

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 106/TT/2013**

**Coram:**

**Shri Gireesh B. Pradhan, Chairman  
Shri A.K. Singhal, Member**

**Date of Hearing: 13.05.2014**

**Order issued on: 13.05.2015**

**In the matter of:**

Approval of transmission tariff for Assets (3 nos.) after approval of revised cost estimate under Transmission System for start-up power to DVC and Maithon Right Bank Generation Projects in Eastern Region for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009.

**And In the matter of:**

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

**.....Petitioner**

**Vs**

1. Bihar State Electricity Board,  
Vidyut Bhavan, Bailey Road,  
Patna-800 001
2. West Bengal State Electricity Distribution Company Limited,  
Bidyut Bhawan, Bidhan Nagar,  
Block DJ, Sector-II, Salt Lake City,  
Calcutta-700 091
3. Grid Corporation of Orissa Limited,  
Shahid Nagar, Bhubneshwar-751 007
4. Damodar Valley Corporation,  
DVC Tower, Maniktala,  
Civic Centre, VIP Road, Calcutta-700 054



5. Power Department,  
Government of Sikkim,  
Gangtok-737 101
6. Jharkhand State Electricity Board,  
In Front of Main Secretariat,  
Doranda, Ranchi-834 002
7. NTPC Limited,  
NTPC Bhawan, Scope Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110 003
8. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana)-134 109
9. Delhi Transco Limited,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002

....Respondents

**For petitioner:** Shri S.S. Raju, PGCIL  
Shri M.M. Mondal, PGCIL

**For respondents:** None

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission charges for Assets (3 nos.) after approval of Revised Cost Estimate (RCE) (hereinafter referred to as “transmission assets”) under Transmission System for start-up power to DVC and Maithon Right Bank Generation Projects in Eastern Region for the tariff block period from 2009-2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. This order has been issued after considering PGCIL affidavit dated 18.6.2014.
3. The investment approval for the scheme, under which these assets were commissioned was originally accorded by Board of Directors of the petitioner vide their letter dated 29.4.2008 at an estimated cost of ₹29049 lakh including IDC of ₹1633 lakh (Based on 1<sup>st</sup> Quarter, 2008 price level). The RCE was accorded by Board of Directors on 23.1.2012 at an estimated cost of ₹39160 lakh, including IDC of ₹2617 lakh (Based on 1<sup>st</sup> Qtr 2011 price level).
4. The scope of work covered under the scheme is as follows:-

**For MEJIA-B:**

- (1) LILO of one circuit of 400 kV D/C Maithon-Jamshedpur line at Mejia
- (2) 2 nos. of 400 kV bays at Mejia #
- (3) PLCC Equipment (Excl. Wave Trap) for LILO of one circuit of 400 kV D/C Maithon-Jamshedpur line at Mejia-B TPS

**For KODERMA**

- (1) Koderma-Biharshariff 400 kV D/C (QUAD) line
- (2) 2 nos. of 400 kV bays at Biharshariff
- (3) 2 nos. of 400 kV bays at Koderma #

**For MAITHON-RB**

- (1) Maithon-RB-Maithon 400 kV D/C line
- (2) 2 nos. of 400 kV bays at Maithon
- (3) 2 nos. of 400 kV bays at Maithon-RB #  
# These 400 kV bays at Generation Switchyard would be under the scope of DVC

5. The transmission assets covered under the instant petition have been commissioned on 1.2.2010, 1.6.2011 and 1.10.2010. The annual transmission charges of the instant assets for the period up to 31.3.2014 were approved by the Commission in Petition No. 232-2010, Petition No. 100/2011 and Petition No. 317/2010 subject to the petitioner filing revision petition after obtaining approval of Revised Cost Estimates (RCE).

6. The details of transmission assets covered under the scheme and commissioned are as under:-

S. No.	Name of the Asset	DOCO	Petition No.	Commission's order date
1	Asset-A: LILO of one Ckt of Maithon-Jamshedpur Line at Mejia "B" TPS including PLCC Equipment (excluding Wave Trap) of the TL	1.2.2010	232-2010	18.08.2011
2	Asset-B: 400kV D/C Koderma-Biharshariff TL and 2 nos. associated line Bays at Biharshariff Sub-station	1.6.2011	100/2011	27.09.2011
3	Asset-C: 400kV D/C Maithon (RB)- Maithon (PG) TL and associated Bays Extension at Maithon Sub-station	1.10.2010	317/2010	29.11.2011

7. The Commission in respect of Asset-A, vide order dated 18.08.2011 in Petition No. 232/2010 had observed as under:-

"20. Petitioner has claimed additional capital expenditure of ₹816.95 lakh, ₹ 204.91 lakh and ₹123.00 lakh for the year 2009-10 (from the date of commercial operation to 31.3.2010), 2010-11 and 2011-12 respectively. As pointed out by BSEB, estimated completion cost will exceed the apportioned approved cost, consequent to the above addition. As the petitioner has not submitted Revised Cost Estimates, additional capital expenditure amounting to ₹750.70 lakh only out of ₹816.95 lakh during 2009-10 period has been

considered for the purpose of tariff calculation. Additional capital expenditure claimed for the remaining years have not been allowed.”

8. The Commission in respect of Asset-B, vide order dated 27.09.2011 in Petition No. 100/2011 had observed as below:-

“14. The actual expenditure as on the date of commercial operation exceeds the apportioned approved cost. Therefore, capital cost as on the date of commercial operation has been restricted up to apportioned approved cost of ₹18022.37 lakh. Consequently, the Transmission Line cost, Sub-station cost and PLCC cost on the date of commercial operation shall be ₹17315.88 lakh, ₹632.59 lakh and ₹73.90 lakh respectively, before adjustment of Initial spares. The effect of cost over-run and time over-run shall be considered after RCE is filed by the petitioner.”

9. The Commission in respect of Asset-C, vide order dated 29.11.2011 in Petition No. 317/2010, observed as below:-

“13. The petitioner has claimed capital cost of ₹4657.85 lakh as on the date of commercial operation i.e. 1.10.2010. The petitioner has not submitted the RCE and as such the apportioned approved cost of ₹4528.40 lakh has been considered for the purpose of tariff calculation after deducting IDC and IEDC for the delay of 4 months and limiting the initial spares.

14. The total expenditure as on 31.3.2014 is in excess of apportioned approved cost and as such the cost has been restricted to apportioned approved cost. The cost as on date of commercial operation is within the apportioned approved cost, the additional capital expenditure for the year 2010-11 is in excess of the apportioned approved cost and hence it has been accordingly restricted and the additional capital expenditure for the year 2011-12 is disallowed.”

10. In view of above, the petitioner has filed a single petition for revision of tariff for all three assets in accordance with Regulation 6(1) of the 2009 tariff Regulations and has submitted the RCE.

11. The instant petition is supported by auditor’s certificate dated 27.7.2012 and

3.10.2012 and covers determination of transmission tariff based on actual expenditure incurred up to DOCO of the assets, actual additional capitalization during DOCO to 31.3.2012 and estimated additional capitalization during 1.4.2012 to 31.3.2013 for all three assets. The details of apportioned approved cost, actual expenditure as on DOCO and actual/estimated additional capitalization are as below:-

Assets	Apportioned approved cost	Revised Apportioned approved cost	Actual Cost Incurred as on DOCO	Additional Capitalization				Total Estimated completion Cost
				DOCO to 31.3.2010	2010-11	2011-12	2012-13	
A	5602.00	7258.35	4851.30	816.95	485.51	215.38	19.57	6388.71
B	18022.37	25082.45	23196.84	-	-	1498.25	100.00	24795.09
C	5486.98	6819.41	4657.85	-	459.32	464.74	199.99	5781.90

12. The petitioner has claimed the transmission charges for the instant assets as under:-

**Asset-A**

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	46.40	312.86	331.37	337.57	338.09
Interest on Loan	54.94	353.65	346.40	323.77	293.88
Return on Equity	47.45	319.96	338.93	345.29	345.82
Interest on Working Capital	3.50	23.13	23.89	23.77	23.25
O & M Expenses	5.19	32.90	34.79	36.77	38.86
<b>Total</b>	<b>157.48</b>	<b>1042.50</b>	<b>1075.38</b>	<b>1067.17</b>	<b>1039.90</b>

**Asset-B**

Particulars	(₹ in lakh)		
	2011-12	2012-13	2013-14
Depreciation	1054.45	1307.64	1310.38
Interest on Loan	1217.64	1406.04	1290.41
Return on Equity	1046.55	1297.77	1300.39
Interest on Working Capital	75.62	91.96	90.43
O & M Expenses	194.56	246.82	260.87
<b>Total</b>	<b>3588.82</b>	<b>4350.23</b>	<b>4252.48</b>

### Asset-C

Particulars	(₹ in lakh)			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Depreciation	129.39	283.18	300.79	306.13
Interest on Loan	151.57	313.94	308.75	287.45
Return on Equity	128.15	280.52	297.95	303.19
Interest on Working Capital	10.59	22.63	23.55	23.72
O & M Expenses	65.84	139.22	147.18	155.58
<b>Total</b>	<b>485.54</b>	<b>1039.49</b>	<b>1078.22</b>	<b>1076.07</b>

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

### Asset-A

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	4.67	4.93	5.22	5.52	5.83
O & M expenses	2.60	2.74	2.90	3.06	3.24
Receivables	157.48	173.75	179.23	177.86	173.32
<b>Total</b>	<b>164.75</b>	<b>181.43</b>	<b>187.35</b>	<b>186.44</b>	<b>182.39</b>
Rate of Interest	12.75%	12.75%	12.75%	12.75%	12.75%
<b>Interest</b>	<b>3.50</b>	<b>23.13</b>	<b>23.89</b>	<b>23.77</b>	<b>23.25</b>

### Asset-B

Particulars	(₹ in lakh)		
	2011-12	2012-13	2013-14
Maintenance Spares	35.02	37.02	39.13
O & M expenses	19.46	20.57	21.74
Receivables	717.76	725.04	708.75
<b>Total</b>	<b>772.24</b>	<b>782.63</b>	<b>769.62</b>
Rate of Interest	11.75%	11.75%	11.75%
<b>Interest</b>	<b>75.62</b>	<b>91.96</b>	<b>90.43</b>

### Asset-C

Particulars	(₹ in lakh)			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Maintenance Spares	19.75	20.88	22.08	23.34
O & M expenses	10.97	11.60	12.27	12.97
Receivables	161.85	173.25	179.70	179.35
<b>Total</b>	<b>192.57</b>	<b>205.73</b>	<b>214.05</b>	<b>215.66</b>
Rate of Interest	11.00%	11.00%	11.00%	11.00%
<b>Interest</b>	<b>10.59</b>	<b>22.63</b>	<b>23.55</b>	<b>23.72</b>

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 any reply.

15. We have considered the submissions of the petitioner and perused the material on record, we proceed to dispose of the petition.

### **CAPITAL COST**

16. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

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

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

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:  
Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

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

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

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient



technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

17. The details of capital cost allowed as on DOCO are as follows:-

(₹ in lakh)

Assets	DOCO	Capital Cost considered for tariff before adjustment of IEDC/IDC and Initial spares, if any, as on DOCO	Applicable period of tariff
A	1.2.2010	4851.30	1.2.2010 to 31.3.2014
B	1.6.2011	23196.84	1.6.2011 to 31.3.2014
C	1.10.2010	4657.85	1.10.2010 to 31.3.2014

### **TREATMENT OF IEDC AND IDC**

18. As per Investment Approval (IA), the commissioning schedule of the project was 24 months from the date of IA i.e. 29.4.2008. Accordingly the schedule date of completion (DOCO) works out to 29.4.2010, say 1.5.2010.

19. There was no time over-run in the case of Asset-A. However, there was a delay of 13 months and 5 months in the case of Asset-B and asset-C respectively. The delay of 13 months in the case of Asset-B was condoned by the Commission vide order dated 27.09.2011 in petition No. 100/2011. The delay of 4 months out of total delay of 5 months in the case of Asset-C was not condoned by the Commission vide order dated 29.11.2011 in Petition No. 317/2010. The relevant portion of the order dated 29.11.2011 in Petition No. 317/2010 is as below:-

“21. In view of above, the delay of one month, in September, 2010 is condoned and the IDC & IEDC for the period of delay of 4 months during May-August 2010 is not condoned.”

20. In view of above, the details of disallowed IEDC/IDC in the case of Asset-C are as under:-

(₹ in lakh)			
As per Auditor's Certificate dated 27.7.2012	IEDC	IDC	TOTAL
IEDC/IDC upto 31.3.2010 (23 months)	92.75	123.09	215.84
IEDC/IDC for the period 1.4.2010 to 30.9.2010 (6 months)	46.08	141.95	188.03
<b>Total IDC and IEDC Claimed for the total period of Completion (29 Months)</b>	<b>138.83</b>	<b>265.04</b>	<b>403.87</b>
<b>Detail of IEDC/IDC Disallowed for 4 months</b>			
Pro Rata IEDC/IDC Disallowed (4 months)	30.72	94.63	125.35
<b>Total Disallowed (4 months)</b>	<b>30.72</b>	<b>94.63</b>	<b>125.35</b>

### TREATMENT OF INITIAL SPARES

21. The claim of the petitioner for capital cost as on DOCO is inclusive of Initial spares for ₹3.16 lakh, ₹67.88 lakh and ₹22.26 lakh in respect of Asset-A, B and C respectively, corresponding to sub-station including PLCC. The petitioner has claimed initial spares in excess of the ceiling limit as per the 2009 Regulation. The details of excess initial spares are as under:-

(₹ in lakh)							
Assets	Sub-Station Cost including PLCC Claimed as on Cut-off date/ 31.03.2014	Initial Spares Claimed against Sub-Station Cost including PLCC Claimed as on Cut-off date/ 31.03.2014	Sub-Station Cost including PLCC after adjustment of IEDC/IDC disallowed as on Cut-off date/ 31.03.2014	Proportionate claim of Initial Spares against the adjusted Sub-Station Cost including PLCC after cut-off date/ 31.03.2014	Ceiling Limit as per the 2009 Regulation,	Initial Spares allowed	Excess Initial Spares claimed
A	72.68	3.16	72.68	3.16	2.50%	1.78	1.38
B	1091.29	67.88	1091.29	67.88	2.50%	26.24	41.64
C	564.69	22.26	552.70	21.79	2.50%	13.61	8.17

22. In view of above, capital cost considered for the purpose of tariff after deducting disallowed IEDC/IDC and initial spares is as follows:-

(₹ in lakh)

Assets	Capital Cost considered for the purpose of tariff before adjustment of IEDC/IDC & Initial Spares as on DOCO	Deduction in respect of Excess IEDC/IDC	Deduction in respect of Excess Initial Spares	Capital Cost considered for the purpose of tariff after disallowed IEDC/IDC & Initial Spares as on DOCO
A	4851.30	-	1.38	4849.92
B	23196.84	-	41.64	23155.20
C	4657.85	125.35	8.17	4524.32

**ADDITIONAL CAPITAL EXPENDITURE:**

23. The clause (2) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (ii) Change in law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work
- (iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and
- (v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system.”

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

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

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

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

“cut-off date” means 31<sup>st</sup> 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 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.

26. Accordingly, the cut-off date for the instant assets is 31.3.2015.

27. The tariff period is 2009-14, the add-cap is allowed till 31.3.2014. The add-cap is claimed under Regulation 9(1) of the 2009 Tariff Regulations, against estimated balance and retention payments and thus allowed. The details are as hereunder:-

(₹ in lakh)

Assets	DOCO	DOCO to 31.3.2010	2010-11	2011-12	2012-13	Total Add Cap
A	1.2.2010	816.95	485.51	215.38	19.57	1537.41
B	1.6.2011	-	-	1498.25	100.00	1598.25
C	1.10.2010	-	459.32	464.74	199.99	1124.05

## CAPITAL COST AS ON 31.3.2014

28. Capital cost as on 31.3.2014 has been worked out by considering capital costs as on DOCO allowed and the additional capital expenditure during 2009-14 period as under:-

(₹ in lakh)

Particulars	Capital cost as on 31.3.2014		
	Asset-A	Asset-B	Asset-C
Freehold Land	-	-	-
Leasehold Land	-	-	-
Building & Other Civil Works	-	-	-
Transmission Line	6316.03	23703.80	5103.85
Sub-Station Equipments	-	935.31	465.40
PLCC	71.30	114.34	79.12
<b>Total</b>	<b>6387.33</b>	<b>24753.45</b>	<b>5648.37</b>

## 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. The petitioner has claimed tariff based on debt: equity ratio of 70: 30 for all three transmission assets. The same debt: equity ratio has been considered for add-cap also in the case of instant assets.

31. The details of the Debt: Equity Ratio considered for the purpose of tariff determination are as under:-

(₹ in lakh)

Particulars	Capital cost as on DOCO		Capital cost as on 31.3.2014	
	Amount	(%)	Amount	(%)
<b>Asset-A</b>				
Debt	3395.04	70.00	4471.22	70.00
Equity	1454.89	30.00	1916.11	30.00
<b>Total</b>	<b>4849.92</b>	<b>100.00</b>	<b>6387.33</b>	<b>100.00</b>
<b>Asset-B</b>				
Debt	16208.64	70.00	17327.42	70.00
Equity	6946.56	30.00	7426.04	30.00
<b>Total</b>	<b>23155.20</b>	<b>100.00</b>	<b>24753.45</b>	<b>100.00</b>
<b>Asset-C</b>				
Debt	3167.17	70.00	3954.00	70.00
Equity	1357.16	30.00	1694.37	30.00
<b>Total</b>	<b>4524.32</b>	<b>100.00</b>	<b>5648.37</b>	<b>100.00</b>

## RETURN ON EQUITY

32. Regulation 15 of the 2009 Tariff Regulations provides for working out return on equity 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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".

33. The petitioner has claimed the return on equity as per Regulation 15 of the 2009 Tariff Regulations. The Commission in respect of Asset-A has allowed the additional 0.5% return on account of it being commissioned before time, vide order dated 18.08.2011 in Petition No. 232-2010. The relevant extract of the order is as below:-

"28.....It has been observed that the elements under the transmission system for start-up power to Mejia-B TPS i.e. LILO of one Ckt (Ckt-I) of 400 kV D/C Maithon-Jamshedpur line

at Mejia 'B' TPS including PLCC equipment (excluding Wave Trap) have been commissioned (on 1.2.2010) in less than 28 months from the date of investment approval (i.e. 29.4.2008) and qualify for the additional 0.5% return and the same has therefore been allowed.”

34. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission under Regulation 15(5) of the 2009 Tariff Regulations. We would like to clarify that the petitioner is allowed to recover the shortfall or refund the excess Annual Transmission Charges under Regulation 15(5) of the 2009 Tariff Regulations. In this order, RoE has been computed @ 18.044% p.a for Asset-A and @ 17.481% p.a for Asset-B and C on average equity, based on the tax rate of 11.330% for the year 2008-09, as per Regulation 15(5) of the 2009 Tariff Regulations.

35. Accordingly, the return on equity has been computed as under:-

**Asset-A**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	1454.89	1699.97	1845.62	1910.24	1916.11
Addition due to Additional Capitalisation	245.09	145.65	64.61	5.87	-
Closing Equity	1699.97	1845.62	1910.24	1916.11	1916.11
Average Equity	1577.43	1772.80	1877.93	1913.17	1916.11
Return on Equity (Base Rate)	16.00%	16.00%	16.00%	16.00%	16.00%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	18.044%	18.044%	18.044%	18.044%	18.044%
<b>Return on Equity (Pre Tax)</b>	<b>47.44</b>	<b>319.88</b>	<b>338.85</b>	<b>345.21</b>	<b>345.74</b>



## Asset-B

Particulars	(₹ in lakh)		
	2011-12	2012-13	2013-14
Opening Equity	6946.56	7396.04	7426.04
Addition due to Additional Capitalization	449.48	30.00	-
Closing Equity	7396.04	7426.04	7426.04
Average Equity	7171.30	7411.04	7426.04
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>1044.68</b>	<b>1295.52</b>	<b>1298.15</b>

## Asset-C

Particulars	(₹ in lakh)			
	2010-11	2011-12	2012-13	2013-14
Opening Equity	1357.16	1494.95	1634.37	1694.37
Addition due to Additional Capitalisation	137.80	139.42	60.00	-
Closing Equity	1494.95	1634.37	1694.37	1694.37
Average Equity	1426.05	1564.66	1664.37	1694.37
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>124.64</b>	<b>273.52</b>	<b>290.95</b>	<b>296.19</b>

## INTEREST ON LOAN

36. Regulation 16 of the 2009 Tariff Regulations provides that;

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

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

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

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered

from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,

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

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

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

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

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

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

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

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

37. The interest on loan has been worked out as detailed below:-

a) Gross amount of loan, repayment of instalments and rate of interest on actual loan have been considered as per the petition;

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

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

38. The detailed calculations in support of the weighted average rate of interest on loan are attached at Annexure-I to III to this order.

39. The weighted average rate of interest on loans has been calculated on the basis of prevailing rates of interest on actual loans available as on DOCO. Any change in rate of interest subsequent to DOCO will be considered at the time of truing up.

40. Details of the interest calculated on normative loan are as follows:-

**Asset-A**

	(₹ in lakh)				
<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Gross Normative Loan	3395.04	3966.90	4306.76	4457.52	<b>4471.22</b>
Cumulative Repayment upto Previous Year	-	46.39	359.16	690.44	1027.93
Net Loan-Opening	3395.04	3920.51	3947.59	3767.08	3443.30
Addition due to Additional Capitalisation	571.87	339.86	150.77	13.70	-
Repayment during the year	46.39	312.78	331.28	337.48	338.00
Net Loan-Closing	3920.51	3947.59	3767.08	3443.30	3105.30
Average Loan	3657.77	3934.05	3857.34	3605.19	3274.30
Weighted Average Rate of Interest on Loan	9.0101%	8.9873%	8.9784%	8.9788%	8.9735%
<b>Interest</b>	<b>54.93</b>	<b>353.57</b>	<b>346.33</b>	<b>323.70</b>	<b>293.82</b>

### Asset-B

Particulars	(₹ in lakh)		
	2011-12	2012-13	2013-14
Gross Normative Loan	16208.64	17257.42	17327.42
Cumulative Repayment upto Previous Year	-	1052.62	2358.06
Net Loan-Opening	16208.64	16204.80	14969.36
Addition due to Additional Capitalisation	1048.78	70.00	-
Repayment during the year	1052.62	1305.44	1308.18
Net Loan-Closing	16204.80	14969.36	13661.17
Average Loan	16206.72	15587.08	14315.27
Weighted Average Rate of Interest on Loan	9.0003%	9.0056%	8.9993%
<b>Interest</b>	<b>1215.55</b>	<b>1403.71</b>	<b>1288.28</b>

### Asset-C

Particulars	(₹ in lakh)			
	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	3167.17	3488.69	3814.01	3954.00
Cumulative Repayment upto Previous Year	-	125.86	401.97	695.69
Net Loan-Opening	3167.17	3362.83	3412.04	3258.31
Addition due to Additional Capitalisation	321.52	325.32	139.99	-
Repayment during the year	125.86	276.11	293.72	299.06
Net Loan-Closing	3362.83	3412.04	3258.31	2959.25
Average Loan	3265.00	3387.44	3335.18	3108.78
Weighted Average Rate of Interest on Loan	9.0308%	9.0374%	9.0423%	9.0362%
<b>Interest</b>	<b>147.43</b>	<b>306.13</b>	<b>301.58</b>	<b>280.91</b>

## DEPRECIATION

41. Regulation 17 of the 2009 Tariff Regulations provides for computation of depreciation in the following manner:-

“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. Clause 17 (4) of the 2009 Tariff Regulations provides that 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. It further provides 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 asset. The transmission Assets-A, B and C in the instant petition were put on commercial operation as on 1.2.2010, 1.6.2011 and 1.10.2010 respectively and will complete 12 years beyond 2013-14. Accordingly, the depreciation has been calculated as overleaf:-

**Asset-A**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block as on DOCO	4849.92	5666.87	6152.38	6367.76	6387.33
Projected Additional Capitalization	816.95	485.51	215.38	19.57	-
Closing Gross Block	5666.87	6152.38	6367.76	6387.33	6387.33
Average Gross Block	5258.40	5909.63	6260.07	6377.55	6387.33
Rate of Depreciation	5.2929%	5.2927%	5.2920%	5.2917%	5.2917%
Depreciable Value	4732.56	5318.66	5634.07	5739.79	5748.60
Remaining Depreciable Value	4732.56	5272.28	5274.90	5049.35	4720.67
<b>Depreciation</b>	<b>46.39</b>	<b>312.78</b>	<b>331.28</b>	<b>337.48</b>	<b>338.00</b>

**Asset-B**

(₹ in lakh)

Particulars	2011-12	2012-13	2013-14
Gross Block as on 1.4.2009	23155.20	24653.45	24753.45
Projected Additional Capitalization	1498.25	100.00	-
Closing Gross Block	24653.45	24753.45	24753.45
Average Gross Block	23904.33	24703.45	24753.45
Rate of Depreciation	5.2842%	5.2844%	5.2849%
Depreciable Value	21551.37	22270.58	22315.58
Remaining Depreciable Value	21551.37	21217.96	19957.52
<b>Depreciation</b>	<b>1052.62</b>	<b>1305.44</b>	<b>1308.18</b>

**Asset-C**

(₹ in lakh)

Particulars	2010-11	2011-12	2012-13	2013-14
Gross Block as on 1.4.2009	4524.32	4983.64	5448.38	5648.37
Projected Additional Capitalization	459.32	464.74	199.99	-
Closing Gross Block	4983.64	5448.38	5648.37	5648.37
Average Gross Block	4753.98	5216.01	5548.38	5648.37
Rate of Depreciation	5.2948%	5.2935%	5.2938%	5.2947%
Depreciable Value	4278.58	4694.41	4993.54	5083.54
Remaining Depreciable Value	4278.58	4568.55	4591.57	4387.85
<b>Depreciation</b>	<b>125.86</b>	<b>276.11</b>	<b>293.72</b>	<b>299.06</b>

**OPERATION AND MAINTENANCE EXPENSES (O&M Expenses)**

43. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies norms for O&M Expenses for transmission system based on type of sub-stations and the transmission line. Norms specified in respect of O&M Expenses for assets covered in the petition are as follows:-

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
S/C (twin & Triple conductor) (₹ lakh per km)	0.358	0.378	0.400	0.423	0.447
D/C (twin & Triple conductor) (₹ lakh per km)	0.627	0.663	0.701	0.741	0.783
D/C four conductor T/L (₹ lakh per km)	0.940	0.994	1.051	1.111	1.174
400 kV bays (₹ lakh per bay)	52.40	55.40	58.57	61.92	65.46

44. Accordingly, the petitioner's entitlement to O & M Expenses has been worked out as under:-

(₹ in lakh)

Elements	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
<b>Asset-A</b>					
0.297 km, 400 kV S/C twin conductor T/L	0.02	0.11	0.12	0.13	0.13
49.456 km, 400 kV D/C twin conductor T/L	5.17	32.79	34.67	36.65	38.72
<b>Total</b>	<b>5.19</b>	<b>32.90</b>	<b>34.79</b>	<b>36.78</b>	<b>38.85</b>
<b>Asset-B</b>					
110.69 km, 400 kV D/C four conductor T/L	-	-	96.95	122.98	129.95
2 nos., 400 kV Bays	-	-	97.62	123.84	130.92
<b>Total</b>	<b>-</b>	<b>-</b>	<b>194.57</b>	<b>246.82</b>	<b>260.87</b>
<b>Asset-C</b>					
31.5 km, 400 kV D/C twin conductor T/L	-	10.44	22.08	23.34	24.66
2 nos., 400 kV Bays	-	55.40	117.14	123.84	130.92
<b>Total</b>	<b>-</b>	<b>65.84</b>	<b>139.22</b>	<b>147.18</b>	<b>155.58</b>

45. The petitioner has submitted that O&M Expenses for the year 2009-14 had been arrived at on the basis of normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the years of tariff period. 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 Expenses for the tariff period 2009-14. The petitioner has further submitted that it may approach the Commission for suitable revision in norms for O&M Expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

46. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultation with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms.

### **INTEREST ON WORKING CAPITAL**

47. The components of the working capital and the interest thereon are discussed hereunder:-

i) Maintenance spares

As stated above, O&M Expenses have been claimed in the instant petition. Accordingly, as per Regulation 19 Maintenance spares have been worked out as 15% of O&M Expenses.

ii) O & M Expenses

As stated above, O&M Expenses have been claimed in the instant petition. Accordingly, as per Regulation 19, working capital has been worked out by considering 1 month O&M Expenses.

iii) Receivables:

The receivables have been worked out on the basis of 2 months' of annual transmission charges as worked out above.



iv) Rate of interest on working capital:

Interest on working capital has been worked out considering SBI PLR as on 1.4.2009 as interest rate @ 12.25%, SBI Base rate plus 350 bps as on 1.4.2011 i.e. 11.75% and SBI base rate plus 350 bps as on 1.7.2010 i.e. 11.00% for Asset-A, Asset-B and Asset-C respectively.

48. The necessary computation in support of the interest on working capital is as follows:-

**Asset-A**

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	4.67	4.94	5.22	5.52	5.83
O & M expenses	2.60	2.74	2.90	3.07	3.24
Receivables	157.30	173.55	179.03	177.67	173.12
<b>Total</b>	<b>164.57</b>	<b>181.23</b>	<b>187.15</b>	<b>186.25</b>	<b>182.19</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>3.36</b>	<b>22.20</b>	<b>22.93</b>	<b>22.82</b>	<b>22.32</b>

**Asset-B**

(₹ in lakh)			
Particulars	2011-12	2012-13	2013-14
Maintenance Spares	35.02	37.02	39.13
O & M expenses	19.46	20.57	21.74
Receivables	716.58	723.89	707.63
<b>Total</b>	<b>771.06</b>	<b>781.48</b>	<b>768.50</b>
Rate of Interest	11.75%	11.75%	11.75%
<b>Interest</b>	<b>75.50</b>	<b>91.82</b>	<b>90.30</b>

**Asset-C**

(₹ in lakh)				
Particulars	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	19.75	20.88	22.08	23.34
O & M expenses	10.97	11.60	12.27	12.97
Receivables	158.05	169.53	176.10	175.85
<b>Total</b>	<b>188.78</b>	<b>202.02</b>	<b>210.44</b>	<b>212.15</b>
Rate of Interest	11.00%	11.00%	11.00%	11.00%
<b>Interest</b>	<b>10.38</b>	<b>22.22</b>	<b>23.15</b>	<b>23.34</b>

## **TRANSMISSION CHARGES**

49. The transmission charges allowed for the transmission assets are as under:-

### **Asset-A**

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	46.39	312.78	331.28	337.48	338.00
Interest on Loan	54.93	353.57	346.33	323.70	293.82
Return on Equity	47.44	319.88	338.85	345.21	345.74
Interest on Working Capital	3.36	22.20	22.93	22.82	22.32
O & M Expenses	5.19	32.90	34.79	36.78	38.85
<b>Total</b>	<b>157.30</b>	<b>1041.33</b>	<b>1074.18</b>	<b>1066.00</b>	<b>1038.73</b>

### **Asset-B**

Particulars	(₹ in lakh)		
	2011-12	2012-13	2013-14
Depreciation	1052.62	1305.44	1308.18
Interest on Loan	1215.55	1403.71	1288.28
Return on Equity	1044.68	1295.52	1298.15
Interest on Working Capital	75.50	91.82	90.30
O & M Expenses	194.57	246.82	260.87
<b>Total</b>	<b>3582.91</b>	<b>4343.31</b>	<b>4245.77</b>

### **Asset-C**

Particulars	(₹ in lakh)			
	2010-11	2011-12	2012-13	2013-14
Depreciation	125.86	276.11	293.72	299.06
Interest on Loan	147.43	306.13	301.58	280.91
Return on Equity	124.64	273.52	290.95	296.19
Interest on Working Capital	10.38	22.22	23.15	23.34
O & M Expenses	65.84	139.22	147.18	155.58
<b>Total</b>	<b>474.15</b>	<b>1017.21</b>	<b>1056.58</b>	<b>1055.09</b>

## **Filing Fee and the Publication Expenses**

50. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly

from the beneficiaries on *pro-rata* basis in accordance with Regulation 42 A (1) (a) of the 2009 Tariff Regulations.

### **Licence Fee**

51. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to bill and recover license fee separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (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, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

53. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 Tariff Regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection and disbursement of the transmission charges shall be governed by the provision 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. 106/TT/2013.

**sd/-**  
**(A. K. Singhal)**  
**Member**

**sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**

## ANNEXURE-I

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Bond XXIX</b>					
	Gross loan opening	1200.00	<b>1200.00</b>	<b>1200.00</b>	<b>1200.00</b>	<b>1200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>100.00</b>
	Net Loan-Opening	1200.00	1200.00	1200.00	1200.00	1100.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	100.00	100.00
	Net Loan-Closing	1200.00	1200.00	1200.00	1100.00	1000.00
	Average Loan	1200.00	1200.00	1200.00	1150.00	1050.00
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	<b>110.40</b>	<b>110.40</b>	<b>110.40</b>	<b>105.80</b>	<b>96.60</b>
	Rep Schedule	12 equal Annual Instalment from 12.03.2013				
<b>2</b>	<b>Bond XXVIII</b>					
	Gross loan opening	500.00	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>41.67</b>
	Net Loan-Opening	500.00	500.00	500.00	500.00	458.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	41.67	41.67
	Net Loan-Closing	500.00	500.00	500.00	458.33	416.67
	Average Loan	500.00	500.00	500.00	479.17	437.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	<b>46.65</b>	<b>46.65</b>	<b>46.65</b>	<b>44.71</b>	<b>40.82</b>
	Rep Schedule	12 equal Annual Instalment from 15.12.2012				
<b>3</b>	<b>Bond XXXI (Add Cap for 2009-10 drawl on 31-03-2010)</b>					
	Gross loan opening	<b>0.00</b>	<b>571.87</b>	<b>571.87</b>	<b>571.87</b>	<b>571.87</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	571.87	571.87	571.87	571.87
	Additions during the year	571.87	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	47.66
	Net Loan-Closing	571.87	571.87	571.87	571.87	524.21
	Average Loan	285.94	571.87	571.87	571.87	548.04
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	<b>25.45</b>	<b>50.90</b>	<b>50.90</b>	<b>50.90</b>	<b>48.78</b>
	Rep Schedule	12 equal Annual Instalment from 25.02.2014				
<b>4</b>	<b>Bond XXX</b>					
	Gross loan opening	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1696.00	1696.00	1696.00	1696.00	1696.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	141.33
	Net Loan-Closing	1696.00	1696.00	1696.00	1696.00	1554.67
	Average Loan	1696.00	1696.00	1696.00	1696.00	1625.33
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	<b>149.25</b>	<b>149.25</b>	<b>149.25</b>	<b>149.25</b>	<b>143.03</b>

	Rep Schedule	12 equal Annual Instalment from 29.09.2013				
<b>5</b>	<b>Bond XXXVII (Add Cap for 2011-12 drawl on 31-03-2012)</b>					
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>150.77</b>	<b>150.77</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00	0.00	150.77	150.77
	Additions during the year	0.00	0.00	150.77	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	150.77	150.77	150.77
	Average Loan	0.00	0.00	75.39	150.77	150.77
	Rate of Interest	0.00%	0.00%	9.25%	9.25%	9.25%
	Interest	0.00	0.00	6.97	13.95	13.95
	Rep Schedule	12 equal Annual Instalment from 26.12.2015				
<b>6</b>	<b>Bond XXXIII (Add Cap for 2010-11 drawl on 31-03-2011)</b>					
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>339.86</b>	<b>339.86</b>	<b>339.86</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00	339.86	339.86	339.86
	Additions during the year	0.00	339.86	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	339.86	339.86	339.86	339.86
	Average Loan	0.00	169.93	339.86	339.86	339.86
	Rate of Interest	0.00%	8.64%	8.64%	8.64%	8.64%
	Interest	0.00	14.68	29.36	29.36	29.36
	Rep Schedule	12 equal Annual Instalment from 08.07.2014				
	<b>Total Loan</b>					
	Gross loan opening	3396.00	3967.87	4307.73	4458.50	4458.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	141.67
	Net Loan-Opening	3396.00	3967.87	4307.73	4458.50	4316.83
	Additions during the year	571.87	339.86	150.77	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	141.67	330.66
	Net Loan-Closing	3967.87	4307.73	4458.50	4316.83	3986.18
	Average Loan	3681.94	4137.80	4383.12	4387.67	4151.51
	Rate of Interest	<b>9.0101%</b>	<b>8.9873%</b>	<b>8.9784%</b>	<b>8.9788%</b>	<b>8.9735%</b>
	<b>Interest</b>	<b>331.75</b>	<b>371.88</b>	<b>393.53</b>	<b>393.96</b>	<b>372.53</b>

## ANNEXURE-II

(₹ in lakh)

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>				
	<b>Details of Loan</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond- XXXIII</b>			
	Gross loan opening	1963.00	<b>1963.00</b>	<b>1963.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1963.00	1963.00	1963.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1963.00	1963.00	1963.00
	Average Loan	1963.00	1963.00	1963.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	169.60	169.60	169.60
	Rep Schedule	12 Annual instalments from 08.07.2014		
<b>2</b>	<b>Bond XXVIII</b>			
	Gross loan opening	2385.00	<b>2385.00</b>	<b>2385.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>198.75</b>
	Net Loan-Opening	2385.00	2385.00	2186.25
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	198.75	198.75
	Net Loan-Closing	2385.00	2186.25	1987.50
	Average Loan	2385.00	2285.63	2086.88
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	222.52	213.25	194.71
	Rep Schedule	12 Annual instalments from 15.12.2012		
<b>3</b>	<b>Bond XXXIV</b>			
	Gross loan opening	2744.00	<b>2744.00</b>	<b>2744.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	2744.00	2744.00	2744.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	2744.00	2744.00	2744.00
	Average Loan	2744.00	2744.00	2744.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	242.57	242.57	242.57
	Rep Schedule	12 Annual instalments from 21.08.2014		
<b>4</b>	<b>Bond XXIX</b>			
	Gross loan opening	4330.00	<b>4330.00</b>	<b>4330.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>360.83</b>
	Net Loan-Opening	4330.00	4330.00	3969.17
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	360.83	360.83
	Net Loan-Closing	4330.00	3969.17	3608.33
	Average Loan	4330.00	4149.58	3788.75

	Rate of Interest	9.20%	9.20%	9.20%
	Interest	398.36	381.76	348.57
	Rep Schedule	12 Annual instalments from 12.03.2013		
<b>5</b>	<b>Bond XXX</b>			
	Gross loan opening	2966.00	<b>2966.00</b>	<b>2966.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	2966.00	2966.00	2966.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	247.17
	Net Loan-Closing	2966.00	2966.00	2718.83
	Average Loan	2966.00	2966.00	2842.42
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	261.01	261.01	250.13
	Rep Schedule	12 Annual instalments from 29.09.2013		
<b>6</b>	<b>Bond XXXI</b>			
	Gross loan opening	1691.00	<b>1691.00</b>	<b>1691.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1691.00	1691.00	1691.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	140.92
	Net Loan-Closing	1691.00	1691.00	1550.08
	Average Loan	1691.00	1691.00	1620.54
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	150.50	150.50	144.23
	Rep Schedule	12 Annual instalments from 25.02.2014		
<b>7</b>	<b>Bond XXXV</b>			
	Gross loan opening	158.45	<b>158.45</b>	<b>158.45</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	158.45	158.45	158.45
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	158.45	158.45	158.45
	Average Loan	158.45	158.45	158.45
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	15.27	15.27	15.27
	Rep Schedule	12 Annual instalments from 31.05.2015		
<b>8</b>	<b>Bond XXXV (Add Cap 2011-12)</b>			
	Gross loan opening	0.00	<b>68.67</b>	<b>68.67</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	68.67	68.67
	Additions during the year	68.67	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	68.67	68.67	68.67



	Average Loan	34.34	68.67	68.67
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	3.31	6.62	6.62
	Rep Schedule	12 Annual instalments from 31.05.2015		
<b>9</b>	<b>Bond XXXVI (Add Cap 2011-12)</b>			
	Gross loan opening	0.00	<b>284.00</b>	<b>284.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	284.00	284.00
	Additions during the year	284.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	284.00	284.00	284.00
	Average Loan	142.00	284.00	284.00
	Rate of Interest	9.35%	9.35%	9.35%
	Interest	13.28	26.55	26.55
	Rep Schedule	15 annual instalments from 29.08.2016		
<b>10</b>	<b>Bond XXXVII (Add Cap 2011-12)</b>			
	Gross loan opening	0.00	<b>89.92</b>	<b>89.92</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	89.92	89.92
	Additions during the year	89.92	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	89.92	89.92	89.92
	Average Loan	44.96	89.92	89.92
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	4.16	8.32	8.32
	Rep Schedule	12 annual instalments from 26.12.2015		
<b>11</b>	<b>Bond XXXVIII (Add Cap 2011-12)</b>			
	Gross loan opening	0.00	<b>606.18</b>	<b>606.18</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	606.18	606.18
	Additions during the year	606.18	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	606.18	606.18	606.18
	Average Loan	303.09	606.18	606.18
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	28.04	56.07	56.07
	Rep Schedule	Bullet Payment as on 09.03.2027		
	<b>Total Loan</b>			
	Gross loan opening	16237.45	17286.22	17286.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	559.58
	Net Loan-Opening	16237.45	17286.22	16726.64
	Additions during the year	1048.77	0.00	0.00
	Repayment during the year	0.00	559.58	947.67

	Net Loan-Closing	17286.22	16726.64	15778.97
	Average Loan	16761.84	17006.43	16252.80
	<b>Weighted Average Rate of Interest</b>	<b>9.0003%</b>	<b>9.0056%</b>	<b>8.9993%</b>
	<b>Interest</b>	<b>1508.62</b>	<b>1531.53</b>	<b>1462.64</b>

**ANNEXURE-III**  
**(₹ in lakh)**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>					
	<b>Details of Loan</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXIII</b>				
	Gross loan opening	<b>504.50</b>	<b>504.50</b>	<b>504.50</b>	<b>504.50</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	504.50	504.50	504.50	504.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	504.50	504.50	504.50	504.50
	Average Loan	504.50	504.50	504.50	504.50
	Rate of Interest	8.64%	8.64%	8.64%	8.64%
	Interest	43.59	43.59	43.59	43.59
	Rep Schedule	12 annual instalments from 08.07.2014			
<b>2</b>	<b>Bond XXIX</b>				
	Gross loan opening	<b>1006.00</b>	<b>1006.00</b>	<b>1006.00</b>	<b>1006.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>83.83</b>
	Net Loan-Opening	1006.00	1006.00	1006.00	922.17
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	83.83	83.83
	Net Loan-Closing	1006.00	1006.00	922.17	838.33
	Average Loan	1006.00	1006.00	964.08	880.25
	Rate of Interest	9.20%	9.20%	9.20%	9.20%
	Interest	92.55	92.55	88.70	80.98
	Rep Schedule	12 annual instalments from 12.03.2013			
<b>3</b>	<b>Bond XXX</b>				
	Gross loan opening	<b>407.00</b>	<b>407.00</b>	<b>407.00</b>	<b>407.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	407.00	407.00	407.00	407.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	33.92
	Net Loan-Closing	407.00	407.00	407.00	373.08
	Average Loan	407.00	407.00	407.00	390.04
	Rate of Interest	8.80%	8.80%	8.80%	8.80%
	Interest	35.82	35.82	35.82	34.32
	Rep Schedule	12 annual instalments from 29.09.2013			
<b>4</b>	<b>Bond XXXI</b>				
	Gross loan opening	<b>628.14</b>	<b>628.14</b>	<b>628.14</b>	<b>628.14</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	628.14	628.14	628.14	628.14
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	52.35
	Net Loan-Closing	628.14	628.14	628.14	575.80
	Average Loan	628.14	628.14	628.14	601.97
	Rate of Interest	8.90%	8.90%	8.90%	8.90%
	Interest	55.90	55.90	55.90	53.58
	Rep Schedule	12 annual instalments from 25.02.2014			

<b>5</b>	<b>Bond XXXIII (Add Cap 2010-11)</b>				
	Gross loan opening	<b>0.00</b>	<b>94.64</b>	<b>94.64</b>	<b>94.64</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	94.64	94.64	94.64
	Additions during the year	94.64	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	94.64	94.64	94.64	94.64
	Average Loan	47.32	94.64	94.64	94.64
	Rate of Interest	8.64%	8.64%	8.64%	8.64%
	Interest	4.09	8.18	8.18	8.18
	Rep Schedule	12 annual instalments from 08.07.2014			
<b>6</b>	<b>Bond XXXIV(Add Cap 2010-11)</b>				
	Gross loan opening	<b>0.00</b>	<b>154.00</b>	<b>154.00</b>	<b>154.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	154.00	154.00	154.00
	Additions during the year	154.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	154.00	154.00	154.00	154.00
	Average Loan	77.00	154.00	154.00	154.00
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	6.81	13.61	13.61	13.61
	Rep Schedule	12 annual instalments from 21.10.2014			
<b>7</b>	<b>Bond XXXV (Add Cap 2010-11)</b>				
	Gross loan opening	<b>0.00</b>	<b>72.88</b>	<b>72.88</b>	<b>72.88</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	72.88	72.88	72.88
	Additions during the year	72.88	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	72.88	72.88	72.88	72.88
	Average Loan	36.44	72.88	72.88	72.88
	Rate of Interest	9.64%	9.64%	9.64%	9.64%
	Interest	3.51	7.03	7.03	7.03
	Rep Schedule	12 annual instalments from 31.05.2015			
<b>8</b>	<b>Bond XXXVII (Add Cap 2011-12)</b>				
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>325.32</b>	<b>325.32</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00	325.32	325.32
	Additions during the year	0.00	325.32	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	325.32	325.32	325.32
	Average Loan	0.00	162.66	325.32	325.32
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	0.00	15.05	30.09	30.09
	Rep Schedule	12annual instalments from 26.12.2015			
<b>9</b>	<b>Bond XXVIII</b>				
	Gross loan opening	<b>715.00</b>	<b>715.00</b>	<b>715.00</b>	<b>715.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>59.58</b>
	Net Loan-Opening	715.00	715.00	715.00	655.42

Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	59.58	59.58
Net Loan-Closing	715.00	715.00	655.42	595.83
Average Loan	715.00	715.00	685.21	625.63
Rate of Interest	9.33%	9.33%	9.33%	9.33%
Interest	66.71	66.71	63.93	58.37
Rep Schedule	12 annual instalments from 15.12.2012			
<b>Total Loan</b>				
Gross loan opening	3260.64	3582.16	3907.48	3907.48
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	143.42
Net Loan-Opening	3260.64	3582.16	3907.48	3764.06
Additions during the year	321.52	325.32	0.00	0.00
Repayment during the year	0.00	0.00	143.42	229.68
Net Loan-Closing	3582.16	3907.48	3764.06	3534.39
Average Loan	3421.40	3744.82	3835.77	3649.22
Rate of Interest	9.0308%	9.0374%	9.0423%	9.0362%
<b>Interest</b>	<b>308.98</b>	<b>338.43</b>	<b>346.84</b>	<b>329.75</b>