

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 99/TT/2012**

**Coram:**

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

**Date of Hearing : 13.11.2014**

**Date of Order : 24.03.2015**

**In the matter of:**

Approval of transmission tariff for transmission assets associated with 765 kV systems for Central Part of Northern Grid Part-III in Northern Region for the period from date of commercial operation to 31.3.2014 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 Power Procurement Centre,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur-302 024.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur-302 024.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur-302 024.



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-180 001.
9. UP Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow- 226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi- 110 002.
11. BSES Yamuna Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi- 110 019.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi- 110 019.
13. North Delhi Power Ltd.,  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11 kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi-110 034.
14. Chandigarh Administration,  
Sector-9, Chandigarh-160 009.
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun- 248 001.
16. North Central Railway,  
Allahabad- 211 003.

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

....Respondents

**For petitioner :** Shri M M Mondal, PGCIL  
Shri S K Venkatesan, PGCIL  
Ms. Sangeeta Edwards, PGCIL  
Shri Rakesh Prasad, PGCIL

**For respondent :** None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Ltd. (PGCIL) seeking approval of transmission tariff for the transmission assets associated with 765 kV systems for Central Part of Northern Grid Part-III in Northern Region for the period from the respective dates 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 “the 2009 Tariff Regulations”).

2. Investment approval of the project was accorded by the Board of Directors of the petitioner's company vide Memorandum dated 3.11.2009 for ₹107512 lakh including IDC of ₹7712 lakh, based on 3rd Quarter, 2009 price level.

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

#### **Transmission Lines:**

- (a) Meerut Bhiwani 765 kV S/C line -175 km.
- (b) LILO of Bareilly –Mandola 400 kV D/C Line at Meerut -103 km.
- (c) LILO of both circuits of Bawana/Bahadurgarh- Hissar 400 kV D/C

line at Bhiwani-15 km.

**Sub-Stations:**

- (a) New 2X1000 MVA, 765/400 kV and 2X 500 MVA, 400/220 kV Bhiwani 765/400/220 kV sub-station.
- (b) Extension of Meerut 765/400 kV sub-station.
- (c) Extension of Mandola 400/220 kV sub-station.
- (d) Extension of Ballabhgarh 400/220 kV sub-station- Realignment works.

**Reactive Compensation:**

**Line Reactors**

- (a) Meerut –Bhiwani 765 kV S/C Line(240 MVAR switchable)

**Bus Reactor(s)**

- (b) Bhiwani- 2X 240 MVAR

4. The petitioner had claimed tariff for four assets initially in the instant petition. Later on, vide affidavit dated 27.2.2013, the petitioner segregated these four assets into eleven assets and again vide affidavit(s) dated 7.10.2013 and 9.12.2014 had combined certain assets as per their actual date of commercial operation(s) and submitted the revised cost figures to arrive at a tally of eight assets. The details of the assets for which the petitioner has claimed tariff through this petition together with the respective dates of commercial operation (hereinafter DOCO) are given overleaf:-

<b>Assets as per affidavit dated 7.10.2013 and 9.12.2014 with their Actual DOCO</b>	
LILO of Circuit -1 of 400 kV D/C Bareilly-Mandola Line at Meerut Sub-station. <b>(Hereafter referred to as "Asset-1")</b>	1.10.2012
LILO of Circuit -2 of 400 kV D/C Bareilly- Mandola Line at Meerut Sub-station <b>(Hereafter referred to as "Asset-2")</b>	1.4.2013
765 kV Bays for Bhiwani-Moga Line at Bhiwani Substation; 765 kV 240 MVAR Bus Reactor-I along with Associated Bays at Bhiwani Sub-station; 765/400 kV 1000 MVA ICT-I Alongwith Associated Bays at Bhiwani Sub-station; 2 nos. 400 kV Bays for Hisar- Bahadurgarh at Bhiwani sub-station. <b>(Hereafter referred to as "Asset-3")</b>	1.6.2012
LILO of Hisar-Bawana at Bhiwani Alongwith 2 No 400 kV Bays at Bhiwani Sub-station. <b>(Hereafter referred to as "Asset-4")</b>	1.7.2012
765 kV Bays For Jattikalan-Bhiwani Line at Bhiwani Sub-station. <b>(Hereafter referred to as "Asset-5")</b>	1.10.2012
765 kV S/C Meerut-Bhiwani Line alongwith Associated Bays At Meerut & Bhiwani and 765 kV, 240 MVAR Line Reactor at Bhiwani Sub-station <b>(Hereafter referred to as "Asset-6")</b>	1.2.2014
765/400 kV, 1000 MVA ICT-II alongwith associated bays at Bhiwani Sub-station <b>(Hereafter referred to as "Asset-7")</b>	1.10.2012
765 kV, 240 MVAR Bus Reactor-II Along with Associated Bays at Bhiwani Sub-station <b>(Hereafter referred to as "Asset-8")</b>	1.7.2012

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

<b>Particulars</b>	<b>(₹ in lakh)</b>		
	<b>Asset 1</b>		<b>Asset 2</b>
	<b>2012-13</b>	<b>2013-14</b>	<b>2013-14</b>
Depreciation	177.46	382.88	396.44
Interest on Loan	211.73	432.25	470.86
Return on equity	177.48	382.72	396.20
Interest on Working Capital	17.10	36.16	36.85
O & M Expenses	73.51	155.42	156.09
<b>Total</b>	<b>657.28</b>	<b>1389.43</b>	<b>1456.44</b>

<b>Particulars</b>	<b>(₹ in lakh)</b>			
	<b>Asset 3</b>		<b>Asset 4</b>	
	<b>2012-13</b>	<b>2013-14</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	558.38	807.70	96.41	142.69
Interest on Loan	711.13	968.38	123.63	172.88
Return on equity	595.85	858.37	102.80	152.32
Interest on Working Capital	63.46	86.68	12.80	18.34
O & M Expenses	371.50	471.30	97.19	136.99
<b>Total</b>	<b>2300.32</b>	<b>3192.43</b>	<b>432.83</b>	<b>623.22</b>

(₹ in lakh)

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Depreciation	32.34	78.01	258.29
Interest on Loan	44.51	101.40	311.81
Return on equity	36.87	88.10	256.50
Interest on Working Capital	5.01	11.22	22.12
O & M Expenses	43.34	91.64	65.24
<b>Total</b>	<b>162.07</b>	<b>370.37</b>	<b>913.96</b>

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Depreciation	177.61	449.35	148.57	233.35
Interest on Loan	228.79	556.70	186.18	276.72
Return on equity	186.45	469.11	155.28	244.62
Interest on Working Capital	17.75	42.63	14.87	22.43
O & M Expenses	74.30	157.10	65.01	91.64
<b>Total</b>	<b>684.90</b>	<b>1674.89</b>	<b>569.91</b>	<b>868.76</b>

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

(₹ in lakh)

Particulars	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Maintenance Spares	22.05	23.31	23.41
O & M expenses	12.25	12.95	13.01
Receivables	219.09	231.57	242.74
<b>Total</b>	<b>253.39</b>	<b>267.83</b>	<b>279.16</b>
Interest	17.10	36.16	37.69
Rate of Interest	13.50%	13.50%	13.50%

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	66.87	70.70	19.44	20.55
O & M expenses	37.15	39.28	10.80	11.42
Receivables	460.07	532.07	96.19	103.87
<b>Total</b>	<b>564.09</b>	<b>642.05</b>	<b>126.43</b>	<b>135.84</b>
Interest	63.46	86.68	12.80	18.34
Rate of Interest	13.50%	13.50%	13.50%	13.50%

(₹ in lakh)

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Maintenance Spares	13.00	13.75	58.72
O & M expenses	7.22	7.64	32.62
Receivables	54.02	61.73	913.96
<b>Total</b>	<b>74.24</b>	<b>83.12</b>	<b>1005.30</b>
Interest	5.01	11.22	22.12
Rate of Interest	13.50%	13.50%	13.20%

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	22.29	23.57	13.00	13.75
O & M expenses	12.38	13.09	7.22	7.64
Receivables	228.30	279.15	126.65	144.79
<b>Total</b>	<b>262.97</b>	<b>315.81</b>	<b>146.87</b>	<b>166.18</b>
Interest	17.75	42.63	14.87	22.43
Rate of Interest	13.50%	13.50%	13.50%	13.50%

7. No comments have been received from the general public in response to the notices published in news papers by the petitioner under Section 64 of the Electricity Act, 2003 (the Act). Replies have been filed by Respondent No. 2 Ajmer Vidyut Vitran Nigam Ltd, Respondent No. 4 Jodhpur Vidyut Vitran Nigam Ltd. vide affidavits dated 17.5.2012, and Respondent No. 6. Punjab State Power corporation Ltd. (PSPCL) vide affidavits dated 3.7.2012 and 11.2.2013. The petitioner has not filed any rejoinder to the reply of AVVNL, Jd.VVNL and PSPCL. The concerns expressed by the respondents are being addressed in the respective paras of this order.

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

9. PSPCL has raised the issue of propriety of claiming tariff in respect of some of the elements included in this petition. We address this issue before

taking up the issue of tariff determination. Gist of the submissions by the PSPCL in this connection is as under:-

(a) Incomplete Assets:- 765 kV bay for Jhattikalan-Bhiwani line at Bhiwani Sub-station (Asset 5) was initially included in Asset-III and 765 kV bay for Moga-Bhiwani line at Bhiwani Sub-station (Asset 3) was included in Asset-II. It is not in order to claim transmission charges for a line bay at Bhiwani end of the 765 kV line only without reference to the complete line. As per definition of transmission line given in the Act, the transmission line includes the switchgear. Hence, it is not justified to claim transmission tariff for only a part of the line i.e. the Bhiwani end 765 kV bay of Bhiwani-Moga and Bhiwani-Jhattikalan lines. The petition does not contain any averment or details regarding the status of commissioning of the complete lines i.e. Bhiwani-Moga and Bhiwani-Jhattikalan. Hence, the claim of transmission tariff for only the line bays at Bhiwani end is not in order. The Commission may consider taking a policy decision for ensuring that the transmission tariff of a line is decided for the complete line itself and not for separate components such as the bay at one end, in tune with the definition contained in the Act.

(b) Incomplete Bhiwani Sub-station:- PSPCL has submitted that, as regards implementation of telemetry in Bhiwani Sub-station, it has been stated that the 765 kV Bhiwani Sub-station was incomplete since the telemetry system in the Sub-station was not

commissioned/ functional. The same has been discussed in 75<sup>th</sup>, 76<sup>th</sup>, 77<sup>th</sup>, 78<sup>th</sup> and 79<sup>th</sup> meeting and from the minutes of meeting it is clearly evident that 765 kV Bhiwani Sub-station did not have telemetry till 14.9.2012. Besides, the 765 kV Bhiwani-Moga line was energized in May, 2012 while the 765 kV Bhiwani-Jhattikalan line was energized in September, 2012. Therefore, the telemetering of the 765 kV Bhiwani Sub-station was incomplete. The petitioner may, therefore, be directed to get a certificate from NRPC as well as NRLDC to confirm the date when the telemetry of 765 kV Bhiwani Sub-station was completed. The DOCO of 765 kV equipment/elements connected to Bhiwani 765 kV grid Sub-station should be allowed only from the date onwards. The 765 kV elements at Bhiwani considered in the present petition are as under:-

- (i) 765 kV Moga Bay, 240 MVAR Bus Reactor-I and 1000 MVA, ICT-I at Bhiwani Sub-station (Asset 3)
- (ii) 765 kV Jhattikalan Bay, 765 kV Bhiwani-Meerut line, 240 MVAR Line Reactor at Bhiwani, (Asset 6) 1000 MVA, ICT-II (Asset 7) and 240 MVAR Bus Reactor-II at Bhiwani Sub-station (Asset 8).

The DOCO of these assets should be decided after taking into account the commissioning of telemetry system at 765 kV Bhiwani Sub-station.

(c) The 765 kV ring main system which was envisaged for injection of power at Agra from 765 kV Gwalior-Agra line and 765 kV Gaya-Sasaram-Fatehpur-Agra line as well as injection of power at Meerut from 765 kV Gaya Balia-Lucknow-Bareilly- Meerut line is incomplete because

(i) Gwalior-Agra section has not been upgraded to 765 kV,

(ii) Agra-Jhattikalan line is not complete,

(iii) Lucknow-Bareilly-Meerut 765 kV line is not ready (this line has been awarded to private party NKTCL under Section-63 of the Act).

d) The only route of 765 kV supply to Bhiwani is the Agra-Meerut-Bhiwani route (since Moga is envisaged as a receiving station. The petitioner is not justified to claim date of commercial operation of Bhiwani assets until and unless the 765 kV supply system Agra-Meerut-Bhiwani is commissioned.

10. We have considered the submissions made by PSPCL. As regards PSPCL's submission at (a) above, the completion of 765 kV bay for Jhattikalan-Bhiwani line, it is observed that the petitioner has claimed tariff for Bhiwani-Moga transmission line and Jhattikalan-Bhiwani transmission line in Petition No. 82/TT/2012. Bhiwani-Moga transmission line was put under commercial operation w.e.f. 1.6.2012 and Jhattikalan-Bhiwani transmission line w.e.f 1.10.2012. The bays associated with Bhiwani-Moga and Jhattikalan-

Bhiwani transmission lines were filed in the instant petition and they were commissioned on 1.6.2012 and 1.10.2012 respectively i.e. on the same dates on which transmission lines were commissioned. With regard to PSPCL's contention at (b) above, i.e. the issue of implementation of telemetry at Bhiwani Sub-station was discussed in 75<sup>th</sup>, 76<sup>th</sup>, 77<sup>th</sup>, 78<sup>th</sup> and 79<sup>th</sup> meeting and as per their minutes it is clear that the 765 kV Bhiwani Sub-station did not have the telemetry till 14.9.2012. The petitioner has not submitted any documentary evidence in the instant petition regarding the commissioning of telemetry. However, the assets in the Bhiwani Sub-station were commissioned on 1.6.2012, 1.7.2012 and 1.10.2012. The issue of telemetry was dealt up by the Commission in the Petition No. 56/SM/2013 and vide order dated 19.12.2013, the petitioner was directed to commission the telemetry in all its Sub-stations within six months of the issue of order. The petitioner is directed to submit the details of the telemetry system installed at Bhiwani Sub-station and its date of commissioning at the time of truing-up. A certificate from NRLDC shall be submitted by the petitioner in this regard. As regards PSPCL's submission at (c) above, the upgradation of 400 kV Gwalior-Agra transmission line to 765 kV, the same has been upgraded on 1.4.2013 and it is covered in Petition No. 51/TT/2013. Similarly, Agra-Jhattikalan transmission line was put under commercial operation on 1.10.2012 and it is covered in Petition No. 199/TT/2012. With regards to PSPCL's contention at (d), we would like to clarify that the 765 kV S/C Agra-Meerut transmission line was put under commercial operation on 1.6.2013 and it is covered in Petition No.

199/TT/2012. Further, 765 kV S/C Meerut-Bhiwani line, covered in the instant petition, was put under commercial operation on 1.2.2014.

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

### **Capital cost**

12. As regards the capital cost, Regulation 7(1) of the 2009 Tariff Regulations provides as follows:-

“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.”

13. As stated above the details of the apportioned approved cost, actual expenditure incurred as on date of commercial operation and details of additional capital expenditure (hereinafter “add cap”) incurred/ projected to be incurred for the assets covered in the petition are as follows:-

Assets	Apportioned approved cost	Cost incurred as on actual DOCO	Projected additional capitalization			Total estimated completion cost
			2012-13	2013-14	2014-15 and 2015-16	
Asset 1	7521.06	6412.26	712.56	346.22	-	7471.04
Asset 2	7762.7	7380.76	-	348.18	-	7728.94
Asset 3	21853.12	11652.06	3964.52	1502.25	2124.47	19243.30
Asset 4	3000.76	2468.81	289.46	292.39	313.68	3364.34
Asset 5	1897.04	1251.73	308.36	239.74	274.55	2074.38
Asset 6	36260.02	29022.68	-	647.21	1794.56	31464.45
Asset 7	11783.41	5605.76	3009.90	658.96	993.43	10268.05
Asset 8	6234.04	3402.42	1090.71	342.62	510.85	5346.60
<b>Total</b>	<b>96312.15</b>	<b>67196.48</b>	<b>9375.51</b>	<b>4377.57</b>	<b>6011.54</b>	<b>86961.1</b>

### **Cost over-run**

14. The total estimated completion cost of the project is within the approved cost. However, the completion cost in respect of Asset 4 and Asset 5 is more than the apportioned approved cost. It is seen from above that in respect of some of the assets including the above two, additional capital expenditure projected to be incurred during 2014-15 and 2015-16 has been claimed by the petitioner. Add-cap claimed for the years 2014-15 and 2015-16 falls beyond the tariff period 2009-14. Add-cap upto 31.3.2014 is admissible in the instant tariff. Total estimated expenditure during the current tariff period is within the apportioned approved cost. Thus, there is no cost over-run in respect of the assets covered in the instant petition. However, there is a variation in cost of some of the elements of the assets covered in the petition.

15. PSPCL has made the following submissions regarding cost over-run:-

- a) As per the petitioner, the increase in cost of line portion is due to increase in length of the line. This statement is not correct since the actual line length is given as 15.515 km, while the cost approved as per approval letter of 3.11.2009 is 15 km.
- b) The estimated cost of foundation for structure for 765 kV Bus Reactor-I is ₹76 lakh while the actual cost incurred is ₹267.68 lakh, which is 350% of the original estimated cost. For bus reactor, the foundation for structure would mean the foundation for the bus reactor, and also the foundation for breaker and isolator etc. However, the cost of ₹268 lakh is too high.

- c) The cost of foundation for structure for 1000 MVA ICT is too high.  
Original estimate is ₹109.19 lakh while actual expenditure is ₹535.37 lakh. The cost of over ₹500 lakh for the foundation of ICT is too high.
- d) The cost of foundation for structure of 765 kV bays for Jattikalan-Bhiwani Transmission Line is ₹267.68 lakh as against the original estimate of ₹79.53 lakh, which is too high.
- e) The cost of foundation structure for ICT-II is ₹535.37 lakh as against the original estimate of ₹109.19 lakh. The cost is about 5 times the original estimate.
- f) The cost of foundation for structure of Bus Reactor-II is ₹267.68 Lakh as against the original estimate of ₹76 lakh.

16. The Commission vide letter dated 6.7.2012, had directed the petitioner to submit the reasons and justification for such huge increase in the cost of certain elements.

17. In response, petitioner vide affidavit dated 27.2.2013 has submitted as under: -

- (a) As per FR line length of LILO of one circuit was considered as 7.5 km, but as per actual execution length of LILO for one ckt. works out to 15 km. As such due to increase in length of LILO, cost of transmission line material increased, hence cost of line increased. Further, the estimates are prepared by the petitioner 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

contract. For procurement, open competitive bidding route is followed 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 vary lower as compared to the cost estimate depending upon prevailing market conditions. The cost of foundation for structures is as per actual award cost through open tender.

(b) The cost of land acquisition and cost of foundation & miscellaneous civil work is as per actual cost.

(c) The cost variation in preliminary works and civil work includes cost of crop compensation, tree compensation and forest compensation and also cost structure foundation and is as per actual award cost.

18. The Commission vide Record of Proceedings dated 13.11.2014 directed the petitioner to submit the rejoinder to the reply filed by PSPCL. The petitioner has not filed any rejoinder.

19. The details of cost of Structure for Foundation for various assets claimed by the petitioner in Form-5B is given overleaf:-

(₹ in lakh)

Asset		As per original estimate	As on DOCO	Estimated expenditure up to 31.3.2012	Liabilities	Variation w.r.t. original estimate	% of Variation
<b>Asset-3</b>	765 kV, 240 MVAR Bus Reactor-I	76.00	71.31	8.99	187.38	191.68	240
	1000 MVA ICT-I	109.19	142.62	17.99	374.76	426.18	374
<b>Asset-5</b>	765 kV bays for Jattikalan-Bhiwani TL	79.53	71.31	65.21	131.16	188.15	237
<b>Asset-7</b>	1000 MVA ICT-II	109.19	142.62	130.42	262.33	426.18	390
<b>Asset-8</b>	765 kV, 240MVAR Bus Reactor-II	76.00	71.31	65.21	131.16	191.68	252

20. We have considered the submissions of the petitioner and PSPCL. The petitioner has not filed its rejoinder to the reply filed by PSPCL. We are not happy with the petitioner for not filing its rejoinder to the PSPCL's reply inspite of clear direction to this effect on 13.11.2014. In response to Commission's queries, the petitioner has clarified that the LILO of one circuit had increased from 7.5 km as per FR to 15 km during actual execution. The petitioner has not furnished any explanation regarding the higher completion cost of the "foundation for structure" of the assets at Bhiwani Sub-station. Further, the reasons submitted by the petitioner for the steep increase in cost of certain items are not exhaustive and the information submitted by the petitioner do not give the details like change in volume of work, scope of work or cost and the extent of change from estimate to actual. Keeping in view, we are constrained to restrict the cost of the "foundation for structure" for assets involving Bhiwani Sub-station to FR cost. The petitioner is at liberty to reply to the PSPCL queries dated 10.7.2012 and 13.2.2013 and submit detailed justification of the

foundation cost at the time of truing-up.

21. The revised foundation cost has been worked out by considering the revised cost as on 31.3.2014 in the ratio of original foundation cost to total completion cost given in the original petition as indicated below. This revised foundation cost has been reduced from capital cost of the respective assets as on actual DOCO for tariff calculation. Based on the above, capital cost of asset-3, 5, 7 and 8 considered for purpose of tariff calculation are as under:-

(₹ in lakh)						
Assets	Revised Cost incurred as on actual DOCO as per mgt certificate dated 21.1.2014	Revised Cost incurred as on 31.03.2014 as per mgt certificate dated 21.01.2014	Foundation cost (original)	Total completion cost of the respective asset as per original petition	Deemed revised Foundation cost worked out (e)=(b)*(c)/(d)	Restricted Capital cost considered as on DOCO (f)=(a)-(e)
	(a)	(b)	(c )	(d)	(e)	(f)
Asset 3	11652.06	17118.83	617.86	13844.78	763.97	10888.09
Asset 5	1251.73	1799.83	188.15	1862.37	181.83	1069.90
Asset 7	5605.76	9274.64	426.18	8894.30	444.40	5161.36
Asset 8	3402.42	4835.75	191.68	5027.47	184.37	3218.05

22. Due to unavailability of IDC and IEDC corresponding to the foundation cost(s) IDC/IEDC has not been reduced from the capital cost as on DOCO. The capital cost including IDC and IEDC shall be reviewed after the submission of revised data as per actual DOCO(s). The petitioner is directed to furnish the actual expenditure figures of the foundation structures with IDC/IEDC and corresponding ACE figures at the time of filing the truing-up petition.

### **Time over-run**

23. As per the Investment Approval (IA) dated 3.11.2009, the assets were scheduled to be commissioned within 30 months from the date of IA i.e. by 1.6.2012. Against this, the assets covered in the instant petition were put under commercial operation as follows:-

<b>Asset</b>	<b>Actual DOCO</b>	<b>Delay</b>
Asset 1	1.10.2012	4 Months
Asset 2	1.4.2013	10 Months
Asset 3	1.6.2012	No delay
Asset 4	1.7.2012	1 Month
Asset 5	1.10.2012	4 Months
Asset 6	1.2.2014	20 Months
Asset 7	1.10.2012	4 Months
Asset 8	1.7.2012	1 Month

24. From the above, it is seen that there is delay in respect of commissioning of all the assets except Asset 3. AVVNL Jd.VVNL have submitted that additional burden due to time over-run should not be passed on the beneficiaries. Justification offered by the petitioner in this connection and the acceptability thereof are discussed in the succeeding paragraphs.

25. There is a delay of 4 months and 10 months in commissioning Asset-1 and Asset 2 respectively. In this connection, the petitioner has stated as under:-

- (a) The LILO of Bareilly-Mandola line (Ckt-I and II) are passing through fertile and cultivated land of Western UP. Therefore, the petitioner faced a lot of resistance from villagers during construction of said line despite the payment of compensation.

(b) Project got delayed as work stopped at different stages i.e. during foundation, Stringing, etc. Villagers created ROW problems throughout the line.

(c) The ROW problem was resolved with the help of District Magistrate and Police Authorities.

26. As regards Asset 1, the petitioner has submitted copies of letters written by it to District Magistrate in regard to Right of Way issue in construction of LILO of 400 kV D/C Bareilly-Mandola transmission line (Loop in Line) at Meerut Sub-station. The letters submitted by the petitioner dated 17.3.2012 and 14.6.2012 indicate that there is RoW issue created by villagers at tower locations 13/0, 20/0, 21/0, 21/4, 35/3, 35/4, 39/3, 40/0 and 42/0. Further, the petitioner has submitted copy of letters written to Superintendent of Police on 27.3.2012 and 31.3.2012 to provide adequate protection from villagers and to complete the balance works of stringing/ tower erection of transmission line. The petitioner has submitted documentary evidence and necessary steps taken by them to tackle RoW issue in construction of transmission line. Considering the submission of the petitioner in regard to the hindrance caused by the villagers and the letters written by the petitioner to District Magistrate and Police Authorities, we are of the view that the delay is not attributable to the petitioner. Accordingly, time over-run of 4 months in commissioning of LILO of Bareilly-Mandola ckt-I at Meerut is condoned.

27. As regards the delay in commissioning of Asset 2 i.e. LILO of ckt-II of Bareilly-Mandola D/C line, the petitioner has submitted copies of letters written

to District Magistrate in regard to Right of Way issue in construction of LILO of 400 kV D/C Bareilly-Mandola transmission line (Ckt-II) at Meerut sub-station. The letters submitted by the petitioner dated 17.3.2012, 14.6.2012, 6.9.2012, 3.12.2012, 28.1.2013 and 1.2.2013 indicate that there is RoW issue created by villagers at tower locations 9/0 to 10/0, 10/1, 17/1, 21/4, 23/0, 24/1, 24A/1, 28/0, 39/3, 40/0, 41/0 and 42 A/0. Further, the petitioner has also written letter to Divisional Magistrate on 18.2.2013 in regard to RoW issue at tower location 39/3. The petitioner has submitted the copy of letters written to Senior Superintendent of Police on 20.2.2013 and 26.2.2013 to provide adequate protection from villagers and to complete the balance works of stringing/ tower erection of transmission line. The petitioner has submitted the documentary evidence and necessary steps taken to tackle the RoW issue in construction of transmission line pertaining to work held up from March, 2012 to September, 2012 and again from December, 2012 to February, 2013. We are of the view that the time over-run of 10 months in commissioning of LILO of Bareilly-Mandola ckt-II at Meerut is not attributable to the petitioner and, accordingly, it is condoned.

28. As regards the commissioning of Asset-6, there is a delay of 20 months. The petitioner has attributed the delay to hindrance created by the villagers of village PipliKhera, village Bamla, village Tihar Malik etc. at various locations of this line. It has been stated that the matter was taken up with Higher Authorities in the Administration to resolve the issue. The RoW problem was so serious that the police protection was taken for construction of this line. The petitioner has submitted copies of letters written to SDM, Bhiwani, SHO,

Sadar Thana, Bhiwani, SDM Gohana, Sonapat, SHO, Bhiwani, SHO, Maham, Rohtak, SDM Mohana, Sonapat, SHO, Kharak, Bhiwani, The Deputy Commissioner, Rohtak (HR), The Deputy Commissioner, Sonapat (HR) and The District Magistrate, Bhiwani (HR). The letters submitted by the petitioner indicate the hindrances caused at various locations for the erection of 765 kV Meerut-Bhiwani Transmission Line. The letters submitted by the petitioner in regard to hindrances caused by villagers at various locations of 765 kV S/C Meerut-Bhiwani do not indicate the start date and end date of the hindrance. From the submission of the petitioner it is difficult to determine the delay at each tower location. There is evidence to establish that work was held up at different locations from 10.6.2011 to 1.2.2012 and again from 19.10.2012 to 6.8.2013. Letters in the month of June, 2011, August, 2011, December, 2011, February, 2012, October, 2012, November, 2012, December, 2012, January, 2013 February, 2013, March, 2013, April, 2013, July, 2013 and August, 2013 submitted under Affidavit dated 17.10.2014, establish this. We, therefore, have no hesitation in condoning the delay of 18 months i.e. from 10.6.2011 to 1.2.2012 (8 months) and from 19.10.2012 to 5.8.2013 (10 months). The delay of remaining 2 months in respect of Asset 6 is disallowed. Consequently, the capital cost of this asset is reduced by ₹358.66 lakh (₹301.66 lakh towards IDC and ₹57.00 lakh towards IEDC)

29. As regards the delay in commissioning of Asset 4, Asset 5, Asset 7 and Asset 8, the petitioner has submitted the reasons vide its affidavit dated 27.2.2103, together with copies of the correspondence pertaining to the

matter. Gist of the correspondence submitted by the petitioner are as given below:-

Letter dated	Addressed to	By	Summary
14.2.2011	Superintendent of Police, Bhiwani	DGM-POWERGRID	Requesting Police protection for its Officials from the Local Villagers who threatened of dire consequences for carrying survey at the Site
17.2.2011	DRO	Narsana Villagers	Requesting higher compensation for the crops
7.3.2011	Deputy Commissioner Bhiwani District	DGM – POWERGRID	Requesting action for acquisition of remaining 30 Kila of land because of which the site construction works have been delayed
11.3.2011	District Commissioner, Bhiwani	DGM-POWERGRID	Assuring the Commissioner that no works has been taken place in the land for which the compensation has not been accepted and requesting the authorities for demarcation and handing over the land to petitioner as per the land acquisition awarded to petitioner
8.4.2011	Sub-Divisional Magistrate	DGM-POWERGRID	Requesting action for the acquisition of remaining 39 acres of the 127 acres to be acquired for starting of the project
15.5.2011	Chief manager POWERGRID	Operator-POWERGRID	Informed about the threatening received from the Villagers
16.5.2011	SHO	POWERGRID	Requesting Police Protection site for its Officials

30. These letters indicate that the petitioner was pursuing the matter diligently in the face of severe threat from the villagers. The petitioner was not able to carry out work w.r.t. Assets 4, 5, 7 and 8 for almost 4 months from February, 2011 to May, 2011. The time over-run in case of these assets is not attributable to the petitioner. Thus, the time over-run of 1 month in case of Assets 4 and 8 and the delay of 4 months in case of Assets 5 and 7 in Bhiwani Sub-station is condoned. In view of the foregoing, the entire delay in case of

Assets 1, 2 4, 5, 7 and 8 has been condoned. However, the time over-run of 18 months out of total 20 months in case Asset 6, is condoned. Details of IDC and IEDC for Asset-6 are given below:-

<b>Details of IDC and IEDC as per Management Certificate dated 16.10.2014 as per affidavit dated 17.10.2014</b>		
<b>Particulars</b>	<b>IDC</b>	<b>IEDC</b>
Up to 31.3.2013	1663.09	284.79
From 1.4.2013 to 31.1.2014	1508.30	284.99
<b>Total Claim</b>	<b>3171.39</b>	<b>569.78</b>
<b>Detail of IDC and IEDC to be disallowed due to time overrun</b>		
<b>For two months</b>	<b>301.66</b>	<b>57.00</b>

### **Initial spares**

31. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission line	0.75%
Transmission sub-station	2.5%
Series compensation devices & HVDC Station	3.5%

32. From the details of the initial spares claimed by the petitioner, it is noticed that the petitioner has claimed excess initial spares in respect of Assets 1, 2, 4 and 6. As regards the remaining assets, the initial spares claimed is within the percentage specified in the 2009 Tariff Regulations. Details of the cost as on cut-off date, initial spares claimed as well as initial spares admissible as per the 2009 Tariff Regulations in respect of Asset-1, Asset-2, Asset-4 and Asset-6 are given overleaf:-

(₹ in lakh)

Assets	Description (a)	Cost as on cut-off date (b)	Initial spares claimed (c)	Ceiling limits as per clause 8 of 2009 Tariff Regulation (d)	Initial Spares worked out (e) = (b)-(c)*(d)/(100%-(d))	Excess initial spares claimed (f) (c)-(e)
<b>Asset 1</b>	Substation	860.51	36.21	2.50%	21.14	15.07
<b>Asset 2</b>	Substation	869.70	36.21	2.50%	21.37	14.84
<b>Asset 4</b>	Transmission Line	1555.13	12.24	0.75%	11.66	0.58
<b>Asset 6</b>	Transmission Line	27138.93*	219.45	0.75%	203.42	16.02

\* Cost as on cut-off date after reducing IDC and IEDC.

33. Capital cost as on DOCO after restricting the foundation cost, time over-run and cost of initial spares where necessary, in respect of the assets as under:-

(₹ in lakh)

Assets	Capital cost claimed by the petitioner as on DOCO	Foundation cost reduced	Disallowed IDC and IEDC	Excess spares reduced	Capital cost as on DOCO for computing tariff
Asset-1	6412.26	0.00	0.00	15.07	6397.19
Asset-2	7380.76	0.00	0.00	14.84	7365.92
Asset-3	111652.06	763.97	0.00	0.00	110888.09
Asset-4	2468.81	0.00	0.00	0.58	2468.23
Asset-5	1251.73	181.83	0.00	0.00	1069.90
Asset-6	29022.68	0.00	358.66	16.02	28648.00
Asset-7	5605.76	444.40	0.00	0.00	5161.36
Asset-8	3402.42	184.37	0.00	0.00	3218.05

### **Additional capital expenditure**

34. As regards Additional Capital Expenditure clause 9(1) of the 2009 Tariff

Regulations provides as under:-

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

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

35. Further, the 2009 Tariff Regulations define cut-off date as:-

“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 incase of 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”.

36. It is seen that the petitioner has claimed projected additional capital expenditure mainly on account of balance and retention payments covered under Regulations 9 (1) of 2009 Tariff Regulations. AVVNL and Jd.VVNL have submitted that additional capital expenditure is claimed by the petitioner towards balance and retention payment and hence the petitioner should confirm that the works included in the scope of the project have been completed within the indicated cost. Thus, the additional capital expenditure upto 31.3.2014 has been considered to work out the tariff as it falls within the purview of Regulation 9(1) of 2009 Tariff Regulations and is adjusted within the apportioned approved cost. Further, as stated above, the petitioner has submitted projected additional capital expenditure pertaining to FY 2014-15 and 2015-16 in respect of some of the Assets. The same will be dealt with under 2014 Tariff Regulation as and when the petitioner files the tariff petition for the relevant period.

37. Based on the above, the details of the additional capital expenditure

claimed by the petitioner, allowed for the purpose of calculation of tariff and the capital cost as on 31.3.2014 are given as follows:-

(₹ in lakh)				
Assets	Adjusted capital cost as on DOCO	Additional capitalisation		Total capital cost as on 31.3.2014
		2012-13	2013-14	
Asset-1	6397.19	712.56	346.22	7455.97
Asset-2	7365.92	-	348.18	7714.10
Asset-3	10888.09	3964.52	1502.25	16354.86
Asset-4	2468.23	289.46	292.39	3050.08
Asset-5	1069.90	308.36	239.74	1618.00
Asset-6	28648.00	-	647.21	29295.21
Asset-7	5161.36	3009.90	658.96	8830.22
Asset-8	3218.05	1090.71	342.62	4651.38

### **Debt- Equity ratio**

38. 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.”

39. The debt equity ratio claimed by the petitioner in respect of the capital cost as on respective dates of commercial operation of the assets is as under:-

(₹ in lakh)		
Asset-1	Cost as on date of commercial operation	
	Amount	%
Debt	4478.03	70.00
Equity	1919.15	30.00
<b>Total</b>	<b>6397.19</b>	<b>100.00</b>
Asset- 2	Amount	%
Debt	5156.15	70.00
Equity	2209.78	30.00
<b>Total</b>	<b>7365.92</b>	<b>100.00</b>
Asset 3	Amount	%
Debt	7621.66	70.00
Equity	3266.43	30.00
<b>Total</b>	<b>10888.09</b>	<b>100.00</b>
Asset 4	Amount	%
Debt	1727.76	70.00
Equity	740.47	30.00
<b>Total</b>	<b>2468.23</b>	<b>100.00</b>
Asset 5	Amount	%
Debt	748.93	70.00%
Equity	320.97	30.00%
<b>Total</b>	<b>1069.90</b>	<b>100.00%</b>
Asset 6	Amount	%
Debt	20053.60	70.00
Equity	8594.40	30.00
<b>Total</b>	<b>28648.00</b>	<b>100.00</b>
Asset 7	Amount	%
Debt	3612.95	70.00
Equity	1548.41	30.00
<b>Total</b>	<b>5161.36</b>	<b>100.00</b>
Asset 8	Amount	%
Debt	2252.63	70.00
Equity	965.41	30.00
<b>Total</b>	<b>3218.05</b>	<b>100.00</b>

40. Debt-Equity ratio for additional capital expenditure considered in the computation of tariff is also 70:30.

41. Details of the Debt-Equity ratio as on 31.3.2014 are as follows:-

(₹ in lakh)		
Asset-1	Cost as on 31.3.2014	
	Amount	%
Debt	5219.18	70.00
Equity	2236.79	30.00
Total	<b>7455.97</b>	<b>100.00</b>
Asset- 2	Amount	
	%	
Debt	5399.87	70.00
Equity	2314.23	30.00
Total	<b>7714.10</b>	<b>100.00</b>
Asset 3	Amount	
	%	
Debt	11448.40	70.00
Equity	4906.46	30.00
Total	<b>16354.86</b>	<b>100.00</b>
Asset 4	Amount	
	%	
Debt	2135.06	70.00
Equity	915.02	30.00
Total	<b>3050.08</b>	<b>100.00</b>
Asset 5	Amount	
	%	
Debt	1132.60	70.00
Equity	485.40	30.00
Total	<b>1618.00</b>	<b>100.00</b>
Asset 6	Amount	
	%	
Debt	20506.65	70.00
Equity	8788.56	30.00
Total	<b>29295.21</b>	<b>100.00</b>
Asset 7	Amount	
	%	
Debt	6181.15	70.00
Equity	2649.06	30.00
Total	<b>8830.22</b>	<b>100.00</b>
Asset 8	Amount	
	%	
Debt	3255.97	70.00
Equity	1395.41	30.00
Total	<b>4651.38</b>	<b>100.00</b>

42. The above stated debt-equity ratios have been applied for the purpose of tariff calculation in this order.

### **Return on Equity (RoE)**

43. Regulation 15 of the 2009 Tariff Regulations provides that:-

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

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

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

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

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

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

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

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

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

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

44. The petitioner has claimed additional RoE of 0.5% as per Regulation 15 of the 2009 Tariff Regulations in the petition, as the assets were

anticipated to be commissioned within the timeline specified in the 2009 Tariff Regulations. AVVNL and Jd.VVNL have objected to grant of additional RoE. There is time over-run in case of all assets except for one asset. Additional RoE of 0.5% is permissible only if the whole project is completed within the timeline specified in Appendix-II to the 2009 Tariff Regulations. Accordingly, the petitioner's prayer for additional RoE of 0.5% is rejected.

45. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(5) as stated above. Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

46. Details of return on equity calculated are as follows:-

Particulars	(₹ in lakh)		
	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Opening Equity	1919.15	2132.92	2209.78
Addition due to Additional Capitalisation	213.77	103.87	104.45
Closing Equity	2132.92	2236.79	2314.23
Average Equity	2026.04	2184.85	2262.00
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	<b>177.09</b>	<b>381.93</b>	<b>395.42</b>

Particulars	(₹ in lakh)			
	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	3266.43	4455.78	740.47	827.30
Addition due to Additional Capitalisation	1189.36	450.68	86.84	87.72
Closing Equity	4455.78	4906.46	827.30	915.02
Average Equity	3861.10	4681.12	783.88	871.16
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	<b>562.47</b>	<b>818.31</b>	<b>102.77</b>	<b>152.29</b>

Particulars	(₹ in lakh)		
	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Opening Equity	320.97	413.48	8594.40
Addition due to Additional Capitalisation	92.51	71.92	194.16
Closing Equity	413.48	485.40	8788.56
Average Equity	367.22	449.44	8691.48
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	<b>32.10</b>	<b>78.57</b>	<b>253.23</b>

Particulars	(₹ in lakh)			
	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	1548.41	2451.38	965.41	1292.63
Addition due to Additional Capitalisation	902.97	197.69	327.21	102.79
Closing Equity	2451.38	2649.06	1292.63	1395.41
Average Equity	1999.89	2550.22	1129.02	1344.02
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	<b>174.80</b>	<b>445.80</b>	<b>148.02</b>	<b>234.95</b>

### Interest on Loan

47. Regulation 16 of the 2009 Tariff Regulations provides that:-

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;
- (b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period; and
- (c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

49. Interest on loan has been calculated on the basis of prevailing rate of actual loan available as on the date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

50. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 8 of this order.

51. Details of interest on loan calculated are as below:-

Particulars	(₹ in lakh)		
	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Gross Normative Loan	4478.03	4976.82	5156.15
Cumulative Repayment upto Previous Year	0.00	177.07	0.00
Net Loan-Opening	4478.03	4799.76	5156.15
Addition due to Additional Capitalisation	498.79	242.35	243.73
Repayment during the year	177.07	382.08	395.66
Net Loan-Closing	4799.76	4660.03	5004.21
Average Loan	4638.90	4729.89	5080.18
Weighted Average Rate of Interest on Loan	9.1082%	9.1198%	9.2504%
Interest	<b>211.26</b>	<b>431.36</b>	<b>469.94</b>

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	7621.66	10396.82	1727.76	1930.39
Cumulative Repayment upto Previous Year	0.00	524.76	0.00	96.38
Net Loan-Opening	7621.66	9872.06	1727.76	1834.00
Addition due to Additional Capitalisation	2775.16	1051.58	202.62	204.67
Repayment during the year	524.76	767.37	96.38	142.66
Net Loan-Closing	9872.06	10156.27	1834.00	1896.02
Average Loan	8746.86	10014.17	1780.88	1865.01
Weighted Average Rate of Interest on Loan	9.2107%	9.2269%	9.2543%	9.2681%
Interest	<b>671.37</b>	<b>924.00</b>	<b>123.61</b>	<b>172.85</b>

(₹ in lakh)

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Gross Normative Loan	748.93	964.78	20053.60
Cumulative Repayment upto Previous Year	0.00	27.53	0.00
Net Loan-Opening	748.93	937.25	20053.60
Addition due to Additional Capitalisation	215.85	167.82	453.05
Repayment during the year	27.53	68.42	254.99
Net Loan-Closing	937.25	1036.64	20251.66
Average Loan	843.09	986.95	20152.63
Weighted Average Rate of Interest on Loan	9.1968%	9.1795%	9.1649%
Interest	<b>38.77</b>	<b>90.60</b>	<b>307.83</b>

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	3612.95	5719.88	2252.63	3016.13
Cumulative Repayment upto Previous Year	0.00	165.88	0.00	141.27
Net Loan-Opening	3612.95	5554.00	2252.63	2874.86
Addition due to Additional Capitalisation	2106.93	461.27	763.50	239.83
Repayment during the year	165.88	425.89	141.27	223.62
Net Loan-Closing	5554.00	5589.38	2874.86	2891.07
Average Loan	4583.47	5571.69	2563.75	2882.97
Weighted Average Rate of Interest on Loan	9.3599%	9.5012%	9.2311%	9.2243%
Interest	<b>214.50</b>	<b>529.38</b>	<b>177.50</b>	<b>265.93</b>

## **Depreciation**

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

“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.”

53. Dates of commercial operation of assets covered in the petition fall in the years 2012-13 and 2013-14. Accordingly these assets will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually

based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations.

54. Details of the depreciation worked out are as follows:-

Particulars	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Opening Gross Block	6397.19	7109.75	7365.92
Addition during 2009-14 due to Projected Additional Capitalisation	712.56	346.22	348.18
Closing Gross Block	7109.75	7455.97	7714.10
Average Gross Block	6753.47	7282.86	7540.01
Rate of Depreciation	5.2437%	5.2463%	5.2475%
Depreciable Value	6078.12	6554.57	6786.01
Remaining Depreciable Value	6078.12	6377.51	6786.01
Depreciation	177.07	382.08	395.66

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	10888.09	14852.61	2468.23	2757.69
Addition during 2009-14 due to Projected Additional Capitalisation	3964.52	1502.25	289.46	292.39
Closing Gross Block	14852.61	16354.86	2757.69	3050.08
Average Gross Block	12870.35	15603.73	2612.96	2903.88
Rate of Depreciation	4.8928%	4.9178%	4.9181%	4.9128%
Depreciable Value	10760.90	13162.77	9137.71	2437.37
Remaining Depreciable Value	10760.90	12638.00	9137.71	2340.99
Depreciation	524.76	767.37	96.38	142.66

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Opening Gross Block	1069.90	1378.26	28648.00
Addition during 2009-14 due to Projected Additional Capitalisation	308.36	239.74	647.21
Closing Gross Block	1378.26	1618.00	29295.21
Average Gross Block	1224.08	1498.13	28971.60
Rate of Depreciation	4.4986%	4.5671%	5.2807%
Depreciable Value	936.70	1171.45	26074.44
Remaining Depreciable Value	936.70	1143.91	26074.44
Depreciation	27.53	68.42	254.99

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	5161.36	8171.26	3218.05	4308.76
Addition during 2009-14 due to Projected Additional Capitalisation	3009.90	658.96	1090.71	342.62
Closing Gross Block	8171.26	8830.22	4308.76	4651.38
Average Gross Block	6666.31	8500.74	3763.40	4480.07
Rate of Depreciation	4.9767%	5.0100%	5.0051%	4.9915%
Depreciable Value	5669.75	7298.43	3222.58	3835.72
Remaining Depreciable Value	5669.75	7132.55	3222.58	3694.45
Depreciation	<b>165.88</b>	<b>425.89</b>	<b>141.27</b>	<b>223.62</b>

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

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

#### **Norms for AC and HVDC lines:**

(₹ in lakh / km)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
S/C (Twin & Triple conductor)	0.358	0.378	0.400	0.423	0.447
S/C (Bundled conductor with four or more sub-conductors)	0.537	0.568	0.600	0.635	0.671
D/C (Twin & Triple conductor)	0.627	0.663	0.701	0.741	0.783

#### **Norms for sub-stations: -**

(₹ in lakh per bay)

Bay	2009-10	2010-11	2011-12	2012-13	2013-14
765 kV	73.36	77.56	81.99	86.68	91.64
400 kV	52.40	55.40	58.57	61.92	65.46

56. Accordingly, the following operation and maintenance expenses are allowed in respect of the assets covered in this petition:-

(₹ in lakh)			
Asset	Details	2012-13	2013-14
Asset 1	54.809km of LILO of 400kV ckt-I of Bareilly-Mandola line at Meerut sub-station along with associated bays at both the ends (DOCO: 1.10.2012).	73.51 (Pro-rata) for 6 months	155.42
Asset 2	56.298km of LILO of 400 kV D/C of Bareilly-Mandola line at Meerut sub-station along with associated bays at both the ends (DOCO: 1.4.2013)		156.09
Asset 3	Bays for Bhiwani-Moga Line at Bhiwani Substation; 765 kV 240 MVAR Bus Reactor-I along with Associated Bays at Bhiwani Substation; 765/400 kV 1000 MVA ICT-I Alongwith Associated Bays at Bhiwani Substation; 02 nos 400 kV Bays for Hisar-Bahadurgarh at Bhiwani Substation.	371.49 (Pro-rata) for 10 months	471.30
Asset 4	7.7575km of LILO of 400 kV D/C Hisar-Bawana at Bhiwani along with 2no 400 kV bays at Bhiwani sub-station (DOCO: 1.7.2012)	97.19 (Pro-rata) for 9 months	136.99
Asset 5	765 kV Bays For Jattikalan –Bhiwani Line at Bhiwani Substation.	43.34 (Pro-rata) for 6 months	91.64
Asset 6	765 kV S/C Meerut-Bhiwani Line Alongwith Associated Bays At Meerut & Bhiwani and 765 kV, 240 MVAR Line Reactor at Bhiwani substation	-	65.24 (Pro-rata)
Asset 7	1000 MVA ICT-II alongwith associated bays at Bhiwani substation.	74.30 (Pro-rata) for 6 months	<b>157.10</b>
Asset 8	765 kV 240 MVAR Bus Reactor-II Along with Associated Bays at Bhiwani substation.	65.01 (Pro-rata) for 9 months	91.64

57. The petitioner has submitted that O & M Expenses for the period 2009-14 was arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been

considered while calculating the O & M Expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

58. 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 consultations 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**

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

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

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months' average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months' 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 from 1.4.2009. The value of maintenance spares has accordingly been worked out.

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

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O & M Expenses for one month as a component of working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year as claimed in the petition. 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, Interest on working capital has been worked out based on SBI Base rate 9.70% and 10.00% as on 1.4.2012 and 1.4.2013 respectively plus 350 Bps i.e. 13.20% and 13.50%.

60. Necessary computations in support of interest on working capital are as follows:-

Particulars	(₹ in lakh)		
	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Maintenance Spares	22.05	23.31	23.41
O & M Expenses	12.25	12.95	13.01
Receivables	218.67	231.15	242.46
<b>Total</b>	<b>252.97</b>	<b>267.41</b>	<b>278.88</b>
Rate of Interest	13.50%	13.50%	13.50 %
Interest	<b>17.08</b>	<b>36.10</b>	<b>37.65</b>

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	66.87	70.70	19.44	20.55
O & M Expenses	37.15	39.28	10.80	11.42
Receivables	438.22	510.80	96.17	103.85
<b>Total</b>	<b>542.24</b>	<b>620.77</b>	<b>126.40</b>	<b>135.82</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	<b>61.00</b>	<b>83.80</b>	<b>12.80</b>	<b>18.34</b>

(₹ in lakh)

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Maintenance Spares	13.00	13.75	58.72
O & M expenses	7.22	7.64	32.62
Receivables	48.80	56.63	903.16
<b>Total</b>	<b>69.02</b>	<b>78.01</b>	<b>994.50</b>
Rate of Interest	13.50%	13.50%	13.20%
Interest	<b>4.66</b>	<b>10.53</b>	<b>21.88</b>

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	22.29	23.57	13.00	13.75
O & M expenses	12.38	13.09	7.22	7.64
Receivables	215.46	266.52	121.36	139.65
<b>Total</b>	<b>250.13</b>	<b>303.17</b>	<b>141.59</b>	<b>161.03</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	<b>16.88</b>	<b>40.93</b>	<b>14.34</b>	<b>21.74</b>

### Transmission charges

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

(₹ in lakh)

Particulars	Asset 1		Asset 2
	2012-13	2013-14	2013-14
Depreciation	177.07	382.08	395.66
Interest on Loan	211.26	431.36	469.94
Return on equity	177.09	381.93	395.42
Interest on Working Capital	17.08	36.10	37.65
O & M Expenses	73.51	155.42	156.09
<b>Total</b>	<b>656.00</b>	<b>1386.89</b>	<b>1454.76</b>

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Depreciation	524.76	767.37	96.38	142.66
Interest on Loan	671.37	924.00	123.61	172.85
Return on equity	562.47	818.31	102.77	152.29
Interest on Working Capital	61.00	83.80	12.80	18.34
O & M Expenses	371.49	471.30	97.19	136.99
<b>Total</b>	<b>2191.09</b>	<b>3064.77</b>	<b>432.75</b>	<b>623.12</b>

(₹ in lakh)

Particulars	Asset 5		Asset 6
	2012-13	2013-14	2013-14
Depreciation	27.53	68.42	254.99
Interest on Loan	38.77	90.60	307.83
Return on equity	32.10	78.57	253.23
Interest on Working Capital	4.66	10.53	21.88
O & M Expenses	43.34	91.64	65.24
<b>Total</b>	<b>146.40</b>	<b>339.76</b>	<b>903.16</b>

(₹ in lakh)

Particulars	Asset 7		Asset 8	
	2012-13	2013-14	2012-13	2013-14
Depreciation	165.88	425.89	141.27	223.62
Interest on Loan	214.50	529.38	177.50	265.93
Return on equity	174.80	445.80	148.02	234.95
Interest on Working Capital	16.88	40.93	14.34	21.74
O & M Expenses	74.30	157.10	65.01	91.64
<b>Total</b>	<b>646.37</b>	<b>1599.10</b>	<b>546.14</b>	<b>837.88</b>

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

62. 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**

63. 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**

64. 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 premature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

65. The billing, collection and disbursement of the transmission charges with effect from 1.7.2011 shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

66. This order disposes of Petition No. 99/TT/2012.

sd/-

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

sd/-

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

sd/-

**(Gireesh B. Pradhan)**  
**Chairperson**

**Annexure 1****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>		
	Gross loan opening	<b>850.00</b>	<b>850.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	850.00	850.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	70.83
	Net Loan-Closing	850.00	779.17
	Average Loan	850.00	814.58
	Rate of Interest	8.84%	8.84%
	Interest	<b>75.14</b>	<b>72.01</b>
	Rep Schedule	12 annual installments from 27.03.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>151.00</b>	<b>151.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	151.00	151.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	151.00	151.00
	Average Loan	151.00	151.00
	Rate of Interest	8.640%	8.640%
	Interest	<b>13.05</b>	<b>13.05</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>638.00</b>	<b>638.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	638.00	638.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	638.00	638.00
	Average Loan	638.00	638.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>56.40</b>	<b>56.40</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>2490.66</b>	<b>2490.66</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	2490.66	2490.66

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2490.66	2490.66
	Average Loan	2490.66	2490.66
	Rate of Interest	9.250%	9.250%
	Interest	<b>230.39</b>	<b>230.39</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>5</b>	<b>Bond XL</b>		
	Gross loan opening	<b>358.93</b>	<b>857.72</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	358.93	857.72
	Additions during the year	498.79	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	857.72	857.72
	Average Loan	608.33	857.72
	Rate of Interest	9.30%	9.30%
	Interest	<b>56.57</b>	<b>79.77</b>
	Rep Schedule	12 annual installments from 28.6.2016	
	<b>Total Loan</b>		
	Gross loan opening	<b>4488.59</b>	<b>4987.38</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4488.59	4987.38
	Additions during the year	498.79	0.00
	Repayment during the year	0.00	70.83
	Net Loan-Closing	4987.38	4916.55
	Average Loan	4737.99	4951.96
	Rate of Interest	<b>9.1082%</b>	<b>9.1198%</b>
	<b>Interest</b>	431.55	451.61

**Annexure 2****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>	
	Gross loan opening	<b>500.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	500.00
	Additions during the year	0.00
	Repayment during the year	41.67
	Net Loan-Closing	458.33
	Average Loan	479.17
	Rate of Interest	8.84%
	Interest	<b>42.36</b>
	Rep Schedule	12 annual installments from 27.03.2014
<b>2</b>	<b>Bond XXXIII</b>	
	Gross loan opening	<b>150.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	150.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	150.00
	Average Loan	150.00
	Rate of Interest	8.640%
	Interest	<b>12.96</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014
<b>3</b>	<b>Bond XXXIV</b>	
	Gross loan opening	<b>100.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	8.84%
	Interest	<b>8.84</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014
<b>4</b>	<b>Bond XXXV</b>	
	Gross loan opening	<b>27.50</b>
	Cumulative Repayment upto DOCO/previous	<b>0.00</b>

	year	
	Net Loan-Opening	27.50
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	27.50
	Average Loan	27.50
	Rate of Interest	9.640%
	Interest	<b>2.65</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015
<b>5</b>	<b>Bond XXXVIII</b>	
	Gross loan opening	<b>830.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	830.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	830.00
	Average Loan	830.00
	Rate of Interest	9.250%
	Interest	<b>76.78</b>
	Rep Schedule	Full payment on 09.03.2027
<b>6</b>	<b>Bond XL</b>	
	Gross loan opening	<b>711.03</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	711.03
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	711.03
	Average Loan	711.03
	Rate of Interest	9.30%
	Interest	<b>66.13</b>
	Rep Schedule	12 annual installments from 28.6.2016
<b>7</b>	<b>Bond XXXVI</b>	
	Gross loan opening	<b>2848.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	2848.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2848.00
	Average Loan	2848.00
	Rate of Interest	9.35%
	Interest	266.29
	Rep Schedule	12 Annual Installments from 29.08.2016

	<b>Total Loan</b>	
	Gross loan opening	<b>5166.53</b>
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5166.53
	Additions during the year	0.00
	Repayment during the year	41.67
	Net Loan-Closing	5124.86
	Average Loan	5145.70
	Rate of Interest	<b>9.2504%</b>
	<b>Interest</b>	476.00

**Annexure 3****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>		
	Gross loan opening	<b>925.00</b>	<b>925.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	925.00	925.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	77.08
	Net Loan-Closing	925.00	847.92
	Average Loan	925.00	886.46
	Rate of Interest	8.84%	8.84%
	Interest	<b>81.77</b>	<b>78.36</b>
	Rep Schedule	12 annual installments from 27.03.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>167.00</b>	<b>167.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	167.00	167.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	167.00	167.00
	Average Loan	167.00	167.00
	Rate of Interest	8.640%	8.640%
	Interest	<b>14.43</b>	<b>14.43</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>1591.00</b>	<b>1591.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1591.00	1591.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1591.00	1591.00
	Average Loan	1591.00	1591.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>140.64</b>	<b>140.64</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>4295.00</b>	<b>4295.00</b>

	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	4295.00	4295.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4295.00	4295.00
	Average Loan	4295.00	4295.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>401.58</b>	<b>401.58</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>652.00</b>	<b>652.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	652.00	652.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	652.00	652.00
	Average Loan	652.00	652.00
	Rate of Interest	9.640%	9.64%
	Interest	<b>62.85</b>	<b>62.85</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>6</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>426.09</b>	<b>426.09</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	426.09	426.09
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	426.09	426.09
	Average Loan	426.09	426.09
	Rate of Interest	9.250%	9.250%
	Interest	<b>39.41</b>	<b>39.41</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>100.00</b>	<b>2875.16</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	100.00	2875.16
	Additions during the year	2775.16	1051.58
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2875.16	3926.74
	Average Loan	1487.58	3400.95
	Rate of Interest	9.30%	9.30%
	Interest	<b>138.34</b>	<b>316.29</b>
	Rep Schedule	12 annual installments from	

		28.6.2016	
	<b>Total Loan</b>		
	Gross loan opening	<b>8156.09</b>	<b>10931.25</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	8156.09	10931.25
	Additions during the year	2775.16	1051.58
	Repayment during the year	0.00	77.08
	Net Loan-Closing	10931.25	11905.75
	Average Loan	9543.67	11418.50
	Rate of Interest	<b>9.2107%</b>	<b>9.2269%</b>
	<b>Interest</b>	879.04	1053.57

**Annexure 4****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>		
	Gross loan opening	<b>100.00</b>	<b>100.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.83
	Rate of Interest	8.84%	8.84%
	Interest	<b>8.84</b>	<b>8.47</b>
	Rep Schedule	12 annual installments from 27.03.2014	
<b>2</b>	<b>BOND XLV</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	136.75
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	136.75
	Average Loan	0.00	68.38
	Rate of Interest	9.65%	9.65%
	Interest	<b>0.00</b>	<b>6.60</b>
	Rep Schedule	12 Equal Annual Installments from 28.02.2018	
<b>3</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>25.00</b>	<b>25.00</b>
	Cumulative Repayment upto DOCO/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	8.640%	8.640%
	Interest	<b>2.16</b>	<b>2.16</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>4</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>172.00</b>	<b>172.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	172.00	172.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	172.00	172.00

	Average Loan	172.00	172.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>15.20</b>	<b>15.20</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>5</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>1110.00</b>	<b>1110.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1110.00	1110.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1110.00	1110.00
	Average Loan	1110.00	1110.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>103.79</b>	<b>103.79</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>6</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>41.00</b>	<b>41.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	41.00	41.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	41.00	41.00
	Average Loan	41.00	41.00
	Rate of Interest	9.640%	9.64%
	Interest	<b>3.95</b>	<b>3.95</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>7</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>227.93</b>	<b>227.93</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	227.93	227.93
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	227.93	227.93
	Average Loan	227.93	227.93
	Rate of Interest	9.250%	9.250%
	Interest	<b>21.08</b>	<b>21.08</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>8</b>	<b>Bond XL</b>		
	Gross loan opening	<b>52.24</b>	<b>254.86</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	52.24	254.86
	Additions during the year	202.62	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	254.86	254.86
	Average Loan	153.55	254.86
	Rate of Interest	9.30%	9.30%
	Interest	<b>14.28</b>	<b>23.70</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>9</b>	<b>SBI (21.03.2012)</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	10.15
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	10.15
	Average Loan	0.00	5.08
	Rate of Interest	10.75%	10.75%
	Interest	0.00	0.55
	Rep Schedule	22 Annual Installments from 31.8.2016	
<b>10</b>	<b>Bond XLII</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	57.77
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	57.77
	Average Loan	0.00	28.89
	Rate of Interest	8.80%	8.80%
	Interest	0.00	2.54
	Rep Schedule	Full payment on 13.03.2023	
	<b>Total Loan</b>		
	Gross loan opening	<b>1728.17</b>	<b>1930.79</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1728.17	1930.79
	Additions during the year	202.62	204.67
	Repayment during the year	0.00	8.33
	Net Loan-Closing	1930.79	2127.13
	Average Loan	1829.48	2028.96
	Rate of Interest	<b>9.2543%</b>	<b>9.2681%</b>
	<b>Interest</b>	169.31	188.05

**Annexure 5****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)		
	<b>2012-13</b>	<b>2013-14</b>
<b>1 Bond XXXII</b>		
Gross loan opening	<b>125.00</b>	<b>125.00</b>
Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
Net Loan-Opening	125.00	125.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	10.42
Net Loan-Closing	125.00	114.58
Average Loan	125.00	119.79
Rate of Interest	8.84%	8.84%
Interest	<b>11.05</b>	<b>10.59</b>
Rep Schedule	12 annual installments from 27.03.2014	
<b>2 Bond XXXIII</b>		
Gross loan opening	<b>17.00</b>	<b>17.00</b>
Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
Net Loan-Opening	17.00	17.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	17.00	17.00
Average Loan	17.00	17.00
Rate of Interest	8.640%	8.640%
Interest	<b>1.47</b>	<b>1.47</b>
Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3 Bond XXXIV</b>		
Gross loan opening	<b>125.00</b>	<b>125.00</b>
Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
Net Loan-Opening	125.00	125.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	125.00	125.00
Average Loan	125.00	125.00
Rate of Interest	8.84%	8.84%
Interest	<b>11.05</b>	<b>11.05</b>
Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4 Bond XXXVI</b>		
Gross loan opening	<b>305.00</b>	<b>305.00</b>
Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
Net Loan-Opening	305.00	305.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	305.00	305.00

	Average Loan	305.00	305.00
	Rate of Interest	9.350%	9.35%
	Interest	<b>28.52</b>	<b>28.52</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>60.00</b>	<b>60.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	60.00	60.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	60.00	60.00
	Average Loan	60.00	60.00
	Rate of Interest	9.640%	9.64%
	Interest	<b>5.78</b>	<b>5.78</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>6</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>219.36</b>	<b>219.36</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	219.36	219.36
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	219.36	219.36
	Average Loan	219.36	219.36
	Rate of Interest	9.250%	9.250%
	Interest	<b>20.29</b>	<b>20.29</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>24.85</b>	<b>240.70</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	24.85	240.70
	Additions during the year	215.85	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	240.70	240.70
	Average Loan	132.78	240.70
	Rate of Interest	9.30%	9.30%
	Interest	<b>12.35</b>	<b>22.39</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>8</b>	<b>Bond XLII</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	167.82
	Repayment during the year	0.00	0.00

Net Loan-Closing	0.00	167.82
Average Loan	0.00	83.91
Rate of Interest	8.80%	8.80%
Interest	0.00	7.38
Rep Schedule	Full payment on 213.03.2023	
<b>Total Loan</b>		
Gross loan opening	<b>876.21</b>	<b>1092.06</b>
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	876.21	1092.06
Additions during the year	215.85	167.82
Repayment during the year	0.00	10.42
Net Loan-Closing	1092.06	1249.46
Average Loan	984.14	1170.76
Rate of Interest	<b>9.1968%</b>	<b>9.1795%</b>
<b>Interest</b>	90.51	107.47

**Annexure 6****Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>	
	Gross loan opening	<b>3000.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	3000.00
	Additions during the year	0.00
	Repayment during the year	250.00
	Net Loan-Closing	2750.00
	Average Loan	2875.00
	Rate of Interest	8.84%
	Interest	<b>254.15</b>
	Rep Schedule	12 annual installments from 27.03.2014
<b>2</b>	<b>Bond XXXVII</b>	
	Gross loan opening	<b>868.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	868.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	868.00
	Average Loan	868.00
	Rate of Interest	9.25%
	Interest	<b>80.29</b>
	Rep Schedule	12 Equal Annual Installments from 26.12.2015
<b>3</b>	<b>BOND-XLV</b>	
	Gross loan opening	<b>886.17</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	886.17
	Additions during the year	453.05
	Repayment during the year	0.00
	Net Loan-Closing	1339.22
	Average Loan	1112.70
	Rate of Interest	9.65%
	Interest	<b>107.38</b>
	Rep Schedule	12 Equal Annual Installments from 28.02.2018
<b>4</b>	<b>Bond XXXIII</b>	
	Gross loan opening	<b>50.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	50.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	50.00

	Average Loan	50.00
	Rate of Interest	8.640%
	Interest	<b>4.32</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014
<b>5</b>	<b>Bond XXXIV</b>	
	Gross loan opening	<b>3861.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	3861.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3861.00
	Average Loan	3861.00
	Rate of Interest	8.84%
	Interest	<b>341.31</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014
<b>6</b>	<b>Bond XXXVI</b>	
	Gross loan opening	<b>4165.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	4165.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4165.00
	Average Loan	4165.00
	Rate of Interest	9.350%
	Interest	<b>389.43</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016
<b>7</b>	<b>Bond XXXV</b>	
	Gross loan opening	<b>4000.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	4000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4000.00
	Average Loan	4000.00
	Rate of Interest	9.640%
	Interest	<b>385.60</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015
<b>8</b>	<b>Bond XXXVIII</b>	
	Gross loan opening	<b>485.71</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	485.71

	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	485.71
	Average Loan	485.71
	Rate of Interest	9.250%
	Interest	<b>44.93</b>
	Rep Schedule	Full payment on 09.03.2027
<b>8</b>	<b>Bond XL</b>	
	Gross loan opening	<b>200.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	200.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	200.00
	Average Loan	200.00
	Rate of Interest	9.30%
	Interest	<b>18.60</b>
	Rep Schedule	12 annual installments from 28.6.2016
<b>9</b>	<b>SBI (21.03.2012)</b>	
	Gross loan opening	<b>1000.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	1000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1000.00
	Average Loan	1000.00
	Rate of Interest	10.25%
	Interest	102.50
	Rep Schedule	22 Annual Instalments from 31.8.2016
<b>10</b>	<b>Bond XLIII</b>	
	Gross loan opening	<b>1800.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	1800.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1800.00
	Average Loan	1800.00
	Rate of Interest	7.93%
	Interest	142.74
	Rep Schedule	12 annual installments from 20.05.2017
	<b>Total Loan</b>	
	Gross loan opening	<b>20315.88</b>
	Cumulative Repayment upto DOCO/previous year	0.00

	Net Loan-Opening	20315.88
	Additions during the year	453.05
	Repayment during the year	250.00
	Net Loan-Closing	20518.93
	Average Loan	20417.41
	Rate of Interest	<b>9.1649%</b>
	<b>Interest</b>	1871.24

## **Annexure 7**

### **Calculation of Weighted Average Rate of Interest on Actual Loans**

(₹ in lakh)

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</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	25.00
	Net Loan-Closing	300.00	275.00
	Average Loan	300.00	287.50
	Rate of Interest	8.84%	8.84%
	Interest	<b>26.52</b>	<b>25.42</b>
	Rep Schedule	12 annual installments from 27.03.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>50.00</b>	<b>50.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.640%	8.640%
	Interest	<b>4.32</b>	<b>4.32</b>
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>638.00</b>	<b>638.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	638.00	638.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	638.00	638.00
	Average Loan	638.00	638.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>56.40</b>	<b>56.40</b>
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	<b>1817.65</b>	<b>1817.65</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1817.65	1817.65
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1817.65	1817.65

	Average Loan	1817.65	1817.65
	Rate of Interest	9.350%	9.35%
	Interest	<b>169.95</b>	<b>169.95</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>119.00</b>	<b>119.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	119.00	119.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	119.00	119.00
	Average Loan	119.00	119.00
	Rate of Interest	9.640%	9.64%
	Interest	<b>11.47</b>	<b>11.47</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>6</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>899.38</b>	<b>899.38</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	899.38	899.38
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	899.38	899.38
	Average Loan	899.38	899.38
	Rate of Interest	9.250%	9.250%
	Interest	<b>83.19</b>	<b>83.19</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>100.00</b>	<b>1079.64</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	100.00	1079.64
	Additions during the year	979.64	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1079.64	1079.64
	Average Loan	589.82	1079.64
	Rate of Interest	9.30%	9.30%
	Interest	<b>54.85</b>	<b>100.41</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>8</b>	<b>SBI (21.03.2012)</b>		
	Gross loan opening	<b>0.00</b>	<b>1127.29</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	1127.29
	Additions during the year	1127.29	461.27
	Repayment during the year	0.00	0.00

	Net Loan-Closing	1127.29	1588.56
	Average Loan	563.65	1357.93
	Rate of Interest	10.50%	10.50%
	Interest	59.18	142.58
	Rep Schedule	22 Annual Installments from 31.8.2016	
	<b>Total Loan</b>		
	Gross loan opening	<b>3924.03</b>	<b>6030.96</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3924.03	6030.96
	Additions during the year	2106.93	461.27
	Repayment during the year	0.00	25.00
	Net Loan-Closing	6030.96	6467.23
	Average Loan	4977.50	6249.10
	Rate of Interest	<b>9.3599%</b>	<b>9.5012%</b>
	<b>Interest</b>	465.89	593.74

## Annexure 8

### Calculation of Weighted Average Rate of Interest on Actual Loans

(₹ in lakh)

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XXXII</b>		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	16.67
	Net Loan-Closing	200.00	183.33
	Average Loan	200.00	191.67
	Rate of Interest	8.84%	8.84%
	Interest	17.68	16.94
	Rep Schedule	12 annual installments from 27.03.2014	
<b>2</b>	<b>Bond XXXIII</b>		
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.640%	8.640%
	Interest	4.32	4.32
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
<b>3</b>	<b>Bond XXXIV</b>		
	Gross loan opening	327.00	327.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	327.00	327.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	327.00	327.00
	Average Loan	327.00	327.00
	Rate of Interest	8.84%	8.84%
	Interest	28.91	28.91
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
<b>4</b>	<b>Bond XXXVI</b>		
	Gross loan opening	1420.82	1420.82
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1420.82	1420.82
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	1420.82	1420.82
	Average Loan	1420.82	1420.82
	Rate of Interest	9.350%	9.35%
	Interest	<b>132.85</b>	<b>132.85</b>
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>72.00</b>	<b>72.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	72.00	72.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	72.00	72.00
	Average Loan	72.00	72.00
	Rate of Interest	9.640%	9.64%
	Interest	<b>6.94</b>	<b>6.94</b>
	Rep Schedule	12 Equal Annual Installments from 31.5.2015	
<b>6</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>211.87</b>	<b>211.87</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	211.87	211.87
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	211.87	211.87
	Average Loan	211.87	211.87
	Rate of Interest	9.250%	9.250%
	Interest	<b>19.60</b>	<b>19.60</b>
	Rep Schedule	Full payment on 09.03.2027	
<b>7</b>	<b>Bond XL</b>		
	Gross loan opening	<b>100.00</b>	<b>863.50</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	100.00	863.50
	Additions during the year	763.50	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	863.50	863.50
	Average Loan	481.75	863.50
	Rate of Interest	9.30%	9.30%
	Interest	<b>44.80</b>	<b>80.31</b>
	Rep Schedule	12 annual installments from 28.6.2016	
<b>8</b>	<b>Bond XLII</b>		
	Gross loan opening	<b>0.00</b>	<b>0.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	239.83

	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	239.83
	Average Loan	0.00	119.92
	Rate of Interest	8.80%	8.80%
	Interest	0.00	10.55
	Rep Schedule	Full payment on 213.03.2023	
	<b>Total Loan</b>		
	Gross loan opening	<b>2381.69</b>	<b>3145.19</b>
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2381.69	3145.19
	Additions during the year	763.50	239.83
	Repayment during the year	0.00	16.67
	Net Loan-Closing	3145.19	3368.35
	Average Loan	2763.44	3256.77
	Rate of Interest	<b>9.2311%</b>	<b>9.2243%</b>
	<b>Interest</b>	255.09	300.41