

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 65/TT/2012

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 : 13.05.2014

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulation, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 of Transmission Tariff for (a) LILO of Neelamangala - Somanhalli 400 kV D/C Line at Bidadi with 1X63 MVAR Bus Reactor, and (b) 2X500 MVA ICTs with associated bay and equipments along with downstream network at Bidadi GIS S/S under System Strengthening –X in Southern Regional Grid

And in the matter of:

Power Grid Corporation of India Ltd
Saudamini, Plot No 2, Sector 29 Gurgaon - 122001

Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd.,
Kaveri Bhawan,
Banglore-560 009
2. Transmission Corporation of Andhra Pradesh Ltd.,
Vidyut Soudha, Hyderabad-500 082
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam, Pattom,
Thriuvananthapuram – 695 004
4. Tamil Nadu Electricity Board
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002
5. Electricity Department
Government of Goa, Vidyuti Bhawan,
Panaji, Goa-403 001



6. Electricity Department
Government of Pondicherry,
Pondicherry – 605 001
7. Eastern Power Distribution Company of Andhra Pradesh
Limited (APEPDCL),
P&T Colony, Seethmahadara,
Vishakhapatnam
8. Southern Power Distribution Company of Andhra Pradesh Limited
(APSPDCL),
Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road,
Kesavayana Gunta,
Tirupati-517 501
9. Central Power Distribution Company of Andhra Pradesh Limited
(APCPDCL),
Corporate Office, Mint Compound,
Hyderabad-500063
10. North Power Distribution Company of Andhra Pradesh Limited
(APNPDCL),
Opp. NIT Petrol Pump, Chaitanayapuri,
Kazipet
Warangal-506 004
11. Bangalore Electricity Supply Company Limited (BESCOM)
Corporate Office, K.R. Circle,
Bangalore-560 001
12. Gulbarga Electricity Supply Company Limited (GESCOM)
Station Main Road,
Gulbarga
13. Hubli Electricity supply Company Limited (HESCOM)
Navanagar, PB Road,
Hubli
14. Mescom Corporate Office
Paradigm plaza, Ab Shetty Circle,
Mangalore-575 001
15. Chamundeswari Electricity Supply Corporation Ltd. (CESC)
927, LJ Avenue Ground Floor,
New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009

Respondents

For petitioner : Shri S.S. Raju, PGCIL
Shri M.M. Mondal, PGCIL
Shri Piyush Awasthi, PGCIL

For Respondent : None

ORDER

The petition has been filed for approval of the transmission tariff for (a) LILO of Neelamangala - Somanhalli 400 kV D/C Line at Bidadi with 1X63 MVAR Bus Reactor, and (b) 2X500 MVA ICTs with associated bays and equipments along with downstream network at Bidadi GIS sub-station, under System Strengthening Scheme – X in Southern Region (hereinafter "the transmission scheme"), based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations).

2. The investment approval for the transmission scheme was accorded by the Board of Directors of the petitioner company vide letter dated 10.12.2009 for ₹27661 lakh, including Interest During Construction (IDC) of ₹1853 lakh based on 3rd Quarter, 2009 price level. The scope of work covered under the transmission scheme includes:

Transmission Line

LILO of both circuits of Neelamangala- Somanhalli 400 kV D/C Transmission Line at Bidadi 400 kV GIS Sub-station-25 km.

Sub-station

Establishment of new 400/220 kV GIS Sub-station at Bidadi with 2 x 500 MVA 400/220 kV transformers

3. In accordance with the investment approval, the transmission scheme was scheduled to be commissioned within 28 months from the date of investment approval. As such, the Scheme was to be put under commercial operation latest by 1.5.2012. The scheduled and actual dates of commercial operation of the respective assets are indicated hereunder:-

Asset	Scheduled DOCO	Actual DOCO
LILO of Neelamangala - Somanhalli 400 kV D/C Line at Bidadi (hereafter "Asset-I A")	1.5.2012	1.4.2012
1X63 MVAR Bus Reactor at Bidadi (hereafter "Asset-I B")	1.5.2012	1.6.2012
1X500 MVA ICTs with associated bays and equipments and downstream network at Bidadi GIS S/S (hereafter "Asset-II A")	1.5.2012	1.4.2012
1X500 MVA ICTs with associated bays and equipments and downstream network at Bidadi GIS S/S (hereafter "Asset-II B")	1.5.2012	1.4.2013

4. The transmission charges claimed by the petitioner based on the actual dates of commercial operation are as under:

(₹ in lakh)

Particulars	Asset – I A		Asset – I B		Asset – II A		Asset- II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Depreciation	420.25	473.32	20.46	28.62	281.60	302.96	90.28
Interest on Loan	638.02	679.17	24.07	31.49	333.27	332.65	105.77
Return on Equity	553.95	623.08	20.36	28.51	289.95	311.99	89.78
Interest on Working Capital	51.37	55.94	4.34	5.66	41.01	43.15	12.44
O & M Expenses	258.09	272.84	51.60	65.46	365.30	386.20	111.28
Total	1921.68	2104.35	120.83	159.74	1311.13	1376.95	409.55

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

(₹ in lakh)

Particulars	Asset - I A		Asset - I B		Asset - II A		Asset - II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Maintenance Spares	38.71	40.93	Details of Interest on Working Capital not available		54.80	57.93	Details of Interest on Working Capital not available.
O & M Expenses	21.51	22.74			30.44	32.18	
Receivables	320.28	350.73			218.52	229.49	
Total	380.50	414.40			303.76	319.60	
Rate of Interest	13.50%	13.50%			13.50%	13.50%	
Interest	51.37	55.94	41.01	43.15			

6. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. The reply to the petition has been filed by Tamil Nadu Generation and Distribution Company Ltd (TANGEDCO), vide affidavit dated 22.3.2012.

7. We have heard the representatives of the parties present at the hearing and have perused the material available on record. We proceed to dispose of the petition. While doing so, the submissions of the respondent are duly taken note of.

Capital cost

8. Regulation 7 of the Tariff Regulations so far as relevant 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.”

9. The details of apportioned approved capital cost, actual capital cost as on the dates of commercial operation and estimated additional capital expenditure projected to be incurred for the assets, as given by the petitioner are as under:-

(₹ in lakh)

Particulars	Apportioned approved cost	Actual cost on DOCO	Projected additional capital expenditure		Projected cost up to 31.3.2014	Projected additional capital expenditure 2014-15	Estimated completion cost
			2012-13	2013-14			
Asset-I A	15551.00	9525.19	1416.13	1138.00	12079.32	310.89	12390.21
Asset-I B	611.00	396.10	139.55	16.02	551.67	0.00	551.67
Asset-II A	9753.00	5021.84	669.20	145.00	5836.04	0.00	5836.04
Asset-II B	1746.00	1656.72	-	110.53	1767.25	54.61	1821.86

Total estimated capital cost claimed up to 31.3.2014 of all the above assets falls within the ceiling limit except Asset-II (Part-B). However, after deducting disallowed IDC and IEDC for 11 months, estimated cost up to 31.3.2014 falls within the apportioned approved cost.

10. The petitioner has vide affidavit dated 13.7.2012 submitted reasons for reduction of transmission line cost and also justification for expenditure under the head "civil works", increase in the cost of items under sub-head "Control, Relay & Protection Panel", Station Auxiliaries, "Structure for switchyard", and "Erection. The Feasibility Report was prepared considering LILO point of the existing line which is about 12.5 km from the substation location (with total route length of 25 km for 2 nos. of D/C lines), by avoiding townships, developing areas, proposed housing layouts etc. However, during the execution, the Lines were constructed in the shortest possible route through the developing areas/layouts by effectively addressing the RoW issues. Thereby the total route length was reduced to 14 km comprising of 3.43 km of Multi circuit portion and 7.2 km of double circuit portion. This resulted in savings in Tower materials, conductor, Earth wire, Insulators, TL Erection costs etc. The petitioner has given details of major tower materials reduction from FR to actual as under:-

S. No.	Description	Unit	Quantity considered in FR	Actual Quantity
1	Tower Materials	MT	1280	1266
2	Conductor	km	308	163.7
3	Earth wire	km	52	20.6
4	120 KN Insulators	Nos.	6264	3065

11. The petitioner has further submitted that there was change in price levels of contracts awarded through competitive bidding, and also reduction of IDC and IEDC from FR to actual. The cost of sub-station reduced because of reduction in cost of land from FR (₹ 3000 lakh) to actual (₹2000 lakh), reduction in cost of GIS Equipment from FR to LOA/ Actual, change in price levels of packages awarded through competitive bidding, and reduction in IEDC & IDC from FR to actual. The cost of Control, Relay & Protection panel, Station, Auxiliaries, structure for switch

yard, and Erection increased because of change in price levels of packages awarded through competitive bidding.

Time over-run

12. There is one months' time over-run in the commissioning of Asset – I B and eleven months' time over-run in the commissioning of Asset-II B. The petitioner, vide affidavit dated 22.7.2013, has submitted that the Bus Reactor (Asset I B) was put under commercial operation on 1.6.2012, with a marginal delay of one month and has sought condonation of the delay. Since the petitioner has not furnished any reason, the delay in commissioning of Asset – I B has not been condoned.

13. While explaining the delay of 11 months in commissioning of Asset – II B, the petitioner has submitted that there was only one 315 MVA ICT in service at Bahadurgarh operating at full load during peak hours. The average load of Bahadurgarh transformer is 225 MW. The existing transformer is feeding number of line faults from the 220 kV system of HVPNL. The petitioner has further submitted that Bahadurgarh sub-station is feeding number of line faults from 220 kV system of HVPNL through Noonmajra-I and Noonmajra-II feeders, which feed power to 220 kV Daulatabad sub-station of HVPNL used for supply of power to Gurgaon (NCR). In the protection scheme of the transformers connected to HVPNL system, suitable protection is either not installed in 220 kV Bus or if installed, it does not function most of times. The petitioner has explained that the transformer installed at Bahadurgarh was vulnerable as it was frequently feeding faults in HVPNL system. It has been submitted that one transformer had failed

because of this reason and in place of the failed transformer, one new transformer was diverted and commissioned. It has been further stated that new transformer had also developed fault within short period of commissioning due to frequent feeding faults in HVPNL system. According to the petitioner, there was urgent requirement of second ICT at Bahadurgarh to meet the load and to limit stress on the transformer due to the feeding faults and since the transformer meant for Bahadurgarh was getting delayed, considering the urgent requirement for continuity of supply and to maintain reliability of system, second ICT meant for Bidadi was shifted to Bahadurgarh sub-station. The petitioner has stated that against two ICTs planned for new Bidaddi sub-station, one ICT was already in operation and generally there was no system constraint with one ICT.

14. We have considered the submissions of the petitioner. On perusal of documents on record, it emerges that the petitioner has not submitted any documentary evidence to show that the beneficiaries of Southern Region were consulted either individually or at the forum of Regional Power Committee of Southern Region, before diverting ICT to Northern Region. The petitioner has stated that failure of the transformer at Bahadurgarh was due to feeding of frequent faults in HVPNL system. In our view, the consequences of deficiency in HVPNL system cannot be passed on to Southern Region beneficiaries in the form of IDC/IEDC. The transformer outage in the Northern Region was due to forced outage. By transferring the ICT from Bidaddi sub-station to Bahadurgarh sub-station, the availability of the system improved in the Northern Region. Thus, the petitioner is getting the benefit of higher system availability in the Northern Region. In our view, the petitioner should bear the consequences of the delay in

the commissioning of Asset – II B. Accordingly, the 11 months delay in the commissioning of Asset-II B is not being condoned.

15. Accordingly, IDC and IEDC for the period of delay has been reduced from the capital cost as on the date of commercial operation. The details of the disallowed IDC and IEDC are as follows:-

Asset- I B

(₹ In lakh)

Details of IDC and IEDC as per Management certificate submitted under affidavit dated 22.7.2013		
	IDC	IEDC
IDC and IEDC up to 31.3.2012	14.80	11.41
IDC and IEDC from 1.4.2012 to 31.5.2012	3.54	16.52
Total IDC and IEDC Claimed	18.34	27.93
<i>Pro rata</i> IDC and IEDC Disallowed for the month of May 2012 against total IDC and IEDC claimed	1.77	8.26

Asset-II B

(₹ In lakh)

Detail of IDC and IEDC as per Management certificate submitted under affidavit dated 22.7.2013		
	IDC	IEDC
Total IDC and IEDC Claimed up to 31.3.2013	133.99	88.39
<i>Pro rata</i> IDC and IEDC Disallowed for 11 months (May 2012 to March 2013) against total IDC and IEDC claimed	37.79	24.93

Treatment of initial spares

16. Initial spares claimed by the petitioner for sub-station as on the date of commercial operation is as per details given hereunder:-

(₹ in lakh)

Particulars	Cost of initial spares
Asset-I A	468.41
Asset-I B	25.33
Asset-II A	288.39
Asset-II B	0.00

17. In the present petition, the petitioner has furnished details of projected additional capital expenditure for 2014-15. Though additional capital expenditure claimed for the year 2014-15 falls beyond current tariff period, it is within the cut-off date. The initial spares claimed by the petitioner are in excess of the normative initial spares in case of Asset – I A, Asset – I B and Asset – II A. The petitioner has not claimed the initial spares for Asset – II B. TANGEDCO has objected to the petitioner's claim for excess initial spares. The petitioner in its rejoinder vide affidavit dated 26.7.2012 has submitted that all the GIS equipments in case of Bidadi sub-station are imported from Korea. The petitioner has stated that since the components are not available in India on one-to-one basis, it has to rely on procurement of components from the Original Equipment Manufacturer, and the lead time is one year or more. Accordingly, the petitioner has sought relaxation of the norms, as it has to maintain optimum level of spares.

18. The petitioner has not been able to justify its claim for the initial spares beyond the ceiling norms specified under the 2009 Tariff Regulations. Therefore, the initial spares have been restricted to 3.50% of the cost projected to be incurred during the current tariff period. The excess initial spares have been deducted from the capital cost as on the date of commercial operation considered for tariff. The initial spares pertaining to sub-station, claimed and allowed as part of capital cost, are shown below:-

(₹ in lakh)

Particulars	Sub-station cost up to cut-off date**	Initial spares claimed	IDC/IEDC disallowed	Sub-station cost up to cut-off date after adjusting IDC/IEDC	Proportionate initial spares deemed to have been claimed	Ceiling Limits as per Regulation 8 of 2009	Initial spares worked out	Excess initial spares
Asset – I A	9198.17	468.41	0.00	9198.17	468.41	3.50%	316.62	151.79
Asset – I B	551.67	25.33	10.03	541.64	24.87	3.50%	18.74	6.13
Asset- II A	5836.04	288.39	0.00	5836.04	288.39	3.50%	201.21	87.18

** Cut off date has been considered only upto the end of current tariff block i.e upto 31.3.2014

19. The initial spares shall be reviewed at the time of truing up, on submission of actual completion cost certified by the Auditor, and then in the next tariff period, considering additional capital expenditure for the year 2014-15.

20. Based on the above, the following gross block as on the date of commercial operation has been arrived at:-

(₹ In lakh)

Particular	Asset – I A	Asset- I B	Asset-II A	Asset-II B
Capital cost claimed	9525.19	396.10	5021.84	1656.72
Less: Excess initial spares claimed	151.79	6.13	87.18	0.00
Less: IDC and IEDC disallowed	0.00	10.03	0.00	62.72
Capital cost considered as on DOCO	9373.40	379.94	4934.66	1594.00

Projected additional capital expenditure

21. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as under:-

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

- (i) Undischarged liabilities;
- (ii) 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.”

22. Additional capital expenditure claimed by the petitioner for Asset- I A, i.e. LILO of Neelmangala-Somanhalli 400 kV D/C line at Bidadi is as per details given hereunder:-

Asset -1 A		(₹ in lakh)	
Year	Work/Equipment proposed to be added after COD up to cut off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2012-2013	Building	603.33	Balance & Retention Payment
	Transmission Line	272.96	
	Sub station	523.33	
	PLCC	16.51	
	Subtotal	1416.13	
2013-14	Building	885.00	Balance & Retention Payment
	Transmission Line	68.00	
	Sub station	185.00	
	Subtotal	1138.00	
2014-15	Building & other civil works	300.00	Balance & Retention Payment
	Transmission Line	10.89	
	Subtotal	310.89	
	Grand Total	2865.02	

23. Additional capital expenditure claimed by the petitioner for Asset II A, i.e. 1X500 MVA 400/220 kV transformer along with associated bays and 220 kV downstream systems at Bidadi GIS sub-station is as per details given hereunder:-

Asset -II A		(₹ in lakh)	
Year	Work/Equipment proposed to be added after COD up to cut-off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2012-2013	Building	14.90	Balance & Retention Payment
	Sub station	653.14	
	PLCC	1.16	
	Subtotal	669.20	
2013-14	Sub station	145.00	Balance & Retention Payment
	Subtotal	145.00	
	Grand Total	814.20	

24. Additional capital expenditure claimed by the petitioner in Asset I B, i.e. 1X63 MVAR 400 kV Bus Reactor at Bidadi GIS sub-station is as per details given hereunder:-

Asset -I B			(₹ in lakh)
Year	Work/Equipment proposed to be added after COD up to cut-off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2012-2013	Building	3.05	Balance & Retention Payment
	Sub station	64.91	Balance & Retention Payment
	Sub-total	67.96	
2013-2014	Sub station	30.00	Balance & Retention Payment
	Sub-total	30.00	
	Grand Total	97.96	

25. Additional capital expenditure claimed by the petitioner for Asset II B, i.e. 1X500 MVA 400/220 kV transformer along with associated bays and 220 kV downstream system at Bidadi GIS sub-station is as per details given hereunder:-

Asset-II B			(₹ in lakh)
Year	Work/Equipment proposed to be added after COD up to cut-off date	Amount capitalized and proposed to be capitalized	Justification as per purpose
2012-2013	Building	13.55	Balance & Retention Payment
	Sub station	342.33	
	PLCC	1.15	
	Subtotal	356.93	
2013-14	Sub station	47.29	Balance & Retention Payment
	Subtotal	47.29	
	Grand Total	404.22	

26. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

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

27. The additional capital expenditure during 2012-13 and 2013-14 claimed by the petitioner, mainly on account of balance and retention payments, is within the cut-off date and is allowed.

28. The cost as on DOCO, and admitted cost as on 31.3.2014, after allowing additional capitalization, is within the limits of apportioned approved cost, as per details given hereunder:-

(₹ In lakh)

Particulars	Apportioned Approved Cost	Cost on DOCO	Projected Additional Capital Expenditure		Capital Cost on 31.3.2014
			2012-13	2013-14	
Asset-I A	15551.00	9373.40	1416.13	1138.00	11927.53
Asset-I B	611.00	379.94	139.55	16.02	535.51
Asset-II A	9753.00	4934.66	669.20	145.00	5748.86
Asset-II B	1746.00	1594.00	-	110.53	1704.53

Debt- equity ratio

29. 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.”

30. Details of debt-equity in respect of the assets as on dates of commercial operation is as follows:-

(₹ in lakh)

Capital Cost as on date of commercial operation		
	Amount	%
Asset-I A		
Debt	6561.38	70.00
Equity	2812.02	30.00
Total	9373.40	100.00
Asset-I B		
Debt	265.96	70.00
Equity	113.98	30.00
Total	379.94	100.00
Asset-II A		
Debt	3454.26	70.00
Equity	1480.40	30.00
Total	4934.66	100.00
Asset-II B		
Debt	1115.80	70.00
Equity	478.20	30.00
Total	1594.00	100.00

29. Debt-equity ratio for the projected additional capital expenditure has also been considered in the normative ratio of 70:30 as shown hereunder:-

(₹ In lakh)		
	Amount	%
Asset-I A		
2012-13		
Debt	991.29	70.00
Equity	424.84	30.00
Total	1416.13	100.00
2013-14		
Debt	796.60	70.00
Equity	341.40	30.00
Total	1138.00	100.00
Asset-I B		
2012-13		
Debt	97.69	70.00
Equity	41.87	30.00
Total	139.55	100.00
2013-14		
Debt	11.21	70.00
Equity	4.18	30.00
Total	16.02	100.00
Asset-II A		
2012-13		
Debt	468.44	70.00
Equity	200.76	30.00
Total	669.20	100.00
2013-14		
Debt	101.50	70.00%
Equity	43.50	30.00%
Total	145.00	100.00%
Asset-II B		
2013-14		
Debt	77.37	70.00
Equity	33.16	30.00
Total	110.53	100.00

30. Details of debt-equity in respect of the assets as on 31.3.2014 is as follows:-

Capital Cost as on date of commercial operation		
	Amount	%
Asset-I A		
Debt	8349.27	70.00
Equity	3578.26	30.00
Total	11927.53	100.00
Asset-I B		
Debt	374.86	70.00
Equity	160.65	30.00
Total	535.51	100.00
Asset-II A		
Debt	4024.20	70.00
Equity	1724.66	30.00
Total	5748.86	100.00
Asset-II B		
Debt	1193.17	70.00
Equity	511.36	30.00
Total	1704.53	100.00

Return on equity

31. 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".

32. The petitioner has claimed return on equity at the rate of 15.5% for Asset – I B and Asset – II B in accordance with clause (2) of Regulation 15 and at the rate of 16.0% based on second proviso to clause (2) of Regulation 15 for Asset – I A and Asset – II A. The request for additional return on equity for Asset-I A and Asset-II A is not allowed, as the petitioner has not commissioned all the assets within schedule specified in Appendix-II to the 2009 Tariff Regulations. Accordingly, base rate of 15.5% has been allowed for all the four assets, as per details given hereunder:-

(₹ in lakh)

Particulars	Asset - I A		Asset - I B		Asset - II A		Asset - II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Opening Equity	2812.02	3236.86	113.98	155.85	1480.40	1681.16	478.20
Addition due to Add Cap	424.84	341.40	41.87	4.81	200.76	43.50	33.16
Closing Equity	3236.86	3578.26	155.85	160.65	1681.16	1724.66	511.36
Average Equity	3024.44	3407.56	134.92	158.25	1580.78	1702.91	494.78
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	528.70	595.68	19.65	27.66	276.34	297.69	86.49

Interest on loan

33. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“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 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.”

34. In keeping with the provisions of Regulation 16, 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 has been considered from the first year of commercial operation of the transmission scheme and is 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.

35. Detailed calculations in support of the weighted average rates of interest have been given in Annexures I to IV to this order.

36. Based on the above, interest on loan has been calculated on the basis of prevailing rate available as on date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up. The interest on loan is worked out as under:-

(₹ in lakh)

Particulars	Asset- I A		Asset- I B		Asset - II A		Asset- II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Gross Normative Loan	6561.38	7552.67	265.96	363.65	3454.26	3922.70	1115.80
Cumulative Repayment upto previous year	0.00	412.23	0.00	19.75	0.00	277.00	0.00
Net Loan-Opening	6561.38	7140.44	265.96	343.90	3454.26	3645.70	1115.80
Addition due to additional capital expenditure	991.29	796.60	97.69	11.21	468.44	101.50	77.37
Repayment during the year	412.23	465.31	19.75	27.77	277.00	298.35	86.98
Net Loan-Closing	7140.44	7471.73	343.90	327.34	3645.70	3448.85	1106.19
Average Loan	6850.91	7306.09	304.93	335.62	3549.98	3547.28	1111.00
Weighted Average Rate of Interest on Loan	9.1759%	9.1776%	9.1420%	9.1073%	9.2326%	9.2342%	9.1714%
Interest	628.64	670.53	23.23	30.57	327.75	327.56	101.89

37. The petitioner has considered "Proposed Loan 2012-13" of ₹ 546.12 lakh @ 9.25% in actual loan portfolio of Asset- II A for determination of weighted average rate of interest to be considered for the computation of interest on normative loan. As per Regulation 16 (5) of the 2009 Tariff Regulations, only actual loans drawn have been considered for the computation of weighted average rate of interest.

Depreciation

38. Regulation 17 of the 2009 Tariff Regulations provides as under:-

“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.”

39. The petitioner has claimed actual depreciation. In our calculations, depreciation has been calculated in accordance with clause (4) of Regulation 17 extracted above.

40. Asset-I A, Asset I B, Asset II A and Asset II B were commissioned respectively on 1.4.2012, 1.6.2012, 1.4.2012 and 1.4.2013. All the assets will complete 12 years beyond 2013-14 and hence depreciation has been calculated annually, based on Straight Line Method at the rates specified in Appendix-III to the 2009 Tariff Regulations, as per details given hereunder:-

(₹ in lakh)

Particulars	Asset - I A		Asset - I B		Asset- II A		Asset- II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Opening Gross Block	9373.40	10789.53	379.94	519.49	4934.66	5603.86	1594.00
Addition due to Projected Add Cap	1416.13	1138.00	139.55	16.02	669.20	145.00	110.53
Closing Gross Block	10789.53	11927.53	519.49	535.51	5603.86	5748.86	1704.53
Average Gross Block	10081.47	11358.53	449.72	527.50	5269.26	5676.36	1649.26
Rate of Depreciation	4.0890%	4.0966%	5.2688%	5.2648%	5.2569%	5.2561%	5.2736%
Depreciable Value	7273.32	8422.68	404.75	474.75	4742.33	5108.72	1484.34
Remaining Depreciable Value	7273.32	8010.45	404.75	455.01	4742.33	4831.73	1484.34
Depreciation	412.23	465.31	19.75	27.77	277.00	298.35	86.98
Cumulative Depreciation	412.23	877.54	19.75	47.52	277.00	575.35	86.98

Operation & maintenance expenses

41. 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:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
D/C (Twin & Triple Conductor) (₹ lakh per Km)	0.627	0.663	0.701	0.741	0.783
400 kV bays (₹ lakh per bay)	52.40	55.40	58.57	61.92	65.46
220 kV bays (₹ lakh per bay)	36.68	38.78	41.00	43.34	45.82

42. The allowable O&M expenses for the assets are as under:-

(₹ in lakh)

Element	2012-13	2013-14
14.048 KM D/C LILO Neelmangala-Somanhalli at Bidadi	10.41	11.00
4 Nos. 400 kV bays	247.68	261.84
Sub Total Asset-1(Part-A)	258.09	272.84
63 MVAR bus reactor with 1 No. 400 kV associated bays	51.60 (Pro rata for 10 months)	65.46
Total O&M for Asset 1	309.69	338.30
500 MVA ICT with 1 No. 400 kV bay and 7 Nos. 220 kV bays	365.30	386.20
500 MVA ICT with 1 No. 400 kV bay and 1 No. 220 kV bay	-	111.28
Total O&M Expenses	674.99	835.78

43. The petitioner has stated that O&M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the years 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 it would approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike w.e.f. 1.1.2007 is more than 50%.

44. 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

45. 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' fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. 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 applicable on 1st April of the year of commercial operation plus 350 bps. The State Bank of India base rate as on 1.4.2012 was 10% and as on 1.4.2013 the base rate was 9.70%. Accordingly, rate of interest of 13.50% has been considered for Asset – I A, Asset – I B and Asset – II A and of 13.20% for Asset- II B (Base rate as on 1.4.2013 i.e. 9.70% and 350 basis points). The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	Asset - IA		Asset - IB		Asset - IIA		Asset- II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Maintenance Spares	38.71	40.93	9.29	9.82	54.80	57.93	16.69
O & M Expenses	21.51	22.74	5.16	5.46	30.44	32.18	9.27
Receivables	313.01	343.21	23.70	26.18	214.47	225.40	66.47
Total	373.23	406.88	38.15	41.45	54.80	57.93	92.44
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.20%
Interest	50.39	54.93	4.29	5.60	40.46	42.59	12.20

Transmission charges

47. The transmission charges being allowed for the assets are summarized hereunder:-

(₹ in lakh)

Particulars	Asset - I A		Asset – I B		Asset – II A		Asset- II B
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2013-14
Depreciation	412.23	465.31	19.75	27.77	277.00	298.35	86.98
Interest on Loan	628.64	670.53	23.23	30.57	327.75	327.56	101.89
Return on Equity	528.70	595.68	19.65	27.66	276.34	297.69	86.49
Interest on Working Capital	50.39	54.93	4.29	5.60	40.46	42.59	12.20
O & M Expenses	258.09	272.84	51.60	65.46	365.30	386.20	111.28
Total	1878.05	2059.28	118.52	157.06	1286.85	1352.40	398.84

48. The transmission charges allowed are subject to truing up in accordance with the 2009 Tariff Regulations.

Filing fee and publication expenses

49. 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

50. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with licence fees had not been captured and the licence fee may be allowed to be recovered separately from the respondents.

51. 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

52. 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 premature and accordingly this prayer is rejected.

Sharing of Transmission Charges

53. 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.

54. This order disposes of Petition No. 65/TT/2012.

Sd/-

(A.K. Singhal)
Member

Sd/-

(M. Deena Dayalan)
Member

Sd/-

(Gireesh B. Pradhan)
Chairperson

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-I A**

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	2742.00	2742.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2742.00	2742.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2742.00	2742.00
	Average Loan	2742.00	2742.00
	Rate of Interest	8.84%	8.84%
	Interest	242.39	242.39
	Rep Schedule	12 Annual instalments from 21.10.2014	
2	Bond XXXI		
	Gross loan opening	967.00	967.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	967.00	967.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	80.58
	Net Loan-Closing	967.00	886.42
	Average Loan	967.00	926.71
	Rate of Interest	8.90%	8.90%
	Interest	86.06	82.48
	Rep Schedule	12 Annual instalments from 25.2.2014	
3	Bond XXXIII		
	Gross loan opening	116.00	116.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	116.00	116.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	116.00	116.00
	Average Loan	116.00	116.00
	Rate of Interest	8.64%	8.64%
	Interest	10.02	10.02
	Rep Schedule	12 Annual instalments from 8.7.2014	
4	Bond XXXV		
	Gross loan opening	2665.80	2665.80
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2665.80	2665.80

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2665.80	2665.80
	Average Loan	2665.80	2665.80
	Rate of Interest	9.64%	9.64%
	Interest	256.98	256.98
	Rep Schedule	12 Annual instalments from 31.5.2015	
5	Bond XXXVII		
	Gross loan opening	176.83	176.83
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	176.83	176.83
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	176.83	176.83
	Average Loan	176.83	176.83
	Rate of Interest	9.25%	9.25%
	Interest	16.36	16.36
	Rep Schedule	12 Annual instalments from 26.12.2015	
	Total Loan		
	Gross loan opening	6667.63	6667.63
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	6667.63	6667.63
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	80.58
	Net Loan-Closing	6667.63	6587.05
	Average Loan	6667.63	6627.34
	Weighted Average Rate of Interest	9.1759%	9.1776%
	Interest	611.82	608.23

Annexure II

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-I B**

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	Gross loan opening	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4.00	4.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4.00	4.00
	Average Loan	4.00	4.00
	Rate of Interest	8.64%	8.64%
	Interest	0.35	0.35
	Rep Schedule	12 Annual instalments from 8.7.2014	
2	Bond XXXI		
	Gross loan opening	33.00	33.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	33.00	33.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	2.75
	Net Loan-Closing	33.00	30.25
	Average Loan	33.00	31.63
	Rate of Interest	8.90%	8.90%
	Interest	2.94	2.81
	Rep Schedule	12 Annual instalments from 25.02.2014	
3	Bond XLI		
	Gross loan opening	0.00	7.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	7.17
	Additions during the year	7.17	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	7.17	7.17
	Average Loan	3.59	7.17
	Rate of Interest	8.85%	8.85%
	Interest	0.32	0.63
	Rep Schedule	12 Annual instalments from	

		19.10.2016	
4	Bond XXXIV		
	Gross loan opening	93.00	93.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	93.00	93.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	93.00	93.00
	Average Loan	93.00	93.00
	Rate of Interest	8.84%	8.84%
	Interest	8.22	8.22
	Rep Schedule	12 Annual instalments from 21.10.2014	
5	Bond XXXVII		
	Gross loan opening	15.00	15.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	15.00	15.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	15.00	15.00
	Average Loan	15.00	15.00
	Rate of Interest	9.25%	9.25%
	Interest	1.39	1.39
	Rep Schedule	12 Annual instalments from 26.12.2015	
6	Bond XL		
	Gross loan opening	0.00	25.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	25.10
	Additions during the year	25.10	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.10	25.10
	Average Loan	12.55	25.10
	Rate of Interest	9.30%	9.30%
	Interest	1.17	2.33
	Rep Schedule	12 Annual instalments from 28.6.2016	
7	Bond XXXV		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto	0.00	0.00

	DOCOC/previous year		
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	9.64%	9.64%
	Interest	9.64	9.64
	Rep Schedule	12 Annual instalments from 31.5.2015	
8	Bond XLI (AddCap for 2012-13 drwal on 19th Oct 2012)		
	Gross loan opening	0.00	97.69
	Cumulative Repayment upto DOCOC/previous year	0.00	0.00
	Net Loan-Opening	0.00	97.69
	Additions during the year	97.69	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	97.69	97.69
	Average Loan	48.85	97.69
	Rate of Interest	8.85%	8.85%
	Interest	4.32	8.65
	Rep Schedule	12 Annual instalments from 19.10.2016	
	Total Loan		
	Gross loan opening	245.00	374.96
	Cumulative Repayment upto DOCOC/previous year	0.00	0.00
	Net Loan-Opening	245.00	374.96
	Additions during the year	129.96	0.00
	Repayment during the year	0.00	2.75
	Net Loan-Closing	374.96	372.21
	Average Loan	309.98	373.59
	Weighted Average Rate of Interest	9.1420%	9.1073%
	Interest	28.34	34.02

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-II A**

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	Gross loan opening	42.00	42.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	42.00	42.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	42.00	42.00
	Average Loan	42.00	42.00
	Rate of Interest	8.64%	8.64%
	Interest	3.63	3.63
	Rep Schedule	12 Annual instalments from 8.7.2014	
2	Bond XXXI		
	Gross loan opening	346.00	346.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	346.00	346.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	28.83
	Net Loan-Closing	346.00	317.17
	Average Loan	346.00	331.58
	Rate of Interest	8.90%	8.90%
	Interest	30.79	29.51
	Rep Schedule	12 Annual instalments from 25.02.2014	
3	Bond XXXV		
	Gross loan opening	1240.00	1240.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1240.00	1240.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1240.00	1240.00
	Average Loan	1240.00	1240.00
	Rate of Interest	9.64%	9.64%
	Interest	119.54	119.54
	Rep Schedule	12 Annual instalments from 31.5.2015	

4	Bond XXXIV		
	Gross loan opening	948.00	948.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	948.00	948.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	948.00	948.00
	Average Loan	948.00	948.00
	Rate of Interest	8.84%	8.84%
	Interest	83.80	83.80
	Rep Schedule	12 Annual instalments from 21.10.2014	
5	Bond XXXVII		
	Gross loan opening	393.17	393.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	393.17	393.17
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	393.17	393.17
	Average Loan	393.17	393.17
	Rate of Interest	9.25%	9.25%
	Interest	36.37	36.37
	Rep Schedule	12 Annual instalments from 26.12.2015	
	Total Loan		
	Gross loan opening	2969.17	2969.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2969.17	2969.17
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	28.83
	Net Loan-Closing	2969.17	2940.34
	Average Loan	2969.17	2954.75
	Weighted Average Rate of Interest	9.2326%	9.2342%
	Interest	274.13	272.85

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-IIB**

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XXXIII	
	Gross loan opening	11.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	11.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	11.00
	Average Loan	11.00
	Rate of Interest	8.64%
	Interest	0.95
	Rep Schedule	12 Annual instalments from 8.7.2014
2	Bond XXXI	
	Gross loan opening	88.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	88.00
	Additions during the year	0.00
	Repayment during the year	7.33
	Net Loan-Closing	80.67
	Average Loan	84.33
	Rate of Interest	8.90%
	Interest	7.51
	Rep Schedule	12 Annual instalments from 25.02.2014
3	Bond XXXV	
	Gross loan opening	319.20
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	319.20
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	319.20
	Average Loan	319.20
	Rate of Interest	9.64%

	Interest	30.77
	Rep Schedule	12 Annual instalments from 31.5.2015
4	Bond XXXIV	
	Gross loan opening	241.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	241.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	241.00
	Average Loan	241.00
	Rate of Interest	8.84%
	Interest	21.30
	Rep Schedule	12 Annual instalments from 21.10.2014
5	Bond XXXVII	
	Gross loan opening	48.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	48.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	48.00
	Average Loan	48.00
	Rate of Interest	9.25%
	Interest	4.44
	Rep Schedule	12 Annual instalments from 26.12.2015
6	Bond XL	
	Gross loan opening	223.78
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	223.78
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	223.78
	Average Loan	223.78
	Rate of Interest	9.30%
	Interest	20.81
	Rep Schedule	12 Annual instalments from 28.6.2016

7	Bond XLI	
	Gross loan opening	228.72
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	228.72
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	228.72
	Average Loan	228.72
	Rate of Interest	8.85%
	Interest	20.24
	Rep Schedule	12 Annual instalments from 19.10.2016
	Total Loan	
	Gross loan opening	1159.70
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1159.70
	Additions during the year	0.00
	Repayment during the year	7.33
	Net Loan-Closing	1152.37
	Average Loan	1156.03
	Weighted Average Rate of Interest	9.1714%
	Interest	106.02