

Shri Prashant Sharma, PGCIL
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ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission tariff in respect of (i) Combined Assets of 400/220 kV Pune S/S with Bus Reactor and bays for LILLO of Kalwa-Lonikhand D/C at Pune, and Solapur S/S with Bus Reactor and Bays for LILLO of Solapur –Karad & Solapur-Kolhapur along with Reactors, and (ii) Combined Assets of 400/220 kV ICT-I and ICT-II at Solapur S/S and ICT-I & II at Pune S/S along with associated bays under WRSS-II, Set-B Scheme of Western Region (hereinafter referred to as “the transmission system”) for tariff block 2009-14 period based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. Investment approval for the scheme was accorded by the Ministry of Power, Government of India, vide letter dated 24.7.2006 at an estimated cost of ₹522123 lakh including IDC of ₹38042 lakh (based on 4th Quarter,2005 price level) consisting of (i) ₹358140 lakh (including IDC of ₹25062 lakh) for PGCIL portion and (ii) ₹163983 lakh including IDC of ₹12980 lakh for IPTC’S portion.

3. The petitioner in the present petition and Petition No. 24/TT/2011, under the WRSS-II, Set-B Scheme, has sought determination of transmission tariff of the following assets:-

Asset No.	Name of the asset	DOCO	Covered under Petition No. 24/TT/2011
I	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur –Karad, 2x 50 MVAR Reactors in Kolhapur Bays as Switchable Reactors	1.2.2011	
II	400/220 kV ICT I at Solapur S/S along with bays	1.2.2011	
III (Asset-II & III)	Combined Assets of 400/220 kV ICT I and ICT II at Solapur along with associated bays	1.4.2011	
IV	400/220 kV Pune S/S (New) with LILO Ckt-I of Lonikhand-Kalwa D/C at Pune	1.5.2011	Covered in the present petition
V	ICT I at 400/220 kV Pune S/S (New) along with associated bays	1.5.2011	
VI	ICT II at 400/220 kV Pune S/S (New) along with associated bays	1.9.2011	

4. The petitioner, vide affidavit dated 16.7.2012 in Petition No. 152/TT/2011, has revised the expenditure incurred upto the date of commercial operation and the projected additional capital expenditure during 2009-14 pertaining to the assets covered in the instant petition and in Petition No.24/2011. The petitioner has submitted that all the assets covered in the Petition No.24/TT/2011 and Petition No.81/TT/2011 except ICTs have been clubbed in Petition No.152/TT/2011 and has also filed all tariff forms, revised management certificates and revised funding for all the assets. Further, the respondents, both in the instant petition and Petition Nos.24/TT/2011 and Petition No.152/TT/2012 are same and hence all the information submitted vide affidavit dated 16.7.2012 is considered for the purpose of calculating the transmission tariff in the instant petition. The details of the revised cost and

the additional capital expenditure submitted by the petitioner in Petition No.152/TT/2011 are given below:-

(₹ in lakh)

Asset (DOCO)	Capital cost claimed as on DOCO/ Notional DOCO	Projected additional capital expenditure considered						Total estimated completion cost considered	
		2010-11	2011-12				2012-13		2013-14
		1.2.11 to 31.3.11	1.4.11 to 30.4.11	1.5.11 to 31.8.11	1.9.11 to 31.1.12	1.2.12 to 31.3.12			
I (1.2.2011)	4807.89*	185.85	20.07	133.86	365.83	110.10	809.19	0.00	6432.79
II (1.2.2011)	2198.04	25.91	0.00	24.50	38.15	88.17	102.60	0.00	2477.37
III(Combined Asset II & III) (1.4.2011)		3948.34	0.00	36.48	96.82	125.46	102.60	0.00	4309.70

*Capital cost as on date of commercial operation was inclusive of initial spares amounting to ₹213.72 lakh for Asset-I corresponding to Sub-station.

5. The capital cost as on date of commercial operation, for the assets covered in Petition No.24/TT/2011 has already been approved by the Commission, vide order dated 2.4.2013, as under:-

(₹ in lakh)

Particulars	Actual/ Notional date of commercial operation	Capital cost considered in P.No.24/2011 for the purpose of Tariff	Applicable Tariff Period
Asset-I	1.2.2011	4753.63	1.2.2011 to 31.3.2014
Asset-II	1.2.2011	2198.04	1.2.2011 to 31.3.2011
Asset-III (Combined Assets of II & III)	1.4.2011	3948.34	1.4.2011 to 31.3.2014

6. From the foregoing it may be seen that the present petition and Petition Nos. 24/TT/2011 and 152/TT/2011 are part of the same system. In view of this, tariff has been calculated on the basis of the information submitted by the petitioner vide affidavit dated 16.7.2012 in Petition No. 152/TT/2011. The petitioner vide affidavit dated 16.7.2012 has further

submitted that Asset-VII, i.e. "400/220 kV Pune S/S (New) with LILO Ckt-II of Lonikhand- Kalwa D/C at Pune" (DOCO: 1.9.2011) which was originally claimed in this petition, has since been deleted, and is now being claimed in the Petition No. 152/TT/2011.

7. Details of the assets covered under the present petition and Petition No. 24/TT/2011 along with their respective dates of commercial operation are given hereunder:-

Asset No.	Name of the asset	Date of commercial operation	Remarks
I	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur – Karad, 2x 50 MVAR Reactors in Kolhapur Bays as Switchable Reactors	1.2.2011	Covered in Petition No. 24/TT/2011
II	400/220 kV ICT I at Solapur S/S along with bays	1.2.2011	
III	Combined Assets of 400/220 kV ICT I and ICT II at Solapur along with associated bays	1.4.2011	
IV	400/220 kV Pune S/S (New) with LILO Ckt-I of Lonikhand- Kalwa D/C at Pune	1.5.2011	Covered in the Instant petition.
V	ICT I at 400/220 kV Pune S/S (New) along with associated bays	1.5.2011	
VI	ICT II at 400/220 kV Pune S/S (New) along with associated bays	1.9.2011	

8. The petitioner has prayed to combine the above assets for the purpose of determination of transmission tariff in the following ways:-

Combined Asset	Combination of the above mentioned Assets	Notional date of commercial operation	Applicable tariff period
1	I & IV	1.5.2011	1.5.2011 to 31.3.2014
2	III & V	1.5.2011	1.5.2011 to 31.8.2011
3	III, V & VI	1.9.2011	1.9.2011 to 31.3.2014

9. The actual date of commercial operation of Asset-I (Single Asset), as stated in Paragraph No. 3 above, is 1.2.2011 and the Commission vide order dated 2.4.2013 in Petition No. 24/TT/2011 has already allowed tariff, for the period from 1.2.2011 to 31.3.2014. Now, as the petitioner has requested to combine the tariff of Asset-I and Asset-IV, the tariff in respect of the above will be applicable only up to 30.4.2011. Similarly, notional date of commercial operation of Asset-III (Combined Assets II & III) is 1.4.2011, the tariff for which has been determined vide order dated 2.4.2013 in Petition No. 24/2011 for the period from 1.4.2011 to 31.3.2014. In view of combination of this with Asset-V, the above tariff order will be applicable up to 30.4.2011 only.

10. The petitioner, vide affidavit dated 16.7.2012 in Petition No 152/TT/2011, has claimed actual expenditure incurred up to dates of commercial operation and projected additional capital expenditure during 2009-14 for the following assets covered in this petition as per details given hereunder:-

(₹ in lakh)

Asset (DOCO)	Capital Cost claimed as on DOCO	Projected Additional Capitalization					Total Estimated Completion Cost
		2011-12			2012-13	2013-14	
		1.5.11 to 31.8.11	1.9.11 to 31.1.12	1.2.12 to 31.3.12			
IV (1.5.2011)	3923.68*	95.36	270.01	125.77	2289.13	178.21	6882.16
V (1.5.2011)	2238.41#	1.79	133.78	0.00	32.75	0.00	2406.73
VI (1.9.2011)		1943.89#	116.09	0.00	37.68	0.00	2097.66

*Capital cost as on date of commercial operation was inclusive of initial spares amounting to ₹187.61 lakh for Asset-IV corresponding to Sub-station.

Capital cost as on date of commercial operation was inclusive of initial spares amounting to ₹48.73 lakh (₹47.01 lakh for Asset-V and ₹1.72 lakh for Asset-VI) corresponding to Sub-station.

11. Accordingly, following capital cost up to notional dates of commercial operation of the Combined Assets has been claimed by the petitioner for the

purpose of tariff:-

(₹ in lakh)

SI. No.	Combination of Assets	Notional DOCO	Apportioned/ Approved Cost	Capital cost claimed by the petitioner for the purpose of tariff as on DOCO/ Notional DOCO	Applicable tariff period
1	I & IV	1.5.2011	15675.86	8937.49	1.5.2011 to 31.3.2014
2	III & V	1.5.2011	8967.43*	6186.75	1.5.2011 to 31.8.2011
3	III, V & VI	1.9.2011		8168.91	1.9.2011 to 31.3.2014

*In respect of Combined Asset-II & III, the petitioner has submitted same Apportioned/ Approved Cost in their Form-6 in corresponding tariff calculations.

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

(₹ in lakh)

Particulars	Combined Asset-1			Combined Asset-2
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12 (Pro-rata)
Depreciation	354.03	466.92	528.12	109.17
Interest on Loan	141.40	189.98	202.05	28.35
Return on equity	456.11	607.69	693.60	111.60
Interest on Working Capital	37.02	46.04	50.41	13.68
O & M Expenses	375.82	433.44	458.22	181.57
Total	1364.38	1744.07	1932.40	444.37

Combined Asset -3			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	252.85	449.71	454.06
Interest on Loan	64.58	118.24	108.13
Return on equity	257.12	457.70	462.24
Interest on Working Capital	31.79	57.29	59.37
O & M Expenses	423.66	767.76	811.68
Total	1030.00	1850.70	1895.48

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

(₹ in lakh)

Particulars	Combined Asset-1			Combined Asset-2
	2011-12 (Pro-Rata)	2012-13	2013-14	2011-12 (Pro-Rata)
Maintenance Spares	61.50	65.02	68.73	27.24
O & M expenses	34.17	36.12	38.19	15.13
Receivables	248.07	290.68	322.07	74.06
Total	343.74	391.82	428.99	116.43
Interest	37.02	46.04	50.41	13.68
Rate of Interest	11.75%	11.75%	11.75%	11.75%

(₹ in lakh)

Particulars	Combined Asset-3		
	2011-12 (Pro-Rata)	2012-13	2013-14
Maintenance Spares	108.94	115.16	121.75
O & M expenses	60.52	63.98	67.64
Receivables	294.29	308.45	315.91
Total	463.75	487.59	505.30
Interest	31.79	57.29	59.37
Rate of Interest	11.75%	11.75%	11.75%

14. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003. None of the respondents have filed reply. Having heard the representative of the petitioner and perused the material on records, we proceed to dispose of the petition.

Capital cost

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

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

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.”

16. Accordingly, following capital cost as on notional dates of commercial operation has been considered for the purpose of computation of tariff:-

(₹ in lakh)

Combined Assets	Assets	Date/Notional Date of commercial operation	Capital cost considered for the purpose of tariff before adjustment of IEDC/IDC & initial spares as on DOCO / Notional DOCO	Applicable tariff period
1	I & IV	1.5.2011	8937.49*	1.5.2011 to 31.3.2014
2	III & V	1.5.2011	6186.75	1.5.2011 to 31.8.2011
3	III, V & VI	1.9.2011	8168.91#	1.9.2011 to 31.3.2014

*Capital cost as on DOCO is inclusive of initial spares amounting to ₹401.33 lakh (₹213.72 lakh for Asset-I and ₹187.61 for Asset-IV) corresponding to Sub-station.

#Capital cost as on DOCO is inclusive of initial spares amounting to ₹48.73 lakh (₹47.01 lakh for Asset-V and ₹1.72 lakh for Asset-VI) corresponding to Sub-station.

Time over-run

17. As per the investment approval the transmission scheme is scheduled to be commissioned within 48 months from the date of approval i.e. by July 2010. However, while granting transmission licence to WRTML, for transmission line portion, the Commission had granted nine months extension for achieving the commercial operation of the projects i.e. upto 31.12.2010 considering the delay in signing of Power Transmission Agreement (by the beneficiaries). Accordingly amendment in RCOD up to 31.12.2010 has been issued by the petitioner on 27.3.2009.

18. The petitioner has stated that the Commission in its order dated 31.12.2010 in Petition No. 296/2010 observed that WRTL has a case for extension of RCOD for eight months in case of Project B, i.e. up to 31.8.2011. Extension in RCOD till 31.8.2011 was thus granted to WRTML by the petitioner by amending the Implementation Agreement. The petitioner has further submitted that it made efforts for execution of Sub-station in alignment with the commissioning of transmission lines by WRTML which was extended from time to time. Accordingly, the transmission assets covered under the WRSS-II, Set-B have been put under commercial operation with effect from 1.2.2011, 1.4.2011, 1.5.2011 and 1.9.2011.

19. The petitioner has submitted that both Solapur and Pune Sub-stations were ready for charging well before December, 2010 as CEA clearance for charging was received in October, 2010. The petitioner has further submitted that MSETCL did not allow the LILO of line at Solapur and Pune Sub-stations due to apprehension regarding system parameters. Finally, after a series of discussions between the petitioner, MSETCL and WRTML for early commissioning of Solapur Sub-station, MSETCL agreed, and vide letter dated 7.2.2011 requested the petitioner for early commissioning of lines and Sub-station near Solapur. Solapur and Pune Sub-stations were charged on rated parameters on 21.1.2011 and 15.4.2011 respectively. The petitioner has submitted that reasons for time over-run were beyond its control, and has requested to condone the delay. Similarly for Pune Sub-station, the petitioner has submitted that CEA clearance for charging was obtained in October 2010 and they were ready for charging. Due to MSETCL not allowing the LILO of

line at Solapur and Pune sub-stations, their commissioning was delayed. The petitioner vide its affidavit dated 16.5.2011 has submitted that the commissioning of Pune sub-station, bays and ICTs-I & II had to be matched with WRTML system.

20. As regards the delay in the commissioning of ICT-II on 1.4.2011 two months after the commissioning of ICT-I on 1.2.2011 at Solapur, and ICT-II at Pune on 1.9.2011 i.e., four months after the commissioning of ICT-I on 1.5.2011, the petitioner has explained the operational issues/ difficulties in commissioning two ICTs simultaneously at one sub-station. For delay in the commissioning of Pune ICT-II, the petitioner has submitted that during rainy season, the opening of main tank for erection of CT turrets and bushing and oil filling, oil filtration etc. is avoided to reduce moisture impregnation. We are satisfied with the reasons adduced by the petitioner and hence condone the delay in the commissioning of ICTs at Solapur and Pune sub-stations.

Cost variation

21. The petitioner has in the main petition claimed higher cost of ₹1332 lakh towards Miscellaneous Test equipments. The petitioner vide affidavit dated 18.9.2012 has submitted that these instruments were meant for Pune and Solapur sub-stations and were covered in the combined assets of “400/220 kV Pune Sub-station with bus reactor and bays for LILO of Kalwa-Lonikhand D/C at Pune and Solapur Sub-station with bus reactor and bays for LILO of Solapur-Karad and Solapur-Kolhapur along with reactors”. The total estimated expenditure as per CA certificate in the main petition was ₹15926.39 lakh. As elements of this asset have been commissioned at

different dates, trifurcated data has been submitted by the petitioner wherein the estimated cost has been revised downwards to ₹14593 lakh in which the cost of corresponding testing instrument has been revised to ₹543 lakh. The petitioner has also submitted a list of testing equipments. The petitioner has further submitted that in the original approval accorded by the Ministry of Power, Government of India at the price level of 4th quarter, 2005, Miscellaneous T&P estimated cost was ₹3088 lakh (1% of Approved Cost of ₹308764 lakh). Actual expenditure against ₹3088 lakh is ₹1192 lakh (₹649 lakh under Set-A and ₹543 lakh under Set-B). We find the higher claim against Miscellaneous T&P equipment justified and expenditure of ₹543 lakh under Miscellaneous T&P equipment (Set-B).

Treatment of initial spares

22. As regards the initial spares, while examining the assets in Petition No, 24/TT/2011, it was observed as under:-

“17.The capital cost of Asset I is ₹6432.79 lakh as on the cut-off date. The petitioner has claimed ₹213.72 lakh as initial spares against sub-station (inclusive of PLCC) and it is in excess of the ceiling norm of 2.5% specified in the 2009 Tariff Regulations by ₹54.26 lakh. Accordingly, this amount has been reduced pro-rata from the cost of all the elements of Asset I. Initial spares have been worked out by taking into consideration the land, building and civil works expenditure. The petitioner has not claimed any initial spares in respect of Asset-II & Asset-III.”

23. In the present case in respect of Combined Asset-1, capital cost, as on the cut-off date, would be ₹13314.95 lakh. The petitioner has claimed initial spares amounting to ₹401.33 lakh (₹213.72 lakh for Asset-I and ₹187.61 for Asset-IV) corresponding to Sub-station, which has been found to be in excess of the ceiling norms of 2.5% as per the 2009 Tariff Regulations by ₹70.21 lakh. This amount has been reduced pro-rata from the cost of all the elements

(except transmission line) of Combined Asset-1. Initial spares have been worked out by taking in to consideration the land, building and civil works expenditures, as per the details given below:-

(₹ in lakh)

Particulars	Accumulated Capital Cost upto cutoff date claimed	Initial Spares Claimed	Ceiling Limits as per clause 8 Regulation 2009	Initial Spares worked out	Excess Initial Spares Claimed
Sub-station	13314.95	401.33	2.50%	331.12	70.21

24. As regards Combined Asset -3, capital cost as on date of commercial operation is inclusive of initial spares amounting to ₹48.73 lakh (₹47.01 lakh for Asset-V and ₹1.72 lakh for Asset-VI) corresponding to the Sub-station. This falls within the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulations, and hence is being allowed as per the details given below:-

(₹ in lakh)

Particulars	Cost as on cut- off date	Initial spares claimed	Ceiling limits as per the 2009 Tariff Regulations	Initial spares worked out	Excess initial spares claimed
Sub-station	8814.09	48.73	2.50%	224.75	0.00

25. Based on the above, capital cost as on date of commercial operation considered for the purpose of tariff calculation after deducting excess initial spares is given overleaf:-

(₹ in lakh)				
Combined Assets	Combination of the Assets	Capital cost before adjustment of Initial spares as on DOCO/ Notional DOCO	Excess Initial spares	Capital cost after deduction of excess initial spares as on DOCO / Notional DOCO
1	I & IV	8937.49	70.21	8867.28
2	III & V	6186.75	0.00	6186.75
3	III, V & VI	8168.91	0.00	8168.91

Projected additional capital expenditure

26. With regard to additional capital expenditure, clause 9(1) 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.”

27. As per the 2009 Tariff Regulations,

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

28. As per the above definition, cut-off date in respect of all the transmission assets whose transmission tariff is being approved vide this order is 31.3.2014.

29. Petitioner has claimed additional capital expenditure as per the following details, which is allowed being within the cut-off date:-

(₹ in lakh)						
Combined Assets	Combination of the above mentioned Assets	Notional DOCO	2011-12 (Pro-rata)	2012-13	2013-14	Total
1	I & IV	1.5.2011	1100.93	3098.32	178.21	4377.46
2	III & V	1.5.2011	394.33	135.35	0.00	529.68
3	III, V & VI	1.9.2011	472.15	173.03	0.00	645.18

Debt- equity ratio

30. Regulation 12 of the 2009 Tariff Regulations provides that,-

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

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

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

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

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

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

31. The petitioner has not submitted separate funding pattern for Asset-IV, Asset-V & Asset-VI. However, the petitioner has submitted in Form-6 debt-equity ratios of 74.78:25.22, 70:30 and 70:30 respectively for Combined Asset-1, Combined Asset-2 and Combined Asset-3 as on the date of commercial operation.

32. Thus, as per the 2009 Tariff Regulations, debt-equity ratio of 74.78:25.22, 70:30 and 70:30 have been considered for tariff in respect of Combined Asset-1, Combined Asset-2 & Combined Asset-3 respectively. The details of debt-equity as on dates of commercial operation/notional dates of commercial operation of assets are as follows:-

(₹ in lakh)

Particulars	Details of capital cost as on DOCO/Notional DOCO	
	Amount (₹ in lakh)	%
Combined Asset-1		
Debt	6630.65	74.777
Equity	2236.63	25.223
Total	8867.28	100.00
Combined Asset-2		
Debt	4330.73	70.000
Equity	1856.03	30.000
Total	6186.75	100.00
Combined Asset-3		
Debt	5718.25	70.000
Equity	2450.66	30.000
Total	8168.91	100.00

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

(₹ in lakh)

Particulars	Capital Cost as on 31.3.2014	
	Amount (₹ in lakh)	%
Combined Asset-1		
Debt	9694.87	73.20
Equity	3549.87	26.80
Total	13244.74	100.00

Combine Asset- 3		
Debt	6169.88	70.000
Equity	2644.21	30.000
Total	8814.09	100.00

The additional capital expenditure amount in the intervening years has been considered in the debt-equity ratio of 70:30.

Return on equity

34. Regulation 15 of the 2009 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”.

35. In terms of the above, the following return on equity has been allowed based on the pre-tax return on equity of 17.481%:-

(₹ in lakh)

Particulars	Combined Asset-1			Combined Asset-2
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12* (Pro-rata)
Opening Equity	2236.63	2566.91	3496.41	1856.03
Addition due to additional capital expenditure	330.28	929.50	53.46	118.30
Closing Equity	2566.91	3496.41	3549.87	1974.32
Average Equity	2401.77	3031.66	3523.14	1915.17
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	384.87	529.96	615.88	306.89

*The figures for Combined Asset-2 relates to period from 1.5.2011 to 31.3.2012. For the applicable period from 1.5.2011 to 31.8.2011, this works out to ₹1111.60 lakh.

(₹ in lakh)

Combined Asset -3			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Opening Equity	2450.66	2592.31	2644.21
Addition due to additional capital expenditure	141.65	51.91	0.00
Closing Equity	2592.31	2644.21	2644.21
Average Equity	2521.48	2618.26	2644.21
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	257.12	457.70	462.24

36. The petitioner has prayed to allow grossing up of base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between transmission licensee and the beneficiaries/long term transmission customers on year to year basis. The petitioner's request to allow grossing up the base rate of return on equity based on tax rates viz., MAT, surcharge, any other cess, charges, levies etc.,

as per relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 Tariff Regulations.

Interest on loan

37. Regulation 16 of the 2009 regulations provides that,-

“16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

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

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per affidavit dated 16.7.2012;

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

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

39. Detailed calculation of the weighted average rate of interest has been given in the Annexure I to III to this order.

40. Details of the interest on loan worked on the above basis are given overleaf:-

(₹ in lakh)

Combined Asset-1				Combined Asset-2
Particulars	2011-12 (Pro-rata)	2012-13	2013-14	2011-12* (Pro-rata)
Gross Normative Loan	6630.65	7401.30	9570.12	4330.73
Cumulative Repayment upto Previous Year	59.78	411.19	875.25	35.59
Net Loan-Opening	6570.87	6990.11	8694.87	4295.14
Addition due to additional capital expenditure	770.65	2168.82	124.75	276.03
Repayment during the year	351.41	464.07	525.26	300.21
Net Loan-Closing	6990.11	8694.87	8294.35	4270.97
Average Loan	6780.49	7842.49	8494.61	4283.05
Weighted Average Rate of Interest on Loan	2.4086%	2.5455%	2.4906%	1.9859%
Interest	149.71	199.63	211.57	77.97

*The figures for Combined Asset-2 relates to period from 1.5.2011 to 31.3.2012. For the applicable period from 1.5.2011 to 31.8.2011, this works out to ₹28.35 lakh.

(₹ in lakh)

Combined Asset-3			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Gross Normative Loan	5718.25	6048.76	6169.88
Cumulative Repayment upto Previous Year	144.76	397.61	847.33
Net Loan-Opening	5573.49	5651.14	5322.55
Addition due to additional capital expenditure	330.51	121.12	0.00
Repayment during the year	252.85	449.71	454.06
Net Loan-Closing	5651.14	5322.55	4868.49
Average Loan	5612.32	5486.85	5095.52
Weighted Average Rate of Interest on Loan	1.9726%	2.1550%	2.1220%
Interest	64.58	118.24	108.13

Depreciation

41. Regulation 17 of the 2009 Tariff Regulations provides for depreciation as under:-

“17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

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

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

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

42. The notional dates of commercial operation of Combined Asset-1, Combined Asset-2 and Combined Asset-3 in the instant petition are 1.5.2011, 1.5.2011, 1.9.2011 respectively. Accordingly they will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure as on commercial operation wherein depreciation for the first year has been calculated on pro rata basis for the part of year.

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

Combined Asset-1				(₹ in lakh)	Combined Asset-2
Particulars	2011-12 (Pro-rata)	2012-13	2013-14		2011-12* (Pro-rata)
As per previous tariff order	8867.28	9968.21	13066.53		6186.75
Addition during 2009-14 due to additional capital expenditure	1100.93	3098.32	178.21		394.33
Gross Block	9968.21	13066.53	13244.74		6581.08
Average Gross Block	9417.74	11517.37	13155.63		6383.92
Rate of Depreciation	4.0706%	4.0293%	3.9927%		5.1300%
Depreciable Value	7405.66	9293.07	10758.51		5745.52
Remaining Depreciable Value	7345.88	8881.89	9883.26		5709.94
Depreciation	351.41	464.07	525.26		300.21
Cumulative depreciation	411.19	875.25	1400.52		335.79

*The figures for Combined Asset-2 relates to period from 1.5.2011 to 31.3.2012. For the applicable period from 1.5.2011 to 31.8.2011, this works out to ₹109.17 lakh.

Combined Asset--3				(₹ in lakh)
Particulars	2011-12 (Pro-rata)	2012-13	2013-14	
As per previous tariff order	8168.91	8641.06	8814.09	
Addition during 2009-14 due to additional capital expenditure	472.15	173.03	0.00	
Gross Block	8641.06	8814.09	8814.09	
Average Gross Block	8404.99	8727.58	8814.09	
Rate of Depreciation	5.1572%	5.1528%	5.1516%	
Depreciable Value	7564.49	7854.82	7932.68	
Remaining Depreciable Value	7419.73	7457.20	7085.36	
Depreciation	252.85	449.71	454.06	
Cumulative depreciation	397.61	847.33	1301.39	

Operation & maintenance expenses

44. Clause (g) of regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Relevant norms are as under:

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bays (₹ in lakh per bay)	52.40	55.40	58.57	61.92	65.46
220 kv Bays (₹ in lakh per bay)	36.68	38.78	41	43.34	45.82

45. Based on the above norms, O&M expenses for the assets in the present petition have been worked out as under:-

(₹ in lakh)

Element	2011-12 (Pro rata)	2012-13	2013-14	Applicable period
Asset 1 & IV 7 Number 400 kV bays	375.82	433.44	458.22	1.5.2011 to 31.3.2014
Asset III & V 3 Nos. 400 kV bays 9 Nos. 220 kV bays	58.57 123.00	-	-	1.5.2011 to 31.8.2011
Asset III, V & VI 4 Nos.400 kV bays 12 Nos. 220 kV bays	136.66 287.00	247.68 520.08	261.84 549.84	1.9.2011 to 31.3.2014
Total	981.05	1201.20	1269.90	

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

47. The Commission has given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employees cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

Interest on working capital

48. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance spares

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

(iii) O & M expenses

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

(iv) Rate of interest on working capital

SBI Base Rate Plus 350 bps as on 1.4.2011 (i.e.11.75%) has been considered as the rate of interest on working capital for the assets covered under the petition.

49. Necessary computations in support of interest on working capital are appended herein below:-

(₹ in lakh)

Combined Asset-1			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Maintenance Spares	61.50	65.02	68.73
O & M expenses	34.17	36.12	38.19
Receivables	235.91	278.62	309.99
Total	331.58	379.76	416.90
Rate of Interest	11.75%	11.75%	11.75%
Interest	35.71	44.62	48.99

(₹ in lakh)

Combined Asset-2		
Particulars	2011-12 (From 1.5.2011 to 31.3.2012)	(From 1.5.2011 to 31.8.2012)
Maintenance Spares	81.71	27.24
O & M expenses	45.39	15.13
Receivables	222.18	74.06
Total	349.28	116.43
Rate of Interest	11.75%	11.75%
Interest	37.62	13.68

(₹ in lakh)

Combined Asset-3			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Maintenance Spares	108.94	115.16	121.75
O & M expenses	60.52	63.98	67.64
Receivables	294.29	308.45	315.91
Total	463.75	487.59	505.31
Rate of Interest	11.75%	11.75%	11.75%
Interest	31.79	57.29	59.37

Transmission charges

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

(₹ in lakh)

Combined Asset-1			
Particulars	2011-12 (Pro-Rata)	2012-13	2013-14
Depreciation	351.41	464.07	525.26
Interest on Loan	149.71	199.63	211.57
Return on equity	384.87	529.96	615.88
Interest on Working Capital	35.71	44.62	48.99
O & M Expenses	375.82	433.44	458.22
Total	1297.51	1671.72	1859.92

Combined Asset-2		
Particulars	2011-12 (From 1.5.2011 to 31.3.2012)	(From 1.5.2011 to 31.8.2012)
Depreciation	300.21	109.17
Interest on Loan	77.97	28.35
Return on equity	306.89	111.60
Interest on Working Capital	37.62	13.68
O & M Expenses	499.32	181.57
Total	1222.01	444.37

Combined Asset-3			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	252.85	449.71	454.06
Interest on Loan	64.58	118.24	108.13
Return on equity	257.12	457.70	462.24
Interest on Working Capital	31.79	57.29	59.37
O & M Expenses	423.66	767.76	811.68
Total	1030.00	1850.71	1895.48

Filing fee and the publication expenses:-

51. 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 beneficiary on *pro-rata* basis.

Licence fee

52. 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 hence the license fee may be allowed to be recovered separately from the respondents. It is clarified that 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

53. The petitioner has made a specific prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if the exemption granted to it is withdrawn in future and

transmission of power is made a taxable service. We consider the prayer premature and accordingly this prayer is rejected.

Sharing of transmission charges

54. Tariff for the assets covered under this petition shall be shared by the respondents in accordance with Regulation 33 of the 2009 Tariff Regulations till 30.6.2011. With effect from 1.7.2011, the billing, collection and disbursement of transmission charges shall be governed by provisions of the Central Electricity Regulatory Commission (Sharing of inter-State transmission charges and losses) Regulations, 2010.

55. This order disposes of Petition No. 81/2011.

sd/-

(M. Deena Dayalan)
Member

sd/-

(V. S. Verma)
Member

sd/-

(Dr. Pramod Deo)
Chairperson

Annexure-I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
					(₹ in lakh)
	Details of Loan	2010-11	2011-12	2012-13	2013-14
1	IBRD- IV (Ex. Rate @46.38)				
	Gross loan opening	0.00	1823.20	1823.20	1823.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	1823.20	1823.20	1823.20
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	40.35
	Net Loan-Closing	0.00	1823.20	1823.20	1782.84
	Average Loan	0.00	1823.20	1823.20	1803.02
	Rate of Interest	1.72%	1.72%	1.72%	1.72%
	Interest	0.00	31.36	31.36	31.01
	Rep Schedule	30 HY installments from 15.11.2013			
2	IBRD IV ADDL (Ex. Rate @46.38)				
	Gross loan opening	0.00	1118.22	1118.22	1118.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	18.90
	Net Loan-Opening	0.00	1118.22	1118.22	1099.32
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	18.90	38.13
	Net Loan-Closing	0.00	1118.22	1099.32	1061.19
	Average Loan	0.00	1118.22	1108.77	1080.26
	Rate of Interest	1.73%	1.73%	1.73%	1.73%
	Interest	0.00	19.35	19.18	18.69
	Rep Schedule	30 HY installments from 01.02.2013			
3	IBRD- IV (Ex. Rate @44.83)				
	Gross loan opening	0.00	2720.73	2720.73	2720.73
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	2720.73	2720.73	2720.73
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	60.22
	Net Loan-Closing	0.00	2720.73	2720.73	2660.51
	Average Loan	0.00	2720.73	2720.73	2690.62
	Rate of Interest	1.72%	1.72%	1.72%	1.72%
	Interest	0.00	46.80	46.80	46.28
	Rep Schedule	30 HY installments from 15.11.2013			
4	Bond XXIX				
	Gross loan opening	0.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	8.33
	Net Loan-Opening	0.00	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33	8.33

	Net Loan-Closing	0.00	100.00	91.67	83.33
	Average Loan	0.00	100.00	95.83	87.50
	Rate of Interest	9.20%	9.20%	9.20%	9.20%
	Interest	0.00	9.20	8.82	8.05
	Rep Schedule	12 annual installments from 12.03.2013			
5	Bond XXVIII				
	Gross loan opening	0.00	300.00	300.00	300.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	25.00
	Net Loan-Opening	0.00	300.00	300.00	275.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	25.00	25.00
	Net Loan-Closing	0.00	300.00	275.00	250.00
	Average Loan	0.00	300.00	287.50	262.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%
	Interest	0.00	27.99	26.82	24.49
	Rep Schedule	12 annual installments from 15.12.2012			
6	IBRD IV ADDL (Ex. Rate @45.78)				
	Gross loan opening	0.00	130.02	130.02	130.02
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	2.20
	Net Loan-Opening	0.00	130.02	130.02	127.82
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	2.20	4.43
	Net Loan-Closing	0.00	130.02	127.82	123.38
	Average Loan	0.00	130.02	128.92	125.60
	Rate of Interest	1.73%	1.73%	1.73%	1.73%
	Interest	0.00	2.25	2.23	2.17
	Rep Schedule	30 HY installments from 01.02.2013			
7	Bond XXIV				
	Gross loan opening	0.00	50.00	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	4.17	8.33	12.50
	Net Loan-Opening	0.00	45.83	41.67	37.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	4.17	4.17	4.17
	Net Loan-Closing	0.00	41.67	37.50	33.33
	Average Loan	0.00	43.75	39.58	35.42
	Rate of Interest	9.95%	9.95%	9.95%	9.95%
	Interest	0.00	4.35	3.94	3.52
	Rep Schedule	12 annual installments from 26-03-2011			
8	IBRD IV ADDL (Ex. Rate @44.76)				
	Gross loan opening	0.00	13.88	13.88	13.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.23
	Net Loan-Opening	0.00	13.88	13.88	13.64
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.23	0.47
	Net Loan-Closing	0.00	13.88	13.64	13.17
	Average Loan	0.00	13.88	13.76	13.40

	Rate of Interest	1.73%	1.73%	1.73%	1.73%
	Interest	0.00	0.24	0.24	0.23
	Rep Schedule	30 HY installments from 01.02.2013			
9	IBRD IV ADDL (Ex. Rate @44.76)				
	Gross loan opening	0.00	427.01	427.01	427.01
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	7.22
	Net Loan-Opening	0.00	427.01	427.01	419.79
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	7.22	14.56
	Net Loan-Closing	0.00	427.01	419.79	405.23
	Average Loan	0.00	427.01	423.40	412.51
	Rate of Interest	1.73%	1.73%	1.73%	1.73%
	Interest	0.00	7.39	7.32	7.14
	Rep Schedule	30 HY installments from 01.02.2013			
10	Bond XXVIII				
	Gross loan opening	0.00	0.00	343.80	343.80
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	28.65
	Net Loan-Opening	0.00	0.00	343.80	315.15
	Additions during the year	0.00	343.80	0.00	0.00
	Repayment during the year	0.00	0.00	28.65	28.65
	Net Loan-Closing	0.00	343.80	315.15	286.50
	Average Loan	0.00	171.90	329.48	300.83
	Rate of Interest	9.33%	9.33%	9.33%	9.33%
	Interest	0.00	16.04	30.74	28.07
	Rep Schedule	12 annual installments from 15.12.2012			
	Total Loan				
	Gross loan opening	0.00	6683.05	7026.85	7026.85
	Cumulative Repayment upto DOCO/previous year	0.00	4.17	8.33	103.03
	Net Loan-Opening	0.00	6678.89	7018.52	6923.82
	Additions during the year	0.00	343.80	0.00	0.00
	Repayment during the year	0.00	4.17	94.70	224.32
	Net Loan-Closing	0.00	7018.52	6923.82	6699.50
	Average Loan	0.00	6848.70	6971.17	6811.66
	Rate of Interest	0.0000%	2.4086%	2.5455%	2.4906%
	Interest	0.00	164.96	177.45	169.65

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2011-12	2012-13	2013-14
1	IBRD -IV (Exchange Rate: 45.23)			
	Gross loan opening	1206.74	1206.74	1206.74
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1206.74	1206.74	1206.74
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	26.71
	Net Loan-Closing	1206.74	1206.74	1180.03
	Average Loan	1206.74	1206.74	1193.38
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	20.76	20.76	20.53
	Rep Schedule	30 HY instalments from 15-11-2013		
2	IBRD -IV (Exchange Rate: 46.38)			
	Gross loan opening	1538.89	1538.89	1538.89
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1538.89	1538.89	1538.89
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	34.06
	Net Loan-Closing	1538.89	1538.89	1504.83
	Average Loan	1538.89	1538.89	1521.86
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	26.47	26.47	26.18
	Rep Schedule	30 HY instalments from 15-11-2013		

3	IBRD -IV (Exchange Rate: 44.83)			
	Gross loan opening	1566.81	1566.81	1566.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1566.81	1566.81	1566.81
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	34.68
	Net Loan-Closing	1566.81	1566.81	1532.13
	Average Loan	1566.81	1566.81	1549.47
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	26.95	26.95	26.65

	Rep Schedule	30 HY instalments from 15-11-2013		
4	BOND XXVIII			
	Gross loan opening	18.14	18.14	18.14
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.51
	Net Loan-Opening	18.14	18.14	16.63
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1.51	1.51
	Net Loan-Closing	18.14	16.63	15.12
	Average Loan	18.14	17.38	15.87
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	1.69	1.62	1.48
	Rep Schedule	12 equal annual Instalments from 15.12.2012		
5	BOND XXVIII (For Add Cap 2011-12)			
	Gross loan opening	0.00	276.03	276.03
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	23.00
	Net Loan-Opening	0.00	276.03	253.03
	Additions during the year	276.03	0.00	0.00
	Repayment during the year	0.00	23.00	23.00
	Net Loan-Closing	276.03	253.03	230.03
	Average Loan	138.02	264.53	241.53
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	12.88	24.68	22.53
	Rep Schedule	12 equal annual Instalments from 15.12.2012		

	Total Loan			
	Gross loan opening	4330.57	4606.60	4606.60
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	24.51
	Net Loan-Opening	4330.57	4606.60	4582.09
	Additions during the year	276.03	0.00	0.00
	Repayment during the year	0.00	24.51	119.96
	Net Loan-Closing	4606.60	4582.09	4462.13
	Average Loan	4468.59	4594.35	4522.11
	Rate of Interest	1.9859%	2.1870%	2.1532%
	Interest	88.74	100.48	97.37

Annexure III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(₹ in lakh)				
	Details of Loan	2011-12	2012-13	2013-14
1	IBRD -IV (Exchange Rate: 45.23)			
	Gross loan opening	1206.74	1206.74	1206.74
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1206.74	1206.74	1206.74
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	26.71
	Net Loan-Closing	1206.74	1206.74	1180.03
	Average Loan	1206.74	1206.74	1193.38
	Rate of Interest	1.70%	1.70%	1.70%
	Interest	20.51	20.51	20.29
	Rep Schedule	30 HY instalments from 15-11-2013		
2	IBRD -IV (Exchange Rate: 46.38)			
	Gross loan opening	1538.89	1538.89	1538.89
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1538.89	1538.89	1538.89
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	34.06
	Net Loan-Closing	1538.89	1538.89	1504.83
	Average Loan	1538.89	1538.89	1521.86
	Rate of Interest	1.70%	1.70%	1.70%
	Interest	26.16	26.16	25.87
	Rep Schedule	30 HY instalments from 15-11-2013		

3	IBRD -IV (Exchange Rate: 46.51)			
	Gross loan opening	1360.88	1360.88	1360.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1360.88	1360.88	1360.88
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	30.12
	Net Loan-Closing	1360.88	1360.88	1330.76
	Average Loan	1360.88	1360.88	1345.82

	Rate of Interest	1.70%	1.70%	1.70%
	Interest	23.14	23.14	22.88
	Rep Schedule	30 HY instalments from 15-11-2013		
4	IBRD -IV (Exchange Rate: 44.83)			
	Gross loan opening	1566.81	1566.81	1566.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1566.81	1566.81	1566.81
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	34.68
	Net Loan-Closing	1566.81	1566.81	1532.13
	Average Loan	1566.81	1566.81	1549.47
	Rate of Interest	1.70%	1.70%	1.70%
	Interest	26.64	26.64	26.34
	Rep Schedule	30 HY instalments from 15-11-2013		
5	BOND XXVIII			
	Gross loan opening	44.93	44.93	44.93
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.74
	Net Loan-Opening	44.93	44.93	41.19
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	3.74	3.74
	Net Loan-Closing	44.93	41.19	37.44
	Average Loan	44.93	43.06	39.31
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	4.19	4.02	3.67
	Rep Schedule	12 equal annual Instalments from 15.12.2012		
6	BOND XXVIII (For Add Cap 2011-12)			
	Gross loan opening	0.00	330.51	330.51
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	27.54
	Net Loan-Opening	0.00	330.51	302.97
	Additions during the year	330.51	0.00	0.00
	Repayment during the year	0.00	27.54	27.54
	Net Loan-Closing	330.51	302.97	275.43
	Average Loan	165.26	316.74	289.20
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	15.42	29.55	26.98
	Rep Schedule	12 equal annual Instalments from 15.12.2012		
	Total Loan			

Gross loan opening	5718.25	6048.76	6048.76
Cumulative Repayment upto DOCO/previous year	0.00	0.00	31.29
Net Loan-Opening	5718.25	6048.76	6017.47
Additions during the year	330.51	0.00	0.00
Repayment during the year	0.00	31.29	156.86
Net Loan-Closing	6048.76	6017.47	5860.61
Average Loan	5883.50	6033.11	5939.04
Rate of Interest	1.9726%	2.1550%	2.1220%
Interest	116.06	130.02	126.03