

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO. 58/TT/2015**

**Coram:**

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

**Date of Hearing: 06.04.2016  
Date of Order : 29.04.2016**

**In the matter of:**

Determination of transmission tariff for 765 kV D/C Wardha-Aurangabad transmission line 1 and associated bays along with 765 kV, 3X80 MVAR line reactor at Aurangabad Sub-station, 765/400 kV, 1500 MVA ICT-1 with bays and equipments at Aurangabad Sub-station, 400 kV, 80 MVAR switchable line reactor for Aurangabad-Boiser transmission line ckt-1 charged as bus reactor at Aurangabad Sub-station, 400 kV, 80 MVAR switchable line reactor for Aurangabad-Boiser transmission line ckt-2 charged as bus reactor at Aurangabad Sub-station, 400/220 kV, 500 MVA ICT-3 with bays and equipments at Boiser, 400 kV, 80 MVAR line reactor for Aurangabad-Boiser transmission line ckt-1 charged as bus reactor at Boiser Sub-station, 400 kV, 80 MVAR line reactor for Aurangabad-Boiser transmission line ckt-2 charged as bus reactor at Boiser Sub-station under IPPs generation projects in Chhattisgarh (IPP D) in Western Region for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

**And in the Matter of:**

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

**.....Petitioner**

**Versus**

1. Madhya Pradesh Power Management Company Ltd.  
Shakti Bhawan, Rampur  
Jabalpur – 482008
  
2. Maharashtra State Electricity Distribution Co. Ltd.  
Prakashgad, 4th Floor  
Andheri (East), Mumbai - 400 052



3. Gujarat Urja Vikas Nigam Ltd.  
Sardar Patel Vidyut Bhawan,  
Race Course Road  
Vadodara - 390 007
4. Electricity Department Govt. Of Goa  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa - 403 001
5. Electricity Department  
Administration of Daman & Diu  
Daman - 396 210
6. Electricity Department  
Administration Of Dadra Nagar Haveli  
U.T., Silvassa - 396 230
7. Chhattisgarh State Electricity Board  
P.O.Sunder Nagar, Dangania, Raipur  
Chhatisgarh-492013
8. Madhya Pradesh Audyogik Kendra  
Vikas Nigam (Indore) Ltd.  
3/54, Press Complex, Agra-Bombay Road,  
Indore -452008

....Respondent(s)

The following were present:

For Petitioner:       Shri S. S. Raju, PGCIL  
                              Shri M. M. Mondal, PGCIL  
                              Shri Rakesh Prasad, PGCIL  
                              Shri Pankaj Sharma, PGCIL  
                              Shri Subash C Taneja, PGCIL  
                              Shri S. K. Venkatesan, PGCIL  
                              Shri A. M. Pavgi, PGCIL

For Respondents:   None



## **ORDER**

The petition has been preferred by Power Grid Corporation of India Limited (“the petitioner”) for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from COD to 31.3.2019 in respect of 765 kV D/C Wardha-Aurangabad transmission line 1 and associated bays along with 765 kV, 3X80 MVAR line reactor at Aurangabad Sub-station (referred as “Asset-I”), 765/400 kV, 1500 MVA ICT-1 with bays and equipments at Aurangabad Sub-station (referred as “Asset-II”), 400 kV, 80 MVAR switchable line reactor for Aurangabad-Boiser transmission line circuit-1 charged as bus reactor at Aurangabad Sub-station (referred as “Asset-III”), 400 kV, 80 MVAR switchable line reactor for Aurangabad-Boiser transmission line circuit-2 charged as bus reactor at Aurangabad Sub-station (referred as “Asset-IV”), 400/220 kV, 500 MVA ICT-3 with bays and equipments at Boiser (referred as “Asset-V”), 400 kV, 80 MVAR line reactor for Aurangabad-Boiser transmission line circuit-1 charged as bus reactor at Boiser Sub-station (referred as “Asset-VI”), 400 kV, 80 MVAR line reactor for Aurangabad-Boiser transmission line ckt-2 charged as bus reactor at Boiser Sub-station (referred as “Asset-VII”) under IPPs generation projects in Chhattisgarh (IPP D) in Western Region (hereinafter referred to as “the transmission asset”)

2. The petitioner has been entrusted with the implementation of “Transmission system strengthening in western part of WR for IPPs generation projects in Chhattisgarh (IPP D)”. The scope of work covered under “Transmission system strengthening in western part of WR for IPPs generation projects in Chhattisgarh (IPP D)” in Western Region is as follows:-

**Transmission Line –**

- (i) Wardha-Aurangabad 765 kV D/C**
- (ii) Aurangabad- Boisar 400 kV D/C (Quad)**

**Sub-station**

- i. Establishment of 765/400 kV, 2x1500 MVA Aurangabad Substation**
- ii. Augmentation of 400/220 kV transformation capacity by 1x500MVA transformer at Boiser substation**
- iii. Extension of 765/400kV Wardha substation

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

a) The Investment Approval of the project was accorded by Board of Directors of the petitioner company vide the Memorandum No. C/CP/Chhattisgarh IPP dated 22.11.2011 with an estimated cost of ₹212751 lakh, including Interest During Construction of ₹13573 lakh, at 2<sup>nd</sup> Quarter, 2011 price level. The Revised Cost Estimate (RCE) of the project was accorded by the Board of Directors of the petitioner company vide C/CP/RCE/RCE/WR-IPPs dated 9.3.2016 for ₹261956 lakh including an IDC of ₹22169 lakh..

b) The Transmission System Strengthening for IPP generation projects in Chhattisgarh has been discussed in 29<sup>th</sup> SCM of Western Region Constituents. Further, sub-divisions of entire transmission system into nine sub-schemes (including subject project) have been discussed in 30<sup>th</sup> SCM of Western Region Constituents.

4. As per the Investment Approval, the project was scheduled to be commissioned within 32 months from the date of Investment Approval. The date of Investment Approval is 22.11.2011 and accordingly the schedule date of completion of work is 21.7.2014.

5. The petitioner, vide affidavit dated 21.1.2015 and 10.3.2016, has submitted the anticipated/actual COD in respect of the assets covered in the instant petition, as below:

<b>Asset</b>	<b>Description</b>	<b>COD</b>	<b>Actual COD</b>
Asset-I	765 kV D/C Wardha-Aurangabad Transmission Line 1 and associated Bays alongwith 765 kV 3X80MVAR Line Reactor at Aurangabad Sub Station	8.7.2014 (Actual)	8.7.2014
Asset-II	765/400 kV 1500 MVA ICT-1 with Bays and equipments at Aurangabad Sub Station	1.7.2014 (Actual)	1.7.2014
Asset-III	400 kV, 80 MVAR switchable Line Reactor for Aurangabad - Boiser T/L ckt-1 charged as bus reactor at Aurangabad Sub Station	2.10.2014 (Actual)	2.10.2014
Asset-IV	400 kV, 80 MVAR switchable Line Reactor for Aurangabad - Boiser T/L ckt-2 charged as bus reactor at Aurangabad Sub Station	1.10.2014 (Actual)	1.10.2014
Asset-V	765/400 kV 500 MVA ICT-3 with Bays and equipments at Boiser	1.1.2015 (Anticipated)	2.1.2015
Asset-VI	400 kV, 80 MVAR Line Reactor for Aurangabad - Boiser T/L ckt-1 charged as bus reactor at Boiser Sub Station	1.1.2015 (Anticipated)	11.1.2015
Asset-VII	400 kV, 80 MVAR Line Reactor for Aurangabad - Boiser T/L ckt-2 charged as bus reactor at Boiser Sub Station	1.1.2015 (Anticipated)	7.1.2015

6. The petitioner, vide affidavit dated 10.3.2016, has submitted the letter declaring COD in respect of commissioning of the instant assets. Accordingly, the Asset V, VI and VII which was filed based on anticipated COD, have been commissioned. There is a mismatch of few days between the anticipated commissioning and actual commissioning of these assets. However, the petitioner has not submitted the revised Auditor's Certificate and the revised tariff forms based on actual COD of the assets.

7. Further, it is observed that the assets covered in the instant petition are distinctly identifiable in the detailed scope of work under the Investment Approval of the project as submitted by the petitioner with the Abstract Cost Estimate.

8. The capital cost claimed by the petitioner, as certified vide Auditor's Certificate dated 14.10.2014 for Asset-1 and 2, 4.12.2014 for Asset-3 and 4, and 29.9.2014 for Asset-5, 6 and 7 along with the estimated additional capital expenditure during 2014-19 tariff period, is as below :

(₹ in lakh)

Asset	Apportioned approved cost as per RCE	Exp. Up to COD	Exp. for 2014-15	Exp. for 2015-16	Total estimated additional capital expenditure	Total Est. Exp.
Asset-I	140972.21	114982.05	12063.91	2865.82	14929.73	129911.78
Asset-II	9030.87	6289.96	1527.43	834.75	2362.18	8652.14
Asset-III	740.40	533.06	101.04	41.19	142.23	675.29
Asset-IV	707.61	527.64	98.39	40.8	139.19	666.83
Asset-V	3037.42	2346.93	262.23	300.42	562.65	2909.58
Asset-VI	1185.56	930.79	112.38	120.02	232.40	1163.19
Asset-VII	893.83	732.69	55.23	90.71	145.94	878.63
<b>Total</b>	<b>156567.90</b>	<b>126343.12</b>	<b>14220.61</b>	<b>4293.71</b>	<b>18514.32</b>	<b>144857.44</b>

9. The Annual Transmission Charges for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 15.4.2015.

10. The petition was served on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments/objections have been received from the public in response to the notice in newspaper. No reply has been submitted by the respondents. The hearing in this matter was held on 6.4.2016. The petitioner has

filed additional information vide affidavit dated 10.3.2016 and 5.4.2016 and the same has been considered.

11. It is observed that Asset-V, VI and VII were anticipated to be commissioned on 1.1.2015. However, Asset-V, VI and VII have been commissioned on 2.1.2015, 11.1.2015 and 7.1.2015 respectively. The petitioner has submitted the capital cost as on the anticipated COD and the claim is supported by the Auditor Certificate. The petitioner has not submitted the capital cost as per the actual COD in the aforesaid assets. The tariff for these assets will be revised on the basis of capital cost on actual COD at the time of truing up. The tariff for Asset-I, II, III and IV is allowed on the basis of actual COD and the Auditor Certificate submitted by the petitioner.

12. Having heard the representatives of the petitioner and respondents, and perused the material on record, we proceed to determine the tariff in accordance with the Tariff Regulations, 2014.

13. The petitioner has commissioned Asset-III, IV, VI and VIII line reactors as bus reactors at Aurangabad Sub-station and Boisar Sub-station. This is a deviation from what was envisaged in the Investment Approval.

14. It is observed that that the problem of over voltage was discussed in 24<sup>th</sup> WRPC meeting held on 9.10.2013. The petitioner has further submitted minutes of 28<sup>th</sup> WRPC meeting held on 4<sup>th</sup> March, 2015 wherein the commissioning of line reactor as bus reactor has been accepted. The approval in this respect has been submitted by the petitioner. It is noticed that the same has been referred to in the 37<sup>th</sup> and 38<sup>th</sup> SCM for power system planning in Western Region held on 5.9.2014 and 17.7.2015

respectively. As for the WRPC, the use of line reactors as bus reactors will help in arresting over voltage in the system and accordingly the tariff for Asset-III, IV , VI and VII is allowed.

### **Petitioner's claim**

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

#### **Asset-I:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	4659.99	6760.58	6834.93	6834.93	6834.93
Interest on Loan	5043.90	6857.67	6364.72	5776.78	5177.88
Return on Equity	5373.51	7802.39	7889.41	7889.41	7889.41
Interest on Working Capital	365.37	518.94	512.16	499.52	486.66
O & M Expenses	331.63	468.51	483.92	500.12	516.77
<b>Total</b>	<b>15774.40</b>	<b>22408.09</b>	<b>22085.14</b>	<b>21500.76</b>	<b>20905.65</b>

#### **Asset-II:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	271.32	420.52	441.45	441.45	441.45
Interest on Loan	273.90	401.76	390.21	354.61	318.93
Return on Equity	321.27	500.09	525.44	525.44	525.44
Interest on Working Capital	25.94	38.70	39.77	39.24	38.71
O & M Expenses	108.54	149.52	154.49	159.62	164.91
<b>Total</b>	<b>1000.97</b>	<b>1510.59</b>	<b>1551.36</b>	<b>1520.36</b>	<b>1489.44</b>

#### **Asset-III:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	14.69	32.84	33.84	33.84	33.84
Interest on Loan	18.75	40.16	38.38	35.17	32.04
Return on Equity	17.62	39.76	41.01	41.01	41.01
Interest on Working Capital	4.49	9.48	9.72	9.88	10.05
O & M Expenses	59.98	124.60	128.74	133.02	137.42
<b>Total</b>	<b>115.53</b>	<b>246.84</b>	<b>251.69</b>	<b>252.92</b>	<b>254.36</b>



**Asset-IV:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	14.59	32.40	33.39	33.39	33.39
Interest on Loan	17.53	37.29	35.64	32.69	29.74
Return on Equity	17.52	39.26	40.50	40.50	40.50
Interest on Working Capital	4.47	9.39	9.63	9.80	9.98
O & M Expenses	60.30	124.60	128.74	133.02	137.42
<b>Total</b>	<b>114.41</b>	<b>242.94</b>	<b>247.90</b>	<b>249.40</b>	<b>251.03</b>

**Asset-V:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	31.99	142.00	149.54	149.54	149.54
Interest on Loan	38.88	165.49	161.81	148.38	135.13
Return on Equity	37.62	167.57	176.70	176.70	176.70
Interest on Working Capital	5.08	21.60	22.26	22.31	22.39
O & M Expenses	46.73	193.13	199.55	206.16	213.01
<b>Total</b>	<b>160.30</b>	<b>689.79</b>	<b>709.86</b>	<b>703.09</b>	<b>696.77</b>

**Asset-VI:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	12.68	56.52	59.50	59.50	59.50
Interest on Loan	15.06	64.36	62.94	57.75	52.64
Return on Equity	14.98	67.00	70.64	70.64	70.64
Interest on Working Capital	1.82	7.77	8.00	8.00	8.00
O & M Expenses	15.08	62.30	64.37	66.51	68.71
<b>Total</b>	<b>59.62</b>	<b>257.95</b>	<b>265.45</b>	<b>262.40</b>	<b>259.49</b>

**Asset-VII:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	9.72	42.45	44.68	44.68	44.68
Interest on Loan	11.59	48.55	47.50	43.60	39.76
Return on Equity	11.54	50.60	53.36	53.36	53.36
Interest on Working Capital	1.59	6.70	6.91	6.93	6.97
O & M Expenses	15.08	62.30	64.37	66.51	68.71
<b>Total</b>	<b>49.52</b>	<b>210.60</b>	<b>216.82</b>	<b>215.08</b>	<b>213.48</b>



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

**Asset-I:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	37.796	39.043	40.327	41.677	43.064
Maintenance Spares	68.033	70.277	72.588	75.018	77.516
Receivables	3595.635	3734.681	3680.856	3583.460	3484.275
Total working Capital	<b>3701.464</b>	<b>3844.000</b>	<b>3793.771</b>	<b>3700.154</b>	<b>3604.854</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	365.370	518.940	512.160	499.520	486.660

**Asset-II:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	12.060	12.460	12.874	13.302	13.743
Maintenance Spares	21.708	22.428	23.174	23.943	24.737
Receivables	222.438	251.764	258.560	253.394	248.240
Total working capital	<b>256.206</b>	<b>286.652</b>	<b>294.608</b>	<b>290.638</b>	<b>286.719</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	25.940	38.700	39.770	39.240	38.710

**Asset-III:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	38.72	41.14	41.95	42.15	42.39
Total working capital	<b>66.86</b>	<b>70.21</b>	<b>71.99</b>	<b>73.19</b>	<b>74.46</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	4.49	9.48	9.72	9.88	10.05

**Asset-IV:**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	38.14	40.49	41.32	41.57	41.84



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Total working capital	<b>66.28</b>	<b>69.56</b>	<b>71.36</b>	<b>72.61</b>	<b>73.90</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	4.47	9.39	9.63	9.80	9.98

#### Asset-V:

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	15.58	16.09	16.63	17.18	17.75
Maintenance Spares	28.04	28.97	29.93	30.92	31.95
Receivables	106.87	114.97	118.31	117.18	116.13
Total working capital	<b>150.48</b>	<b>160.03</b>	<b>164.87</b>	<b>165.29</b>	<b>165.83</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	5.08	21.60	22.26	22.31	22.39

#### Asset-VI

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	39.75	42.99	44.24	43.73	43.25
Total working capital	<b>53.82</b>	<b>57.53</b>	<b>59.26</b>	<b>59.25</b>	<b>59.28</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	1.82	7.77	8.00	8.00	8.00

#### Asset-VII

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	33.01	35.10	36.14	35.85	35.58
Total working capital	<b>47.09</b>	<b>49.64</b>	<b>51.56</b>	<b>51.37</b>	<b>51.61</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on working capital	1.59	6.70	6.91	6.93	6.97

#### Date of Commercial Operation (“COD”)



17. The petitioner has claimed the date of the commercial operation of the assets as under:

<b>Asset</b>	<b>COD (vide affidavit dated 21.1.2015)</b>	<b>Actual COD (vide affidavit dated 10.3.2016)</b>
Asset-I	8.7.2014 (Actual)	8.7.2014
Asset-II	1.7.2014 (Actual)	1.7.2014
Asset-III	2.10.2014 (Actual)	2.10.2014
Asset-IV	1.10.2014 (Actual)	1.10.2014
Asset-V	1.1.2015 (Anticipated)	2.1.2015
Asset-VI	1.1.2015 (Anticipated)	11.1.2015
Asset-VII	1.1.2015 (Anticipated)	7.1.2015

18. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

**“4. Date of Commercial Operation:** The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

xxx

xxx”

19. The petitioner has submitted, vide affidavit dated 10.3.2016, the actual COD of all the assets covered in the instant petition. The petitioner has submitted the self declaration COD notification letter in respect of commissioning of the instant assets. However, the petitioner has submitted the RLDC certificates for the assets namely I,II,VI & VII.

20. The commercial operation dates of Asset-I, II, III, IV, V, VI and VII are considered as per the actual COD depicted in Para 17. Thus, the tariff is worked out for the subject assets from respective actual COD of the assets to 31.3.2019.

21. The petitioner is directed to submit the RLDC certificates for the assets III,IV & V during true-up, in support of the claim of commercial operation in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation for the instant transmission asset.

### **Capital Cost**

22. The petitioner has claimed the capital cost upto COD as mentioned in Para 8 supported by Auditor's Certificate dated 14.10.2014 for Asset-1 and 2, dated 4.12.2014 for Asset-3 and 4, and dated 29.9.2014 for Asset-5, 6 and 7. As discussed in Para 11, the capital cost submitted upto anticipated COD which is few days prior to actual COD has been considered for the purpose of tariff , in respect of Asset V, VI and VII. This capital cost includes the interest during construction (IDC), Incidental expenditure during construction (IEDC), capitalized spares and estimated additional capital expenditure from COD to 31.3.2019.

23. Regulation 9 (1) and (2) and 10 (1) of the 2014 Tariff Regulations specify as follows:-

**“9. Capital Cost:** (1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.

(2) The Capital Cost of a new project shall include the following:

- a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- b) Interest during construction and financing charges, on the loans (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 funds deployed;
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

**“10. Prudence Check of Capital Expenditure:** The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time:

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

24. The petitioner has submitted the details of capital cost and estimated additional capital expenditure in respect of the instant assets vide the affidavit in initial petition dated 21.1.2015. The admissible capital cost of the transmission asset as on COD is worked out in the subsequent paragraphs taking into consideration the initial spares and IEDC and IDC amount.

### **Cost over-run**

25. As per the original Investment approval, the cost of the project was ₹212751 lakh which has been revised to ₹261956 lakh vide the Revised Cost Estimates dated 11.3.2016. The petitioner has submitted the revised apportioned cost as per RCE for

the instant transmission assets. The estimated completion cost is within the apportioned approved cost as given in Para 8 of this order. Hence, there is no cost over-run.

### **Time Over-run**

26. As per the Investment Approval, the project was scheduled to be commissioned within 32 months from the date of Investment Approval. The date of Investment Approval is 22.11.2011 and accordingly the schedule date of completion of work is 21.7.2014. Against the scheduled completion date of 21.7.2014, Asset-I, II, III, IV, V, VI and VII have been commissioned on 8.7.2014, 1.7.2014, 2.10.2014, 1.10.2014, 2.1.2015, 11.1.2015 and 7.1.2015 respectively. There is no time over-run in commissioning of Asset-I and II. There is time over run of around 2 months in Asset-III and IV and around 5 months in Asset-V, VI and VII.

27. The elements covered in Asset-III, IV, V, VI and VII are line reactors and line bays. The petitioner has submitted that the commissioning of line reactors were delayed due to delay in commissioning of the related transmission line i.e. 400 kV D/C Aurangabad-Boisar transmission line. The said delay in commissioning of the line is due to severe ROW problems in grapes park areas near Nasik and Forest approval is yet to be issued for this line. In view of this, it was decided to charge the line reactor as bus reactor to compensate the voltage problems at Aurangabad Sub-station. The petitioner has submitted that the delay was thus due to non-readiness of the transmission line which is beyond control of the petitioner and therefore the delay be condoned.

28. The Commission has observed that the commissioning of 400 kV D/C Aurangabad-Boisar transmission line is indeed delayed due to aforementioned reasons. The same has been noted in the 38<sup>th</sup> Standing Committee Meeting (SCM) held on 17.7.2015. The documentary evidences submitted by the petitioner depict the communication with respect to the grape gardens. However, there are no documents to substantiate the Forest Clearance issues referred to by the petitioner. At this stage, we are not going in the merits of the delay in commissioning of the 400 kV D/C Aurangabad-Boisar transmission line. Having perused all the documents at hand, the Commission is of the view that the time over run of 2 months in Asset-III and IV and time over run of 5 months in Asset-V, VI and VII is due to delay in commissioning of 400 kV D/C Aurangabad-Boisar transmission line. It is fact that the commissioning of the 400 kV D/C Aurangabad-Boisar is delayed. Accordingly, the time over run in the commissioning of Asset III, IV, V, VI and VII is condoned. The IDC and IEDC is thus being capitalised with respect to the actual/anticipated COD of the assets.

### **Initial Spares**

29. The petitioner has claimed initial spares of ₹1428.87 lakh and ₹51.40 lakh pertaining to transmission line and sub-station respectively in Asset-I, ₹159.59 lakh, ₹17.10 lakh, ₹11.85 lakh, ₹88.12 lakh, ₹35.29 lakh and ₹8.92 lakh pertaining to sub-station, in Asset-II, III, IV, V, VI and VIII respectively, corresponding to the capital cost (excluding IDC, IEDC, Land cost and cost of civil works) up to the cut-off dates of 31.3.2017 for Asset-I, II, III & IV and 31.3.2018 for Asset-V, VI & VII.

30. The allowable initial spares have been computed based on the norms in accordance with clause 13 of Tariff Regulations 2014, as below:



(₹ in lakh)

Asset	Element	P&M Cost as per Auditor's Certificate (exc. IDC, IEDC, civil works)	Initial Spares Claimed (as submitted vide Auditor's certificate)	Ceiling limit as per 2014 Regulation	Logical formula	Initial spares allowed	Excess initial spares
Asset I	Transmission line	114744.37	1428.87	1.00%	c*(a-b)/(1-c)	1144.60	284.27
	Substation	3681.46	51.40	6.00%		231.71	0.00
Asset II	Substation	7243.41	159.59	4.00%		295.16	0.00
Asset-III	Substation	526.76	17.10	6.00%		32.53	0.00
Asset-IV	Substation	519.04	11.85	6.00%		32.37	0.00
Asset-V	Substation	2450.71	88.12	4.00%		98.44	0.00
Asset-VI	Substation	954.54	35.29	6.00%		58.68	0.00
Asset-VII	Substation	708.64	8.92	6.00%		44.66	0.00

31. Thus, initial spares claimed by the petitioner in all the assets except Asset-I, are within the normative limits in accordance with clause 13 (1) of the Tariff Regulations. The initial spares claimed in Asset-I are in excess of the normative limits and the same are accordingly disallowed in accordance with clause 13 (1) of the Tariff Regulations.

32. Based on the above, capital costs considered as on COD, after capitalization of IDC, IEDC and initial spares for the purpose of the determination of transmission tariff are as below:-

### Asset-I

(₹ in lakh)

Particulars	Capital cost on COD	Excess initial spares	Capital cost on COD considered for tariff computation
Land – Freehold	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00
Building Civil Works & Colony	614.17	0.00	614.17
Transmission Line	110771.66	284.27	110487.39
Sub Station	3493.30	0.00	3493.30
PLCC	102.92	0.00	102.92
<b>Total</b>	<b>114982.05</b>	<b>284.27</b>	<b>114697.78</b>



(₹ in lakh)

Particulars	Capital cost on COD considered for tariff computation					
	Asset-II	Asset-III	Asset-IV	Asset-V	Asset-VI	Asset-VII
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	420.88	47.55	47.54	135.08	62.47	57.95
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00
Sub Station	5868.66	485.51	480.10	2195.73	868.32	674.74
PLCC	0.42	0.00	0.00	16.12	0.00	0.00
<b>Total</b>	<b>6289.96</b>	<b>533.06</b>	<b>527.64</b>	<b>2346.93</b>	<b>930.79</b>	<b>732.69</b>

### **Additional Capital Expenditure**

33. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) 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;
- (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.”

34. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines cut-off date as follows:-

“Cut-off Date” means 31st 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 31st March of the year closing after three years of the year of commercial operation:

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer ”

35. The cut-off date for Asset-I, II, III and IV is 31.3.2017 and for Asset-V, VI and VII is 31.3.2018. The petitioner has claimed an estimated additional capital expenditure

of ₹14929.73 lakh, ₹2362.18 lakh, ₹142.23 lakh, ₹139.19 lakh, ₹562.65 lakh, ₹232.40 lakh and ₹145.94 lakh during 2014-19 tariff period in Asset-I, II, III, IV, V, VI and VII respectively up to respective cut-off dates, on account of balance and retention payments.

36. The additional capital expenditure claimed by the petitioner is on account of balance and retention payments and the total estimated completion cost is within the apportioned approved cost as per RCE dated 11.3.2016. The same is allowed under Regulation 14(1) of 2014 Tariff Regulations, subject to true up on actual basis. Thus the additional capital expenditure allowed for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	Apportioned approved cost as per RCE	Exp. up to COD	Additional capital expenditure approved			Total Est. Exp.
			Exp. for 2014-15	Exp. for 2015-16	Total	
Asset I	140972.21	114697.78	12063.91	2865.82	14929.73	129627.50
Asset II	9030.87	6289.96	1527.43	834.75	2362.18	8652.14
Asset-III	740.40	533.06	101.04	41.19	142.23	675.29
Asset-IV	707.61	527.64	98.39	40.80	139.19	666.83
Asset-V	3037.42	2346.93	262.23	300.42	562.65	2909.58
Asset-VI	1185.56	930.79	112.38	120.02	232.40	1163.19
Asset-VII	893.83	732.69	55.23	90.71	145.94	878.63

### **Debt: Equity**

37. Clause (1) of Regulation 19 of the 2014 Tariff Regulations provides 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”

Provided that:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff;
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
- any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”

38. The petitioner has considered debt: equity ratio of 70:30 in all assets which is in line with the 2014 Tariff Regulations, hence the same is considered for calculation of tariff. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

(₹ in lakh)

Funding	As on COD	(%)	Additional capital expenditure during 2014-19	(%)	As on 31.3.2019	(%)
<b>Asset-I</b>						
Debt	80288.45	70.00	10450.80	70.00	90739.25	70.00
Equity	34409.33	30.00	4478.92	30.00	38888.25	30.00
<b>Total</b>	<b>114697.78</b>	<b>100.00</b>	<b>14929.72</b>	<b>100.00</b>	<b>129627.50</b>	<b>100.00</b>
<b>Asset-II</b>						
Debt	4402.97	70.00	1653.52	70.00	6056.49	70.00
Equity	1886.99	30.00	708.65	30.00	2595.64	30.00
<b>Total</b>	<b>6289.96</b>	<b>100.00</b>	<b>2362.17</b>	<b>100.00</b>	<b>8652.13</b>	<b>100.00</b>
<b>Asset-III</b>						
Debt	373.14	70.00	99.56	70.00	472.70	70.00
Equity	159.92	30.00	42.67	30.00	202.59	30.00
<b>Total</b>	<b>533.06</b>	<b>100.00</b>	<b>142.23</b>	<b>100.00</b>	<b>675.29</b>	<b>100.00</b>
<b>Asset-IV</b>						
Debt	369.35	70.00	97.43	70.00	466.78	70.00
Equity	158.29	30.00	41.76	30.00	200.05	30.00
<b>Total</b>	<b>527.64</b>	<b>100.00</b>	<b>139.19</b>	<b>100.00</b>	<b>666.83</b>	<b>100.00</b>
<b>Asset-V</b>						
Debt	1642.85	70.00	393.86	70.00	2036.71	70.00
Equity	704.08	30.00	168.80	30.00	872.87	30.00
<b>Total</b>	<b>2346.93</b>	<b>100.00</b>	<b>562.65</b>	<b>100.00</b>	<b>2909.58</b>	<b>100.00</b>
<b>Asset-VI</b>						
Debt	651.55	70.00	162.68	70.00	814.23	70.00
Equity	279.24	30.00	69.72	30.00	348.96	30.00
<b>Total</b>	<b>930.79</b>	<b>100.00</b>	<b>232.40</b>	<b>100.00</b>	<b>1163.19</b>	<b>100.00</b>
<b>Asset-VII</b>						
Debt	512.88	70.00	102.16	70.00	615.04	70.00
Equity	219.81	30.00	43.78	30.00	263.59	30.00
<b>Total</b>	<b>732.69</b>	<b>100.00</b>	<b>145.94</b>	<b>100.00</b>	<b>878.63</b>	<b>100.00</b>

## **Return on Equity (“ROE”)**

39. 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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**

(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

### **“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.”

40. The petitioner has claimed ROE at the rate of 20.961% during 2014-15 and at 21.342% during 2015-2019 after grossing up the ROE of 15.5% with MAT rate as per the above said Regulation. The petitioner has also claimed the additional RoE of 0.5%. The petitioner has submitted that as per Investment Approval dated 9.2.2012 and CERC time line of 40 months the asset is anticipated to be commissioned on 1.1.2015 which is within CERC time line specified for claiming additional ROE of 0.5 %, the provision of Regulation 24 (i) of CERC (Terms and Conditions of Tariff) Regulations, 2014 may be invoked. The Commission has observed that the Investment Approval for the instant project was accorded on 22.11.2011. Based on this date and Appendix-I of 2014 Tariff Regulations, the completion period for the purpose for assessing the claim of additional RoE works out to be 40 months for Asset-I, 36 months for Asset-II and V, 30 months for Asset-III, IV, VI and VII. It is observed that Asset-I and II have been commissioned within the aforesaid timeline. However, since the project is yet not completed and the petitioner has not submitted the certificate by the Regional Power Committee/National Power Committee certifying that commissioning of the concerned element of the project will benefit the system operation in the regional/national grid, the claim of additional RoE of the petitioner is not allowed in accordance with Regulation 24(2) (iii) of the 2014 Tariff Regulations. It is to mention that though the additional ROE is allowed in the 2014 Tariff Regulations for individual element, the completion of the entire project is to be examined to ensure the intended use of the individual element benefitting the system.

41. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

42. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/ adjustable after completion of income tax assessment of the financial year.

43. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. The ROE allowed for the instant transmission asset is given below:-

**Asset-I**

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	34409.33	38028.51	38888.25	38888.25	38888.25
Additions	3619.17	859.74	0.00	0.00	0.00
Closing Equity	38028.51	38888.25	38888.25	38888.25	38888.25
Average Equity	36218.92	38458.38	38888.25	38888.25	38888.25
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	5195.67	7541.86	7626.16	7626.16	7626.16

**Asset-II**

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	1886.99	2345.21	2595.64	2595.64	2595.64
Additions	458.23	250.43	0.00	0.00	0.00
Closing Equity	2345.21	2595.64	2595.64	2595.64	2595.64
Average Equity	2116.10	2470.43	2595.64	2595.64	2595.64
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	311.52	484.46	509.02	509.02	509.02

**Asset-III**

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	159.92	190.23	202.59	202.59	202.59
Additions	30.31	12.36	0.00	0.00	0.00
Closing Equity	190.23	202.59	202.59	202.59	202.59
Average Equity	175.07	196.41	202.59	202.59	202.59
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	17.03	38.52	39.73	39.73	39.73

**Asset-IV**

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	158.29	187.81	200.05	200.05	200.05
Additions	29.52	12.24	0.00	0.00	0.00
Closing Equity	187.81	200.05	200.05	200.05	200.05





Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Average Equity	173.05	193.93	200.05	200.05	200.05
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	16.92	38.03	39.23	39.23	39.23

### Asset-V

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	704.08	782.75	872.87	872.87	872.87
Additions	78.67	90.13	0.00	0.00	0.00
Closing Equity	782.75	872.87	872.87	872.87	872.87
Average Equity	743.41	827.81	872.87	872.87	872.87
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	35.55	162.34	171.17	171.17	171.17

### Asset-VI

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	279.24	312.95	348.96	348.96	348.96
Additions	33.71	36.01	0.00	0.00	0.00
Closing Equity	312.95	348.96	348.96	348.96	348.96
Average Equity	296.09	330.95	348.96	348.96	348.96
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	12.73	64.90	68.43	68.43	68.43

### Asset-VII

(₹ in lakh)

Return on Equity	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	219.81	236.38	263.59	263.59	263.59
Additions	16.57	27.21	0.00	0.00	0.00
Closing Equity	236.38	263.59	263.59	263.59	263.59
Average Equity	228.09	249.98	263.59	263.59	263.59
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	10.29	49.02	51.69	51.69	51.69



### **Interest on Loan (“IoL”)**

44. Clause 5 and 6 of Regulation 26 of 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.”

45. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period, if any from the respondents. The petitioner has also prayed that they will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The petitioner’s prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at Annexure-I and the IOL has been worked out as follows:-

**Asset-I**

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	80288.45	88733.18	90739.25	90739.25	90739.25
Cumulative Repayment upto Previous Year	0.00	4651.08	11396.64	18216.56	25036.48
Net Loan-Opening	80288.45	84082.11	79342.61	72522.69	65702.77
Additions	8444.74	2006.07	0.00	0.00	0.00
Repayment during the year	4651.08	6745.57	6819.92	6819.92	6819.92
Net Loan-Closing	84082.11	79342.61	72522.69	65702.77	58882.86
Average Loan	82185.28	81712.36	75932.65	69112.73	62292.82
Weighted Average Rate of Interest on Loan (%)	8.3737	8.3737	8.3636	8.3401	8.2938
Interest on Loan	5034.22	6842.38	6350.71	5764.05	5166.47

**Asset-II**

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	4402.97	5472.17	6056.49	6056.49	6056.49
Cumulative Repayment upto Previous Year	0.00	271.57	692.08	1133.54	1574.99
Net Loan-Opening	4402.97	5200.60	5364.41	4922.95	4481.50
Additions	1069.19	584.33	0.00	0.00	0.00
Repayment during the year	271.57	420.51	441.45	441.45	441.45
Net Loan-Closing	5200.60	5364.41	4922.95	4481.50	4040.05
Average Loan	4801.78	5282.50	5143.68	4702.23	4260.78
Weighted Average Rate of Interest on Loan (%)	7.6052	7.6052	7.5858	7.5410	7.4848
Interest on Loan	274.14	401.75	390.19	354.60	318.91

**Asset-III**

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	373.14	443.87	472.70	472.70	472.70
Cumulative Repayment upto Previous Year	0.00	14.64	47.48	81.32	115.16
Net Loan-Opening	373.14	429.23	425.22	391.38	357.54
Additions	70.73	28.83	0.00	0.00	0.00
Repayment during the year	14.64	32.84	33.84	33.84	33.84
Net Loan-Closing	429.23	425.22	391.38	357.54	323.70
Average Loan	401.18	427.22	408.30	374.46	340.62



Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Weighted Average Rate of Interest on Loan (%)	9.4001	9.4001	9.4001	9.3926	9.4073
Interest on Loan	18.70	40.16	38.38	35.17	32.04

#### Asset-IV

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	369.35	438.22	466.78	466.78	466.78
Cumulative Repayment upto Previous Year	0.00	14.55	46.95	80.35	113.74
Net Loan-Opening	369.35	423.67	419.83	386.44	353.04
Additions	68.87	28.56	0.00	0.00	0.00
Repayment during the year	14.55	32.40	33.39	33.39	33.39
Net Loan-Closing	423.67	419.83	386.44	353.04	319.65
Average Loan	396.51	421.75	403.13	369.74	336.35
Weighted Average Rate of Interest on Loan (%)	8.8424	8.8424	8.8424	8.8422	8.8420
Interest on Loan	17.48	37.29	35.65	32.69	29.74

#### Asset-V

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1642.85	1826.41	2036.71	2036.71	2036.71
Cumulative Repayment upto Previous Year	0.00	31.20	173.21	322.75	472.29
Net Loan-Opening	1642.85	1795.21	1863.50	1713.96	1564.42
Additions	183.56	210.29	0.00	0.00	0.00
Repayment during the year	31.20	142.00	149.54	149.54	149.54
Net Loan-Closing	1795.21	1863.50	1713.96	1564.42	1414.88
Average Loan	1719.03	1829.35	1788.73	1639.19	1489.65
Weighted Average Rate of Interest on Loan (%)	9.0501	9.0501	9.0503	9.0567	9.0763
Interest on Loan	37.93	165.56	161.88	148.46	135.20

#### Asset-VI

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	651.55	730.22	814.23	814.23	814.23
Cumulative Repayment upto Previous Year	0.00	11.12	67.64	127.14	186.64



Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Net Loan-Opening	651.55	719.10	746.60	687.09	627.59
Additions	78.67	84.01	0.00	0.00	0.00
Repayment during the year	11.12	56.52	59.50	59.50	59.50
Net Loan-Closing	719.10	746.60	687.09	627.59	568.09
Average Loan	685.33	732.85	716.85	657.34	597.84
Weighted Average Rate of Interest on Loan (%)	8.8011	8.8011	8.7995	8.8056	8.8273
Interest on Loan	13.22	64.50	63.08	57.88	52.77

## Asset-VII

(₹ in lakh)

Interest on Loan	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	512.88	551.54	615.04	615.04	615.04
Cumulative Repayment upto Previous Year	0.00	8.95	51.40	96.08	140.76
Net Loan-Opening	512.88	542.59	563.64	518.96	474.28
Additions	38.66	63.50	0.00	0.00	0.00
Repayment during the year	8.95	42.45	44.68	44.68	44.68
Net Loan-Closing	542.59	563.64	518.96	474.28	429.60
Average Loan	527.74	553.12	541.30	496.62	451.94
Weighted Average Rate of Interest on Loan (%)	8.7895	8.7895	8.7874	8.7925	8.8129
Interest on Loan	10.68	48.62	47.57	43.67	39.83

## Depreciation

46. Clause (2), (5) and (6) of Regulation 27 of 2014 Tariff Regulations provide that:-

"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.”

47. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-

“(67) ‘Useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

- (a) Coal/Lignite based thermal generating station 25 years
- (b) Gas/Liquid fuel based thermal generating station 25 years
- (c) AC and DC sub-station 25 years
- (d) Gas Insulated Substation (GIS) 25 years
- (d) Hydro generating station including pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

48. The depreciation has been worked out considering the admitted capital cost as on COD and the additional capital expenditure admitted during 2014-19 period. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

**Asset-I**

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	114697.78	126761.69	129627.50	129627.50	129627.50
Additional Capitalization	12063.91	2865.81	0.00	0.00	0.00
Closing Gross Block	126761.69	129627.50	129627.50	129627.50	129627.50
Average Gross Block	120729.74	128194.60	129627.50	129627.50	129627.50
Rate of Depreciation (%)	5.27	5.26	5.26	5.26	5.26
Balance Useful life of the asset	35	34	33	32	31
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	108656.76	110724.06	105268.11	98448.19	91628.27
Depreciation during the year	4651.08	6745.57	6819.92	6819.92	6819.92
Cumulative depreciation	4651.08	11396.64	18216.56	25036.48	31856.39



**Asset-II**

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	6289.96	7817.38	8652.13	8652.13	8652.13
Additional Capitalization	1527.42	834.75	0.00	0.00	0.00
Closing Gross Block	7817.38	8652.13	8652.13	8652.13	8652.13
Average Gross Block	7053.67	8234.76	8652.13	8652.13	8652.13
Rate of Depreciation (%)	5.13	5.11	5.10	5.10	5.10
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	6348.30	7140.05	7095.17	6653.72	6212.27
Depreciation during the year	271.57	420.51	441.45	441.45	441.45
Cumulative depreciation	271.57	691.74	1133.20	1574.65	2016.10

**Asset-III**

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	533.06	634.10	675.29	675.29	675.29
Additional Capitalization	101.04	41.19	0.00	0.00	0.00
Closing Gross Block	634.10	675.29	675.29	675.29	675.29
Average Gross Block	583.58	654.70	675.29	675.29	675.29
Rate of Depreciation (%)	5.06	5.02	5.01	5.01	5.01
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	525.22	318.00	303.69	269.85	236.01
Depreciation during the year	14.64	32.84	33.84	33.84	33.84
Cumulative depreciation	14.64	304.07	337.91	371.75	405.59

**Asset-IV**

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	527.64	626.03	666.83	666.83	666.83
Additional Capitalization	98.39	40.80	0.00	0.00	0.00
Closing Gross Block	626.03	666.83	666.83	666.83	666.83
Average Gross Block	576.84	646.43	666.83	666.83	666.83
Rate of Depreciation (%)	5.06	5.01	5.01	5.01	5.01
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	519.15	310.56	296.51	263.12	229.73
Depreciation during the year	14.55	32.40	33.39	33.39	33.39
Cumulative depreciation (incl. of AAD)	14.55	303.63	337.03	370.42	403.81



## Asset-V

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	2346.93	2609.16	2909.58	2909.58	2909.58
Additional Capitalization	262.23	300.42	0.00	0.00	0.00
Closing Gross Block	2609.16	2909.58	2909.58	2909.58	2909.58
Average Gross Block	2478.05	2759.37	2909.58	2909.58	2909.58
Rate of Depreciation (%)	5.16	5.15	5.14	5.14	5.14
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	2230.24	2212.20	2205.39	2055.85	1906.31
Depreciation during the year	31.20	142.00	149.54	149.54	149.54
Cumulative depreciation (incl. of AAD)	31.20	413.23	562.77	712.31	861.85

## Asset-VI

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	930.79	1043.17	1163.19	1163.19	1163.19
Additional Capitalization	112.38	120.02	0.00	0.00	0.00
Closing Gross Block	1043.17	1163.19	1163.19	1163.19	1163.19
Average Gross Block	986.98	1103.18	1163.19	1163.19	1163.19
Rate of Depreciation (%)	5.14	5.12	5.12	5.12	5.12
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	888.28	721.63	719.12	659.62	600.12
Depreciation during the year	11.12	56.52	59.50	59.50	59.50
Cumulative depreciation (incl. of AAD)	11.12	327.75	387.25	446.75	506.26

## Asset-VII

(₹ in lakh)

Depreciation	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	732.69	787.92	878.63	878.63	878.63
Additional Capitalization	55.23	90.71	0.00	0.00	0.00
Closing Gross Block	787.92	878.63	878.63	878.63	878.63
Average Gross Block	760.31	833.28	878.63	878.63	878.63
Rate of Depreciation (%)	5.11	5.09	5.09	5.09	5.09
Balance Useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	684.27	478.72	477.09	432.41	387.72





<b>Depreciation</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation during the year	8.95	42.45	44.68	44.68	44.68
Cumulative depreciation (incl. of AAD)	8.95	313.68	358.36	403.04	447.73

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

49. The instant petition covers a total of 2 nos.765 kV bays, 8 nos. 400 kV bays, 3 nos. 220 kV bays and double circuit (bundled cond.- 4 sub-conductor) line of length 347.577 KMs. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses:-

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Norm (₹ lakh/bay)</b>					
765 kV bay	84.42	87.22	90.12	93.11	96.2
400 kV bay	60.3	62.3	64.37	66.51	68.71
220 kV bay	42.21	43.61	45.06	46.55	48.1
<b>Norm (₹ lakh/KM)</b>					
D/C (Bundle Conductor-4 sub-c)	1.062	1.097	1.133	1.171	1.21

50. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

51. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)

Asset	Year				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Asset-I</b>					
765 kV bay (1 No.)	84.42	87.22	90.12	93.11	96.20
D/C (Bundle Conductor- 4 sub-c)- 347.577 KMs	369.13	381.29	393.80	407.01	420.57
<b>Total</b>	<b>331.77</b>	<b>468.51</b>	<b>483.92</b>	<b>500.12</b>	<b>516.77</b>
<b>Asset-II</b>					
765 kV bay (1 No.)	84.42	87.22	90.12	93.11	96.20
400 kV bay (1 No.)	60.30	62.30	64.37	66.51	68.71
<b>Total</b>	<b>108.64</b>	<b>149.52</b>	<b>154.49</b>	<b>159.62</b>	<b>164.91</b>
<b>Asset-III</b>					
400 kV bay (2 Nos.)	120.60	124.60	128.74	133.02	137.42
<b>Total</b>	<b>59.80</b>	<b>124.60</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Asset-IV</b>					
400 kV bay (2 Nos.)	120.60	124.60	128.74	133.02	137.42
<b>Total</b>	<b>59.80</b>	<b>124.60</b>	<b>128.74</b>	<b>133.02</b>	<b>137.42</b>
<b>Asset-V</b>					
400 kV bay (1 No.)	60.30	62.30	64.37	66.51	68.71
220 kV bay (3 Nos.)	126.63	130.83	135.18	139.65	144.30
<b>Total</b>	<b>45.58</b>	<b>193.13</b>	<b>199.55</b>	<b>206.16</b>	<b>213.01</b>
<b>Asset-VI</b>					
400 kV bay (1 No.)	60.30	62.30	64.37	66.51	68.71
<b>Total</b>	<b>13.22</b>	<b>62.30</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>
<b>Asset-VII</b>					
400 kV bay (1 No.)	60.30	62.30	64.37	66.51	68.71
<b>Total</b>	<b>13.88</b>	<b>62.30</b>	<b>64.37</b>	<b>66.51</b>	<b>68.71</b>

52. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any

application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

### **Interest on Working Capital**

53. 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;”

54. The petitioner has considered the rate of interest on working capital to be 13.50%.

55. 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:-

### **Asset-I**

(₹ in lakh)

<b>Interest on Working Capital</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	37.80	39.04	40.33	41.68	43.06
Maintenance Spares	68.03	70.28	72.59	75.02	77.52
Receivables	3548.29	3685.09	3631.02	3533.85	3434.88
Total	3654.12	3794.41	3743.94	3650.54	3555.46
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	360.86	512.25	505.43	492.82	479.99



## Asset-II

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	12.06	12.46	12.87	13.30	13.74
Maintenance Spares	21.71	22.43	23.17	23.94	24.74
Receivables	220.15	249.10	255.76	250.59	245.44
Total	253.92	283.98	291.80	287.84	283.92
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	25.73	38.34	39.39	38.86	38.33

## Asset-III

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	38.53	40.93	41.73	41.94	42.18
Total	66.67	70.00	71.77	72.97	74.24
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.46	9.45	9.69	9.85	10.02

## Asset-IV

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	37.95	40.28	41.10	41.35	41.62
Total	66.09	69.36	71.14	72.39	73.69
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.45	9.36	9.60	9.77	9.95

## Asset-V

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	15.58	16.09	16.63	17.18	17.75
Maintenance Spares	28.04	28.97	29.93	30.92	31.95
Receivables	106.08	114.09	117.38	116.25	115.20
Total	149.70	159.15	163.94	164.36	164.90
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.93	21.49	22.13	22.19	22.26



## Asset-VI

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	39.44	42.66	43.89	43.38	42.90
Total	53.51	57.19	58.91	58.90	58.93
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	1.58	7.72	7.95	7.95	7.96

## Asset-VII

(₹ in lakh)

Interest on Working Capital	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	32.77	34.84	35.86	35.57	35.31
Total	46.84	49.38	50.88	51.09	51.34
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	1.46	6.67	6.87	6.90	6.93

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

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

### Asset-I

(₹ in lakh)

Particulars	2014-15 (pro-rata from 8.7.2014)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	114697.78	126761.69	129627.50	129627.50	129627.50
Additional Capitalisation	12063.91	2865.81	0.00	0.00	0.00
Closing Gross Block	126761.69	129627.50	129627.50	129627.50	129627.50
Average Gross Block	120729.74	128194.60	129627.50	129627.50	129627.50
Rate of Depreciation	5.27	5.26	5.26	5.26	5.26
Depreciable Value	108656.76	115375.14	116664.75	116664.75	116664.75
Balance Useful life of the asset	35	34	33	32	31
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	108656.76	110724.06	105268.11	98448.19	91628.27



<b>Particulars</b>	<b>2014-15 (pro-rata from 8.7.2014)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	4651.08	6745.57	6819.92	6819.92	6819.92
Cumulative depreciation	4651.08	11396.64	18216.56	25036.48	31856.39
<b>Interest on Loan</b>					
Gross Normative Loan	80288.45	88733.18	90739.25	90739.25	90739.25
Cumulative Repayment upto Previous Year	0.00	4651.08	11396.64	18216.56	25036.48
Net Loan-Opening	80288.45	84082.11	79342.61	72522.69	65702.77
Additions	8444.74	2006.07	0.00	0.00	0.00
Repayment during the year	4651.08	6745.57	6819.92	6819.92	6819.92
Net Loan-Closing	84082.11	79342.61	72522.69	65702.77	58882.86
Average Loan	82185.28	81712.36	75932.65	69112.73	62292.82
Weighted Average Rate of Interest on Loan	8.3737	8.3737	8.3636	8.3401	8.2938
Interest	5034.22	6842.38	6350.71	5764.05	5166.47
<b>Return on Equity</b>					
Opening Equity	34409.33	38028.51	38888.25	38888.25	38888.25
Additions	3619.17	859.74	0.00	0.00	0.00
Closing Equity	38028.51	38888.25	38888.25	38888.25	38888.25
Average Equity	36218.92	38458.38	38888.25	38888.25	38888.25
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	5195.67	7541.86	7626.16	7626.16	7626.16
<b>Interest on Working Capital</b>					
O & M expenses	37.80	39.04	40.33	41.68	43.06
Maintenance Spares	68.03	70.28	72.59	75.02	77.52
Receivables	3548.29	3685.09	3631.02	3533.85	3434.88
Total	3654.12	3794.41	3743.94	3650.54	3555.46
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	360.86	512.25	505.43	492.82	479.99
<b>Annual Transmission Charges</b>					
Depreciation	4651.08	6745.57	6819.92	6819.92	6819.92
Interest on Loan	5034.22	6842.38	6350.71	5764.05	5166.47
Return on Equity	5195.67	7541.86	7626.16	7626.16	7626.16
Interest on Working	360.86	512.25	505.43	492.82	479.99



Particulars	2014-15 (pro-rata from 8.7.2014)	2015-16	2016-17	2017-18	2018-19
Capital					
O & M Expenses	331.77	468.51	483.92	500.12	516.77
<b>Total</b>	<b>15573.59</b>	<b>22110.57</b>	<b>21786.14</b>	<b>21203.08</b>	<b>20609.30</b>

## Asset-II

(₹ in lakh)

Particulars	2014-15 (pro-rata from 1.7.2014)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	6289.96	7817.38	8652.13	8652.13	8652.13
Additional Capitalisation	1527.42	834.75	0.00	0.00	0.00
Closing Gross Block	7817.38	8652.13	8652.13	8652.13	8652.13
Average Gross Block	7053.67	8234.76	8652.13	8652.13	8652.13
Rate of Depreciation	5.13	5.11	5.10	5.10	5.10
Depreciable Value	6348.30	7411.28	7786.92	7786.92	7786.92
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	6348.30	7140.05	7095.17	6653.72	6212.27
Depreciation	271.57	420.51	441.45	441.45	441.45
Cumulative depreciation	271.57	691.74	1133.20	1574.65	2016.10
<b>Interest on Loan</b>					
Gross Normative Loan	4402.97	5472.17	6056.49	6056.49	6056.49
Cumulative Repayment upto Previous Year	0.00	271.57	692.08	1133.54	1574.99
Net Loan-Opening	4402.97	5200.60	5364.41	4922.95	4481.50
Additions	1069.19	584.33	0.00	0.00	0.00
Repayment during the year	271.57	420.51	441.45	441.45	441.45
Net Loan-Closing	5200.60	5364.41	4922.95	4481.50	4040.05
Average Loan	4801.78	5282.50	5143.68	4702.23	4260.78
Weighted Average Rate of Interest on Loan	7.6052	7.6052	7.5858	7.5410	7.4848
Interest	274.14	401.75	390.19	354.60	318.91
<b>Return on Equity</b>					
Opening Equity	1886.99	2345.21	2595.64	2595.64	2595.64
Additions	458.23	250.43	0.00	0.00	0.00
Closing Equity	2345.21	2595.64	2595.64	2595.64	2595.64
Average Equity	2116.10	2470.43	2595.64	2595.64	2595.64
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	311.52	484.46	509.02	509.02	509.02



Particulars	2014-15 (pro-rata from 1.7.2014)	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O & M expenses	12.06	12.46	12.87	13.30	13.74
Maintenance Spares	21.71	22.43	23.17	23.94	24.74
Receivables	220.15	249.10	255.76	250.59	245.44
Total	253.92	283.98	291.80	287.84	283.92
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	25.73	38.34	39.39	38.86	38.33
<b>Annual Transmission Charges</b>					
Depreciation	271.57	420.51	441.45	441.45	441.45
Interest on Loan	274.14	401.75	390.19	354.60	318.91
Return on Equity	311.52	484.46	509.02	509.02	509.02
Interest on Working Capital	25.73	38.34	39.39	38.86	38.33
O & M Expenses	108.64	149.52	154.49	159.62	164.91
<b>Total</b>	<b>991.60</b>	<b>1494.58</b>	<b>1534.54</b>	<b>1503.54</b>	<b>1472.62</b>

### Asset-III

(₹ in lakh)

Particulars	2014-15 (pro-rata from 2.10.2014)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	533.06	634.10	675.29	675.29	675.29
Additional Capitalisation	101.04	41.19	0.00	0.00	0.00
Closing Gross Block	634.10	675.29	675.29	675.29	675.29
Average Gross Block	583.58	654.70	675.29	675.29	675.29
Rate of Depreciation	5.06	5.02	5.01	5.01	5.01
Depreciable Value	525.22	589.23	607.76	607.76	607.76
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	525.22	318.00	303.69	269.85	236.01
Depreciation	14.64	32.84	33.84	33.84	33.84
Cumulative depreciation	14.64	304.07	337.91	371.75	405.59
<b>Interest on Loan</b>					
Gross Normative Loan	373.14	443.87	472.70	472.70	472.70
Cumulative Repayment upto Previous Year	0.00	14.64	47.48	81.32	115.16
Net Loan-Opening	373.14	429.23	425.22	391.38	357.54
Additions	70.73	28.83	0.00	0.00	0.00
Repayment during the year	14.64	32.84	33.84	33.84	33.84
Net Loan-Closing	429.23	425.22	391.38	357.54	323.70





Particulars	2014-15 (pro-rata from 2.10.2014)	2015-16	2016-17	2017-18	2018-19
Average Loan	401.18	427.22	408.30	374.46	340.62
Weighted Average Rate of Interest on Loan	9.4001	9.4001	9.4001	9.3926	9.4073
Interest	18.70	40.16	38.38	35.17	32.04
<b>Return on Equity</b>					
Opening Equity	159.92	190.23	202.59	202.59	202.59
Additions	30.31	12.36	0.00	0.00	0.00
Closing Equity	190.23	202.59	202.59	202.59	202.59
Average Equity	175.07	196.41	202.59	202.59	202.59
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	17.03	38.52	39.73	39.73	39.73
<b>Interest on Working Capital</b>					
O & M expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	38.53	40.93	41.73	41.94	42.18
Total	66.67	70.00	71.77	72.97	74.24
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	4.46	9.45	9.69	9.85	10.02
<b>Annual Transmission Charges</b>					
Depreciation	14.64	32.84	33.84	33.84	33.84
Interest on Loan	18.70	40.16	38.38	35.17	32.04
Return on Equity	17.03	38.52	39.73	39.73	39.73
Interest on Working Capital	4.46	9.45	9.69	9.85	10.02
O & M Expenses	59.80	124.60	128.74	133.02	137.42
<b>Total</b>	<b>114.64</b>	<b>245.57</b>	<b>250.38</b>	<b>251.61</b>	<b>253.05</b>

#### Asset-IV

(₹ in lakh)

Particulars	2014-15 (pro-rata from 1.10.2014)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	527.64	626.03	666.83	666.83	666.83
Additional Capitalisation	98.39	40.80	0.00	0.00	0.00
Closing Gross Block	626.03	666.83	666.83	666.83	666.83
Average Gross Block	576.84	646.43	666.83	666.83	666.83
Rate of Depreciation	5.06	5.01	5.01	5.01	5.01



<b>Particulars</b>	<b>2014-15 (pro-rata from 1.10.2014)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciable Value	519.15	581.79	600.15	600.15	600.15
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	519.15	310.56	296.51	263.12	229.73
Depreciation	14.55	32.40	33.39	33.39	33.39
Cumulative depreciation	14.55	303.63	337.03	370.42	403.81
<b>Interest on Loan</b>					
Gross Normative Loan	369.35	438.22	466.78	466.78	466.78
Cumulative Repayment upto Previous Year	0.00	14.55	46.95	80.35	113.74
Net Loan-Opening	369.35	423.67	419.83	386.44	353.04
Additions	68.87	28.56	0.00	0.00	0.00
Repayment during the year	14.55	32.40	33.39	33.39	33.39
Net Loan-Closing	423.67	419.83	386.44	353.04	319.65
Average Loan	396.51	421.75	403.13	369.74	336.35
Weighted Average Rate of Interest on Loan	8.8424	8.8424	8.8424	8.8422	8.8420
Interest	17.48	37.29	35.65	32.69	29.74
<b>Return on Equity</b>					
Opening Equity	158.29	187.81	200.05	200.05	200.05
Additions	29.52	12.24	0.00	0.00	0.00
Closing Equity	187.81	200.05	200.05	200.05	200.05
Average Equity	173.05	193.93	200.05	200.05	200.05
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	16.92	38.03	39.23	39.23	39.23
<b>Interest on Working Capital</b>					
O & M expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	37.95	40.28	41.10	41.35	41.62
Total	66.09	69.36	71.14	72.39	73.69
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	4.45	9.36	9.60	9.77	9.95
<b>Annual Transmission Charges</b>					
Depreciation	14.55	32.40	33.39	33.39	33.39
Interest on Loan	17.48	37.29	35.65	32.69	29.74
Return on Equity	16.92	38.03	39.23	39.23	39.23
Interest on Working Capital	4.45	9.36	9.60	9.77	9.95
O & M Expenses	60.13	124.60	128.74	133.02	137.42
<b>Total</b>	<b>113.54</b>	<b>241.69</b>	<b>246.61</b>	<b>248.11</b>	<b>249.73</b>

## Asset-V

(₹ in lakh)

Particulars	2014-15 (pro-rata from 2.1.2015)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	2346.93	2609.16	2909.58	2909.58	2909.58
Additional Capitalisation	262.23	300.42	0.00	0.00	0.00
Closing Gross Block	2609.16	2909.58	2909.58	2909.58	2909.58
Average Gross Block	2478.05	2759.37	2909.58	2909.58	2909.58
Rate of Depreciation	5.16	5.15	5.14	5.14	5.14
Depreciable Value	2230.24	2483.43	2618.62	2618.62	2618.62
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	2230.24	2212.20	2205.39	2055.85	1906.31
Depreciation	31.20	142.00	149.54	149.54	149.54
Cumulative depreciation	31.20	413.23	562.77	712.31	861.85
<b>Interest on Loan</b>					
Gross Normative Loan	1642.85	1826.41	2036.71	2036.71	2036.71
Cumulative Repayment upto Previous Year	0.00	31.20	173.21	322.75	472.29
Net Loan-Opening	1642.85	1795.21	1863.50	1713.96	1564.42
Additions	183.56	210.29	0.00	0.00	0.00
Repayment during the year	31.20	142.00	149.54	149.54	149.54
Net Loan-Closing	1795.21	1863.50	1713.96	1564.42	1414.88
Average Loan	1719.03	1829.35	1788.73	1639.19	1489.65
Weighted Average Rate of Interest on Loan	9.0501	9.0501	9.0503	9.0567	9.0763
Interest	37.93	165.56	161.88	148.46	135.20
<b>Return on Equity</b>					
Opening Equity	704.08	782.75	872.87	872.87	872.87
Additions	78.67	90.13	0.00	0.00	0.00
Closing Equity	782.75	872.87	872.87	872.87	872.87
Average Equity	743.41	827.81	872.87	872.87	872.87
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	35.55	162.34	171.17	171.17	171.17
<b>Interest on Working Capital</b>					
O & M expenses	15.58	16.09	16.63	17.18	17.75
Maintenance Spares	28.04	28.97	29.93	30.92	31.95
Receivables	106.08	114.09	117.38	116.25	115.20
Total	149.70	159.15	163.94	164.36	164.90
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Particulars	2014-15 (pro-rata from 2.1.2015)	2015-16	2016-17	2017-18	2018-19
Interest on working capital	4.93	21.49	22.13	22.19	22.26
<b>Annual Transmission Charges</b>					
Depreciation	31.20	142.00	149.54	149.54	149.54
Interest on Loan	37.93	165.56	161.88	148.46	135.20
Return on Equity	35.55	162.34	171.17	171.17	171.17
Interest on Working Capital	4.93	21.49	22.13	22.19	22.26
O & M Expenses	45.58	193.13	199.55	206.16	213.01
<b>Total</b>	<b>155.19</b>	<b>684.52</b>	<b>704.28</b>	<b>697.52</b>	<b>691.19</b>

## Asset-VI

(₹ in lakh)

Particulars	2014-15 (pro-rata from 11.1.2015)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	930.79	1043.17	1163.19	1163.19	1163.19
Additional Capitalisation	112.38	120.02	0.00	0.00	0.00
Closing Gross Block	1043.17	1163.19	1163.19	1163.19	1163.19
Average Gross Block	986.98	1103.18	1163.19	1163.19	1163.19
Rate of Depreciation	5.14	5.12	5.12	5.12	5.12
Depreciable Value	888.28	992.86	1046.87	1046.87	1046.87
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	888.28	721.63	719.12	659.62	600.12
Depreciation	11.12	56.52	59.50	59.50	59.50
Cumulative depreciation	11.12	327.75	387.25	446.75	506.26
<b>Interest on Loan</b>					
Gross Normative Loan	651.55	730.22	814.23	814.23	814.23
Cumulative Repayment upto Previous Year	0.00	11.12	67.64	127.14	186.64
Net Loan-Opening	651.55	719.10	746.60	687.09	627.59
Additions	78.67	84.01	0.00	0.00	0.00
Repayment during the year	11.12	56.52	59.50	59.50	59.50
Net Loan-Closing	719.10	746.60	687.09	627.59	568.09
Average Loan	685.33	732.85	716.85	657.34	597.84
Weighted Average Rate of Interest on Loan	8.8011	8.8011	8.7995	8.8056	8.8273
Interest	13.22	64.50	63.08	57.88	52.77



Particulars	2014-15 (pro-rata from 11.1.2015)	2015-16	2016-17	2017-18	2018-19
<b>Return on Equity</b>					
Opening Equity	279.24	312.95	348.96	348.96	348.96
Additions	33.71	36.01	0.00	0.00	0.00
Closing Equity	312.95	348.96	348.96	348.96	348.96
Average Equity	296.09	330.95	348.96	348.96	348.96
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	12.73	64.90	68.43	68.43	68.43
<b>Interest on Working Capital</b>					
O & M expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	39.44	42.66	43.89	43.38	42.90
Total	53.51	57.19	58.91	58.90	58.93
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	1.58	7.72	7.95	7.95	7.96
<b>Annual Transmission Charges</b>					
Depreciation	11.12	56.52	59.50	59.50	59.50
Interest on Loan	13.22	64.50	63.08	57.88	52.77
Return on Equity	12.73	64.90	68.43	68.43	68.43
Interest on Working Capital	1.58	7.72	7.95	7.95	7.96
O & M Expenses	13.22	62.30	64.37	66.51	68.71
<b>Total</b>	<b>51.87</b>	<b>255.94</b>	<b>263.34</b>	<b>260.28</b>	<b>257.37</b>

## Asset-VII

(₹ in lakh)

Particulars	2014-15 (pro-rata from 7.1.2015)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	732.69	787.92	878.63	878.63	878.63
Additional Capitalisation	55.23	90.71	0.00	0.00	0.00
Closing Gross Block	787.92	878.63	878.63	878.63	878.63
Average Gross Block	760.31	833.28	878.63	878.63	878.63
Rate of Depreciation	5.11	5.09	5.09	5.09	5.09
Depreciable Value	684.27	749.95	790.77	790.77	790.77
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	0	1	2	3	4
Remaining Depreciable Value	684.27	478.72	477.09	432.41	387.72
Depreciation	8.95	42.45	44.68	44.68	44.68



<b>Particulars</b>	<b>2014-15 (pro-rata from 7.1.2015)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Cumulative depreciation	8.95	313.68	358.36	403.04	447.73
<b>Interest on Loan</b>					
Gross Normative Loan	512.88	551.54	615.04	615.04	615.04
Cumulative Repayment upto Previous Year	0.00	8.95	51.40	96.08	140.76
Net Loan-Opening	512.88	542.59	563.64	518.96	474.28
Additions	38.66	63.50	0.00	0.00	0.00
Repayment during the year	8.95	42.45	44.68	44.68	44.68
Net Loan-Closing	542.59	563.64	518.96	474.28	429.60
Average Loan	527.74	553.12	541.30	496.62	451.94
Weighted Average Rate of Interest on Loan	8.7895	8.7895	8.7874	8.7925	8.8129
Interest	10.68	48.62	47.57	43.67	39.83
<b>Return on Equity</b>					
Opening Equity	219.81	236.38	263.59	263.59	263.59
Additions	16.57	27.21	0.00	0.00	0.00
Closing Equity	236.38	263.59	263.59	263.59	263.59
Average Equity	228.09	249.98	263.59	263.59	263.59
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	10.29	49.02	51.69	51.69	51.69
<b>Interest on Working Capital</b>					
O & M expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	32.77	34.84	35.86	35.57	35.31
Total	46.84	49.38	50.88	51.09	51.34
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	1.46	6.67	6.87	6.90	6.93
<b>Annual Transmission Charges</b>					
Depreciation	8.95	42.45	44.68	44.68	44.68
Interest on Loan	10.68	48.62	47.57	43.67	39.83
Return on Equity	10.29	49.02	51.69	51.69	51.69
Interest on Working Capital	1.46	6.67	6.87	6.90	6.93
O & M Expenses	13.88	62.30	64.37	66.51	68.71
<b>Total</b>	<b>45.25</b>	<b>209.05</b>	<b>215.18</b>	<b>213.45</b>	<b>211.84</b>

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

57. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the

filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 52 (1) of the 2014 Tariff Regulations.

### **Licence Fee & RLDC Fees and Charges**

58. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 52 (2) (b) of the 2014 Tariff Regulations for 2014-19 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 52 (2) (a) of the 2014 Tariff Regulations for 2014-19 tariff period.

### **Service Tax**

59. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

### **Sharing of Transmission Charges**

60. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of the 2014 Tariff Regulations.

61. This order disposes of Petition No. 58/TT/2015.

Sd/-  
**(Dr. M.K. Iyer)**  
**Member**

Sd/-  
**(A.S. Bakshi)**  
**Member**

**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19****Asset-I**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XL	9.30	2100.00	0.00	2100.00
BOND XXXIX	9.40	4400.00	0.00	4400.00
SBI (21.03.2012) - CHILD 1	10.25	7700.00	0.00	7700.00
IFC (IFC - A LOAN) (31419-00) CHILD 01	3.23	904.48	0.00	904.48
BOND - XLI - CHILD 1	8.85	3635.00	0.00	3635.00
BOND - XLII	8.80	3300.00	0.00	3300.00
FC - BOND (17.01.2013)	3.88	13915.00	0.00	13915.00
BOND - XLIII - CHILD 1	7.93	8200.00	0.00	8200.00
BOND - XLV	9.65	6612.00	0.00	6612.00
BOND - XLIV - CHILD 1	8.70	11200.00	0.00	11200.00
Proposed loan 2014 -15 (10.25 %) - CHILD	10.25	18520.96	0.00	18520.96
<b>Total</b>		<b>80487.44</b>	<b>0.00</b>	<b>80487.44</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	80487.44	80487.44	80487.44	80487.44	80487.44
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	1177.92	3590.17
<b>Net Loans Opening</b>	<b>80487.44</b>	<b>80487.44</b>	<b>80487.44</b>	<b>79309.52</b>	<b>76897.27</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	1177.92	2412.25	6962.51
<b>Net Closing Loan</b>	<b>80487.44</b>	<b>80487.44</b>	<b>79309.52</b>	<b>76897.27</b>	<b>69934.75</b>
Average Net Loan	80487.44	80487.44	79898.48	78103.39	73416.01
Rate of Interest on Loan (%)	8.3737%	8.3737%	8.3636%	8.3401%	8.2938%
<b>Interest on Loan</b>	<b>6739.81</b>	<b>6739.81</b>	<b>6682.40</b>	<b>6513.88</b>	<b>6089.01</b>



## DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

### Asset-II

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XL	9.30	200.00	0.00	200.00
BOND XXXIX	9.40	100.00	0.00	100.00
SBI (21.03.2012) -	10.25	500.00	0.00	500.00
IFC (IFC - A LOAN) (31419-00)	3.23	606.60	0.00	606.60
BOND - XLI - CHILD 1	8.85	200.00	0.00	200.00
BOND - XLII	8.80	300.00	0.00	300.00
FC - BOND (17.01.2013)	3.88	606.60	0.00	606.60
BOND - XLIII	7.93	300.00	0.00	300.00
BOND - XLV	9.65	185.00	0.00	185.00
BOND - XLIV	8.70	400.00	0.00	400.00
BOND - XLII	8.80	300.00	0.00	300.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	704.77	0.00	704.77
<b>Total</b>		<b>4402.97</b>	<b>0.00</b>	<b>4402.97</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	4402.97	4402.97	4402.97	4402.97	4402.97
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	78.79	198.00
<b>Net Loans Opening</b>	<b>4402.97</b>	<b>4402.97</b>	<b>4402.97</b>	<b>4324.18</b>	<b>4204.97</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	78.79	119.21	282.87
<b>Net Closing Loan</b>	<b>4402.97</b>	<b>4402.97</b>	<b>4324.18</b>	<b>4204.97</b>	<b>3922.10</b>
Average Net Loan	4402.97	4402.97	4363.58	4264.58	4063.54
Rate of Interest on Loan (%)	7.6052%	7.6052%	7.5858%	7.5410%	7.4848%
<b>Interest on Loan</b>	<b>334.86</b>	<b>334.86</b>	<b>331.01</b>	<b>321.59</b>	<b>304.15</b>



## DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

### Asset-III

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND -XLV	9.65	261.00	0.00	261.00
BOND - XLIV - CHILD 1	8.70	90.00	0.00	90.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	22.14	0.00	22.14
<b>Total</b>		<b>373.14</b>	<b>0.00</b>	<b>373.14</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	373.14	373.14	373.14	373.14	373.14
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00	21.75
<b>Net Loans Opening</b>	<b>373.14</b>	<b>373.14</b>	<b>373.14</b>	<b>373.14</b>	<b>351.39</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	0.00	21.75	51.75
<b>Net Closing Loan</b>	<b>373.14</b>	<b>373.14</b>	<b>373.14</b>	<b>351.39</b>	<b>299.64</b>
Average Net Loan	373.14	373.14	373.14	362.27	325.52
Rate of Interest on Loan (%)	9.4001%	9.4001%	9.4001%	9.3926%	9.4073%
<b>Interest on Loan</b>	<b>35.08</b>	<b>35.08</b>	<b>35.08</b>	<b>34.03</b>	<b>30.62</b>



## DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

### Asset-IV

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND - XLI - CHILD 1	8.85	100.00	0.00	100.00
BOND - XLII	8.80	248.00	0.00	248.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	21.35	0.00	21.35
<b>Total</b>		<b>369.35</b>	<b>0.00</b>	<b>369.35</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	369.35	369.35	369.35	369.35	369.35
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	8.33	16.66
<b>Net Loans Opening</b>	<b>369.35</b>	<b>369.35</b>	<b>369.35</b>	<b>361.02</b>	<b>352.69</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	8.33	8.33	8.33
<b>Net Closing Loan</b>	<b>369.35</b>	<b>369.35</b>	<b>361.02</b>	<b>352.69</b>	<b>344.36</b>
Average Net Loan	369.35	369.35	365.19	356.86	348.53
Rate of Interest on Loan (%)	8.8424%	8.8424%	8.8424%	8.8422%	8.8420%
<b>Interest on Loan</b>	<b>32.66</b>	<b>32.66</b>	<b>32.29</b>	<b>31.55</b>	<b>30.82</b>

**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19**

**Asset-V**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND - XLI - CHILD 1	8.85	27.00	0.00	27.00
BOND - XLIII - CHILD 1	7.93	215.00	0.00	215.00
BOND - XLIV - CHILD 1	8.70	173.00	0.00	173.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	1227.85	0.00	1227.85
<b>Total</b>		<b>1642.85</b>	<b>0.00</b>	<b>1642.85</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1642.85	1642.85	1642.85	1642.85	1642.85
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	2.25	22.42
<b>Net Loans Opening</b>	<b>1642.85</b>	<b>1642.85</b>	<b>1642.85</b>	<b>1640.60</b>	<b>1620.43</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	2.25	20.17	77.84
<b>Net Closing Loan</b>	<b>1642.85</b>	<b>1642.85</b>	<b>1640.60</b>	<b>1620.43</b>	<b>1542.59</b>
Average Net Loan	1642.85	1642.85	1641.73	1630.52	1581.51
Rate of Interest on Loan (%)	9.0501%	9.0501%	9.0503%	9.0567%	9.0763%
<b>Interest on Loan</b>	<b>148.68</b>	<b>148.68</b>	<b>148.58</b>	<b>147.67</b>	<b>143.54</b>



## DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19

### Asset-VI

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XL	9.30	50.00	0.00	50.00
BOND - XLIII - CHILD 1	7.93	165.00	0.00	165.00
BOND - XLIV - CHILD 1	8.70	165.00	0.00	165.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	271.55	0.00	271.55
<b>Total</b>		<b>651.55</b>	<b>0.00</b>	<b>651.55</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	651.55	651.55	651.55	651.55	651.55
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	4.17	22.08
<b>Net Loans Opening</b>	<b>651.55</b>	<b>651.55</b>	<b>651.55</b>	<b>647.38</b>	<b>629.47</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	4.17	17.92	72.92
<b>Net Closing Loan</b>	<b>651.55</b>	<b>651.55</b>	<b>647.38</b>	<b>629.47</b>	<b>556.55</b>
Average Net Loan	651.55	651.55	649.47	638.42	593.01
Rate of Interest on Loan (%)	8.8011%	8.8011%	8.7995%	8.8056%	8.8273%
<b>Interest on Loan</b>	<b>57.34</b>	<b>57.34</b>	<b>57.15</b>	<b>56.22</b>	<b>52.35</b>



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19**

**Asset-VII**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2010	Additions during the tariff period	Total
BOND XL	9.30	50.00	0.00	50.00
BOND - XLIII - CHILD 1	7.93	132.00	0.00	132.00
BOND - XLIV - CHILD 1	8.70	135.00	0.00	135.00
PROPOSED LOAN 2014-15 (9.30%)	9.30	195.88	0.00	195.88
<b>Total</b>		<b>512.88</b>	<b>0.00</b>	<b>512.88</b>

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	512.88	512.88	512.88	512.88	512.88
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	4.17	19.34
<b>Net Loans Opening</b>	<b>512.88</b>	<b>512.88</b>	<b>512.88</b>	<b>508.71</b>	<b>493.54</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	4.17	15.17	60.17
<b>Net Closing Loan</b>	<b>512.88</b>	<b>512.88</b>	<b>508.71</b>	<b>493.54</b>	<b>433.37</b>
Average Net Loan	512.88	512.88	510.80	501.13	463.46
Rate of Interest on Loan (%)	8.7895%	8.7895%	8.7874%	8.7925%	8.8129%
<b>Interest on Loan</b>	<b>45.08</b>	<b>45.08</b>	<b>44.89</b>	<b>44.06</b>	<b>40.84</b>