LILO of both circuits of Madurai -Trivandrum 400 kV D/C line at Tirunelveli,	1.2.2010
II	400 kV, 63 MVAR Bus Reactor –II at Tirunelveli	
III	3 no line Reactors at Tirunelveli s/s	
IV	Kudankulam-Tirunelveli 400 kV (Quad) D/C line-I & II,	
V	400 kV Tirunelveli-Udumalpet D/C Line	
VI	1x63 MVAR Reactors at Tirunelveli S/S [notional DOCO 01.02.2010)	
	<b>(B) Combined Asset</b>	
VII	ICT II at Tirunelveli	1.4.2009
VIII	ICT I at Tirunelveli	
XI	ICT –III at Udumalpet	

3. The capital cost for Asset-I, II, III, VII & VIII is based on admitted cost as on 31.3.2009, vide order dated 6.7.2011 in Petition No.12/2011, for Asset-IV based on admitted cost as on 1.4.2009, vide order dated 4.5.2011 in Petition No 307/2010 and for Assets-V, VI, & IX is based on admitted cost, vide order dated 20.7.2011 in Petition No. 258/2010.

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

(₹ in lakh)	
<b>Combined Asset I,II,III and IV</b>	
	<b>2009-10 (Pro- rata)</b>
Depreciation	2591.86
Interest on Loan	2761.18
Return on equity	2598.85
Interest on Working Capital	212.91
O & M Expenses	943.20
<b>Total</b>	<b>9108.00</b>

(₹ in lakh)

<b>Combined Asset I,II,III,IV and V</b>	
	<b>2009-10 (Pro-rata)</b>
Depreciation	1648.81
Interest on Loan	1463.09
Return on equity	1648.23
Interest on Working Capital	125.61
O & M Expenses	527.73
<b>Total</b>	<b>5413.47</b>

(₹ in lakh)

<b>Combined Asset I,II,III,IV, V and VI</b>					
	<b>2009-10 (Pro-rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	665.73	4031.89	4050.14	4054.71	4054.71
Interest on Loan	587.16	3401.36	3122.47	2811.37	2496.09
Return on equity	665.45	4030.05	4048.36	4052.87	4052.87
Interest on Working Capital	50.98	308.68	307.62	305.54	303.42
O & M Expenses	219.82	1394.52	1474.36	1558.63	1647.53
<b>Total</b>	<b>2189.14</b>	<b>13166.50</b>	<b>13002.95</b>	<b>12783.12</b>	<b>12554.62</b>

(₹ in lakh)

<b>Combined Asset VII,VIII and IX</b>					
	<b>2009-10 (Pro-rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	334.75	342.73	346.90	346.90	346.90
Interest on Loan	257.25	242.73	223.16	199.35	175.56
Return on equity	332.23	340.15	344.30	344.30	344.30
Interest on Working Capital	38.13	39.24	40.15	40.86	41.64
O & M Expenses	377.28	398.88	421.71	445.80	471.30
<b>Total</b>	<b>1339.64</b>	<b>1363.73</b>	<b>1376.22</b>	<b>1377.21</b>	<b>1379.70</b>

5. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

(₹ in lakh)

<b>Combined Asset I,II,III and IV</b>	
	<b>2009-10 (Pro-rata)</b>
Maintenance Spares	141.48
O & M expenses	78.60
Receivables	1518.00
<b>Total</b>	<b>1738.08</b>
Interest	212.91
Rate of Interest	<b>12.25%</b>

(₹ in lakh)

<b>Combined Asset I,II,III,IV and V</b>	
	<b>2009-10 (Pro rata)</b>
Maintenance Spares	189.98
O & M expenses	105.55
Receivables	2165.39
<b>Total</b>	<b>2460.92</b>
Interest	125.61
Rate of Interest	12.25%

(₹ in lakh)

<b>Combined Asset I,II,III,IV, V and VI</b>					
	<b>2009-10 (Pro- rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Maintenance Spares	197.84	209.18	221.15	233.79	247.13
O & M expenses	109.91	116.21	122.86	129.89	137.29
Receivables	2189.14	2194.42	2167.16	2130.52	2092.44
<b>Total</b>	<b>2496.89</b>	<b>2519.81</b>	<b>2511.17</b>	<b>2494.20</b>	<b>2476.86</b>
Interest	50.98	308.68	307.62	305.54	303.42
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

(₹ in lakh)

<b>Combined Asset VII,VIII and IX</b>					
	<b>2009-10 (Pro-rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Maintenance Spares	56.59	59.83	63.26	66.87	70.69
O & M expenses	31.44	33.24	35.14	37.15	39.28
Receivables	223.27	227.29	229.37	229.54	229.95
<b>Total</b>	<b>311.30</b>	<b>320.36</b>	<b>327.77</b>	<b>333.56</b>	<b>339.92</b>
Interest	38.13	39.24	40.15	40.86	41.64
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

6. 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. Reply to the petition has been filed by TANGEDCO, the Respondent No. 2.

7. TANGEDCO, Respondent No.2, vide its affidavit dated 25.12.2011, has submitted that the initial spares should be allowed individually on transmission elements and not to consider the project as a whole. Allow initial spares as per the 2009 regulations and not as per the 2004 regulations. Further, to include the 3rd ICT

at Trivandrum in the present petition, as it is part of the Kudankulam Transmission System.

8. The petitioner in its rejoinder, dated 5.3.2012, has clarified that the investment approval of the project was during the tariff block 2004-09 and a major portion of the project was commissioned during the tariff block 2004-09, wherein the norms for the initial spares was 1.5% of the capital cost of the project. While determining the initial spares of any project, the regulations prevailing at the time of conceptualization are followed by the petitioner. In the instant case, spares were procured as per the 2004 regulations prevailing at that time. It has been submitted that limiting the initial spares to the 2009 regulations would cause loss to the petitioner. Therefore, the petitioner has requested to allow initial spares considering the total cost of the project as a whole as per the 2004 regulations. As regards the 3rd ICT at Trivandrum, the petitioner has submitted that it was put under commercial operation on 1.7.2009 and the POC is effective from 1.7.2011 and thus the tariff from the date of commercial operation to 30.6.2011 was to be shared by Kerala and from 1.7.2011, the billing collection and disbursement of transmission charges shall be governed by provisions of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 and Removal of difficulties orders issued thereafter.

9. We would like to clarify that the initial spares shall be allowed as per the regulations prevailing at the time of commissioning of the assets. As far as sharing of transmission charges is concerned, we would like to clarify that the tariff of the assets shall be shared by the beneficiaries in accordance with Regulation 33 of the 2009 regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection &

disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (sharing of inter-state transmission charges and losses) Regulations, 2010, as amended.

10. Having heard the representative of the parties and perused the material on record, we proceed to dispose of the petition.

### **CAPITAL COST**

11. As regards capital cost, Regulation 7(1) (a) of the 2009 regulations provides that:-

*“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. The capital cost considered for the purpose of tariff calculation is as follows:-

(₹ in lakh)		
Asset	Actual DOCO	Admitted cost
I	1.5.2008	15084.88
II	1.11.2008	991.61
III	1.2.2009	3161.37
IV	1.4.2009	29739.61
V	1.11.2009	25659.15
VI	1.2.2010	698.83
VII	1.5.2008	2798.64
VIII	1.11.2008	2010.20
IX	1.4.2009	1455.32

13. The details of the transmission assets covered in the instant petition are as under:-

**Set-1 (Assets I,II,III,&IV)** - Combined element of LILO of Madurai-Trivandrum Line, Bus Reactors-II at Tirunelveli, 3 no Line Reactor at Tirunelveli, Kudankulam-Tirunelveli D/C Line-I & II (notional date of commercial operation 1.4.2009). Tariff has been claimed for period 1.4.2009 (notional date of commercial operation) to 31.10.2009 i.e. for 7 months.

**Set-2 (Set I and Asset V)** - Combined elements of LILO of Madurai - Trivandrum Line, Bus Reactors – II and 3 no Line Reactor at Tirunelveli, Kudankulam- Tirunelveli D/C Line – I & II and Tirunelveli-Udumalpet D/C Line notional date of commercial operation 1.11.2009. Tariff has been claimed for period 1.11.2009 (notional date of commercial operation) to 31.1.2010 i.e. for 3 months.

**Set-3 (Set II and Asset VI)** - Combined elements of LILO of Madurai- Trivandrum Line, Bus Reactors –II and 3 no Line Reactor at Tirunelveli, Kudankulam- Tirunelveli D/C Line –I & II and Tirunelveli-Udumalpet D/C Line and 4<sup>th</sup> 63 MVAR Line Reactors at Tirunelveli (notional date of commercial operation 1.2.2010). Tariff has been claimed for period 1.2.2010 (notional date of commercial operation) to 31.3.2014.

**Set-4 (Assets VII, VIII & IX)** - Combined elements ICT-I & II at Tirunelveli sub-station and 315 MVA ICT at Udumalpet (notional date of commercial operation 1.4.2009). Tariff has been claimed for period 1.4.2009 (notional date of commercial operation) to 31.3.2014.

In accordance with the notional date of commercial operation, tariff has been worked out for respective sets of assets, for the period indicated above.



## **ADDITIONAL CAPITAL EXPENDITURE**

14. As per Regulation 9(1) of 2009 regulations-

*“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) XXX*
- (iii) XXX*
- (iv) XXX*
- (iv) XXX”*

15. As per Regulations 2009,

*“Cut-off date means 31<sup>st</sup> March of the year closing after 2 years of the year of commercial operation of the project, and in-case of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.*

Therefore, the cut-off date for assets covered under Set 1, Set 2 and Set 4 is 31.3.2012 and for assets covered under Set 3 it is 31.3.2013.

16. Details of projected additional capital expenditure claimed by the petitioner are as follows:-

<b>Asset</b>	<b>Year</b>	<b>Nature</b>	<b>Amount</b>
<b>Set-1 (I,II,III,&amp;IV)</b> - Combined element of LILO of Madurai-Trivandrum Line, Bus Reactors-II at Tirunelveli, 3 no Line Reactor at Tirunelveli, Kudankulam-Tirunelveli D/C Line-I & II	2009-10	Building & Civil Works	1.50
		TL	213.02
		Sub Station	227.40
		PLCC	15.14
		<b>Total</b>	<b>457.06</b>
<b>Set-2 (Set I and Asset V)</b> - Combined elements of LILO of Madurai - Trivandrum Line, Bus Reactors – II and 3 no Line Reactor at Tirunelveli, Kudankulam- Tirunelveli D/C Line – I & II and Tirunelveli-Udumalpet D/C Line	2009-10	Building & Civil Works	1.50
		TL	586.90
		Sub Station	266.05
		PLCC	31.75
		<b>Total</b>	<b>886.20</b>
<b>Set-3 (Set II and Asset VI)</b> - Combined elements of LILO of Madurai-Trivandrum Line, Bus Reactors –II and 3 no Line Reactor at Tirunelveli,	2009-10	Building & Civil Works	1.50
		TL	586.90
		Sub-Station	278.14

Kudankulam- Tirunelveli D/C Line –I & II and Tirunelveli-Udumalpet D/C Line and 4 <sup>th</sup> 63 MVAR Line Reactors at Tirunelveli			
		PLCC	31.75
		<b>Total</b>	<b>898.29</b>
	2010-11	Building & Civil Works	27.09
		TL	377.05
		Sub-Station	113.55
		PLCC	8.34
		<b>Total</b>	<b>526.03</b>
	2011-12	TL	75
		Sub-Station	90.80
		PLCC	6.19
		<b>Total</b>	<b>171.99</b>
	<b>Set-4 (Assets VII,VIII &amp; IX) - Combined elements ICT-I &amp; II at Tirunelveli S/S and 315 MVA ICT at Udumalpet</b>	2009-10	Sub Station
<b>Total</b>			<b>143.92</b>
2010-11		Sub-Station	158.08
		<b>Total</b>	<b>158.08</b>

17. The petitioner has claimed the additional capital expenditure on account of balance and retention payment during 2009-10 for Set 1 and Set 2 and for payment during 2009-10, 2010-11 and 2011-12 for Set 3. Similarly, on account of balance and retention payment during 2009-10 and 2010-11 for Set 4. The additional capital expenditure claimed falls within cut-off date and hence the same has been considered for the purpose of tariff calculation.

## DEBT- EQUITY RATIO

18. Regulation 12 of the 2009 regulations provides that,

"(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.*

(2) XXX."

19. The details of opening debt-equity of assets as on the date of commercial operation is as follows:-

(₹ in lakh)

<b>Capital Cost as on DOCO/Notional DOCO</b>		
<b>Combined Asset-I,II,III &amp; IV</b>		
	<b>Amount (₹ in lakh)</b>	<b>%</b>
Debt	34284.95	70.001
Equity	14692.51	29.999
<b>Total</b>	<b>48977.46</b>	<b>100.00</b>
<b>Combined Asset-I,II,III, IV &amp; V</b>		
Debt	52246.60	70.001
Equity	22390.26	29.999
<b>Total</b>	<b>74636.86</b>	<b>100.00</b>
<b>Combined Asset-I,II,III, IV ,V &amp; VI</b>		
<b>Debt</b>	<b>52735.57</b>	<b>70.001</b>
Equity	22599.89	29.999
<b>Total</b>	<b>75335.46</b>	<b>100.00</b>
<b>Combined Asset-VII,VIII &amp; IX</b>		
<b>Debt</b>	<b>4385.20</b>	<b>70.005</b>
Equity	1878.96	29.995
<b>Total</b>	<b>6264.16</b>	<b>100.00</b>

20. Detail of debt- equity ratio of assets is as follows:-

<b>Combined Asset-I,II,III &amp; IV</b>		
	<b>(₹ in lakh)</b>	<b>%</b>
<b>Additional Capital for 2009-10</b>		
Debt	319.94	70.00
Equity	137.12	30.00
<b>Total</b>	<b>457.06</b>	<b>100.00</b>

<b>Combined Asset-I,II,III, IV &amp; V</b>		
	<b>(₹ in lakh)</b>	<b>%</b>
<b>Additional Capital for 2009-10</b>		
Debt	620.34	70.00
Equity	265.86	30.00

<b>Combined Asset-I,II,III, IV, V&amp; VI</b>		
	<b>(₹ in lakh)</b>	<b>%</b>
<b>Additional Capital for 2009-10</b>		
Debt	628.80	70.00
Equity	269.49	30.00
<b>Total</b>	<b>898.29</b>	<b>100.00</b>
<b>Additional Capital for 2010-11</b>		
Debt	368.22	70.00
Equity	157.81	30.00
<b>Total</b>	<b>526.03</b>	<b>100.00</b>
<b>Additional Capital for 2011-12</b>		
Debt	120.39	70.00
Equity	51.60	30.00
<b>Total</b>	<b>171.99</b>	<b>100.00</b>

<b>Combined Asset-VII,VIII,IX</b>		
	<b>(₹ in lakh)</b>	<b>%</b>
<b>Additional Capital for 2009-10</b>		
Debt	100.74	70.00
Equity	43.18	30.00
<b>Total</b>	<b>143.92</b>	<b>100.00</b>
<b>Additional Capital for 2010-11</b>		
Debt	110.66	70.00
Equity	47.42	30.00
<b>Total</b>	<b>158.08</b>	<b>100.00</b>

## RETURN ON EQUITY

21. 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 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:*

*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.*

*(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's prayer to allow grossing up the base rate of return on equity based on tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations as amended by Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011.



23. Return on equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax return on equity of 17.481%.

24. In view of the above, the following amount of equity has been considered for calculation of return of equity:-

(₹ in lakh)

Asset I,II,III,IV	
	2009-10 (pro-rata)
Opening Equity	14692.51
Addition due to Additional Capitalisation	137.12
Closing Equity	14829.63
Average Equity	14761.07
Return on Equity (Base Rate )	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of Return on Equity (Pre Tax )	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>2580.38</b>

(₹ in lakh)

Asset I,II,III,IV & V	
	2009-10 (pro-rata)
Opening Equity	22390.26
Addition due to Additional Capitalisation	265.86
Closing Equity	22656.12
Average Equity	22523.19
Return on Equity (Base Rate )	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of Return on Equity (Pre Tax )	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>1640.53</b>

(₹ in lakh)

Asset I,II,III,IV, V & VI					
	2009-10 (pro-rata)	2010-11	2011-12	2012-13	2013-14
Opening Equity	22599.89	22869.38	23027.19	23078.78	23078.78
Addition due to Additional Capitalisation	269.49	157.81	51.60	0.00	0.00
Closing Equity	22869.38	23027.19	23078.78	23078.78	23078.78
Average Equity	22734.63	22948.28	23052.98	23078.78	23078.78
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	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>662.37</b>	<b>4011.59</b>	<b>4029.89</b>	<b>4034.40</b>	<b>4034.40</b>

(₹ in lakh)

<b>Asset VII,VIII,IX</b>					
	<b>2009-10 (pro-rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Opening Equity	1878.96	1922.13	1969.56	1969.56	1969.56
Addition due to Additional Capitalisation	43.18	47.42	0.00	0.00	0.00
Closing Equity	1922.13	1969.56	1969.56	1969.56	1969.56
Average Equity	1900.55	1945.85	1969.56	1969.56	1969.56
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	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>332.23</b>	<b>340.15</b>	<b>344.30</b>	<b>344.30</b>	<b>344.30</b>

## **INTEREST ON LOAN**

25. 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."*

26. In these calculations, interest on loan has been worked out as follows:-

(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 the petition;

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

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

27. Detailed calculations of the weighted revised average rate of interest have been in Annexure I, II, III, and IV to this order.



28. Details of the interest on loan worked on the above basis are as under:-

(₹ in lakh)

<b>Asset I,II,III,IV</b>	
	<b>2009-10 (pro-rata)</b>
Gross Normative Loan	34284.95
Cumulative Repayment upto Previous Year	415.38
Net Loan-Opening	33869.57
Addition due to Additional Capitalisation	319.94
Repayment during the year	2586.27
Net Loan-Closing	31603.25
Average Loan	32736.41
Weighted Average Rate of Interest on Loan	8.4352%
<b>Interest</b>	<b>2761.39</b>

(₹ in lakh)

<b>Asset I,II,III,IV &amp; V</b>	
	<b>2009-10 (pro-rata)</b>
Gross Normative Loan	52246.37
Cumulative Repayment upto Previous Year	1337.20
Net Loan-Opening	50909.17
Addition due to Additional Capitalisation	620.34
Repayment during the year	1646.48
Net Loan-Closing	49883.03
Average Loan	50396.10
Weighted Average Rate of Interest on Loan	7.0503%
<b>Interest</b>	<b>1480.45</b>

(₹ in lakh)

<b>Asset I,II,III,IV, V &amp; VI</b>					
	<b>2009-10 (pro-rata)</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Gross Normative Loan	52735.57	53364.37	53732.59	53852.98	53852.98
Cumulative Repayment upto Previous Year	2073.58	2738.38	6764.68	10809.22	14858.34
Net Loan-Opening	50661.98	50625.99	46967.91	43043.76	38994.65
Addition due to Additional Capitalisation	628.80	368.22	120.39	0.00	0.00
Repayment during the year	664.79	4026.30	4044.54	4049.12	4049.12
Net Loan-Closing	50625.99	46967.91	43043.76	38994.65	34945.53
Average Loan	50643.99	48796.95	45005.84	41019.20	36970.09
Weighted Average Rate of Interest on Loan	7.0741%	7.0935%	7.0718%	7.0002%	6.9131%
<b>Interest</b>	<b>597.10</b>	<b>3461.41</b>	<b>3182.72</b>	<b>2871.41</b>	<b>2555.76</b>

(₹ in lakh)

Asset VII,VIII,IX					
	2009-10 (pro-rata)	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	4385.20	4485.95	4596.60	4596.60	4596.60
Cumulative Repayment upto Previous Year	120.60	455.35	798.08	1144.98	1491.88
Net Loan-Opening	4264.60	4030.59	3798.52	3451.62	3104.72
Addition due to Additional Capitalisation	100.74	110.66	0.00	0.00	0.00
Repayment during the year	334.75	342.73	346.90	346.90	346.90
Net Loan-Closing	4030.59	3798.52	3451.62	3104.72	2757.82
Average Loan	4147.60	3914.56	3625.07	3278.17	2931.27
Weighted Average Rate of Interest on Loan	6.2024%	6.2007%	6.1560%	6.0811%	5.9891%
Interest	<b>257.25</b>	<b>242.73</b>	<b>223.16</b>	<b>199.35</b>	<b>175.56</b>

## **DEPRECIATION**

29. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. However, Regulation 17 (4) of the 2009 regulations provides as under:-

*"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 asset".*

30. Accordingly depreciation for the period 2009-10 for Set-1 & Set-2 works out to ₹1508.66 lakh (for 7 months) and ₹960.45 lakh (for 3 months), respectively. For Set-3 it works out to ₹664.79 lakh, ₹4026.25 lakh, ₹4044.54 lakh, ₹4049.12 lakh and ₹4049.12 lakh for the period 2009-10, 2010-11, 2011-2012, 2012-13 and 2013-14, respectively. For Set-4 depreciation works out to ₹334.75 lakh, ₹342.73 lakh for the period of 2009-10, 2010-11, respectively and ₹346.90 lakh each for the period 2011-12, 2012-13 & 2013-14. Cumulative depreciation for assets under Set-1, 2, 3, and 4 is ₹415.38 lakh, ₹1336.56 lakh, ₹2073.58 lakh & ₹120.60 lakh, respectively.

31. Details of the depreciation worked out are as given as under:-

(₹ in lakh)

Asset I,II,III,IV	
	2009-10 (pro-rata)
Opening Gross Block	48977.47
Addition during 2009-14 due to Projected Additional Capitalisation	457.06
Closing Gross Block	49434.53
Average Gross Block	49206.00
Rate of Depreciation	5.2560%
Depreciable Value	44122.50
Remaining Depreciable Value	43707.12
<b>Depreciation</b>	<b>2586.27</b>
Cumulative Depreciation	3001.65

(₹ in lakh)

Asset I,II,III,IV & V	
	2009-10 (pro-rata)
Opening Gross Block	74636.63
Addition during 2009-14 due to Projected Additional Capitalisation	886.20
Closing Gross Block	75522.83
Average Gross Block	75079.73
Rate of Depreciation	5.2631%
Depreciable Value	67408.85
Remaining Depreciable Value	66071.66
<b>Depreciation</b>	<b>1646.48</b>
Cumulative Depreciation	2983.68

(₹ in lakh)

Asset I,II,III,IV, V & VI					
	2009-10 (pro-rata)	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	75335.46	76233.75	76759.78	76931.77	76931.77
Addition during 2009-14 due to Projected Additional Capitalisation	898.29	526.03	171.99	0.00	0.00
Closing Gross Block	76233.75	76759.78	76931.77	76931.77	76931.77
Average Gross Block	75784.60	76496.76	76845.77	76931.77	76931.77
Rate of Depreciation	5.2633%	5.2634%	5.2632%	5.2633%	5.2633%
Depreciable Value	68043.24	68684.19	68998.29	69075.69	69075.69
Remaining Depreciable Value	65969.66	65945.81	62233.62	58266.47	54217.35
<b>Depreciation</b>	<b>664.79</b>	<b>4026.30</b>	<b>4044.54</b>	<b>4049.12</b>	<b>4049.12</b>
Cumulative Depreciation	2738.38	6764.68	10809.22	14858.34	18907.45

(₹ in lakh)

Asset VII,VIII,IX					
	2009-10 (pro-rata)	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	6264.16	6408.08	6566.16	6566.16	6566.16
Addition during 2009-14 due to Projected Additional Capitalisation	143.92	158.08	0.00	0.00	0.00
Closing Gross Block	6408.08	6566.16	6566.16	6566.16	6566.16
Average Gross Block	6336.12	6487.12	6566.16	6566.16	6566.16
Rate of Depreciation	5.2833%	5.2832%	5.2831%	5.2831%	5.2831%
Depreciable Value	5702.51	5838.41	5909.54	5909.54	5909.54
Remaining Depreciable Value	5581.91	5383.05	5111.46	4764.56	4417.66
<b>Depreciation</b>	<b>334.75</b>	<b>342.73</b>	<b>346.90</b>	<b>346.90</b>	<b>346.90</b>
Cumulative Depreciation	455.35	798.08	1144.98	1491.88	1838.78

### **OPERATION & MAINTENANCE EXPENSES**

32. The petitioner has submitted that O&M expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M expenses for tariff period 2009-14. The petitioner has submitted that it would approach the Commission for suitable revision in the norms for O&M expenses in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

33. It is clarified that, if any, application for revision of norms of O&M expenses is filed by the petitioner in future, it will be dealt with in accordance with law. In the instant petition O&M expenses are allowed on the basis of existing norms.

34. Clause (9) of Regulation 19 of the 2009 regulations prescribed the norms for operation and maintenance expenditure based on the type of sub-station and line.

The norms for the assets covered in this petition are as follows:-

(₹ in lakh)

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV (twin conductor) D/C T/Line (₹ in lakh/ km)	0.627	0.663	0.701	0.741	0.783
400 kV D/C (Quad conductor) T/Line (₹ in lakh/ km)	0.940	0.994	1.051	1.111	1.174
400 kV bay (₹ in lakh/ bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ in lakh/ bay)	36.68	38.78	41.00	43.34	45.82

35. Based on the above norms, the petitioner has calculated the following operational and maintenance expenses which are allowed:-

- I. Combined assets of LILO of Madurai-Trivandrum Line, Bus Reactor-2 & 3 nos. Line Reactor at Tirunelveli, Kudankulam-Tirunelveli D/C Line I & II (notional date of commercial operation: 1.4.2009)

(₹ in lakh)

Assets	2009-10 (Pro-rata)
106.372 km, 400 kV (twin conductor) D/C T/Line	38.91
152.023( 72.489+79.534) km, 400 kV Quad conductor) T/Line	83.36
14 nos. 400 kV Bays	427.93
<b>Total O&amp;M Expenditure</b>	<b>550.20</b>

- II. Combined LILO of Madurai- Trivandrum Line, Bus Reactor-2 & 3 no. Line Reactor at Tirunelveli, Kudankulam- Tirunelveli D/C Line-I & II and Tirunelveli-Udumalpet D/C Line, notional date of commercial operation: 1.11.2009.

(₹ in lakh)

Assets	2009-10 (Pro-rata)
371.359 (106.372 +264.987) km, 400 kV D/C (twin conductor) T/Line	58.21
152.023 ( 72.489+79.534) km, 400 kV D/C (Quad conductor) T/Line	35.72
17 nos. 400 kV Bays	222.70
<b>Total O&amp;M Expenditure</b>	<b>316.63</b>

- III. LILO of Madurai-Trivandrum Line, Bus Reactor-2 & 3 nos. Line Reactor at Tirunelveli, Kudankulam-Tirunelveli D/C Line-I & II, Tirunelveli- Udumalpet D/C Line and 4th 63 MVAR Line Reactor at Tirunelveli, notional date of commercial operation: 1.2.2010.

(₹ in lakh)

Assets	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
371.359 (106.372 +264.987) km, 400 kV D/C (twin conductor) T/Line	38.81	246.21	260.32	275.18	290.77
152.023( 72.489+79.534) km, 400 kV D/C (Quad conductor) T/Line	23.82	151.11	159.78	168.90	178.48
18 nos. 400 kV Bays	157.20	997.20	1054.26	1114.56	1178.28
<b>Total O&amp;M Expenditure</b>	<b>219.82</b>	<b>1394.52</b>	<b>1474.36</b>	<b>1558.63</b>	<b>1647.53</b>

- IV. Combined elements of ICT-I & II at Tirunelveli & ICT-III at Udumalpet, notional date of commercial operation: 1.4.2009.

(₹ in lakh)

Assets	2009-10	2010-11	2011-12	2012-13	2013-14
3 nos. 400 kV Bays	157.20	166.20	175.71	185.76	196.38
6 nos. 220 kV Bays	220.08	232.68	246.00	260.04	274.92
<b>Total O&amp;M Expenditure</b>	<b>377.28</b>	<b>398.88</b>	<b>421.71</b>	<b>445.80</b>	<b>471.30</b>

## **INTEREST ON WORKING CAPITAL**

36. As per the 2009 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 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 claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

**(ii) Maintenance spares:** Maintenance spares have worked on the based on 15% of Operation and Maintenance expenses specified in Regulation 19 of the 2009.

**(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 the respective year. This has been considered in the working capital.

**(iv) Rate of interest on working capital:** In these calculations, the SBI PLR as on 1.4.2009, i.e., interest rate of 12.25% has been considered in accordance with the 2009 regulations, as amended vide the second amendment regulations notified in June 2011, for calculating on working capital.

37. Necessary computations in support of interest on working capital are appended hereunder:-

(₹ in lakh)

Asset I,II,III,IV	
	2009-10 (pro-rata for 7 month)
Maintenance Spares	82.53
O & M expenses	45.85
Receivables	883.13
<b>Total</b>	<b>1011.51</b>
Interest	123.91

(₹ in lakh)

Asset I,II,III,IV & V	
	2009-10 (pro-rata for 3 month)
Maintenance Spares	47.50
O & M expenses	26.39
Receivables	542.09
<b>Total</b>	<b>615.98</b>
Interest	75.46

(₹ in lakh)

Asset I,II,III,IV, V & VI					
	2009-10 (pro-rata for 2 month)	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	197.84	209.18	221.15	233.79	247.13
O & M expenses	109.91	116.21	122.86	129.89	137.29
Receivables	2195.19	2200.54	2173.31	2136.64	2098.49
<b>Total</b>	<b>2502.94</b>	<b>2525.93</b>	<b>2517.33</b>	<b>2500.32</b>	<b>2482.92</b>
Interest	51.10	309.43	308.37	306.29	304.16

(₹ in lakh)

Asset VII,VIII,IX					
	2009-10 (pro-rata for 2 month)	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	56.59	59.83	63.26	66.87	70.70
O & M expenses	31.44	33.24	35.14	37.15	39.28
Receivables	223.28	227.29	229.37	229.53	229.95
<b>Total</b>	<b>311.31</b>	<b>320.36</b>	<b>327.77</b>	<b>333.55</b>	<b>339.92</b>
Interest	38.14	39.24	40.15	40.86	41.64



## TRANSMISSION CHARGES

38. The transmission charges being allowed for the transmission lines are summarized below:-

(₹ in lakh)

Asset I,II,III,IV	
	2009-10 (Pro-rata for 2 months)
Depreciation	1508.66
Interest on Loan	1610.81
Return on equity	1505.22
Interest on Working Capital	123.91
O & M Expenses	550.20
<b>Total</b>	<b>5298.81</b>

(₹ in lakh)

Asset I,II,III,IV & V	
	2009-10 (Pro-rata for 2 months)
Depreciation	411.62
Interest on Loan	370.11
Return on equity	410.13
Interest on Working Capital	31.44
O & M Expenses	131.93
<b>Total</b>	<b>1355.24</b>

(₹ in lakh)

Asset I,II,III,IV, V & VI					
	2009-10 (Pro-rata for 2 months)	2010-11	2011-12	2012-13	2013-14
Depreciation	664.79	4026.30	4044.54	4049.12	4049.12
Interest on Loan	597.10	3461.41	3182.72	2871.41	2555.76
Return on equity	662.37	4011.59	4029.89	4034.40	4034.40
Interest on Working Capital	51.10	309.43	308.37	306.29	304.16
O & M Expenses	219.82	1394.52	1474.36	1558.63	1647.53
<b>Total</b>	<b>2195.19</b>	<b>13203.25</b>	<b>13039.89</b>	<b>12819.84</b>	<b>12590.97</b>

(₹ in lakh)

Asset VII,VIII,IX					
	2009-10 (Pro-rata for 2 months)	2010-11	2011-12	2012-13	2013-14
Depreciation	334.75	342.73	346.90	346.90	346.90
Interest on Loan	257.25	242.73	223.16	199.35	175.56
Return on equity	332.23	340.15	344.30	344.30	344.30
Interest on Working Capital	38.14	39.24	40.15	40.86	41.64
O & M Expenses	377.28	398.88	421.71	445.80	471.30
<b>Total</b>	<b>1339.65</b>	<b>1363.73</b>	<b>1376.22</b>	<b>1377.21</b>	<b>1379.70</b>

### **FILING FEE AND THE PUBLICATION EXPENSES**

39. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with our order dated 11.1.2010 in Petition No. 109/2009, 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**

40. The petitioner submitted that in O&M norms for tariff block 2009-14, the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. It is clarified that the petitioner's prayer for licence fee shall be dealt with in accordance with our order dated 25.10.2011 in Petition No. 21/2011 and 22/2011.

## **SERVICE TAX**

41. 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 the prayer of the petitioner pre-mature and accordingly it is rejected.

## **SHARING OF TRANSMISSION CHARGES**

42. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection & disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (sharing of inter-state transmission charges and losses) Regulations, 2010 as amended.

43. This order disposes of Petition No.22/TT/2012

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

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

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

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>BOND XXVIII</b>					
	Gross loan opening	<b>4839.10</b>	<b>4839.10</b>	<b>4839.10</b>	<b>4839.10</b>	<b>4839.10</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>403.26</b>
	Net Loan-Opening	4839.10	4839.10	4839.10	4839.10	4435.84
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	403.26	403.26
	Net Loan-Closing	4839.10	4839.10	4839.10	4435.84	4032.58
	Average Loan	4839.10	4839.10	4839.10	4637.47	4234.21
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	451.49	451.49	451.49	432.68	395.05
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>2</b>	<b>BOND XIX</b>					
	Gross loan opening	<b>574.00</b>	<b>574.00</b>	<b>574.00</b>	<b>574.00</b>	<b>574.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>47.83</b>	<b>95.67</b>	<b>143.50</b>
	Net Loan-Opening	574.00	574.00	526.17	478.33	430.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	47.83	47.83	47.83	47.83
	Net Loan-Closing	574.00	526.17	478.33	430.50	382.67
	Average Loan	574.00	550.08	502.25	454.42	406.58
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	53.10	50.88	46.46	42.03	37.61
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>3</b>	<b>BOND XX</b>					
	Gross loan opening	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>3.33</b>	<b>6.67</b>	<b>10.00</b>
	Net Loan-Opening	40.00	40.00	36.67	33.33	30.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.33	3.33	3.33	3.33
	Net Loan-Closing	40.00	36.67	33.33	30.00	26.67
	Average Loan	40.00	38.33	35.00	31.67	28.33
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	3.57	3.42	3.13	2.83	2.53
	Rep Schedule	12 equal annual installments w.e.f 07.09.2010				
<b>4</b>	<b>BOND XXI</b>					

	Gross loan opening	<b>4548.00</b>	<b>4548.00</b>	<b>4548.00</b>	<b>4548.00</b>	<b>4548.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>379.00</b>	<b>758.00</b>	<b>1137.00</b>
	Net Loan-Opening	4548.00	4548.00	4169.00	3790.00	3411.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	379.00	379.00	379.00	379.00
	Net Loan-Closing	4548.00	4169.00	3790.00	3411.00	3032.00
	Average Loan	4548.00	4358.50	3979.50	3600.50	3221.50
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	397.04	380.50	347.41	314.32	281.24
	Rep Schedule	12 equal annual installments w.e.f 11.10.2010				
<b>5</b>	<b>BOND XXII</b>					
	Gross loan opening	<b>2940.00</b>	<b>2940.00</b>	<b>2940.00</b>	<b>2940.00</b>	<b>2940.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>245.00</b>	<b>490.00</b>	<b>735.00</b>
	Net Loan-Opening	2940.00	2940.00	2695.00	2450.00	2205.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	245.00	245.00	245.00	245.00
	Net Loan-Closing	2940.00	2695.00	2450.00	2205.00	1960.00
	Average Loan	2940.00	2817.50	2572.50	2327.50	2082.50
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	255.19	244.56	223.29	202.03	180.76
	Rep Schedule	12 equal annual installments w.e.f 07.12.2010				
<b>6</b>	<b>BOND XXIV</b>					
	Gross loan opening	<b>1680.00</b>	<b>1680.00</b>	<b>1680.00</b>	<b>1680.00</b>	<b>1680.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>140.00</b>	<b>280.00</b>	<b>420.00</b>
	Net Loan-Opening	1680.00	1680.00	1540.00	1400.00	1260.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	140.00	140.00	140.00	140.00
	Net Loan-Closing	1680.00	1540.00	1400.00	1260.00	1120.00
	Average Loan	1680.00	1610.00	1470.00	1330.00	1190.00
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	167.16	160.20	146.27	132.34	118.41
	Rep Schedule	12 equal annual installments w.e.f 26.03.2011				
<b>7</b>	<b>BOND XXV</b>					
	Gross loan opening	<b>13122.00</b>	<b>13122.00</b>	<b>13122.00</b>	<b>13122.00</b>	<b>13122.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1093.50</b>	<b>2187.00</b>
	Net Loan-Opening	13122.00	13122.00	13122.00	12028.50	10935.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1093.50	1093.50	1093.50
	Net Loan-Closing	13122.00	13122.00	12028.50	10935.00	9841.50
	Average Loan	13122.00	13122.00	12575.25	11481.75	10388.25
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%



	Interest	1325.32	1325.32	1270.10	1159.66	1049.21
	Rep Schedule	12 equal annual installments w.e.f 12.06.2011				
<b>8</b>	<b>BOND XXVI</b>					
	Gross loan opening	<b>1160.00</b>	<b>1160.00</b>	<b>1160.00</b>	<b>1160.00</b>	<b>1160.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>96.67</b>	<b>193.33</b>
	Net Loan-Opening	1160.00	1160.00	1160.00	1063.33	966.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	96.67	96.67	96.67
	Net Loan-Closing	1160.00	1160.00	1063.33	966.67	870.00
	Average Loan	1160.00	1160.00	1111.67	1015.00	918.33
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	107.88	107.88	103.39	94.40	85.41
	Rep Schedule	12 equal annual installments w.e.f 07.03.2012				
<b>9</b>	<b>ADB-III (Exchange Rate 40.87)</b>					
	Gross loan opening	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>67.89</b>	<b>213.55</b>	<b>374.04</b>	<b>551.17</b>
	Net Loan-Opening	4495.70	4427.81	4282.15	4121.66	3944.53
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	67.89	145.66	160.50	177.13	195.11
	Net Loan-Closing	4427.81	4282.15	4121.66	3944.53	3749.41
	Average Loan	4461.76	4354.98	4201.91	4033.09	3846.97
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	121.14	118.24	114.08	109.50	104.45
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 49.4)</b>					
	Gross loan opening	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>4.48</b>	<b>14.08</b>	<b>24.66</b>	<b>36.34</b>
	Net Loan-Opening	296.40	291.92	282.32	271.74	260.06
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	4.48	9.60	10.58	11.68	12.86
	Net Loan-Closing	291.92	282.32	271.74	260.06	247.20
	Average Loan	294.16	287.12	277.03	265.90	253.63
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	7.99	7.80	7.52	7.22	6.89
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 49.57)</b>					
	Gross loan opening	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>13.47</b>	<b>42.38</b>	<b>74.24</b>	<b>109.39</b>
	Net Loan-Opening	892.26	878.79	849.88	818.02	782.87
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	13.47	28.91	31.85	35.16	38.72



Net Loan-Closing	878.79	849.88	818.02	782.87	744.14
Average Loan	885.52	864.33	833.95	800.45	763.51
Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
Interest	24.04	23.47	22.64	21.73	20.73
Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>Total Loan</b>					
Gross loan opening	34587.46	34587.46	34587.46	34587.46	34587.46
Cumulative Repayment upto DOCO/previous year	0.00	85.83	1085.17	3293.44	5925.99
Net Loan-Opening	34587.46	34501.63	33502.29	31294.02	28661.47
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	85.83	999.34	2208.26	2632.56	2655.29
Net Loan-Closing	34501.63	33502.29	31294.02	28661.47	26006.17
Average Loan	34544.54	34001.96	32398.15	29977.74	27333.82
Rate of Interest	<b>8.4352%</b>	<b>8.4517%</b>	<b>8.4442%</b>	<b>8.4020%</b>	<b>8.3496%</b>
<b>Interest</b>	2913.91	2873.75	2735.77	2518.72	2282.27

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>BOND XXVIII</b>					
	Gross loan opening	4883.10	4883.10	4883.10	4883.10	4883.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	406.93
	Net Loan-Opening	4883.10	4883.10	4883.10	4883.10	4476.18
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	406.93	406.93
	Net Loan-Closing	4883.10	4883.10	4883.10	4476.18	4069.25
	Average Loan	4883.10	4883.10	4883.10	4679.64	4272.71
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	455.59	455.59	455.59	436.61	398.64
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>2</b>	<b>BOND XIX</b>					
	Gross loan opening	574.00	574.00	574.00	574.00	574.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	47.83	95.67	143.50
	Net Loan-Opening	574.00	574.00	526.17	478.33	430.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	47.83	47.83	47.83	47.83
	Net Loan-Closing	574.00	526.17	478.33	430.50	382.67
	Average Loan	574.00	550.08	502.25	454.42	406.58
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	53.10	50.88	46.46	42.03	37.61
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>3</b>	<b>BOND XX</b>					
	Gross loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.33	6.67	10.00
	Net Loan-Opening	40.00	40.00	36.67	33.33	30.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.33	3.33	3.33	3.33
	Net Loan-Closing	40.00	36.67	33.33	30.00	26.67
	Average Loan	40.00	38.33	35.00	31.67	28.33
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	3.57	3.42	3.13	2.83	2.53
	Rep Schedule	12 equal annual installments w.e.f 07.09.2010				





<b>4</b>	<b>BOND XXI</b>					
	Gross loan opening	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>387.33</b>	<b>774.67</b>	<b>1162.00</b>
	Net Loan-Opening	4648.00	4648.00	4260.67	3873.33	3486.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	387.33	387.33	387.33	387.33
	Net Loan-Closing	4648.00	4260.67	3873.33	3486.00	3098.67
	Average Loan	4648.00	4454.33	4067.00	3679.67	3292.33
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	405.77	388.86	355.05	321.23	287.42
	Rep Schedule	12 equal annual installments w.e.f 11.10.2010				
<b>5</b>	<b>BOND XXII</b>					
	Gross loan opening	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>461.67</b>	<b>923.33</b>	<b>1385.00</b>
	Net Loan-Opening	5540.00	5540.00	5078.33	4616.67	4155.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	461.67	461.67	461.67	461.67
	Net Loan-Closing	5540.00	5078.33	4616.67	4155.00	3693.33
	Average Loan	5540.00	5309.17	4847.50	4385.83	3924.17
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	480.87	460.84	420.76	380.69	340.62
	Rep Schedule	12 equal annual installments w.e.f 07.12.2010				
<b>6</b>	<b>BOND XXIV</b>					
	Gross loan opening	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>156.67</b>	<b>313.33</b>	<b>470.00</b>
	Net Loan-Opening	1880.00	1880.00	1723.33	1566.67	1410.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	156.67	156.67	156.67	156.67
	Net Loan-Closing	1880.00	1723.33	1566.67	1410.00	1253.33
	Average Loan	1880.00	1801.67	1645.00	1488.33	1331.67
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	187.06	179.27	163.68	148.09	132.50
	Rep Schedule	12 equal annual installments w.e.f 26.03.2011				
<b>7</b>	<b>BOND XXV</b>					
	Gross loan opening	<b>14622.00</b>	<b>14622.00</b>	<b>14622.00</b>	<b>14622.00</b>	<b>14622.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1218.50</b>	<b>2437.00</b>
	Net Loan-Opening	14622.00	14622.00	14622.00	13403.50	12185.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1218.50	1218.50	1218.50
	Net Loan-Closing	14622.00	14622.00	13403.50	12185.00	10966.50
	Average Loan	14622.00	14622.00	14012.75	12794.25	11575.75



	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	1476.82	1476.82	1415.29	1292.22	1169.15
	Rep Schedule	12 equal annual installments w.e.f 12.06.2011				
<b>8</b>	<b>BOND XXVI</b>					
	Gross loan opening	<b>1260.00</b>	<b>1260.00</b>	<b>1260.00</b>	<b>1260.00</b>	<b>1260.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>105.00</b>	<b>210.00</b>
	Net Loan-Opening	1260.00	1260.00	1260.00	1155.00	1050.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	105.00	105.00	105.00
	Net Loan-Closing	1260.00	1260.00	1155.00	1050.00	945.00
	Average Loan	1260.00	1260.00	1207.50	1102.50	997.50
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	117.18	117.18	112.30	102.53	92.77
	Rep Schedule	12 equal annual installments w.e.f 07.03.2012				
<b>9</b>	<b>ADB-III (Exchange Rate 40.87)</b>					
	Gross loan opening	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>67.89</b>	<b>213.55</b>	<b>374.04</b>	<b>551.17</b>
	Net Loan-Opening	4495.70	4427.81	4282.15	4121.66	3944.53
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	67.89	145.66	160.50	177.13	195.11
	Net Loan-Closing	4427.81	4282.15	4121.66	3944.53	3749.41
	Average Loan	4461.76	4354.98	4201.91	4033.09	3846.97
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	121.14	118.24	114.08	109.50	104.45
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 49.4)</b>					
	Gross loan opening	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>4.48</b>	<b>14.08</b>	<b>24.66</b>	<b>36.34</b>
	Net Loan-Opening	296.40	291.92	282.32	271.74	260.06
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	4.48	9.60	10.58	11.68	12.86
	Net Loan-Closing	291.92	282.32	271.74	260.06	247.20
	Average Loan	294.16	287.12	277.03	265.90	253.63
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	7.99	7.80	7.52	7.22	6.89
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 49.57)</b>					
	Gross loan opening	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>13.47</b>	<b>42.38</b>	<b>74.24</b>	<b>109.39</b>
	Net Loan-Opening	892.26	878.79	849.88	818.02	782.87
	Additions during the year	0.00	0.00	0.00	0.00	0.00



	Repayment during the year	13.47	28.91	31.85	35.16	38.72
	Net Loan-Closing	878.79	849.88	818.02	782.87	744.14
	Average Loan	885.52	864.33	833.95	800.45	763.51
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	24.04	23.47	22.64	21.73	20.73
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 47.41)</b>					
	Gross loan opening	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>202.60</b>	<b>637.31</b>	<b>1116.30</b>	<b>1644.93</b>
	Net Loan-Opening	13417.03	13214.43	12779.72	12300.73	11772.10
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	202.60	434.71	478.99	528.63	582.30
	Net Loan-Closing	13214.43	12779.72	12300.73	11772.10	11189.80
	Average Loan	13315.73	12997.08	12540.23	12036.42	11480.95
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	361.52	352.87	340.47	326.79	311.71
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
	<b>Total Loan</b>					
	Gross loan opening	52548.49	52548.49	52548.49	52548.49	52548.49
	Cumulative Repayment upto DOCO/previous year	0.00	288.43	1964.15	5026.40	8566.26
	Net Loan-Opening	52548.49	52260.06	50584.34	47522.09	43982.23
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	288.43	1675.72	3062.25	3539.85	3616.26
	Net Loan-Closing	52260.06	50584.34	47522.09	43982.23	40365.98
	Average Loan	52404.27	51422.20	49053.21	45752.16	42174.11
	Rate of Interest	<b>7.0503%</b>	<b>7.0694%</b>	<b>7.0474%</b>	<b>6.9756%</b>	<b>6.8881%</b>
	<b>Interest</b>	3694.65	3635.24	3456.96	3191.48	2905.01

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>BOND XXVIII</b>					
	Gross loan opening	4883.10	4883.10	4883.10	4883.10	4883.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	406.93
	Net Loan-Opening	4883.10	4883.10	4883.10	4883.10	4476.18
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	406.93	406.93
	Net Loan-Closing	4883.10	4883.10	4883.10	4476.18	4069.25
	Average Loan	4883.10	4883.10	4883.10	4679.64	4272.71
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	455.59	455.59	455.59	436.61	398.64
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>2</b>	<b>BOND XIX</b>					
	Gross loan opening	574.00	574.00	574.00	574.00	574.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	47.83	95.67	143.50
	Net Loan-Opening	574.00	574.00	526.17	478.33	430.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	47.83	47.83	47.83	47.83
	Net Loan-Closing	574.00	526.17	478.33	430.50	382.67
	Average Loan	574.00	550.08	502.25	454.42	406.58
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	53.10	50.88	46.46	42.03	37.61
	Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>3</b>	<b>BOND XX</b>					
	Gross loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.33	6.67	10.00
	Net Loan-Opening	40.00	40.00	36.67	33.33	30.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.33	3.33	3.33	3.33
	Net Loan-Closing	40.00	36.67	33.33	30.00	26.67
	Average Loan	40.00	38.33	35.00	31.67	28.33
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	3.57	3.42	3.13	2.83	2.53
	Rep Schedule	12 equal annual installments w.e.f 07.09.2010				
<b>4</b>	<b>BOND XXI</b>					



	Gross loan opening	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>	<b>4648.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>387.33</b>	<b>774.67</b>	<b>1162.00</b>
	Net Loan-Opening	4648.00	4648.00	4260.67	3873.33	3486.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	387.33	387.33	387.33	387.33
	Net Loan-Closing	4648.00	4260.67	3873.33	3486.00	3098.67
	Average Loan	4648.00	4454.33	4067.00	3679.67	3292.33
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	405.77	388.86	355.05	321.23	287.42
	Rep Schedule	12 equal annual installments w.e.f 11.10.2010				
<b>5</b>	<b>BOND XXII</b>					
	Gross loan opening	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>	<b>5540.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>461.67</b>	<b>923.33</b>	<b>1385.00</b>
	Net Loan-Opening	5540.00	5540.00	5078.33	4616.67	4155.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	461.67	461.67	461.67	461.67
	Net Loan-Closing	5540.00	5078.33	4616.67	4155.00	3693.33
	Average Loan	5540.00	5309.17	4847.50	4385.83	3924.17
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	480.87	460.84	420.76	380.69	340.62
	Rep Schedule	12 equal annual installments w.e.f 07.12.2010				
<b>6</b>	<b>BOND XXIV</b>					
	Gross loan opening	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>	<b>1880.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>156.67</b>	<b>313.33</b>	<b>470.00</b>
	Net Loan-Opening	1880.00	1880.00	1723.33	1566.67	1410.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	156.67	156.67	156.67	156.67
	Net Loan-Closing	1880.00	1723.33	1566.67	1410.00	1253.33
	Average Loan	1880.00	1801.67	1645.00	1488.33	1331.67
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	187.06	179.27	163.68	148.09	132.50
	Rep Schedule	12 equal annual installments w.e.f 26.03.2011				
<b>7</b>	<b>BOND XXV</b>					
	Gross loan opening	<b>14822.00</b>	<b>14822.00</b>	<b>14822.00</b>	<b>14822.00</b>	<b>14822.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1235.17</b>	<b>2470.33</b>
	Net Loan-Opening	14822.00	14822.00	14822.00	13586.83	12351.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1235.17	1235.17	1235.17
	Net Loan-Closing	14822.00	14822.00	13586.83	12351.67	11116.50
	Average Loan	14822.00	14822.00	14204.42	12969.25	11734.08
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%



	Interest	1497.02	1497.02	1434.65	1309.89	1185.14
	Rep Schedule	12 equal annual installments w.e.f 12.06.2011				
<b>8</b>	<b>BOND XXVI</b>					
	Gross loan opening	<b>1549.20</b>	<b>1549.20</b>	<b>1549.20</b>	<b>1549.20</b>	<b>1549.20</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>129.10</b>	<b>258.20</b>
	Net Loan-Opening	1549.20	1549.20	1549.20	1420.10	1291.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	129.10	129.10	129.10
	Net Loan-Closing	1549.20	1549.20	1420.10	1291.00	1161.90
	Average Loan	1549.20	1549.20	1484.65	1355.55	1226.45
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	144.08	144.08	138.07	126.07	114.06
	Rep Schedule	12 equal annual installments w.e.f 07.03.2012				
<b>9</b>	<b>ADB-III (Exchange Rate 40.87)</b>					
	Gross loan opening	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>	<b>4495.70</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>67.89</b>	<b>213.55</b>	<b>374.04</b>	<b>551.17</b>
	Net Loan-Opening	4495.70	4427.81	4282.15	4121.66	3944.53
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	67.89	145.66	160.50	177.13	195.11
	Net Loan-Closing	4427.81	4282.15	4121.66	3944.53	3749.41
	Average Loan	4461.76	4354.98	4201.91	4033.09	3846.97
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	121.14	118.24	114.08	109.50	104.45
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>10</b>	<b>ADB-III (Exchange Rate 49.4)</b>					
	Gross loan opening	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>	<b>296.40</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>4.48</b>	<b>14.08</b>	<b>24.66</b>	<b>36.34</b>
	Net Loan-Opening	296.40	291.92	282.32	271.74	260.06
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	4.48	9.60	10.58	11.68	12.86
	Net Loan-Closing	291.92	282.32	271.74	260.06	247.20
	Average Loan	294.16	287.12	277.03	265.90	253.63
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	7.99	7.80	7.52	7.22	6.89
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>11</b>	<b>ADB-III (Exchange Rate 49.57)</b>					
	Gross loan opening	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>	<b>892.26</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>13.47</b>	<b>42.38</b>	<b>74.24</b>	<b>109.39</b>
	Net Loan-Opening	892.26	878.79	849.88	818.02	782.87
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	13.47	28.91	31.85	35.16	38.72



	Net Loan-Closing	878.79	849.88	818.02	782.87	744.14
	Average Loan	885.52	864.33	833.95	800.45	763.51
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	24.04	23.47	22.64	21.73	20.73
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>12</b>	<b>ADB-III (Exchange Rate 47.41)</b>					
	Gross loan opening	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>	<b>13417.03</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>202.60</b>	<b>637.31</b>	<b>1116.30</b>	<b>1644.93</b>
	Net Loan-Opening	13417.03	13214.43	12779.72	12300.73	11772.10
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	202.60	434.71	478.99	528.63	582.30
	Net Loan-Closing	13214.43	12779.72	12300.73	11772.10	11189.80
	Average Loan	13315.73	12997.08	12540.23	12036.42	11480.95
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	361.52	352.87	340.47	326.79	311.71
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
	<b>Total Loan</b>					
	Gross loan opening	53037.69	53037.69	53037.69	53037.69	53037.69
	Cumulative Repayment upto DOCO/previous year	0.00	288.43	1964.15	5067.17	8647.79
	Net Loan-Opening	53037.69	52749.26	51073.54	47970.52	44389.90
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	288.43	1675.72	3103.02	3580.62	3657.03
	Net Loan-Closing	52749.26	51073.54	47970.52	44389.90	40732.88
	Average Loan	52893.47	51911.40	49522.03	46180.21	42561.39
	Rate of Interest	<b>7.0741%</b>	<b>7.0935%</b>	<b>7.0718%</b>	<b>7.0002%</b>	<b>6.9131%</b>
	<b>Interest</b>	<b>3741.75</b>	<b>3682.33</b>	<b>3502.10</b>	<b>3232.68</b>	<b>2942.29</b>

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>BOND XIX</b>					
	Gross loan opening	57.00	57.00	57.00	57.00	57.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	4.75	9.50	14.25
	Net Loan-Opening	57.00	57.00	52.25	47.50	42.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	4.75	4.75	4.75	4.75
	Net Loan-Closing	57.00	52.25	47.50	42.75	38.00
	Average Loan	57.00	54.63	49.88	45.13	40.38
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	5.27	5.05	4.61	4.17	3.73
	Rep Schedule	12 equal annual installments w.e.f 24.07.2010				
<b>2</b>	<b>BOND XX</b>					
	Gross loan opening	4.00	4.00	4.00	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.33	0.67	1.00
	Net Loan-Opening	4.00	4.00	3.67	3.33	3.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.33	0.33	0.33	0.33
	Net Loan-Closing	4.00	3.67	3.33	3.00	2.67
	Average Loan	4.00	3.83	3.50	3.17	2.83
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	0.36	0.34	0.31	0.28	0.25
	Rep Schedule	12 equal annual installments w.e.f 07.09.2010				
<b>3</b>	<b>BOND XXI</b>					
	Gross loan opening	1242.00	1242.00	1242.00	1242.00	1242.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	103.50	207.00	310.50
	Net Loan-Opening	1242.00	1242.00	1138.50	1035.00	931.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	103.50	103.50	103.50	103.50
	Net Loan-Closing	1242.00	1138.50	1035.00	931.50	828.00
	Average Loan	1242.00	1190.25	1086.75	983.25	879.75
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	108.43	103.91	94.87	85.84	76.80
	Rep Schedule	12 equal annual installments w.e.f 11.10.2010				





<b>4</b>	<b>BOND XXII</b>					
	Gross loan opening	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>16.67</b>	<b>33.33</b>	<b>50.00</b>
	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	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	17.36	16.64	15.19	13.74	12.30
	Rep Schedule	12 equal annual installments w.e.f 07.12.2010				
<b>5</b>	<b>BOND XXIV</b>					
	Gross loan opening	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>	<b>16.67</b>	<b>25.00</b>
	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 equal annual installments w.e.f 26.03.2011				
<b>6</b>	<b>BOND XXV</b>					
	Gross loan opening	<b>325.00</b>	<b>325.00</b>	<b>325.00</b>	<b>325.00</b>	<b>325.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>27.08</b>	<b>54.17</b>
	Net Loan-Opening	325.00	325.00	325.00	297.92	270.83
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	27.08	27.08	27.08
	Net Loan-Closing	325.00	325.00	297.92	270.83	243.75
	Average Loan	325.00	325.00	311.46	284.38	257.29
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	32.83	32.83	31.46	28.72	25.99
	Rep Schedule	12 equal annual installments w.e.f 12.06.2011				
<b>7</b>	<b>BOND XXVI</b>					
	Gross loan opening	<b>153.00</b>	<b>153.00</b>	<b>153.00</b>	<b>153.00</b>	<b>153.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.75</b>	<b>25.50</b>
	Net Loan-Opening	153.00	153.00	153.00	140.25	127.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	12.75	12.75	12.75
	Net Loan-Closing	153.00	153.00	140.25	127.50	114.75
	Average Loan	153.00	153.00	146.63	133.88	121.13



	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	14.23	14.23	13.64	12.45	11.26
	Rep Schedule	12 equal annual installments w.e.f 07.03.2012				
<b>8</b>	<b>ADB-III (Exchange Rate 51.55)</b>					
	Gross loan opening	<b>1018.63</b>	<b>1018.63</b>	<b>1018.63</b>	<b>1018.63</b>	<b>1018.63</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>15.38</b>	<b>48.38</b>	<b>84.75</b>	<b>124.88</b>
	Net Loan-Opening	1018.63	1003.25	970.24	933.88	893.74
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	15.38	33.00	36.37	40.13	44.21
	Net Loan-Closing	1003.25	970.24	933.88	893.74	849.54
	Average Loan	1010.94	986.74	952.06	913.81	871.64
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	27.45	26.79	25.85	24.81	23.67
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>9</b>	<b>ADB-III (Exchange Rate 40.87)</b>					
	Gross loan opening	<b>408.70</b>	<b>408.70</b>	<b>408.70</b>	<b>408.70</b>	<b>408.70</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>6.17</b>	<b>19.41</b>	<b>34.00</b>	<b>50.11</b>
	Net Loan-Opening	408.70	402.53	389.29	374.70	358.59
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	6.17	13.24	14.59	16.10	17.74
	Net Loan-Closing	402.53	389.29	374.70	358.59	340.86
	Average Loan	405.61	395.91	381.99	366.64	349.72
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	11.01	10.75	10.37	9.95	9.50
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>10</b>	<b>ADB-III (Exchange Rate 49.4)</b>					
	Gross loan opening	<b>592.80</b>	<b>592.80</b>	<b>592.80</b>	<b>592.80</b>	<b>592.80</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>8.95</b>	<b>28.16</b>	<b>49.32</b>	<b>72.68</b>
	Net Loan-Opening	592.80	583.85	564.64	543.48	520.12
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	8.95	19.21	21.16	23.36	25.73
	Net Loan-Closing	583.85	564.64	543.48	520.12	494.40
	Average Loan	588.32	574.25	554.06	531.80	507.26
	Rate of Interest	2.715%	2.715%	2.715%	2.715%	2.715%
	Interest	15.97	15.59	15.04	14.44	13.77
	Rep Schedule	Half yearly installments w.e.f 15.01.2010				
<b>11</b>	<b>BOND XXVIII</b>					
	Gross loan opening	<b>337.97</b>	<b>337.97</b>	<b>337.97</b>	<b>337.97</b>	<b>337.97</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>28.16</b>
	Net Loan-Opening	337.97	337.97	337.97	337.97	309.81



Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	28.16	28.16
Net Loan-Closing	337.97	337.97	337.97	309.81	281.64
Average Loan	337.97	337.97	337.97	323.89	295.72
Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
Interest	31.53	31.53	31.53	30.22	27.59
Rep Schedule	12 equal annual installments w.e.f 15.12.2012				
<b>Total Loan</b>					
Gross loan opening	4439.10	4439.10	4439.10	4439.10	4439.10
Cumulative Repayment upto DOCO/previous year	0.00	30.50	229.54	475.07	756.25
Net Loan-Opening	4439.10	4408.59	4209.56	3964.02	3682.85
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	30.50	199.04	245.54	281.17	289.25
Net Loan-Closing	4408.59	4209.56	3964.02	3682.85	3393.60
Average Loan	4423.85	4309.08	4086.79	3823.44	3538.22
Rate of Interest	<b>6.2024%</b>	<b>6.2007%</b>	<b>6.1560%</b>	<b>6.0811%</b>	<b>5.9891%</b>
<b>Interest</b>	274.39	267.19	251.58	232.51	211.91