CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 213/TT/2012

Coram:

Shri V.S. Verma, Member Shri M. Deena Dayalan, Member

Date of Hearing : 01.10.2013 Date of Order : 22.02.2014

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 **Asset-I**: LILO of 400 kV S/C Baripada – Rengali TL and associated bays at Keonjhar; **Asset-II**: 1 No of 400/220 kV, 315 MVA (1st) ICT along with associated bays and 2nos 220 kV line bays at Keonjhar; **Asset-III**: 1 no of 400/220 kV, 315 MVA (2nd) ICT along with associated bays and 2 no 220 kV line bays at Keonjher; **Asset-IV** 1 no of 80 MVAR, 420 kV Bus Reactor and associated bays at Keonjhar associated with Eastern Region Strengthening Scheme-III in Eastern Region from anticipated DOCO (1.12.2012) to 31.3.2014

And in the matter of:

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

Vs

- Bihar State Electricity Board Vidyut Bhawan, Bailey Road Patna-800 001.
- West Bengal State Electricity Distribution Company Ltd. Bidyut Bhawan, Bidhan Nagar Block DJ, Sector-II, Salt Lake City Calcutta-700 091.
- Grid Corporation of Orissa Ltd. Shahid Nagar, Bhubaneswar-751 007.



- Damodar Valley Corporation DVC Tower, Maniktala Civic Centr, VIP Road Calcutta-700 054.
- Power Department, Government of Sikkim, Gangtok- 737 101
- 6. Jharkhand State Electricity Board In Front of Main Secretariat Doranda, Ranchi-834 002.

....Respondents

For petitioner : Ms. Sangeeta Edwards, PGCIL

Shri S.S Raju, PGCIL

For respondent : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL)seeking approval of the transmission chargesfor **Asset-I**: LILO of 400 kV S/C Baripada – Rengali TL and associated bays at Keonjhar; **Asset-II**: 1 No of 400/220 kV, 315 MVA (1st) ICT along with associated bays and 2nos 220 kV line bays at Keonjhar; **Asset-III**: 1 no of 400/220 kV, 315 MVA (2nd) ICT along with associated bays and 2 no 220 kV line bays at Keonjher; **Asset-IV**: 1 no of 80 MVAR, 420 kV Bus Reactor and associated bays at Keonjhar associated with Eastern Region Strengthening Scheme-III in Eastern Region (hereinafter referred to as "transmission assets") from anticipated date of commercial operation to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval (IA) of the project was accorded by the Board of Directors of the petitioner, vide Memorandum ref. C/CP/ERSS-III dated 7.7.2010 at an estimated cost of ₹127280 lakh including an IDC of ₹8152 lakh (based on 1st Quarter 2010 price level). The scope of work covered under the scheme broadly includes:-

Transmission lines

- 1. Sasaram-Daltonganj 400 kV D/C line
- 2. Mendhasal Uttara 400kV D/C line
- 3. LILO of Kahalgaon-Biharshariff 400 kV D/C line (1st line) at Lakhisarai
- 4. LILO of Kahalgaon-Biharsharif 400 kV D/C line (2nd line) at Banka
- 5. LILO of Meramundali Jeypore 400 kV S/C line at Bolangir
- 6. LILO of Rengali-Baripada 400KV S/C line at Keonjhar
- 7. LILO of one circuit of Baripada-Mendhasal 400 kV D/C line at Dubri (OPTCL)
- 8. LILO of both circuits of Jamshedpur –Rourkela 400KV D/C line at Chaibasa (out of two LILO's bussing of one LILO at Chaibasa, the 2nd LILO would be routed through Chaibasa but presently not bussed at Chaibasa)

Sub-Station

- 1. 2x315 MVA, 400/220 kV Sub-Station at Daltongani (new)
- 2. 2x200 MVA, 400/132 kV Sub-Station at Lakhisarai (new)
- 3. 2x200 MVA, 400/132 kV Sub-Station at Banka (new)
- 4. 2x315 MVA, 400/220 kV Sub-Station at Bolangir (new)
- 5. 2x315 MVA, 400/220 kV Sub-Station at Keonjhar (new)
- 6. 2x315 MVA, 400/220 kV Sub-Station at Chaibasa (new)
- 7. 2x315 MVA, 400/220 kV Sub-Station at Uttara (new)
- 8. Extension at 400 kV Sasaram Sub-Station (Powergrid) and 400 kV Dubri (OPTCL) & Mendhasal Sub-Station (OPTCL)
- 3. It is observed that the 80 MVAR Bus Reactor has not been mentioned in the IA. The petitioner has not mentioned the Reactors in the IA not only in the present petition but also in some other petitions. We have already observed in our order dated 31.1.2014 in Petition No.58/TT/2012 that the requirement of reactive compensation should be discussed in the Standing Committee/RPCs and the petitioner should also obtain the approval of its Board. The petitioner is directed to

ensure in future that the requirement of line reactors are discussed in the Standing Committee/RPCs and it has the approval of its Board. The bus reactor in the instant case is allowed.

- 4. The petitioner initially submitted, vide affidavit dated 3.1.2013, that the assets covered in the instant petition were expected to be put under commercial operation w.e.f 1.3.2013. Subsequently, vide affidavit dated 26.7.2013, the petitioner has submitted that Asset-1, Asset-2 and Asset-4 have been put under commercial operation on 1.2.2013 and Asset-3 has been put under commercial operation on 1.3.2013 and submitted Management Certificate and tariff forms accordingly.
- 5. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as under:-

(₹ in lakh)

	Ass	et-1	Asset-2 Asset-3		Asset-4			
Particulars	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	14.10	103.29	10.06	91.62	4.64	85.57	6.94	56.26
Interest on Loan	20.07	141.06	16.36	131.51	7.74	125.53	10.73	79.31
Return on Equity	16.28	119.00	13.30	110.85	6.26	104.84	8.71	66.77
Interest on working capital	2.36	15.99	2.68	18.90	1.31	18.48	1.18	8.27
O & M Expenses	21.78	138.15	31.99	202.92	16.00	202.92	10.32	65.46
Total	74.59	517.49	74.39	555.80	35.95	537.34	37.88	276.07

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

	Asse	et-1	Asso	et-2	Asse	et-3	Ass	et-4
Particulars	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	19.60	20.72	28.79	30.44	28.80	30.44	9.29	9.82
O & M Expenses	10.89	11.51	16.00	16.91	16.00	16.91	5.16	5.46
Receivables	74.59	86.25	74.39	92.63	71.90	89.56	37.88	46.01
Total	105.08	118.48	119.18	139.98	116.70	136.91	52.33	61.29
Rate of Interest	2.36	15.99	2.68	18.90	1.31	18.48	1.18	8.27
Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%

- 7. 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. None of the respondents have filed reply.
- 8. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

Capital cost

9. Regulation 7 of the 2009 Tariff Regulations so far as relevant provides as follows:-

"(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."

10. The details of FR cost, capital cost as on actual DOCO and estimated additional capitalization projected to be incurred for the transmission assets covered in this petition are as follows:-

(₹ in lakh)

Particulars	Apportioned	Actual cost	Projected	additional	Total
	approved	incurred as	capital expenditure		estimated
	cost	on DOCO*			completion
			2012-13	2013-14	cost
Asset-1	3247.15	1777.03	171.99	640.21	2589.23
Asset-2	3509.73	1432.77	177.23	1007.23	2617.29
Asset-3	3509.73	1433.09	0.00	1132.23	2565.32
Asset-4	1762.59	947.40	97.22	456.97	1501.59

^{*} inclusive of initial spares for sub-station amounting to ₹12.95 lakh, ₹51.93 lakh, ₹51.93 lakh and ₹23.86 lakh pertaining to Asset-1, Asset-2, Asset-3 and Asset-4 respectively. Initial spares claimed falls within the ceiling limit defined under Regulation 8 of 2009 Tariff Regulations.

Time over-run

11. As per the Investment Approval dated 7.7.2010, the project was scheduled to be commissioned within 28 months from the date of Investment approval i.e by 1.12.2012. There is a delay of two months in commissioning of the Assets-I, II & IV and 3 months in Asset-III. The details of the assets covered and their actual date of commercial operation are as follows:-

Srl. No.	Name of Asset	Schedule of Commissioning	DOCO	Delay
1	LILO of 400 kV S/C Baripada- Rengali T/L and associated bays at Keonjhar- Asset-I		1.2.2013	Two months
2	1 no. of 400/220 kV, 315 MVA (1 st) ICT along with associated bays and 2 nos. 220 kV line bays at Keonjhar- Asset-II	1.12.2012	1.2.2013	Two months
3	1 no. of 400/220 kV, 315 MVA (2 nd) ICT along with associated bays and 2 nos. 220 kV line bays at Keonjhar- Asset-III		1.3.2013	Three months
4	1 no. 80 MVAR, 420 kV Bus Reactor and associated Bays at Keonjhar - Asset-IV		1.2.2013	Two months

- 12. The petitioner was directed to give the reasons for time over-run along-with documentary evidence for the delay. In response, the petitioner has submitted, vide affidavit dated 13.09.2013, the reasons for time over-run. It has been submitted that the time over-run was due to inordinate delay in land acquisition. The petitioner has submitted that the application for acquisition of sub-station land was submitted in November, 2009 and advance possession of 26.85 acres of Government land was received from District Administration on 11.1.2011 and 15.76 acres of private land advance possession was received on 10.7.2011. The land was handed over to the contractor in July, 2011 for starting the construction work. Because of the best efforts, the time over-run has been minimized to two and three months.
- 13. During hearing on 1.10.2013, the representative of the petitioner submitted that the possession of land was to be given in January, 2011, however the possession was given in July and thus there was a delay of six months in getting possession of land and this delay of six has been reduced to 3 months by the petitioner by putting more efforts. He requested to condone the time over-run. The

Commission directed the petitioner to submit the PERT chart along-with critical activities on affidavit with a copy to the respondents. In response to it, the petitioner, vide affidavit dated 25.11.2013, has submitted that PERT chart is not being maintained by it and submitted a copy of the L2 Network/ Master Network which gives the detail schedule of activities.

14. We have gone through the L2 Network submitted by the petitioner. It is observed that the land was scheduled to be provided to the petitioner during January, 2010 to July, 2010, however the possession of land was handed over by the District Administration only in January, 2011. The petitioner initiated the tendering process in July, 2010, prior to possession of land. Subsequently, the awards for transformers and reactor packages were placed in August, 2010. The delay in acquisition of land is not attributable to the petitioner and it is further observed that the petitioner has taken certain pro-active steps prior to and after getting possession of land which has reduced the overall time over-run to two to three months. Hence, we condone the time over-run of two months in case of Asset-III.

Cost over-run

15. The total estimated completion cost of the project as per Chartered Accountant's certificate is ₹10414.34 lakh against apportioned approved FR cost of ₹12029.20 lakh and thus there is no cost over-run. However, there is significant increase in cost of certain items as per Form 5-Bs. The petitioner was directed to furnish detailed justification/reasons for significant increase in cost of items under

head 'Hardware fittings' by 92.31%, 'Earth-wire' by 55.56% and 'Site preparation' by 75.94% and 112.96%. In response, the petitioner has submitted, vide affidavit dated 3.1.2013, that the award of contract for "Hardware fittings/ Earth-wires" was made on turnkey basis for various items under line package, through Domestic Competitive Bidding. It has been further submitted that the award was made to the lowest evaluated bidder. The rates of individual items, only for the purpose of On Account payment are asked and not for any comparison or justification. As regards "site preparation", LOA has been placed for an amount of ₹128 lakh and ₹130 lakh for site leveling, grading, etc, and construction of boundary wall respectively which amended to higher side due to actual site condition. Apart from this, roads and drainage work, work for provision of permanent water supply and power supply, rain water harvesting, etc, were executed at site which come under site preparation category. Due to the undulated and rocky site condition, the cost of site preparation as stated above has exceeded the FR cost. The reasons submitted by the petitioner for cost variation appears to be justified and in order and hence the cost variation is allowed.

Treatment of Initial Spares

16. The initial spares claimed by the petitioner are within normative limits of 2.5% as specified in the 2009 Tariff Regulations and accordingly it is allowed. The details of the initial spares claimed for the assets is as follows:-

(₹ in lakh)

Asset	Initial spares claimed (Sub-Station)	Total cost	% of initial spares
Asset-I	12.95	1461.23	0.50
Asset-II	51.93	2617.29	1.98
Asset-III	51.93	2565.32	2.02
Asset-IV	23.86	1501.59	1.59

17. The petitioner has claimed capital cost of ₹1777.03 lakh, ₹1432.77 lakh, ₹1433.09 lakh and ₹947.40 lakh for Asset-I, II, III and IV respectively, vide revised Management Certificate dated 23.7.2013, as per the actual date of commercial operation. The capital cost claimed by the petitioner has been considered for the purpose of the tariff calculation as on the date of commercial operation.

Projected additional capital expenditure

18. Clause (1) of Regulation 9 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:"
- 19. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines "cut-off date" as under:-

"cut-off date" means 31stMarch of the year closing after 2 years of the year of commercial operation of the project, and incase 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".

- 20. Accordingly, the cut-off date in the instant case works out to 31.3.2016.
- 21. The details of the projected additional capital expenditure claimed and considered for tariff computation is as follows:-

(₹ in lakh)

Particulars	2012-13	2013-14	2012-13	2013-14
	Ass	et-1	Ass	set-2
Freehold Land	0.00	50.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	181.61	0.00	0.00
Transmission Line	51.89	114.03	0.00	0.00
Sub-Station Equipments	120.10	227.19	177.29	1007.23
PLCC	0.00	67.38	0.00	0.00
Total	171.99	640.21	177.29	1007.23

Particulars	2012-13	2013-14	2012-13	2013-14
	Asset-3		Ass	et-4
Sub-Station Equipments	0.00	1132.23	97.22	456.97
Total	0.00	1132.23	97.22	456.97

22. The additional capital expenditure claimed by the petitioner falls within the cutoff date and is mainly on account of balance and retention payments. Hence, the same has been considered for the purpose of tariff determination as provided under Regulation 9 of the 2009 Tariff Regulations.

Debt- equity ratio

- 23. Regulation 12 of the 2009 Tariff Regulations provides as under:-
 - "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."
- 24. Details of debt-equity in respect of the assets as on the dates of commercial operation are given hereunder:-

		(₹ in lakh)
	Asset-1	
Capital cost	as on date of comm	nercial operation
Particulars	Amount	%
Debt	1243.92	70.00
Equity	533.11	30.00
Total	1777.03	100.00
	Asset-2	
Capital cost	as on date of comm	nercial operation
Particulars	Amount	%
Debt	1002.94	70.00
Equity	429.93	30.00
Total	1432.77	100.00
	Asset-3	
Capital cost	as on date of comm	ercial operation
Particulars	Amount	%
Debt	1003.16	70.00
Equity	429.93	30.00
Total	1433.09	100.00
	Asset-4	
	as on date of comm	ercial operation
Particulars	Amount	%
Debt	663.18	70.00
Equity	284.22	30.00
Total	947.40	100.00

25. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

		(₹ in lakh)		
Asset-1				
Capital cost as on 31.3.2014				
Particulars	Amount	%		
Debt	1812.46	70.00		
Equity	776.77	30.00		
Total	2589.23	100.00		
Asset-2				

Capital cost as on 31.3.2014				
Particulars	Amount	%		
Debt	1832.10	70.00		
Equity	785.19	30.00		
Total	2617.29	100.00		
	Asset-3			
C	apital cost as on 31.3	.2014		
Particulars	Amount	%		
Debt	1795.72	70.00		
Equity	769.60	30.00		
Total	2565.32	100.00		
	Asset-4			
C	apital cost as on 31.3	.2014		
Particulars	Amount	%		
Debt	1051.11	70.00		
Equity	450.48	30.00		
Total	1501.59	100.00		

26. Details of debt-equity ratio for projected additional capital expenditure are as follows:-

Asset-I					
	2012-	-13	2013-14		
Particulars	Amount	%	Amount	%	
Debt	120.39	70.00	448.15	70.00	
Equity	51.60	30.00	192.06	30.00	
Total	171.99	100.00	640.21	100.00	
		Asset-II			
	2012-		2013-14		
Particulars	Amount	%	Amount	%	
Debt	124.10	70.00	705.06	70.00	
Equity	53.19	30.00	302.17	30.00	
Total	177.29	100.00	1007.23	100.00	
		Asset-IV			
	2012-	·13	2013-14		
Particulars	Amount	%	Amount	%	
Debt	68.05	70.00	319.88	70.00	
Equity	29.17	30.00	137.09	30.00	
Total	97.22	100.00	456.97	100.00	
	Asset-III				
	2013-14				
Particulars	Amount	%			
Debt	792.56	70.00			
Equity	339.67	30.00			
Total	1132.23	100.00			

Return on equity

- 27. Regulation 15 of the 2009 Tariff Regulations provides as under:-
 - "15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.
 - (2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

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

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

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

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

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

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

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

28. Based on the above, the following return on equity has been considered:-

Particular	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asse	et-1	Asse	et-2
Opening Equity	533.11	584.71	429.83	483.02
Addition due to Additional Capitalisation	51.60	192.06	(₹ in lakh)	302.17
Closing Equity	584.71	776.77	483.02	785.19
Average Equity	558.91	680.74	456.42	634.10
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	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)	16.28	119.00	13.30	110.85

Particular	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
	Asse	et-3	Asset-	-4
Opening Equity	429.93	429.93	284.22	313.39
Addition due to Additional	0.00	339.67	29.17	137.09
Capitalization				
Closing Equity	429.93	769.60	313.39	450.48
Average Equity	429.93	599.76	298.80	381.93
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	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)	6.26	104.84	8.71	66.77

29. Return on equity has been calculated as per Regulation 15 of the 2009 Tariff Regulations with pre-tax return on equity of 17.481%. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account of RoE due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly with the beneficiaries shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

Interest on loan

30. Regulation 16 of the 2009 Tariff Regulations provides as follows:-

- "16. Interest on loan capital (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 reenactment 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 refinancing of loan."

- 31. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-
 - (a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.
 - (b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.
 - (c) Notwithstanding 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.
- 32. Detailed calculations in support of the weighted average rates of interest have been given in Annexure-I to IV to this order.
- 33. Based on the above, interest on loan has been calculated as follows:-

Particular	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
	Asse	t-1	Ass	et-2
Gross loan opening	1243.92	1364.31	1002.94	1127.04
Cumulative Repayment upto	0.00	14.10	0.00	10.06
DOCO/previous year				
Net Loan-Opening	1243.92	1350.22	1002.94	1116.99
Additions during the year	120.39	448.15	124.10	705.06
Repayment during the year	14.10	103.29	10.06	91.62
Net Loan-Closing	1350.22	1695.07	1116.99	1730.43
Average Loan	1297.07	1522.64	1059.96	1423.71
Rate of Interest	9.2829%	9.2642%	9.2590%	9.2370%
Interest	20.07	141.06	16.36	131.51

Particular	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
	Ass	et-3	Α	sset-4
Gross loan opening	1003.16	1003.16	663.18	731.23
Cumulative Repayment upto	0.00	4.64	0.00	6.94
DOCO/previous year				
Net Loan-Opening	1003.16	998.52	663.18	724.30
Additions during the year	0.00	792.56	68.05	319.88
Repayment during the year	4.64	85.57	6.94	56.26
Net Loan-Closing	998.52	1705.51	724.30	987.91
Average Loan	1000.84	1352.02	693.74	856.11
Rate of Interest	9.2843%	9.2850%	9.2835%	9.2636%
Interest	7.74	125.53	10.73	79.31

Depreciation

- 34. Regulation 17 of the 2009 Tariff Regulations provides as follows:-
 - "17. **Depreciation**(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."
- 35. The transmission assets covered in the instant petition shall complete 12 years beyond 2013-14. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations.

	Ass	Asset-I		et-II
Particulars	2012-13	2013-14	2012-13	23013-14
	(pro-rata)		(pro-rata)	
Opening Gross Block	1777.03	1949.02	1432.77	1610.06
Addition due to Projected	171.99	640.21	177.29	1007.23
Additional Capitalisation				
Closing Gross Block	1949.02	2589.23	1610.06	2617.29
Average Gross Block	1863.03	2269.13	1521.42	2113.68
Rate of Depreciation	4.5399%	4.5522%	3.9664%	4.3345%
Depreciable Value	1445.96	1788.95	1028.62	1561.66
Remaining Depreciable	1445.96	1774.86	1028.62	1551.60
Value				
Depreciation	14.10	103.29	10.06	91.62
Cumulative Depreciation	14.10	117.39	10.06	101.67

(₹ in lakh)

	Asset-3		Ass	et-4
Particulars	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
Opening Gross Block	1433.09	1433.09	947.40	1044.62
Addition due to Projected	0.00	1132.23	97.22	456.97
Additional Capitalisation				
Closing Gross Block	1433.09	2565.32	1044.62	1501.59
Average Gross Block	1433.09	1999.21	996.01	1273.11
Rate of Depreciation	3.8855%	4.2804%	4.1796%	4.4191%
Depreciable Value	949.13	1458.63	709.60	958.98
Remaining Depreciable	949.13	1453.99	709.60	952.04
Value				
Depreciation	4.64	85.57	6.94	56.26
Cumulative Depreciation	4.64	90.21	6.94	63.20

Operation & maintenance expenses

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

Elements	2012-13	2013-14
S/C twin conductor T/L (₹ lakh per km)	0.428	0.447
D/C twin conductor T/L (₹ lakh per km)	0.741	0.783
400 kV bay (₹ lakh per bay)	61.97	65.46
220 kV bay (₹ lakh per bay)	43.34	45.82

37. As per the norms of Tariff Regulations, 2009, allowable O&M expenses for the asset covered in the petition are given overleaf:-

(₹ in lakh)

		(\ III Idkii)
Element	2012-13	2013-14
	(Pro-rata)	
Asset	·	
9.02 km D/C twin conductor T/L	1.11	7.06
0.373 km S/C twin conductor T/L	0.03	0.17
2 nos. 400 kV bays	20.64	130.92
Total	21.78	138.15
Asset-	II	
	(Pro-rata)	
One no., 400 kV ICT-I bay	10.32	65.46
One no., 220 kV ICT-I bay	24.67	107.40
2 nos., 220 kV OPTCL bays line -I 8	21.67	137.46
Total	31.99	202.92
Asset-	III	
	(Pro-rata)	
One no., 400 kV ICT-I bay	5.16	65.46
One no., 220 kV ICT-I bay	40.04	407.40
2 nos., 220 kV OPTCL bays line -I 8	10.84	137.46
Total	16.00	202.92
Asset-	V	
	(Pro-rata)	
One no., 400 kV ICT-I bay	10.32	65.46
Total	10.32	65.46

- 38. The petitioner has submitted that O&M expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M charges for tariff period 2009-14. The petitioner has submitted that he would approach the Commission for suitable revision in the norms for O&M expenditure due to impact of wage revision.
- 39. While specifying the norms for operation and maintenance expenses, the Commission has in the 2009 Tariff Regulations already factored 50% on account of pay revision of the employees of PSUs after extensive consultation with the

stakeholders. At this stage there does not seem to be any justification for deviating from the norms. However, in case the petitioner separately approaches the Commission by making an appropriate application, the same shall be dealt with in accordance with law.

Interest on working capital

40. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual 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 as part of the working capital 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 to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of interest on working capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10.00% plus 350 bps as on 1.4.2012 (13.50%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

	Asset-1		Asset-2	
Particulars	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
Maintenance Spares	19.60	20.72	28.79	30.44
O & M Expenses	10.89	11.51	16.00	16.91
Receivables	74.59	86.25	74.38	92.63
Total				
	105.08	118.49	119.17	139.98
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest				
	2.36	16.00	2.68	18.90

(₹ in lakh)

	Asset-3		Asset-4	
Particulars	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	28.80	30.44	9.29	9.82
O & M Expenses	16.00	16.91	5.16	5.46
Receivables	71.92	89.56	37.88	46.01
Total	116.72	136.91	52.32	61.28
Rate of Interest	13.50	13.50	13.50	13.50
Interest	1.31	18.48	1.18	8.27

Transmission charges

42. The transmission charges being allowed for the assets are as follows:-

(₹ in lakh)

	Asset-1		Asse	et-2
Particulars	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
Depreciation	14.10	103.29	10.06	91.62
Interest on Loan	20.07	141.06	16.36	131.51
Return on Equity	16.28	119.00	13.30	110.85
Interest on Working Capital				18.90
	2.36	15.99	2.68	
O & M Expenses	21.78	138.15	31.99	202.92
Total	74.59	517.49	74.38	555.79

(₹ in lakh)

	Asset-3		Asse	et-4
Particulars	2012-13	2013-14	2012-13	2013-14
	(pro-rata)		(pro-rata)	
Depreciation	4.64	85.57	6.94	56.26
Interest on Loan	7.74	125.53	10.73	79.31
Return on Equity	6.26	104.84	8.71	66.77
Interest on Working Capital				
	1.31	18.48	1.18	8.27
O & M Expenses	16.00	202.92	10.32	65.46
Total	35.96	537.35	37.88	276.07

Filing fee and the publication expenses

43. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's order dated

11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

Licence fee

44. 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

Service tax

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

Sharing of Transmission Charges

46. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

47. This order disposes of Petition No. 213/TT/2012.

sd/-(M. Deena Dayalan) Member sd/-(V. S. Verma) Member

Annexure-I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.84%	8.84%
	Interest	3.54	3.54
	Rep Schedule	12 Annual instalments fro	
2	Bond XXXVI		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	9.35%	9.35%
	Interest	3.74	3.74
	Rep Schedule	15 Annual instalments fro	om 29.8.2016
3	Bond XXXIII		
Ť	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.64%	8.64%
	Interest	3.46	3.46
	Rep Schedule	12 Annual instalments fr	om 8.7.2014

4	Bond XXXV		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	9.64%	9.64%
	Interest	3.86	3.86
	Rep Schedule	12 Annual instalments	from 31.5.2015
5	Bond XXXI		
<u> </u>	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	3.33
	Net Loan-Closing	40.00	36.67
	Average Loan	40.00	38.33
	Rate of Interest	8.90%	8.90%
	Interest	3.56	3.41
	Rep Schedule	12 Annual instalments f	rom 25.02.2014
	Bond XXXVII		
6		04.00	04.00
	Gross loan opening Cumulative Repayment upto DOCO/previous year	81.00 0.00	81.00 0.00
	Net Lagr Opening	04.00	04.00
	Net Loan-Opening Additions during the year	81.00	81.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	81.00	81.00
	Average Loan	81.00	81.00
	Rate of Interest	9.25%	9.25%
	Interest	7.49	7.49
	Rep Schedule	12 Annual instalments f	
_	Bond XXXIX		
7	Gross loan opening	540.00	540.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	540.00	540.00
	Additions during the year	0.00	0.00
	- ·		•

	Repayment during the year	0.00	0.00
	Net Loan-Closing	540.00	540.00
	Average Loan	540.00	540.00
	Rate of Interest	9.40%	9.40%
	Interest	50.76	50.76
	Rep Schedule	Bullet payment 29	
8	Bond XL		
	Gross loan opening	422.92	422.92
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	422.92	422.92
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	422.92	422.92
	Average Loan	422.92	422.92
	Rate of Interest	9.30%	9.30%
	Interest	39.33	39.33
	Rep Schedule	12 Annual instalments f	rom 28.6.2016
9	Bond XLI (Add Cap for 2012-13, Drawl on 31.3.2013)		
•	Gross loan opening	0.00	120.39
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	120.39
	Additions during the year	120.39	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	120.39	120.39
	Average Loan	60.20	120.39
	Rate of Interest	8.85%	8.85%
	Interest	5.33	10.65
	Rep Schedule	12 Annual instalments fr	
	Total Loan		
	Gross loan opening	1243.92	1364.31
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1243.92	1364.31
	Additions during the year	120.39	0.00
	Repayment during the year	0.00	3.33
	Net Loan-Closing	1364.31	1360.98
	Average Loan	1304.12	1362.64
	Weighted Average Rate of Interest	9.2829%	9.2642%
	Interest	121.06	126.24

Annexure-II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	Details of Loan	2012-13	2013-14
		2012-13	2013-14
1	Bond XXXIV	50.00	50.00
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous	0.00	0.00
	year		70.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.84%	8.84%
	Interest	4.42	4.42
	Rep Schedule		nts from 21.10.2014
	Nop Collecture	/	
2	Bond XXXVI		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous	0.00	0.00
	year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	9.35%	9.35%
	Interest	3.74	3.74
	Rep Schedule	15 Annual instalme	ents from 29.8.2016
3	Bond XXXIII		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous	0.00	0.00
	year		
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.64%	8.64%
	Interest	3.46	3.46
	Rep Schedule		ents from 8.7.2014

4	Bond XXXI		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	3.33
	Net Loan-Closing	40.00	36.67
	Average Loan	40.00	38.33
	Rate of Interest	8.90%	8.90%
	Interest	3.56	3.41
	Rep Schedule	12 Annual instalments from 25	5.02.2014
5	Bond XXXVII		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.25%	9.25%
	Interest	0.93	0.93
	Rep Schedule	12 Annual instalments from 2	6.12.2015
6	Bond XXXIX		
U	Gross loan opening	482.00	482.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	482.00	482.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	482.00	482.00
	Average Loan	482.00	482.00
	Rate of Interest	9.40%	9.40%
	Interest	45.31	45.31
	Rep Schedule	Bullet payment 29.3.20	27
7	Bond XL		
-	Gross loan opening	340.94	340.94
	Cumulative Repayment upto DOCO/previous	0.00	0.00
	year	3.55	0.00
	Net Loan-Opening	340.94	340.94
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Nepayment during the year	0.00	0.00

Net Loan-Closing	340.94	340.94
Average Loan	340.94	340.94
Rate of Interest	9.30%	9.30%
Interest	31.71	31.71
Rep Schedule	12 Annual instalmer	nts from 28.6.2016
Bond XLI (AddCap for 2012-13, Drawl on 31.3.2013)		
Gross loan opening	0.00	124.10
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	0.00	124.10
Additions during the year	124.10	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	124.10	124.10
Average Loan	62.05	124.10
Rate of Interest	8.85%	8.85%
Interest	5.49	10.98
Rep Schedule	12 Annual instalmen	ts from 19.10.2016
Total Loan		
Gross loan opening	1002.94	1127.04
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	1002.94	1127.04
Additions during the year	124.10	0.00
Repayment during the year	0.00	3.33
Net Loan-Closing	1127.04	1123.71
Average Loan	1064.99	1125.37
Weighted Average Rate of Interest	9.2590%	9.2370%
Interest	98.61	103.95

Annexure-III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

			(₹ in lakh
	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.84%	8.84%
	Interest	4.42	4.42
	Rep Schedule	12 Annual instalments from 21	.10.2014
2	Bond XXXVI		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	9.35%	9.35%
	Interest	3.74	3.74
	Rep Schedule	15 Annual instalments from 2	9.8.2016
3	Bond XXXIII		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.64%	8.64%
	Interest	3.46	3.46
	11.101.001	12 Annual instalments from 8	

5	Bond XXXI		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	3.33
	Net Loan-Closing	40.00	36.67
	Average Loan	40.00	38.33
	Rate of Interest	8.90%	8.90%
	Interest	3.56	3.41
	Rep Schedule	12 Annual instalments from 25.	02.2014
6	Bond XXXVII		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.25%	9.25%
	Interest	0.93	0.93
	Rep Schedule	12 Annual instalments from 26.	12.2015
7	Bond XXXIX		
	Gross loan opening	482.00	482.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	482.00	482.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	482.00	482.00
	Average Loan	482.00	482.00
	Rate of Interest	9.40%	9.40%
	Interest	45.31	45.31
	Rep Schedule	Bullet payment 29.3.202	7
8	Bond XL		
	Gross loan opening	341.16	341.16
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	341.16	341.16
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
_	Net Loan-Closing	341.16	341.16

Average Loan	341.16	341.16
Rate of Interest	9.30%	9.30%
Interest	31.73	31.73
Rep Schedule	12 Annual instalments	from 28.6.2016
Total Loan		
Gross loan opening	1003.16	1003.16
Cumulative Repayment upto	0.00	0.00
DOCO/previous year		
Net Loan-Opening	1003.16	1003.16
Additions during the year	0.00	0.00
Repayment during the year	0.00	3.33
Net Loan-Closing	1003.16	999.83
Average Loan	1003.16	1001.49
Weighted Average Rate of	9.2843%	9.2850%
Interest		
Interest	93.14	92.99

Annexure-IV

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

	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	30.00	30.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	30.00	30.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	30.00	30.00
	Average Loan	30.00	30.00
	Rate of Interest	8.84%	8.84%
	Interest	2.65	2.65
	Rep Schedule	12 Annual instalments from 2	21.10.2014
2	Bond XXXIII		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
\neg	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	8.64%	8.64%
	Interest	0.86	0.86
	Rep Schedule	12 Annual instalments from 8.7.2014	
3	Bond XXXV		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.64%	9.64%
	Interest	0.96	0.96
	Rep Schedule	12 Annual instalments from	31.5.2015

4	Bond XXXI		
4	Gross loan opening	15.00	15.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	ournaliative repayment apto 2000/provious year	0.00	0.00
	Net Loan-Opening	15.00	15.00
	Additions during the year	0.00	0.00
	3 ,		
	Repayment during the year	0.00	1.25
	Net Loan-Closing	15.00	13.75
	Average Loan	15.00	14.38
	Rate of Interest	8.90%	8.90%
	Interest	1.34	1.28
	Rep Schedule	12 Annual instalments fr	om 25.02.2014
5	Bond XXXVII		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.25%	9.25%
	Interest	0.93	0.93
	Rep Schedule	12 Annual instalments fro	
	Trop Goriedatio		
6	Bond XXXIX		
	Gross loan opening	273.00	273.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	273.00	273.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	273.00	273.00
	Average Loan	273.00	273.00
	Rate of Interest	9.40%	9.40%
	Interest	25.66	25.66
	Rep Schedule	Bullet payment 29	9.3.2027
	D IVI		
7	Bond XL	0.17.47	A.= .=
	Gross loan opening	315.17	315.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	315.17	315.17
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	315.17	315.17
	Average Loan	315.17	315.17
	Rate of Interest	9.30%	9.30%

	Interest	29.31	29.31
	Rep Schedule	12 Annual instalments f	rom 28.6.2016
8	Bond XLI (AddCap for 2012-13, Drawl on 31.3.2013)		
	Gross loan opening	0.00	68.05
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	68.05
	Additions during the year	68.05	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	68.05	68.05
	Average Loan	34.03	68.05
	Rate of Interest	8.85%	8.85%
	Interest	3.01	6.02
	Rep Schedule	12 Annual instalments fr	om 19.10.2016
	Total Loan		
	Gross loan opening	663.17	731.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	663.17	731.22
	Additions during the year	68.05	0.00
	Repayment during the year	0.00	1.25
	Net Loan-Closing	731.22	729.97
	Average Loan	697.20	730.60
	Weighted Average Rate of Interest	9.2835%	9.2636%
	Interest	64.72	67.68