

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 184/TT/2011**

**Coram:**

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

**Date of Hearing: 13.8.2013**

**Date of Order : 22.2.2014**

**In the matter of**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms & Conditions of tariff) Regulations, 2009 for determination of combined transmission tariff from anticipated DOCO (01.01.2012) to 31.03.2014 for assets:

- (i) 400kV D/C Bongaigaon TPS- Bongaigaon Line along with associated bays
- (ii) 132 kV D/C Silchar- Badarpur line alongwith associated bays
- (iii) 132 kV D/C Silchar-Sirkona line alongwith associated bays
- (iv) 200 MVA,400/132kV ICT at Silchar S/S alongwith associated bays
- (v) 50 MVAR switchable line reactors for 400 kV D/C Silchar-Palatana at Silchar S/S alongwith associated bays
- (vi) 63 MVAR Bus Reactor at Silchar S/S alongwith associated bays, under Transmission System associated with Pallatana Gas Based project and Bongaigaon Thermal Power Station in NER for tariff block 2009-14 period.

**And in the matter of**

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

.....Petitioner



**Order in Petition No 184/TT/2011**

Vs

1. Assam State Electricity Board  
Bijulee Bhawan, Paltan Bazar,  
Guwahati – 782001
2. Meghalaya Energy Corporation Ltd  
Short Round Road,  
Shillong – 793001
3. Government of Arunanchal Pradesh  
Itanagar
4. Power and Electricity Department  
Govt of Mizoram  
Aizawal
5. Electricity Department  
Govt of Manipur, Keishampat  
Imphal
6. Department of Power  
Govt of Nagaland  
Kohima
7. Tripura State Electricity Corporation Ltd  
Bidyut Bhawan, North Banamalipur  
Agartala – 700001
8. ONGC Tripura Power Corporation Ltd  
6<sup>th</sup> Floor, A Wing, IFCI Towers,  
New Delhi – 110019
9. NTPC Ltd  
NTPC Bhawan,  
Core-7, Scope Complex,  
7, Institutional Area, Lodi Road,  
New Delhi-110 003

.....Respondents



**For Petitioner** : Shri Prashant Sharma  
Shri M.M. Mondal  
Shri S.S. Raju

**For Respondents** : Shri Rohit chabra, NTPC

**ORDER**

The petition has been filed for approval of transmission charges in respect of the transmission assets listed below and sanctioned under the transmission system associated with Pallatana Gas Based Power Project and Bongaigaon Thermal Power Station (the transmission system) in North Eastern Region from 1.1.2012, the anticipated date of commercial operation to 31.3.2014 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations):-

- (i) 400 kV D/C Bongaigaon TPS- Bongaigaon transmission line along with associated bays **(Asset I)**,
- (ii) 132 kV D/C Silchar- Badarpur transmission line along with associated bays **(Asset II)**,
- (iii) 132 kV D/C Silchar-Sirkona transmission line along with associated bays **(Asset III)**,
- (iv) 200 MVA,400/132 kV ICT at Silchar sub-station along with associated bays **(Asset IV)**,
- (v) 50 MVAR switchable line reactors for 400 kV D/C Silchar-Palatana at Silchar sub-station along with associated bays and 63 MVAR Bus Reactor at Silchar



S/S along with associated bays (**Asset V**).

2. The administrative approval and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner company under Memorandum dated 26.2.2010 at estimated cost of ₹214400 lakh, including Interest During Construction (IDC) of ₹17835 lakh based on 3<sup>rd</sup> Quarter, 2009 price level. The apportioned approved cost of the transmission assets covered in the present petition (the transmission assets) is as under:-

(₹ in lakh)

Particulars	Apportioned approved cost
<b>Asset I</b>	2413.42
<b>Asset II</b>	2300.26
<b>Asset III</b>	3512.15
<b>Asset IV</b>	2301.62
<b>Asset V</b>	4746.49

3. As per the administrative approval, the assets were scheduled to be commissioned within 34 months from the date of administrative approval. As such, the assets were to be commissioned by 1.1.2013. The transmission assets have been declared under commercial operation as indicated below:-

Description of the Asset	Date of Commercial Operation
Asset I	1.1.2013
Asset II	1.5.2012
Asset III	1.4.2012
Asset IV	1.7.2012
Asset V	1.7.2012



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

(₹ in lakh)

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	22.62	99.29	72.66	89.86	103.96	132.69	90.26	134.05	118.06	171.22
Interest on Loan	27.71	116.09	87.64	101.39	153.09	179.11	106.63	148.68	138.12	187.51
Return on Equity	22.41	98.42	72.00	89.23	124.60	153.98	90.16	133.96	116.61	169.07
Interest on Working Capital	3.42	14.59	11.93	14.05	15.65	17.98	10.46	15.02	23.97	33.85
O & M Expenses	31.55	133.42	119.12	137.37	124.22	131.32	69.66	98.19	278.64	392.76
<b>Total</b>	<b>107.71</b>	<b>461.81</b>	<b>363.35</b>	<b>431.90</b>	<b>521.52</b>	<b>615.08</b>	<b>367.17</b>	<b>529.90</b>	<b>675.40</b>	<b>954.41</b>

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

(₹ in lakh)

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	18.93	20.01	19.49	20.61	18.63	19.70	13.93	14.73	55.73	58.91
O & M expenses	10.52	11.12	10.83	11.45	10.35	10.94	7.74	8.18	30.96	32.73
Receivables	71.81	76.97	66.06	71.98	86.92	102.51	81.59	88.32	150.09	159.07
<b>Total</b>	<b>101.26</b>	<b>108.10</b>	<b>96.38</b>	<b>104.04</b>	<b>115.90</b>	<b>133.15</b>	<b>103.26</b>	<b>111.23</b>	<b>236.78</b>	<b>250.71</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	<b>3.42</b>	<b>14.59</b>	<b>11.93</b>	<b>14.05</b>	<b>15.65</b>	<b>17.98</b>	<b>10.46</b>	<b>15.02</b>	<b>23.97</b>	<b>33.85</b>

6. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. None of the respondents have filed reply.



7. We have heard the representatives of the parties present at the hearing and have perused the material available on record. We proceed to dispose of the petition.

### **Date of Commercial Operation**

8. A preliminary issue regarding the dates of commercial operation of the transmission assets needs to be considered first. As noticed from paragraph 3 above, the transmission assets were declared under commercial operation on or before the scheduled date. The transmission assets which are the part of the transmission system associated with Pallatana GBPP and Bongaigaon TPS have been commissioned before commissioning of the generating stations. In response to the Commission's queries, the petitioner has explained the reasons for early commissioning of the transmission assets. It has been submitted that as discussed at 10<sup>th</sup> TCC meeting of NERPC, the commissioning schedule of the Unit-I of Pallatana GBPP was December, 2011 and therefore commissioning of Asset II, Asset III, Asset IV and Asset V was rescheduled to match with the commissioning of Unit-I of Pallatana GBPP. It has been further submitted that as per the record notes of the Quarterly Director-level coordination meeting between NTPC and the petitioner held on 11.1.2011, NTPC had stated that the 1<sup>st</sup> unit at Bongaigaon TPS would be coming by December, 2011. NTPC stated that 400 kV D/C Bongaigaon-BTPS transmission line (Asset I) would be required for evacuation of power of 1<sup>st</sup> Unit. The petitioner has explained that in view of the request made by NTPC, the petitioner confirmed commissioning of Asset I by December, 2011 to match the commissioning of the 1<sup>st</sup> Unit at Bongaigaon TPS. The petitioner has further



informed that some of the elements under the transmission system are yet to be commissioned.

9. The petitioner has filed an affidavit, dated 6.8.2013, seeking approval to the date of commercial operation of 1.1.2013 in case of Asset I in accordance with sub-clause (c) of clause (12) of Regulation 3 of the Tariff Regulations. During hearing on 13.8.2013, the representative of the petitioner reiterated the request for approval of the dates of commercial operation of the transmission assets. He stated that four transmission assets, Asset II, Asset III, Asset IV and Asset V, associated transmission system of Pallatana GBPP were not being used, since Pallatana GBPP too had not been commissioned. The representative of the petitioner informed that commissioning of these assets without corresponding generation was discussed in NERPC meeting and accordingly the transmission assets were commissioned. The petitioner's submission in this regard is supported through the minutes of 10<sup>th</sup> meeting of NERPC. The prayer was made for approval of the dates of commercial operation of the transmission assets as taken note of at paragraph 3 above.

10. The first unit of Pallatana GBPP was synchronized in October, 2012. The assets under instant petition are part of down-stream of Pallatana GBPP. The assets were commissioned on Silchar sub-station and were not directly connected with Pallatana GBPP. It is also felt that downstream network should be made available before commissioning of the generating station. In the light of these observations, we have considered the submission on early commissioning of the transmission assets. The



Commission in its order dated 21.6.2013 in Petition No. 83/TT/2012 observed as under:-

"11... It is observed that the Regional Inspectorial Organization, CEA, has approved the energisation of the transmission asset on 29.06.2012 based on the inspection carried out on 28.06.2012 and the asset was put under commercial operation on 01.07.2012. The commissioning of the transmission asset was discussed and agreed in the 22<sup>nd</sup> TCC and ERPC meeting held on 24 and 25<sup>th</sup> August, 2012, which was attended by NTPC besides others. As regard the pending works, it has been submitted by the petitioner that miscellaneous works like extra soil removal, extra filling, repositioning of phase plates and danger plates etc. were pending which did not affect the safety and performance of the transmission asset. From the foregoing, it appears that the transmission asset was ready on 01.07.2012 and the date of commercial operation had the approval of both the CEA and the ERPC. It further appears that had the switchgear and generation unit at BRBCL end been ready., the transmission system could have been put into regular service. As such, we are inclined to approve the date of commercial operation as 1.7.2012 as prayed by the petitioner. In all future cases, the petitioner is directed to seek the prior approval of the Commission whenever the transmission system is ready for regular service but is prevented from doing so for reasons not attributable to it, as provided under the second proviso to Regulation 3(12)(c)....."

11. In accordance with above, the petitioner was required to obtain prior approval of the Commission for advancing the commissioning of the transmission assets. However, the petitioner has not taken the prior approval for the same. However, since the transmission assets were commissioned prior to 21.6.2013 when the order was passed, we, as a special case, allow advancement of the date of commercial operation of the transmission assets as claimed in the present petition and prayed by the petitioner. However, the petitioner is directed to seek the prior approval of the Commission whenever the transmission system is ready for regular service but is prevented from





doing so for reasons not attributable to it, as provided under second proviso to sub-clause (c) of clause 12 of Regulation 3 of the Tariff Regulations.

### **Capital Cost**

12. Regulation 7 of the Tariff Regulations so far as relevant provides as under:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

13. The details of apportioned approved capital cost, actual capital cost as on the dates of commercial operation and estimated additional capital expenditure projected to



be incurred for the transmission assets are given hereunder:-

(₹ in lakh)

Description	Apportioned Approved Cost	Actual Cost on DOCO	Projected Expenditure			Capital	Estimated Completion Cost
			2012-13	2013-14	2014-15		
Asset I	2413.42	1626.38	166.31	168.08	40.08	2000.85	
Asset II	2300.26	1404.93	185.73	221.43	9.17	1821.26	
Asset III	3512.15	2120.55	510.51	610.01	115.00	3356.07	
Asset IV	2301.62	2252.25	80.00	444.44	50.00	2826.69	
Asset V	4746.49	2902.84	123.84	394.28	0.00	3420.96	
<b>Total</b>	<b>15273.94</b>	<b>10306.95</b>	<b>1066.39</b>	<b>1838.24</b>	<b>214.25</b>	<b>13425.83</b>	

### Cost Overrun

14. The estimated completion cost of all the assets, except Asset IV falls within the apportioned approved cost of respective assets. In case of Asset IV the estimated completion capital cost as on 31.3.2014 exceeds apportioned approved cost by ₹475.07 lakh. The Commission in its order dated 28.5.2011 in Petition No 136/TT/2011, which has been upheld by the Appellate Tribunal in the judgment dated 28.11.2013 in Appeal No. 165 of 2012, had restricted the capital cost of certain assets to the apportioned approved cost for the purpose of tariff. Accordingly, in the present petition also the capital cost of Asset IV has been so considered that it does not exceed the apportioned approved cost of ₹2301.62 lakh.



## **Initial Spares**

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

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

(iv) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

(c) Series Compensation devices and HVDC Station - 3.5%

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

16. The actual cost on the date of commercial operation claimed by the petitioner is inclusive of the cost of initial spares, except in case of Asset V in respect of which the petitioner has not claimed initial spares.

17. The petitioner has claimed the cost of initial spares for sub-stations (including cost of land, buildings and PLCC) in the capital cost as follows:

<b>(₹ In lakh)</b>	
<b>Particulars</b>	<b>Cost of Initial Spares</b>
Asset I	19.76
Asset II	8.93
Asset III	79.80
Asset IV	56.65

18. The cost of initial spares for sub-station portion is within the ceiling limit of 2.50% in respect of Asset III and Asset IV. However, in case of Asset I and Asset II the cost



exceeds the ceiling limit of 2.50%. Initial spares claimed by the petitioner have been reduced in proportion to the restricted capital cost as shown below:

(₹ In lakh)

Asset	Cost on cut off date	initial spares claimed	Entitlement of initial spares	Excess initial spares claimed
Asset-I	756.05	19.76	18.88	0.88
Asset-II	348.17	8.93	8.70	0.23
Asset-III	3192.06	79.80	79.80	0.00
Asset-IV	2266.14	56.65	56.65	0.00

The capital cost of Asset-IV has been restricted up to apportioned approved cost and accordingly the initial spares claimed by the petitioner have been reduced in proportion to the restricted capital cost.

19. Details of initial spares worked out for transmission lines included in Asset I, Asset II and Asset III, with ceiling limit of 0.75% are given below:

(₹ In lakh)

Asset	Cost as on Cut off Date	Initial Spares Claimed	Entitlement of Initial Spares	Excess Initial Spares Claimed
Asset I	1204.72	9.08	9.04	0.04
Asset II	1463.92	10.98	10.98	0.00
Asset III	164.01	1.23	1.23	0.00

20. Accordingly, capital cost considered as on the date of commercial operation for the purpose of tariff after considering the normative initial spares for the transmission assets is given below: -



(₹ In lakh)

Assets	Capital Cost as on DOCO as claimed by the petitioner	Initial Spares Deducted for sub-station	Initial Spares Deducted for transmission line	Capital Cost considered for calculating tariff as on actual DOCO
Asset -I	1626.38	0.88	0.04	1625.45
Asset –II	1,404.93	0.23	0.00	1404.70
Asset-III	2120.55	0.00	0.00	2120.55
Asset-IV	2252.25	0.00	-	2252.25
Asset-V	2902.84	-	-	2902.84

### **Projected additional capital expenditure**

21. Clause (1) of Regulation 9 of the Tariff Regulations provides as under:-

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

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

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

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



23. After taking into account the dates of commercial operation of the transmission assets, cut-off date arrived at is 31.3.2015.

24. The petitioner's claim for projected additional capital expenditure is given under paragraph 12 above. Details of additional capital expenditure considered for computation of transmission charges for the transmission assets is given below:

(₹ in lakh)

Assets	2012-2013	2013-2014	Remarks
Asset I	166.31	168.08	Additional capital expenditure claimed for the year 2014-2015 falls beyond tariff period and has not been considered for tariff computation.
Asset II	185.73	221.43	
Asset III	510.51	610.01	
Asset IV	49.37	-----	Additional capital expenditure for the year 2012-2013 has been restricted to apportioned approved cost by disallowing ₹36.63 lakh against additional capital expenditure claimed for the year and no additional capital expenditure has been allowed for the year 2013-2014.
Asset V	123.84	394.28	Additional capital expenditure claimed for the year 2014-2015 falls beyond tariff period and has not been considered for tariff computation.

### **Gross Block**

25. Based on the above, the gross block considered for the purpose of computation of the transmission charges is given overleaf:-



(₹ in lakh)

Description	Gross Block on DOCO	Projected Additional Capital Expenditure		Gross Block as on 31.3.2014
		2012-13	2013-14	
Asset I	1625.45	166.31	168.08	1959.84
Asset II	1404.70	185.73	221.43	1811.86
Asset III	2120.55	510.51	610.01	3241.07
Asset IV	2252.25	49.37	-----	2301.62
Asset V	2902.84	123.84	394.28	3420.96

### Debt –Equity Ratio

26. Regulation 12 of the Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”



27 The capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed have been considered in the normative debt-equity ratio of 70:30. Details of debt-equity as on dates of commercial operation and 31.3.2014 considered on normative basis are as follows:-

(₹ in lakh)

Particulars	Cost on Date of Commercial Operation					Cost on 31.3.2014				
	Asset I	Asset II	Asset III	Asset IV	Asset V	Asset I	Asset II	Asset III	Asset IV	Asset V
Debt	1137.82	983.29	1484.39	1576.57	2031.99	1371.90	1268.30	2268.75	1611.13	2394.67
Equity	487.63	421.41	636.17	675.67	870.85	587.95	543.56	972.32	690.49	1026.29
<b>Total</b>	<b>1625.45</b>	<b>1404.70</b>	<b>2120.55</b>	<b>2252.25</b>	<b>2902.84</b>	<b>1959.84</b>	<b>1811.86</b>	<b>3241.07</b>	<b>2301.62</b>	<b>3420.96</b>

### Return on Equity

28 Regulation 15 of the Tariff Regulations provides as under:-

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

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

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

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

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





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

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".

29. The petitioner initially sought to claim additional RoE of 0.5% in accordance with proviso to clause (2) of Regulation 15. Towards justification for claiming additional RoE, the petitioner in affidavit dated 18.11.2011 has stated that the Tariff Regulations do not stipulate that the additional RoE would be admissible in case the whole of the project is completed within the stipulated time schedule. The petitioner has submitted that even if a part of project is completed within the specified timeline, the beneficiaries would be benefited in respect of such part by way of reduced IDC and IEDC components of the project cost. According to the petitioner, in case additional RoE is not allowed, the project developer would not have any incentive for early completion of a part of the project. The petitioner has urged that the eligible timeline in case of a scheme having combination of the various elements would be the timeline having maximum time period. Many elements are completed before the timeline allowed by the Commission,



there will be reduction in the overall cost of completion of the project as a whole due to reduction in IDC/IEDC and for PV, if any. The beneficiaries also would start utilizing these assets. Thereby, the petitioner has sought to justify additional RoE.

30. On the question of admissibility of additional RoE, the Appellate Tribunal, in its judgment 10.5.2012 in Appeal No. 155/2011 observed as under:-

16....."Completion of a part of the total work covered under the project is not what is contemplated in the regulation 15(2) read with the Appendix II and the Note thereto. The element of transmission project appertains to the scope and ambit of the word transmission system. It means that element of the transmission work which is applicable in a given situation. If it had been the intention of the authors of the Regulations that completion of a part of a work or a part of the project or a part of the transmission system would entitle the transmission licensee to claim additional return on equity then they would have expressly made provision there for and made separate time frame for each of the units or each of the parts of the total works to be implemented within a specific timeframe from the date of investment approval. That has not been done. It is the scheme as a whole, not a part thereof, which would qualify a transmission licensee to the entitlement to the additional return on equity. Interpretation of different provision of the Act does hardly have too much of relevance in the conspectus of the fact situation in which interpretation of the regulation 15(2) of the Regulations, 2009 is called for. The element of the transmission project does not mean only one element to the exclusion of others, if there are more than one, and the Commission does appear to have rightly held that the project as a whole has not been commissioned within the time schedule....."

31. In view of the above observations of the Appellate Tribunal and the fact that many of the elements of the transmission system were not commissioned before the scheduled date of commercial operation, the petitioner could not be permitted to claim additional RoE. Accordingly, the petitioner in the subsequent computations filed under affidavit dated 17.4.2013 claimed RoE at the base rate of 15.5% in accordance with



clause (2) of Regulation 15 ibid which has been found to be in order. RoE allowed for the years 2012-2013 and 2013-2014 is given below:

(₹ in lakh)

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Opening Equity	487.63	537.53	421.41	477.13	636.17	789.32	675.67	690.49	870.85	908.00
Addition due to Additional Capitalisation	49.89	50.42	55.72	66.43	153.15	183.00	14.81	0.00	37.15	118.28
Closing Equity	537.53	587.95	477.13	543.56	789.32	972.32	690.49	690.49	908.00	1026.29
Average Equity	512.58	562.74	449.27	510.34	712.74	880.82	683.08	690.49	889.43	967.14
Return on Equity (Base Rate)	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>22.40</b>	<b>98.37</b>	<b>71.99</b>	<b>89.21</b>	<b>124.59</b>	<b>153.98</b>	<b>89.56</b>	<b>120.70</b>	<b>116.61</b>	<b>169.07</b>

### Interest on Loan

32. Regulation 16 of the Tariff Regulations provides as under:-

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

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

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



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

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

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

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

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

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

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

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

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

33. In keeping with the provisions of Regulation 16, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-



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

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

(c) 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.

34. Detailed calculations in support of the weighted average rates of interest have been given in **Annexure I** attached to this order.

35. Based on the weighted average rates of interest considered, interest on loan has been calculated as given overleaf:-



(₹ In lakh)

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	1137.82	1254.24	983.29	1113.30	1484.39	1841.74	1576.57	1611.13	2031.99	2118.68
Cumulative Repayment upto Previous Year	0.00	22.60	0.00	72.64	0.00	103.96	0.00	89.65	0.00	118.06
Net Loan-Opening	1137.82	1231.63	983.29	1040.65	1484.39	1737.78	1576.57	1521.48	2031.99	2000.61
Addition due to Additional Capitalisation	116.42	117.66	130.01	155.00	357.36	427.01	34.56	0.00	86.69	276.00
Repayment during the year	22.60	99.24	72.64	89.85	103.96	132.69	89.65	120.84	118.06	171.22
Net Loan-Closing	1231.63	1250.05	1040.65	1105.81	1737.78	2032.09	1521.48	1400.65	2000.61	2105.39
Average Loan	1184.73	1240.84	1011.97	1073.23	1611.08	1884.93	1549.03	1461.06	2016.30	2053.00
Weighted Average Rate of Interest on Loan	9.3513%	9.3513%	9.4462%	9.4462%	9.5024%	9.5024%	9.1170%	9.1170%	9.1335%	9.1335%
<b>Interest</b>	<b>27.70</b>	<b>116.04</b>	<b>87.63</b>	<b>101.38</b>	<b>153.09</b>	<b>179.11</b>	<b>105.92</b>	<b>133.21</b>	<b>138.12</b>	<b>187.51</b>

### Depreciation

36. Regulation 17 of the Tariff Regulations provides as under:-

“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.*”

37. The petitioner’s entitlement to depreciation has been considered in accordance with clause (4) of Regulation 17 extracted above. The assets were put under commercial operation during 2012-13 and will complete 12 years beyond 2013-14 and hence depreciation has been calculated annually based on Straight Line Method at the rates of depreciation specified in Appendix-III to the 2009 Tariff Regulations for sub-station, as per details given overleaf:-



(₹ In lakh)

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Gross Block as on DOCO	1625.45	1791.76	1404.70	1590.43	2120.55	2631.06	2252.25	2301.62	2902.84	3026.68
Additions due to Projected Additional Capitalisation	166.31	168.08	185.73	221.43	510.51	610.01	49.37	0.00	123.84	394.28
Closing Gross Block	1791.76	1959.84	1590.43	1811.86	2631.06	3241.07	2301.62	2301.62	3026.68	3420.96
Average Gross Block	1708.61	1875.80	1497.56	1701.14	2375.81	2936.07	2276.93	2301.62	2964.76	3223.82
Rate of Depreciation	5.2920%	5.2903%	5.2919%	5.2815%	4.3760%	4.5194%	5.2498%	5.2501%	5.3096%	5.3111%
Depreciable Value	1537.75	1688.22	1347.81	1531.03	2039.96	2544.20	2049.24	2071.46	2668.28	2901.44
Remaining Depreciable Value	1537.75	1665.62	1347.81	1458.38	2039.96	2440.23	2049.24	1981.81	2668.28	2783.37
<b>Depreciation</b>	<b>22.60</b>	<b>99.24</b>	<b>72.64</b>	<b>89.85</b>	<b>103.96</b>	<b>132.69</b>	<b>89.65</b>	<b>120.84</b>	<b>118.06</b>	<b>171.22</b>

### Operation & Maintenance Expenses

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

Element	2009-10	2010-11	2011-12	2012-13	2013-14
D/C single conductor transmission line (₹ lakh/ km.)	0.269	0.284	0.301	0.318	0.330
D/C twin conductor transmission line (₹ lakh / km)	0.627	0.663	0.701	0.741	0.783
400 kV bay (₹ lakh / bay.)	52.40	55.40	58.57	61.97	65.46
132 kV bay (₹ lakh / bay.)	26.20	27.70	29.28	30.96	32.73





39. The allowable O&M expenses for the transmission assets are as under:  
(₹ in lakh)

Element	Line Length (Km)	No of Bays	2012-13	2013-14
400 kV D/C twin conductor Bongaigaon TPS- Bongaigaon transmission line <b>(Asset I)</b>	3.187	-	0.59	2.50
400 kV Bongaigaon TPS-I bay <b>(Asset I)</b>	-	1	15.48	65.46
400 kV Bongaigaon TPS-II bay <b>(Asset I)</b>	-	1	15.48	65.46
<b>Total Asset I</b>	<b>3.187</b>	<b>2</b>	<b>31.55</b>	<b>133.42</b>
132 kV D/C single conductor Silchar- Badarpur transmission line <b>(Asset II)</b>	19.2	-	5.60	6.45
<b>Silchar Sub-station (Asset II)</b>	-			
132 kV Badarpur-I bay	-	1	28.38	32.73
132 kV Badarpur-II bay	-	1	28.38	32.73
<b>Badarpur Sub-station (Asset II)</b>				
132 kV Badarpur-I bay	-	1	28.38	32.73
132 kV Badarpur-II bay	-	1	28.38	32.73
<b>Total Asset II</b>	<b>19.2</b>	<b>4</b>	<b>119.12</b>	<b>137.37</b>
132 kV D/C single conductor Silchar- Srikona transmission line <b>(Asset III)</b>	1.2	-	0.38	0.40
<b>Silchar Sub-station (Asset III)</b>				
132 kV Srikona-I bay	-	1	30.96	32.73
132 kV Srikona-II bay	-	1	30.96	32.73
<b>Srikona Sub-station (Asset III)</b>				
132 kV Silchar-I bay	-	1	30.96	32.73
132 kV Silchar-II bay	-	1	30.96	32.73
<b>Total Asset III</b>	<b>1.2</b>	<b>4</b>	<b>124.22</b>	<b>131.32</b>
<b>Silchar Sub-station (Asset IV)</b>				
400 kV side ICT bay	-	1	46.44	65.46
132 kV side ICT bay	-	1	23.22	32.73



<b>Total Asset IV</b>	-	2	<b>69.66</b>	<b>98.19</b>
<b>Silchar Sub-station (Asset V)</b>				
400 kV Pallatana –I bay	-	1	46.44	32.73
400 kV Pallatana –II bay	-	1	46.44	32.73
400 kV Pallatana –I line reactor bay	-	1	46.44	32.73
400 kV Pallatana –II line reactor bay	-	1	46.44	32.73
400 kV Bus reactor-I bay	-	1	46.44	32.73
400 kV Bus reactor-II bay	-	1	46.44	32.73
<b>Total Asset V</b>	-	6	<b>278.64</b>	<b>392.76</b>

40. The petitioner has stated that O&M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the normative O&M charges for the period 2009-14. The petitioner has submitted that it would approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

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



## **Interest on Working Capital**

42. The petitioner is entitled to claim interest on working capital as per the Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder.

**(i) Receivables** : As per Regulation 18(1) (c) (i) of the Tariff Regulations, receivables as a component of working capital will be equivalent to two months' of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

**(ii) Maintenance spares** : Regulation 18 (1) (c) (ii) of the Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

**(iii) O & M expenses** : Regulation 18(1) (c) (iii) of the Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

**(iv) Rate of interest on working capital** : In accordance with clause (3) of Regulation 18 of the Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.4.2009 shall be equal to State Bank of India



Base Rate as applicable on 1<sup>st</sup> April of the year of commercial operation plus 350 bps. State Bank of India base interest rate on 1.4.2012 was 10.00%. Therefore, interest rate of 13.50% has been considered. The interest on working capital for the assets covered in the petition has been worked out accordingly.

43. Necessary computations in support of interest on working capital are appended below:-

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	18.93	20.01	19.49	20.61	18.63	19.70	13.93	14.72	55.73	58.91
O & M expenses	10.52	11.12	10.83	11.45	10.35	10.94	7.74	8.18	30.96	32.73
Receivables	71.78	76.94	66.06	71.98	86.92	102.51	81.15	81.16	150.09	159.07
<b>Total</b>	<b>101.23</b>	<b>108.07</b>	<b>96.38</b>	<b>104.03</b>	<b>115.90</b>	<b>133.15</b>	<b>102.83</b>	<b>104.06</b>	<b>236.78</b>	<b>250.71</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	<b>3.42</b>	<b>14.59</b>	<b>11.93</b>	<b>14.04</b>	<b>15.65</b>	<b>17.98</b>	<b>10.41</b>	<b>14.05</b>	<b>23.97</b>	<b>33.85</b>

### Transmission Charges

44. The transmission charges allowed are summarized hereunder:-

Particulars	Asset I		Asset II		Asset III		Asset IV		Asset V	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	22.60	99.24	72.64	89.85	103.96	132.69	89.65	120.84	118.06	171.22
Interest on Loan	27.70	116.04	87.63	101.38	153.09	179.11	105.92	133.21	138.12	187.51
Return on Equity	22.40	98.37	71.99	89.21	124.59	153.98	89.56	120.70	116.61	169.07
Interest on Working Capital	3.42	14.59	11.93	14.04	15.65	17.98	10.41	14.05	23.97	33.85
O & M Expenses	31.55	133.42	119.12	137.37	124.22	131.32	69.66	98.16	278.64	392.76
<b>Total</b>	<b>107.67</b>	<b>461.65</b>	<b>363.31</b>	<b>431.85</b>	<b>521.52</b>	<b>615.08</b>	<b>365.20</b>	<b>486.95</b>	<b>675.41</b>	<b>954.40</b>



45. The transmission charges allowed for the first year of commercial operation of the transmission assets are on proportionate basis considering the number of months of commercial operation in the year. The transmission charges allowed are marginally lower than those claimed by the petitioner for the following reasons:

(a) In case of Asset I and Asset II, the capital cost has been adjusted because of excess initial spares claimed by the petitioner, over the normative initial spares allowed.

(b) Capital cost in respect of Asset IV has been restricted to the apportioned approved cost.

46. The transmission charges allowed are subject to truing up in accordance with the Tariff Regulations.

### **Sharing of Transmission Charges**

47. Bongaigaon TPS of NTPC has not yet been commissioned and petitioner has been prevented from putting 400 kV Bongaigaon TPS-Bongaigaon transmission D/C transmission line (Asset I), declared under commercial operation on 1.1.2013 into regular service. Under such a situation, the question of bearing the transmission charges of Asset I arises. As per Indemnification Agreement (IA) dated 15.3.2002 executed between NTPC and the petitioner, NTPC has specifically agreed to pay full IDC in respect of the associated transmission line for a maximum period of 6 months from the scheduled date of the commissioning in the event of delay in commissioning of a generation project. IA further provides that, the schedule of commissioning of NTPC



generating units along with the Associated Transmission System of the petitioner (the zero date from which the indemnification mechanism shall be applicable) shall be worked out for each project and mutually agreed in the Quarterly Director-level coordination meeting between the two entities within 3 months of investment approval and such an agreement will form an integral part of IA. It has also been provided that the above schedule for the power project and the ATS shall be regularly reviewed in the Quarterly Director level coordination meeting.

48. The petitioner has informed that Zero Date of Indemnification Agreement between the petitioner and Bongaigaon TPS has not been signed. However on perusal of the minutes of the 10<sup>th</sup> TCC of NERPC meeting, it was revealed that Asset I was anticipated to be commissioned on 1.1.2012 to match with the commissioning of first unit of Bongaigaon TPS as NTPC in the meeting held on 11.1.2011 stated that their first unit of Bongaigaon TPS would be coming in December, 2011. In any case, Asset I has been commissioned as per original schedule.

49. Clause (6) of Regulation 8 of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations (the Sharing Regulations) provides as under:

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



50. Clause (5) of Regulation 13 of the Sharing Regulations states that the notified Model Transmission Service Agreement shall be the default transmission agreement and shall mandatorily apply to all Designated ISTS Customers (DICs). Regulation 14 provides that the existing contracts shall be amended by all existing users of ISTS and the Transmission Licensee shall ensure that their existing contracts are realigned to these regulations within a period of 60 days from the date of notification of the Transmission Service Agreement in so far as the elements related to determination of PoC transmission charges, allocation of losses, billing and collection, provision of information and any other matter that requires amendment or realignment consequent to these regulations. In line with Sharing Regulations, the Model Transmission Services Agreement is the default transmission agreement and apply to all DICs.

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.

52. The billing, collection and disbursement of the transmission charges approved in respect of Asset II, Asset III, Asset IV and Asset V shall be governed by the provisions of the Sharing Regulations, as amended from time to time. The billing, collection and disbursement of the transmission charges of the transmission charges in respect of Asset I shall also be in same manner after commissioning of Bongaigaon TPS.

### **Filing Fee, Licence Fee and Publication Expenses**

53. The petitioner has sought reimbursement of fee paid by it for filing the petition, licence fee and also the publication expenses. The petitioner shall be entitled for reimbursement of fee and licence fee directly from the beneficiaries in accordance with Regulation 42A of the Tariff Regulations. Similarly, the petitioner shall also be entitled to recover the publication expenses incurred in connection with the present petition. The reimbursement of filing fee, licence fee and the publication expenses shall be on *pro rata* basis in the same ratio as the transmission charges.

### **Service tax**

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





service tax in future. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

55. The petition stands disposed of accordingly.

**sd/-**  
**(M. DEENA DAYALAN)**  
**MEMBER**

**sd/-**  
**(V.S. VERMA)**  
**MEMBER**



## CALCULATIONS OF WEIGHTED AVERAGE RATES OF INTEREST

(₹ in lakh)

## Asset I

	Details of Loan	2012-13	2013-14
<b>1</b>	<b>Bond XL</b>		
	Gross loan opening	213.47	213.47
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	213.47	213.47
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	213.47	213.47
	Average Loan	213.47	213.47
	Rate of Interest	8.85%	8.85%
	Interest	18.89	18.89
	Rep Schedule	12 annual installments from 19.10.2016	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	8.84%	8.84%
	Interest	17.68	17.68
	Rep Schedule	12 annual installments from 21.10.2014	
<b>3</b>	<b>Bond XXXV</b>		
	Gross loan opening	725.00	725.00

Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	725.00	725.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	725.00	725.00
Average Loan	725.00	725.00
Rate of Interest	9.64%	9.64%
Interest	69.89	69.89
Rep Schedule	12 annual installments from 31.05.2015.	
<b>Total Loan</b>		
Gross loan opening	1138.47	1138.47
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	1138.47	1138.47
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	1138.47	1138.47
Average Loan	1138.47	1138.47
Rate of Interest	<b>9.3513%</b>	<b>9.3513%</b>
<b>Interest</b>	106.46	106.46



## Asset II

Details of Loan	2012-13	2013-14
<b>Bond XXXVIII</b>		
Gross loan opening	283.45	<b>283.45</b>
Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
Net Loan-Opening	283.45	283.45
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	283.45	283.45
Average Loan	283.45	283.45
Rate of Interest	9.25%	9.25%
Interest	26.22	26.22
Rep Schedule	Bullet Payment as on 09.03.2027	
<b>Bond XXXIV</b>		
Gross loan opening	100.00	<b>100.00</b>
Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
Net Loan-Opening	100.00	100.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	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	
<b>Bond XXXV</b>		
Gross loan opening	600.00	<b>600.00</b>
Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
Net Loan-Opening	600.00	600.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	600.00	600.00
Average Loan	600.00	600.00



Rate of Interest	9.64%	9.64%
Interest	57.84	57.84
Rep Schedule	12 annual installments from 31.05.2015.	
<b>Total Loan</b>		
Gross loan opening	983.45	983.45
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	983.45	983.45
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	983.45	983.45
Average Loan	983.45	983.45
Rate of Interest	<b>9.4462%</b>	<b>9.4462%</b>
<b>Interest</b>	92.90	92.90



### Asset III

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXIX</b>		
	Gross loan opening	184.38	<b>184.38</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	184.38	184.38
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	184.38	184.38
	Average Loan	184.38	184.38
	Rate of Interest	9.40%	9.40%
	Interest	17.33	17.33
	Rep Schedule	Payment as on 2027.	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	200.00	<b>200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	8.84%	8.84%
	Interest	17.68	17.68
	Rep Schedule	12 annual installments from 21.10.2014	
<b>3</b>	<b>Bond XXXV</b>		
	Gross loan opening	1100.00	<b>1100.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	1100.00	1100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1100.00	1100.00
	Average Loan	1100.00	1100.00



Rate of Interest	9.64%	9.64%
Interest	106.04	106.04
Rep Schedule	12 annual installments from 31.05.2015.	
<b>Total Loan</b>		
Gross loan opening	1484.38	1484.38
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	1484.38	1484.38
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	1484.38	1484.38
Average Loan	1484.38	1484.38
Rate of Interest	<b>9.5024%</b>	<b>9.5024%</b>
<b>Interest</b>	141.05	141.05



### Asset IV

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XL</b>		
	Gross loan opening	66.57	<b>66.57</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	66.57	66.57
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	66.57	66.57
	Average Loan	66.57	66.57
	Rate of Interest	9.30%	9.30%
	Interest	6.19	6.19
	Rep Schedule	12 annual installments from 28.06.2016	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	900.00	<b>900.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	900.00	900.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	900.00	900.00
	Average Loan	900.00	900.00
	Rate of Interest	8.84%	8.84%
	Interest	79.56	79.56
	Rep Schedule	12 annual installments from 21.10.2014	
<b>3</b>	<b>Bond XXXV</b>		
	Gross loan opening	400.00	<b>400.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	400.00	400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	400.00	400.00





	Average Loan	400.00	400.00
	Rate of Interest	9.64%	9.64%
	Interest	38.56	38.56
	Rep Schedule	12 annual installments from 31.05.2015.	
4	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>210.00</b>	<b>210.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	210.00	210.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	210.00	210.00
	Average Loan	210.00	210.00
	Rate of Interest	9.25%	9.25%
	Interest	19.43	19.43
	Rep Schedule	Payment as on 09.03.2027	
	<b>Total Loan</b>		
	Gross loan opening	1576.57	1576.57
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1576.57	1576.57
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1576.57	1576.57
	Average Loan	1576.57	1576.57
	Rate of Interest	<b>9.1170%</b>	<b>9.1170%</b>
	<b>Interest</b>	143.74	143.74



## Asset V

	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XL</b>		
	Gross loan opening	81.99	<b>81.99</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	81.99	81.99
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	81.99	81.99
	Average Loan	81.99	81.99
	Rate of Interest	9.30%	9.30%
	Interest	7.63	7.63
	Rep Schedule	12 annual installments from 28.06.2016	
<b>2</b>	<b>Bond XXXIV</b>		
	Gross loan opening	900.00	<b>900.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	900.00	900.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	900.00	900.00
	Average Loan	900.00	900.00
	Rate of Interest	8.84%	8.84%
	Interest	79.56	79.56
	Rep Schedule	12 annual installments from 21.10.2014	
<b>3</b>	<b>Bond XXXV</b>		
	Gross loan opening	200.00	<b>200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	9.64%	9.64%



	Interest	19.28	19.28
	Rep Schedule	12 annual installments from 31.05.2015.	
4	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>515.00</b>	<b>515.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	515.00	515.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	515.00	515.00
	Average Loan	515.00	515.00
	Rate of Interest	9.25%	9.25%
	Interest	47.64	47.64
	Rep Schedule	Payment as on 09.03.2027	
5	<b>Bond XXXIX</b>		
	Gross loan opening	<b>335.00</b>	<b>335.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	335.00	335.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	335.00	335.00
	Average Loan	335.00	335.00
	Rate of Interest	9.40%	9.40%
	Interest	31.49	31.49
	Rep Schedule	Payment as on 09.03.2027	
	<b>Total Loan</b>		
	Gross loan opening	2031.99	2031.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2031.99	2031.99
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2031.99	2031.99
	Average Loan	2031.99	2031.99
	Rate of Interest	<b>9.1335%</b>	<b>9.1335%</b>
	<b>Interest</b>	185.59	185.59

