

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 310/2010

**Coram: Dr. Pramod Deo, Chairperson
Shri S.Jayaraman, Member
Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member**

Date of Hearing: 24.5.2011

Date of Order: 19.8.2011

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 for (a) LILO of one circuit of Trichy-Madurai 400 kV D/C line at Karaikudi along with 1x80 MVAR Bus Reactor and associated bays & Equipments at 400/230 kV Karaikudi Sub-station, (b) 400/220 kV, 2x315 MVA Auto Transformers & Down stream System with associated bays and equipments at Karaikudi Sub-station, (c) LILO of one circuit of existing Talaguppa - Neelamangala 400 kV D/C line along with 1x80 MVAR Line Reactor at Hassan, and (d) 400/220 kV, 2X315 MVA Transformers & Down stream System with associated bays and equipment at Hassan Sub-station under System Strengthening – VII of S R Grid for the period 2009-14

And

In the matter of:

Power Grid Corporation of India Limited, 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 Electricity Board, Chennai
5. Electricity Department, Govt. of Goa, Panaji
6. Electricity Department, Govt. of Pondicherry, Pondicherry
7. Eastern Power Distribution Company of Andhra Pradesh Ltd., Visakhapatnam
8. Southern Power Distribution Company of Andhra Pradesh Ltd., Tirupati
9. Central Power Distribution Company of Andhra Pradesh Ltd., Hyderabad
10. Northern Power Distribution Company of Andhra Pradesh Ltd., Warangal
11. Bangalore Electricity Supply Company Ltd., Bangalore
12. Gulbarga Electricity Supply Company Ltd., Gulbarga
13. Hubli Electricity Supply Company Ltd., Hubli



The following was present:

1. Shri.U. K Tyagi, PGCIL
2. Shri M. M. Mondal, PGCIL
3. Shri Rajeev Gupta, PGCIL

ORDER

This petition has been filed seeking approval for determination of transmission tariff for (a) LILO of one circuit of Trichy-Madurai 400 kV D/C line at Karaikudi along with 1x80 MVAR Bus Reactor and associated bays & Equipments at 400/230 kV Karaikudi Sub-station, (b) 400/220 kV, 2x315 MVA Auto Transformers & Down stream System with associated bays and equipments at Karaikudi Sub-station, (c) LILO of one circuit of existing Talaguppa - Neelamangala 400 kV D/C line along with 1x80 MVAR Line Reactor at Hassan, and (d) 400/220 kV, 2X315 MVA Transformers & Down stream System with associated bays and equipment at Hassan Sub-station (hereinafter collectively referred to as the transmission assets) under System Strengthening – VII of S R Grid for the period 2009-14 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 regulations”). The petitioner has also sought the reliefs as under:-

- (a) Allow grossing up the base rate of return with the applicable tax rate as per the relevant Finance Act and direct settlement of tax liability with the long term transmission customers on year to year basis;

(b) Allow, in respect of the assets being combined to calculate the transmission charges, to recover full depreciation (90% of the Gross Block) of the assets during their useful life (25 years for Sub-station and 35 years for Transmission Line) reckoning from their actual dates of commercial operation and also permit the petitioner to treat the recovery of depreciation after achieving the useful life by an asset (to be reckoned from the actual date of commercial operation);

(c) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee and publishing of notices in newspapers in terms of Regulation 42 of the 2009 regulations, and other expenditure (if any) in relation to the filing of petition;

(d) Allow the petitioner to bill and recover Service Tax on transmission charges separately from the respondents, if at any time the exemption from service tax is withdrawn and transmission of power is notified as a taxable service; and

(e) Allow the petitioner to bill and recover license fee separately from the respondents.

2. The administrative approval and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner company vide C/CP/S47-00 dated 31.5.2006 for ₹ 27930 lakh including Interest During Construction of ₹ 1730 lakh based on 4th quarter, 2004 price level.



3. Further, revised cost estimates were approved vide POWERGRID Memorandum ref. C/CP/RCE-SR-VII dated 20.12.2010 for ₹ 32509 lakh including IDC of ₹ 2854 lakh based on 2nd quarter, 2010 price level.

4. The details of the elements forming part of the project and their respective dates of commercial operation are as under:-

S.No	Element	Date of commercial operation
(a)	LILO of one circuit of Trichy-Madurai 400 kV D/C line at Karaikudi along with 1x80 MVAR Bus Reactor and associated bays & Equipments at 400/230 kV Karaikudi S/S, (hereinafter referred to as Asset 1)	1.8.2009
(b)	400/220 kV, 2x315 MVA Auto Transformers & Downstream System with associated bays and equipments at Karaikudi S/S, Hereinafter referred to as Asset – 2)	1.8.2009
(c)	LILO of one circuit of existing Talaguppa - Neelamangala 400 kV D/C line along with 1x80 MVAR Line Reactor at Hassan (hereinafter referred to as Asset – 3)	1.6.2010
(d)	400/220 kV, 2X315 MVA Transformers & Downstream System with associated bays and equipment at Hassan S/S (hereinafter referred to as Asset -4)	1.7.2010

5. Earlier the petitioner had filed Petition No. 72/2010 claiming Transmission tariff from date of commercial operation to 31.3.2014 for Asset-1 & Asset -2 above. In the present petition the Petitioner has combined Asset-1 & Asset-3 and has submitted fresh Auditor's certificate revising the Capital Cost for the Asset-1 claimed in Petition No. 72/2010. Revised Tariff based on revised capital cost for Asset-1 for the period 1.8.2009 to 31.5.2010 and Tariff for Combined Asset-1&3 and Asset-4 are being approved in this order.

6. Details of the transmission charges claimed by the petitioner are as given overleaf:-



(₹ in lakh)

Asset 1		
	2009-10 (Pro rata)	2010-11
Depreciation	279.58	437.69
Interest on Loan	385.05	567.59
Return on equity	317.89	496.28
Interest on Working Capital	26.74	41.22
O & M Expenses	125.13	198.45
Total	1134.39	1741.23

(₹ in lakh)

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Depreciation	901.50	1093.18	1094.05	1094.05
Interest on Loan	1132.31	1280.94	1179.88	1078.12
Return on equity	966.43	1171.82	1172.68	1172.68
Interest on Working Capital	76.47	91.81	91.02	90.26
O & M Expenses	344.95	437.64	462.66	489.06
Total	3421.66	4075.39	4000.29	3924.17

(₹ in lakh)

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Depreciation	180.87	246.41	246.41	246.41
Interest on Loan	215.16	273.47	250.46	227.55
Return on equity	179.28	244.25	244.25	244.25
Interest on Working Capital	23.84	32.67	33.21	33.80
O & M Expenses	257.61	363.14	383.88	405.84
Total	856.76	1159.94	1158.21	1157.85

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

(₹ in lakh)

Asset 1		
	2009-10 (Pro rata)	2010-11
Maintenance Spares	28.15	29.77
O & M expenses	15.64	16.54
Receivables	283.60	290.21
Total	327.39	336.52
Rate of Interest	12.25%	12.25%
Interest	26.74	41.22



(₹ in lakh)

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Maintenance Spares	62.09	65.65	69.40	73.36
O & M expenses	34.50	36.47	38.56	40.76
Receivables	684.33	679.23	666.72	654.03
Total	780.92	781.35	774.68	768.15
Rate of Interest	11.75%	11.75%	11.75%	11.75%
Interest	76.47	91.81	91.02	90.26

(₹ in lakh)

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Maintenance Spares	51.52	54.47	57.58	60.88
O & M expenses	28.62	30.26	31.99	33.82
Receivables	190.39	193.32	193.04	192.98
Total	270.53	278.05	282.61	287.68
Rate of Interest	11.75%	11.75%	11.75%	11.75%
Interest	23.84	32.67	33.21	33.80

8. 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 only by Respondent No. 4, Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), a unit of the erstwhile Tamil Nadu Electricity Board. TANGEDCO has raised the following objections, vide its affidavit dated 21.1.2011:-

(a) That the petitioner has referred to the reactors as line reactors in some places and as bus reactors in some other places and has requested that the petitioner may be directed to clarify as to whether both deserve the same treatment for the purpose of O&M charges;

(b) That the estimated completion cost of the combined assets (SR Portion) viz. ₹ 22361.11 lakh is about 8% more than the



apportioned approved cost of ₹ 20694 lakh. The respondent has requested the Commission to limit the capital cost to the apportioned original sanctioned cost;

(c) That the initial spares capitalized in respect of the LILO of Madurai – Trichy at Karaikudi is more than the prescribed norm of 0.75% applicable for the transmission line when viewed in isolation and has requested that any further claim for capitalization of initial spares at a later stage be negated;

(d) That the beneficiaries are not responsible for the delay in filing the application by the petitioner or award of tariff by the Commission. Hence, the beneficiaries should not be burdened with payment of transmission charges from date of commercial operation to the date of order with interest charges; and

(e) The respondent has also requested to negate the petitioner's prayer for reimbursement of licence fee, reimbursement of Service Tax, revision of O&M charges considering the impact of wage revision and grossing up the base rate of return.

9. The petitioner has not filed any rejoinder to the reply filed by TANGEDCO.

10. As regards the TANGEDCO's observations that the petitioner has referred to reactors as line reactors in some places and as bus reactors in some other places, it has been clarified by the petitioner, in its affidavit dated



24.3.2011, that inadvertently the line reactor has been mentioned as bus reactor at para 4.1 of page no.11 of the petition. O&M expenditure has been worked out accordingly.

11. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition. While doing so, we also take care of the submissions of the respondent in its reply and address them in the relevant paragraphs. .

CAPITAL COST

12. As regards the capital cost, Regulation 7 (1) of the 2009 regulations provides as under:-

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

13. As stated hereinabove, the petitioner has submitted fresh Auditor's certificate in respect of Asset 1. Accordingly, the tariff being allowed in this order in respect of Asset 1 will supersede the tariff awarded for the same Asset vide Order in Petition No. 72/2010 for the period from 1.6.2010.

14. Capital expenditure in respect of the assets as available on the records is given overleaf:-

(₹ in lakh)

Particular	Apportioned approved cost as per RCE	Capital Cost as on date of commercial operation	Date of commercial operation	Basis
Asset-1	9921.67	8766.88	1.6.2010	Auditor's certificate dated 27.10.2010
Asset-4	4688.67	4458.95	1.7.2010	Auditor's certificate dated 2.7.2010
Combined asset 1 & 3	22768.41	21899.71	1.6.2010	Including expenditure of Rs. 652.13 lakh from DOCO to Mar 2010 for Asset 1

15. As regards the capital cost, two issues merit consideration. Firstly, it has been contended by TANGEDCO that the cost of initial spares in respect of LILO of Madurai – Trichy at Karaikudi is more than the prescribed norm of 0.75%. It is found that the net value of initial spares amounting to ₹ 209.27 lakh is within the prescribed limit while considering all the assets falling under System Strengthening – VII of Southern Regional Grid. Accordingly, this objection of TANGEDCO is overruled.

16. Secondly, it is seen that as per the Investment Approval accorded in May 2005, the project was to be completed within 36 months. The petitioner has submitted that the 1st Letter of Award was placed in August 2006. Therefore, the completion schedule works out to August 2009.

17. The investment approval was granted in May 2005 and the project should have been commissioned by May 2008, i.e., in 36 months from the date of investment approval. The period of 36 months, for completion of the project, shall be counted from the date of investment approval and not from the date of issue of the 1st Letter of Award, as claimed by the petitioner. Accordingly, the asset should have been commissioned in May 2008. Thus, there is a delay of 14 months in commissioning of the project in August



2009. We hold that the appropriate deductions need to be effected in the IDC and IEDC for the delay in commissioning as explained hereunder.

18. The petitioner had submitted details of capital cost, pertaining to Asset I, including IDC and IEDC vide the Auditor's certificate dated 9.12.2009 (Audited Accounts upto 31.3.2009) in Petition No. 72/2010. In the instant Petition the petitioner has submitted details of capital cost including IDC and IEDC vide revised Auditor' certificate dated 27.10.2010 (Audited Accounts upto 31.3.2010). Accordingly, it has been decided that IDC and IEDC for the delay period for 10 months from 1.5.2008 to 31.3.2009 has been proportionately deducted as per Auditor's certificate dated 9.12.2009 and for the remaining four months, i.e. 1.4.2009 to 31.7.2009, has been deducted as per revised Auditor's certificate dated 27.10.2010. This has been proportionally deducted from the Assets (excluding land) of the transmission system as per the details are as under:-

(₹ in lakh)

Detail of IDC and IEDC as per CA Certificate dated 27.10.2010 in current petition as CA Certificated dated 09.12.2009 in submitted in Pet no 72/2010		
	IEDC	IDC
From Date of Investment Approval to 31.03.2009	326.49	432.01
From 01.04.2009-31.07.2009	64.16	277.40
Total IDC and IEDC upto DOCO	390.65	709.41
Detail of IDC and IEDC Disallowed form May'08 to July'09		
From May'08 to March'09 (for 10 months)	70.98	93.92
From April'09 to July'09 (for 4 months)	64.16	277.40
Total Disallowed IDC and IEDC (for 14 months)	135.14	371.32

19. As a result of the above deductions, the capital cost considered for computation of tariff in this order is given overleaf:-

(₹ in lakh)

Particular	Capital Cost as per the Auditor's certificate	Deductions	Capital cost considered for tariff
Asset-1	8766.88	135.14+371.32	8260.43
Asset-3	12480.70	NIL	12480.70
Asset-4	4458.95	NIL	4458.95
Combined asset 1 &3 (Including ₹ 652.13 towards Asset 1 incurred during 2009- 10)	21899.71	135.14+371.32	21393.26

ADDITIONAL CAPITAL EXPENDITURE

20. With regard to additional capital expenditure, clause 9(1) of the 2009 regulations provides as under:-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) XXX
- (iii) XXX
- (iv) XXX
- (v) XXX”

21. The 2009 regulations further defines cut-off date as under: -

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

22. As per the above definition, cut-off date in respect of all the assets whose transmission tariff is being approved in this order is 31.3.2013.

23. The following additional capital expenditure claimed by the petitioner has accordingly been allowed:-

(₹ in lakh)

Particular	Year	Additional Capital Expenditure
Asset-1	2009-10	652.13
	2010-11	89.66
Asset-4	2010-11	199.00
Combined Asset 1 &3	2010-11	428.40
	2011-12	33.00



DEBT- EQUITY RATIO

24. Regulation 12 of the 2009 regulations provides that,

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

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

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

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

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

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

25. Details of debt-equity in respect of the transmission assets as on the date of commercial operation are as under:-

Particulars	Capital Cost as on date of commercial operation	
	(` in lakh)	%
Asset-1		
Debt	5782.47	70.00
Equity	2477.96	30.00
Total	8260.43	100.00
Combined Asset- 1 and 3		
Debt	14975.45	70.00
Equity	6417.80	30.00
Total	21393.26	100.00
Asset-4		
Debt	3121.40	70.00
Equity	1337.55	30.00
Total	4458.95	100.00

26. As regards the additional capital expenditure (referred to as “Ad Cap:” in the tables below), the debt-equity details are as under:-

Normative		
	(₹ in lakh)	%
Asset 1		
Add Cap for 2009 - 10		
Debt	456.49	70.00
Equity	195.64	30.00
Total	652.13	100.00
Add Cap for 2010 -11		
Debt	62.76	70.00
Equity	26.90	30.00
Total	89.66	100.00

Combined Asset 1 and 3		
Add Cap for 2010 - 11		
Debt	299.88	70.00
Equity	128.52	30.00
Total	428.40	100.00
Add Cap for 2011-12		
Debt	23.10	70.00
Equity	9.90	30.00
Total	33.00	100.00

Asset 4		
Add Cap for 2010-11		
Debt	139.30	70.00
Equity	59.70	30.00
Total	199.00	100.00

RETURN ON EQUITY

27. 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.

28. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax ROE of 17.481%.

29. Petitioner's prayer to allow grossing up the base rate of ROE based on the tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Acts, has already been taken care of through the 2nd amendment to the 2009 regulations which inter alia provides as under:

"(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"



30. Details of return on equity calculated are as under:-

(₹ in lakh)

Asset 1		
	2009-10 (Pro rata)	2010-11
Opening Equity	2477.96	2673.59
Addition due to additional capital expenditure	195.64	26.90
Closing Equity	2673.59	2700.49
Average Equity	2575.77	2687.04
Return on Equity (Base Rate)	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%
Return on Equity (Pre Tax)	300.18	469.72

(₹ in lakh)

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Opening Equity	6417.80	6546.32	6556.22	6556.22
Addition due to additional capital expenditure	128.52	9.90	0.00	0.00
Closing Equity	6546.32	6556.22	6556.22	6556.22
Average Equity	6482.06	6551.27	6556.22	6556.22
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	944.27	1145.23	1146.09	1146.09

(₹ in lakh)

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Opening Equity	1337.55	1397.25	1397.25	1397.25
Addition due to additional capital expenditure	59.70	0.00	0.00	0.00
Closing Equity	1397.25	1397.25	1397.25	1397.25
Average Equity	1367.40	1397.25	1397.25	1397.25
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	179.28	244.25	244.25	244.25

INTEREST ON LOAN

31. 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.”

32. In these calculations, interest on loan has been worked out as detailed below:-

(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 has been deemed to be equal to the depreciation allowed for that period.

(c) As regards the moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

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

33. Methodology followed for the calculation of weighted average Rate of Interest in case of floating interest loans in Petition 132/2010, has been adopted in the instant petition. Accordingly, the interest on Loan has been calculated on the basis of rate prevailing as on 1.4.2009/date of commercial operation. Any subsequent change in rate of Interest will be considered at the time of truing up.

34. Further, as mentioned above Tariff is being allowed for Asset-1 only from date of commercial operation (1.8.2009) to 31st May, 2010. Repayment of Normative Loan i.e. ₹ 330.90 lakh for Asset-1 upto 1.6.2010 has been considered as cumulative Repayment of Normative Loan for Combined Asset-1&3 as on Notional date of commercial operation i.e. 1.6.2010.

35. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 3 to this order.



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

(₹ in lakh)

Asset 1		
	2009-10 (Pro rata)	2010-11
Gross Normative Loan	5782.47	6238.96
Cumulative Repayment upto Previous Year	0.00	262.28
Net Loan-Opening	5782.47	5976.69
Addition due to additional capital expenditure	456.49	62.76
Repayment during the year	262.28	411.74
Net Loan-Closing	5976.69	5627.71
Average Loan	5879.58	5802.20
Weighted Average Rate of Interest on Loan	9.2777%	9.2646%
Interest	363.66	537.55

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Gross Normative Loan	3121.40	3260.70	3260.70	3260.70
Cumulative Repayment upto Previous Year	0.00	180.87	427.28	673.69
Net Loan-Opening	3121.40	3079.83	2833.42	2587.01
Addition due to additional capital expenditure	139.30	0.00	0.00	0.00
Repayment during the year	180.87	246.41	246.41	246.41
Net Loan-Closing	3079.83	2833.42	2587.01	2340.60
Average Loan	3100.62	2956.63	2710.22	2463.80
Weighted Average Rate of Interest on Loan	9.2525%	9.2493%	9.2414%	9.2358%
Interest	215.16	273.47	250.46	227.55

(₹ in lakh)

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Gross Normative Loan	14975.45	15275.33	15298.43	15298.43
Cumulative Repayment upto Previous Year	330.90	1210.77	2278.00	3346.10
Net Loan-Opening	14644.56	14064.57	13020.44	11952.34
Addition due to additional capital expenditure	299.88	23.10	0.00	0.00
Repayment during the year	879.87	1067.23	1068.10	1068.10
Net Loan-Closing	14064.57	13020.44	11952.34	10884.23
Average Loan	14354.56	13542.50	12486.39	11418.29
Weighted Average Rate of Interest on Loan	9.2592%	9.2561%	9.2490%	9.2441%
Interest	1107.60	1253.50	1154.87	1055.52



DEPRECIATION

37. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:-

“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.

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(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.”

38. The transmission assets were put under commercial operation on various dates from 1.8.2009 to 1.7.2010. Accordingly, the same will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 regulations.

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

(₹ in lakh)

Asset 1		
	2009-10 (Pro rata)	2010 – 11
Gross Block	8260.43	8912.56
Addition during 2009-14 due to Projected Additional Capitalisation	652.13	89.66
Closing Gross Block	8912.56	9002.22
Average Gross Block	8586.49	8957.39
Rate of Depreciation	4.5818%	4.5966%
Depreciable Value (90%)	6921.22	7255.02
Remaining Depreciable Value	6921.22	6992.75
Depreciation	262.28	411.74

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Gross Block	21393.26	21821.66	21854.66	21854.66
Addition during 2009-14 due to Projected Additional Capitalisation	428.40	33.00	0.00	0.00
Closing Gross Block	21821.66	21854.66	21854.66	21854.66
Average Gross Block	21607.46	21838.16	21854.66	21854.66
Rate of Depreciation	4.8865%	4.8870%	4.8873%	4.8873%
Depreciable Value (90%)	18449.93	18646.92	18661.77	18661.77
Remaining Depreciable Value	18119.03	17436.15	16383.77	15315.67
Depreciation	879.87	1067.23	1068.10	1068.10

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Gross Block	4458.95	4657.95	4657.95	4657.95
Addition during 2009-14 due to Projected Additional Capitalisation	199.00	0.00	0.00	0.00
Closing Gross Block	4657.95	4657.95	4657.95	4657.95
Average Gross Block	4558.45	4657.95	4657.95	4657.95
Rate of Depreciation	5.2903%	5.2901%	5.2901%	5.2901%
Depreciable Value (90%)	4102.61	4192.16	4192.16	4192.16
Remaining Depreciable Value	4102.61	4011.29	3764.88	3518.46
Depreciation	180.87	246.41	246.41	246.41

OPERATION & MAINTENANCE EXPENSES

40. Clause (g) of regulation 19 of the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are given overleaf:-



Elements	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV Twin conductor D/C Transmission line	0.627	0.663	0.701	0.741	0.783
400 kV Bay (` lakh/ bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (` lakh/ bay)	36.68	38.78	41.00	43.34	45.82

41. O&M expenses for the Asset 1 for the years 2009-10 (pro-rata) and 2010-11 has already been approved by the Commission by its order of 1.6.2011 in 72/2010. The petitioner has not claimed any revised O&M expenses and hence the O&M expenses allowed in 72/2010 in the case of Asset 1 is adopted in this petition. Based on the above norms, the following operation and maintenance expenses, w.r.t. combined Asset 1&3 and Asset 4, claimed by the petitioner have been allowed: -

(₹ in lakh)

Combined Asset 1 &3				
Name of Elements	2010-11 Pro rata from June 2010 onwards	2011-12	2012-13	2013-14
122.992 k.m (48.642+74.35) 400 kV D/C twin conductor Transmission line	67.95	86.22	91.14	96.30
6 Nos. 400 kV Bay .	277.00	351.42	371.52	392.76
Total	344.95	437.64	462.66	489.06

Asset 4				
Name of Elements	2010-11 (Pro rata from July 2010)	2011-12	2012-13	2013-14
2 No. 400 kV bay	83.10	117.14	123.84	130.92
6 Nos. 220 kV Bay	174.51	246.00	260.04	274.92
Total	257.61	363.14	383.88	405.84

42. The petitioner has submitted that O & M expenditure for the year 2009-14 had been arrived at on the basis of normalized actual O & M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M charges for the tariff period 2009-14.



The petitioner has further submitted that it reserves the right to approach the Commission for suitable revision in the norms for O & M expenditure in case the impact of wage hike with effect from 1.1.2007 is more than 50%. The petitioner has further submitted that in O & M norms for the period 2009-14, the cost associated with license fees had not been captured and therefore licence fee be allowed to be recovered separately from the respondents.

43. We observe that these issues have been raised by the petitioner in other petitions also. A view is yet to be taken by the Commission on reimbursement of the cost of wage hike and reimbursement of licence fees. The decision as and when taken will be applicable to the present case also.

INTEREST ON WORKING CAPITAL

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

(iii) O & M expenses Regulation 18(1) (c) (iii) of the 2009 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 as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital As per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 dated 21.06.2010, In the calculations, for the Assets commissioned before 30.06.2010, SBI PLR rate i.e. 12.25% as on 1.4.2009 for Asset-1 and SBI PLR rate i.e. 11.75% as on 1.4.2010 for Combined Asset-1&3 and SBI Base Rate Plus 350 Bps as on 1.07.2010 (i.e.11.00%) for Asset-4 have been considered as the rate of interest on working capital.

45. Interest on working capital is worked out as under:-

(₹ in lakh)

Asset 1			
	2009-10 (Pro rata)	2010 - 11	2010-11 (April '10 to May '10)
Maintenance Spares	28.15	29.77	4.96
O & M expenses	15.64	16.54	2.76
Receivables	269.20	276.16	46.03
Total	313.00	322.47	53.74
Rate of Interest	12.25%	12.25%	12.25%
Interest	25.26	39.50	6.58

Combined Asset 1 and 3				
	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	62.09	65.65	69.40	73.36
O & M expenses	34.50	36.47	38.56	40.76
Receivables	670.36	665.64	653.53	641.25
Total	766.94	767.75	761.49	755.37
Rate of Interest	11.75%	11.75%	11.75%	11.75%
Interest	75.10	90.21	89.47	88.76

Asset - 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Maintenance Spares	51.52	54.47	57.58	60.88
O & M expenses	28.62	30.26	31.99	33.82
Receivables	190.05	192.97	192.68	192.61
Total	270.19	277.70	282.25	287.31
Rate of Interest	11.00%	11.00%	11.00%	11.00%
Interest	22.29	30.55	31.05	31.60

TRANSMISSION CHARGES

46. The transmission charges being allowed for the transmission assets are summarized below:-

(₹ in lakh)

Asset 1			
	2010-11 (Pro rata)	2010 - 11	2010-11 (April '10 to May '10)
Depreciation	262.28	411.74	68.62
Interest on Loan	363.66	537.55	89.59
Return on equity	300.18	469.72	78.29
Interest on Working Capital	25.56	39.50	6.58
O & M Expenses	125.13	198.45	33.08
Total	1076.81	1656.96	276.16

Combined Asset 1 and 3				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Depreciation	879.87	1067.23	1068.10	1068.10
Interest on Loan	1107.60	1253.50	1154.87	1055.52
Return on equity	944.27	1145.23	1146.09	1146.09
Interest on Working Capital	75.10	90.21	89.47	88.76
O & M Expenses	344.95	437.64	462.66	489.06
Total	3351.79	3993.81	3921.20	3847.53

Asset 4				
	2010-11 (Pro rata)	2011-12	2012-13	2013-14
Depreciation	180.87	246.41	246.41	246.41
Interest on Loan	215.16	273.47	250.46	227.55
Return on equity	179.28	244.25	244.25	244.25
Interest on Working Capital	22.29	30.55	31.05	31.60
O & M Expenses	257.61	363.14	383.88	405.84
Total	855.21	1157.82	1156.05	1155.66



OTHER ISSUES

47. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. In accordance with the Commission's decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries.

48. Accordingly, expenses incurred by the petitioner on petition filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiary on pro rata basis.

49. The petitioner has made a specific prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents if the exemption granted to it is withdrawn and transmission of power is made a taxable service. We consider the prayer pre-mature. The petitioner is at liberty to approach the Commission for any relief at the appropriate as per law.

50. As regards the prayer for reimbursement of licence fee, it is clarified that the matter is under consideration of the Commission and any decision taken will apply to this case as well.

50. 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 regulations upto 30.6.2011. With effect from 1.7.2011, the billing, collection and disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and



Losses Regulations, 2010) and the Removal of Difficulties orders issued thereunder.

51. This order disposes of Petition No. 310/2010.

Sd/-	Sd/-	Sd/-	Sd/-
(M.Deena Dayalan) Member	(V.S.Verma) Member	(S.Jayaraman) Member	(Dr. Pramod Deo) Chairperson



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2009-10	2010-11
1	Bond XX		
	Gross loan opening	150.00	150.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.00	150.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.50
	Net Loan-Closing	150.00	137.50
	Average Loan	150.00	143.75
	Rate of Interest	8.93%	8.93%
	Interest	13.40	12.84
	Rep Schedule	12 equal installments w.e.f. 07.09.2010	
2	Bond XXI		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.84
	Rate of Interest	8.73%	8.73%
	Interest	8.73	8.37
	Rep Schedule	12 equal installments w.e.f. 11.10.2010	
3	Bond XXII		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.84
	Rate of Interest	8.68%	8.68%
	Interest	8.68	8.32
	Rep Schedule	12 equal installments w.e.f. 07.12.2010	

4	Bond XXIV		
	Gross loan opening	250.00	250.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	250.00	250.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	20.83
	Net Loan-Closing	250.00	229.17
	Average Loan	250.00	239.58
	Rate of Interest	9.95%	9.95%
	Interest	24.88	23.84
	Rep Schedule	12 equal installments w.e.f. 26.03.2011	
5	Bond XXVII		
	Gross loan opening	2000.00	2000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2000.00	2000.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2000.00	2000.00
	Average Loan	2000.00	2000.00
	Rate of Interest	9.47%	9.47%
	Interest	189.40	189.40
	Rep Schedule	12 equal installments w.e.f. 31.03.2012	
6	Bond XXVIII		
	Gross loan opening	1400.00	1400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1400.00	1400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1400.00	1400.00
	Average Loan	1400.00	1400.00
	Rate of Interest	9.33%	9.33%
	Interest	130.62	130.62
	Rep Schedule	12 equal installments w.e.f. 15.12.2012	
7	Bond XXIX		
	Gross loan opening	1620.00	1620.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1620.00	1620.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1620.00	1620.00
	Average Loan	1620.00	1620.00
	Rate of Interest	9.20%	9.20%
	Interest	149.04	149.04
	Rep Schedule	12 equal installments w.e.f. 12.03.2013	



8	Bond XXX		
	Gross loan opening	517.00	517.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	517.00	517.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	517.00	517.00
	Average Loan	517.00	517.00
	Rate of Interest	8.80%	8.80%
	Interest	45.50	45.50
	Rep Schedule	12 equal installments w.e.f. 29.09.2013	
9	Bond XXXI (AddCap for 2009-10 Drwal on 31.03.2010)		
	Gross loan opening	0.00	456.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	456.50
	Additions during the year	456.50	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	456.50	456.50
	Average Loan	228.25	456.50
	Rate of Interest	8.90%	8.90%
	Interest	20.31	40.63
	Rep Schedule	12 equal installments w.e.f. 25.02.2014	
	Total Loan		
	Gross loan opening	6137.00	6593.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	6137.00	6593.50
	Additions during the year	456.50	0.00
	Repayment during the year	0.00	49.99
	Net Loan-Closing	6593.50	6543.51
	Average Loan	6365.25	6568.50
	Rate of Interest	9.2777%	9.2646%
	Interest	590.55	608.54



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2010-11	2011-12	2012-13	2013-14
1	Bond XX				
	Gross loan opening	480.00	480.00	480.00	480.00
	Cumulative Repayment upto DOCO/previous year	0.00	40.00	80.00	120.00
	Net Loan-Opening	480.00	440.00	400.00	360.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	40.00	40.00	40.00	40.00
	Net Loan-Closing	440.00	400.00	360.00	320.00
	Average Loan	460.00	420.00	380.00	340.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%
	Interest	41.08	37.51	33.93	30.36
	Rep Schedule	12 equal installments w.e.f. 07.09.2010			
2	Bond XXI				
	Gross loan opening	240.00	240.00	240.00	240.00
	Cumulative Repayment upto DOCO/previous year	0.00	20.00	40.00	60.00
	Net Loan-Opening	240.00	220.00	200.00	180.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	20.00	20.00	20.00	20.00
	Net Loan-Closing	220.00	200.00	180.00	160.00
	Average Loan	230.00	210.00	190.00	170.00
	Rate of Interest	8.73%	8.73%	8.73%	8.73%
	Interest	20.08	18.33	16.59	14.84
	Rep Schedule	12 equal installments w.e.f. 11.10.2010			
3	Bond XXII				
	Gross loan opening	180.00	180.00	180.00	180.00
	Cumulative Repayment upto DOCO/previous year	0.00	15.00	30.00	45.00
	Net Loan-Opening	180.00	165.00	150.00	135.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	15.00	15.00	15.00	15.00
	Net Loan-Closing	165.00	150.00	135.00	120.00
	Average Loan	172.50	157.50	142.50	127.50
	Rate of Interest	8.68%	8.68%	8.68%	8.68%
	Interest	14.97	13.67	12.37	11.07
	Rep Schedule	12 equal installments w.e.f. 07.12.2010			

4	Bond XXIV				
	Gross loan opening	630.00	630.00	630.00	630.00
	Cumulative Repayment upto DOCO/previous year	0.00	52.50	105.00	157.50
	Net Loan-Opening	630.00	577.50	525.00	472.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	52.50	52.50	52.50	52.50
	Net Loan-Closing	577.50	525.00	472.50	420.00
	Average Loan	603.75	551.25	498.75	446.25
	Rate of Interest	9.95%	9.95%	9.95%	9.95%
	Interest	60.07	54.85	49.63	44.40
	Rep Schedule	12 equal installments w.e.f. 26.03.2011			
5	Bond XXVII				
	Gross loan opening	4950.00	4950.00	4950.00	4950.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	412.50	825.00
	Net Loan-Opening	4950.00	4950.00	4537.50	4125.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	412.50	412.50	412.50
	Net Loan-Closing	4950.00	4537.50	4125.00	3712.50
	Average Loan	4950.00	4743.75	4331.25	3918.75
	Rate of Interest	9.47%	9.47%	9.47%	9.47%
	Interest	468.77	449.23	410.17	371.11
	Rep Schedule	12 equal installments w.e.f. 31.03.2012			
6	Bond XXVIII				
	Gross loan opening	3880.00	3880.00	3880.00	3880.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	323.33
	Net Loan-Opening	3880.00	3880.00	3880.00	3556.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	323.33	323.33
	Net Loan-Closing	3880.00	3880.00	3556.67	3233.33
	Average Loan	3880.00	3880.00	3718.33	3395.00
	Rate of Interest	9.33%	9.33%	9.33%	9.33%
	Interest	362.00	362.00	346.92	316.75
	Rep Schedule	12 equal installments w.e.f. 15.12.2012			
7	Bond XXIX				
	Gross loan opening	1912.00	1912.00	1912.00	1912.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	159.33
	Net Loan-Opening	1912.00	1912.00	1912.00	1752.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	159.33	159.33
	Net Loan-Closing	1912.00	1912.00	1752.67	1593.33
	Average Loan	1912.00	1912.00	1832.33	1673.00
	Rate of Interest	9.20%	9.20%	9.20%	9.20%
	Interest	175.90	175.90	168.57	153.92
	Rep Schedule	12 equal installments w.e.f. 12.03.2013			



8	Bond XXX				
	Gross loan opening	1497.00	1497.00	1497.00	1497.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1497.00	1497.00	1497.00	1497.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	124.75
	Net Loan-Closing	1497.00	1497.00	1497.00	1372.25
	Average Loan	1497.00	1497.00	1497.00	1434.63
	Rate of Interest	8.80%	8.80%	8.80%	8.80%
	Interest	131.74	131.74	131.74	126.25
	Rep Schedule	12 equal installments w.e.f. 29.09.2013			
9	Bond XXXI				
	Gross loan opening	1561.50	1561.50	1561.50	1561.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1561.50	1561.50	1561.50	1561.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	130.13
	Net Loan-Closing	1561.50	1561.50	1561.50	1431.38
	Average Loan	1561.50	1561.50	1561.50	1496.44
	Rate of Interest	8.90%	8.90%	8.90%	8.90%
	Interest	138.97	138.97	138.97	133.18
	Rep Schedule	12 equal installments w.e.f. 25.02.2014			
	Total Loan				
	Gross loan opening	15330.50	15330.50	15330.50	15330.50
	Cumulative Repayment upto DOCO/previous year	0.00	127.50	667.50	1690.17
	Net Loan-Opening	15330.50	15203.00	14663.00	13640.33
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	127.50	540.00	1022.67	1277.54
	Net Loan-Closing	15203.00	14663.00	13640.33	12362.79
	Average Loan	15266.75	14933.00	14151.67	13001.56
	Rate of Interest	9.2592%	9.2561%	9.2490%	9.2441%
	Interest	1413.59	1382.21	1308.89	1201.88



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
(₹ in lakh)

	Details of Loan	2010-11	2011-12	2012-13	2013-14
1	BOND XXII				
	Gross loan opening	35.00	35.00	35.00	35.00
	Cumulative Repayment upto DOCO/previous year	0.00	2.92	5.83	8.75
	Net Loan-Opening	35.00	32.08	29.17	26.25
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.92	2.92	2.92	2.92
	Net Loan-Closing	32.08	29.17	26.25	23.33
	Average Loan	33.54	30.63	27.71	24.79
	Rate of Interest	8.68%	8.68%	8.68%	8.68%
	Interest	2.91	2.66	2.41	2.15
	Rep Schedule	12 equal annula installments w.e.f. 07.12.2010			
2	BOND XX				
	Gross loan opening	120.00	120.00	120.00	120.00
	Cumulative Repayment upto DOCO/previous year	0.00	10.00	20.00	30.00
	Net Loan-Opening	120.00	110.00	100.00	90.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	10.00	10.00	10.00	10.00
	Net Loan-Closing	110.00	100.00	90.00	80.00
	Average Loan	115.00	105.00	95.00	85.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%
	Interest	10.27	9.38	8.48	7.59
	Rep Schedule	12 equal annula installments w.e.f. 07.09.2010			
3	BOND XXI				
	Gross loan opening	55.00	55.00	55.00	55.00
	Cumulative Repayment upto DOCO/previous year	0.00	4.58	9.17	13.75
	Net Loan-Opening	55.00	50.42	45.83	41.25
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	4.58	4.58	4.58	4.58
	Net Loan-Closing	50.42	45.83	41.25	36.67
	Average Loan	52.71	48.13	43.54	38.96
	Rate of Interest	8.73%	8.73%	8.73%	8.73%
	Interest	4.60	4.20	3.80	3.40
	Rep Schedule	12 equal annula installments w.e.f. 11.10.2010			

4	BOND XXIX				
	Gross loan opening	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	8.33
	Net Loan-Opening	100.00	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33	8.33
	Net Loan-Closing	100.00	100.00	91.67	83.33
	Average Loan	100.00	100.00	95.83	87.50
	Rate of Interest	9.20%	9.20%	9.20%	9.20%
	Interest	9.20	9.20	8.82	8.05
	Rep Schedule	12 equal annula installments w.e.f. 12.03.2013			
5	BOND XXVIII				
	Gross loan opening	887.00	887.00	887.00	887.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	73.92
	Net Loan-Opening	887.00	887.00	887.00	813.08
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	73.92	73.92
	Net Loan-Closing	887.00	887.00	813.08	739.17
	Average Loan	887.00	887.00	850.04	776.13
	Rate of Interest	9.33%	9.33%	9.33%	9.33%
	Interest	82.76	82.76	79.31	72.41
	Rep Schedule	12 equal Annual Installment from 15.12.2012			
6	Bond XXXI				
	Gross loan opening	397.40	397.40	397.40	397.40
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	397.40	397.40	397.40	397.40
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	33.12
	Net Loan-Closing	397.40	397.40	397.40	364.28
	Average Loan	397.40	397.40	397.40	380.84
	Rate of Interest	8.90%	8.90%	8.90%	8.90%
	Interest	35.37	35.37	35.37	33.89
	Rep Schedule	12 equal Annual Installment from 25.02.2014			
7	Bond XXIV				
	Gross loan opening	132.00	132.00	132.00	132.00
	Cumulative Repayment upto DOCO/previous year	0.00	11.00	22.00	33.00
	Net Loan-Opening	132.00	121.00	110.00	99.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	11.00	11.00	11.00	11.00
	Net Loan-Closing	121.00	110.00	99.00	88.00
	Average Loan	126.50	115.50	104.50	93.50
	Rate of Interest	9.95%	9.95%	9.95%	9.95%
	Interest	12.59	11.49	10.40	9.30
	Rep Schedule	12 equal Annual Installment from 26.03.2011			



8	Bond XXX				
	Gross loan opening	345.00	345.00	345.00	345.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	345.00	345.00	345.00	345.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	28.75
	Net Loan-Closing	345.00	345.00	345.00	316.25
	Average Loan	345.00	345.00	345.00	330.63
	Rate of Interest	8.80%	8.80%	8.80%	8.80%
	Interest	30.36	30.36	30.36	29.10
	Rep Schedule	12 equal Annual Installment from 29.09.2013			
9	Bond XXVII				
	Gross loan opening	1050.00	1050.00	1050.00	1050.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	87.50	175.00
	Net Loan-Opening	1050.00	1050.00	962.50	875.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	87.50	87.50	87.50
	Net Loan-Closing	1050.00	962.50	875.00	787.50
	Average Loan	1050.00	1006.25	918.75	831.25
	Rate of Interest	9.47%	9.47%	9.47%	9.47%
	Interest	99.44	95.29	87.01	78.72
	Rep Schedule	12 equal Annual Installment from 31.03.2012			
	Total Loan				
	Gross loan opening	3121.40	3121.40	3121.40	3121.40
	Cumulative Repayment upto DOCO/previous year	0.00	28.50	144.50	342.75
	Net Loan-Opening	3121.40	3092.90	2976.90	2778.65
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	28.50	116.00	198.25	260.12
	Net Loan-Closing	3092.90	2976.90	2778.65	2518.53
	Average Loan	3107.15	3034.90	2877.78	2648.59
	Rate of Interest	9.2525%	9.2493%	9.2414%	9.2358%
	Interest	287.49	280.71	265.95	244.62

