

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 207/TT/2012

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri M. Deena Dayalan, member
Shri A. K. Singhal, Member**

**Date of Hearing : 29.05.2014
Date of Order : 16.01.2015**

In the matter of:

Approval of transmission tariff for six Assets. (6 Nos. Bus Reactors Part-IV) under Common Scheme for 765 kV Pooling Stations and Network for NR, Import by NR from ER and Common Scheme for network for WR and Import by WR from ER and from NER/SR/WR via ER 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 Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur-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 66/11kV 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 S. K. Venkatesan, PGCIL
Shri S.S Raju, PGCIL

For respondent : Shri Padamjit Singh, PSPCL
Shri J K Bilkha, RVPNL, JPR
Shri R.B. Sharma, Advocate, BRPL

ORDER

The instant petition has been filed seeking approval of transmission tariff for six Assets (6 Nos. Bus Reactors Part IV) under Common Scheme for 765 KV Pooling Stations and Network for NR, Import by NR from ER and Common Scheme for network for WR and Import by WR from ER and from NER/SR/WR via ER in Northern Region (hereinafter referred to as "transmission assets") 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 Board of Directors of PGCIL vide letter dated 29.8.2008 at an estimated cost of ₹707533 lakh including IDC of ₹71360 lakh. (Based on 1st Quarter, 2008 price level). The scope of work covered under the project is as follows:-

Transmission Lines

- (a) Maithon-Gaya 400 kV Quad D/C line – 235 km
- (b) Gaya-Sasaram 765 kV S/C line -148 Km
- (c) Gaya-Balia 765 kV S/C line – 235.10 km
- (d) Balia-Lucknow 765 kV S/C line – 316 km
- (e) Ranchi-WR Pooling station 765 kV S/C line-372 km
- (f) Lucknow 765/400 kV new sub-station – Lucknow 400/220 kV existing sub-station 400 kV quad D/C line – 40 km.
- (g) Ranchi 765/400 kV new sub-station – Ranchi 400/220 kV existing sub-station 400 kV quad 2xD/C line – 110 km
- (h) LILO of both circuits of Allahabad – Mainpuri 400 kV D/c line at Fatehpur 765/400 kV sub-station of POWERGRID – 34 km.
- (i) LILO of Barh-Balia 400 kV quad D/C line at Patna-25 km.

Sub-stations

- (a) Augmentation of Maithon 400/220 kV sub-station
 - (i) 2 nos. of 400 kV line bays (for terminating Maithon-Gaya D/C line)
 - (ii) 2 no. of 400 kV line bays (for terminating Mejia-Maithon D/C line)
- (b) New 765/400 kV sub-station at Gaya
 - (i) 3x1500 MVA, 765/400 kV transformer alongwith associated bays
 - (ii) 2 nos. of 765 kV line bays (for Gaya-Sasaram & Gaya-Balia 765kV lines)

- (iii) 4 nos. of 400 kV line bays (for Maithon-Gaya line & Koderma-Gaya line)

(c) New 765/400 kV sub-station at Sasaram

- (i) 2x1500 MVA, 765/400 kV transformer alongwith associated bays
- (ii) 2 nos. of 765 kV line bays (for Gaya-Sasaram 765 kV S/C & Sasaram-Fatehpur 765 kV S/C)
- (iii) 2 nos. of 400kV bays (for Biharsharif-Sasaram 400 kV quad D/C line)

NOTE : New 765/400 kV sub-station at Sasaram is to be accommodated in the premises of existing Sasaram Sub-station.

(d) Augmentation of Biharsharif 400/220kV sub-station

- (i) 2 nos. of 400 kV bays (for Biharsharif – Sasaram 400 kV quad D/C line)

(e) New 765/400 kV sub-station at Fatehpur

- (i) 2x1500, MVA, 765/400 kV transformer alongwith associated bays
- (ii) 2 nos. of 765 kV line bays (for Sasaram-Fatehpur & Fatehpur-Agra 765 kV lines)
- (iii) 4 nos. of 400 kV line bays (for LILO of Allahabad-Mainpuri 400 kV D/C line)

(f) Augmentation of 400 kV Agra sub-station to 765 kV

- (i) 2x1500 MVA, 765/400 kV transformer alongwith associated

bays

(ii) 1 no. of 765 kV line bay (for Fatehpur-Agra 765 kV line)

(g) Augmentation of 400 kV Balia sub-station to 765 kV

(i) 2x1500 MVA, 765/400 kV transformer alongwith associated bays

(ii) 2 nos. of 765 kV line bays (for Gaya-Balia & Balia-Lucknow 765 kV lines)

(h) New 765/400 kV sub-station at Lucknow

(i) 2x1500 MVA, 765/400 kV transformer alongwith associated bays

(ii) 1 nos. of 765 kV line bays (for Balia-Lucknow 765 kV line)

(iii) 2 nos. 400 kV bays (for Lucknow 765/400 kV new sub-station-Lucknow 400/220 kV existing sub-station 400 kV quad D/C line)

(i) Augmentation of existing Lucknow 400/220 kV sub-station

(i) 2 nos. 400 kV bays (for Lucknow 765/400 kV new sub-station – Lucknow 400/220 kV existing sub-station 400 kV quad D/C line)

(j) New 2x1500 MVA, 765/400 kV sub-station at Ranchi

(i) 1 no. of 765 kV line bays (for Ranchi – WR polling 765 kV S/C line)

(ii) 4 nos. 400 kV bays (for Ranchi 400 kV new Sub-station Ranchi 400/220 kV existing sub-station 400 kV quad 2xD/C line)

(k) Augmentation of Ranchi 400/220 kV Sub-station

(i) 6 nos. 400 kV bays (4 nos. for Ranchi 765/400 kV new sub-station Ranchi 400/220 kV existing sub-station 400 kV quad 2xD/C line and 2 nos. for Raghunathpur TPS-Ranchi line)

(l) 765/400 kV WR Pooling sub-station

(i) 1 no. of 765 kV line bays (for Ranchi-WR Pooling 765 kV S/C line)

(m) Augmentation of Patna 400/220 kV sub-station

(i) 4 nos. of 400 kV line bay (for LILO of Barh-Balia 400 kV Quad line)

3. The petitioner has claimed tariff in respect of assets which are under Common Scheme for 765 kV Pooling Stations and network for NR, Import by NR from ER and Common Scheme for network for WR and Import by WR from ER and from NER/SR/WR via ER in Northern Region. Details of the assets together with their respective dates of commercial operation are as under:-

S. No	Name of the Asset	Schedule completion as per investment approval	Actual date of commercial operation
(a)	Asset-1 765 kV, 240 (3*80) MVAR Bus Reactor II alongwith associated bays at 765/400 kV Balia sub-station	1.9.2012	1.4.2012
(b)	Asset-2 765 kV 330 MVAR (3*110) Bus Reactor alongwith associated bays at 765/400/220 kV Fatehpur sub-station		1.4.2012
(c)	Asset-3 765 kV 3*80 MVAR Bus Reactor at Lucknow alongwith associated bays		1.6.2012
(d)	Asset-4 400 kV 125 MVAR Bus Reactor III alongwith associated bays at 765/400 KV Agra (Augmentation) sub-station	1.9.2012	1.6.2012

(e)	Asset-5 400 kV 125 MVAR Bus Reactor II alongwith associated bays at 765/400 KV Agra (Augmentation) sub-station	1.9.2012	1.6.2012
(f)	Asset-6 400 kV 125 MVAR Bus Reactor III at Ballia sub-station alongwith associated bays(Augmentation of 400 KV to 765 kV)	1.9.2012	1.6.2012

4. The above assets were planned to evacuate power from various generation projects of DVC. DVC has indicated that it's Mejia-B (1000MW), Koderma (1000MW), Durgapur (1000MW) and Maithon-RB (1000MW) generation projects (Total-4000MW) are scheduled to be commissioned progressively in coming years. At the time of planning of transmission system, the schedule of commissioning of these various generation projects of DVC was indicated progressively from December, 2009 to December, 2010. The proposed beneficiaries of these projects and the power supply scenario of ER, NR and WR suggest that power from these projects is to be transferred to power deficit region like NR and WR.

5. The comprehensive transmission system was evolved and discussed in various Standing Committee/Regional Power Committee meetings of NR, WR and ER. The summary of record of discussions held during 22nd meeting of the Standing Committee on Power System Planning of Northern Region on 12.3.2007, wherein the transmission system from the new generation capacity planned by DVC for supply of power to NR constituents was discussed in detail. Hence, the entire transmission system is covered under three separate schemes i.e. three investment approvals.

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

(₹ in lakh)

Particulars	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Depreciation	181.91	199.84	298.89	305.82
Interest on Loan	206.64	211.25	340.27	322.41
Return on equity	181.09	199.28	300.08	307.63
Interest on Working Capital	17.90	19.11	26.41	26.60
O & M Expenses	86.68	91.64	86.68	91.64
Total	674.22	721.12	1052.33	1054.10

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Depreciation	202.60	276.82	61.70	96.74
Interest on Loan	237.32	304.14	93.18	132.08
Return on equity	205.77	281.19	78.45	116.69
Interest on Working Capital	18.85	24.91	8.22	11.57
O & M Expenses	72.23	91.64	51.60	65.46
Total	736.77	978.70	293.15	422.54

(₹ in lakh)

Particulars	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Depreciation	80.55	104.24	57.05	74.86
Interest on Loan	115.26	139.09	67.65	83.85
Return on equity	97.17	124.14	57.40	76.01
Interest on Working Capital	9.59	12.08	7.04	9.02
O & M Expenses	51.60	65.46	51.60	65.46
Total	354.17	445.01	240.74	309.20

7. 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	2012-13	2013-14
Maintenance Spares	13.00	13.75	13.00	13.75
O & M expenses	7.22	7.64	7.22	7.64
Receivables	112.37	120.19	175.39	175.68
Total	132.59	141.58	195.61	197.07
Interest	17.90	19.11	26.41	26.60
Rate of Interest	13.50%	13.50%	13.50%	13.50%

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	13.00	13.75	9.29	9.82
O & M expenses	7.22	7.64	5.16	5.46
Receivables	147.35	163.12	58.63	70.42
Total	167.57	184.51	73.08	85.70
Interest	18.85	24.91	8.22	11.57
Rate of Interest	13.50%	13.50%	13.50%	13.50%

(₹ in lakh)

Particulars	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	9.29	9.82	9.29	9.82
O & M expenses	5.16	5.46	5.16	5.46
Receivables	70.83	74.17	41.85	51.53
Total	85.28	89.45	56.30	66.81
Interest	8.22	11.57	7.04	9.02
Rate of Interest	13.50%	13.50%	13.50%	13.50%

8. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. Ajmer Vidyut Vitran Nigam Limited, (AVVNL) Respondent No. 2 has filed reply vide affidavit dated 23.5.2013, and Punjab State Power Corporation Limited (PSPCL), Respondent No. 7 has filed reply before the bench dated 29.5.2014, Respondent No. 12, BSES Rajdhani Power Ltd (BRPL), has filed its reply vide affidavit dated 28.5.2014. The petitioner has filed the separate rejoinders to the replies of PSPCL and BRPL in vide affidavits dated 22.10.2014. The respondents have raised the issue of capital cost, additional capital expenditure, additional return on equity, O&M Expenses, approval of the scheme, cost over-run, additional RoE, higher initial spares, petition filing fee and service tax. The petitioner has not filed the rejoinder to the reply of AVVNL. The objections raised by the respondents in their reply and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

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

10. PSPCL has made the following submissions:-

- a) The assets for which the tariff is claimed relate to transmission scheme 765 kV Balia, Fatehpur, Lucknow and 400 kV sub-station at Agra & Balia. Subsequent to the approval of transmission scheme as above major changes/developments have taken place and need to be incorporated in the petition to amend the same so as to conform with the revised scheme.
- b) The starting point of DVC transmission system is Gaya Sub-station where in 400 kV power is pooled and stepped up to 765 kV and transmitted to NR receiving stations at Fatehpur, Balia etc. At 765 kV level major changes have taken place instead of the original approved line, Gaya-Balia, the amended scheme is 765 kV Gaya- Varanasi - Balia with a spur line Varansai-Kanpur. This 765 kV amended system of Gaya - Varanasi- Balia/Kanpur is expected to be commissioned in 2015 whereas the transmission elements at Balia and Lucknow have a claimed DOCO of April/June, 2012.
- c) As per original scheme, the Balia sub-station was to get 765 kV supply from Gaya. However, due to delay /non-commissioning of Gaya-Varanasi-Balia line, the 400 kV supply at Balia is stepped up to 765 kV through ICTs and this 785 kV supply is then transmitted to Lucknow

over the single circuit 785 kV Balia-Lucknow line.

- d) Accordingly, the petitioner may supply the relevant documents/ approvals, minutes of meeting which relate to amended scheme.
- e) The SCM minutes enclosed need to be replaced with the amended /modified decision of SCM, CEA.
- f) The 765 kV Bus reactor at Balia was approved as justified in the original scheme when the incoming line was to give supply from Gaya at 765 kV. However, with the amended scheme, Balia is to get supply at 765 kV from Varanasi. The petitioner may supply the documents/ decision by which the bus reactor at Balia is justified under the amended scheme.
- g) The petitioner may inform the date of commissioning of 765 kV Balia-Lucknow line since the commissioning of the Asset 1 & 3 above is justified on a date which is later than the date of commissioning of 765 kV Balia-Lucknow line.

11. During the hearing on 29.5.2014, the representative of PSPCL submitted that the first line in the Scheme is Maithon-Gaya 400 kV D/C Quad line and without commissioning this first line the petitioner is claiming transmission tariff for 6 assets, in the instant petition, which are at the end point. As per the scheme, the 400 kV double circuit Quad line from Koderma and double circuit from Maithon are pooled at Gaya sub-station and stepped up to 765 kV and one line goes to Fatehpur and other lines to Ballia. The petitioner is seeking transmission tariff for the assets located at Fatehpur, Lucknow and Ballia, without the Maithon-Gaya 400 kV D/C

Quad line being commissioned. He submitted that major changes have been made in the Scheme and these changes have not been reflected in the petition. He also submitted that as per the date of commercial operation letter dated 13.6.2012, the 400 kV 125 MVAR Bus Reactor-III at Agra was charged on 31.5.2012 at 23:42 hours and declared under commercial operation after 18 minutes which is too short a period to energise a bus reactor. He submitted the date of commercial operation should be 1.7.2012 and not 1.6.2012 as claimed by the petitioner.

12. The learned counsel for BRPL, submitted that the layout of the transmission scheme has been changed and these changes should have been communicated to the beneficiaries. Fresh system studies may have to be conducted in view of the changes made to the transmission scheme.

13. In response to the issues raised by PSPCL and BRPL, the representative of the petitioner clarified that the assets were commissioned as per the plan and there is no change in the scheme. He also submitted that the cost variation is due to the cost of sub-station equipment, ratings of the reactors and the local site conditions.

14. In response to PSPCL query, the petitioner clarified the following:-

- a) The Maithon-Gaya and Koderma-Gaya 400 kV D/C (quad) line could not be completed due to delay in their execution caused due to delay in Forest Clearance, RoW issues, wherein the Forest Authorities had insisted for execution of transmission lines through multi-circuiting in the forest-stretch, for reduction of damage to forest cover. With regard to power transmission without Gaya-Koderma and Maithon-Koderma, it is to be clarified that the one of the circuits of Biharshariff-Sasaram 400 kV

(Quad) D/C and Gaya-Ballia 765 kV line was re-configured to facilitate interconnection as Sasaram-Ballia and Biharshariff-Gaya 400 kV interconnection. This re-configuration resulted into availability of 400 kV voltage at Gaya sub-stations, without compromising upon the transmission capacity of the transmission networks. Based on this, the 765 kV transmission lines onwards of Gaya sub-station were charged and taken into service, thus strengthening and augmenting the inter-regional transmission capacity between Eastern and Northern Region. This also led to the opportunity of serving the 220 kV sub-transmission network through the 400/220 kV (1X315 MVA and 1X500MVA) transformers at Gaya by supplying reliable power to neighboring demand areas of Bodhgaya and Dehri.

- b) The above reconfiguration of line could be achieved because the requisite transmission elements were available and their gainful utilization was of emergent nature. This gave rise to strengthening of regional/inter-regional transmission system as explained above. The issue of re-configuration was discussed with CEA and their in-principle approval was obtained on 25.1.2012. Based on this, the reconfigured network was changed and taken in service on 1.2.2012. Further, same was also inferred and discussed in the Standing Committee of Eastern Region held on 8.2.2012, following which it was also discussed in ERPC meeting held on 20.4.2014 and 21.4.2012.
- c) In accordance with the 1st Standing Committee meeting on Power System Planning in Eastern Region held on 8.2.2012 it is noted that the

Koderma-Gaya and Maithon-Gaya lines were passing through dense forest stretch of about 37 km. In order to avoid any evacuation for generation projects, the petitioner formulated an interim arrangement by reconfiguring the (i) Gaya-Ballia 765kV S/C (to be completed shortly) and (ii) one circuit of the Biharshariff-Sasaram 400 kV D/C (Quad) lines. It would enable to create a 400 kV Biharshariff-gaya S/C and Sasaram-Ballia 400 kV S/C lines to transfer DVC power to Fatehpur and Ballia in NR. This interim arrangement would also enable Bihar to draw power from Gaya through the 400/220 kV 2X315 MVA ICTs and Dehri-Bodhgaya 220 kV line being LIL0ed at Gaya. The interim arrangement would be withdrawn and the normal/planned transmission system would be in place upon completion on Maithon-Gaya 400 kV D/C and Koderma-Gaya 400 kV D/C lines. Members of ER constituents have agreed to the above interim arrangement.

- d) The assets covered under this petition i.e. (i) 765 kV, 240 (3X80) MVAR Bus Reactor-II along with associated bays at 765/400 kV Ballia Sub-station, (ii) 765 kV, 330 MVAR (3x110) Bus Reactor along with associated bays at 765/400/220 kV Fatehpur sub-station, (iii) 765 kV 3X80 MVAR Bus Reactor at Lucknow along with associated bays, (iv) 400 kV, 125 MVAR Bus Reactor-III along with associated bays at 765/400 kV Agra (Augmentation) sub-station, (v) 400 kV, 125 MVAR Bus Reactor-II along with associated bays at 765/400 kV Agra (Augmentation) Sub-station, (vi) 400 kV, 125 MVAR Bus Reactor-III at Ballia sub-station along with associated bays (Augmentation of 400 kV to

765 kV) were planned as a part of "Common Scheme for 765 kV Pooling Station and Network for NR", whereas that Gaya-Varanasi-Ballia line was planned as a part of scheme namely "Transmission System for Phase-I Generation projects in Jharkhand and West Bengal Part-2". As mentioned Varanasi sub-station was planned under different scheme i.e. transmission system for Phase-I generation projects in Jharkhand and West Bengal, and was approved in December, 2011. The lines under the scheme are planned to match the commissioning of IPP's in Jharkhand and West Bengal. Varanasi sub-station along with lines connected to it were never planned to be completed by 2012 as claimed by the respondent. In fact Varanasi sub-station was not even conceived while finalizing common scheme for 765 kV Pooling Station and Network Associated with DVC and Maithon RB Project etc.

- e) The petitioner has submitted that the assets have been declared under commercial operation in line with the 2009 Tariff Regulations. The asset was test charged on 31.5.2012 and was declared under commercial operation on 1.6.2012. AC Transmission elements are such that once successfully test charged the elements are immediately available for transmission of power @100% of its rated capacity. Power flow through any AC element is dependent on grid condition and demand and supply situation of the grid which is beyond the control of the petitioner. In transmission system generally transmission elements are static while in service and no rotating is involved. Unlike generating stations where one unit is connected with the grid at a certain load and with further

additional input the load is increased to its rated capacity, whereas in case of AC transmission elements no additional input is required for transmission of power at rated capacity. All the relevant tests/checks are carried out before charging and once successfully test charges the transmission elements are available for regular service @100% of its rated capacity, hence declared for commercial operation from 1st day of next calendar month.

- f) The date of commercial operation of 765 kV Ballia-Lucknow line is 1.3.2012 whereas the date of commercial operation of 240 MVAR, 765 kV Bus Reactor at Ballia and Lucknow is 1.4.2012 and 1.6.2012 respectively. Thus, the reactor has been commissioned subsequent to 765 kV Ballia-Lucknow line.

15. We have considered the submission of the petitioner regarding the issues raised by PSPCL in regard to Varanasi sub-station, it is observed that the investment approval of DVC and Maithon RB dated 29.8.2008 of the petitioner for 765 kV Pooling Station and Network Associated with DVC and Maithon RB Project etc. does not include Varanasi sub-station. As regards PSPCL's query on whether the transmission line was commissioned first or Reactors, we have considered the submission of the petitioner and it is evident that the petitioner has covered the asset 765 kV Lucknow-Ballia line in Petition No. 187/TT/2011. The asset Ballia-Lucknow line was commissioned on 1.3.2012. Hence, the Bus Reactors at Ballia and Lucknow which were commissioned on 1.4.2012 and 1.6.2012 respectively, were commissioned subsequent to commissioning of the line.

Capital cost

16. As regards the capital cost, Regulation 7(1) of the 2009 Tariff

Regulations provides as under:-

“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.”

17. The details of apportioned approved cost, actual expenditure incurred as on date of commercial operation (hereinafter “DOCO”) and details of additional capital expenditure (hereinafter “add cap”) incurred/ projected to be incurred for the assets covered in the petition are summarized below:-

(₹ in lakh)

Particulars	Apportioned approved cost	Cost incurred upto DOCO*	Projected expenditure		Total estimated completion cost
			DOCO to 31.3.2013	1.4.2013 to 31.3.2014	
Asset-I	3932.05	3106.20	693.78	-	3799.08
Asset-2	7775.02	5578.00	288.04	-	5866.04
Asset 3	6557.06	4055.20	1306.65	-	5361.85
Asset 4	1573.15	1365.00	860.14	-	2225.14
Asset 5	1573.15	2079.87	287.26	-	2367.13
Asset-6	1620.66	1177.40	272.00	-	1449.40
Total	23031.89	17361.67	3707.87	-	21069.54

* Inclusion of cost of initial spares

Cost-over-run

18. The total estimated completion cost of Asset-I, II, III and VI is within the apportioned approved cost. But there is cost over-run in case of Asset-IV (41.44%) and Asset-V (50.47%).

19. The Commission vide letter dated 16.9.2013, directed the petitioner to submit the detailed computation of FR estimates including the details of Assets (name of assets/equipment/date of order/ quantity and value) which were considered for preparing the basis of estimates and the price levels at which these estimates were prepared. The petitioner was further directed to submit the indices at the time of preparation of FR, at the time of order and at the time of date of commercial operation. The petitioner was further directed to submit the documentary proof of actual cost paid for the land.

20. In response, the petitioner vide affidavit dated 24.3.2014 has submitted that the FR cost estimates is broad indicative cost worked out generally on the basis of average unit rate of recently awarded contracts/general practice. The petitioner has further submitted that 98 acres of land was acquired at the rate of ₹32 lakh per acre as compared to the rate of ₹8.90 lakh per acre envisaged in the FR. Accordingly, a payment of ₹3132 lakh was made for the land. Only 40% of this land has been booked in this subject project. The same has been apportioned in different elements of 765/400 kV Agra sub-station.

21. BRPL has submitted that in spite of the overall savings it may be noted that the Asset-IV and Asset-V have major cost over-runs. The element wise break-up of the cost of these assets as contained in their respective Form-5B of these assets show that the reasons mentioned for the cost variations are very casual reasons like based on actual and the higher tendered cost etc. BRPL submits that in the absence of the proper reasoning on cost over runs, the same may not be allowed by the Commission. PSPCL has submitted that there is difference in the

apportioned approved cost and the estimated completion cost of the instant assets and the petitioner should clarify the same.

22. During the hearing the on 29.5.2014, the Commission observed that the cost of one of the 125 MVAR reactors is ₹2300 lakh whereas the cost of other 125 MVAR reactor is ₹1400 lakh and directed the petitioner to give reasons for such a huge variation. In response, the petitioner has, vide the affidavit dated 7.10.2014, submitted that the actual cost of Reactor-II at Agra is ₹611 lakh and whereas the actual cost of Reactor-III at Ballia is ₹536 lakh. The total cost of ₹2300 lakh and ₹1400 lakh of both the reactors respectively includes other items. The variation in these items is due to actual site condition and further it is submitted that cost variation is mainly on account of land (₹391 lakh), Switchgear (₹238 lakh), Misc. Common Equipment (₹58 lakh), IEDC and IDC (₹170 lakh).

23. The petitioner has further submitted in its affidavit dated 20.10.2014 that the basic cost of reactor at Lucknow and Ballia is ₹1930 lakh and ₹1760 lakh respectively. As per Form-5B enclosed along with the petition, the major difference in cost is on account of switchgear (CT, PT, Circuit Breaker, Isolator, etc) cost i.e. ₹2300 lakh for Bus Reactor at Lucknow and ₹1150 lakh for Bus Reactor-II at Ballia which accounts a difference of ₹1150 lakh. Further, the taxes and duties paid for Bus Reactor at Lucknow is ₹177 lakh and for Bus Reactor at Ballia is ₹40 lakh which accounts a difference of ₹130 lakh.

24. We have considered the submissions of the petitioner. It is observed that the reasons submitted by the petitioner in Form-5B for cost variation is as per actual and higher award price. It is further observed that amount paid for

switchgear (CT, PT, Circuit Breaker, Isolator etc) for Bus Reactor at Lucknow is ₹2300 lakh and for Bus Reactor-II at Ballia is ₹1150 lakh, exhibiting a variation of around ₹1150 lakh. The details of the cost submitted by the petitioner for both the sub-stations are given as under:-

(₹ in lakh)

Srl. No.	Balia sub-Station	Amount	Lucknow sub-station	Amount
1	Switchgear (CT, PT, Circuit Breaker, Isolator etc)	1157	Switchgear (CT, PT, Circuit Breaker, Isolator etc)	2300
2	Compensating Equipment	1760	Compensating Equipment	1931
3	Taxes Paid	42	Taxes Paid	177

25. From the above table it is evident that there is a variation of around ₹1143 lakh in Switchgear (CT, PT, Circuit Breaker, Isolator etc) equipment of Lucknow and Ballia sub-station. As the petitioner has not clearly explained the difference in cost of Compensating Equipment (Reactor) of same rating (240 MVAR) in Ballia and Lucknow sub-stations, ₹171 lakh (₹1931 lakh- ₹1760 lakh) has been deducted from the capital cost of Lucknow sub-station. The petitioner has attributed this difference to difference in taxes and duties. But, the same is not appropriate as the tax paid is applicable for the whole sub-station and not just for the reactor.

26. We have considered the submissions of petitioner and respondents. The petitioner has not justified the major difference in cost of Switchgear (CT, PT, Circuit Breaker, Isolator etc) equipment in Ballia and Lucknow Sub-stations which is around ₹1143 lakh. The order for the Ballia and Lucknow Switchgear (CT, PT, Circuit Breaker, Isolator etc) equipment was placed during March and February, 2010. The reason for difference has not been

clarified. Thus, the capital cost for switching equipment at Lucknow sub-station is restricted to the capital cost of the Ballia sub-station.

27. It is seen from the details submitted by the petitioner that anticipated completion cost in respect of Asset-4 and 5 are higher than the apportioned approved cost. The petitioner has not furnished the RCE for assets covered in the instant case. Accordingly, the capital cost of transmission assets is restricted to the apportioned approved cost. The apportioned approved cost of the individual asset is considered for the purpose of tariff calculations. However, the capital cost in case of transmission assets shall be reviewed at the time truing-up, subject to the petitioner filing the RCE and justification for cost over-run. This approach has been upheld by the Appellate Tribunal for Electricity in its order dated 28.11.2013 in Appeal No. 165 of 2012, and subsequently the Commission, vide its order dated 18.2.2014 in Petition No. 216/TT/2012, has considered the apportioned approved cost of individual asset for restricting the capital expenditure due to cost-overrun for the purpose of tariff determination. The same approach has been adopted in the present case and capital expenditure has been restricted to apportioned approved cost.

28. It has been further observed that the cost of the Bus Reactor at Lucknow (Asset 3) is found to be high in comparison to the cost of the reactor of the same rating at Balia. Accordingly, we restrict the estimated completion cost of Asset 3 to ₹4047.85 lakh. The total estimated completion cost has been considered in the capital cost as ₹4047.85 lakh for Asset III and capital

cost of Asset IV and V has been restricted to the apportioned approved cost.

Time over-run

29. As per the Investment Approval, the commissioning schedule of the project is 48 months progressively from the date of Investment Approval. Based on this, the assets are scheduled to be commissioned in a progressive manner up to August, 2012 i.e. by 1.9.2012. As against this, Assets 1 and 2 have been commissioned on 1.4.2012 and all the remaining assets have been commissioned on 1.6.2012.

30. BRPL in its reply had pointed out that based on the submissions in Form-5C, there has been considerable time over run in completion of the project. In this connection, the petitioner has clarified vide its affidavit dated 24.3.2014 that the information contained in Form-5C is based on LOA and has pleaded that scheduled date of commissioning is to be reckoned based on the Investment Approval.

31. We are in agreement with the submission of the petitioner which is in tune with the consistent stand of the Commission. Accordingly, we hold that there is no delay in the matter of commissioning.

Initial Spares

32. 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	

33. Details of the Initial Spares claimed for all the assets and the percentage thereof are summarized in the table below:-

(₹ in lakh)			
Asset	sub-station Cost as on 31.3.2013	Cost of Spares	Spares as % of sub-station Cost
Asset-1	3977.98	145.24	3.65%
Asset-2	5866.04	113.95	1.94%
Asset-3	5361.85	123.80	2.31%
Asset-4	1573.15*	38.86	2.47%
Asset-5	1573.15*	38.10	2.42%
Asset-6	1449.40	19.82	1.37%

* Claim has been restricted to apportioned approved cost.

34. It is seen that cost of initial spares is in excess of the prescribed norms in respect of Asset 1. As regards Asset 3, 4 and 5, the cost of initial spares is within the prescribed norms even based on the reduced apportioned approved cost. As regards Asset 1, it is seen that there is excess of ₹51.53 lakh (₹145.24-₹93.71) and the same has therefore been reduced from the capital cost.

35. Based on the above, details of the capital cost as on the date of commercial operation, considered for the purpose of calculation of tariff, after making necessary adjustment on account of excess initial spares, and IDC is as follows:-

(₹ in lakh)						
Particular	Asset-1	Asset 2	Asset 3	Asset 4	Asset-5	Asset 6
Freehold land	0.00	45.65	82.51	391.37	296.02	0.00
Leasehold land	0.00	0.00	0.00	0.00	0.00	0.00
Building and Civil works	1.65	7.09	16.62	3.12	2.36	5.76
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00
sub-station Equipments	3053.02	5525.25	3948.72	922.46	1274.77	1171.63
PLCC	0.00	0.00	0.00	0.00	0.00	0.00
Total Capital Cost	3054.67	5577.99	4047.85	1316.95	1573.15	1177.39

Additional capital expenditure

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

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

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

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

“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

38. 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. Thus, the additional capital expenditure upto 31.3.2014 has been considered to work out the tariff as it falls within the meaning of Regulation 9(1) of 2009 Tariff Regulations and is adjusted within the apportioned approved cost.

Debt- equity ratio

39. Regulation 12 of the 2009 Tariff Regulations provides as follows,-

“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.”

40. The debt-equity ratio claimed by the petitioner in respect of the capital cost as on respective DOCO(s) of the assets as well as in respect of the additional capitalization is 70:30. The same has been allowed being in accordance with the 2009 Tariff Regulations.

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

Return on equity

42. 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".

43. The petitioner has claimed additional RoE of 0.5% stating that the assets covered in the instant petition have been put under commercial operation within the time limit specified for completion of projects. We do not approve this claim because the petitioner has not commissioned all the assets considered in the scheme within the schedule time. Accordingly, the claim of additional RoE has not been considered in the instant petition.

44. Details of return on equity calculated are as under:-

Particulars	(₹ in lakh)			
	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	916.40	1124.54	1673.40	1759.81
Addition due to Additional Capitalisation	208.13	0.00	86.41	0.00
Closing Equity	1124.54	1124.54	1759.81	1759.81
Average Equity	1020.47	1124.54	1716.60	1759.81
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	178.39	196.58	300.08	307.63

Particulars	(₹ in lakh)			
	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	1214.36	1214.36	395.09	471.95
Addition due to Additional Capitalisation	0.00	0.00	76.86	0.00
Closing Equity	1214.36	1214.36	471.95	471.95
Average Equity	1214.36	1214.36	433.52	471.95
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	176.90	212.28	63.15	82.50

Particulars	(₹ in lakh)			
	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Opening Equity	471.95	471.95	353.22	434.82
Addition due to Additional Capitalisation	0.00	0.00	81.60	0.00
Closing Equity	471.95	471.95	434.82	434.82
Average Equity	471.95	471.95	394.02	434.82
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	68.75	82.50	57.40	76.01

45. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(5)

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

Interest on loan

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

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

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

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

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

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

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

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

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

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

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

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of

Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

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

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

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

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

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

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

(e) Proposed loan has not been considered for the purpose of tariff calculation, as it is not supported by the relevant proof of interest on loan. Needless to add that any change in rate of interest subsequent to

the date of commercial operation will be considered at the time of truing up.

48. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 6 of this order.

49. Details of Interest on Loan calculated are as under:-

(₹ in lakh)

Particulars	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	2138.27	2623.92	3904.59	4106.22
Cumulative Repayment upto Previous Year	0.00	179.19	0.00	298.89
Net Loan-Opening	2138.27	2444.73	3904.59	3807.33
Addition due to Additional Capitalisation	485.65	0.00	201.63	0.00
Repayment during the year	179.19	197.12	298.89	305.82
Net Loan-Closing	2444.73	2247.61	3807.33	3501.51
Average Loan	2291.50	2346.17	3855.96	3654.42
Weighted Average Rate of Interest on Loan	8.8833%	8.8827%	8.8244%	8.8225%
Interest	203.56	208.40	340.27	322.41

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	2833.50	2833.50	921.87	1101.21
Cumulative Repayment upto Previous Year	0.00	174.21	0.00	46.31
Net Loan-Opening	2833.50	2659.29	921.87	1054.90
Addition due to Additional Capitalisation	0.00	0.00	179.34	0.00
Repayment during the year	174.21	209.05	46.31	62.33
Net Loan-Closing	2659.29	2450.24	1054.90	992.56
Average Loan	2746.39	2554.76	988.38	1023.73
Weighted Average Rate of Interest on Loan	8.9134%	8.9122%	9.1176%	9.1193%
Interest	204.00	227.69	75.10	93.36

(₹ in lakh)

Particulars	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	1101.21	1101.21	824.17	1014.57
Cumulative Repayment upto Previous Year	0.00	56.16	0.00	57.05
Net Loan-Opening	1101.21	1045.05	824.17	957.52
Addition due to Additional Capitalisation	0.00	0.00	190.40	0.00
Repayment during the year	56.16	67.39	57.05	74.86
Net Loan-Closing	1045.05	977.66	957.52	882.66
Average Loan	1073.13	1011.36	890.85	920.09
Weighted Average Rate of Interest on Loan	9.1176%	9.1193%	9.1123%	9.1123%
Interest	81.54	92.23	67.65	83.84

Depreciation

50. 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.”

51. Dates of commercial operation of all the assets covered in the instant petition fall in the year 2012-13. 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.

52. Details of the depreciation worked out are as under:-

(₹ in lakh)

Particulars	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	3054.67	3748.45	5577.99	5866.03
Addition during 2009-14 due to Projected Additional Capitalisation	693.78	0.00	288.04	0.00
Closing Gross Block	3748.45	3748.45	5866.03	5866.03
Average Gross Block	3401.56	3748.45	5722.01	5866.03
Rate of Depreciation	5.2678%	5.2586%	5.2236%	5.2134%
Depreciable Value	3061.41	3373.61	5108.72	5238.34
Remaining Depreciable Value	3061.41	3194.42	5108.72	4939.45
Depreciation	179.19	197.12	298.89	305.82

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	4047.85	4047.85	1316.95	1573.15
Addition during 2009-14 due to Projected Additional Capitalisation	0.00	0.00	256.20	0.00
Closing Gross Block	4047.85	4047.85	1573.15	1573.15
Average Gross Block	4047.85	4047.85	1445.05	1573.15
Rate of Depreciation	5.1644%	5.1644%	3.8456%	3.9622%
Depreciable Value	3568.81	3568.81	948.31	1063.60
Remaining Depreciable Value	3568.81	3394.60	948.31	1017.29
Depreciation	174.21	209.05	46.31	62.33

(₹ in lakh)

Particulars	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	1573.15	1573.15	1177.39	1449.39
Addition during 2009-14 due to Projected Additional Capitalisation	0.00	0.00	272.00	0.00
Closing Gross Block	1573.15	1573.15	1449.39	1449.39
Average Gross Block	1573.15	1573.15	1313.39	1449.39
Rate of Depreciation	4.2836%	4.2836%	5.2124%	5.1652%
Depreciable Value	1149.42	1149.42	1182.05	1304.45
Remaining Depreciable Value	1149.42	1093.26	1182.05	1247.40
Depreciation	56.16	67.39	57.05	74.86

Operation & Maintenance Expenses(O&M Expenses)

53. 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:-

Bays	(₹ lakh/bay)	
	2012-13	2013-14
765 kV	86.68	91.64
400 kV	61.92	65.46

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

Element	(₹ in lakh)	
	2012-13	2013-14
Asset-I	86.68	91.64
Asset-II	86.68	91.64
Asset-III	72.23	91.64
Asset-IV	51.60	65.46
Asset-V	51.60	65.46
Asset-VI	51.60	65.46
Total	400.39	471.30

55. 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.

56. In this order, we have allowed O&M Expenses as per the existing norms only. We observe that it is premature to examine the issue raised by the petitioner.

Interest on Working Capital

57. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are as follows:-

(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 operation and maintenance 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

As per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 dated 21.06.2011, Interest on working capital has been worked out considering interest rate @ 13.50 % (Base rate as on 1.4.2012 and 350 basis points) for all assets.

58. Necessary computations in support of interest on working capital are given overleaf:-

Particulars	(₹ in lakh)			
	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	13.00	13.75	13.00	13.75
O & M expenses	7.22	7.64	7.22	7.64
Receivables	110.92	118.78	175.39	175.68
Total	131.15	140.16	195.61	197.07
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	17.70	18.92	26.41	26.60

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	13.00	13.75	9.29	9.82
O & M expenses	7.22	7.64	5.16	5.46
Receivables	128.82	126.78	48.65	52.12
Total	149.04	148.16	63.10	67.40
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	16.77	20.00	7.10	9.10

(₹ in lakh)

Particular	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	9.29	9.82	9.29	9.82
O & M expenses	5.16	5.46	5.16	5.46
Receivables	53.13	52.79	48.15	51.53
Total	67.58	68.07	62.60	66.81
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	7.60	9.19	7.04	9.02

Transmission charges

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

(₹ in lakh)

Particulars	Asset 1		Asset 2	
	2012-13	2013-14	2012-13	2013-14
Depreciation	179.19	197.12	298.89	305.82
Interest on Loan	203.56	208.40	340.27	322.41
Return on equity	178.39	196.58	300.08	307.63
Interest on Working Capital	17.70	18.92	26.41	26.60
O & M Expenses	86.68	91.64	86.68	91.64
Total	665.52	712.66	1052.33	1054.10

(₹ in lakh)

Particulars	Asset 3		Asset 4	
	2012-13	2013-14	2012-13	2013-14
Depreciation	174.21	209.05	46.31	62.33
Interest on Loan	204.00	227.69	75.10	93.36
Return on equity	176.90	212.28	63.15	82.50
Interest on Working Capital	16.77	20.00	7.10	9.10
O & M Expenses	72.23	91.64	51.60	65.46
Total	644.10	760.66	243.26	312.75

Particulars	(₹ in lakh)			
	Asset 5		Asset 6	
	2012-13	2013-14	2012-13	2013-14
Depreciation	56.16	67.39	57.05	74.86
Interest on Loan	81.54	92.23	67.65	83.84
Return on equity	68.75	82.50	57.40	76.01
Interest on Working Capital	7.60	9.19	7.04	9.02
O & M Expenses	51.60	65.46	51.60	65.46
Total	265.64	316.77	240.74	309.20

Filing Fee and the Publication Expenses

60. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The BRPL submitted that the filing fee shall be governed as per the Commission's order. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42A (1) (a) of the 2009 Tariff Regulations.

Licence Fee

61. The petitioner has submitted that in O&M expenses 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

62. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is

subjected to such service tax in future. The BRPL has objected to recovery of service tax from the beneficiaries in future as CBEC has exempted service tax on transmission. The petitioner has clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

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

64. This order disposes of Petition No. 207/TT/2012.

sd/-

(Shri A.K. Singhal)
Member

sd/-

(Shri M. Deena Dayalan)
Member

sd/-

(Gireesh B. Pradhan)
Chairperson

Annexure 1

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(₹ in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	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	8.64%	8.64%
	Interest	4.32	4.32
	Rep Schedule	12 Annual installments from 8.7.2014	
2	Bond XXVIII		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	100.00	91.67
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	8.33
	Net Loan-Closing	91.67	83.34
	Average Loan	95.84	87.50
	Rate of Interest	9.33%	9.33%
	Interest	8.94	8.16
	Rep Schedule	12 Annual installments from 15.12.2012	
3	Bond XXXIV		
	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	8.84%	8.84%
	Interest	4.42	4.42
	Rep Schedule	12 Annual installments from 21.10.2014	
4	Bond XXXI		
	Gross loan opening	950.00	950.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	950.00	950.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	79.17
	Net Loan-Closing	950.00	870.83
	Average Loan	950.00	910.42

	Rate of Interest	8.90%	8.90%
	Interest	84.55	81.03
	Rep Schedule	12 Annual installments from 25.2.2014	
5	Bond XXXVI		
	Gross loan opening	74.34	74.34
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	74.34	74.34
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	74.34	74.34
	Average Loan	74.34	74.34
	Rate of Interest	9.35%	9.35%
	Interest	6.95	6.95
	Rep Schedule	15 Annual installments from 29.8.2016	
6	Bond XXX		
	Gross loan opening	950.00	950.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	950.00	950.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	79.17
	Net Loan-Closing	950.00	870.83
	Average Loan	950.00	910.42
	Rate of Interest	8.80%	8.80%
	Interest	83.60	80.12
	Rep Schedule	12 Annual installments from 29.9.2013	
	Total Loan		
	Gross loan opening	2174.34	2174.34
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	2174.34	2166.01
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	166.67
	Net Loan-Closing	2166.01	1999.34
	Average Loan	2170.18	2082.68
	Weighted Average Rate of Interest	8.8833%	8.8827%
	Interest	192.78	185.00

Annexure 2

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(₹ in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	Gross loan opening	700.00	700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	700.00	700.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	700.00	700.00
	Average Loan	700.00	700.00
	Rate of Interest	8.64%	8.64%
	Interest	60.48	60.48
	Rep Schedule	12 Annual installments from 8.7.2014	
2	Bond XXVIII		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	100.00	91.67
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	8.33
	Net Loan-Closing	91.67	83.34
	Average Loan	95.84	87.50
	Rate of Interest	9.33%	9.33%
	Interest	8.94	8.16
	Rep Schedule	12 Annual installments from 15.12.2012	
3	Bond XXXIV		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	8.84%	8.84%
	Interest	8.84	8.84
	Rep Schedule	12 Annual installments from 21.10.2014	
4	Bond XXXI		
	Gross loan opening	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1500.00	1500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	125.00
	Net Loan-Closing	1500.00	1375.00
	Average Loan	1500.00	1437.50
	Rate of Interest	8.90%	8.90%
	Interest	133.50	127.94

	Rep Schedule	12 Annual installments from 25.2.2014	
5	Bond XXXVI		
	Gross loan opening	4.60	4.60
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4.60	4.60
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4.60	4.60
	Average Loan	4.60	4.60
	Rate of Interest	9.35%	9.35%
	Interest	0.43	0.43
	Rep Schedule	15 Annual installments from 29.8.2016	
6	Bond XXX		
	Gross loan opening	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1500.00	1500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	125.00
	Net Loan-Closing	1500.00	1375.00
	Average Loan	1500.00	1437.50
	Rate of Interest	8.80%	8.80%
	Interest	132.00	126.50
	Rep Schedule	12 Annual installments from 29.9.2013	
	Total Loan		
	Gross loan opening	3904.60	3904.60
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	3904.60	3896.27
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	258.33
	Net Loan-Closing	3896.27	3637.94
	Average Loan	3900.44	3767.10
	Weighted Average Rate of Interest	8.8244%	8.8225%
	Interest	344.19	332.35

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2012-13	2013-14
1	Bond XXVIII		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	16.67
	Net Loan-Opening	200.00	183.33
	Additions during the year	0.00	0.00
	Repayment during the year	16.67	16.67
	Net Loan-Closing	183.33	166.66
	Average Loan	191.67	175.00
	Rate of Interest	9.33%	9.33%
	Interest	17.88	16.33
	Rep Schedule	12 Annual installments from 15.12.2012	
2	Bond XXX		
	Gross loan opening	600.00	600.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	600.00	600.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	50.00
	Net Loan-Closing	600.00	550.00
	Average Loan	600.00	575.00
	Rate of Interest	8.80%	8.80%
	Interest	52.80	50.60
	Rep Schedule	12 Annual installments from 29.9.2013	
3	Bond XXXI		
	Gross loan opening	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1500.00	1500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	125.00
	Net Loan-Closing	1500.00	1375.00
	Average Loan	1500.00	1437.50
	Rate of Interest	8.90%	8.90%
	Interest	133.50	127.94
	Rep Schedule	12 Annual installments from 25.2.2014	
4	Bond XXXIII		
	Gross loan opening	300.00	300.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	8.64%	8.64%
	Interest	25.92	25.92

	Rep Schedule	12 Annual installments from 8.7.2014	
5	Bond XXXIV		
	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	8.84%	8.84%
	Interest	4.42	4.42
	Rep Schedule	22 half yearly installments from 21.10.2014	
6	Bond XXXV		
	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	9.64%	9.64%
	Interest	4.82	4.82
	Rep Schedule	12 Annual installments from 31.5.2015	
7	Bond XXXVI		
	Gross loan opening	131.97	131.97
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	131.97	131.97
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	131.97	131.97
	Average Loan	131.97	131.97
	Rate of Interest	9.35%	9.35%
	Interest	12.34	12.34
	Rep Schedule	15 Annual installments from 29.8.2016	
	Total Loan		
	Gross loan opening	2831.97	2831.97
	Cumulative Repayment upto DOCO/previous year	0.00	16.67
	Net Loan-Opening	2831.97	2815.30
	Additions during the year	0.00	0.00
	Repayment during the year	16.67	191.67
	Net Loan-Closing	2815.30	2623.63
	Average Loan	2823.64	2719.47
	Weighted Average Rate of Interest	8.9134%	8.9122%
	Interest	251.68	242.36

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2012-13	2013-14
1	Bond XXVIII		
	Gross loan opening	39.62	39.62
	Cumulative Repayment upto DOCO/previous year	0.00	3.30
	Net Loan-Opening	39.62	36.32
	Additions during the year	0.00	0.00
	Repayment during the year	3.30	3.30
	Net Loan-Closing	36.32	33.02
	Average Loan	37.97	34.67
	Rate of Interest	9.33%	9.33%
	Interest	3.54	3.23
	Rep Schedule	12 Annual installments from 15.12.2012	
2	Bond XXIX		
	Gross loan opening	19.81	19.81
	Cumulative Repayment upto DOCO/previous year	0.00	1.65
	Net Loan-Opening	19.81	18.16
	Additions during the year	0.00	0.00
	Repayment during the year	1.65	1.65
	Net Loan-Closing	18.16	16.51
	Average Loan	18.99	17.34
	Rate of Interest	9.20%	9.20%
	Interest	1.75	1.59
	Rep Schedule	12 Annual installments from 12.3.2013	
3	Bond XXX		
	Gross loan opening	99.06	99.06
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	99.06	99.06
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	8.26
	Net Loan-Closing	99.06	90.81
	Average Loan	99.06	94.93
	Rate of Interest	8.80%	8.80%
	Interest	8.72	8.35
	Rep Schedule	12 Annual installments from 29.9.2013	
4	Bond XXXI		
	Gross loan opening	99.06	99.06
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	99.06	99.06
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	8.26
	Net Loan-Closing	99.06	90.81
	Average Loan	99.06	94.93
	Rate of Interest	8.90%	8.90%
	Interest	8.82	8.45

	Rep Schedule	12 Annual installments from 25.2.2014	
5	Bond XXXIII		
	Gross loan opening	99.06	99.06
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	99.06	99.06
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	99.06	99.06
	Average Loan	99.06	99.06
	Rate of Interest	8.64%	8.64%
	Interest	8.56	8.56
	Rep Schedule	22 half yearly installments from 8.7.2014	
6	Bond XXXII		
	Gross loan opening	19.81	19.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	19.81	19.81
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.65
	Net Loan-Closing	19.81	18.16
	Average Loan	19.81	18.99
	Rate of Interest	8.84%	8.84%
	Interest	1.75	1.68
	Rep Schedule	12 Annual installments from 29.3.2014	
7	Bond XXXIV		
	Gross loan opening	130.76	130.76
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	130.76	130.76
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	130.76	130.76
	Average Loan	130.76	130.76
	Rate of Interest	8.84%	8.84%
	Interest	11.56	11.56
	Rep Schedule	12 Annual installments from 21.10.2014	
8	Bond XXXV		
	Gross loan opening	118.87	118.87
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	118.87	118.87
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	118.87	118.87
	Average Loan	118.87	118.87
	Rate of Interest	9.64%	9.64%
	Interest	11.46	11.46
	Rep Schedule	12 Annual installments from 31.5.2015	
9	Bond XXXVI		
	Gross loan opening	302.78	302.78
	Cumulative Repayment upto	0.00	0.00

	DOCO/previous year		
	Net Loan-Opening	302.78	302.78
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	302.78	302.78
	Average Loan	302.78	302.78
	Rate of Interest	9.35%	9.35%
	Interest	28.31	28.31
	Rep Schedule	15 Annual installments from 29.8.2016	
	Total Loan		
	Gross loan opening	928.83	928.83
	Cumulative Repayment upto DOCO/previous year	0.00	4.95
	Net Loan-Opening	928.83	923.88
	Additions during the year	0.00	0.00
	Repayment during the year	4.95	23.11
	Net Loan-Closing	923.88	900.77
	Average Loan	926.36	912.33
	Weighted Average Rate of Interest	9.1176%	9.1193%
	Interest	84.46	83.20

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2012-13	2013-14
1	XXXIII		
	Gross loan opening	150.94	150.94
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.94	150.94
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	150.94	150.94
	Average Loan	150.94	150.94
	Rate of Interest	8.64%	8.64%
	Interest	13.04	13.04
	Rep Schedule	12 Annual installments from 8.7.2014	
2	Bond XXXII		
	Gross loan opening	30.19	30.19
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	30.19	30.19
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	2.52
	Net Loan-Closing	30.19	27.67
	Average Loan	30.19	28.93
	Rate of Interest	8.84%	8.84%
	Interest	2.67	2.56
	Rep Schedule	12 Annual installments from 29.3.2014	
3	Bond XXVIII		
	Gross loan opening	60.38	60.38
	Cumulative Repayment upto DOCO/previous year	0.00	5.03
	Net Loan-Opening	60.38	55.35
	Additions during the year	0.00	0.00
	Repayment during the year	5.03	5.03
	Net Loan-Closing	55.35	50.32
	Average Loan	57.87	52.84
	Rate of Interest	9.33%	9.33%
	Interest	5.40	4.93
	Rep Schedule	12 Annual installments from 15.12.2012	
4	BOND XXIX		
	Gross loan opening	30.19	30.19
	Cumulative Repayment upto DOCO/previous year	0.00	2.52
	Net Loan-Opening	30.19	27.67
	Additions during the year	0.00	0.00
	Repayment during the year	2.52	2.52
	Net Loan-Closing	27.67	25.15
	Average Loan	28.93	26.41
	Rate of Interest	9.20%	9.20%

	Interest	2.66	2.43
	Rep Schedule	22 half yearly installments from 12.3.2013	
5	Bond XXXIV		
	Gross loan opening	199.24	199.24
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	199.24	199.24
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	199.24	199.24
	Average Loan	199.24	199.24
	Rate of Interest	8.84%	8.84%
	Interest	17.61	17.61
	Rep Schedule	12 Annual installments from 21.10.2014	
6	Bond XXXI		
	Gross loan opening	150.94	150.94
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.94	150.94
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.58
	Net Loan-Closing	150.94	138.36
	Average Loan	150.94	144.65
	Rate of Interest	8.90%	8.90%
	Interest	13.43	12.87
	Rep Schedule	12 Annual installments from 25.2.2014	
7	Bond XXXVI		
	Gross loan opening	461.36	461.36
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	461.36	461.36
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	461.36	461.36
	Average Loan	461.36	461.36
	Rate of Interest	9.35%	9.35%
	Interest	43.14	43.14
	Rep Schedule	15 Annual installments from 29.8.2016	
8	Bond XXX		
	Gross loan opening	150.94	150.94
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	150.94	150.94
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.58
	Net Loan-Closing	150.94	138.36
	Average Loan	150.94	144.65
	Rate of Interest	8.80%	8.80%
	Interest	13.28	12.73
	Rep Schedule	12 Annual installments from 29.9.2013	
9	Bond XXXV		
	Gross loan opening	181.13	181.13

Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	181.13	181.13
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	181.13	181.13
Average Loan	181.13	181.13
Rate of Interest	9.64%	9.64%
Interest	17.46	17.46
Rep Schedule	12 Annual installments from 31.5.2015	
Total Loan		
Gross loan opening	1415.31	1415.31
Cumulative Repayment upto DOCO/previous year	0.00	7.55
Net Loan-Opening	1415.31	1407.76
Additions during the year	0.00	0.00
Repayment during the year	7.55	35.23
Net Loan-Closing	1407.76	1372.53
Average Loan	1411.54	1390.15
Weighted Average Rate of Interest	9.1176%	9.1193%
Interest	128.70	126.77

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(₹ in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	8.64%	8.64%
	Interest	8.64	8.64
	Rep Schedule	12 Annual installments from 8.7.2014	
2	Bond XXXIV		
	Gross loan opening	300.00	300.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	8.84%	8.84%
	Interest	26.52	26.52
	Rep Schedule	12 Annual installments from 21.10.2014	
3	Bond XXXVI		
	Gross loan opening	320.48	320.48
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	320.48	320.48
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	320.48	320.48
	Average Loan	320.48	320.48
	Rate of Interest	9.35%	9.35%
	Interest	29.96	29.96
	Rep Schedule	15 Annual installments from 29.8.2016	
4	Bond XXXV		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	9.64%	9.64%
	Interest	9.64	9.64

Rep Schedule	12 Annual installments from 31.5.2015	
Total Loan		
Gross loan opening	820.48	820.48
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	820.48	820.48
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	820.48	820.48
Average Loan	820.48	820.48
Weighted Average Rate of Interest	9.1123%	9.1123%
Interest	74.76	74.76