

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 197/TT/2012**

**Coram:**

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

**Date of Hearing : 08.05.2014**

**Date of Order : 25.05.2015**

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for determination of transmission tariff for the tariff block 2009-14 for (i) LILO of 220 kV Tanakpur- Bareilly Transmission Line (Ckt-II) at Sitarganj along with associated bays (DOCO: 1.3.2009) (ii) 220/132 kV ICT-I at Sitarganj along with associated bays (DOCO: 1.3.2009) under System Strengthening Scheme in Uttaranchal in Northern Region.

**And in the matter of:**

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

.....**Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.



5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla-171 004.
6. Punjab State Electricity Board,  
The Mall, Patiala-147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana)-134 109.
8. Power Development Department,  
Govt. of Jammu and Kashmir,  
Mini Secretariat, Jammu.
9. UP Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. North Delhi Power Ltd.  
Power Trading and Load Dispatch Group  
Cennet Building, Adjacent to 66/11 kV Pitampura-3  
Grid Building, Near PP Jewellers  
Pitampura, New Delhi-110 034.
14. Chandigarh Administration,  
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,  
UrjaBhawan, Kanwali Road,  
Dehradun.
16. North Central Railway,  
Allahabad.

17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110 002.

.....Respondents

**For petitioner** : Shri S. K. Venkatesan, PGCIL  
Shri Prashant Sharma, PGCIL  
Shri S.S Raju, PGCIL  
Mrs. Sangeeta Edwards, PGCIL

**For respondent** : Shri R. B. Sharma, Advocate, BRPL  
Shri Padamjit Singh, PSPCL  
Shri T. P. S. Bawa, PSPCL

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges for Asset I: LILO of 220 kV Tanakpur- Bareilly Transmission Line (Ckt-II) at Sitarganj along with associated bays and Asset II: 220/132 kV ICT-I at Sitarganj along with associated bays (hereinafter referred to as "transmission assets") under System Strengthening Scheme in Uttaranchal in Northern Region for Tariff block 2009-14 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval (I.A.) for the project was accorded by Board of Directors of the petitioner on 13.7.2004 at an estimated cost of ₹7642 lakh including Interest During Construction of ₹305 lakh at 4<sup>th</sup> Quarter 2003 price level. Revised cost estimates of project was been approved by Board of Directors of the petitioner on 20.12.2010 at an estimated cost of ₹14258 lakh including Interest During Construction (IDC)



of ₹779 lakh at 2<sup>nd</sup> Quarter of 2010 price level. The project was scheduled to be commissioned within 24 months from the date of first letter of award and the award for transformer package was placed in March, 2005. The scope of the project broadly includes:-

**Transmission lines:**

- i. LILO of one ckt of Dhauliganga- Bareilly 400 kV D/C (Charged at 220 kV) at Pithoragarh
- ii. LILO of one ckt of Tanakpur- Bareilly 220 kV D/C at Sitarganj

**Sub-stations:**

- i. 220/132 kV Pithoragarh- New sub-station- 6x33.3 MVA
- ii. 220/132 kV Sitarganj- New sub-station- 2x100 MVA

3. Both the assets covered in the instant petition were commissioned on 1.3.2009, i.e. during 2004-09 tariff period. The tariff for the 2004-09 period was allowed by the Commission vide order dated 4.10.2011 in Petition No. 1/2011. As stated in para 2, the I.A. was granted on 13.7.2004 and the project was scheduled to be commissioned within 24 months from the date of first letter of award for transformer package. The first letter of award for transformer package was placed in March, 2005 and the project was scheduled to be commissioned in April, 2007. However, the project has been put under commercial operation on 1.3.2009. Thus, there has been a time over-run of 23 months. While allowing transmission tariff for the instant assets for the 2004-09 period, the IDC and IEDC for 6 months was

disallowed. The relevant portion of the Commission's order dated 4.10.2011 in Petition No.1/2011 is extracted hereunder:-

"12. The project was due for completion by March 2007. The progress of work was affected due to rescheduling of supply of ICT by the manufacturer. However, it is observed that the petitioner could have carried out all the work related to bay equipments except the ICT by March 2007. Moreover, permission for work was given by the Uttarakhand High Court on 21.4.2008. All the residual work, including the commissioning of the ICT, could have been completed within a reasonable period, say four months, from the date of permission by the High Court and the project could have been completed much ahead of the actual date of commissioning. The delay of four months from April to August 2008 is condoned. The delay of six months beyond August 2008, i.e. from September 2008 to February 2009 is not condoned and accordingly, IDC and IEDC for this period of 6 months are not allowed".

4. Aggrieved by the said order, the petitioner had filed an appeal i.e. 43 of 2012 before the Hon'ble Appellate Tribunal of Electricity (hereinafter referred to as "the Tribunal"). The Tribunal in its judgment dated 24.9.2013 observed that the issue of commissioning of ICTs has only been considered and the commissioning of the line was not considered by the Commission. The Tribunal set aside the impugned order and remanded back to the Commission with a direction to examine the reasons for the delay in commissioning of the transmission line as well as the ICTs afresh, considering all the relevant reasons furnished by both the petitioner and the respondents. The relevant portion of the Tribunal's order is as follows:-

"23(b) ..Perusal of the Commission's findings on the issue of time over-run in the Impugned Orders would also reveal that the Commission has dealt with only the delay in commissioning of ICTs. The Commission has not given any finding on delay in commissioning of the line. It has not discussed as to whether the delay in commissioning of the line could be or could not be attributed to the Appellant either wholly or partially. The grievance of the Appellant is that the Central Commission has wrong fully disallowed IDC and IEDC both for Transmission line and ICTs. Considering that both, the line as well as ICT could put to use simultaneously and accordingly could have attained commercial operation on the same day, it is necessary to know the findings of the Commission on this aspect.

24....In view of the above, the impugned orders on this aspect are set aside remanding back to the Central Commission with the direction that it shall examine the reasons for the delay in commissioning the transmission line as well as the ICTs afresh, considering all the relevant particulars furnished by the Appellant and the Respondents and decide the matter by passing reasoned order uninfluenced by its earlier findings and the observations made by this Tribunal."

5. As per the directions of the Tribunal dated 24.9.2013 in Appeal No.43/2012, Petition No.1/2011 was heard on 20.3.2014. Taking into consideration the submissions made during the hearing and the reply and the rejoinder filed by the petitioner and respondents, IDC and IEDC were allowed for 20 months vide order dated 18.5.2015. Consequently, the capital cost has also been revised. Accordingly, the revised capital cost as on 1.4.2009 has been taken into consideration for working out the tariff for the instant assets for the 2009-14 tariff period in the this order.

6. The transmission charges claimed by the petitioner are as follows:-

(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	133.84	136.05	137.58	141.37	144.70
Interest on Loan	166.86	157.33	147.05	139.23	130.34
Return on Equity	121.97	124.64	126.76	130.97	134.60
Interest on Working capital	12.77	12.90	13.01	13.26	13.49
O & M Expenses	79.25	83.78	88.59	93.65	99.00
<b>Total</b>	<b>514.69</b>	<b>514.70</b>	<b>512.99</b>	<b>518.48</b>	<b>522.13</b>

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	86.02	90.61	93.35	99.66	105.38
Interest on Loan	119.68	118.12	114.47	115.38	114.66
Return on Equity	70.08	75.83	79.97	87.97	95.13
Interest on Working capital	11.52	12.03	12.44	13.13	13.77
O & M Expenses	115.28	121.88	128.84	136.22	144.01
<b>Total</b>	<b>402.58</b>	<b>418.47</b>	<b>429.07</b>	<b>452.36</b>	<b>472.95</b>

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

(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.89	12.57	13.29	14.05	14.85
O & M Expenses	6.60	6.98	7.38	7.80	8.25
Receivables	85.78	85.78	85.50	86.41	87.02
<b>Total</b>	<b>104.27</b>	<b>105.33</b>	<b>106.17</b>	<b>108.26</b>	<b>110.12</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	12.77	12.90	13.01	13.26	13.49

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	17.29	18.28	19.33	20.43	21.60
O & M Expenses	9.61	10.16	10.74	11.35	12.00
Receivables	67.10	69.75	71.51	75.39	78.83
<b>Total</b>	<b>94.00</b>	<b>98.19</b>	<b>101.58</b>	<b>107.17</b>	<b>112.43</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	11.52	12.03	12.44	13.13	13.77

8. 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. Ajmer Vidyut Vitran Nigam Ltd (AVVNL), Respondent No. 2, has filed reply vide affidavit dated 16.10.2012, Punjab State Power Corporation Limited (PSPCL), Respondent No. 7, has filed reply on 8.5.2014, BSES Rajdhani Power Ltd (BRPL), Respondent No. 12, has filed its reply vide affidavit dated 7.11.2013. The petitioner has filed rejoinders to the reply of AVVNL and BRPL vide affidavits dated 2.5.2014 and 30.4.2014. The respondents have raised the issue of additional capital expenditure, time over-run, petition filing fee and service tax. The objections raised by the respondents in their reply and the clarifications given by the

petitioner in its rejoinder are addressed in the relevant paragraphs of this order.

9. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

10. During the hearing on 8.5.2014, the representative of PSPCL submitted that instead of providing the Auditor's certificate, the petitioner has submitted the management certificate. He further submitted that the ICT-I at Sitarganj has 2 nos. of 132 kV outgoing bays to provide power supply to PTCUL and requested the Commission to direct the petitioner to confirm that the ICT-I at Sitarganj has been commissioned and both the bays have been put to use. He further requested the petitioner to provide the status of loading of these bays as on 1.4.2009. The representative of petitioner clarified that Auditor's certificate for the 2004-09 period was submitted. At the time of filing the instant petition, Management certificate was filed as the petition was filed on the projection basis and Auditor certificate in the instant case will be filed at the time of truing up. He further clarified that the bays were already approved vide order dated 4.10.2011 pertaining to 2004-09 period. The petitioner further submitted vide affidavit dated 20.6.2014 that ICT was loaded as soon as it was commissioned and bays at PTCUL were loaded as soon as the ICT was commissioned.

### **Capital Cost**

11. Regulation 7(2) of the 2009 Tariff Regulations provides as follows:-



"(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.

Provided also that the Commission may issue guidelines for vetting of capital cost of hydro-electric projects by independent agency or expert and in that event the capital cost asvetted by such agency or expert may be considered by the Commission while determining the tariff for the hydro generating station:

Provided also that the Commission may issue guidelines for scrutiny and commissioning schedule of the hydro-electric projects in accordance with the tariff policy issued by the Central Government under section 3 of the Act from time to time.

Provided also that in case the site of a hydro generating station is awarded to a developer (not being a State controlled or owned company), by a State Government by following a twostage transparent process of bidding, any expenditure incurred or committed to be incurred by the project developer for getting the project site allotted shall not be included in the capital cost:

Provided also that the capital cost in case of such hydro generating station shall include:

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project inconformity with National R&R Policy and R&R package as approved; and
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area:

Provided also that the capital cost of the generating station shall include the cost for creating infrastructure for supply of power to the rural households located within a radius of five kilometers of the power station if the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.

Provided also that where the power purchase agreement entered into between the generating company and the beneficiaries or the implementation agreement and the transmission service agreement

entered into between the transmission licensee and the long-term transmission customer, as the case may be, provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff:

Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

12. Details of capital cost considered for computing tariff for Asset I and Asset II are as under:-

(₹ in lakh)

Asset	Revised capital cost admitted as on 1.4.2009*	Projected additional capital expenditure				
		2009-10	2010-11	2011-12	2012-13	Total capital cost
Asset I	2576.79	43.58	58.48	22.31	138.23	2839.39
Asset II	1714.01	92.68	126.47	31.73	273.19	2238.08

13. BRPL has submitted that in case of existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred during the tariff period 2009-14 shall form the basis for determination of tariff. We would like to clarify that the revised capital cost as on 1.4.2009 and the additional capital expenditure during the 2009-14 has been considered for the purpose of determination of transmission tariff for the 2009-14 tariff period.

### **Time Over-run**

14. BRPL has raised the issue of time over-run in its reply. The petitioner in its rejoinder dated 30.4.2014 has submitted detailed reasons for time over-run. It is noted that BRPL had raised similar objections in Petition

No.1/2011, pertaining to the tariff for 2004-09 wherein the tariff for the instant transmission assets were allowed for the 2004-09 period. The issue of time over-run was dealt in order dated 4.10.2011 in Petition No.1/2011. By way of implementation of the Tribunal's judgement dated 24.9.2013 in Appeal No.43 of 2012, the issue of time over-run has been dealt by us in our order dated 18.5.2015. Therefore, there is no requirement to deal with the issue of time over-run in this order.

### **Projected Additional Capital Expenditure**

15. 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:

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted alongwith the application for determination of tariff”

(2) The capital expenditure or projected to be 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

(vi) 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:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009

(vi) In case of gas/ liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations;

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed;

(vii) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receipt system arising due to non-materialisation of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station;

(viii) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc;

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the

power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

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

“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”.

Therefore, the cut-off date for the instant assets is 31.3.2012.

17. AVVNL has submitted that the petitioner has claimed projected additional capital expenditure for the period 2009-10 to 2012-13, the petitioner should submit the actual additional capital expenditure during the said period. The petitioner has clarified that the instant petition was filed with projected additional capital expenditure and the actual expenditure incurred during 2009-14 period shall be submitted at the time of truing-up.

18. BRPL has submitted that the entire capital expenditure claimed is for balance/retention payment and no comments are offered on additional capital expenditure. The petitioner has clarified that additional capital is claimed as per clause 9(1) of the 2009 Tariff Regulations, which is on account of balance and retention payments (i.e. undischarged liabilities).

19. The petitioner vide affidavit dated 23.1.2013 has clarified that the additional capital expenditure up to cut-off date has been claimed under Regulation 9(1) and the additional capital expenditure after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations.

20. We would like to clarify that additional capital expenditure during 2009-12 is allowed under Regulation 9(1) and the additional capital expenditure during 2012-13 is under allowed Regulation 9(2) of the 2009 Tariff Regulations as the additional capital expenditure is on account of balance/retention payment.

### **Debt- Equity Ratio**

21. 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.”

22. Details of debt-equity ratio as on 1.4.2009 are given overleaf:-

(₹ in lakh)

Particulars	Debt-Equity Ratio as on 1.4.2009			
	Asset I		Asset II	
	Amount	(%)	Amount	(%)
Debt	1872.49	72.67	1320.51	77.04
Equity	704.30	27.33	393.50	22.96
Total	<b>2576.79</b>	<b>100.00</b>	<b>1714.01</b>	<b>100.00</b>

23. Additional capital expenditure has been considered in the debt-equity ratio of 70:30.

24. The debt-equity ratio as on 31.3.2014 is as under:-

(₹ in lakh)

Particulars	Asset I		Asset II	
	Amount	(%)	Amount	(%)
Debt	2056.31	72.42	1687.36	75.39
Equity	783.08	27.58	550.72	24.61
Total	<b>2839.39</b>	<b>100.00</b>	<b>2238.08</b>	<b>100.00</b>

### Return on Equity

25. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

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

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

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

the concerned generating company or the transmission licensee, as the case may be:

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

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

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

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

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

26. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on 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 shall be dealt under Regulation 15(5) as stated above. Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

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



(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	704.30	717.38	734.92	741.61	783.08
Additional Capital Expenditure	13.07	17.54	6.69	41.47	0.00
Closing Equity	717.38	734.92	741.61	783.08	783.08
Average Equity	710.84	726.15	738.27	762.35	783.08
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre-Tax )	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	124.26	126.94	129.06	133.27	136.89

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	393.50	421.30	459.24	468.76	550.72
Addition due to Additional Capitalisation	27.80	37.94	9.52	81.96	0.00
Closing Equity	421.30	459.24	468.76	550.72	550.72
Average Equity	407.40	440.27	464.00	509.74	550.72
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>71.22</b>	<b>76.96</b>	<b>81.11</b>	<b>89.11</b>	<b>96.27</b>

### Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

29. The petitioner’s entitlement to interest on loan has been calculated as provided under Regulation 16 of the 2009 Tariff Regulations, on the following basis:-

(a) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedule for the loans, rate of interest etc. have been considered for working out weighted average rate of interest.

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

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

(d) For loans with floating interest rates, rates of interest as on 1.4.2009 have been considered which will be considered on actual basis at the time of truing up.

30. Accordingly, the interest on loan has been calculated on the basis of prevailing rate on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up.

31. Detailed calculations in support of the weighted average rates of interest have been given in Annexure I and Annexure II.

32. Based on the above, interest on loan has been calculated as follows:-

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	1872.49	1903.00	1943.93	1959.55	2056.31
Cumulative Repayment up to Previous Year	6.05	141.53	279.22	418.44	561.45
Net Loan-Opening	1866.45	1761.47	1664.72	1541.11	1494.86
Addition due to Additional	30.51	40.94	15.62	96.76	0.00

Capitalisation					
Repayment during the year	135.48	137.69	139.22	143.01	146.34
Net Loan-Closing	1761.47	1664.72	1541.11	1494.86	1348.52
Average Loan	1813.96	1713.09	1602.91	1517.98	1421.69
Weighted Average Rate of Interest on Loan	9.3772%	9.3639%	9.3562%	9.3545%	9.3516%
Interest	170.10	160.41	149.97	142.00	132.95

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	1320.51	1385.39	1473.92	1496.13	1687.36
Cumulative Repayment upto Previous Year	4.50	90.18	180.44	273.45	372.53
Net Loan-Opening	1316.02	1295.21	1293.48	1222.68	1314.83
Addition due to Additional Capitalisation	64.88	88.53	22.21	191.23	0.00
Repayment during the year	85.68	90.26	93.01	99.09	104.58
Net Loan-Closing	1295.21	1293.48	1222.68	1314.83	1210.24
Average Loan	1305.62	1294.35	1258.08	1268.76	1262.54
Weighted Average Rate of Interest on Loan	9.3278%	9.2898%	9.2699%	9.2672%	9.2603%
Interest	<b>121.78</b>	<b>120.24</b>	<b>116.62</b>	<b>117.58</b>	<b>116.91</b>

### **Depreciation**

33. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

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

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

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

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

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and

its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

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

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

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

34. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. The instant transmission assets were put under commercial operation on 1.3.2009. Accordingly, assets will complete 12 years beyond 2013-14. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations, as per details given hereunder:-

(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order (Opening Gross Block)	2576.79	2620.37	2678.85	2701.16	2839.39
Addition due to Projected Additional Capitalisation	43.58	58.48	22.31	138.23	0.00
Closing Gross Block	2620.37	2678.85	2701.16	2839.39	2839.39
Average Gross Block	2598.58	2649.61	2690.01	2770.28	2839.39
Rate of Depreciation	5.2137%	5.1965%	5.1756%	5.1624%	5.1540%
Depreciable Value	2314.52	2360.44	2396.80	2469.04	2531.24
Remaining Depreciable Value	2308.47	2172.99	2035.30	1896.08	1753.06
Depreciation	135.48	137.69	139.22	143.01	146.34
Cumulative Depreciation	141.53	279.22	418.44	561.45	707.80

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order (Opening Gross Block)	1714.01	1806.69	1933.16	1964.89	2238.08
Addition due to Projected Additional Capitalisation	92.68	126.47	31.73	273.19	0.00
Closing Gross Block	1806.69	1933.16	1964.89	2238.08	2238.08
Average Gross Block	1760.35	1869.92	1949.02	2101.48	2238.08
Rate of Depreciation	4.8672%	4.8270%	4.7721%	4.7151%	4.6730%
Depreciable Value	1535.89	1634.51	1623.44	1754.63	1871.53
Remaining Depreciable Value	1531.40	1445.72	1355.46	1262.45	1163.36
Depreciation	<b>85.68</b>	<b>90.26</b>	<b>93.01</b>	<b>99.09</b>	<b>104.58</b>
Cumulative Depreciation	90.18	180.44	273.45	372.53	477.12

### **Operation & Maintenance Expenses (O&M Expenses)**

35. Regulation 19 (g) of 2009 Tariff Regulations, specifies the following norms for O&M Expenses for instant assets:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
D/C single conductor T/L (₹ lakh per km)	0.269	0.284	0.301	0.318	0.336
220 kV bays (₹ lakh per bay)	36.48	38.78	41.00	43.34	45.82
Below 132 kV bays (₹ lakh per bay)	26.20	27.70	29.28	30.96	32.73

36. As per the 2009 Tariff Regulations, allowable O&M expenses for the assets covered in the petition are as under:-

### **Asset-I**

(₹ in lakh)

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
21.906 km, 220 kV D/C, single conductor T/L	5.89	6.22	6.59	6.97	7.36
2 nos., 220 kV bays.	73.36	77.56	82.00	86.68	91.64
<b>Total O&amp;M</b>	<b>79.25</b>	<b>83.78</b>	<b>88.59</b>	<b>93.65</b>	<b>99.00</b>

## Asset-II

Elements	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
1 no., 220 kV bay.	36.68	38.78	41.00	43.34	45.82
3 nos., 132 kV bays.	78.60	83.10	87.84	92.88	98.19
<b>Total O&amp;M</b>	<b>115.28</b>	<b>121.88</b>	<b>128.84</b>	<b>136.22</b>	<b>144.01</b>

37. 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 the 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 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%. BRPL has submitted that any further increase in the employee cost due to wage revision should be taken care by the petitioner by improving its productivity levels. The petitioner in its rejoinder has reiterated the submissions made in the petition.

38. The Commission has given effect to 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 employee cost. Therefore, O&M Expenses have been allowed as per the existing norms.

### **Interest on Working Capital**

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

#### **(i) Receivables**

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

#### **(ii) Maintenance Spares**

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

#### **(iii) O & M Expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

#### **(iv) Rate of Interest on Working Capital**



In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate 1.4.2009 (i.e.12.25%) is considered as the rate of interest on working capital for asset. The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.89	12.57	13.29	14.05	14.85
O & M Expenses	6.60	6.98	7.38	7.80	8.25
Receivables	87.00	86.98	86.67	87.56	88.13
<b>Total</b>	<b>105.49</b>	<b>106.53</b>	<b>107.34</b>	<b>109.41</b>	<b>111.23</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	12.92	13.05	13.15	13.40	13.63

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	17.29	18.28	19.33	20.43	21.60
O & M Expenses	9.61	10.16	10.74	11.35	12.00
Receivables	67.59	70.24	72.01	75.86	79.27
<b>Total</b>	<b>94.49</b>	<b>98.68</b>	<b>102.08</b>	<b>107.65</b>	<b>112.87</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	11.57	12.09	12.50	13.19	13.83

### Transmission Charges

41. The transmission charges allowed for the instant assets are given overleaf:-

(₹ in lakh)

Particulars	Asset I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	135.48	137.69	139.22	143.01	146.34
Interest on Loan	170.10	160.41	149.97	142.00	132.95
Return on Equity	124.26	126.94	129.06	133.27	136.89
Interest on Working capital	12.92	13.05	13.15	13.40	13.63
O & M Expenses	79.25	83.78	88.59	93.65	99.00
<b>Total</b>	<b>522.02</b>	<b>521.87</b>	<b>519.99</b>	<b>525.33</b>	<b>528.81</b>

(₹ in lakh)

Particulars	Asset II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	85.68	90.26	93.01	99.09	104.58
Interest on Loan	121.78	120.24	116.62	117.58	116.91
Return on Equity	71.22	76.96	81.11	89.11	96.27
Interest on Working capital	11.57	12.09	12.50	13.19	13.83
O & M Expenses	115.28	121.88	128.84	136.22	144.01
<b>Total</b>	<b>405.54</b>	<b>421.44</b>	<b>432.09</b>	<b>455.18</b>	<b>475.61</b>

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

42. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The BRPL submitted that the filing fee shall be governed as per the Commission's order. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations. 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 42A (1) (a) of the 2009 Tariff Regulations.

### **Licence Fee**

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

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

### **Service Tax**

44. 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 BRPL has objected to recovery of service tax from the beneficiaries in future as service tax on transmission service is exempted. The petitioner has clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, 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**

45. The actual date of commercial operation of the instant transmission asset is 1.3.2009. The transmission charges upto 30.6.2011 for Asset I shall be shared by all the constituents of NR and in case of Asset II, it shall be borne by the local beneficiaries in line with the Commission's order dated 28.3.2008 in suo-motu Petition No. 85/2007. The billing, collection and disbursement of the transmission charges with effect from 1.7.2011 shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

46. This order disposes of Petition No. 197/TT/2012.

sd/-

**(A. K. Singhal)**  
Member

sd/-

**(Gireesh B. Pradhan)**  
Chairperson



**Annexure-I****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****(₹ in lakh)**

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Bond XXI</b>					
	Gross loan opening	100.00	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>8.33</b>	<b>16.67</b>	<b>25.00</b>
	Net Loan-Opening	100.00	100.00	91.67	83.33	75.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	8.33	8.33	8.33
	Net Loan-Closing	100.00	91.67	83.33	75.00	66.67
	Average Loan	100.00	95.83	87.50	79.17	70.83
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	8.73	8.37	7.64	6.91	6.18
	Rep Schedule	12 Annual installments from 11.10.2010				
<b>2</b>	<b>Bond XXII</b>					
	Gross loan opening	200.00	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>16.67</b>	<b>33.33</b>	<b>50.00</b>
	Net Loan-Opening	200.00	200.00	183.33	166.67	150.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	16.67	16.67	16.67	16.67
	Net Loan-Closing	200.00	183.33	166.67	150.00	133.33
	Average Loan	200.00	191.67	175.00	158.33	141.67
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	17.36	16.64	15.19	13.74	12.30
	Rep Schedule	12 Annual installments from 7.12.2010				
<b>3</b>	<b>Bond XXIV</b>					
	Gross loan opening	300.00	<b>300.00</b>	<b>300.00</b>	<b>300.00</b>	<b>300.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>25.00</b>	<b>50.00</b>	<b>75.00</b>
	Net Loan-Opening	300.00	300.00	275.00	250.00	225.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	25.00	25.00	25.00	25.00
	Net Loan-Closing	300.00	275.00	250.00	225.00	200.00
	Average Loan	300.00	287.50	262.50	237.50	212.50
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	29.85	28.61	26.12	23.63	21.14
	Rep Schedule	12 Annual installments from 26.03.2011				
<b>4</b>	<b>XXVII</b>					
	Gross loan opening	800.00	<b>800.00</b>	<b>800.00</b>	<b>800.00</b>	<b>800.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>66.67</b>	<b>133.33</b>
	Net Loan-Opening	800.00	800.00	800.00	733.33	666.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00



	Repayment during the year	0.00	0.00	66.67	66.67	66.67
	Net Loan-Closing	800.00	800.00	733.33	666.67	600.00
	Average Loan	800.00	800.00	766.67	700.00	633.33
	Rate of Interest	9.47%	9.47%	9.47%	9.47%	9.47%
	Interest	75.76	75.76	72.60	66.29	59.98
	Rep Schedule	12 Annual installments from 31.03.2012				
<b>5</b>	<b>XXVIII</b>					
	Gross loan opening	389.00	<b>389.00</b>	<b>389.00</b>	<b>389.00</b>	<b>389.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>32.42</b>
	Net Loan-Opening	389.00	389.00	389.00	389.00	356.58
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	32.42	32.42
	Net Loan-Closing	389.00	389.00	389.00	356.58	324.17
	Average Loan	389.00	389.00	389.00	372.79	340.38
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	36.29	36.29	36.29	34.78	31.76
	Rep Schedule	12 Annual installments from 15.12.2012				
<b>6</b>	<b>XXIX</b>					
	Gross loan opening	69.71	<b>69.71</b>	<b>69.71</b>	<b>69.71</b>	<b>69.71</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.81</b>
	Net Loan-Opening	69.71	69.71	69.71	69.71	63.90
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	5.81	5.81
	Net Loan-Closing	69.71	69.71	69.71	63.90	58.09
	Average Loan	69.71	69.71	69.71	66.81	61.00
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	6.41	6.41	6.41	6.15	5.61
	Rep Schedule	12 Annual installments from 12.03.2013				
<b>7</b>	<b>XXXIII</b>					
	Gross loan opening	0.00	<b>30.51</b>	<b>30.51</b>	<b>30.51</b>	<b>30.51</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	30.51	30.51	30.51	30.51
	Additions during the year	30.51	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	30.51	30.51	30.51	30.51	30.51
	Average Loan	15.26	30.51	30.51	30.51	30.51
	Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
	Interest	1.32	2.64	2.64	2.64	2.64
	Rep Schedule	12 Annual Installment from 8.7.2014				
<b>8</b>	<b>XXXIII</b>					
	Gross loan opening	0.00	<b>0.00</b>	<b>40.94</b>	<b>40.94</b>	<b>40.94</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Net Loan-Opening	0.00	0.00	40.94	40.94	40.94
Additions during the year	0.00	40.94	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	40.94	40.94	40.94	40.94
Average Loan	0.00	20.47	40.94	40.94	40.94
Rate of Interest	0.00%	8.64%	8.64%	8.64%	8.64%
Interest	0.00	1.77	3.54	3.54	3.54
Rep Schedule	12 Annual Installment from 8.7.2014				
<b>XXXV</b>					
Gross loan opening	0.00	<b>0.00</b>	<b>0.00</b>	<b>15.62</b>	<b>15.62</b>
Cumulative Repayment upto DOCO/previous year	0.00	<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	15.62	15.62
Additions during the year	0.00	0.00	15.62	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	15.62	15.62	15.62
Average Loan	0.00	0.00	7.81	15.62	15.62
Rate of Interest	0.00%	0.00%	9.64%	9.64%	9.64%
Interest	0.00	0.00	0.75	1.51	1.51
Rep Schedule	12 Annual Installment from 31.5.2015				
<b>Total Loan</b>					
Gross loan opening	1858.71	1889.22	1930.16	1945.78	1945.78
Cumulative Repayment upto DOCO/previous year	0.00	0.00	50.00	166.67	321.56
Net Loan-Opening	1858.71	1889.22	1880.16	1779.11	1624.22
Additions during the year	30.51	40.94	15.62	0.00	0.00
Repayment during the year	0.00	50.00	116.67	154.89	154.89
Net Loan-Closing	1889.22	1880.16	1779.11	1624.22	1469.33
Average Loan	1873.97	1884.69	1829.64	1701.67	1546.77
Rate of Interest	<b>9.3772%</b>	<b>9.3639%</b>	<b>9.3562%</b>	<b>9.3545%</b>	<b>9.3516%</b>
<b>Interest</b>	175.73	176.48	171.18	159.18	144.65

**Annexure-II**

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXI</b>					
	Gross loan opening	50.00	<b>50.00</b>	<b>50.00</b>	<b>50.00</b>	<b>50.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>4.17</b>	<b>8.33</b>	<b>12.50</b>
	Net Loan-Opening	50.00	50.00	45.83	41.67	37.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	4.17	4.17	4.17	4.17
	Net Loan-Closing	50.00	45.83	41.67	37.50	33.33
	Average Loan	50.00	47.92	43.75	39.58	35.42
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	4.37	4.18	3.82	3.46	3.09
	Rep Schedule	12 Annual Installment from 11.10.2010				
<b>2</b>	<b>Bond XXII</b>					
	Gross loan opening	150.00	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>12.50</b>	<b>25.00</b>	<b>37.50</b>
	Net Loan-Opening	150.00	150.00	137.50	125.00	112.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	12.50	12.50	12.50	12.50
	Net Loan-Closing	150.00	137.50	125.00	112.50	100.00
	Average Loan	150.00	143.75	131.25	118.75	106.25
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	13.02	12.48	11.39	10.31	9.22
	Rep Schedule	Annual Installment from 7.12.2010				
<b>3</b>	<b>Bond XXIV</b>					
	Gross loan opening	150.00	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>12.50</b>	<b>25.00</b>	<b>37.50</b>
	Net Loan-Opening	150.00	150.00	137.50	125.00	112.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	12.50	12.50	12.50	12.50
	Net Loan-Closing	150.00	137.50	125.00	112.50	100.00
	Average Loan	150.00	143.75	131.25	118.75	106.25
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	14.93	14.30	13.06	11.82	10.57
	Rep Schedule	12 Annual Installment from 21.10.14				
<b>4</b>	<b>XXVII</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>41.67</b>	<b>83.33</b>
	Net Loan-Opening	500.00	500.00	500.00	458.33	416.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00





	Repayment during the year	0.00	0.00	41.67	41.67	41.67
	Net Loan-Closing	500.00	500.00	458.33	416.67	375.00
	Average Loan	500.00	500.00	479.17	437.50	395.83
	Rate of Interest	9.47%	9.47%	9.47%	9.47%	9.47%
	Interest	47.35	47.35	45.38	41.43	37.49
	Rep Schedule	12 Annual Installment from 31.3.2012				
<b>5</b>	<b>XXVIII</b>					
	Gross loan opening	284.00	<b>284.00</b>	<b>284.00</b>	<b>284.00</b>	<b>284.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.67</b>
	Net Loan-Opening	284.00	284.00	284.00	284.00	260.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	23.67	23.67
	Net Loan-Closing	284.00	284.00	284.00	260.33	236.67
	Average Loan	284.00	284.00	284.00	272.17	248.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	26.50	26.50	26.50	25.39	23.19
	Rep Schedule	12 Annual Installments from 15.12.2012				
<b>6</b>	<b>XXIX</b>					
	Gross loan opening	122.94	<b>122.94</b>	<b>122.94</b>	<b>122.94</b>	<b>122.94</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.25</b>
	Net Loan-Opening	122.94	122.94	122.94	122.94	112.70
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	10.25	10.25
	Net Loan-Closing	122.94	122.94	122.94	112.70	102.45
	Average Loan	122.94	122.94	122.94	117.82	107.57
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	11.31	11.31	11.31	10.84	9.90
	Rep Schedule	12 Annual Installment from 12.03.2013				
<b>7</b>	<b>XXXIII</b>					
	Gross loan opening	0.00	<b>64.88</b>	<b>64.88</b>	<b>64.88</b>	<b>64.88</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	64.88	64.88	64.88	64.88
	Additions during the year	64.88	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	64.88	64.88	64.88	64.88	64.88
	Average Loan	32.44	64.88	64.88	64.88	64.88
	Rate of Interest	8.64%	8.64%	8.64%	8.64%	8.64%
	Interest	2.80	5.61	5.61	5.61	5.61
	Rep Schedule	12 Annual Installment from 8.7.2014				
<b>8</b>	<b>XXXV</b>					
	Gross loan opening	0.00	<b>0.00</b>	<b>0.00</b>	<b>22.21</b>	<b>22.21</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<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	22.21	22.21
Additions during the year	0.00	0.00	22.21	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	22.21	22.21	22.21
Average Loan	0.00	0.00	11.11	22.21	22.21
Rate of Interest	0.00%	0.00%	9.64%	9.64%	9.64%
Interest	0.00	0.00	1.07	2.14	2.14
Rep Schedule	12 Annual Installment from 31.5.2015				
<b>XXXIII</b>					
Gross loan opening	0.00	<b>0.00</b>	<b>88.54</b>	<b>88.54</b>	<b>88.54</b>
Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Net Loan-Opening	0.00	0.00	88.54	88.54	88.54
Additions during the year	0.00	88.54	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	88.54	88.54	88.54	88.54
Average Loan	0.00	44.27	88.54	88.54	88.54
Rate of Interest	0.00%	8.64%	8.64%	8.64%	8.64%
Interest	0.00	3.82	7.65	7.65	7.65
Rep Schedule	12 Annual Installment from 8.7.2014				
<b>Total Loan</b>					
Gross loan opening	1256.94	1321.82	1410.36	1432.57	1432.57
Cumulative Repayment upto DOCO/previous year	0.00	0.00	29.17	100.00	204.75
Net Loan-Opening	1256.94	1321.82	1381.19	1332.57	1227.83
Additions during the year	64.88	88.54	22.21	0.00	0.00
Repayment during the year	0.00	29.17	70.83	104.75	104.75
Net Loan-Closing	1321.82	1381.19	1332.57	1227.83	1123.08
Average Loan	1289.38	1351.51	1356.88	1280.20	1175.45
Rate of Interest	<b>9.3278%</b>	<b>9.2898%</b>	<b>9.2699%</b>	<b>9.2672%</b>	<b>9.2603%</b>
<b>Interest</b>	120.27	125.55	125.78	118.64	108.85