

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 91/TT/2012**

**Coram:**

**Shri Gireesh B. Pradhan, Chairman**

**Shri A.K. Singhal, Member**

**Shri A.S. Bakshi, Member**

**Date of Hearing: 09.10.2014**

**Order issued on:26.05.2015**

**In the matter of:**

Approval of transmission tariff for Combined Assets for transmission system associated with Parbati-III-HEP in Northern 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. Rajasthan Rajya Vidyut Prasaran Nigam Limited,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005
2. Ajmer Vidyut Vitran Nigam Limited,  
400 kV GSS Building (Ground Floor),  
Ajmer Road, Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited,  
400 kV GSS Building (Ground Floor),  
Ajmer Road, Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited,  
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. Uttar Pradesh Power Corporation Limited,  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001
10. Delhi Transco Limited,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002
11. BSES Yamuna Power Limited,  
BSES Bhawan, Nehru Place  
New Delhi
12. BSES Rajdhani Power Limited,  
BSES Bhawan, Nehru Place  
New Delhi
13. North Delhi Power Limited,  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi-110 034
14. Chandigarh Administration,  
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Limited,  
Urja Bhawan, 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.S. Raju, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesan, PGCIL  
Ms. Seema Gupta, PGCIL

**For respondents:** Shri Padamjit Singh, PSPCL  
Ms. Megha Bajpeyi, BRPL

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission charges for combined assets for Transmission System associated with Parbati-III-HEP (hereinafter referred to as “transmission assets”) in Northern 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’s two affidavits dated 20.9.2013, affidavit dated 19.12.2013, 31.5.2014, 4.10.2014, 7.10.2014, 8.11.2014, 5.1.2015 and 23.3.2015.

3. The investment approval (IA) for the project was accorded by Government of India, Ministry of Power letter no. 12/19/2004-PG dated 31.7.2006 at an estimated cost of ₹55724 lakh including IDC of ₹2661 lakh (Based on 4th Quarter, 2005 price level). The project was to be commissioned within 42 months progressively from the date of IA. Therefore, the scheduled date of commissioning of the transmission project was

1.2.2010. The RCE was approved by Board of Directors of PGCIL on 25.6.2013 at ₹77525 lakh, including IDC of ₹14242 lakh (Based on April, 2013 price level).

4. The scope of work covered under the project is as follows:-

**Transmission Lines:**

- (1) LILO of Parbati-II-Koldam/Nalagarh 400 kV line at Parbati Pooling Point (Quad conductor)
- (2) LILO of one 400 kV circuit of Parbati-II-Parbati Pooling Point at Parbati-III-HEP (Quad conductor)
- (3) Parbati Pooling Point-Amritsar 400 kV D/C line (Twin conductor)

**Sub-stations:**

- (1) New 400 kV Parbati Pooling Point Gas Insulated Sub-station
- (2) Extension of 400/220 kV Amritsar Sub-station

5. The petitioner initially claimed transmission charges for the instant transmission assets on the basis of anticipated dates of commercial operation. The petitioner later submitted the details of the actual dates of commercial operation of the assets vide affidavits dated 19.12.2013 and 31.5.2014. The details of scheduled date of commercial operation, actual date of commercial operation and delay are as given hereunder:-

Asset	Name of the Asset	Scheduled DOCO	Actual DOCO	Delay
Asset-I	400 kV D/C Parbati- Amritsar T/L along with associated bays at both ends	1.2.2010	1.8.2013	42 months
Asset-II	LILO of 2nd Ckt of Parbati-II- Koldam T/L at Pooling Station along with associated bays and LILO at Parbati-III		1.8.2013	
Asset-III	400 kV 80 MVAR Bus Reactor at Parbati Pooling Station along with associated bays		1.8.2013	
Asset-IV*	LILO of Parbati-II Koldam Ckt-I at Parbati Pooling Point along with associated bays.		1.4.2014	50 months

\*Asset-IV falls under the 2014 Tariff Regulations and hence tariff has been claimed in a separate Petition No. 411/TT/2014.

6. A portion of the LILO circuits of Asset-II is not utilized as the Koldam switchyard has not been commissioned and the part of LILO cannot be put to trial operation without the line getting connected at the other end as per the APTEL order dated 2.7.2012 in Appeal No. 123 of 2011. Further, the petitioner has neither prayed for declaration of date of commercial operation under Regulation 3(12)(C) of the 2009 Tariff Regulations nor disclosed the information that the portion of LILO are not in use. Punjab State Power Corporation Limited (PSPCL), Respondent No. 6, has also raised this issue in their submission. Since the Koldam Switchyard has not been commissioned, we are not inclined to grant tariff for Asset-II in this petition. The petitioner is at liberty to file the tariff of this asset when complete LILO is put into regular service after test charge and trial operation.

7. Asset-IV has been commissioned in the 20014-19 tariff period and the petitioner has already claimed tariff as per the 2014 Tariff Regulations for this asset in Petition No. 411/TT/2014. Accordingly, the transmission charges are allowed for only Asset-I and Asset-III in the instant petition. The petitioner was directed to file separate capital cost of Assets-I and III as the petitioner had submitted combined capital cost of all three assets. However, the petitioner again vide affidavit dated 5.1.2015, submitted the combined capital costs of all the three assets.

8. As the breakup of capital cost was not submitted by the petitioner despite the directions, the Commission issued an Interim Order dated 16.2.2015 directing the petitioner to file the capital cost of Asset-I and Asset-II separately as under:-

" 4.-----We are of the view that the transmission tariff for Asset-II should not be allowed at this stage and should be allowed only after the commissioning of Asset-II as per the procedure laid down by APTEL in the said judgment. Consequently, tariff for Asset I and

III shall be dealt with in the instant petition.

5. The petitioner was directed vide letter dated 1.1.2015 to furnish separate capital cost of Assets-I and III along with the capital expenditure from the date of commercial operation to 31.3.2014 and the revised tariff forms. However, the petitioner vide affidavit dated 5.1.2015 has submitted the combined tariff forms for the Assets-I, II and III. The petitioner has not filed the information in the manner sought in the letter dated 1.1.2015. As a last opportunity, the petitioner is directed to submit the information as called for by 3.3.2015 with an advance copy to the respondents. "

9. In compliance of the said interim order, the petitioner vide affidavit dated 23.3.2015 submitted separate capital cost of Asset-I and Asset-II.

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

Particulars	(₹ in lakh)	
	Asset-I 2013-14	Asset-III 2013-14
Depreciation	2292.59	33.24
Interest on Loan	2721.35	40.05
Return on Equity	2312.46	33.92
Interest on Working Capital	181.29	4.77
O & M Expenses	305.34	43.64
<b>Total</b>	<b>7813.03</b>	<b>155.62</b>

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

Particulars	(₹ in lakh)	
	Asset-I 2013-14	Asset-III 2013-14
Maintenance Spares	68.70	9.82
O & M expenses	38.17	5.46
Receivables	1953.26	38.91
<b>Total</b>	<b>2060.13</b>	<b>54.19</b>
Rate of Interest	13.20%	13.20%
<b>Interest</b>	<b>181.29</b>	<b>4.77</b>

12. 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. Jodhpur Vidyut Vitran Nigam Limited (JDVVNL), Respondent No. 4, has filed reply vide affidavit dated 14.5.2013, BSES Rajdhani Power Limited (BRPL), Respondent No. 12, has filed reply vide affidavit dated 8.9.2014 and Punjab State Power Corporation Limited (PSPCL), Respondent No. 6 has filed reply vide affidavits dated 5.9.2014 and 11.10.2014. The petitioner has filed rejoinders to the replies of the BRPL and PSPCL vide affidavits dated 18.11.2014 and 3.12.2014 respectively. No rejoinder to the reply of JDVVNL has been filed by the petitioner. The respondents have mainly raised the issues like time over-run, cost variation, cost over-run, claim of higher Initial Spares, additional capital expenditure, higher operation and maintenance charges and over estimation of cost by the petitioner. The objections of the respondents and submissions of the petitioner have been dealt with in the relevant paragraphs of this order.

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

### **Capital Cost**

14. 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.”

15. The respondents, PSPCL and BRPL have raised the issue of non-submission of approved revised cost estimates of each asset separately by the petitioner. However, the petitioner has submitted the details and submitted the separate costs of both assets and the details of revised apportioned approved cost, actual expenditure as on the date of commercial operation and estimated additional capitalization are as follows:-

(₹ in lakh)

Asset	Apportioned approved cost as per RCE	Expenditure up to COD	Projected Expenditure from COD to 31.03.14	Projected Expenditure 2014-15	Total estimated Expenditure
Asset-I	71870.23	65475.35	1333.30	4157.38	70966.03
Asset-III	1029.20	968.93	2.80	77.15	1048.88

### **Treatment of IDC and IEDC**

16. As per IA dated 31.7.2006, the commissioning schedule of the project was 42 months from the date of IA. Accordingly the schedule date of completion works out to



31.1.2010, say 1.2.2010. The petitioner vide affidavit dated 19.12.2013, has submitted the Revised Cost Estimate (RCE) of the transmission system.

17. The petitioner was directed to submit the details of the IDC computation vide letter dated 26.5.2014. However, the petitioner submitted the allocation of IDC amount amongst the various elements covered in the project. In the absence of non-submission of details by the petitioner, as directed by the Commission, the claim of IDC has been considered with reference to interest paid as per the details of loan furnished by the petitioner as under:-.

**a) Asset-I:**

The petitioner has claimed IDC of ₹11843.34 lakh as on the date of commercial operation as against IDC of ₹9871.98 lakh worked out on cash basis as on the date of commercial operation, with reference to details of loan submitted by the petitioner. Accordingly, the same has been capitalized as on the date of commercial operation and balance claim i.e. ₹1971.36 lakh (₹11843.34 lakh- ₹9871.98 lakh) has been treated as un-discharged liability as discussed in Para 30.

**b) Asset-III:**

Similarly, the petitioner has claimed IDC of ₹182.67 lakh as on the date of commercial operation, against which IDC of ₹166.35 lakh has been worked out on cash basis, as on the date of commercial operation, and balance amount i.e. ₹16.32 lakh (₹182.67 lakh-₹166.35 lakh) has been treated as un-discharged liability as discussed in Para 30.

18. The Commission vide record of proceedings of hearing dated 3.3.2015 in Petition No. 162/TT/2013 has observed as under:-

“IDC will be allowed whenever it is paid and it will be accounted for the purpose of determination of tariff and the petitioner should submit the details of the interest accrued but not paid. The Commission observed that IDC which is not paid will be part of the undischarged liability, whether it is on account of equipment or asset or interest.”

However, the petitioner has not submitted the required information relating to calculation of IDC, therefore, IDC worked out on cash basis based on the available information has been allowed. The amount of IDC claimed by the petitioner on accrual basis which is in the nature of undischarged liability has not been considered in the capital cost. The undischarged liability pertaining to IDC would be considered once the same is discharged after carrying out prudence check. The petitioner is directed to submit the necessary information to that its effect is considered in the truing up petition.

19. The capital cost after considering IDC on cash basis, as on COD is as given hereunder:-

(₹ in lakh)

Particulars	Cost as on COD (including IDC claimed)	IDC Claimed	Capital Cost excluding IDC claim	IDC allowed as on COD on cash basis	Capital Cost considered as on COD
Asset-I	65475.35	11843.34	53632.01	9871.98	63503.99
Asset-III	968.93	182.67	786.26	166.35	952.61

### **Time Over-run**

20. The petitioner was directed to submit the detailed justification and reasons along with documentary evidence for delay, separately for each asset covered in the petition, including details of activities as per PERT chart, work affected and the duration of delay

in the activities along with the reasons and agency responsible for delay. JDVVNL, BRPL and PSPCL have also raised the issue of time over-run resulting in cost over-run.

21. In response, petitioner vide affidavit dated 20.9.2013 has submitted as under:-

**a) Sub-Station:** The land initially selected could not be acquired due to stiff resistance from land owners after initiating the acquisition process in April, 2005. The petitioner initiated the process for identification of alternate land after request from State Government Authorities for the same in March, 2006. Accordingly, the proposal for acquisition was forwarded to State Government of Himachal Pradesh (HP) in May, 2006. Thus, a total of 2.94 Hectare land has been acquired in April, 2009 for Parbati pooling GIS station comprising 1.89 Hectare of private land and 1.054 Hectare from Forest Department, Government of India. After rigorous follow up, Section-IV, Section-VI and Section-IX under Land Acquisition was received on November 28, 2006, May 14, 2007 and October 23, 2007 respectively. The land was finally allotted to the petitioner by Government of HP on March 31, 2009 and possession was handed over in April, 2009. The proposal for transfer of forest land of 1.05 Hectare was processed under Forest (Conservation) Act, 1980 and in-principle approval from Regional MoEF was received only in September, 2009 and the forest land was finally transferred to the petitioner in May, 2010 after depositing cost of compensatory afforestation and NPV of land to Government of HP. Thus, the land acquisition took about 5 years (April, 2005 to May, 2010).

**b) Line: Parbati-Amritsar Line**

- i. **H.P. Portion:** The delay was due to Forest Clearance as some part of land which was proposed to be diverted for construction of transmission line at Mandi was coming under Forest area. There was strong agitation against this diversion by Mahila Mandal of Nau Doghari Village. Some portion of transmission line was also passing through Nargu Wild Life Sanctuary which was earlier taken as forest land. Revised case avoiding Sanctuary area was prepared and submitted. First stage forest clearance was obtained on 11.6.2012, Stage-II clearance for 400 kV D/C Parbati Pooling Station to Amritsar Line (Banala End) obtained on 11.9.2012. Corrigendum to final approval was issued on 19.11.2012. Further, tree felling orders by the DFO to H.P. Forest Development Corporation were given progressively during 1.12.2012 to 9.1.2013. Tender approval process and award by HPSFDC went on till 23.3.2013.

The petitioner has submitted the status of delay in forest clearance in the case of Parbati-Amritsar line (HP Portion) in detailed chronological order of events supported by various documents to establish that Forest clearance in HP portion took about 6 years (October, 2006 to September, 2012) and about 5 months (November, 2012 to March, 2013) were taken for permission of tree cutting. The progress of work of Parbati-Amritsar transmission line was affected by extreme weather/heavy rains from (November, 2012 to March, 2013 and May-June, 2013).

- ii. **Punjab Portion**: The proposal for Forest Clearance was submitted in July, 2008 and 1st stage forest clearance was obtained on 23.4.2010 but Stage-II forest clearance was delayed. Punjab Forest Department was demanding tree cost and land cost in addition to CA and NPV and Stage-II Clearance obtained on 28.5.2012.

The petitioner has submitted the status of delay in forest clearance in the case of Parbati-Amritsar line (Punjab Portion) in detailed chronological order of events supported by various documents to establish that Final Approval Stage-II Clearance for 400 kV D/C Parbati Pooling station to Amritsar line (Hoshiarpur End) was granted by MoEF, New Delhi on 28.5.2012. The forest clearance in Punjab portion of transmission line took about 4 years (July, 2008 to May, 2012).

- iii. The petitioner after obtaining Stage-II forest clearance in May 2012, sought permission for marking and felling of trees. Government of HP granted permission for cutting of Trees in March/April, 2013 and the work on this portion of land could be started only in April, 2013. Besides the issue of trees felling, the terrain being high altitude had faced extreme weather condition due to high fall and snow deposit during November, 2012 to February, 2013 and thereby reducing the working period of construction gang by 4/5 months. The terrain again became worst and work stopped due to severe rainfall during May/June, 2013. The petitioner thereafter had deployed working gang, as soon as the terrain become suitable for working on top priority and succeeded in commissioning the transmission assets in August, 2013.

22. We have considered the submissions made by the petitioner and respondents. The assets were commissioned on 1.8.2013. The delay in forest clearance and acquisition of land for sub-station as well as time taken in tree cutting permission and

snowfall period is considered beyond the control of the petitioner and accordingly the delay of 42 months is condoned.

23. The Commission vide RoP dated 9.10.2014 directed the petitioner to submit on affidavit the status of actual usage of the asset. The petitioner vide affidavit dated 3.12.2014 has submitted that in view of the requirement of NHPC as conveyed by its letter dated 12.6.2013, the petitioner has commissioned the asset with effect from 1.8.2013. It is observed that unit # 1 and 2 of Parbati HEP-III of NHPC were commissioned on 24.3.2014. Since the transmission assets were commissioned with effect from 1.8.2013 at the request and behest of NHPC, we are of the view that the transmission charges from 1.8.2013 to 23.3.2014 shall be borne by NHPC. Our decision is in conformity with Regulation 8(6) of Central Electricity Regulatory Commission (Sharing of Inter-state Transmission Charges and Losses) Regulations, 2010 as amended from time to time which provides as under:-

“(6) For Long Term Customers availing supplies from inter-state generating stations, the charges payable by such generators for such Long Term supply shall be billed directly to the respective Long Term customers based on their share of capacity in such generating stations. Such mechanism shall be effective only after “commercial operation” of the generator. Till then, it shall be the responsibility of generator to pay these charges.”

**Cost Variation:**

24. The respondents JDVVNL, PSPCL and BRPL have raised the issue of cost variation in case of various assets, cost escalation in certain items and huge variation of cost between original and revised approved cost. The petitioner vide affidavit dated 20.9.2013 has submitted that cost variation in tower steel is due to increase in tower quantity and variation in estimated and actual cost. The variation in cost of land is mainly due to higher forest compensation and land payments. The petitioner has

further submitted that the variation is due to estimated cost and actual cost and the estimates are prepared as per well defined procedures for cost estimate. The cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts. Open competitive bidding route is followed for procurement and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. The details of difference in award and estimate rates of the various elements are as given hereunder:-

S.No.	Item/Equipment	Unit of Measurement	Unit rate in FR (₹)	Unit rate in Award (₹)
1	Tower steel	Mt.	59560.00	72580.00
2	Conductor (Qty:1741km)	km	210950.00	287500.00
3	120 KN Insulators (Qty: 6157)	Nos.	464.00	524.00
4	160 KN Insulators(Qty: 198850)	Nos.	535.00	623.00
5	Earth wire	km	36429.00	50093.00

25. The total estimated expenditure of the instant assets is within the revised approved apportioned cost and as such the cost variation is allowed.

### **Treatment of Initial Spares**

26. The petitioner has claimed the initial spares as per 2009 Tariff Regulations for transmission line and sub-station separately and has not claimed initial spares for Asset-III. The initial spares for transmission line claimed for the Asset-I is within the ceiling limit of 2009 Tariff Regulations, however, the cost of initial spares claimed for sub-station exceeds the ceiling limit specified in 2009 Tariff Regulations. Details in

respect of the initial spares, which have been restricted as per 2009 Tariff Regulations, are as below:-

(₹ in lakh)							
Particulars	Capital Cost claimed as on Cutoff date (31.03.2014)	Initial spares claimed as on cut-off date	Capital cost after considering IDC on cash basis as on cut-off date (31.3.2014)	Proportionate claim of initial spares against the adjusted capital cost as on cut-off date (31.3.2014)	Ceiling Limit as per 2009 tariff Regulations	Initial Spares worked out	Excess Initial Spares
Sub-station (excluding T/L)*	11255.96	439.40	10967.22	428.13	3.50%	382.25	45.88

\*GIS Sub-station is commissioned at Parbati Pooling Point.

27. In view of above, the capital cost considered as on the date of commercial operation for the purpose of tariff computation after allowing IDC on cash basis and deducting excess initial spares is as given below:-

(₹ in lakh)				
Particulars	Capital Cost considered for the purpose of tariff before adjustment of IDC/IEDC & Initial Spares as on DOCO*	Deduction in respect of Excess IDC/IEDC	Deduction in respect of Excess Initial Spares	Capital Cost considered for the purpose of tariff after disallowed IEDC/IDC & Initial Spares as on DOCO
Asset-I	65475.35	1971.36	45.88	63458.11
Asset-III	968.93	16.32	-	952.61

\*As per Management certificate dated 23.3.2015.

### **Additional Capital Expenditure**

28. 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:

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.”

29. 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”.

30. Accordingly, the cut-off date for the instant assets is 31.3.2016.

31. The petitioner’s claim of additional capital expenditure for the year 2013-14 has been considered as per the 2009 Tariff Regulations and is allowed till 31.3.2014. The petitioner has claimed ₹1330.30 lakh and ₹2.80 lakh for Asset-I and III respectively. The add-cap claimed is against estimated balance and retention payments and thus are allowed. In addition, the petitioner has claimed IDC on accrual basis but has been allowed on cash basis as discussed at para 17. Thus, the disallowed IDC of ₹1971.36 lakh and ₹16.32 lakh in respect of Asset-I and III respectively has been considered as undischarged liability as on the date of commercial operation.

### **Capital Cost as on 31.3.2014**

32. Capital cost as on 31.3.2014 has been worked out by considering capital costs as on the date of commercial operation allowed and the additional capital expenditure during 2009-14 period as given hereunder:-

(₹ in lakh)

Particulars	Capital cost as on 31.3.2014	
	Asset-I	Asset-III
Freehold Land	840.52	-
Leasehold Land	-	-
Building & Other Civil Works	867.03	70.22
Transmission Line	53870.06	-
Sub-Station Equipments	8915.54	885.19
PLCC	298.25	-
<b>Total</b>	<b>64791.41</b>	<b>955.41</b>

### Debt Equity Ratio:

33. 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.”

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

35. 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-I</b>				
Debt	44420.68	70.00	45353.99	70.00
Equity	19037.43	30.00	19437.42	30.00
<b>Total</b>	<b>63458.11</b>	<b>100.00</b>	<b>64791.41</b>	<b>100.00</b>
<b>Asset-III</b>				
Debt	666.83	70.00	668.79	70.00
Equity	285.78	30.00	286.62	30.00
<b>Total</b>	<b>952.61</b>	<b>100.00</b>	<b>955.41</b>	<b>100.00</b>

### Return on Equity

36. 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:

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 tried up in accordance with Regulation 6 of these regulations".

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

Particulars	(₹ in lakh)	
	Asset-I	Asset-III
	2013-14 (Pro-rata)	
Opening Equity	19037.43	285.78
Addition due to Additional capitalisation	399.99	0.84
Closing Equity	19437.42	286.62
Average Equity	19237.43	286.20
Return on Equity (Base Rate)	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>2241.93</b>	<b>33.35</b>

38. 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). Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

### **INTEREST ON LOAN**

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

“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.”

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

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

b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period;

c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed;

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

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

42. Accordingly, the interest on Loan has been calculated on the basis of prevailing rate of actual loan available as on the date of commercial operation. The drawl date of the Bond XLV as evidenced by the petitioner lies beyond the date of commercial operation i.e. 1.8.2013. However, the petitioner has submitted and considered the opening loan of Bond XLV as on the date of commercial operation. As such, the interest rate has been worked out by considering drawl date of Bond XLV as submitted by the petitioner in case of both the assets. Any change in the rate of interest subsequent to the date of commercial operation shall be considered at the time of truing up.

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

Particulars	(₹ in lakh)	
	Asset-I	Asset-III
	<b>2013-14 (Pro-rata)</b>	
Gross Normative Loan	44420.68	666.83
Cumulative Repayment upto Previous Year	-	-
Net Loan-Opening	44420.68	666.83
Addition due to Additional capitalisation	933.31	1.96
Repayment during the year	2221.67	32.67
Net Loan-Closing	43132.31	636.12
Average Loan	43776.49	651.48
Weighted Average Rate of Interest on Loan	9.0259%	9.0663%
<b>Interest</b>	<b>2634.14</b>	<b>39.38</b>

## DEPRECIATION

44. 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.”

45. Regulation 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. Both the transmission assets i.e. Asset-I and III in the instant petition were put on commercial operation as on 1.8.2013 and will complete 12 years beyond 2013-14. Accordingly, the depreciation has been calculated as follows:-

(₹ in lakh)		
Particulars	Asset-I	Asset-III



	<b>2013-14 (Pro-rata)</b>	
Gross Block as on DOCO	63458.11	952.61
Projected Additional Capitalization	1333.30	2.80
Closing Gross Block	64791.41	955.41
Average Gross Block	64124.76	954.01
Rate of Depreciation	5.1969%	5.1374%
Depreciable Value	56955.81	858.61
Remaining Depreciable Value	56955.81	858.61
<b>Depreciation</b>	<b>2221.67</b>	<b>32.67</b>

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

46. 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:-

<b>Elements</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
D/C twin conductor T/L (₹ lakh per km)	0.627	0.663	0.701	0.741	0.783
400 kV bays (₹ lakh per bay)	52.40	55.40	58.57	61.92	65.46

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

<b>Elements</b>	<b>(₹ in lakh)</b> <b>2013-14</b> <b>(Pro-rata)</b>
<b>Asset-I</b>	
250.53 km, 400 kV D/C twin conductor T/L	130.78
2 nos. 400 kV Bays at Parbati Pooling S/S	87.28
2 nos. 400 kV Bays at Amritsar S/S	87.28
<b>Total</b>	<b>305.34</b>
<b>Asset-III</b>	
80 MVAR, 400 kV Bus Reactor Bay	43.64
<b>Total</b>	<b>43.64</b>

48. 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%.

49. 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**

50. 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 1.4.2013 as interest rate @ 13.20%, (SBI Base rate plus 350 bps) for both the assets in the instant petition.

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

(₹ in lakh)

Particulars	Asset-I	Asset-III
	2013-14 (Pro-rata)	
Maintenance Spares	68.70	9.82
O & M expenses	38.17	5.46
Receivables	1894.81	38.44
<b>Total</b>	<b>2001.68</b>	<b>53.72</b>
Rate of Interest	13.20%	13.20%
<b>Interest</b>	<b>176.15</b>	<b>4.73</b>

**TRANSMISSION CHARGES**

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

(₹ in lakh)

Particulars	Asset-I	Asset-III
	2013-14 (Pro-rata)	
Depreciation	2221.67	32.67

Interest on Loan	2634.14	39.38
Return on Equity	2241.93	33.35
Interest on Working Capital	176.15	4.73
O & M Expenses	305.34	43.64
<b>Total</b>	<b>7579.24</b>	<b>153.77</b>

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

53. 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**

54. 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**

55. 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**

56. 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 subject to our decision in para 23 of this order.

57. This order disposes of Petition No. 91/TT/2012.

**sd/-**

**(A.S. Bakshi)  
Member**

**sd/-**

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

**sd/-**

**(Gireesh B. Pradhan)  
Chairperson**

(₹ in lakh)

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>		
	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XLV - COD</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	2071.28
	Repayment during the year	0.00
	Net Loan-Closing	2071.28
	Average Loan	1035.64
	Rate of Interest	9.65%
	Interest	<b>99.94</b>
	Rep Schedule	12 annual instalments from 28.02.2018
<b>2</b>	<b>Bond XXX</b>	
	Gross loan opening	9057.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	9057.00
	Additions during the year	0.00
	Repayment during the year	754.75
	Net Loan-Closing	8302.25
	Average Loan	8679.63
	Rate of Interest	8.80%
	Interest	763.81
	Rep Schedule	12 annual instalments from 29.09.2013
<b>3</b>	<b>Bond XXXI</b>	
	Gross loan opening	4483.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4483.00
	Additions during the year	0.00
	Repayment during the year	373.58
	Net Loan-Closing	4109.42
	Average Loan	4296.21
	Rate of Interest	8.90%
	Interest	382.36
	Rep Schedule	12 annual instalments from 25.02.2014
<b>4</b>	<b>Bond XLV - Add Cap (2013-14)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	933.31
	Repayment during the year	0.00
	Net Loan-Closing	933.31
	Average Loan	466.66

	Rate of Interest	9.65%
	Interest	45.03
	Rep Schedule	12 annual instalments from 28.02.2018
<b>5</b>	<b>Bond XXXIII</b>	
	Gross loan opening	5600.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5600.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5600.00
	Average Loan	5600.00
	Rate of Interest	8.64%
	Interest	483.84
	Rep Schedule	12 annual instalments from 08.07.2014
<b>6</b>	<b>Bond XXXIV</b>	
	Gross loan opening	2540.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2540.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2540.00
	Average Loan	2540.00
	Rate of Interest	8.84%
	Interest	224.54
	Rep Schedule	12 annual instalments from 21.10.2014
<b>7</b>	<b>Bond XXXV</b>	
	Gross loan opening	1050.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1050.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1050.00
	Average Loan	1050.00
	Rate of Interest	9.64%
	Interest	101.22
	Rep Schedule	12 annual instalments from 31.05.2015.
<b>8</b>	<b>Bond XXXVI</b>	
	Gross loan opening	5050.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5050.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5050.00
	Average Loan	5050.00
	Rate of Interest	9.35%

	Interest	472.18
	Rep Schedule	15 annual instalments from 29.08.2016.
<b>9</b>	<b>Bond XXXVII</b>	
	Gross loan opening	<b>1996.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	1996.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1996.00
	Average Loan	1996.00
	Rate of Interest	9.25%
	Interest	184.63
	Rep Schedule	12 annual instalments from 26.12.2015.
<b>10</b>	<b>Bond XL</b>	
	Gross loan opening	1516.71
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1516.71
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1516.71
	Average Loan	1516.71
	Rate of Interest	9.30%
	Interest	141.05
	Rep Schedule	12 annual instalments from 28.06.2016
<b>11</b>	<b>Bond XLII</b>	
	Gross loan opening	2086.09
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2086.09
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2086.09
	Average Loan	2086.09
	Rate of Interest	8.80%
	Interest	183.58
	Rep Schedule	Bullet Payment as on 13.03.2023
<b>12</b>	<b>Bond XLIII</b>	
	Gross loan opening	895.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	895.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	895.00
	Average Loan	895.00
	Rate of Interest	7.93%
	Interest	70.97



	Rep Schedule	12 annual instalments from 20.05.2017
<b>13</b>	<b>Bond XXVIII</b>	
	Gross loan opening	4400.00
	Cumulative Repayment upto DOCO/previous year	366.67
	Net Loan-Opening	4033.33
	Additions during the year	0.00
	Repayment during the year	366.67
	Net Loan-Closing	3666.67
	Average Loan	3850.00
	Rate of Interest	9.33%
	Interest	359.21
	Rep Schedule	12 annual instalments from 15.12.2012
<b>14</b>	<b>Bond XXIX</b>	
	Gross loan opening	4366.00
	Cumulative Repayment upto DOCO/previous year	363.83
	Net Loan-Opening	4002.17
	Additions during the year	0.00
	Repayment during the year	363.83
	Net Loan-Closing	3638.33
	Average Loan	3820.25
	Rate of Interest	9.20%
	Interest	351.46
	Rep Schedule	12 annual instalments from 12.03.2013
<b>15</b>	<b>Bond XLI</b>	
	Gross loan opening	224.60
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	224.60
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	224.60
	Average Loan	224.60
	Rate of Interest	8.85%
	Interest	19.88
	Rep Schedule	12 annual instalments from 19.10.2016
<b>16</b>	<b>SBI (21.03.2012) - COD</b>	
	Gross loan opening	497.07
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	497.07
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	497.07
	Average Loan	497.07
	Rate of Interest	10.45%
	Interest	51.94
	Rep Schedule	22 half yearly

	instalment from 31.08.2016
<b>Total Loan</b>	
Gross loan opening	43761.47
Cumulative Repayment upto DOCO/previous year	730.50
Net Loan-Opening	43030.97
Additions during the year	3004.59
Repayment during the year	1858.83
Net Loan-Closing	44176.73
Average Loan	43603.85
Rate of Interest	<b>9.0259%</b>
<b>Interest</b>	3935.63

## Annexure-II

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
	Details of Loan	2013-14
<b>1</b>	<b>Bond XLV - Add Cap (2013-14)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	1.96
	Repayment during the year	0.00
	Net Loan-Closing	1.96
	Average Loan	0.98
	Rate of Interest	9.65%
	Interest	0.09
	Rep Schedule	12 annual instalments from 28.02.2018
<b>2</b>	<b>Bond XLII</b>	
	Gross loan opening	223.64
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	223.64
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	223.64
	Average Loan	223.64
	Rate of Interest	8.80%
	Interest	19.68
	Rep Schedule	Bullet Payment as on 13.03.2023
<b>3</b>	<b>Bond XXIX</b>	
	Gross loan opening	450.00
	Cumulative Repayment upto DOCO/previous year	37.50
	Net Loan-Opening	412.50
	Additions during the year	0.00
	Repayment during the year	37.50
	Net Loan-Closing	375.00
	Average Loan	393.75
	Rate of Interest	9.20%
	Interest	36.23
	Rep Schedule	12 annual instalments from 12.03.2013
<b>4</b>	<b>SBI (21.03.2012) - COD</b>	
	Gross loan opening	4.60
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4.60
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4.60
	Average Loan	4.60

	Rate of Interest	10.45%
	Interest	0.48
	Rep Schedule	22 half yearly instalment from 31.08.2016
	<b>Total Loan</b>	
	Gross loan opening	678.24
	Cumulative Repayment upto DOCO/previous year	37.50
	Net Loan-Opening	640.74
	Additions during the year	1.96
	Repayment during the year	37.50
	Net Loan-Closing	605.20
	Average Loan	622.97
	Rate of Interest	<b>9.0663%</b>
	<b>Interest</b>	56.48