

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 284/2010

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri M. Deena Dayalan, Member
Shri A. K. Singhal, Member**

**Date of Hearing : 01.04.2014
Date of Order : 19.05.2014**

In the matter of:

Revision of transmission tariff of 400 kV D/C Raigarh-Raipur TL along with bays associated with East West Transmission Corridor in Western Region for the period from 1.4.2009 to 31.3.2014 consequent to the judgment dated 27.4.2012 of the Hon'ble Appellate Tribunal for Electricity in Appeal No.134/2011 and 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.

And In the matter of:

Power Grid Corporation of India Limited
"Saudamani", Plot No.2,
Sector-29, Gurgaon -122 001.

.....**Petitioner**

Vs

1. Madhya Pradesh Power Trading Company Ltd.,
Shakti Bhawan, Rampur
Jabalpur-482 008.
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th floor
Andehri (East), Mumbai-400 052.
3. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390 007.
4. Electricity Department, Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403 001.



5. Electricity Department,
Administration of Daman and Diu,
Daman-396 210.
6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230.
7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013.
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.,
3/54, Press Complex, Agra-Bombay Road
Indore -452 008.

..... Respondents

For petitioner : Shri S.S Raju, PGCIL
Shri Upendra Pandey, PGCIL
Shri M. M. Mondal, PGCIL

For respondent : None

ORDER

Transmission tariff for 400 kV D/C Raigarh-Raipur TL along with bays associated with East West Transmission Corridor in Western Region (hereinafter referred to as "Asset-1") for the period from 1.4.2009 to 31.3.2014 was approved by the Commission vide order dated 8.6.2011 in Petition No. 284/2010. There was a delay of 15 months in commissioning of Asset-1 and the Commission condoned the delay of 8 months as it was attributed to issues related to funding and the remaining 7 months was not condoned. The petitioner had preferred an appeal against the refusal to condone a portion of the delay in commissioning and consequent disallowance of Interest During Construction (IDC) and Incidental Expenditure During

Construction (IEDC). The Hon'ble Appellate Tribunal for Electricity had, vide its judgment dated 27.4.2012 in Appeal No.134/2011, upheld the decision of the Commission disallowing IDC and IEDC for four months of the total seven months and remanded the matter to the Commission for considering the explanation given by the petitioner for the delay of the remaining three months.

2. The petitioner, PGCIL, was directed to file information regarding the date of filing of application with the Railways for clearance and other related information. On receipt of the said information, the matter was heard on 16.7.2013. During hearing on 16.7.2013, the representative of the petitioner submitted that an application for Railway clearance was filed on 19.1.2009 and the amount required for clearance was deposited with the Railways within four days of receipt of letter from Railways and that there was no delay on the part of the petitioner. He submitted that Railways granted the clearance on 8.9.2010 and there was considerable delay in granting clearance by the Railways and the petitioner cannot be held responsible for the delay. The Commission directed the petitioner to give three live examples to demonstrate the time taken by Railways generally to grant clearance and the time taken in the instant case.

3. In response, the petitioner has submitted, vide affidavit dated 16.8.2013, the time taken by the Railways in respect of three different cases:-

Sr. No.	Name of Line	Date of Proposal Submission	Approval Date	Time taken by Railways (Months)
1	765kV D/C Jabalpur Pooling – Bina T/L	2.2.2012	16.8.2012	06
2	400kV D/C Jabalpur Pooling- Jabalpur	4.9.2012	20.2.2013	05
3	765kV Agra-Jattikara Line	5.11.2011	23.7.2012	08

4. As per the details given above, Railway clearance was given in 5 to 8 months in earlier cases. In the instant case, the petitioner has applied for Railway clearance on 19.1.2009 and deposited the required money in June, 2010 and the Railways gave clearance on 8.9.2010, almost after 20 months of application for clearance. The time taken by Railways for giving the clearance in the instant case is unusually longer than the time taken in other cases. Thus, there is justification for condoning the delay of 3 months in getting approval from Railways. We accordingly condone the delay of three months. Accordingly, 11 months time over-run is condoned and the remaining 4 months time over-run occurred due to theft of towers is not condoned.

5. In the Instant case it was found that the Investment Approval was given by the petitioner's Board on 29.6.2006 and the assets covered in the project were to be commissioned within 36 months from the date of Investment Approval i.e. 28.6.2009 (1.7.2009), where as the petitioner had applied for the Railway clearance on 19.1.2009 i.e. after 2 years 7 months from the date of Investment Approval. We are of the view that the petitioner should have applied for Railway clearance as soon as the Investment Approval has been granted by its Board. Accordingly, the petitioner is advised to initiate action for Railway and Forest clearance, if any, in all future cases immediately after getting Investment Approval.

6. In the meantime, the petitioner had filed Petition No. 350/2010 wherein the above mentioned Asset-1 was combined with Ranchi-Rourkela line (hereinafter referred to as Asset-2). During the course of proceedings in Petition No. 350/2010, the petitioner had submitted fresh Auditor's Certificate revising the capital cost of

Asset-1. Accordingly, Commission vide its order dated 16.9.2011 in Petition No. 350/2010 superseded the tariff awarded vide order dated 8.6.2011 in Petition No. 284/2010. Revised tariff based on revised capital cost for the period 1.10.2010 to 30.11.2010 and tariff for the combined asset for the period 1.12.1010 to 31.3.2014 was approved vide the Commission's order dated 16.9.2011 in Petition No. 350/2010.

7. Subsequently, the petitioner filed Petition No. 103/2011 for fixation of tariff in respect of the above stated two assets and two more assets viz. 400 kV D/C Ranchi–Rourkela TL along with associated bays (hereinafter referred to as “Asset-3”) and 400 kV D/C Rourkela–Raigarh TL along with associated bays and 40% Fixed Series Compensation (FSC) along with 5-15% Thyristor Controlled Series Capacitor (TCSC) on both the circuits of Raigarh – Raipur 400 kV D/C line at Raipur end under East-West Transmission Corridor Strengthening Scheme (hereinafter referred to as “Asset-4”). While doing so, the petitioner had submitted revised auditor's certificate in respect of Asset-1 and Asset-2 revising the capital cost of these assets considered earlier in Petition No. 284/2012. Accordingly, the tariff in respect of Asset-1 and Asset-2 were revised vide order dated 9.5.2013 in Petition No. 103/2011.

8. Condonation of delay of 3 months time over-run in case of Asset-1 in Petition No. 284/2010 has a compounding effect in Petition No.350/2010 and Petition No. 103/2011.

9. Accordingly, we proceed in this order, to revise the tariff awarded vide the following three orders:-

- (a) Order dated 8.6.2011 in Petition No. 284/2010 wherein transmission tariff was awarded to Asset-1.
- (b) Order dated 16.9.2011 in Petition No. 350/2010 wherein transmission tariff was awarded to Asset-2.
- (c) Order dated 9.5.2013 in Petition No. 103/2011, wherein transmission tariff in respect of Asset-1 and Asset-2 were revised and the transmission tariff was awarded to Asset-3 and 4.

10. The investment approval for East-West Transmission Corridor Strengthening Scheme was accorded by the Government of India, Ministry of Power, vide their letter dated 23.6.2006 at an estimated cost of ₹80370 lakh including IDC of ₹3695 lakh (based on 4th Quarter, 2005 price level). The scope of the work covered under the scheme is as under:-

Transmission Lines:

- (a) Ranchi – Rourkela 400 kV D/C
- (b) Rourkela – Raigarh 400 kV D/C
- (c) Raigarh – Raipur 400 kV D/C

Sub Stations:

- (a) 400/220 kV Ranchi (POWERGRID) Sub-station (Extension)
- (b) 400/220 kV Rourkela (POWERGRID) Sub-station (Extension)
- (c) 400/220 kV Raigarh (POWERGRID) Sub-station (Extension)
- (d) 400/220 kV Raipur (POWERGRID) Sub-station (Extension)
- (e) Provision of 40% Fixed Series Compensation (FSC) along with 5-15% Thyristor Controlled Series Capacitor (TCSC) on both the circuits of Raigarh – Raipur 400 kV D/C line at Raipur end.

11. For the purpose of determination of tariff, the assets have been combined as under with the respective dates of commercial operation, capital cost on the dates of commercial operation and the basis of the capital cost:-

(₹ in lakh)

Particulars	DOCO	Capital cost as on DOCO	Reference
Asset-1	1.10.2010	21308.44	Management certificate dated 28.12.2012
Asset-2	1.12.2010	16376.54	Management certificate dated 20.12.2012
Asset-3	1.4.2011	2595.74	Management certificate dated 3.1.2013
Asset-4	1.7.2011	24111.34	Management certificate dated 7.11.2012

12. Details of the apportioned approved cost, actual cost on the date of commercial operation and the projected capital expenditure of the four assets are as given below:-

(₹ in lakh)

Name of the asset	Apportioned approved cost	Actual cost incurred as on actual/notional DOCO	Projected Capital Expenditure						Total estimated completion Cost
			2010-11		2011-12		2012-13	2013-14	
			1.10.10 to 30.11.10	1.12.10 to 31.3.11	1.4.11 to 30.6.11	1.7.11 to 31.3.12	1.4.12 to 31.3.13	1.4.13 to 31.3.14	
Asset 1 : (DOCO: 1.10.10)	24855.51	21308.44	13.60	263.92	548.92	2181.78	28.82	0.00	24345.48
Asset 2 : (DOCO: 1.12.10)	22465.67	16376.54		311.66	114.32	409.76	19.00	0.00	17231.28
Asset 3 : (DOCO: 01.04.11)	33048.82	2595.74		7.15	412.66	402.45	0.00		3418.00
Asset 4 : (DOCO: 01.07.11)		24111.34		1226.29	750.00	0.00		26087.63	
Total (Asset-1, 2, 3 and 4)	80370.00			65651.63	4230.49	1200.27	0.00		71082.39

Capital cost

13. Regulation 7 of the 2009 Tariff Regulations provides as under:-

“(1) Capital cost for a project shall include:-

- (a) 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.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

14. As noted above, the present order pertains to condonation of delay in commissioning and consequent revision of transmission tariff in respect of Asset-1. The apportioned approved cost, cost as on date of commercial operation and the estimated projected additional capital expenditure in respect of Asset-1 are as under:-

(₹ in lakh)

Name of the asset	Apportioned approved cost	Actual cost incurred as on actual/notional DOCO	Projected Capital Expenditure						Total estimated completion cost
			2010-11		2011-12		2012-13	2013-14	
			1.10.10 to 30.11.10	1.12.10 to 31.03.11	1.4.11 to 30.06.11	1.7.11 to 31.03.12	1.4.12 to 31.3.13	1.4.13 to 31.3.14	
Asset 1: (DOCO: 1.10.10)	24855.51	21308.44	13.60	263.92	548.92	2181.78	28.82	0.00	24345.48

Treatment of IDC and IEDC

15. As stated hereinabove, in the earlier tariff orders the Commission had declined to condone the time over-run of seven months. However, on re-consideration of the issues consequent to the directions of the Hon'ble Appellate Tribunal for Electricity vide its judgment dated 27.4.2012 in Appeal No. 134/2011, three months of delay out of the seven months has been condoned. Accordingly, IDC and IEDC for 4 months have been computed on pro-rata basis from the IDC & IEDC claimed for the period April, 2010 to September, 2010. Disallowed IDC & IEDC has been proportionately deducted from the cost of the elements as on the date of commercial operation. Details of IDC and IEDC disallowed are as given follows:-

(₹ in lakh)

Detail of IDC and IEDC as per CA Certificate dated 11.09.2010		
	IEDC	IDC
up to 31.03.2010	306.06	868.04
From 01.04.2010-30.09.2010	25.14	301.44
Total IDC and IEDC Claimed	331.20	1169.48
Detail of IDC and IEDC Disallowed for 4 months		
From June'10 to Sep'10 (for 4 months)	16.76	200.96
Total Disallowed IDC and IEDC (for 4 months)*	16.76	200.96

Treatment for initial spares

16. Regulation 8 of 2009 Tariff Regulations provides that Initial spares shall be capitalised as a percentage of the original project cost , subject to following ceiling norms:-

Transmission line	0.75%
Transmission Sub-station	2.5%
Series compensation devices & HVDC Station	3.5%

17. The petitioner has claimed initial spares of ₹178.85 lakh pertaining to sub-station. As detailed above, the entire project has been covered in Petitions No.

284/2010, 350/2010 and 103/2011. Initial spares claimed for all the four assets except Asset-4 is found to exceed the ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations. Surplus initial spares have been adjusted in proportion to the excess initial spares claimed for Asset-1, Asset-2 and Asset-3. Asset wise details of the excess initial spares claimed and adjustment of surplus initial spares of Asset-4 among the assets is as given below:-

(₹ in lakh)

Particulars	Capital cost up to cut-off date	Initial spares claimed	Capital cost up to cut-off date after adjusting disallowed IDC & IEDC	Proportionate initial spares	Ceiling limits as per Regulation 8 of 2009 Tariff Regulations	Initial spares worked out	Excess/surplus initial spares claimed	Net Excess initial spares has been adjusted in proportion*
	(a)	(b)	(c)	(d)=(c)* (b)/(a)	(e)	(f)= {(c)- d)*(e) /(100%- e)	(g)= (f)- (d)	(h)
Asset-1	2860.97	178.85	2837.03	177.35	2.50%	68.20	-109.16	-106.69
Asset-2	856.13	79.98	856.13	79.98	2.50%	19.90	-60.08	-58.72
Asset-3	3418.00	163.6	3388.44	162.19	2.50%	82.72	-79.46	-77.67
Asset-4	2070.34	46.29	2070.34	46.29	2.50%	51.90	5.61	0.00
Total/Net	9205.44	468.72	9151.94	465.81	2.50%	222.72	-243.09	-243.09

*Net Excess Initial spares have been deducted in proportion to the individual excess of initial spares.

18. Based on the above, the capital cost of the four assets after the disallowance of IDC and IEDC and adjustment of the cost of initial spares is as under:-

(₹ in lakh)

Particulars	Capital cost claimed as on DOCO	Disallowed IDC and IEDC	Excess initial spares	Capital cost of individual assets considered as on DOCO
Asset-1	21308.44	217.72	106.69	20984.03
Asset-2	16376.54	0.00	58.72	16317.82
Asset-3	2595.74	29.56	77.67	2488.51
Asset-4	24111.34	0.00	0.00	24111.34

Additional capital expenditure

19. Regulation 9(1) of the 2009 Tariff Regulations provides as follows:-

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

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

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

“cut-off date means 31st march of the year closing after 2 years of the year of commercial operation of the project, and 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”.

21. Details of the projected additional capital expenditure claimed by the petitioner are as under:-

		(₹ in lakh)		
Name of Assets	2010-11	2011-12	2012-13	
Asset-1	277.52	2730.70	28.82	
Asset-2	311.66	524.08	19.00	
Asset-3	0.00	419.81	402.45	
Asset-4	0.00	1226.29	750.00	

22. Additional capital expenditure claimed is mainly on account of balance retention payment and is within cut-off date. Hence, the same has been considered for the purpose of tariff calculation under Regulation 9(1) of 2009 Tariff Regulations.

23. Based on the above, capital cost considered for the purpose of computation of tariff after allowing the additional capital expenditure in respect of the four assets is as given below:-

Particulars	Capital cost as on DOCO	(₹ in lakh)		
		October 2010 to November 2010	December 2010 to March 2011	April 2011 to Jun 2011
Asset-1 (A)	20984.03	13.60	263.92	548.92
Asset-2 (B)		16317.82	311.66	114.32
Combined Asset-1&2 (C)= (A)+(B)		37315.45	575.58	663.24
Asset-3 (D)			2488.51	7.15
Combined Asset-1,2&3 (E)=(C)+(D)			40379.53	670.39
Asset-4 (F)				24111.32
Combined Asset-1,2,3&4 (G)=(E)+(F)				65161.26

Debt- equity ratio

24. Regulation 12 of the 2009 Tariff 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 assets comprising the transmission assets as on date of commercial operation are as given below:-

(₹ in lakh)

Capital Cost as on date of commercial operation		
Asset-1		
Particulars	Amount	%
Debt	14688.82	70.00
Equity	6295.21	30.00
Total	20984.03	100.00

Combined Asset- 1 & 2		
Debt	26120.81	70.00
Equity	11194.63	30.00
Total	37315.44	100.00

Combined Asset- 1,2 & 3		
Debt	28265.67	70.00
Equity	12113.86	30.00
Total	40379.53	100.00

Combined Asset- 1,2,3 & 4		
Debt	45612.92	70.00
Equity	19548.35	30.00
Total	65161.27	100.00

26. Details of debt equity ratio as on 31.3.2014 are as under:-

(₹ in lakh)

Capital cost as on 31.3.2014		
Combined Asset- 1,2,3 & 4		
Particulars	Amount	%
Debt	49414.45	70.00
Equity	21177.57	30.00
Total	70592.02	100.00

27. The above stated debt–equity ratios have been applied for the purpose of tariff calculation in this order.

Return on equity

28. Regulation 15 of the 2009 Tariff 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% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

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

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

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

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations”.

29. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 Tariff Regulations with pre-tax ROE of 17.481% based on the tax rate of 11.330% for the year 2008-09.

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

(₹ in lakh)

	Asset 1	Combined Asset 1&2	Combined Asset 1,2 and 3
	1.10.2010 to 31.3. 2011	2010-11 (1.12.2010 to 31.3.2011)	DOCO to 31.3.2012
Opening Equity	6295.21	11194.63	12113.86
Addition due to additional capital expenditure	83.26	172.67	1102.38
Closing Equity	6378.46	11367.31	13216.24
Average Equity	6336.84	11280.97	12665.05
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	553.87	657.34	2213.98
ROE pro-rata	184.62	657.34	553.49
Pro-rata period	1.10.2010 to 30.11.2011	1.12.2010 to 31.3.2011	1.4.2011 to 30.6.2011

(₹ in lakh)

Combined Asset 1,2,3 and 4			
	2011-12 (1.7.2011 to 31.3.2012)	2012-13	2013-14
Opening Equity	19548.35	20817.49	21177.57
Addition due to additional capital expenditure	1269.15	360.08	0.00
Closing Equity	20817.49	21177.57	21177.57
Average Equity	20182.92	20997.53	21177.57
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	2646.13	3670.58	3702.05

Interest on loan

31. Regulation 16 of the 2009 Tariff 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 on actual loan have been considered as per the petition to work out the weighted average rate of interest.

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

(c) For loans with floating interest rates, rates of interest as on 01-04-2009/DOCO have been considered.

(d) Repayment for ADB III loans have been calculated as per the supporting documents attached with the petition.

(e) Weighted average rate of interest on actual loan worked out as above has been applied on the notional average loan during the year to arrive at the interest on loan.

(f) Exchange rates, in case of foreign loans, as on drawal dates has been taken into account for the calculation.

33. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 4 to this order.

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

(₹ in lakh)

	Asset 1	Combined Asset 1&2	Combined Asset 1,2 and 3
	1.10.2010 to 31.3. 2011	2010-11 (1.12.2010 to 31.3.2011)	DOCO to 31.3.2012
Gross Normative Loan	14688.82	26120.81	28265.67
Cumulative Repayment upto Previous Year	0.00	185.39	846.38
Net Loan-Opening	14688.82	25935.42	27419.29
Addition due to additional capital expenditure	194.26	402.91	2572.21
Repayment during the year	556.16	660.99	2226.58
Net Loan-Closing	14326.92	25677.34	27764.93
Average Loan	14507.87	25806.38	27592.11
Weighted Average Rate of Interest on Loan	5.2650%	5.2235%	5.1935%
Interest	381.92	449.33	1433.00
Interest pro-rata	127.31	449.33	358.25
Pro-rata period	1.10.2010 to 30.11.2010	1.12.2010 to 31.3.2011	1.4.2011 to 30.6.2011

(₹ in lakh)

Combined Asset 1,2,3 and 4			
	2011-12 (1.7.2011 to 31.3.2012)	2012-13	2013-14
Gross Normative Loan	45612.92	48574.26	49414.45
Cumulative Repayment upto Previous Year	1403.02	4064.26	7755.95
Net Loan-Opening	44209.89	44510.00	41658.50
Addition due to additional capital expenditure	2961.34	840.19	0.00
Repayment during the year	2661.24	3691.69	3723.38
Net Loan-Closing	44510.00	41658.50	37935.12
Average Loan	44359.95	43084.25	39796.81
Weighted Average Rate of Interest on Loan	5.0608%	4.9893%	4.8573%
Interest	1683.71	2149.59	1933.07

Depreciation

35. Regulation 17 of the 2009 Tariff 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.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(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.”

36. The assets were put on commercial operation during the period from 1.10.2010 to 1.7.2011. Accordingly, these assets 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 to the 2009 Tariff Regulations.

37. While combining the assets for the purpose of tariff calculation, depreciation of Asset-1 for the period 1.10.2010 to 30.11.2010 i.e. ₹185.39 lakh has been considered as cumulative Depreciation for the Combined Assets-1&2 and Depreciation of Combined Assets-1&2 for the period 1.12.2010 to 31.3.2011 i.e. ₹ 846.38 lakh has been considered as cumulative Depreciation for the Combined Assets -1,2 & 3. Similarly, depreciation of Combined Assets -1,2 & 3 for the period 1.4.2011 to 30.6.2011 i.e. ₹ 1403.02 lakh has been considered as cumulative Depreciation for the Combined Assets -1,2,3 & 4.

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

(₹ in lakh)			
	Asset 1	Combined Asset 1 & 2	Combined Asset 1,2 and 3
	1.10.2010 to 31.3. 2011	2010-11	DOCO to 31.3.2012
Opening Gross Block	20984.03	37315.44	40379.53
Addition during 2009-14	277.52	575.58	3674.59
Closing Gross Block	21261.55	37891.02	44054.12
Average Gross Block	21122.79	37603.23	42216.83
Rate of Depreciation	5.2660%	5.2734%	5.2741%
Depreciable Value	19010.51	33842.91	37995.14
Remaining Depreciable Value	19010.51	33657.52	37148.77
Depreciation	556.16	660.99	2226.58
Depreciation (pro-rata)	185.39	660.99	556.64
	1.10.2010 to 31.11.2010	1.12.2010 to 31.3.2011	1.4.2011 to 30.6.2011
Cumulative depreciation	0	185.39	846.32

(₹ in lakh)

Combined Asset 1,2,3 and 4				
	2011-12 (1.7.2011 to 31.3.2012)	2012-13	2013-14	
Opening Gross Block	65161.26	69391.75	70592.02	
Addition during 2009-14	4230.49	1200.27	0.00	
Closing Gross Block	69391.75	70592.02	70592.02	
Average Gross Block	67276.51	69991.89	70592.02	
Rate of Depreciation	5.2742%	5.2745%	5.2745%	
Depreciable Value	60548.86	62992.70	63532.82	
Remaining Depreciable Value	59145.83	58928.44	55776.87	
Depreciation	2661.24	3691.69	3723.38	
Cumulative depreciation	1403.02	4064.26	7755.95	11479.33

Operation & maintenance expenses

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

Elements	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C twin conductor, T/L (₹ Lakh/km)	0.627	0.663	0.701	0.741	0.783
400 kV D/C twin conductor on multi Ckt. Tower T/L (₹Lakh/km)*	0.941	0.995	1.052	1.112	1.175
400 kV S/C twin conductor T/L (₹ Lakh/km)*	0.358	0.378	0.400	0.423	0.447
400 kV Bays (₹ Lakh/bay)	52.40	55.40	58.57	61.92	65.46

*Norms for 400 kV D/C twin conductor on Multi Ckt. Tower T/L has been taken as 1.5 times of norms for 400 kV D/C twin conductor T/L as decided in Petition No. 58/TT/2011.

40. As per the existing norms of 2009 Tariff Regulations, allowable O&M expenses for the assets covered in the scheme, as segregated and covered in different petitions (350/TT/2010, 284/TT/2010 and 103/TT/2011) are as given overleaf:-

(₹ in lakh)

Elements	2010-11 (1.10.2010 to 30.11.2010)	2010-11 (1.12.2010 to 31.03.2011)	2011-12 (1.4.2011 to 30.06.2011)	2011-12 (1.7.2011 to 31.03.2012)	2012-13	2013-14
220.884 km 400kV D/C, twin conductor Transmission Line (DOCO:1/10/2010)	24.41	48.81	38.71	116.13	163.67	172.95
142.884 km 400kV D/C, twin conductor Transmission Line (DOCO:1/12/2010)	-	31.58	25.04	75.12	105.88	111.88
208.63km 400kV D/C, twin Conductor Transmission Line (DOCO:1/07/2011)	-	-	-	109.68	154.59	163.36
2.051km 400kV D/C, twin Conductor Transmission Line (DOCO:1/12/2010)	-	0.45	0.36	-	-	-
2.051km 400kV D/C, twin Conductor on multi ckt. tower Transmission Line (DOCO:1/07/2011)	-	-	-	1.62	2.28	2.41
0.653 km 400 kV S/C, twin conductor Transmission Line (DOCO:1/07/2011)	-	-	-	0.19	0.27	0.29
Total O&M expenses for Transmission Line	24.41	80.84	64.11	302.74	426.69	450.89

(₹ in lakh)

Elements	2010-11 (1.10.2010 to 30.11.2010)	2010-11 (1.12.2010 to 31.03.2011)	2011-12 (1.4.2011 to 30.06.2011)	2011-12 (1.7.2011 to 31.03.2012)	2012-13	2013-14
4 nos. 400kV bays (DOCO:1/10/2010)	36.93	73.87	58.57	175.71	247.68	261.84
4 nos. 400kV bays (DOCO:1/12/2010)	-	73.87	58.57	175.71	247.68	261.84
2 nos. 400kV bays (DOCO:1/04/2011)	-	-	29.28	87.85	123.84	130.92
4 nos. 400kV bays (DOCO:1/07/2011)	-	-	-	175.71	247.68	261.84
Total O&M expenses for T/L	36.93	147.74	89.85	614.98	866.88	916.44

Interest on working capital

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

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months' average billing calculated on target availability level. 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 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

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

(iv) Rate of interest on working capital

In view of the Second Amendment dated 21.06.2011, in the 2009 Tariff Regulations, interest rate of 11.00% (SBI Base Rate 7.50% as on 01-07-2010 plus 350 bps) has been considered for calculating interest on working capital.

42. Necessary computations in support of interest on working capital are as follows:-

(₹ in lakh)

Asset 1		
	2010-11 (Doco to 31.3.2011)	Pro-rata (1.10.2010 to 30.11.2010) 2 months
Maintenance Spares	55.21	18.40
O & M expenses	30.67	10.22
Receivables	570.69	190.23
Total	656.57	218.86
Rate of Interest	11.00%	11.00%
Interest	36.11	12.04

(₹ in lakh)

	2010-11 (1.12.2010 to 31.3.2011)
Maintenance Spares	102.86
O & M expenses	57.15
Receivables	1019.75
Total	1,179.76
Rate of Interest	11.00%
Interest	43.26

(₹ in lakh)

Combined Asset 1,2 and 3		
	2010-11	Pro-rata (1.4.2011 to 30.6.2011)
Maintenance Spares	92.38	23.09
O & M expenses	51.32	12.83
Receivables	1106.04	276.51
Total	1,249.73	312.43
Rate of Interest	11.75%	11.75%
Interest	146.84	36.71

(₹ in lakh)

Combined Asset 1, 2, 3 and 4			
	2011-12 (1.7.2011 to 31.3.2012)	2012-13	2013-14
Maintenance Spares	183.54	194.04	205.10
O & M expenses	101.97	107.80	113.94
Receivables	1798.32	1842.91	1829.72
Total	2,083.83	2,144.74	2,148.76
Rate of Interest	11.75%	11.75%	11.75%
Interest	183.64	252.01	252.48

Transmission charges

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

(₹ in lakh)

Asset 1		
	2010-11	Pro-rata (2 months)
Depreciation	556.16	185.39
Interest on Loan	381.92	127.31
Return on equity	553.87	184.62
Interest on Working Capital	36.11	12.04
O & M Expenses	184.02	61.34
Total	1712.08	570.69

(₹ in lakh)

Combined Asset 1 and 2	
	2010-11 (1.12.2010 to 31.3.2011)
Depreciation	660.99
Interest on Loan	449.33
Return on equity	657.34
Interest on Working Capital	43.26
O & M Expenses	228.58
Total	2039.51

(₹ in lakh)

Combined Asset 1, 2 and 3		
	2011-12	Pro-rata (1.4.2011 to 30.6.2011)
Depreciation	2226.58	556.64
Interest on Loan	1433.00	358.25
Return on equity	2213.98	553.49
Interest on Working Capital	146.84	36.71
O & M Expenses	615.84	153.96
Total	6636.23	1,659.06

(₹ in lakh)

Combined Asset 1, 2, 3 and 4			
	2011-12 (1.7.2011 to 31.3.2012)	2012-13	2013-14
Depreciation	2661.24	3691.69	3723.38
Interest on Loan	1683.71	2149.59	1933.07
Return on equity	2646.13	3670.58	3702.05
Interest on Working Capital	183.64	252.01	252.48
O & M Expenses	917.72	1293.57	1367.33
Total	8092.44	11057.44	10978.31

Other issues

44. The petitioner had 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.

45. 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.

46. 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.

47. The petitioner has 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. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

48. As regards the sharing of the transmission charges, we direct that prior to 1.7.2011, the transmission charges be shared by the respondent in accordance with Regulation 33 of the 2009 regulations. From 1.7.2011 onwards, the charges shall be shared in accordance with Central Electricity Regulatory Commission (Sharing of inter-State transmission charges and loses) Regulations 2010.

49. This order disposes of Petition No. 284/2010.

sd/-

(A. K. Singhal)
Member

sd/-

(M. Deena Dayalan)
Member

sd/-

(Gireesh B. Pradhan)
Chairperson

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2010-11
1	IBRD IV (Exchange Rate@Rs.45.29)	
	Gross loan opening	7521.76
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	7521.76
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7521.76
	Average Loan	7521.76
	Rate of Interest	1.86%
	Interest	139.90
	Rep Schedule	30 half yearly installments from 15.11.2013
2	IBRD IV ADDL (Exchange Rate@Rs.45.29)	
	Gross loan opening	274.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	274.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	274.00
	Average Loan	274.00
	Rate of Interest	1.96%
	Interest	5.37
	Rep Schedule	52 half yearly installments from 01.02.2013
3	Bond XXIX	
	Gross loan opening	1615.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1615.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1615.00
	Average Loan	1615.00
	Rate of Interest	9.20%
	Interest	148.58
	Rep Schedule	12 equal Annual Installment from 12.03.2013
4	Bond XXVIII	
	Gross loan opening	4411.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4411.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4411.00
	Average Loan	4411.00
	Rate of Interest	9.33%
	Interest	411.55
	Rep Schedule	12 equal Annual Installment from 15.12.2012
5	Bond XXXIV	

	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	955.52
	Repayment during the year	0.00
	Net Loan-Closing	955.52
	Average Loan	477.76
	Rate of Interest	8.84%
	Interest	42.23
	Rep Schedule	12 Annual Instalments from 31.10.2014
6	Bond XXX	
	Gross loan opening	148.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	148.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	148.00
	Average Loan	148.00
	Rate of Interest	8.80%
	Interest	13.02
	Rep Schedule	12 Annual Instalments from 29.09.2013
	Total Loan	
	Gross loan opening	13969.77
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	13969.77
	Additions during the year	955.52
	Repayment during the year	0.00
	Net Loan-Closing	14925.29
	Average Loan	14447.53
	Rate of Interest	5.2650%
	Interest	760.66

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2010-11
1	IBRD IV (Exchange Rate@Rs.45.29)	
	Gross loan opening	7521.76
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	7521.76
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7521.76
	Average Loan	7521.76
	Rate of Interest	1.72%
	Interest	129.37
	Rep Schedule	30 half yearly installments from 15.11.2013
2	IBRD IV (Exchange Rate@Rs.46.26)	
	Gross loan opening	6304.31
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	6304.31
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	6304.31
	Average Loan	6304.31
	Rate of Interest	1.72%
	Interest	108.43
	Rep Schedule	30 half yearly installments from 15.11.2013
3	IBRD IV ADDL (Exchange Rate@Rs.45.29)	
	Gross loan opening	274.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	274.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	274.00
	Average Loan	274.00
	Rate of Interest	1.73%
	Interest	4.74
	Rep Schedule	52 half yearly installments from 01.02.2013
4	Bond XXIX	
	Gross loan opening	2922.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2922.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2922.00
	Average Loan	2922.00
	Rate of Interest	9.20%
	Interest	268.82

	Rep Schedule	12 equal Annual Installment from 12.03.2013
5	Bond XXVIII	
	Gross loan opening	7983.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	7983.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7983.00
	Average Loan	7983.00
	Rate of Interest	9.33%
	Interest	744.81
	Rep Schedule	12 equal Annual Installment from 15.12.2012
6	Bond XXXIV	
	Gross loan opening	1168.79
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1168.79
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1168.79
	Average Loan	1168.79
	Rate of Interest	8.84%
	Interest	103.32
	Rep Schedule	12 Annual Instalments from 31.10.2014
7	Bond XXX	
	Gross loan opening	215.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	215.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	215.00
	Average Loan	215.00
	Rate of Interest	8.80%
	Interest	18.92
	Rep Schedule	12 Annual Instalments from 29.09.2013
	Total Loan	
	Gross loan opening	26388.87
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	26388.87
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	26388.87
	Average Loan	26388.87
	Rate of Interest	5.2235%
	Interest	1378.43

Annexure 3

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2011-12
1	IBRD IV (Exchange Rate@Rs.45.29)	
	Gross loan opening	7521.76
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	7521.76
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7521.76
	Average Loan	7521.76
	Rate of Interest	1.86%
	Interest	139.90
	Rep Schedule	30 half yearly installments from 15.11.2013
2	IBRD IV (Exchange Rate@Rs.46.26)	
	Gross loan opening	6304.31
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	6304.31
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	6304.31
	Average Loan	6304.31
	Rate of Interest	1.72%
	Interest	108.43
	Rep Schedule	30 half yearly installments from 15.11.2013
3	IBRD IV ADDL (Exchange Rate@Rs.45.29)	
	Gross loan opening	274.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	274.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	274.00
	Average Loan	274.00
	Rate of Interest	1.73%
	Interest	4.74
	Rep Schedule	52 half yearly installments from 01.02.2013
4	IBRD IV (Exchange Rate@Rs.45.23)	
	Gross loan opening	1137.99
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1137.99
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1137.99
	Average Loan	1137.99
	Rate of Interest	1.72%

	Interest	19.57
	Rep Schedule	30 half yearly installments from 15.11.2013
5	IBRD IV ADDL (Exchange Rate@Rs.45.29)	
	Gross loan opening	92.27
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	92.27
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	92.27
	Average Loan	92.27
	Rate of Interest	1.73%
	Interest	1.60
	Rep Schedule	52 half yearly installments from 01.02.2013
6	Bond XXIX	
	Gross loan opening	2922.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2922.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2922.00
	Average Loan	2922.00
	Rate of Interest	9.20%
	Interest	268.82
	Rep Schedule	12 equal Annual Installment from 12.03.2013
7	Bond XXVIII	
	Gross loan opening	8569.76
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	8569.76
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	8569.76
	Average Loan	8569.76
	Rate of Interest	9.33%
	Interest	799.56
	Rep Schedule	12 equal Annual Installment from 15.12.2012
8	Bond XXXIV	
	Gross loan opening	1168.79
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1168.79
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1168.79
	Average Loan	1168.79
	Rate of Interest	8.84%
	Interest	103.32
	Rep Schedule	12 Annual Instalments from 31.10.2014
9	Bond XXX	
	Gross loan opening	215.00

Cumulative Repayment upto DOCO/previous year	0.00
Net Loan-Opening	215.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	215.00
Average Loan	215.00
Rate of Interest	8.80%
Interest	18.92
Rep Schedule	12 Annual Instalments from 29.09.2013
Total Loan	
Gross loan opening	28205.89
Cumulative Repayment upto DOCO/previous year	0.00
Net Loan-Opening	28205.89
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	28205.89
Average Loan	28205.89
Rate of Interest	5.1935%
Interest	1464.87

Annexure 4

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2011-12	2012-13	2013-14
1	IBRD IV (Exchange Rate@Rs.45.29)			
	Gross loan opening	7521.76	7521.76	7521.76
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	7521.76	7521.76	7521.76
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	166.48
	Net Loan-Closing	7521.76	7521.76	7355.28
	Average Loan	7521.76	7521.76	7438.52
	Rate of Interest	1.86%	1.86%	1.86%
	Interest	139.90	139.90	138.36
	Rep Schedule	30 half yearly instalments from 15.11.2013		
2	IBRD IV (Exchange Rate@Rs.46.26)			
	Gross loan opening	6304.31	6304.31	6304.31
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	6304.31	6304.31	6304.31
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	139.54
	Net Loan-Closing	6304.31	6304.31	6164.78
	Average Loan	6304.31	6304.31	6234.55
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	108.43	108.43	107.23
	Rep Schedule	30 half yearly instalments from 15.11.2013		
3	IBRD IV ADDL (Exchange Rate@Rs.45.29)			
	Gross loan opening	274.00	274.00	274.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	4.63
	Net Loan-Opening	274.00	274.00	269.37
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	4.63	9.34
	Net Loan-Closing	274.00	269.37	260.03
	Average Loan	274.00	271.69	264.70
	Rate of Interest	1.96%	1.96%	1.96%
	Interest	5.37	5.33	5.19
	Rep Schedule	52 half yearly instalments from 01.02.2013		
4	IBRD IV (Exchange Rate@Rs.45.23)			
	Gross loan opening	1137.99	1137.99	1137.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1137.99	1137.99	1137.99
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	25.19
	Net Loan-Closing	1137.99	1137.99	1112.80
	Average Loan	1137.99	1137.99	1125.39
	Rate of Interest	1.72%	1.72%	1.72%

	Interest	19.57	19.57	19.36
	Rep Schedule	30 half yearly instalments from 15.11.2013		
5	IBRD IV ADDL (Exchange Rate@Rs.45.29)			
	Gross loan opening	92.27	92.27	92.27
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.56
	Net Loan-Opening	92.27	92.27	90.71
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1.56	3.15
	Net Loan-Closing	92.27	90.71	87.56
	Average Loan	92.27	91.49	89.14
	Rate of Interest	1.73%	1.73%	1.73%
	Interest	1.60	1.58	1.54
	Rep Schedule	52 half yearly instalments from 01.02.2013		
6	IBRD IV (Exchange Rate@Rs.45.24)			
	Gross loan opening	8947.57	8947.57	8947.57
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	8947.57	8947.57	8947.57
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	198.04
	Net Loan-Closing	8947.57	8947.57	8749.53
	Average Loan	8947.57	8947.57	8848.55
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	153.90	153.90	152.20
	Rep Schedule	30 half yearly instalments from 15.11.2013		
7	IBRD IV ADDL (Exchange Rate@Rs.45.24)			
	Gross loan opening	973.11	973.11	973.11
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	16.45
	Net Loan-Opening	973.11	973.11	956.67
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	16.45	33.18
	Net Loan-Closing	973.11	956.67	923.48
	Average Loan	973.11	964.89	940.08
	Rate of Interest	1.73%	1.73%	1.73%
	Interest	16.83	16.69	16.26
	Rep Schedule	52 half yearly instalments from 01.02.2013		
8	Bond XXIX			
	Gross loan opening	4703.00	4703.00	4703.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	391.92
	Net Loan-Opening	4703.00	4703.00	4311.08
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	391.92	391.92
	Net Loan-Closing	4703.00	4311.08	3919.17
	Average Loan	4703.00	4507.04	4115.13
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	432.68	414.65	378.59
	Rep Schedule	12 equal Annual Installment from 12.03.2013		
9	Bond XXVIII			

	Gross loan opening	13459.00	13459.00	13459.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1121.58
	Net Loan-Opening	13459.00	13459.00	12337.42
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1121.58	1121.58
	Net Loan-Closing	13459.00	12337.42	11215.83
	Average Loan	13459.00	12898.21	11776.63
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	1255.72	1203.40	1098.76
	Rep Schedule	12 equal Annual Installment from 15.12.2012		
10	Bond XXXIV			
	Gross loan opening	1354.81	1354.81	1354.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1354.81	1354.81	1354.81
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1354.81	1354.81	1354.81
	Average Loan	1354.81	1354.81	1354.81
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	119.77	119.77	119.77
	Rep Schedule	12 Annual Instalments from 31.10.2014		
11	Bond XXX			
	Gross loan opening	316.00	316.00	316.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	316.00	316.00	316.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	26.33
	Net Loan-Closing	316.00	316.00	289.67
	Average Loan	316.00	316.00	302.83
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	27.81	27.81	26.65
	Rep Schedule	12 Annual Instalments from 29.09.2013		
	Total Loan			
	Gross loan opening	45083.83	45083.83	45083.83
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1536.14
	Net Loan-Opening	45083.83	45083.83	43547.69
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1536.14	2114.75
	Net Loan-Closing	45083.83	43547.69	41432.94
	Average Loan	45083.83	44315.76	42490.32
	Rate of Interest	5.0608%	4.9893%	4.8573%
	Interest	2281.59	2211.03	2063.90