

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO. 152/TT/2016**

**Coram:**

**Shri A.S. Bakshi, Member  
Dr. M. K. Iyer, Member**

**Date of Hearing : 06.09.2016  
Date of Order : 08.09.2016**

**In the Matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Regulation 6 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for breaking up of true up transmission tariff of 2009-14 tariff block and determination of transmission tariff of 2014-19 tariff block of "Pallatana GBPP and Bongaigaon TPS Project" in North Eastern Region.

**And in the Matter of:**

Power Grid Corporation of India Ltd,  
SAUDAMINI, Plot No.-2, Sector-29,  
Gurgaon-122001 (Haryana)

**.....Petitioner**

**Versus**

1. Assam Electricity Grid Corporation Limited  
(Formerly Assam Electricity Board),  
Bijulee Bhawan, Paltan Bazar,  
Guwahati-781001
2. Meghalaya Energy Corporation Limited  
(Formerly Known as Meghalaya State Electricity Board)  
Short Round Road, "Lumjingshai",  
Shillong – 793001, Meghalaya
3. Government of Arunachal Pradesh,  
Itanagar, Arunachal Pradesh
4. Power and Electricity Department,  
Government of Mizoram,



Aizawl, Mizoram

5. Manipur Electricity Distribution Company Limited  
(Formerly Electricity Department, Government of Manipur),  
Keishampat, Imphal
6. Department of Power,  
Government of Nagaland,  
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,  
Vidyut Bhawan, North Banamalipur,  
Agartala, Tripura (W) – 799001, Tripura
8. NTPC Ltd.  
NTPC Bhawan, Core-7, Scope Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003

....Respondent(s)

The following were present:

For Petitioner: Shri S S Raju, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri S K Venkatesan, PGIL

For Respondents: None

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”) for breaking up of tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “2014 Tariff Regulations”) of transmission assets under "Pallatana GBPP and Bongaigaon TPS Project" in North Eastern Region (hereinafter referred to as “the transmission asset”).

2. The brief facts of the case are as follows:-



a) The petitioner has implemented transmission assets under "Pallatana GBPP and Bongaigaon TPS Project" in North Eastern Region. The annual transmission charges for 2009-14 tariff period for the instant transmission assets were determined vide order dated 18.2.2014, 22.2.2014 and 16.9.2014 in Petition Nos. 216/TT/2012, 184/TT/2011 and 98/TT/2012 respectively. The details of assets covered in the instant petition and the date of commercial operations are given hereunder:-

<b>Name of the Asset</b>	<b>COD</b>	<b>Covered in Petition No.</b>
<b>Asset – 1:</b> 1 No. 400 kV Bay of Silchar-Bongaigaon (NETC) Transmission Line along with 1 No 63 MVAR Switchable Line Reactor at Silchar Sub-station	1.11.2012	216/TT/2012
<b>Asset – 2:</b> 1 No. 400 kV Bay of Silchar-Bongaigaon (NETC) Transmission Line along With 1 No. 63 MVAR Switchable Line Reactor at Silchar Sub-station	1.12.2012	
<b>Asset – 3:</b> 2 No. 400 kV Bay of Silchar-Bongaigaon (NETC) Transmission Line along with 2 No. 63 MVAR Line Reactor at 400 kV Bongaigaon Sub-station	1.4.2013	
<b>Asset – 4:</b> 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station	1.1.2013	184/TT/2011
<b>Asset – 5:</b> 132 kV D/C Silchar- Badarpur Transmission Line along with associated bays	1.5.2012	
<b>Asset - 6:</b> 132 kV D/C Silchar-Sirkona Transmission Line along with associated bays	1.4.2012	
<b>Asset - 7:</b> 200 MVA, 400/132 kV ICT at Silchar Sub-station along with associated bays	1.7.2012	
<b>Asset - 8:</b> 2 Nos. of 50 MVAR Switchable Line Reactors for 400 kV D/C Silchar-Palatana Transmission Line at Silchar Sub-station along with associated bays and 2 Nos. of 63 MVAR Bus Reactors at Silchar Sub-station along with associated bays	1.7.2012	
<b>Asset - 9:</b> 132 kV Silchar-Hailakandi Transmission Line upto LILO point of 132 kV S/C Panchgram-Dullavcherra AEGCL line along with associated Bays	1.7.2012	98/TT/2012



Name of the Asset	COD	Covered in Petition No.
<b>Asset - 10:</b> 200 MVA, 400/132 kV ICT-II at Silchar along with associated bays	1.7.2012	
<b>Asset - 11:</b> 400 kV D/C Pallatana-Surjamaninagar line (charges at 132 kV) along with associated bays	1.7.2012	
<b>Asset - 12:</b> 80 MVAR, 420 kV Bus reactor at Bongaigaon along with associated bays	1.11.2012	

b) The Commission while granting tariff for Asset 4:400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station in order dated 22.4.2014 in Petition No. 184/TT/2011 had held that the tariff for said asset would be borne by NTPC from 1.1.2013 till commissioning of Bongaigaon TPS.

The relevant portion of the order is extracted as under:-

"51. As per para 2.1.3 of Model Transmission Services Agreement approved by the Commission, ISGS who is not a signatory to a BPTA or TSA too shall enter into this agreement and bind itself to the terms of the agreement. Therefore, NTPC is governed by the Model Transmission Services Agreement. Accordingly, it is directed that NTPC shall bear the transmission charges for Asset I from 1.1.2013 till commissioning of Bongaigaon TPS in line with clause (6) of Regulation 8 of the Sharing Regulations. The petitioner shall bill the transmission charges for Asset I on NTPC. NTPC shall have liberty to claim capitalization of the transmission charges paid to the petitioner in accordance with law. If during the prudence check of the capital cost of the generating station, the Commission finds out that the delay in commissioning of the generating station was caused by reasons beyond the control of NTPC, it may allow capitalization of the transmission charges."

c) The petitioner filed Petition No.553/TT/2014 for truing up of 2009-14 tariff period for the assets covered in the project separately and claimed combined tariff for all the 12 assets (hereinafter called as "Combined Assets") for 2014-19 tariff period. The petitioner overlooked the direction of the Commission in order dated 22.4.2014 in Petition No. 184/TT/2011, wherein it was held that the tariff of 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station would be borne by NTPC from 1.1.2013 till the date of



commissioning of NTPC Bongaigaon TPS, i.e. 1.4.2016. Combined tariff for all the 12 assets, as prayed by the petitioner, for 2014-19 tariff period was allowed vide order dated 28.3.2016 in Petition No. 553/TT/2014.

d) The petitioner has claimed separate tariff for Asset 4: 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station and combined tariff for all the other assets in order to bill differential tariff from 1.4.2014 till 31.3.2016 i.e. date of commissioning of Bongaigaon TPS (NTPC). The petitioner has also submitted letter dated 31.3.2016 declaring the date of commercial operation of 1<sup>st</sup> unit of 250 MW of Bongaigaon Thermal Power Station (3x250 MW) as 1.4.2016.

e) The tariff approved for the combined assets vide order dated 28.3.2016 in Petition No. 553/TT/2014 for 2014-19 tariff period is as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1678.17	1728.69	1728.69	1728.69	1728.69
Interest on Loan	1778.40	1686.30	1526.15	1366.16	1206.89
Return on Equity	1902.68	1961.69	1961.69	1961.69	1961.69
Interest on Working Capital	212.05	215.39	214.75	214.21	213.79
O & M Expenses	1605.56	1658.84	1713.89	1770.85	1829.59
<b>Total</b>	<b>7176.86</b>	<b>7250.92</b>	<b>7145.17</b>	<b>7041.60</b>	<b>6940.66</b>

f) The petitioner has claimed following tariff for Asset 4: 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station from 1.4.2014 to 31.3.2016 and combined tariff for all assets except Asset 4 from 1.4.2014 to 31.3.2016 and combined tariff for all the 12 assets from 1.4.2016 to 31.3.2019:-



**(₹ in lakh)**

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
Depreciation	102.52	104.79
Interest on Loan	110.42	103.56
Return on Equity	113.93	116.46
Interest on Working Capital	14.31	14.49
O & M Expenses	122.85	126.93
<b>Total</b>	<b>464.03</b>	<b>466.23</b>

**(₹ in lakh)**

<b>Combined Asset (Except Asset 4) (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
Depreciation	1575.65	1623.89
Interest on Loan	1668.06	1582.81
Return on Equity	1788.71	1845.19
Interest on Working Capital	197.75	200.91
O & M Expenses	1482.71	1531.91
<b>Total</b>	<b>6712.88</b>	<b>6784.71</b>

**(₹ in lakh)**

<b>Combined Asset (1.4.2016 to 31.3.2019)</b>			
<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	1728.69	1728.69	1728.69
Interest on Loan	1526.15	1366.16	1206.89
Return on Equity	1961.69	1961.69	1961.69
Interest on Working Capital	214.75	214.21	213.79
O & M Expenses	1713.89	1770.85	1829.59
<b>Total</b>	<b>7145.17</b>	<b>7041.60</b>	<b>6940.66</b>

3. The petitioner has served the copy of the petition to the respondents on 21.7.2016. The hearing in this matter was held on 6.9.2016. None of the respondents have filed the reply in the matter.

4. Having heard the petitioner and perused the material on record, we proceed to dispose of the petition.

5. We have considered the submissions of the petitioner. It is necessary for the petitioner to have separate transmission charges for Asset 4: 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station



so that the petitioner could claim the same from NTPC from 1.4.2014 to 31.3.2016 as directed in order dated 22.2.2014 in Petition No.184/TT/2011. Accordingly, tariff for Asset 4: 400 kV D/C Bongaigaon TPS-Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station is taken out of the tariff allowed in order dated 28.3.2016 in Petition No.553/TT/2014. Further, the tariff for remaining 11 assets for the periods 1.4.2014 to 31.3.2016 and from 1.4.2016 to 31.3.2019 is worked out separately.

6. The petitioner has claimed capital cost of combined assets except Asset 4 is ₹29444.68 lakh and for Asset- 4 is ₹1893.60 lakh as on 31.3.2014, approved by the Commission in order dated 28.3.2016 in Petition No.553/TT/2014. The same has been considered as opening capital cost as on 1.4.2014 for determination of tariff 2014-19 period in accordance with Regulation 9 of the 2014 Tariff Regulations as shown below:-

(₹ in lakh)

Name of Asset	Apportioned approved cost as per RCE	Capital cost as on 31.3.2014
Asset-1	1471.54	1153.55
Asset-2	1258.98	952.53
Asset-3	2360.59	1726.66
Asset-5	2195.96	1721.17
Asset-6	4439.53	3354.38
Asset-7	3242.57	2604.93
Asset-8	4642.36	3233.67
Asset-9	3911.76	2050.16
Asset-10	2613.83	2146.38
Asset-11	10937.02	9481.6
Asset-12	1433.01	1019.66
<b>Combined Asset (Except Asset 4)</b>	<b>38507.13</b>	<b>29444.68</b>
Asset-4	2574.72	1893.60
<b>Total</b>	<b>41081.85</b>	<b>31338.28</b>

### **Additional Capital Expenditure**

7. Clause (3) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

"The capital expenditure in respect of the new project or an existing project 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 recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law:.”

8. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” as follows:-

“Cut-off Date” means 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation:”

9. The “cut-off date” for all the assets works out to be 31.3.2015. The petitioner has claimed additional capital expenditure for 2014-19 tariff period under Regulation 14(2) of the 2014 Tariff Regulations as shown below:-

(₹ in lakh)

Asset	Apportioned approved cost as per RCE	Capital cost as on 1.3.2014	Additional capital expenditure		Capital cost as on 31.3.2019
			2014-15	2014-19	
Asset-1	1471.54	1153.55	51.95	51.95	1205.50
Asset-2	1258.98	952.53	39.48	39.48	992.01
Asset-3	2360.59	1726.66	166.82	166.82	1893.48
Asset-5	2195.96	1721.17	201.25	201.25	1922.42
Asset-6	4439.53	3354.38	451.8	451.80	3806.18
Asset-7	3242.57	2604.93	221.76	221.76	2826.69
Asset-8	4642.36	3233.67	187.29	187.29	3420.96
Asset-9	3911.76	2050.16	74.16	74.16	2124.32
Asset-10	2613.83	2146.38	103.62	103.62	2250.00
Asset-11	10937	9481.60	383.92	383.92	9865.52
Asset-12	1433.01	1019.66	37.95	37.95	1057.61





<b>Combined Asset (Except Asset 4)</b>	<b>38507.13</b>	<b>29444.68</b>	<b>1920.00</b>	<b>1920.00</b>	<b>31364.69</b>
Asset-4	2574.72	1893.60	86.08	86.08	1979.68
<b>Total</b>	<b>41081.85</b>	<b>31338.28</b>	<b>2006.08</b>	<b>2006.08</b>	<b>33344.36</b>

10. The above mentioned additional capital expenditure is towards balance and retention payments and the same has been certified by the Auditor vide certificates dated 2.12.2014 for all the assets. Further, the total capital cost for all the assets as on 31.3.2019 is within the approved apportioned cost of the project. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 14(1) of the 2014 Tariff Regulations.

#### **Debt: Equity**

11. Clause (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provide as under:-

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:”

“(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe 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.”

12. The normative debt:equity ratio has been considered to work out the tariff in accordance with the 2014 Tariff Regulations as given below:-



(₹ in lakh)

Asset 4 (1.4.2014 to 31.3.2016)						
Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	1325.52	70.00	60.26	70.00	1385.78	70.00
Equity	568.08	30.00	25.82	30.00	593.90	30.00
<b>Total</b>	<b>1893.60</b>	<b>100.00</b>	<b>86.08</b>	<b>100.00</b>	<b>1979.68</b>	<b>100.00</b>

(₹ in lakh)

Combined Assets (Except Asset 4) (1.4.2014 to 31.3.2016)						
Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	20611.28	70.00	1344.00	70.00	21955.28	70.00
Equity	8833.40	30.00	576.00	30.00	9409.40	30.00
<b>Total</b>	<b>29444.68</b>	<b>100.00</b>	<b>1920.00</b>	<b>100.00</b>	<b>31364.68</b>	<b>100.00</b>

(₹ in lakh)

Combined Assets (1.4.2016 to 31.3.2019)						
Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	21936.80	70.00	1404.26	70.00	23341.05	70.00
Equity	9401.48	30.00	601.82	30.00	10003.31	30.00
<b>Total</b>	<b>31338.28</b>	<b>100.00</b>	<b>2006.08</b>	<b>100.00</b>	<b>33344.36</b>	<b>100.00</b>

### Return on Equity (“ROE”)

13. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014

Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

“25. Tax on Return on Equity:

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

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

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance



Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."

14. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Return on Equity</b>	<b>2014-15</b>	<b>2015-16</b>
Opening Equity	568.08	593.90
Additions	25.82	0.00
Closing Equity	593.90	593.90
Average Equity	580.99	593.90
Return on Equity (Base Rate) (%)	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610
<b>Return on Equity</b>	<b>113.94</b>	<b>116.47</b>

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Return on Equity</b>	<b>2014-15</b>	<b>2015-16</b>
Opening Equity	8833.40	9409.40
Additions	576.00	0.00
Closing Equity	9409.40	9409.40
Average Equity	9121.40	9409.40
Return on Equity (Base Rate) (%)	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610
<b>Return on Equity</b>	<b>1788.75</b>	<b>1845.23</b>

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Return on Equity</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	10003.31	10003.31	10003.31
Additions	0.00	0.00	0.00
Closing Equity	10003.31	10003.31	10003.31
Average Equity	10003.31	10003.31	10003.31



<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Return on Equity</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610
Return on Equity	1961.69	1961.69	1961.69

### **Interest on Loan (“IoL”)**

15. Clause 5 and Clause 6 of Regulation 26 of the 2014 Tariff Regulations provides that:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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.”

16. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure 1. IoL has been worked out and allowed as follows:



(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Interest on Loan</b>	<b>2014-15</b>	<b>2015-16</b>
Gross Normative Loan	1325.52	1385.78
Cumulative Repayment upto Previous Year	114.93	217.45
Net Loan-Opening	1210.59	1168.33
Additions	60.26	0.00
Repayment during the year	102.52	104.79
Net Loan-Closing	1168.33	1063.53
Average Loan	1189.46	1115.93
Weighted Average Rate of Interest on Loan (%)	9.2834	9.2804
<b>Interest on Loan</b>	<b>110.42</b>	<b>103.56</b>

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Interest on Loan</b>	<b>2014-15</b>	<b>2015-16</b>
Gross Normative Loan	20611.28	21955.28
Cumulative Repayment upto Previous Year	2446.98	4022.63
Net Loan-Opening	18164.30	17932.65
Additions	1344.00	0.00
Repayment during the year	1575.65	1623.90
Net Loan-Closing	17932.65	16308.75
Average Loan	18048.47	17120.70
Weighted Average Rate of Interest on Loan (%)	9.2421	9.2450
Interest on Loan	1668.05	1582.80

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Interest on Loan</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	23341.05	23341.05	23341.05
Cumulative Repayment upto Previous Year	5968.77	7697.46	9426.15
Net Loan-Opening	17372.28	15643.59	13914.90
Additions	0.00	0.00	0.00
Repayment during the year	1728.69	1728.69	1728.69
Net Loan-Closing	15643.59	13914.90	12186.21
Average Loan	16507.94	14779.25	13050.56
Weighted Average Rate of Interest on Loan (%)	9.2449	9.2438	9.2478
<b>Interest on Loan</b>	<b>1526.15</b>	<b>1366.16</b>	<b>1206.89</b>



## Depreciation

17. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

...(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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"

"(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II 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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

18. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. depreciation up to 2014-19 tariff period has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of the 2014 Tariff Regulations. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Depreciation</b>	<b>2014-15</b>	<b>2015-16</b>
Opening Gross Block	1893.60	1979.68
Additional Capitalisation	86.08	0.00
Closing Gross Block	1979.68	1979.68
Average Gross Block	1936.64	1979.68
Freehold Land (Av. Cost)	0.00	0.00
Rate of Depreciation (%)	5.29%	5.29%
Depreciable Value	1742.98	1820.45
Balance useful life of the asset	27.00	26.00
Elapsed life	0.00	1.00



<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Depreciation</b>	<b>2014-15</b>	<b>2015-16</b>
Remaining Depreciable Value	1628.05	1564.26
Depreciation during the year	102.52	104.79
Depreciation upto previous year	114.93	217.45
Cumulative depreciation	217.45	322.24

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Depreciation</b>	<b>2014-15</b>	<b>2015-16</b>
Opening Gross Block	29444.68	31364.68
Additional Capitalisation	1920.00	0.00
Closing Gross Block	31364.68	31364.68
Average Gross Block	30404.68	31364.68
Freehold Land (Av. Cost)	109.18	109.18
Rate of Depreciation (%)	5.18	5.18
Depreciable Value	27265.95	28993.95
Balance useful life of the asset	27.00	26.00
Elapsed life	0.00	1.00
Remaining Depreciable Value	24840.09	24128.44
Depreciation during the year	1575.65	1623.90
Depreciation upto previous year	2425.86	4001.51
Cumulative depreciation	4001.51	5625.41

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Depreciation</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	33344.36	33344.36	33344.36
Additional Capitalisation	0.00	0.00	0.00
Closing Gross Block	33344.36	33344.36	33344.36
Average Gross Block	33344.36	33344.36	33344.36
Freehold Land (Av. Cost)	109.18	109.18	109.18
Rate of Depreciation (%)	5.18	5.18	5.18
Depreciable Value	29911.66	29911.66	29911.66
Balance useful life of the asset	25.00	24.00	23.00
Elapsed life	2.00	3.00	4.00
Remaining Depreciable Value	23964.01	22235.32	20506.63
Depreciation during the year	1728.69	1728.69	1728.69
Depreciation upto previous year	5947.65	7676.34	9405.03
Cumulative depreciation	7676.34	9405.03	11133.72



## Operation & Maintenance Expenses (“O&M Expenses”)

19. Clause 4(a) of Regulation 29 of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets have been worked out and allowed are as follows:-

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>400 kV Bays:</b>		
No. of Bays	2	2
Norms (₹ lakh/Bay)	60.30	62.30
<b>D/C Twin/Triple Conductor Transmission line:</b>		
Length(km)	3.187	3.187
Norms (₹ lakh/km)	0.707	0.731

(₹ in lakh)

<b>Combined Assets Except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>132 kV Bays:</b>		
No. of Bays	14	14
Norms (₹ lakh/Bay)	30.15	31.15
<b>400 kV Bays:</b>		
No. of Bays	17	17
Norms (₹ lakh/Bay)	60.30	62.30
<b>S/C Single Conductor Transmission line:</b>		
Length(km)	15.00	15.00
Norms (₹ lakh/km)	0.202	0.209
<b>D/C Twin/Triple Conductor Transmission line:</b>		
Length(km)	37.20	37.20
Norms (₹ lakh/km)	0.707	0.731
<b>D/C Single Conductor Transmission line:</b>		
Length(km)	20.40	20.40
Norms (₹ lakh/km)	0.303	0.313
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>1482.71</b>	<b>1531.91</b>





(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>132 kV Bays:</b>			
No. of Bays	14	14	14
Norms (₹ lakh/Bay)	32.18	33.25	34.36
<b>400 kV Bays:</b>			
No. of Bays	19	19	19
Norms (₹ lakh/Bay)	64.37	66.51	68.71
<b>S/C Single Conductor Transmission line:</b>			
Length(km)	15.00	15.00	15.00
Norms (₹ lakh/km)	0.216	0.223	0.230
<b>D/C Twin/Triple Conductor Transmission line:</b>			
Length(km)	40.387	40.387	40.387
Norms (₹ lakh/km)	0.755	0.780	0.806
<b>D/C Single Conductor Transmission line:</b>			
Length(km)	20.40	20.40	20.40
Norms (₹ lakh/km)	0.324	0.334	0.346
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>1713.89</b>	<b>1770.85</b>	<b>1829.59</b>

### **Interest on Working Capital (IWC)**

20. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specifies as follows:

#### **“28. Interest on Working Capital**

- (c) (i) Receivables equivalent to two months of fixed cost;  
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

21. The petitioner has claimed 13.50% rate of interest on working capital. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff



Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Interest on Working Capital</b>	<b>2014-15</b>	<b>2015-16</b>
O & M Expenses	10.23	10.57
Maintenance Spares	18.43	19.04
Receivables	77.34	77.71
Total	106.00	107.32
Rate of Interest (%)	13.50	13.50
Interest	14.31	14.49

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Interest on Working Capital</b>	<b>2014-15</b>	<b>2015-16</b>
O & M Expenses	123.51	127.61
Maintenance Spares	222.41	229.79
Receivables	1118.82	1130.79
Total	1464.73	1488.19
Rate of Interest (%)	13.50	13.50
Interest	197.74	200.91

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Interest on Working Capital</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M Expenses	142.77	147.51	152.40
Maintenance Spares	257.08	265.63	274.44
Receivables	1190.86	1173.60	1156.78
Total	1590.71	1586.74	1583.62
Rate of Interest (%)	13.50	13.50	13.50
Interest	214.75	214.21	213.79

### **ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

22. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-



(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Depreciation</b>		
Opening Gross Block	1893.60	1979.68
Additional Capitalisation	86.08	0.00
Closing Gross Block	1979.68	1979.68
Average Gross Block	1936.64	1979.68
Freehold Land (Av. Cost)	0.00	0.00
Rate of Depreciation (%)	5.29	5.29
Depreciable Value	1742.98	1820.45
Balance useful life of the asset	27.00	26.00
Elapsed life	0.00	1.00
Remaining Depreciable Value	1628.05	1564.26
Depreciation during the year	102.52	104.79
Depreciation upto previous year	114.93	217.45
Cumulative depreciation	217.45	322.24
<b>Interest on Loan</b>		
Gross Normative Loan	1325.52	1385.78
Cumulative Repayment upto Previous Year	114.93	217.45
Net Loan-Opening	1210.59	1168.33
Additions	60.26	0.00
Repayment during the year	102.52	104.79
Net Loan-Closing	1168.33	1063.53
Average Loan	1189.46	1115.93
Weighted Average Rate of Interest on Loan (%)	9.2834	9.2804
Interest on Loan	110.42	103.56
<b>Return on Equity</b>		
Opening Equity	568.08	593.90
Additions	25.82	0.00
Closing Equity	593.90	593.90
Average Equity	580.99	593.90
Return on Equity (Base Rate )	15.500	15.500
MAT rate for the respective year	20.961	20.961
Rate of Return on Equity	19.610	19.610
Return on Equity	113.94	116.47
<b>Interest on Working Capital</b>		
O & M expenses	10.23	10.57
Maintenance Spares	18.43	19.04
Receivables	77.34	77.71
Total	106.00	107.32
Rate of Interest	13.50	13.50
Interest on Working Capital	14.31	14.49
<b>Annual Transmission Charges</b>		
Depreciation	102.52	104.79
Interest on Loan	110.42	103.56
Return on Equity	113.94	116.47
Interest on Working Capital	14.31	14.49
O & M Expenses	122.85	126.93



<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Total</b>	<b>464.04</b>	<b>466.24</b>

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Depreciation</b>		
Opening Gross Block	29444.68	31364.68
Additional Capitalisation	1920.00	0.00
Closing Gross Block	31364.68	31364.68
Average Gross Block	30404.68	31364.68
Freehold Land (Av. Cost)	109.18	109.18
Rate of Depreciation (%)	5.18	5.18
Depreciable Value	27265.95	28993.95
Balance useful life of the asset	27.00	26.00
Elapsed life	0.00	1.00
Remaining Depreciable Value	24840.09	24128.44
Depreciation during the year	1575.65	1623.90
Depreciation upto previous year	2425.86	4001.51
Cumulative depreciation (incl. of AAD)	4001.51	5625.41
<b>Interest on Loan</b>		
Gross Normative Loan	20611.28	21955.28
Cumulative Repayment upto Previous Year	2446.98	4022.63
Net Loan-Opening	18164.30	17932.65
Additions	1344.00	0.00
Repayment during the year	1575.65	1623.90
Net Loan-Closing	17932.65	16308.75
Average Loan	18048.47	17120.70
Weighted Average Rate of Interest on Loan (%)	9.2421	9.2450
Interest on Loan	1668.05	1582.80
<b>Return on Equity</b>		
Opening Equity	8833.40	9409.40
Additions	576.00	0.00
Closing Equity	9409.40	9409.40
Average Equity	9121.40	9409.40
Return on Equity (Base Rate )	15.500	15.500
MAT rate for the respective year	20.961	20.961
Rate of Return on Equity	19.610	19.610
Return on Equity	1788.75	1845.23
<b>Interest on Working Capital</b>		
O & M expenses	123.51	127.61
Maintenance Spares	222.41	229.79
Receivables	1118.82	1130.79
Total	1464.73	1488.19
Rate of Interest	13.50	13.50
Interest on Working Capital	197.74	200.91
<b>Annual Transmission Charges</b>		



<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
Depreciation	1575.65	1623.90
Interest on Loan	1668.05	1582.80
Return on Equity	1788.75	1845.23
Interest on Working Capital	197.74	200.91
O & M Expenses	1482.71	1531.91
<b>Total</b>	<b>6712.90</b>	<b>6784.75</b>

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>			
Opening Gross Block	33344.36	33344.36	33344.36
Additional Capitalisation	0.00	0.00	0.00
Closing Gross Block	33344.36	33344.36	33344.36
Average Gross Block	33344.36	33344.36	33344.36
Freehold Land (Av. Cost)	109.18	109.18	109.18
Rate of Depreciation (%)	5.18	5.18	5.18
Depreciable Value	29911.66	29911.66	29911.66
Balance useful life of the asset	25.00	24.00	23.00
Elapsed life	2.00	3.00	4.00
Remaining Depreciable Value	23964.01	22235.32	20506.63
Depreciation during the year	1728.69	1728.69	1728.69
Depreciation upto previous year	5947.65	7676.34	9405.03
Cumulative depreciation	7676.34	9405.03	11133.72
<b>Interest on Loan</b>			
Gross Normative Loan	23341.05	23341.05	23341.05
Cumulative Repayment upto Previous Year	5968.77	7697.46	9426.15
Net Loan-Opening	17372.28	15643.59	13914.90
Additions	0.00	0.00	0.00
Repayment during the year	1728.69	1728.69	1728.69
Net Loan-Closing	15643.59	13914.90	12186.21
Average Loan	16507.94	14779.25	13050.56
Weighted Average Rate of Interest on Loan (%)	9.2449	9.2438	9.2478
Interest on Loan	1526.15	1366.16	1206.89
<b>Return on Equity</b>			
Opening Equity	10003.31	10003.31	10003.31
Additions	0.00	0.00	0.00
Closing Equity	10003.31	10003.31	10003.31
Average Equity	10003.31	10003.31	10003.31
Return on Equity (Base Rate ) (%)	15.500	15.500	15.500
MAT rate for the respective year (%)	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610
Return on Equity	1961.69	1961.69	1961.69
<b>Interest on Working Capital</b>			



<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	142.77	147.51	152.40
Maintenance Spares	257.08	265.63	274.44
Receivables	1190.86	1173.60	1156.78
Total	1590.71	1586.74	1583.62
Rate of Interest(%)	13.50	13.50	13.50
Interest on Working Capital	214.75	214.21	213.79
<b>Annual Transmission Charges</b>			
Depreciation	1728.69	1728.69	1728.69
Interest on Loan	1526.15	1366.16	1206.89
Return on Equity	1961.69	1961.69	1961.69
Interest on Working Capital	214.08	213.52	213.08
O & M Expenses	1713.89	1770.85	1829.59
<b>Total</b>	<b>7145.17</b>	<b>7041.60</b>	<b>6940.66</b>

### **Sharing of Transmission Charges**

23. As per the direction of the Commission in order dated 22.2.2014 in Petition No. 184/TT/2011, transmission charges of Asset 4: 400 kV D/C Bongaigaon TPS- Bongaigaon Transmission Line along with associated bays at Bongaigaon Sub-station shall be borne by NTPC from 1.1.2013 till 31.3.2016 (commissioning of NTPC Bongaigaon TPS).

24. The billing, collection and disbursement of the transmission charges approved in respect of all assets, except Asset 4 for the period 1.4.2014 to 31.3.2016, 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 as provided in Regulation 43 of the 2014 Tariff Regulations. The billing, collection and disbursement of the transmission charges of the transmission charges in respect of Asset 4 shall also be in same manner after 1.4.2016 (commissioning of Bongaigaon TPS).

25. Except for the above, all other terms contained in our order dated 28.3.2016 in Petition No. 553/TT/2014 remains unchanged.



26. This order disposes of Petition No. 152/TT/2016.

Sd/-

**(Dr. M.K. Iyer)**  
**Member**

Sd/-

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



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)**

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND-XXXIV-DOCO DRAWL ON 01-JAN-2013-	8.84	200.00	0.00	83.35	200.00
BOND-XXXV-DOCO DRAWL ON 01-JAN-2013-	9.64	725.00	0.00	241.68	725.00
BOND - XLI-ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	5.11	0.00	1.29	5.11
BOND - XLI-ADDCAP FOR 2013-2014 Add Cap Funding-	8.85	182.54	0.00	45.63	182.54
BOND - XLI-DOCO Funding-	8.85	212.87	0.00	53.37	212.87
<b>Total</b>		<b>1325.52</b>	<b>0.00</b>	<b>425.32</b>	<b>1325.52</b>

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND XXXI-10.11 DOCO DRAWL ON 01-JUL-2012-	8.90	45.00	0.00	18.75	45.00
BOND XXXI-24.25.DOCO DRAWL ON 01-JUL-2012-	8.90	150.00	0.00	62.50	150.00
BOND XXXI-38.39.DOCO Funding-	8.90	300.00	0.00	125.00	300.00
BOND XXXI-47.49.DOCO Funding-	8.90	50.00	0.00	20.85	50.00
BOND XXXI-53.55.DOCO Funding-	8.90	125.00	0.00	52.10	125.00
BOND XXXI-60.63.DOCO DRAWL ON 01-DEC-2012-	8.90	125.00	0.00	52.10	125.00
BOND XXXI-70.75.DOCO Funding-	8.90	50.00	0.00	20.85	50.00
BOND XXXIII-11.12.DOCO DRAWL ON 01-JUL-2012-	8.64	25.00	0.00	10.40	25.00
BOND XXXIII-25.26.DOCO DRAWL ON 01-JUL-2012-	8.64	50.00	0.00	20.85	50.00
BOND XXXIII-39.40.DOCO Funding-	8.64	150.00	0.00	62.50	150.00





<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND XXXIII-46.48.DOCO DRAWL ON 01-NOV-2012-	8.64	25.00	0.00	10.40	25.00
BOND XXXIII-54.56.DOCO Funding-	8.64	125.00	0.00	52.10	125.00
BOND XXXIII-61.64.DOCO DRAWL ON 01-DEC-2012-	8.64	125.00	0.00	52.10	125.00
BOND XXXIII-71.76.DOCO Funding-	8.64	50.00	0.00	20.85	50.00
BOND-XXXIV-1.1.DOCO Funding-	8.84	200.00	0.00	83.35	200.00
BOND-XXXIV-12.13.DOCO DRAWL ON 01-JUL-2012-	8.84	21.00	0.00	8.75	21.00
BOND-XXXIV-18.19.DOCO DRAWL ON 01-JUL-2012-	8.84	900.00	0.00	375.00	900.00
BOND-XXXIV-26.27.DOCO Funding	8.84	106.82	0.00	44.50	106.82
BOND-XXXIV-31.32.DOCO Funding-	8.84	900.00	0.00	375.00	900.00
BOND-XXXIV-40.41.DOCO Funding-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-55.57.DOCO Funding-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-6.6.DOCO Funding	8.84	100.00	0.00	41.65	100.00
BOND-XXXIV-62.65.DOCO DRAWL ON 01-DEC-2012-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-72.77.DOCO Funding-	8.84	200.00	0.00	83.35	200.00
BOND-XXXV-13.14.DOCO Funding-	9.64	400.00	0.00	133.32	400.00
BOND-XXXV-19.20.DOCO Funding-	9.64	400.00	0.00	133.32	400.00
BOND-XXXV-2.2.DOCO Funding-	9.64	1100.00	0.00	366.68	1100.00
BOND-XXXV-27.28.DOCO Funding-	9.64	600.00	0.00	200.00	600.00
BOND-XXXV-32.33.DOCO DRAWL ON 01-JUL-2012-	9.64	200.00	0.00	66.68	200.00
BOND-XXXV-41.42.DOCO Funding-	9.64	2000.00	0.00	666.68	2000.00
BOND-XXXV-7.7.DOCO DRAWL ON 01-MAY-2012-	9.64	600.00	0.00	200.00	600.00
BOND XXXVI-14.15.DOCO Funding-	9.35	432.00	0.00	86.40	432.00
BOND XXXVI-28.29.DOCO Funding	9.35	490.00	0.00	98.01	490.00
BOND XXXVI-42.43.DOCO	9.35	2140.00	0.00	428.01	2140.00



<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
Funding-					
BOND XXXVI-48.50.DOCO Funding-	9.35	100.00	0.00	20.01	100.00
BOND XXXVII-43.44.DOCO Funding-	9.25	185.00	0.00	61.68	185.00
BOND XXXVII-49.51.DOCO Funding-	9.25	222.00	0.00	74.00	222.00
BOND XXXVII-56.58.DOCO Funding-	9.25	100.00	0.00	33.32	100.00
BOND XXXVII-63.66.DOCO DRAWL ON 01-DEC-2012-	9.25	83.00	0.00	27.68	83.00
BOND XXXVIII-20.21.DOCO Funding-	9.25	210.00	0.00	0.00	210.00
BOND XXXVIII-33.34.DOCO Funding-	9.25	515.00	0.00	0.00	515.00
BOND XXXVIII-50.52.DOCO Funding-	9.25	182.87	0.00	0.00	182.87
BOND XXXVIII-57.59.DOCO Funding-	9.25	115.00	0.00	0.00	115.00
BOND XXXVIII-73.78.DOCO Funding-	9.25	100.00	0.00	0.00	100.00
BOND XXXVIII-79.8.DOCO Funding-	9.25	282.94	0.00	0.00	282.94
BOND XXXIX-3.3.DOCO Funding-	9.40	184.38	0.00	0.00	184.38
BOND XXXIX-34.35.DOCO Funding-	9.40	335.00	0.00	0.00	335.00
BOND XXXIX-74.79.DOCO Funding	9.40	63.00	0.00	0.00	63.00
BOND XXXIX-80.45.DOCO Funding-	9.40	912.54	0.00	0.00	912.54
BOND XL-15.16.DOCO Funding-	9.30	140.40	0.00	35.10	140.40
BOND XL-21.22.ADDCAP FOR 2012-2013 ADDCAP Funding-	9.30	168.82	0.00	42.21	168.82
BOND XL-22.23.DOCO Funding-	9.30	66.57	0.00	16.65	66.57
BOND XL-30.31.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	84.57	0.00	21.15	84.57
BOND XL-35.36.DOCO Funding-	9.30	81.99	0.00	20.49	81.99
BOND XL-36.37.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	160.41	0.00	40.11	160.41
BOND XL-4.4.ADDCAP FOR 2012-2013 ADDCAP Funding-	9.30	603.72	0.00	150.93	603.72
BOND XL-44.46.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	535.90	0.00	133.98	535.90



<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND XL-51.53.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	39.21	0.00	9.81	39.21
BOND XL-75.80.DOCO Funding	9.30	200.00	0.00	50.01	200.00
BOND XL-8.9.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	184.37	0.00	46.08	184.37
BOND - XLI-16.17 ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	329.28	0.00	82.32	329.28
BOND - XLI-58.61 ADDCAP FOR 2012-2013 Add cap Funding-	8.85	126.26	0.00	31.56	126.26
BOND - XLI-59.62.ADDCAP FOR 2013-2014 Addcap funding-	8.85	73.16	0.00	18.30	73.16
BOND - XLI-64.67.ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	125.64	0.00	31.41	125.64
BOND - XLI-65.68.ADDCAP FOR 2013-2014 Add Cap Funding-	8.85	24.96	0.00	6.24	24.96
BOND - XLI-76.81.DOCO Funding-	8.85	200.00	0.00	50.01	200.00
BOND - XLI-81.60.DOCO Funding-	8.85	18.07	0.00	4.53	18.07
BOND - XLI-82.69.DOCO DRAWL ON 01-DEC-2012-	8.85	58.17	0.00	14.55	58.17
BOND - XLII-77.82.DOCO Funding-	8.80	148.98	0.00	0.00	148.98
BOND - XLIII-78.83 ADDCAP FOR ADDCAP FOR 2013-2014 Add Cap Funding-	7.93	196.68	0.00	32.78	196.68
BOND - XLIV-17.18.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	42.43	0.00	14.14	42.43
BOND - XLIV-23.24.ADDCAP FOR 2013-2014 ADDCAP Funding-	8.70	78.06	0.00	26.02	78.06
BOND - XLIV-29.30.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	21.08	0.00	7.03	21.08
BOND - XLIV-37.38 ADDCAP FOR 2013-2014 Add Cap Funding	8.70	71.18	0.00	23.73	71.18
BOND - XLIV-45.47.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	288.68	0.00	96.23	288.68



<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND - XLIV-5.5.ADDCAP FOR 2013-2014 ADDCAP Funding-	8.70	259.96	0.00	86.65	259.96
BOND - XLIV-52.54.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	94.68	0.00	31.56	94.68
BOND - XLIV-9.10.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	37.51	0.00	12.50	37.51
<b>Total</b>		<b>20611.29</b>	<b>0.00</b>	<b>5481.12</b>	<b>20611.29</b>

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND XXXI-11.DOCO DRAWL ON 01-JUL-2012-	8.90	45.00	0.00	18.75	45.00
BOND XXXI-25.DOCO DRAWL ON 01-JUL-2012-	8.90	150.00	0.00	62.50	150.00
BOND XXXI-39.DOCO Funding-	8.90	300.00	0.00	125.00	300.00
BOND XXXI-49.DOCO Funding-	8.90	50.00	0.00	20.85	50.00
BOND XXXI-55.DOCO Funding-	8.90	125.00	0.00	52.10	125.00
BOND XXXI-63.DOCO DRAWL ON 01-DEC-2012-	8.90	125.00	0.00	52.10	125.00
BOND XXXI-75.DOCO Funding-	8.90	50.00	0.00	20.85	50.00
BOND XXXIII-12.DOCO DRAWL ON 01-JUL-2012-	8.64	25.00	0.00	10.40	25.00
BOND XXXIII-26.DOCO DRAWL ON 01-JUL-2012-	8.64	50.00	0.00	20.85	50.00
BOND XXXIII-40.DOCO Funding-	8.64	150.00	0.00	62.50	150.00
BOND XXXIII-48.DOCO DRAWL ON 01-NOV-2012-	8.64	25.00	0.00	10.40	25.00
BOND XXXIII-56.DOCO Funding-	8.64	125.00	0.00	52.10	125.00
BOND XXXIII-64.DOCO DRAWL ON 01-DEC-2012-	8.64	125.00	0.00	52.10	125.00
BOND XXXIII-76.DOCO Funding-	8.64	50.00	0.00	20.85	50.00
BOND-XXXIV-1.DOCO Funding-	8.84	200.00	0.00	83.35	200.00
BOND-XXXIV-13.DOCO DRAWL ON 01-JUL-2012-	8.84	21.00	0.00	8.75	21.00
BOND-XXXIV-19.DOCO DRAWL ON 01-JUL-2012-	8.84	900.00	0.00	375.00	900.00



Combined Assets (1.4.2016 to 31.3.2019)					
Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
BOND-XXXIV-27.DOCO Funding-	8.84	106.82	0.00	44.50	106.82
BOND-XXXIV-32.DOCO Funding-	8.84	900.00	0.00	375.00	900.00
BOND-XXXIV-41.DOCO Funding-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-57.DOCO Funding-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-6.DOCO Funding-	8.84	100.00	0.00	41.65	100.00
BOND-XXXIV-65.DOCO DRAWL ON 01-DEC-2012-	8.84	125.00	0.00	52.10	125.00
BOND-XXXIV-70.DOCO DRAWL ON 01-JAN-2013-	8.84	200.00	0.00	83.35	200.00
BOND-XXXIV-77.DOCO Funding-	8.84	200.00	0.00	83.35	200.00
BOND-XXXV-14.DOCO Funding-	9.64	400.00	0.00	133.32	400.00
BOND-XXXV-2.DOCO Funding-	9.64	1100.00	0.00	366.68	1100.00
BOND-XXXV-20.DOCO Funding-	9.64	400.00	0.00	133.32	400.00
BOND-XXXV-28.DOCO Funding-	9.64	600.00	0.00	200.00	600.00
BOND-XXXV-33.DOCO DRAWL ON 01-JUL-2012-	9.64	200.00	0.00	66.68	200.00
BOND-XXXV-42.DOCO Funding-	9.64	2000.00	0.00	666.68	2000.00
BOND-XXXV-7.DOCO DRAWL ON 01-MAY-2012-	9.64	600.00	0.00	200.00	600.00
BOND-XXXV-71.DOCO DRAWL ON 01-JAN-2013-	9.64	725.00	0.00	241.68	725.00
BOND XXXVI-15.DOCO Funding-	9.35	432.00	0.00	86.40	432.00
BOND XXXVI-29.DOCO Funding-	9.35	490.00	0.00	98.01	490.00
BOND XXXVI-43.DOCO Funding-	9.35	2140.00	0.00	428.01	2140.00
BOND XXXVI-50.DOCO Funding-	9.35	100.00	0.00	20.01	100.00
BOND XXXVII-44.DOCO Funding-	9.25	185.00	0.00	61.68	185.00
BOND XXXVII-51.DOCO Funding-	9.25	222.00	0.00	74.00	222.00
BOND XXXVII-58.DOCO Funding-	9.25	100.00	0.00	33.32	100.00
BOND XXXVII-66.DOCO DRAWL ON 01-DEC-2012-	9.25	83.00	0.00	27.68	83.00
BOND XXXVIII-21.DOCO Funding-	9.25	210.00	0.00	0.00	210.00
BOND XXXVIII-34.DOCO Funding-	9.25	515.00	0.00	0.00	515.00
BOND XXXVIII-52.DOCO Funding-	9.25	182.87	0.00	0.00	182.87
BOND XXXVIII-59.DOCO Funding-	9.25	115.00	0.00	0.00	115.00
BOND XXXVIII-78.DOCO Funding-	9.25	100.00	0.00	0.00	100.00
BOND XXXVIII-8.DOCO Funding-	9.25	282.94	0.00	0.00	282.94



<b>Combined Assets (1.4.2016 to 31.3.2019)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND XXXIX-3.DOCO Funding-	9.40	184.38	0.00	0.00	184.38
BOND XXXIX-35.DOCO Funding-	9.40	335.00	0.00	0.00	335.00
BOND XXXIX-45.DOCO Funding-	9.40	912.54	0.00	0.00	912.54
BOND XXXIX-79.DOCO Funding-	9.40	63.00	0.00	0.00	63.00
BOND XL-16.DOCO Funding-	9.30	140.40	0.00	35.10	140.40
BOND XL-22.ADDCAP FOR 2012-2013 ADDCAP Funding-	9.30	168.82	0.00	42.21	168.82
BOND XL-23.DOCO Funding-	9.30	66.57	0.00	16.65	66.57
BOND XL-31.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	84.57	0.00	21.15	84.57
BOND XL-36.DOCO Funding-	9.30	81.99	0.00	20.49	81.99
BOND XL-37.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	160.41	0.00	40.11	160.41
BOND XL-4.ADDCAP FOR 2012-2013 ADDCAP Funding-	9.30	603.72	0.00	150.93	603.72
BOND XL-46.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	535.90	0.00	133.98	535.90
BOND XL-53.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	39.21	0.00	9.81	39.21
BOND XL-80.DOCO Funding-	9.30	200.00	0.00	50.01	200.00
BOND XL-9.ADDCAP FOR 2012-2013 Add Cap Funding-	9.30	184.37	0.00	46.08	184.37
BOND - XLI-17.ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	329.28	0.00	82.32	329.28
BOND - XLI-60.DOCO Funding-	8.85	18.07	0.00	4.53	18.07
BOND - XLI-61.ADDCAP FOR 2012-2013 Add cap funding-	8.85	126.26	0.00	31.56	126.26
BOND - XLI-62.ADDCAP FOR 2013-2014 Add cap funding-	8.85	73.16	0.00	18.30	73.16
BOND - XLI-67.ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	125.64	0.00	31.41	125.64
BOND - XLI-68.ADDCAP FOR 2013-2014 Add Cap Funding-	8.85	24.96	0.00	6.24	24.96
BOND - XLI-69.DOCO DRAWL ON 01-DEC-2012-	8.85	58.17	0.00	14.55	58.17
BOND - XLI-72.ADDCAP FOR 2012-2013 Add Cap Funding-	8.85	5.11	0.00	1.29	5.11
BOND - XLI-73.ADDCAP FOR 2013-2014 Add Cap Funding-	8.85	182.54	0.00	45.63	182.54
BOND - XLI-74.DOCO Funding-	8.85	212.87	0.00	53.22	212.87
BOND - XLI-81.DOCO Funding-	8.85	200.00	0.00	50.01	200.00
BOND - XLII-82.DOCO Funding-	8.80	148.98	0.00	0.00	148.98
BOND - XLIII-83.ADDCAP FOR ADDCAP FOR 2013-2014 Add Cap Funding-	7.93	196.68	0.00	32.78	196.68



<b>Combined Assets (1.4.2016 to 31.3.2019)</b>					
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
BOND - XLIV-10.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	37.51	0.00	12.50	37.51
BOND - XLIV-18.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	42.43	0.00	14.14	42.43
BOND - XLIV-24.ADDCAP FOR 2013-2014 ADDCAP Funding-	8.70	78.06	0.00	26.02	78.06
BOND - XLIV-30.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	21.08	0.00	7.03	21.08
BOND - XLIV-38.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	71.18	0.00	23.73	71.18
BOND - XLIV-47.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	288.68	0.00	96.23	288.68
BOND - XLIV-5.ADDCAP FOR 2013-2014 ADDCAP Funding-	8.70	259.96	0.00	86.65	259.96
BOND - XLIV-54.ADDCAP FOR 2013-2014 Add Cap Funding-	8.70	94.68	0.00	31.56	94.68
<b>Total</b>		<b>21936.81</b>	<b>0.00</b>	<b>5906.29</b>	<b>21936.81</b>

**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD**

(₹ in lakh)

<b>Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>
Gross Opening Loan	1325.52	1325.52
Cumulative Repayments of Loans up to Previous Year	0.00	16.67
<b>Net Loans Opening</b>	<b>1325.52</b>	<b>1308.85</b>
Add: Drawl(s) during the Year	0.00	0.00
Less: Repayments during the year	16.67	77.09
<b>Net Closing Loan</b>	<b>1308.85</b>	<b>1231.76</b>
Average Net Loan	1317.19	1270.31
Rate of Interest on Loan (%)	9.2834	9.2804
<b>Interest on Loan</b>	<b>122.28</b>	<b>117.89</b>

(₹ in lakh)

<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>
Gross Opening Loan	20611.29	20611.29
Cumulative Repayments of Loans upto Previous Year	70.43	420.28
<b>Net Loans Opening</b>	<b>20540.86</b>	<b>20191.01</b>
Add: Draw(s) during the Year	0.00	0.00
Less: Repayments of Loan during the year	349.85	840.69



<b>Combined Assets except Asset 4 (1.4.2014 to 31.3.2016)</b>		
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Net Closing Loan</b>	<b>20191.01</b>	<b>19350.32</b>
Average Net Loan	20365.94	19770.67
Rate of Interest on Loan (%)	9.2421	9.2450
<b>Interest on Loan</b>	<b>1882.24</b>	<b>1827.80</b>

(₹ in lakh)

<b>Combined Assets (1.4.2016 to 31.3.2019)</b>			
<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Opening Loan	21936.81	21936.81	21936.81
Cumulative Repayments of Loans upto Previous Year	1354.73	2785.18	4232.02
<b>Net Loans Opening</b>	<b>20582.08</b>	<b>19151.63</b>	<b>17704.79</b>
Add: Draw(s) during the Year	0.00	0.00	0.00
Less: Repayments of Loan during the year	1430.45	1446.84	1744.70
<b>Net Closing Loan</b>	<b>19151.63</b>	<b>17704.79</b>	<b>15960.09</b>
Average Net Loan	19866.86	18428.21	16832.44
Rate of Interest on Loan (%)	9.2453	9.2441	9.2482
<b>Interest on Loan</b>	<b>1836.75</b>	<b>1703.53</b>	<b>1556.69</b>

