

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 202/TT/2012**

**Coram:**

**Shri V.S. Verma, Member  
Shri M. Deena Dayalan, Member**

**Date of Hearing : 01.10.2013  
Date of Order : 21.02.2014**

**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 of Asset I: LILO of 400kV D/C Kahalgaon-Biharshariff T/L (2<sup>nd</sup> Line) and associated bays at Banka S/s (Anticipated DOCO: 1.11.2012); Asset II: 400/132kV, 200 MVA ICT-I along with associated bays at Banka S/s (Anticipated DOCO: 01.11.2012); Asset III: 400/132kV, 200 MVA ICT-II along with associated bays at Banka S/s (Anticipated DOCO: 1.12.2012); Asset IV: 400 kV, 80 MVAR, Bus Reactor with associated bays at Banka S/s (Anticipated DOCO: 1.11.2012) associated with Eastern Region Strengthening Scheme-III in Eastern Region from anticipated DOCO to 31.3.2014.

**And in the matter of:**

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

.....**Petitioner**

**Vs**

1. Bihar State Electricity Board  
Vidyut Bhawan, Bailey Road  
Patna-800 001.
2. West Bengal State Electricity Distribution Company Ltd.  
Bidyut Bhawan, Bidhan Nagar  
Block DJ, Sector-II, Salt Lake City  
Calcutta-700 091.
3. Grid Corporation of Orissa Ltd.  
Shahid Nagar, Bhubaneswar-751 007.



4. Damodar Valley Corporation  
DVC Tower, Maniktala  
Civic Centre, VIP Road  
Calcutta-700 054.
5. Power Department  
Govt. of Sikkim,  
Gangtok – 737 101
6. Jharkhand State Electricity Board  
In Front of Main Secretariat  
Doranda, Ranchi-834 002.

....Respondents

**For petitioner** : Ms. Sangeeta Edwards, PGCIL  
Shri S.S Raju, PGCIL  
Shri M. M. Mondal, PGCIL  
Shri B. K. Sahoo, PGCIL

**For respondents** : None

### **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 400kV D/C Kahalgaon-Biharshariff T/L (2<sup>nd</sup> Line) and associated bays at Banka Sub-station; Asset II: 400/132kV, 200 MVA ICT-I along with associated bays at Banka Sub-station ; Asset III: 400/132kV, 200 MVA ICT-II along with associated bays at Banka Sub-station; Asset IV: 400kV, 80 MVAR, Bus Reactor with associated bays at Banka Sub-station associated with Eastern Region Strengthening Scheme-III (hereinafter referred to as "transmission assets") in Eastern Region from anticipated date of commercial operation to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "2009 Tariff Regulations").

2. The investment approval for the scheme was accorded by the Board of Directors of the petitioner, vide Memorandum Ref. No. C/CP/ERSS-III dated 7.7.2010 for ₹127280 lakh, including Interest During Construction (IDC) of ₹8152 lakh based on 1st Quarter, 2010 price level. The scope of works covered under the scheme broadly includes:-

**Transmission Lines:**

1. Sasaram- Daltonganj 400 kV D/C line
2. Mendhasal- Uttara 400 kV D/C line
3. LILO of Kahalgaon- Biharshariff 400 kV D/C line (1<sup>st</sup> line ) at Lakhisarai
4. LILO of Kahalgaon- Biharshariff 400 kV D/C line (2<sup>nd</sup> line ) at Banka
5. LILO of Meramundali- Jeypore 400 kV S/c line at Bolangir
6. LILO of Rengali- Baripada 400 kV S/c line at Keonjhar
7. LILO of one ckt of Baripada- Mendhasal 400 kV D/C line at Dubri (OPTCL)
8. LILO of both ckts of Jamshedpur-Rourkela 400 kV D/C line at Chaibasa  
(out of the two LILOs bussing of one LILO at Chaibasa, the 2<sup>nd</sup> LILO would be routed through Chaibasa but presently not bussed at Chaibasa)

**Sub-stations:**

1. 2x315 MVA, 400/220 kV Sub-station at Daltonganj (new)
2. 2x200 MVA, 400/132 kV Sub-station at Lakhisarai (new)
3. 2x200 MVA, 400/132 kV Sub-station at Banka (new)
4. 2x315 MVA, 400/220 kV Sub-station at Bolangir (new)
5. 2x315 MVA, 400/220 kV Sub-station at Keonjhar (new)
6. 2x315 MVA, 400/220 kV Sub-station at Chaibasa (new)
7. 2x315 MVA, 400/220 kV Sub-station at Uttara (new)
8. Extension of 400 kV Sasaram Sub-station (POWERGRID) and 400 kV Dubri (OPTCL) & Mendhasal Sub-stations (OPTCL)

3. The details of assets covered in the petition and their date of commercial operation are as under:-

Sr. No.	Assets	DOCO
1.	<b>Transmission Lines:</b>	
2.	LILO of 400 kV D/C Kahalgaon- Biharshariff T/L (2 <sup>nd</sup> Line) and associated bays at Banka S/S ( <b>hereinafter referred to as "Asset 1(Part-A)</b> )	1.12.2012
	(b): 2x50 MVAR 400 kV Switchable line reactor at Banka ( <b>hereinafter referred to as "Asset 1(Part-B)</b> )	1.2.2013
3.	400/132 kV, 200 MVA ICT-I along with associated bays at Banka S/S. ( <b>hereinafter referred to as "Asset 2"</b> )	1.12.2012
4.	400/132 kV 200 MVA ICT-II along with associated bays at Banka S/S( <b>hereinafter referred to as "Asset 3"</b> )	1.1.2013
5.	400 kV 80 MVAR Bus Reactor with associated bays at Banka S/S. ( <b>hereinafter referred to as "Asset 4"</b> )	1.2.2013

4. The petitioner has claimed transmission tariff for the transmission assets from the anticipated date of commercial operation(s) to 31.3.2014. The petitioner was directed to furnish the commissioning status of the assets. The petitioner, vide affidavit dated 8.1.2013, has submitted that Asset-1 and Asset-2 have been put under commercial operation on 1.12.2012 and Asset-3 & Asset-4 are expected to put under commercial operation on 1.1.2013. However, the petitioner did not furnish Auditor/Management Certificate and tariff forms as per revised anticipated date of commercial operation(s). Accordingly, the petitioner was directed to submit capital cost certificate along with tariff forms as per revised anticipated/actual date of commercial operation for both the assets.

5. Subsequently, the petitioner, vide affidavit dated 21.2.2013, has submitted that

Asset-1 has been commissioned in two parts i.e. "LILO of 400 kV D/C Kahalgaon-Biharshariff T/L (2<sup>nd</sup> line) and associated bays at Banka S/S" on 1.12.2012 and "2x 50 MVAR Switchable Line Reactor for Biharshariff I & II" on 1.2.2013 and further submitted that Asset-3 and Asset-4 have been put under commercial operation on 1.1.2013 and 1.2.2013, respectively and subsequently, vide affidavit dated 16.7.2013, has submitted the date of commercial operation letters for Asset-3 and Asset-4 along with capital cost certificates and tariff forms.

6. The petitioner, vide affidavit dated 1.8.2013, has submitted revised capital cost certificate along with tariff forms for Asset-1 (Part-A) and Asset-1 (Part-B).

7. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as under:-

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	56.17	229.97	13.35	94.32	30.33	127.28
Interest on Loan	68.77	267.21	17.38	117.56	41.66	164.66
Return on Equity	57.17	233.12	14.12	99.56	34.06	140.17
Interest on working capital	9.14	32.50	2.17	14.40	5.29	18.99
O & M Expenses	89.57	284.08	20.64	130.92	51.60	163.65
<b>Total</b>	<b>280.82</b>	<b>1046.88</b>	<b>67.66</b>	<b>456.76</b>	<b>162.94</b>	<b>614.75</b>

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Depreciation	18.62	101.70	5.79	44.83
Interest on Loan	25.43	130.93	7.51	55.42
Return on Equity	21.04	112.65	6.18	47.47
Interest on working capital	3.64	16.99	1.02	7.02
O & M Expenses	38.70	163.65	10.32	65.46
<b>Total</b>	<b>107.43</b>	<b>525.92</b>	<b>30.82</b>	<b>220.20</b>

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

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	40.31	42.61	40.31	42.61	23.22	24.55
O & M Expenses	22.39	23.67	22.39	23.67	12.90	13.64
Receivables	140.41	174.48	140.41	174.48	81.47	102.46
<b>Total</b>	<b>203.11</b>	<b>240.76</b>	<b>203.11</b>	<b>240.76</b>	<b>117.59</b>	<b>140.65</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	9.14	32.50	9.14	32.50	5.29	18.99

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	23.22	24.55	9.29	9.82
O & M Expenses	12.90	13.64	5.16	5.46
Receivables	71.62	87.65	30.82	36.70
<b>Total</b>	<b>107.74</b>	<b>125.84</b>	<b>45.27</b>	<b>51.98</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	3.64	16.99	1.02	7.02

9. 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. None of the respondents have filed reply.

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

### **Capital cost**

11. Regulation 7 of the 2009 Tariff Regulations so far as relevant 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.”

12. The details of FR cost, capital cost as on the actual date of commercial operation and estimated additional capital expenditure projected to be incurred for the assets covered in this petition are summarized below:-

**(₹ in lakh)**

Particulars	Apportioned approved cost	Actual cost incurred as on DOCO	Projected Additional Capital Expenditure		Capital expenditure up to 31.3.2014	Projected Add-Cap for 2014-15	Total estimated completion cost
			2012-13	2013-14			
Asset-1 (Part-A)	5102.89	2758.29	1024.35	1325.25	5107.89	609.26	5717.15
Asset-1 (Part-B)	2129.11	1576.42	77.63	488.89	2142.94	242.46	2385.40
Asset-2	3410.00	1380.91	1135.12	313.55	2829.58	135.12	2964.70
Asset-3	3410.00	1459.54	291.06	794.96	2545.56	431.89	2977.45
Asset-4	1236.00	698.09	18.28	377.52	1093.89	169.65	1263.54

13. The petitioner has submitted capital cost certificate along with tariff forms except Form-6 i.e. Financial Package as on date of commercial operation for Asset-

1 (Part-A) and Asset-1 (Part-B). As the petitioner has not furnished Form-6, apportioned approved cost of Asset-1 i.e. ₹7232.00 lakh has been distributed proportionately among Asset-1 (Part-A) and Asset-1 (Part-B) on the basis of total estimated completion cost of respective part.

**Time over-run**

14. As per the investment approval dated 7.7.2010, the project was scheduled to be commissioned within 28 months from the date of investment approval i.e. by 1.12.2012. The petitioner, vide affidavit dated 13.9.2013, has submitted that the transmissions assets covered in the petition have been put under commercial operation as per the details given overleaf:-

<b>Asset</b>	<b>Schedule commissioning as per investment approval</b>	<b>Anticipated DOCO as per petition</b>	<b>DOCO (actual)</b>	<b>Delay</b>
Asset-1 (Part-A)	1.12.2012	1.11.2012	1.12.2012	<b>No delay</b>
Asset-1 (Part-B)		1.11.2012	1.2.2013	<b>2 months</b>
Asset-2		1.11.2012	1.12.2012	<b>No delay</b>
Asset-3		1.12.2012	1.1.2013	<b>1 month</b>
Asset-4		1.11.2012	1.2.2013	<b>2 months</b>

15. There is delay of one month in commissioning of Asset-3 and 2 months in commissioning of Asset-1 (Part-B) & 4. There is no delay in commissioning of Asset-1 (Part-A) and 2.

16. The petitioner, vide affidavit 13.9.2013, has submitted the following reasons for time over-run in case of Asset-1 (Part-B), 3 and 4:-



- (a) Normally the manufacturer works has got their production cycle based on their capacity. Their despatch cycle depends on their production and it is not always possible to supply both ICTs/Reactors for a station simultaneously;
- (b) Simultaneous transportation of both the ICTs /Reactors are not possible due to various factors attributed to transportation;
- (c) The commissioning of ICTs/Reactors requires special Tools & Plants (T&P) and experts from manufacturer and one set of T&P and team of testing specialists are made available on site. Deployment of two simultaneous gangs and expert from manufacturer would require additional cost and therefore, commissioning of ICTs/Reactors is done one after other: and
- (d) At times during testing some of the parameters do not meet the specified technical requirements and it takes time to set right the same. The delay is attributed to such problems found in testing at site which requires rectification.

17. During the hearing on 1.10.2013, in response to Commission's query, the representative of the petitioner submitted that the switchable line reactors are not shown in the scope of the project given in the investment approval and it includes only the major lines and sub-stations. However, the details regarding the switchable line reactors and other details are given in the FR and the DPR. The petitioner was directed to submit a copy the FR and DPR. The petitioner, vide affidavit dated 14.11.2013, has submitted Feasibility cum Detailed Project Report. It is observed that 50 MVAR Switchable Line Reactors at Banka and each Ckt. of Bihar- Shariff – Banka section are included in the DPR.

18. We have considered the submissions made by the petitioner and it appears that the time over-run is due to constraints in manufacturing, transportation and timely non-availability and shortage of gangs and experts of the manufacturer which cannot be attributed to the petitioner. Accordingly, we condone the marginal delay of one month in case of Asset-3. However, if any LD is received by the petitioner from the manufacturer, the same shall be adjusted in the capital cost. The petitioner has submitted that installation of Bus Reactor and Switchable Reactors simultaneously requires two gangs which may result in additional cost and hence commissioning of ICTs/Reactor is done one after other. The delay of two months in case of Asset-1 (b) and Asset-4 is also condoned because of the operational difficulties in commissioning of assets simultaneously.

### **Cost over-run**

19. The total estimated capital cost upto 31.3.2014 of all the transmission assets falls within the apportioned approved cost except for Asset-1 i.e. Asset-1 (Part-A) and (Part-B) . The estimated completion cost exceeds the apportioned approved cost by ₹16.82 lakh, after adjusting excess initial spares amounting to ₹1.59 lakh and ₹0.42 lakh. The cost variation in case of Asset-1 is mainly under items like erection, stringing work and civil works. In Form 5B of the petition, reason for variation in cost has been mentioned as actual awarded cost.

20. The petitioner was directed to furnish the reasons for variation in cost. In response, the petitioner, vide affidavit dated 21.2.2013, has submitted as follows:-

<b>Srl. No.</b>	<b>Item of cost over-run</b>	<b>Reasons given by the petitioner</b>
<b>1</b>	Preliminary investigation, RoW, forest clearance, PTCC	Variation due to the actual condition(s) of the site
<b>2</b>	Tower Steel, Hardware fittings, Conductor, Earth-wire accessories, Spares	Order awarded for turnkey basis. Hence, individual items are not compared.
<b>3</b>	Control Room and Office Building, Township & Colony, Roads and Drainage and structure for switchyard	The variation in item under head Control Room & Office building, Township & Colony, Roads & Drainage is nil, however, it is apparent mainly due to not apportionment of FR cost in said items in the Form 5B submitted in the petition. The total FR cost of items at no 4.1, 5.1, 5.2 and 5.3 are bifurcated and accordingly incorporated against the relevant item. The modified Form 5B for all the assets are accordingly revised.

21. During the hearing on 1.10.2013, the petitioner submitted that five separate petitions have been filed for various elements covered in ERSS-III and the total cost of the scheme is within the FR cost. There is an increase of ₹300 lakh in completion cost of the assets in the instant petition and as the overall cost is within the approved cost and hence the cost over-run may be approved.

22. We are satisfied with the reasons furnished by the petitioner for cost variation and accordingly we allow the variation in the cost.

23. The petitioner has not provided apportioned approved cost for Asset-1 (Part-A) and Asset-1 (Part-B) separately. Therefore, available apportioned approved capital cost for Asset-1 has been proportionately distributed between Asset-1 (Part-A) and Asset-1 (Part-B) on the basis of total estimated completion cost of respective part. As mentioned above, though the total completion cost of all the assets falls within the approved cost, the completion cost of Asset-1 is more than the apportioned approved cost. The petitioner has not submitted the RCE and hence the

capital expenditure for Asset-1 (Asset-1 (Part-A) and Asset-1 (Part-B)) has been restricted to its apportioned approved cost. This approach has been upheld by the Appellate Tribunal for Electricity in its order dated 28.11.2013 in Appeal No.165 of 2012, wherein it has been observed as under:-

"..... The Appellant is a Nava Public Sector Company of the Central Government. Its Board is empowered to approve its projects including the cost estimates for such projects. The Central Commission also accepts the cost approved by the Board of the Appellant. Under such circumstances, the Appellant could have approached its own Board for approval of the Revised Cost Estimates as desired by the Central Commission. ...."

24. Detail of the distribution of apportioned approved cost of Asset-1 among Part-A and Part-B is as follows:-

Particular	As per Petition	As per affidavit dated 1.8.2013	Pro-rata of "apportioned approved cost"
	Apportioned approved cost	Estimated completion cost	
Asset-1 (Part A)	7232.00	5717.15	5102.89
Asset-1 (Part B)		2385.40	2129.11
<b>Total</b>	<b>7232.00</b>	<b>8102.55</b>	<b>7232.00</b>

25. Accordingly, the capital expenditure up to 31.3.2014 has been restricted by disallowing additional capital expenditure of ₹3.41 lakh in case of Asset-1 (Part-A) and ₹13.41 lakh in case of Asset-1 (Part-B) pertaining to 2013-14. However, the capital cost in case of Asset 1(Part-A) and Asset-I (Part-B) shall be reviewed alongwith the capital cost of rest of the assets covered in petition at the time truing-up.

26. Details of the capital cost considered for the purpose of the tariff calculation is given overleaf:-

(₹ in lakh)

Particular	Asset-1 (Part-A)	Asset-1 (Part-B)	Asset-2	Asset-3	Asset-4
Apportioned approved cost	<b>5102.89</b>	<b>2129.11</b>	<b>3410.00</b>	<b>3410.00</b>	<b>1236.00</b>
Capital cost claimed as on DOCO (A)	2758.29	1576.42	1380.91	1459.54	698.09
Less: Excess Initial Spares (B)	(1.59)	(0.42)	0.00	0.00	0.00
Capital cost considered as on DOCO (C)= (A)-(B)	2756.70	1576.00	1380.91	1459.54	698.09
Add-Cap for 2012-13 (D)	1024.35	77.63	1135.12	291.06	18.28
Add-Cap for 2013-14 (E)	1321.84	475.48	313.55	794.96	377.52
<b>Total (C)+(D)+(E)</b>	<b>5102.89</b>	<b>2129.11</b>	<b>2829.58</b>	<b>2545.56</b>	<b>1093.89</b>

### Treatment of Initial Spares

27. Regulation 8 of the 2009 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of the transmission system as under:-

**“8. Initial Spares.** Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

(iv) Transmission system

- (a) Transmission line - 0.75%
- (b) Transmission Sub-station - 2.5%
- (c) Series Compensation devices and HVDC Station - 3.5%

Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein."

28. It is observed that the petitioner has furnished the details of projected additional capital expenditure for 2014-15 which is within the cut-off date but beyond current tariff block i.e. 2009-14.

29. Initial spares claimed for Asset-1 (Part-A) and Asset-1 (Part-B) pertaining to transmission line and sub-station respectively exceeds the ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations, whereas initial spares claimed for

rest of the assets falls within the ceiling limit. Details of the excess initial spares claimed in case of Asset-1 (Part-A) and Asset-1 (Part-B) is as follows:-

(₹ in lakh)

Calculation of Initial Spares.						
Particulars	Elements	Capital Cost up to cut off date	Initial Spares Claimed	Ceiling Limits as per Regulation 8 of the 2009 Tariff Regulations	Initial Spares worked out	Excess Initial Spares
Asset-1 (Part-A)	T/L	3638.41	28.87	0.75%	27.28	-1.59
Asset-1 (Part-B)	S/S	2129.53	53.65	2.50%	53.23	-0.42

30. Excess initial spares claimed have been deducted from the capital expenditure of the respective element as on date of commercial operation. The same will be reviewed at the time of truing up on the submission of the actual additional capital expenditure.

31. Accordingly, following capital cost up to date of commercial operation of the assets have been considered for the purpose of tariff:-

(₹ in lakh)

Particular	Capital Cost claimed (₹ in Lakh)	Reference	Capital cost considered as on DOCO
Asset-1 (Part-A)	2758.29	As per management certificate dated 17.4.2013 (affidavit dated 1.8.2013)	2756.70 (excluding excess initial spare of ₹1.59 lakh)
Asset-1 (Part-B)	1576.42	As per management certificate dated 17.4.2013 (affidavit dated 1.8.2013)	1576.00 (excluding excess initial spares of ₹0.42 lakh)
Asset-2	1380.91	As per management certificate dated 4.1.2013 (affidavit dated 11.1.2013)	1380.91
Asset-3	1459.54	As per management certificate dated 17.4.2013 (affidavit dated 17.7.2013)	1459.54
Asset-4	698.09	As per management certificate dated 17.4.2013 (affidavit dated 17.7.2013)	698.09

## **Projected additional capital expenditure**

32. 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.”

33. 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”.

34. After taking in to account the dates of commercial operation of the assets, cut-off date arrived at is 31.3.2015 for Asset-1 (Part-A) and Asset-2. Cut-off date for Asset-1 (Part-B), Asset-3 and Asset-4 is 31.3.2016.

35. Detail of the projected additional capital expenditure claimed and considered for tariff computation is summarized overleaf:-

### Asset-1 (Part-A)

(₹ in lakh)

Particulars	2012-13	2013-14	2012-13	2013-14*
	Claimed		Considered	
Freehold Land	0.00	3.01	0.00	3.00
Leasehold Land	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	67.7	0.00	67.53
Transmission Line	917.74	810.61	917.74	808.53
Sub-Station Equipments	91.61	428.25	91.61	427.15
PLCC	15.00	15.68	15.00	15.64
<b>Total</b>	<b>1024.35</b>	<b>1325.25</b>	<b>1024.35</b>	<b>1321.84</b>

### Asset-1 (Part-B)

(₹ in lakh)

Particulars	2012-13	2013-14	2012-13	2013-14*
	Claimed		Considered	
Freehold Land	0.00	3.01	0.00	2.93
Leasehold Land	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	67.7	0.00	65.84
Transmission Line	0.00	0.00	0.00	0.00
Sub-Station Equipments	77.63	418.18	77.63	406.71
PLCC	0.00	0.00	0.00	0.00
<b>Total</b>	<b>77.63</b>	<b>488.89</b>	<b>77.63</b>	<b>475.48</b>

\*As mentioned earlier, there is a cost overrun of ₹3.41 lakh in case of Asset-1 (Part-A) and Cost overrun of ₹13.41 lakh in case of Asset-1 (Part-B). The same has been proportionately disallowed from the projected additional capital expenditure for the year 2013-14.

### Asset 2, Asset 3 and Asset 4

(₹ in lakh)

Particulars	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
	Asset-2		Asset-3		Asset-4	
Freehold Land	6.89	1.21	0.00	6.03	0.00	1.51
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	152.21	28.86	0.00	135.41	0.00	33.85
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Station Equipments	974.43	283.48	291.06	651.89	18.28	342.16
PLCC	1.59	0.00	0.00	1.63	0.00	0.00
<b>Total</b>	<b>1135.12</b>	<b>313.55</b>	<b>291.06</b>	<b>794.96</b>	<b>18.28</b>	<b>377.52</b>

36. Additional capital expenditure claimed by the petitioner falls within the cut-off date and is mainly on account of balance and retention payments. Hence, the same has been considered, after restricting capital cost in case of Asset-1 (Part-A) and



Asset-1 (Part-B) due to cost over-run, for the purpose of tariff determination under Regulations 9 (1) of the 2009 Tariff Regulations.

### **Debt- equity ratio**

37. 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.”

38. Details of debt-equity in respect of the assets as on dates of commercial operation are given overleaf:-

(₹ in lakh)

<b>Asset-1 (Part-A)</b>		
<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1929.69	70.00
Equity	827.01	30.00
<b>Total</b>	<b>2756.70</b>	<b>100.00</b>
<b>Asset-1 (Part-B)</b>		
<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1103.20	70.00
Equity	472.80	30.00
<b>Total</b>	<b>1576.00</b>	<b>100.00</b>
<b>Asset-2</b>		
<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	966.64	70.00
Equity	414.27	30.00
<b>Total</b>	<b>1380.91</b>	<b>100.00</b>
<b>Asset-3</b>		
<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1021.68	70.00
Equity	437.86	30.00
<b>Total</b>	<b>1459.54</b>	<b>100.00</b>
<b>Asset-4</b>		
<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	488.66	70.00
Equity	209.43	30.00
<b>Total</b>	<b>698.09</b>	<b>100.00</b>

39. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

(₹ in lakh)

<b>Asset-1 (Part-A)</b>		
<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	3572.02	70.00
Equity	1530.87	30.00
<b>Total</b>	<b>5102.89</b>	<b>100.00</b>
<b>Asset-1 (Part-B)</b>		
<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1490.38	70.00
Equity	638.73	30.00
<b>Total</b>	<b>2129.11</b>	<b>100.00</b>

(₹ in lakh)

<b>Asset-2</b>		
<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1980.71	70.00
Equity	848.87	30.00
<b>Total</b>	<b>2829.58</b>	<b>100.00</b>
<b>Asset-3</b>		
<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	1781.89	70.00
Equity	763.67	30.00
<b>Total</b>	<b>2545.56</b>	<b>100.00</b>
<b>Asset-4</b>		
<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	765.72	70.00
Equity	328.17	30.00
<b>Total</b>	<b>1093.89</b>	<b>100.00</b>

40. The debt-equity ratio considered for projected additional capital expenditure is as follows:-

(₹ in lakh)

<b>Asset-1 (Part-A)</b>			<b>Asset-2</b>	
<b>Particulars</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
<b>Normative</b>			<b>Normative</b>	
<b>2012-13</b>			<b>2012-13</b>	
Debt	171.05	70.00	794.58	70.00
Equity	307.31	30.00	340.54	30.00
<b>Total</b>	<b>1024.35</b>	<b>100.00</b>	<b>1135.12</b>	<b>100.00</b>
<b>2013-14</b>			<b>2013-14</b>	
Debt	925.29	70.00	219.49	70.00
Equity	396.55	30.00	94.07	30.00
<b>Total</b>	<b>1321.84</b>	<b>100.00</b>	<b>313.55</b>	<b>100.00</b>
<b>Asset-1 (Part-B)</b>			<b>Asset-3</b>	
<b>Particulars</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
<b>Normative</b>			<b>Normative</b>	
<b>2012-13</b>			<b>2012-13</b>	
Debt	54.34	70.00	203.74	70.00
Equity	23.29	30.00	87.32	30.00
<b>Total</b>	<b>77.63</b>	<b>100.00</b>	<b>291.06</b>	<b>100.00</b>
<b>2013-14</b>			<b>2013-14</b>	
Debt	332.84	70.00	556.47	70.00
Equity	142.64	30.00	238.49	30.00
<b>Total</b>	<b>475.48</b>	<b>100.00</b>	<b>794.96</b>	<b>100.00</b>

Asset-4				
Particulars	Amount	%	Amount	%
	Normative		Normative	
	2012-13		2012-13	
Debt	12.80	70.00	264.26	70.00
Equity	5.48	30.00	113.26	30.00
<b>Total</b>	<b>18.28</b>	<b>100.00</b>	<b>377.52</b>	<b>100.00</b>

### Return on equity

41. 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:

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

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

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

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

42. Based on the above, the return on equity considered are given hereunder:-

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-A)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Opening Equity	827.01	1134.31	472.80	496.09	414.27	754.81
Addition due to Additional Capitalisation	307.31	396.55	23.29	142.64	340.54	94.07
Closing Equity	1134.31	1530.87	496.09	638.73	754.81	848.87
Average Equity	980.66	1332.59	484.44	567.41	584.54	801.84
Return on Equity (Base Rate )	15.50%	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%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>57.14</b>	<b>232.95</b>	<b>14.11</b>	<b>99.19</b>	<b>34.06</b>	<b>140.17</b>

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	437.86	525.18	209.43	214.91
Addition due to Additional Capitalisation	87.32	238.49	5.48	113.26
Closing Equity	525.18	763.67	214.91	328.17
Average Equity	481.52	644.42	212.17	271.54
Return on Equity (Base Rate )	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>21.04</b>	<b>112.65</b>	<b>6.18</b>	<b>47.47</b>

43. Return on equity has been calculated as per Regulation 15 of the 2009 Tariff Regulations with pre-tax return on equity of 17.481%. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account of RoE due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly with the beneficiaries shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

## **Interest on loan**

44. 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.”

45. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

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

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

(c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan 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 (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

46. Detailed calculations in support of the weighted average rates of interest have been given in Annexure-I to V to this order.

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

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	1929.69	2646.73	1103.20	1157.54	966.64	1761.22
Cumulative Repayment upto previous year	0.00	56.15	0.00	13.35	0.00	30.33
Net Loan-Opening	1929.69	2590.59	1103.20	1144.19	966.64	1730.89
Addition due to additional capital expenditure	717.05	925.29	54.34	332.84	794.58	219.49
Repayment during the year	56.15	229.80	13.35	93.97	30.33	127.28
Net Loan-Closing	2590.59	3286.08	1144.19	1383.06	1730.89	1823.09
Average Loan	2260.14	2938.33	1123.70	1263.63	1348.76	1776.99
Weighted Average Rate of Interest on Loan	9.1241%	9.0871%	9.2782%	9.2685%	9.2188%	9.2194%
<b>Interest</b>	<b>68.74</b>	<b>267.01</b>	<b>17.38</b>	<b>117.12</b>	<b>41.45</b>	<b>163.83</b>

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	1021.68	1225.42	488.66	501.46
Cumulative Repayment upto previous year	0.00	18.62	0.00	5.79
Net Loan-Opening	1021.68	1206.80	488.66	495.67
Addition due to additional capital expenditure	203.74	556.47	12.80	264.26
Repayment during the year	18.62	101.70	5.79	44.83
Net Loan-Closing	1206.80	1661.57	495.67	715.10
Average Loan	1114.24	1434.19	492.17	605.38
Weighted Average Rate of Interest on Loan	9.1355%	9.1357%	9.1545%	9.1547%
<b>Interest</b>	<b>25.45</b>	<b>131.02</b>	<b>7.51</b>	<b>55.42</b>

### Depreciation

48. 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.”

49. Asset-1 (Part-A), Asset-1 (Part-B), Asset-2, Asset-3 and Asset-4 were put under commercial operation as on 1.12.2012, 1.2.2013, 1.12.2012, 1.1.2013 and 1.2.2013 respectively. 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 Tariff Regulation 2009-14.

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	23013-14
Opening Gross Block	2756.70	3781.05	1576.00	1653.63	1380.91	2516.03
Addition due to Projected Additional Capitalisation	1024.35	1321.84	77.63	475.48	1135.12	313.55
Closing Gross Block	3781.05	5102.89	1653.63	2129.11	2516.03	2829.58
Average Gross Block	3268.87	4441.97	1614.81	1891.37	1948.47	2672.81
Rate of Depreciation	5.1527%	5.1734%	4.9590%	4.9681%	4.6701%	4.7620%
Depreciable Value	2855.86	3910.30	1367.21	1614.79	1578.28	2226.54
Remaining Depreciable Value	2855.86	3854.15	1367.21	1601.45	1578.28	2196.20
Depreciation	<b>56.15</b>	<b>229.80</b>	<b>13.35</b>	<b>93.97</b>	<b>30.33</b>	<b>127.28</b>

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	1459.54	1750.60	698.09	716.37
Addition due to Projected Additional Capitalisation	291.06	794.96	18.28	377.52
Closing Gross Block	1750.60	2545.56	716.37	1093.89
Average Gross Block	1605.07	2148.08	707.23	905.13
Rate of Depreciation	4.6410%	4.7344%	4.9135%	4.9530%
Depreciable Value	1272.07	1758.06	593.44	770.87
Remaining Depreciable Value	1272.07	1739.44	593.44	765.08
Depreciation	<b>18.62</b>	<b>101.70</b>	<b>5.79</b>	<b>44.83</b>

### Operation & maintenance expenses

50. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms prescribed in respect of the elements covered in the instant petition are as follows:-

(₹ in lakh)

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
D/C twin conductor T/L (Rs Lakh/km)	0.627	0.663	0.701	0.741	0.783
400 kV bays (Rs Lakh per bay)	52.40	55.40	58.57	61.92	65.46
132 kV and below bays (Rs Lakh per bay)	26.20	27.70	29.28	30.96	32.73

51. As per the norms of Tariff Regulations, 2009, allowable O&M expenses for the asset covered in the petition are as under:-

Element	(₹ in lakh)	
	2012-13 (Pro-rata for 4 months)	2013-14
<b>Asset-I: (a):</b> 28.4 km, LILO of 400 kV D/C twin conductor Kahalgaon- Biharshariff-III and IV at Banka T/L	7.01	22.24
4 no 400 kV bays	82.56	261.84
Total	89.57	284.08
<b>Asset-I: (b) :</b>	<b>(Pro-rata for 2 months)</b>	
2 no 400 kV bays	20.64	130.92
<b>Total Asset-I</b>	<b>110.21</b>	<b>415.00</b>
<b>Asset-II: 400/132 kV ICT-I</b>	<b>(Pro-rata for 4 months)</b>	
1 no 400 kV bay	20.64	65.46
3 no 132 kV & below bays	30.96	98.19
<b>Total Asset-II</b>	<b>51.60</b>	<b>163.65</b>
<b>Asset-III: 400/132 kV ICT-II</b>	<b>(Pro-rata for 3 months)</b>	
1 no 400 kV bay	15.48	65.46
3 no 132 kV & below bays	23.22	98.19
<b>Total Asset-III</b>	<b>38.70</b>	<b>163.65</b>
<b>Asset-IV: 400 kV 80 MVAR Bus Reactor</b>	<b>(Pro-rata for 2 months)</b>	
1 no, 80 MVAR bus reactor bay	10.32	65.46
<b>Total Asset-IV</b>	<b>10.32</b>	<b>65.46</b>

52. The petitioner has submitted that O&M expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M charges for tariff period 2009-14. The petitioner has also submitted that it would approach the Commission for suitable revision in the norms for O&M expenses due to impact of wage revision.

53. While specifying the norms for operation and maintenance expenses, the Commission has in the 2009 Tariff Regulations already factored 50% on account of pay revision of the employees of PSUs after extensive consultation with the stakeholders. At this stage there does not seem to be any justification for deviating from the norms. However, in case the petitioner separately approaches the Commission by making an appropriate application, the same shall be dealt with in accordance with law.

### **Interest on working capital**

54. 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 operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

### (iv) Rate of interest on working capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10.00% plus 350 bps as on 1.4.2011 (13.50%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	40.31	42.61	18.58	19.64	23.22	24.55
O & M Expenses	22.39	23.67	10.32	10.91	12.90	13.64
Receivables	140.37	174.39	67.65	75.93	81.36	102.32
Total	203.07	240.67	96.55	106.48	117.48	140.50
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	<b>9.14</b>	<b>32.49</b>	<b>2.17</b>	<b>14.37</b>	<b>5.29</b>	<b>18.97</b>

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	23.22	24.55	9.29	9.82
O & M Expenses	12.90	13.64	5.16	5.46
Receivables	71.63	87.67	30.82	36.70
Total	107.75	125.85	45.27	51.97
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	<b>3.64</b>	<b>16.99</b>	<b>1.02</b>	<b>7.02</b>

### Transmission charges

56. The transmission charges being allowed for the assets are summarized below:-

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-1 (Part-B)		Asset-2	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	56.15	229.80	13.35	93.97	30.33	127.28
Interest on Loan	68.74	267.01	17.38	117.12	41.45	163.83
Return on Equity	57.14	232.95	14.11	99.19	34.06	140.17
Interest on Working Capital	9.14	32.49	2.17	14.37	5.29	18.97
O & M Expenses	89.57	284.08	20.64	130.92	51.60	163.65
<b>Total</b>	<b>280.74</b>	<b>1046.33</b>	<b>67.65</b>	<b>455.57</b>	<b>162.73</b>	<b>613.90</b>

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	2012-13	2013-14	2012-13	2013-14
Depreciation	18.62	101.70	5.79	44.83
Interest on Loan	25.45	131.02	7.51	55.42
Return on Equity	21.04	112.65	6.18	47.47
Interest on Working Capital	3.64	16.99	1.02	7.02
O & M Expenses	38.70	163.65	10.32	65.46
<b>Total</b>	<b>107.45</b>	<b>526.01</b>	<b>30.82</b>	<b>220.20</b>

### Filing fee and the publication expenses

57. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

### Licence fee

58. 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 42 A (1) (b) of the 2009 Tariff Regulations

**Service tax**

59. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

**Sharing of Transmission Charges**

60. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

61. This order disposes of Petition No. 202/TT/2012.

sd/-  
**(M. Deena Dayalan)**  
Member

sd/-  
**(V. S. Verma)**  
Member

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XL</b>		
	Gross loan opening	<b>300.00</b>	<b>300.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	9.30%	9.30%
	Interest	<b>27.90</b>	<b>27.90</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>2</b>	<b>Bond XLI</b>		
	Gross loan opening	<b>493.80</b>	<b>493.80</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	493.80	493.80
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	493.80	493.80
	Average Loan	493.80	493.80
	Rate of Interest	8.85%	8.85%
	Interest	<b>43.70</b>	<b>43.70</b>
	Rep Schedule	12 Equal Annual Installments from 19.10.2016	
<b>3</b>	<b>BOND-XXXI</b>		
	Gross loan opening	<b>48.00</b>	<b>48.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	48.00	48.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	4.00
	Net Loan-Closing	48.00	44.00
	Average Loan	48.00	46.00
	Rate of Interest	8.90%	8.90%
	Interest	<b>4.27</b>	<b>4.09</b>
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>4</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>48.00</b>	<b>48.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	48.00	48.00



	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	48.00	48.00
	Average Loan	48.00	48.00
	Rate of Interest	8.640%	8.640%
	Interest	<b>4.15</b>	<b>4.15</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>5</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>581.00</b>	<b>581.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	581.00	581.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	581.00	581.00
	Average Loan	581.00	581.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>51.36</b>	<b>51.36</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>6</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>65.00</b>	<b>65.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	65.00	65.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	65.00	65.00
	Average Loan	65.00	65.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>6.08</b>	<b>6.08</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>7</b>	<b>Bond XXXIX</b>		
	Gross loan opening	<b>162.00</b>	<b>162.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	162.00	162.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	162.00	162.00
	Average Loan	162.00	162.00
	Rate of Interest	9.400%	9.40%
	Interest	<b>15.23</b>	15.23
	Rep Schedule	Bullet Payment 29.3.2027	
<b>7</b>	<b>SBI (21.3.2012)</b>		
	Gross loan opening	<b>233.00</b>	<b>233.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>

	Net Loan-Opening	233.00	233.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	233.00	233.00
	Average Loan	233.00	233.00
	Rate of Interest	10.500%	10.500%
	Interest	24.47	24.47
	Rep Schedule	Repayment falls beyond 31.3.2014 22 annual installments w.e.f. 31.8.2016	
<b>8</b>	<b>Bond XLI (AddCap for 2012-13)</b>		
	Gross loan opening	<b>0.00</b>	<b>717.05</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	717.05
	Additions during the year	717.05	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	717.05	717.05
	Average Loan	358.53	717.05
	Rate of Interest	8.85%	8.85%
	Interest	31.73	63.46
	Rep Schedule	12 annual installments from 19.10.2016	
	<b>Total Loan</b>		
	Gross loan opening	<b>1930.80</b>	<b>2647.85</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1930.80	2647.85
	Additions during the year	717.05	0.00
	Repayment during the year	0.00	4.00
	Net Loan-Closing	2647.85	2643.85
	Average Loan	2289.33	2645.85
	Rate of Interest	<b>9.1241%</b>	<b>9.0871%</b>
	<b>Interest</b>	208.88	240.43

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

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XL</b>		
	Gross loan opening	<b>480.49</b>	<b>480.49</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	480.49	480.49
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	480.49	480.49
	Average Loan	480.49	480.49
	Rate of Interest	9.30%	9.30%
	Interest	<b>44.69</b>	<b>44.69</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>2</b>	<b>BOND-XXXI</b>		
	Gross loan opening	<b>27.00</b>	<b>27.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	27.00	27.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	2.25
	Net Loan-Closing	27.00	24.75
	Average Loan	27.00	25.88
	Rate of Interest	8.90%	8.90%
	Interest	<b>2.40</b>	<b>2.30</b>
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
<b>3</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>27.00</b>	<b>27.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	27.00	27.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	27.00	27.00
	Average Loan	27.00	27.00
	Rate of Interest	8.640%	8.640%
	Interest	<b>2.33</b>	<b>2.33</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>4</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>319.00</b>	<b>319.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	319.00	319.00

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	319.00	319.00
	Average Loan	319.00	319.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>28.20</b>	<b>28.20</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>5</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>35.00</b>	<b>35.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	35.00	35.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	35.00	35.00
	Average Loan	35.00	35.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>3.27</b>	<b>3.27</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>6</b>	<b>Bond XXXIX</b>		
	Gross loan opening	<b>88.00</b>	<b>88.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	88.00	88.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	88.00	88.00
	Average Loan	88.00	88.00
	Rate of Interest	9.400%	9.40%
	Interest	<b>8.27</b>	8.27
	Rep Schedule	Bullet Payment 29.3.2027	
<b>7</b>	<b>SBI (21.3.2012)</b>		
	Gross loan opening	<b>127.00</b>	<b>127.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	127.00	127.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	127.00	127.00
	Average Loan	127.00	127.00
	Rate of Interest	10.500%	10.500%
	Interest	13.34	13.34
	Rep Schedule	Repayment falls beyond 31.3.2014 22 annual installments w.e.f. 31.8.2016	
<b>8</b>	<b>Bond XLI (AddCap for 2012-13)</b>		
	Gross loan opening	<b>0.00</b>	<b>54.34</b>
	Cumulative Repayment upto	<b>0.00</b>	<b>0.00</b>

DOC0/previous year		
Net Loan-Opening	0.00	54.34
Additions during the year	54.34	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	54.34	54.34
Average Loan	27.17	54.34
Rate of Interest	8.85%	8.85%
Interest	2.40	4.81
Rep Schedule	12 annual installments from 19.10.2016	
<b>Total Loan</b>		
Gross loan opening	<b>1103.49</b>	<b>1157.83</b>
Cumulative Repayment upto DOC0/previous year	0.00	0.00
Net Loan-Opening	1103.49	1157.83
Additions during the year	54.34	0.00
Repayment during the year	0.00	2.25
Net Loan-Closing	1157.83	1155.58
Average Loan	1130.66	1156.71
Rate of Interest	<b>9.2782%</b>	<b>9.2685%</b>
<b>Interest</b>	104.91	107.21

**Annexure-III**

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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXI</b>		
	Gross loan opening	20.00	20.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.67
	Net Loan-Closing	20.00	18.33
	Average Loan	20.00	19.17
	Rate of Interest	8.90%	8.90%
	Interest	1.78	1.71
	Rep Schedule	12 annual installments from 25.2.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	24.00	24.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	24.00	24.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	24.00	24.00
	Average Loan	24.00	24.00
	Rate of Interest	8.64%	8.64%
	Interest	2.07	2.07
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>BOND-XXXIV</b>		
	Gross loan opening	217.00	217.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	217.00	217.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	217.00	217.00
	Average Loan	217.00	217.00
	Rate of Interest	8.84%	8.84%
	Interest	19.18	19.18
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	20.00	20.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00

	Repayment during the year	0.00	0.00
	Net Loan-Closing	20.00	20.00
	Average Loan	20.00	20.00
	Rate of Interest	9.350%	9.350%
	Interest	<b>1.87</b>	<b>1.87</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>SBI (21.3.2012)</b>		
	Gross loan opening	<b>70.00</b>	<b>70.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	70.00	70.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	70.00	70.00
	Average Loan	70.00	70.00
	Rate of Interest	10.500%	10.500%
	Interest	7.35	7.35
	Rep Schedule	22 annual installments w.e.f. 31.8.2016	
<b>6</b>	<b>Bond XXXIX</b>		
	Gross loan opening	<b>56.00</b>	<b>56.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	56.00	56.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	56.00	56.00
	Average Loan	56.00	56.00
	Rate of Interest	9.400%	9.40%
	Interest	<b>5.26</b>	5.26
	Rep Schedule	Bullet Payment 29.3.2027	
	<b>Total Loan</b>		
	Gross loan opening	<b>407.00</b>	<b>407.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	407.00	407.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.67
	Net Loan-Closing	407.00	405.33
	Average Loan	407.00	406.17
	Rate of Interest	<b>9.2188%</b>	<b>9.2194%</b>
	<b>Interest</b>	37.52	37.45

**Annexure-IV**

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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXI</b>		
	Gross loan opening	20.00	20.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.67
	Net Loan-Closing	20.00	18.33
	Average Loan	20.00	19.17
	Rate of Interest	8.90%	8.90%
	Interest	1.78	1.71
	Rep Schedule	12 annual installments from 25.2.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	24.00	24.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	24.00	24.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	24.00	24.00
	Average Loan	24.00	24.00
	Rate of Interest	8.64%	8.64%
	Interest	2.07	2.07
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>BOND-XXXIV</b>		
	Gross loan opening	217.00	217.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	217.00	217.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	217.00	217.00
	Average Loan	217.00	217.00
	Rate of Interest	8.84%	8.84%
	Interest	19.18	19.18
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	20.00	20.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00



	Net Loan-Closing	20.00	20.00
	Average Loan	20.00	20.00
	Rate of Interest	9.350%	9.350%
	Interest	<b>1.87</b>	<b>1.87</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>SBI (21.3.2012)</b>		
	Gross loan opening	<b>70.00</b>	<b>70.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	70.00	70.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	70.00	70.00
	Average Loan	70.00	70.00
	Rate of Interest	10.500%	10.500%
	Interest	7.35	7.35
	Rep Schedule	22 annual installments w.e.f. 31.8.2016	
<b>6</b>	<b>Bond XXXIX</b>		
	Gross loan opening	<b>56.00</b>	<b>56.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	56.00	56.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	56.00	56.00
	Average Loan	56.00	56.00
	Rate of Interest	9.400%	9.40%
	Interest	<b>5.26</b>	5.26
	Rep Schedule	Bullet Payment 29.3.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>314.68</b>	<b>314.68</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	314.68	314.68
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	314.68	314.68
	Average Loan	314.68	314.68
	Rate of Interest	9.300%	9.30%
	Interest	<b>29.27</b>	29.27
	Rep Schedule	12 annual installments from 28.6.2016	
<b>8</b>	<b>Bond XLI</b>		
	Gross loan opening	<b>300.00</b>	<b>300.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

Net Loan-Closing		300.00	300.00
Average Loan		300.00	300.00
Rate of Interest		8.850%	8.850%
Interest		26.55	26.55
Rep Schedule	12 annual installments from 19.10.2016		
<b>Total Loan</b>			
Gross loan opening		<b>1021.68</b>	<b>1021.68</b>
Cumulative Repayment upto DOC0/previous year		0.00	0.00
Net Loan-Opening		1021.68	1021.68
Additions during the year		0.00	0.00
Repayment during the year		0.00	1.67
Net Loan-Closing		1021.68	1020.01
Average Loan		1021.68	1020.85
Rate of Interest		<b>9.1355%</b>	<b>9.1357%</b>
<b>Interest</b>		93.34	93.26

**Annexure-V**

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

(₹ in lakh)

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXI</b>		
	Gross loan opening	<b>10.00</b>	<b>10.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.83
	Net Loan-Closing	10.00	9.17
	Average Loan	10.00	9.58
	Rate of Interest	8.90%	8.90%
	Interest	<b>0.89</b>	<b>0.85</b>
	Rep Schedule	12 annual installments from 25.2.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>10.00</b>	<b>10.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	8.64%	8.64%
	Interest	<b>0.86</b>	<b>0.86</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>BOND-XXXIV</b>		
	Gross loan opening	<b>110.00</b>	<b>110.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	110.00	110.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	110.00	110.00
	Average Loan	110.00	110.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>9.72</b>	<b>9.72</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>10.00</b>	<b>10.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	9.350%	9.350%
	Interest	<b>0.94</b>	<b>0.94</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>SBI (21.3.2012)</b>		
	Gross loan opening	<b>45.00</b>	<b>45.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	45.00	45.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	45.00	45.00
	Average Loan	45.00	45.00
	Rate of Interest	10.500%	10.500%
	Interest	4.73	4.73
	Rep Schedule	22 annual installments w.e.f. 31.8.2016	
<b>6</b>	<b>Bond XXXIX</b>		
	Gross loan opening	<b>25.00</b>	<b>25.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.00	25.00
	Average Loan	25.00	25.00
	Rate of Interest	9.400%	9.40%
	Interest	<b>2.35</b>	2.35
	Rep Schedule	Bullet Payment 29.3.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>130.00</b>	<b>130.00</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	130.00	130.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	130.00	130.00
	Average Loan	130.00	130.00
	Rate of Interest	9.300%	9.30%
	Interest	<b>12.09</b>	12.09
	Rep Schedule	12 annual installments from 28.6.2016	
<b>8</b>	<b>Bond XLI</b>		
	Gross loan opening	<b>148.66</b>	<b>148.66</b>
	Cumulative Repayment upto DOCOC/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	148.66	148.66
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

Net Loan-Closing		148.66	148.66
Average Loan		148.66	148.66
Rate of Interest		8.850%	8.850%
Interest		13.16	13.16
Rep Schedule	12 annual installments from 19.10.2016		
<b>Total Loan</b>			
Gross loan opening		<b>488.66</b>	<b>488.66</b>
Cumulative Repayment upto DOC0/previous year		0.00	0.00
Net Loan-Opening		488.66	488.66
Additions during the year		0.00	0.00
Repayment during the year		0.00	0.83
Net Loan-Closing		488.66	487.83
Average Loan		488.66	488.24
Rate of Interest		<b>9.1545%</b>	<b>9.1547%</b>
<b>Interest</b>		44.73	44.70