

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 104/TT/2014**

**Coram:**

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

**Date of Hearing : 14.03.2016**

**Date of Order : 29.04.2016**

**In the matter of:**

Determination of transmission tariff for 2019 for Asset 1: 765 KV 3X110 MVAR Bus Reactor at Wardha Sub-Station, Asset 2: 3x110 MVAR Line Reactor for 765 kV D/C Raipur-Wardha Line 1 Ckt#1 charged as Bus Reactor at Wardha Sub-station, Asset 3A: 765 kV D/C Raipur Pooling Station-Wardha line-I Transmission Line, Asset 3B: 765 KV 240 MVAR Switchable Line Reactor of Wardha I bay at Raipur Pooling Station (Charged as a Bus Reactor), Asset 3C: 765 KV 240 MVAR Switchable Line Reactor of Wardha II bay at Raipur Pooling Station (Charged as a Bus Reactor) under "Integration of Pooling Stations in Chhattisgarh with central part of WR for IPP generation projects in Chhattisgarh" in Western Region for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and 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 -122 001 (Haryana).

.....**Petitioner**

**Versus**

1. Madhya Pradesh Power Management Company Ltd.  
Shakti Bhawan, Rampur  
Jabalpur - 482 008
2. Maharashtra State Electricity Distribution Co. Ltd.  
Prakashgad, 4th Floor  
Andheri (East), Mumbai - 400 052



3. Gujarat UrjaVikas Nigam Ltd.  
Sardar Patel VidyutBhawan,  
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  
Chhatisgaarh-492013
8. Madhya Pradesh Audyogik Kendra  
Vikas Nigam (Indore) Ltd.  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452 008

**....Respondents**

The following were present:-

For Petitioner:        Shri S. S. Raju, PGCIL  
                              Shri M. M. Mondal, PGCIL  
                              Shri Jasbir Singh, PGCIL  
                              Shri Rakesh Prasad, PGCIL  
                              Shri AryamanSaxena, PGCIL  
                              Shri Mohd. Mohsin, PGCIL  
                              Shri A. M. Pavgi, PGCIL  
                              Shri P. V. Nath, PGCIL  
                              Shri AmitYadav, PGCIL  
                              Smt ArchanaKumari, PGCIL

For Respondent:        None.



## ORDER

1. The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for determination of tariff for (i) 765 kV 3X110 MVAR Bus Reactor at Wardha Sub-station (referred as “Asset 1”); (ii) 3x110 MVAR Line Reactor for 765 kV D/C Raipur-Wardha Line 1 Ckt#1 charged as Bus Reactor at Wardha Sub-station (referred as “Asset 2”); (iii) 765 kV D/C Raipur Pooling Station-Wardha line-I TL (referred as “Asset 3A”); (iv) 765 KV 240 MVAR Switchable Line Reactor of Wardha I bay at Raipur Pooling Station (Charged as a Bus Reactor) (referred as “Asset 3B”); (V) 765 KV 240 MVAR Switchable Line Reactor of Wardha II bay at Raipur Pooling Station (Charged as a Bus Reactor) (referred as “Asset 3C”); under “Integration of Pooling Stations in Chhattisgarh with central part of WR for IPP generation projects in Chhattisgarh” in Western Region under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from date of commercial operation to 31.3.2019.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.

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

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company, vide Memorandum No. C/CP/Chhattisgarh-IPP dated 5.8.2011 with an estimated cost of ₹139197



lakh including IDC of ₹6712 lakh based on First Quarter of 2011 price level. Further, Revised Cost Estimate (RCE) for the project was accorded by Board of Directors of the petitioner company vide letter dated 9.12.2014 for ₹171573 lakh including an IDC of ₹15942 lakh (Based on June, 2014 price level). The total revised approved cost for the instant assets is ₹167151.82 lakh.

(b) The scope of the instant project is as under:-

**Transmission Line**

i) Raipur Pooling Station-Wardha 765 kV D/C line

**Sub-stations**

i) Bay extensions at 765 KV Raipur Pooling Station and Wardha Sub-station

(c) The petitioner has submitted the revised tariff forms based on actual COD and claimed the transmission charges vide affidavits dated 18.3.2016 and 22.4.2016, the transmission charges claimed by the petitioner are as under:-

**Asset I**

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	72.43	199.69	223.42	236.03	236.03
Interest on Loan	77.63	207.29	220.73	217.67	197.05
Return on Equity	85.87	239.54	269.83	285.85	285.85
Interest on Working Capital	7.35	19.70	21.41	22.17	21.86
O&M Expenses	34.71	87.22	90.12	93.11	96.20
<b>Total</b>	<b>277.99</b>	<b>753.44</b>	<b>825.51</b>	<b>854.83</b>	<b>836.99</b>



**Asset 2**

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	235.27	296.87	330.83	342.56	342.56
Interest on Loan	232.64	282.67	300.65	289.33	260.92
Return on Equity	276.28	352.66	395.91	411.24	411.24
Interest on Working Capital	21.79	26.28	28.63	29.15	28.67
O&M Expenses	84.42	87.22	90.12	93.11	96.20
<b>Total</b>	<b>850.40</b>	<b>1045.70</b>	<b>1146.14</b>	<b>1165.39</b>	<b>1139.59</b>

**Asset 3A**

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	2764.40	7678.57	7893.52	7897.92	7897.92
Interest on Loan	2655.41	7097.67	6903.33	6366.63	5716.35
Return on Equity	3178.69	8873.19	9122.99	9128.44	9128.44
Interest on Working Capital	205.98	566.73	573.69	562.33	548.16
O&M Expenses	145.91	404.91	418.20	432.22	446.62
<b>Total</b>	<b>8950.39</b>	<b>24621.07</b>	<b>24911.73</b>	<b>24387.54</b>	<b>23737.49</b>

**Asset 3B**

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	38.07	93.89	119.38	128.06	128.06
Interest on Loan	44.94	103.96	124.28	123.85	112.93
Return on Equity	46.68	114.34	144.58	154.97	154.97
Interest on Working Capital	8.70	16.82	18.89	19.65	19.74
O&M Expenses	103.48	174.44	180.24	186.22	192.40
<b>Total</b>	<b>241.87</b>	<b>503.45</b>	<b>587.37</b>	<b>612.75</b>	<b>608.10</b>

**Asset 3C**

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
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Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	33.59	88.90	113.86	121.63	121.63
Interest on Loan	39.63	98.29	118.32	117.35	107.11
Return on Equity	41.40	108.52	138.17	147.49	147.49
Interest on Working Capital	8.16	16.44	18.48	19.18	19.29
O&M Expenses	99.85	174.44	180.24	186.22	192.40
<b>Total</b>	<b>222.63</b>	<b>486.59</b>	<b>569.07</b>	<b>591.87</b>	<b>587.92</b>

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

#### Asset 1

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	7.04	7.27	7.51	7.76	8.02
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	112.70	125.57	137.59	142.47	139.50
Total	132.40	145.92	158.62	164.20	161.95
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest (pro-rata)</b>	<b>7.35</b>	<b>19.70</b>	<b>21.41</b>	<b>22.17</b>	<b>21.86</b>

#### Asset 2

(₹ in lakh)

Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	7.04	7.27	7.51	7.76	8.02
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	141.73	174.28	191.02	194.23	189.93
Total	161.43	194.63	212.05	215.96	212.38
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



<b>Interest (pro-rata)</b>	21.79	26.28	28.63	29.15	28.67
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### Asset 3A

(₹ in lakh)

<b>Particulars</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	32.67	33.74	34.85	36.02	37.22
Maintenance Spares	58.80	60.74	62.73	64.83	66.99
Receivables	4007.61	4103.51	4151.96	4064.59	3956.25
<b>Total</b>	<b>4099.08</b>	<b>4197.99</b>	<b>4249.54</b>	<b>4165.44</b>	<b>4060.46</b>
Rate of Interest (%)	<b>13.50</b>	<b>13.50</b>	<b>13.50</b>	<b>13.50</b>	<b>13.50</b>
<b>Interest (pro-rata)</b>	<b>205.98</b>	<b>566.73</b>	<b>573.69</b>	<b>562.33</b>	<b>548.16</b>

### Asset 3B

(₹ in lakh)

<b>Particulars</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	14.07	14.54	15.02	15.52	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	65.77	83.91	97.90	102.13	101.35
<b>Total</b>	<b>105.17</b>	<b>124.62</b>	<b>139.96</b>	<b>145.58</b>	<b>146.24</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest (pro-rata)</b>	<b>8.70</b>	<b>16.82</b>	<b>18.89</b>	<b>19.65</b>	<b>19.74</b>

### Asset 3C

(₹ in lakh)

<b>Particulars</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	14.07	14.54	15.02	15.52	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	62.74	81.10	94.85	98.65	97.99



Total	102.14	121.81	136.91	142.10	142.88
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest (pro-rata)</b>	8.16	16.44	18.48	19.18	19.29

4. The annual fixed charges for the instant assets was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 23.6.2014 based on actual / anticipated COD. The petitioner has submitted the cash IDC, Auditor Certificates, and revised tariff forms vide affidavits dated 22.4.2016 and the same has been considered for the purpose of computation of tariff.

5. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 14.3.2016. None of the respondents have filed their reply. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

#### **Commercial Operation Date ("COD")**

6. The petitioner has claimed the date of the commercial operation of Asset 1, 2, 3A, 3B and 3C as 3.11.2014, 1.4.2014, 17.11.2014, 21.8.2014 and 29.8.2014 respectively.





7. 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”

8. The petitioner has submitted RLDC trial run operation certificate in support of the claim of commercial operation for the Assets 1, 3A, 3B and 3C vide its affidavit dated 22.4.2016. However, the petitioner has not submitted RLDC certificates of successful trial operation for Asset 2. Hence, COD of Asset-2 is approved on provisional basis. Accordingly, the commercial operation date considered for the instant transmission assets to work out the tariff from respective COD to 31.3.2019 as given hereunder:

<b>Assets</b>	<b>Scheduled COD</b>	<b>Actual COD</b>
Asset 1	1.1.2014	3.11.2014
Asset 2	1.1.2014	1.4.2014
Asset 3A	1.1.2014	17.11.2014
Asset 3B	1.1.2014	21.8.2014
Asset 3C	1.1.2014	29.8.2014

### **Capital Cost**

9. The petitioner has initially claimed the following capital cost for the instant transmission assets as on actual/anticipated COD in its petition dated 21.10.2015. Later, the petitioner has split Asset 3 into 3 assets as Asset 3A,



Asset 3B and Asset 3C. Further, RCE and revised forms with auditor's certificates has been submitted by the petitioner vide affidavit dated 18.3.2016 and 22.4.2016 respectively. The petitioner has claimed the following costs:-

(₹ in lakh)

Asset	Approved Apportioned Cost as per FR	Approved Apportioned Cost as per RCE	Capital cost as on COD	Additional capital expenditure			Total	Estimated completion cost as on 31.3.2019
				2014-15	2015-16	2016-17		
Asset 1	3850.81	4961.19	3319.20	372.12	467.98	524.94	1365.04	4684.24
Asset 2	5584.35	7065.13	3823.65	1497.96	915.00	502.48	2915.44	6739.08
Asset 3A	125969.5	149753.31	140122.31	1280.70	8008.44	178.69	9467.83	149590.00
Asset 3B		2752.44	982.72	570.31	646.12	340.47	1556.90	2539.61
Asset 3C		2619.75	881.14	569.13	661.15	305.56	1535.84	2416.98
<b>Total</b>	<b>135404.67</b>	<b>167151.82</b>	<b>149129.02</b>	<b>4290.22</b>	<b>10698.69</b>	<b>1852.14</b>	<b>16841.05</b>	<b>165970.04</b>

10. The project completion cost is within apportioned approved cost as per RCE, Hence there is no cost over-run in instant assets.

11. Regulation 9 (1), 9(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:

- the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- 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;
- 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.”

12. The Capital cost claimed by the petitioner is considered for the purpose of tariff subjected to prudence check as discussed in subsequent paragraph.

### **Time overrun**

13. As per the investment approval, the commissioning schedule of the project was 28 months from the date of investment approval. The investment approval was accorded on 5.8.2011 and hence the commissioning schedule comes to 4.12.2013 (SCOD as 1.1.2014) for all the assets covered in the instant petition. The COD for the instant transmission asset as submitted by the petitioner is 20.4.2015. Hence, there is time over-run of 10 months, 3 months, 10.5 months, 8 months and 8 months for Asset 1, 2, 3A, 3B and 3C respectively.



14. The petitioner has submitted that time overrun was due to delay in forest clearances in 765kV D/C Raipur Pooling Station-Wardha line. Accordingly, the line reactors which were scheduled to be charged with transmission lines, due to delay, could not be charged and considering the voltage problem at Wardha Sub-station, line reactors were charged as Bus reactors at Wardha Sub-station as approved at 24<sup>th</sup> WRPC meeting.

15. The petitioner has submitted that forest proposal has been submitted on 31.5.2014. Stage-I forest clearances has been issued by MOEF on 9.1.2014, further Maharashtra Government forwarded the compliance report of stipulated conditions of stage I clearances with recommendation to MOEF for issuance of Stage-II forest clearances (Compliance Report submitted to MOEF by Nodal officer, Nagpur) on 14.2.2014. MOEF stopped issuing forest clearances on account of model code of conduct on 5.3.2014. Further, MOEF sought election commission clarification vide letter dated 10.3.2014 and 18.3.2014.

16. MOEF issued Stage-II approval on 21.4.2014, Further Govt. of Maharashtra issued notification of diversion of land vide letter dated 7.5.2014. We have considered the submissions of the petitioner with regard to the subject assets. As per the petitioner, due to delay in forest clearances the petitioner was unable to complete work within stipulated timeline. The petitioner has substantiated its claim by letters from MOEF, Govt. Of Maharashtra and Election Commission of India. Hence, the delay on account of forest clearance problem is condoned. In view of the above, the total delay of 10 months, 3 months, 10.5

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months, 8 months and 8 months for the Asset 1, 2, 3A, 3B and 3C respectively from SCOD to actual COD is condoned.

17. The petitioner, with respect to the timelines for completion of 756 KV D/C Transmission Line as provided in Appendix-I of the 2014 Tariff Regulations, the transmission line should be complete within 40 months from the date of investment approval. Hence there is no time overrun with regard to instant assets.

18. The petitioner has claimed additional ROE with regard to complete project within timeline. Hence, In line with Regulation 24(2(i)) petitioner's claim of additional ROE has been allowed.

### **IDC and IEDC**

19. The petitioner vide Auditor's certificates dated 10.3.2016 (for Asset 1, Asset 2 & Asset 3A) and 31.12.2015 (for Asset 3B & Asset 3c) has submitted the IDC and IEDC upto COD for the instant transmission assets as given hereunder:

	(₹ in lakh)	
<b>Asset</b>	<b>IEDC upto COD</b>	<b>IDC upto COD</b>
Asset 1	39.17	500.72
Asset 2	52.53	411.02
Asset 3A	728.26	10546.99
Asset 3B	7.33	86.01
Asset 3C	6.54	77.17

20. The petitioner has further submitted the IDC discharged as below:

(₹ in lakh)



Asset	IDC discharged upto COD	Accrued IDC upto COD (discharged during 2014-15)	Accrued IDC upto COD (to be discharged during 2015-16)	Accrued IDC upto COD (to be discharged during 2016-17)
Asset 1	368.95	131.77	-	-
Asset 2	364.44	46.58	-	-
Asset 3A	10261.51	285.48	-	-
Asset 3B	63.36	18.16	4.51	-
Asset 3C	56.12	16.15	4.90	-

21. For determination of tariff for the 2014-19 tariff period for the instant transmission assets we have considered the capital cost as on COD after adjusting the IDC and IEDC discharged on cash basis.

### **Initial Spares**

22. The petitioner has claimed initial spares for the instant transmission assets as per the following details:

(₹ in lakh)

Asset	Initial Spares	
	Transmission Lines	Sub-Station
Asset 1	-	194.23
Asset 2	-	324.58
Asset 3A	1039.74	68.61
Asset 3B	-	-
Asset 3C	-	-



23. The total initial spares claimed by the petitioner for all five assets are within the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and therefore allowed for capitalisation.

### **Additional Capital Expenditure**

24. The petitioner has proposed additional capitalization towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations. As regards Asset 1, the petitioner has claimed additional capitalization of ₹372.12 lakh ₹467.98 lakh and ₹524.94 for the years 2015-16, 2016-17 and 2017-18 respectively. As regards Asset 2, the petitioner has claimed additional capitalization of ₹1497.96 lakh, ₹915.00 lakh and ₹502.48 lakh for the year 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 3A, the petitioner has claimed additional capitalization of ₹1280.70 lakh, ₹8008.44 and ₹178.69 lakh for the years 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 3B, the petitioner has claimed additional capitalization of ₹570.31 lakh, ₹646.12 and ₹340.47 for the year 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 3C, the petitioner has claimed additional capitalization of ₹569.13 lakh, ₹661.15 lakh and ₹305.56 lakh for the years 2014-15, 2015-16 and 2016-17 respectively. The petitioner has submitted breakup of IDC and IEDC on cash basis from SCOD to COD.

25. It is observed that total estimated completion costs of the subject assets including the additional capitalizations are within the approved revised



apportioned costs. Accordingly, additional capitalization for all the subject assets are allowed under Regulation 14(1)(i) of 2014 Tariff Regulations as below:

(₹ in lakh)

Asset	Approved apportioned cost as per FR	Approved apportioned cost as per RCE	Capital cost as on COD	Additional capital expenditure			Total	Estimated completion cost as on 31.3.2019
				2014-15	2015-16	2016-17		
Asset 1	3850.81	4961.19	3187.43	503.89	467.98	524.94	1496.81	4684.24
Asset 2	5584.35	7065.13	3777.07	1,544.54	915.00	502.47	2,962.01	6739.08
Asset 3A	125969.50	149753	139836.83	1,566.18	8,008.44	178.68	9,753.30	149590.00
Asset 3B		2752.44	960.05	588.47	650.62	340.47	1579.56	2539.61
Asset 3C		2619.75	<b>860.09</b>	585.28	666.05	305.56	1556.89	2416.98
<b>Total</b>	<b>135404.67</b>	<b>167151.82</b>	<b>149129.02</b>	<b>4788.36</b>	<b>10708.09</b>	<b>1852.12</b>	<b>17348.57</b>	<b>165970.04</b>

### Debt:EquityRatio

12. Regulation 19 (1) of the 2014 Tariff Regulations specifies 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:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. 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.”

13. The petitioner has considered debt:equity ratio as 70:30 as on COD for the subject asset. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2014-15, 2015-16 and 2016-17 for all the subject assets. The details of the debt:equity as on the date of COD and





31.3.2019 of each subject asset considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	Particulars	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
		Amount	(%)	Amount	(%)	Amount	(%)
Asset 1	Debt	2231.20	70.00	1047.77	70.00	3278.97	70.00
	Equity	956.23	30.00	449.04	30.00	1405.27	30.00
	<b>Total</b>	<b>3187.43</b>	<b>100.00</b>	<b>1496.81</b>	<b>100.00</b>	<b>4684.24</b>	<b>100.00</b>
Asset 2	Debt	2643.95	70.00	2073.41	70.00	4717.36	70.00
	Equity	1133.12	30.00	888.60	30.00	2021.72	30.00
	<b>Total</b>	<b>3777.07</b>	<b>100.00</b>	<b>2962.01</b>	<b>100.00</b>	<b>6739.08</b>	<b>100.00</b>
Asset 3A	Debt	97885.78	70.00	6827.31	70.00	104713.09	70.00
	Equity	41951.05	30.00	2925.99	30.00	44877.04	30.00
	<b>Total</b>	<b>139836.83</b>	<b>100.00</b>	<b>9753.30</b>	<b>100.00</b>	<b>149590.13</b>	<b>100.00</b>
Asset 3B	Debt	672.04	70.00	1105.69	70.00	1777.73	70.00
	Equity	288.02	30.00	473.87	30.00	761.88	30.00
	<b>Total</b>	<b>960.05</b>	<b>100.00</b>	<b>1579.56</b>	<b>100.00</b>	<b>2539.61</b>	<b>100.00</b>
Asset 3C	Debt	602.06	70.00	1089.82	70.00	1691.89	70.00
	Equity	258.03	30.00	467.07	30.00	725.09	30.00
	<b>Total</b>	<b>860.09</b>	<b>100.00</b>	<b>1556.89</b>	<b>100.00</b>	<b>2416.98</b>	<b>100.00</b>

### Interest on Loan (“IOL”)

14. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-

“(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.”

15. 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 1**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	2231.20	2583.92	2911.51	3278.97	3278.97
Cumulative Repayment upto previous year	0.00	71.84	271.12	494.14	729.75
Net Loan-Opening	2231.20	2512.09	2640.39	2784.83	2549.22
Additions during the year	352.72	327.59	367.46	0.00	0.00
Repayment during the year	71.84	199.28	223.02	235.62	235.62
Net Loan-Closing	2512.09	2640.39	2784.83	2549.22	2313.60
Average Loan	2371.64	2576.24	2712.61	2667.02	2431.41
Rate of Interest (%)	7.9631	8.0489	8.1411	8.1666	8.1115



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Interest	77.10	207.36	220.84	217.81	197.22

### Asset 2

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	2643.95	3725.13	4365.63	4717.36	4717.36
Cumulative Repayment upto previous year	0.00	235.24	532.08	862.86	1205.39
Net Loan-Opening	2643.95	3489.88	3833.55	3854.49	3511.97
Additions during the year	1081.18	640.50	351.73	0.00	0.00
Repayment during the year	235.24	296.83	330.79	342.52	342.52
Net Loan-Closing	3489.88	3833.55	3854.49	3511.97	3169.45
Average Loan	3066.92	3661.72	3844.02	3683.23	3340.71
Rate of Interest (%)	7.5856	7.7200	7.8217	7.8561	7.8111
Interest	232.64	282.68	300.67	289.36	260.95

### Asset 3A

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	97885.78	98982.11	104588.02	104713.09	104713.09
Cumulative Repayment upto previous year	0.00	2746.85	10425.40	18318.91	26216.81
Net Loan-Opening	97885.78	96235.25	94162.62	86394.19	78496.28
Additions during the year	1096.33	5605.91	125.08	0.00	0.00
Repayment during the year	2746.85	7678.54	7893.51	7897.91	7897.91
Net Loan-Closing	96235.25	94162.62	86394.19	78496.28	70598.37
Average Loan	97060.52	95198.93	90278.40	82445.23	74547.33
Rate of Interest (%)	7.3508	7.4573	7.6486	7.7244	7.6704
Interest	2638.86	7099.25	6905.04	6368.39	5718.09

### Asset 3B



(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	672.04	1083.96	1539.40	1777.73	1777.73
Cumulative Repayment upto previous year	0.00	37.96	131.89	251.32	379.43
Net Loan-Opening	672.04	1046.01	1407.51	1526.41	1398.30
Additions during the year	411.93	455.43	238.33	0.00	0.00
Repayment during the year	37.96	93.94	119.42	128.11	128.11
Net Loan-Closing	1046.01	1407.51	1526.41	1398.30	1270.18
Average Loan	859.02	1226.76	1466.96	1462.35	1334.24
Rate of Interest (%)	8.5363	8.4752	8.4718	8.4691	8.4639
<b>Interest</b>	44.80	103.97	124.28	123.85	112.93

### Asset 3C

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	602.06	1011.76	1477.99	1691.89	1691.89
Cumulative Repayment upto previous year	0.00	33.46	122.41	236.32	358.01
Net Loan-Opening	602.06	978.30	1355.59	1455.56	1333.88
Additions during the year	409.70	466.24	213.89	0.00	0.00
Repayment during the year	33.46	88.95	113.91	121.68	121.68
Net Loan-Closing	978.30	1355.59	1455.56	1333.88	1212.19
Average Loan	790.18	1166.94	1405.57	1394.72	1273.04
Rate of Interest (%)	8.4806	8.4240	8.4185	8.4141	8.4135
<b>Interest</b>	39.47	98.30	118.33	117.35	107.11

### Return on Equity ("ROE")

16. Clause (1)& (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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:

xxx

xxx”

**“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.”

17. The petitioner has claimed ROE at the rate of 15.50% as per the above said Regulation. In addition to that the petitioner has also claimed additional ROE at the rate of 0.50% with regard to timely commissioning of the scheme as per 2014 Tariff Regulations. 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.



18. 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.

19. We have considered the submissions made by the petitioner. With reference to Regulations 24 and Appendix I of 2014 tariff Regulations, the instant asset has been completed in time and qualifies for additional RoE.

20. 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 1**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	956.23	1107.40	1247.79	1405.27	1405.27
Additional Capitalization	151.17	140.39	157.48	0.00	0.00



Closing Equity	1107.40	1247.79	1405.27	1405.27	1405.27
Average Equity	1031.81	1177.59	1326.53	1405.27	1405.27
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	20.243	20.341	20.341	20.341	20.341
<b>Return on Equity (Pre Tax)</b>	208.87	239.54	269.83	285.85	285.85

## Asset 2

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	1133.12	1596.48	1870.98	2021.72	2021.72
Additional Capitalization	463.36	274.50	150.74	0.00	0.00
Closing Equity	1596.48	1870.98	2021.72	2021.72	2021.72
Average Equity	1364.80	1733.73	1946.35	2021.72	2021.72
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	20.243	20.341	20.341	20.341	20.341
<b>Return on Equity (Pre Tax)</b>	276.28	352.66	395.91	411.24	411.24



**Asset 3A**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	41951.05	42420.90	44823.44	44877.04	44877.04
Additional Capitalization	469.85	2402.53	53.60	0.00	0.00
Closing Equity	42420.90	44823.44	44877.04	44877.04	44877.04
Average Equity	42185.98	43622.17	44850.24	44877.04	44877.04
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	20.243	20.341	20.341	20.341	20.341
<b>Return on Equity (Pre Tax)</b>	8539.73	8873.24	9123.04	9128.49	9128.49

**Asset 3B**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	288.02	464.56	659.74	761.88	761.88
Additional Capitalization	176.54	195.19	102.14	0.00	0.00
Closing Equity	464.56	659.74	761.88	761.88	761.88
Average Equity	376.29	562.15	710.81	761.88	761.88
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00





Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	20.243	20.341	20.341	20.341	20.341
<b>Return on Equity (Pre Tax)</b>	76.17	114.35	144.59	154.98	154.98

### Asset 3C

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	258.03	433.61	633.43	725.09	725.09
Additional Capitalization	175.58	199.82	91.67	0.00	0.00
Closing Equity	433.61	633.43	725.09	725.09	725.09
Average Equity	345.82	533.52	679.26	725.09	725.09
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
Tax rate for the year (%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (Pre Tax) (%)	20.243	20.341	20.341	20.341	20.341
<b>Return on Equity (Pre Tax)</b>	70.00	108.52	138.17	147.49	147.49



## **Depreciation**

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

### **"27. Depreciation:**

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis"

"(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

22. 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 pumpedStorage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years"



23. The weighted average useful life of the asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

#### Asset I

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross block	3187.43	3691.32	4159.30	4684.24	4684.24
Additional Capitalization	503.89	467.98	524.94	0.00	0.00
Closing Gross block	3691.32	4159.30	4684.24	4684.24	4684.24
Average Gross block	3439.38	3925.31	4421.77	4684.24	4684.24
Rate of Depreciation (%)	5.12	5.08	5.04	5.03	5.03
Depreciable Value	3095.44	3532.78	3979.59	4215.82	4215.82
Weighted Balance Useful life of the assets	25	24	23	22	21
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Remaining Depreciable Value	3095.44	3356.80	3604.34	3617.54	3381.93
Depreciation during the year	175.97	199.28	223.02	235.62	235.62
Cumulative depreciation	71.84	271.12	494.14	729.75	965.37

#### Asset 2

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross block	3777.07	5321.61	6236.61	6739.08	6739.08
Additional Capitalization	1544.54	915.00	502.47	0.00	0.00
Closing Gross block	5321.61	6236.61	6739.08	6739.08	6739.08
Average Gross block	4549.34	5779.11	6487.85	6739.08	6739.08
Rate of Depreciation (%)	5.17	5.14	5.10	5.08	5.08



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciable Value	4094.41	5201.20	5839.06	6065.17	6065.17
Weighted Balance Useful life of the assets	25	24	23	22	21
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Remaining Depreciable Value	4094.41	4965.96	5306.98	5202.31	4859.79
Depreciation during the year	235.24	296.83	330.79	342.52	342.52
Cumulative depreciation	235.24	532.08	862.86	1205.39	1547.91

### Asset 3A

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross block	139836.83	141403.01	149411.45	149590.13	149590.13
Additional Capitalization	1566.18	8008.44	178.68	0.00	0.00
Closing Gross block	141403.01	149411.45	149590.13	149590.13	149590.13
Average Gross block	140619.92	145407.23	149500.79	149590.13	149590.13
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	126557.93	130866.51	134550.71	134631.12	134631.12
Weighted Balance Useful life of the assets	35	34	33	32	31
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Remaining Depreciable Value	126557.93	123439.83	119445.48	111632.38	103734.48
Depreciation during the year	7426.68	7678.54	7893.51	7897.91	7897.91
Cumulative depreciation	2746.85	10425.40	18318.91	26216.81	34114.72



**Asset 3B****(₹ in lakh)**

<b>Particulars</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross block	960.05	1548.52	2199.14	2539.61	2539.61
Additional Capitalization	588.47	650.62	340.47	0.00	0.00
Closing Gross block	1548.52	2199.14	2539.61	2539.61	2539.61
Average Gross block	1254.29	1873.83	2369.38	2539.61	2539.61
Rate of Depreciation (%)	4.95	5.01	5.04	5.04	5.04
Depreciable Value	1128.86	1686.45	2132.44	2285.65	2285.65
Weighted Balance Useful life of the assets	25	24	23	22	21
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Remaining Depreciable Value	1128.86	1624.32	1976.38	2010.16	1882.05
Depreciation during the year	62.12	93.94	119.42	128.11	128.11
Cumulative depreciation	37.96	131.89	251.32	379.43	507.54

**Asset 3C****(₹ in lakh)**

<b>Particulars</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross block	860.09	1445.37	2111.42	2416.98	2416.98
Additional Capitalization	585.28	666.05	305.56	0.00	0.00
Closing Gross block	1445.37	2111.42	2416.98	2416.98	2416.98
Average Gross block	1152.73	1778.40	2264.20	2416.98	2416.98



<b>Particulars</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Rate of Depreciation (%)	4.93	5.00	5.03	5.03	5.03
Depreciable Value	1037.46	1600.56	2037.78	2175.28	2175.28
Weighted Balance Useful life of the assets	25	24	23	22	21
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Remaining Depreciable Value	1037.46	1543.75	1892.03	1915.61	1793.93
Depreciation during the year	56.81	88.95	113.91	121.68	121.68
Cumulative depreciation	33.46	122.41	236.32	358.01	479.69

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

26. The petitioner has submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

27. We have considered the submissions of the petitioner and the respondents. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.



28. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

(₹ in lakh)

<b>Asset 1</b>					
<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>					
765kV	34.46	87.22	90.12	93.11	96.20
No. of Bays	1	1	1	1	1
<b>Total</b>	<b>34.46</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

(₹ in lakh)

<b>Asset 2</b>					
<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>					
765kV	84.42	87.22	90.12	93.11	96.20
No. of Bays	1	1	1	1	1
<b>Total</b>	<b>84.42</b>	<b>87.22</b>	<b>90.12</b>	<b>93.11</b>	<b>96.20</b>

(₹in lakh)

<b>Asset 3A</b>					
<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/kM)</b>					
D/C (Bundle Conductor- 4 sub-c)	0.39	1.10	1.133	1.171	1.21
Length	369.11	369.11	369.11	369.11	369.11
<b>Total</b>	<b>144.98</b>	<b>404.91</b>	<b>418.20</b>	<b>432.22</b>	<b>446.62</b>

<b>Asset 3B</b>					
<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>					



<b>Asset 3B</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
765kV	103.15	174.44	180.24	186.22	192.40
No. of bays	2	2	2	2	2
<b>Total</b>	<b>103.15</b>	<b>174.44</b>	<b>180.24</b>	<b>186.22</b>	<b>192.40</b>

(₹in lakh)

<b>Asset 3C</b>					
<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>					
765kV	99.45	174.44	180.24	186.22	192.40
No of Bays	1	1	1	1	1
<b>Total</b>	<b>99.45</b>	<b>174.44</b>	<b>180.24</b>	<b>186.22</b>	<b>192.40</b>

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

28. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

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

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

#### **(ii) Maintenance Spares**





Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

**(iii) O & M Expenses**

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

**(iv) Rate of interest on working capital**

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).



29. The interest on working capital allowed is shown in the table below:-

**Asset 1**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	7.03	7.27	7.51	7.76	8.01
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	112.67	125.51	137.54	142.42	139.46
Total	132.36	145.86	158.56	164.15	161.90
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	17.87	19.69	21.41	22.16	21.86

**Asset 2**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	7.03	7.27	7.51	7.76	8.01
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	141.73	174.28	191.02	194.23	189.93
Total	161.42	194.63	212.04	215.95	212.37
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	21.79	26.27	28.63	29.15	28.67

**Asset 3A**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	32.65	33.73	34.84	36.00	37.20
Maintenance Spares	58.80	60.74	62.73	64.83	66.99
Receivables	4007.75	4103.78	4152.25	4064.90	3956.55
Total	4099.20	4198.25	4249.82	4165.74	4060.75
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	553.39	566.76	573.73	562.37	548.20

**Asset 3B**

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	32.65	33.73	34.84	36.00	37.20



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	58.80	60.74	62.73	64.83	66.99
Receivables	4007.75	4103.78	4152.25	4064.90	3956.55
Total	4099.20	4198.25	4249.82	4165.74	4060.75
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	553.39	566.76	573.73	562.37	548.20

### Asset 3C

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	14.06	14.53	15.01	15.51	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	62.74	81.11	94.86	98.66	98.00
Total	102.13	121.81	136.91	142.10	142.88
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	13.79	16.44	18.48	19.18	19.29

### Annual Transmission Charges

30. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

### Asset 1

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	3187.43	3691.32	4159.30	4684.24	4684.24
Additional Capitalization	503.89	467.98	524.94	0.00	0.00
Closing Gross Block	3691.32	4159.30	4684.24	4684.24	4684.24
Average Gross Block	3439.38	3925.31	4421.77	4684.24	4684.24
Rate of Depreciation (%)	5.12	5.08	5.04	5.03	5.03
Depreciable Value	3095.44	3532.78	3979.59	4215.82	4215.82
Elapsed Life of the assets at beginning of the year	25	24	23	22	21



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Weighted Balance Useful life of the assets	0	1	2	3	4
Remaining Depreciable Value	3095.44	3356.80	3604.34	3617.54	3381.93
Depreciation during the year	175.97	199.28	223.02	235.62	235.62
Cumulative depreciation	71.84	271.12	494.14	729.75	965.37
<b>Interest on Loan</b>					
Gross Normative Loan	2231.20	2583.92	2911.51	3278.97	3278.97
Cumulative Repayment upto Previous Year	0.00	71.84	271.12	494.14	729.75
Net Loan-Opening	2231.20	2512.09	2640.39	2784.83	2549.22
Additions	352.72	327.59	367.46	0.00	0.00
Repayment during the year	71.84	199.28	223.02	235.62	235.62
Net Loan-Closing	2512.09	2640.39	2784.83	2549.22	2313.60
Average Loan	2371.64	2576.24	2712.61	2667.02	2431.41
Weighted Average Rate of Interest on Loan (%)	7.9631	8.0489	8.1411	8.1666	8.1115
Interest	77.10	207.36	220.84	217.81	197.22
<b>Return on Equity</b>					
Opening Equity	956.23	1107.40	1247.79	1405.27	1405.27
Additions	151.17	140.39	157.48	0.00	0.00
Closing Equity	1107.40	1247.79	1405.27	1405.27	1405.27
Average Equity	1031.81	1177.59	1326.53	1405.27	1405.27
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000
MAT Rate for the year 2013-14(%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.341
Return on Equity (Pre Tax)	208.87	239.54	269.83	285.85	285.85
<b>Interest on Working Capital</b>					
O & M Expenses	7.03	7.27	7.51	7.76	8.01
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	112.67	125.51	137.54	142.42	139.46
Total	132.36	145.86	158.56	164.15	161.90
Interest Rate (%)	13.50	13.50	13.50	13.50	13.50
Interest	17.87	19.69	21.41	22.16	21.86



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Annual Transmission Charges</b>					
Depreciation	71.84	199.28	223.02	235.62	235.62
Interest on Loan	77.10	207.36	220.84	217.81	197.22
Return on Equity	85.26	239.54	269.83	285.85	285.85
Interest on Working Capital	7.29	19.69	21.41	22.16	21.86
O & M Expenses	34.46	87.22	90.12	93.11	96.20
<b>Total</b>	<b>275.95</b>	<b>753.09</b>	<b>825.21</b>	<b>854.54</b>	<b>836.74</b>

## Asset 2

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	3777.07	5321.61	6236.61	6739.08	6739.08
Additional Capitalization	1544.54	915.00	502.47	0.00	0.00
Closing Gross Block	5321.61	6236.61	6739.08	6739.08	6739.08
Average Gross Block	4549.34	5779.11	6487.85	6739.08	6739.08
Rate of Depreciation (%)	5.17	5.14	5.10	5.08	5.08
Depreciable Value	4094.41	5201.20	5839.06	6065.17	6065.17
Elapsed Life of the assets at beginning of the year	25	24	23	22	21
Weighted Balance Useful life of the assets	0	1	2	3	4
Remaining Depreciable Value	4094.41	4965.96	5306.98	5202.31	4859.79
Depreciation during the year	235.24	296.83	330.79	342.52	342.52
Cumulative depreciation	235.24	532.08	862.86	1205.39	1547.91
<b>Interest on Loan</b>					
Gross Normative Loan	2643.95	3725.13	4365.63	4717.36	4717.36
Cumulative Repayment upto Previous Year	0.00	235.24	532.08	862.86	1205.39
Net Loan-Opening	2643.95	3489.88	3833.55	3854.49	3511.97
Additions	1081.18	640.50	351.73	0.00	0.00
Repayment during the year	235.24	296.83	330.79	342.52	342.52
Net Loan-Closing	3489.88	3833.55	3854.49	3511.97	3169.45
Average Loan	3066.92	3661.72	3844.02	3683.23	3340.71
Weighted Average Rate of Interest on Loan (%)	7.5856	7.7200	7.8217	7.8561	7.8111
Interest	232.64	282.68	300.67	289.36	260.95



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Return on Equity</b>					
Opening Equity	1133.12	1596.48	1870.98	2021.72	2021.72
Additions	463.36	274.50	150.74	0.00	0.00
Closing Equity	1596.48	1870.98	2021.72	2021.72	2021.72
Average Equity	1364.80	1733.73	1946.35	2021.72	2021.72
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000
MAT Rate for the year 2013-14(%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.341
Return on Equity (Pre Tax)	276.28	352.66	395.91	411.24	411.24
<b>Interest on Working Capital</b>					
O & M Expenses	7.03	7.27	7.51	7.76	8.01
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
Receivables	141.73	174.28	191.02	194.23	189.93
Total	161.42	194.63	212.04	215.95	212.37
Interest Rate (%)	13.50	13.50	13.50	13.50	13.50
Interest	21.79	26.27	28.63	29.15	28.67
<b>Annual Transmission Charges</b>					
Depreciation	235.24	296.83	330.79	342.52	342.52
Interest on Loan	232.64	282.68	300.67	289.36	260.95
Return on Equity	276.28	352.66	395.91	411.24	411.24
Interest on Working Capital	21.79	26.27	28.63	29.15	28.67
O & M Expenses	84.42	87.22	90.12	93.11	96.20
<b>Total</b>	<b>850.38</b>	<b>1045.67</b>	<b>1146.11</b>	<b>1165.38</b>	<b>1139.58</b>

### Asset 3A

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	139836.83	141403.01	149411.45	149590.13	149590.13
Additional Capitalization	1566.18	8008.44	178.68	0.00	0.00
Closing Gross Block	141403.01	149411.45	149590.13	149590.13	149590.13



<b>Particulars</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Average Gross Block	140619.92	145407.23	149500.79	149590.13	149590.13
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	126557.93	130866.51	134550.71	134631.12	134631.12
Elapsed Life of the assets at beginning of the year	35	34	33	32	31
Weighted Balance Useful life of the assets	0	1	2	3	4
Remaining Depreciable Value	126557.93	123439.83	119445.48	111632.38	103734.48
Depreciation during the year	7426.68	7678.54	7893.51	7897.91	7897.91
Cumulative depreciation	2746.85	10425.40	18318.91	26216.81	34114.72
<b>Interest on Loan</b>					
Gross Normative Loan	97885.78	98982.11	104588.02	104713.09	104713.09
Cumulative Repayment upto Previous Year	0.00	2746.85	10425.40	18318.91	26216.81
Net Loan-Opening	97885.78	96235.25	94162.62	86394.19	78496.28
Additions	1096.33	5605.91	125.08	0.00	0.00
Repayment during the year	2746.85	7678.54	7893.51	7897.91	7897.91
Net Loan-Closing	96235.25	94162.62	86394.19	78496.28	70598.37
Average Loan	97060.52	95198.93	90278.40	82445.23	74547.33
Weighted Average Rate of Interest on Loan (%)	7.3508%	7.4573%	7.6486%	7.7244%	7.6704%
Interest	2638.86	7099.25	6905.04	6368.39	5718.09
<b>Return on Equity</b>					
Opening Equity	41951.05	42420.90	44823.44	44877.04	44877.04
Additions	469.85	2402.53	53.60	0.00	0.00
Closing Equity	42420.90	44823.44	44877.04	44877.04	44877.04
Average Equity	42185.98	43622.17	44850.24	44877.04	44877.04
Return on Equity (Base Rate) (%)	16.000%	16.000%	16.000%	16.000%	16.000%
MAT Rate for the year 2013-14(%)	20.961%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (%)	20.243%	20.341%	20.341%	20.341%	20.341%
Return on Equity (Pre Tax)	8539.73	8873.24	9123.04	9128.49	9128.49
<b>Interest on Working Capital</b>					



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
O & M Expenses	32.65	33.73	34.84	36.00	37.20
Maintenance Spares	58.80	60.74	62.73	64.83	66.99
Receivables	4007.75	4103.78	4152.25	4064.90	3956.55
Total	4099.20	4198.25	4249.82	4165.74	4060.75
Interest Rate (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	553.39	566.76	573.73	562.37	548.20
<b>Annual Transmission Charges</b>					
Depreciation	2746.85	7678.54	7893.51	7897.91	7897.91
Interest on Loan	2638.86	7099.25	6905.04	6368.39	5718.09
Return on Equity	3158.53	8873.24	9123.04	9128.49	9128.49
Interest on Working Capital	204.68	566.76	573.73	562.37	548.20
O & M Expenses	144.98	404.91	418.20	432.22	446.62
<b>Total</b>	<b>8893.91</b>	<b>24622.71</b>	<b>24913.51</b>	<b>24389.39</b>	<b>23739.30</b>

### Asset 3B

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	960.05	1548.52	2199.14	2539.61	2539.61
Additional Capitalization	588.47	650.62	340.47	0.00	0.00
Closing Gross Block	1548.52	2199.14	2539.61	2539.61	2539.61
Average Gross Block	1254.29	1873.83	2369.38	2539.61	2539.61
Rate of Depreciation (%)	4.95%	5.01%	5.04%	5.04%	5.04%
Depreciable Value	1128.86	1686.45	2132.44	2285.65	2285.65
Elapsed Life of the assets at beginning of the year	25	24	23	22	21
Weighted Balance Useful life of the assets	0	1	2	3	4
Remaining Depreciable Value	1128.86	1624.32	1976.38	2010.16	1882.05
Depreciation during the year	62.12	93.94	119.42	128.11	128.11
Cumulative depreciation	37.96	131.89	251.32	379.43	507.54
<b>Interest on Loan</b>					
Gross Normative Loan	672.04	1083.96	1539.40	1777.73	1777.73
Cumulative Repayment	0.00	37.96	131.89	251.32	379.43





<b>Particulars</b>	<b>2014-15 (pro-rata)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
upto Previous Year					
Net Loan-Opening	672.04	1046.01	1407.51	1526.41	1398.30
Additions	411.93	455.43	238.33	0.00	0.00
Repayment during the year	37.96	93.94	119.42	128.11	128.11
Net Loan-Closing	1046.01	1407.51	1526.41	1398.30	1270.18
Average Loan	859.02	1226.76	1466.96	1462.35	1334.24
Weighted Average Rate of Interest on Loan (%)	8.5363%	8.4752%	8.4718%	8.4691%	8.4639%
Interest	44.80	103.97	124.28	123.85	112.93
<b>Return on Equity</b>					
Opening Equity	288.02	464.56	659.74	761.88	761.88
Additions	176.54	195.19	102.14	0.00	0.00
Closing Equity	464.56	659.74	761.88	761.88	761.88
Average Equity	376.29	562.15	710.81	761.88	761.88
Return on Equity (Base Rate) (%)	16.000%	16.000%	16.000%	16.000%	16.000%
MAT Rate for the year 2013-14(%)	20.961%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (%)	20.243%	20.341%	20.341%	20.341%	20.341%
Return on Equity (Pre Tax)	76.17	114.35	144.59	154.98	154.98
<b>Interest on Working Capital</b>					
O & M Expenses	14.06	14.53	15.01	15.51	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	65.78	83.92	97.90	102.14	101.36
Total	105.17	124.62	139.95	145.58	146.25
Interest Rate (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	14.20	16.82	18.89	19.65	19.74
<b>Annual Transmission Charges</b>					
Depreciation	37.96	93.94	119.42	128.11	128.11
Interest on Loan	44.80	103.97	124.28	123.85	112.93
Return on Equity	46.54	114.35	144.59	154.98	154.98
Interest on Working Capital	8.67	16.82	18.89	19.65	19.74
O & M Expenses	103.15	174.44	180.24	186.22	192.40
<b>Total</b>	<b>241.12</b>	<b>503.52</b>	<b>587.42</b>	<b>612.81</b>	<b>608.16</b>



### Asset 3C

(₹ in lakh)

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	860.09	1445.37	2111.42	2416.98	2416.98
Additional Capitalization	585.28	666.05	305.56	0.00	0.00
Closing Gross Block	1445.37	2111.42	2416.98	2416.98	2416.98
Average Gross Block	1152.73	1778.40	2264.20	2416.98	2416.98
Rate of Depreciation (%)	4.93	5.00	5.03	5.03	5.03
Depreciable Value	1037.46	1600.56	2037.78	2175.28	2175.28
Elapsed Life of the assets at beginning of the year	25	24	23	22	21
Weighted Balance Useful life of the assets	0	1	2	3	4
Remaining Depreciable Value	1037.46	1543.75	1892.03	1915.61	1793.93
Depreciation during the year	56.81	88.95	113.91	121.68	121.68
Cumulative depreciation	33.46	122.41	236.32	358.01	479.69
<b>Interest on Loan</b>					
Gross Normative Loan	602.06	1011.76	1477.99	1691.89	1691.89
Cumulative Repayment upto Previous Year	0.00	33.46	122.41	236.32	358.01
Net Loan-Opening	602.06	978.30	1355.59	1455.56	1333.88
Additions	409.70	466.24	213.89	0.00	0.00
Repayment during the year	33.46	88.95	113.91	121.68	121.68
Net Loan-Closing	978.30	1355.59	1455.56	1333.88	1212.19
Average Loan	790.18	1166.94	1405.57	1394.72	1273.04
Weighted Average Rate of Interest on Loan (%)	8.4806	8.4240	8.4185	8.4141	8.4135
Interest	39.47	98.30	118.33	117.35	107.11
<b>Return on Equity</b>					
Opening Equity	258.03	433.61	633.43	725.09	725.09
Additions	175.58	199.82	91.67	0.00	0.00
Closing Equity	433.61	633.43	725.09	725.09	725.09
Average Equity	345.82	533.52	679.26	725.09	725.09
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
MAT Rate for the year 2013-14(%)	20.961	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.341
Return on Equity (Pre Tax)	70.00	108.52	138.17	147.49	147.49
<b>Interest on Working Capital</b>					
O & M Expenses	14.06	14.53	15.01	15.51	16.03
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
Receivables	62.74	81.11	94.86	98.66	98.00
Total	102.13	121.81	136.91	142.10	142.88
Interest Rate (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	13.79	16.44	18.48	19.18	19.29
<b>Annual Transmission Charges</b>					
Depreciation	33.46	88.95	113.91	121.68	121.68
Interest on Loan	39.47	98.30	118.33	117.35	107.11
Return on Equity	41.24	108.52	138.17	147.49	147.49
Interest on Working Capital	8.12	16.44	18.48	19.18	19.29
O & M Expenses	99.45	174.44	180.24	186.22	192.40
<b>Total</b>	<b>221.75</b>	<b>486.66</b>	<b>569.13</b>	<b>591.93</b>	<b>587.97</b>

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

31. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.



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

32. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

33. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer of Service Tax is premature.

### **Sharing of Transmission Charges**

34. 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.

35. This order disposes of Petition No. 104/TT/2015.

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

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



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19****Asset 1**

<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on COD</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXXVI- Loan 1-	9.35	2.00	0.00	2.00
BOND XXXIX - Loan 2-	9.25	1550.00	0.00	1550.00
BOND XXXIX - Loan 3-	9.40	100.00	0.00	100.00
SBI (21.3.2012)- ADDCAP FOR 2014-15 loan 10 (Accrual IDC)	10.25	0.00	49.92	49.92
SBI (21.3.2012)-Loan 4-	10.25	50.08	0.00	50.08
BOND XL-ADDCAP FOR 2014-15 Loan 11 (Accrual IDC)-	9.30	0.00	10.00	10.00
BOND - XLI - ADDCAP FOR 2014-15 Loan 12 (Accrual IDC)-	8.85	0.00	4.00	4.00
BOND XLII - ADDCAP FOR 2014-15 Loan 13 (Accrual IDC)-	8.80	0.00	9.00	9.00
IFC (IFC - A Loan) (31419-00)- Loan 5-62.06	3.23	53.12	0.00	53.12
IFC (IFC - B Loan) (31419-01)- Loan 6-62.06	2.38	132.81	0.00	132.81
IFC (ICFF Loan) (31419-02) - Loan 7-62.06	3.23	55.17	0.00	55.17
FC BOND (17.1.2013) - Loan 8-62.06	4.10	288.02	0.00	288.02
BOND XLIII ADDCAP FOR 2014-15 ADD CAP-Loan 14- (Accrual IDC)	7.93	0.00	5.00	5.00
BOND XLIV ADDCAP FOR 2014-15-Loan 15- (Accrual IDC)	8.70	0.00	5.00	5.00
BOND XLIV ADDCAP FOR 2014-15 Loan 16- (Accrual IDC)	9.65	0.00	5.00	5.00
BOND XLIII ADDCAP FOR 2014-15-Loan 17- (Accrual IDC)	10.25	0.00	4.32	4.32
BOND XLVIII-ADDCAP FOR 2014-15 Loan 9-	8.20	0.00	260.48	260.48
<b>Total</b>		<b>2231.20</b>	<b>352.72</b>	<b>2583.92</b>



## Asset 2

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVI- Loan 1-	9.35	3.00	0.00	3.00
BOND XXXVII - Loan 2-	9.25	1600.00	0.00	1600.00
BOND XXXIX - Loan 3-	9.40	61.00	0.00	61.00
SBI (21.3.2012)- Loan 4	10.25	72.00	0.00	72.00
BOND XL-Loan 5-	9.30	50.00	0.00	50.00
BOND XLI - Loan 10-	8.85	10.00	0.00	10.00
BOND- XLII -Loan 11-	8.80	10.00	0.00	10.00
IFC (IFC-A Loan) (31419-00)- Loan 12- 60.61	3.23	82.98	0.00	82.98
IFC (IFC - B Loan) (31419-01)- Loan 13-60.61	2.38	208.98	0.00	208.98
IFC (IFC - B Loan) (31419-02)- Loan 14- 60.61	3.23	86.98	0.00	86.98
FC- BOND (17.1.2013)- Loan 15- 60.61	4.10	453.00	0.00	453.00
BOND - XLIII - ADDCAP FOR 2014-15 Loan 19 (Accrual IDC)	7.93	0.00	3.99	3.99
BOND XLIII- Loan 16-	7.93	6.01	0.00	6.01
BOND XLIV -ADDCAP FOR 2014-15 Loan 20 (Accrual IDC)-	8.70	0.00	15.00	15.00
BOND XLV - ADDCAP FOR 2014-15 Loan 21 (Accrual IDC)-	9.65	0.00	13.62	13.62
BOND XLVIII ADDCAP FOR 2014-15-Loan 17	8.20	0.00	188.12	188.12
BOND XLIX-ADDCAP FOR 2014-15 Loan 18-	8.15	0.00	860.39	860.39
<b>Total</b>		<b>2643.95</b>	<b>1081.12</b>	<b>3725.07</b>



**Asset 3A**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII- Loan 1-	9.25	519.84	0.00	519.84
BOND XXXVIX - Loan 2-	9.40	5509.24	0.00	5509.24
SBI (21.03.2012)-Loan 3	10.25	5870.28	0.00	5870.28
BOND XL - Loan 4-	9.30	20120.10	0.00	20120.10
BOND XLI-Loan 5 -	8.85	2779.29	0.00	2779.29
BOND XLII-Loan 5-	8.80	792.69	0.00	792.69
IFC (IFC - A LOAN) (31419-00)- Loan 7- 62.24	3.23	3153.70	0.00	3153.70
IFC (IFC - B LOAN) (31419) Loan 8- 62.24	2.38	7911.95	0.00	7911.95
IFC (IFC-A Loan) (31419-02)- Loan 8- 62.24	3.23	3296.85	0.00	3296.85
FC -Bond (17.01.2013) - Loan 9-62.24	4.10	17856.00	0.00	17856.00
BOND - XLIII Loan 10-	7.93	6471.54	0.00	6471.54
BOND - XLIV- Loan 11	8.70	8139.66	0.00	8139.66
BOND XLV - Loan 12-	9.65	8654.24	2713.22	11367.46
SBI (2014-15) - Loan 13-	10.25	2472.47	1442.38	3914.85
BOND XLVI- Loan 14-	9.30	2537.90	1.00	2538.90
BOND XLVII- ADDCAP FOR 2014-15 Loan 17 (Accrual IDC)-	8.93	0.00	5.00	5.00
BOND XLVII- Loan 15-	8.93	1800.03	16.65	1816.68
BOND XLVIII- ADDCAP FOR 2014-15 Loan 16-	8.20	0.00	150.00	150.00
<b>Total</b>		<b>97885.78</b>	<b>4328.25</b>	<b>102214.03</b>

**Asset 3B**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVI- Loan 1-	9.35	72.50	0.00	72.50
BOND XLI -Loan 2-	8.85	100.00	0.00	100.00
BOND - XLII-Loan 3-	8.80	100.00	0.00	100.00



Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XLIII - Loan 4-	7.93	200.00	0.00	200.00
BOND XLIV- Loan 5	8.70	175.00	0.00	175.00
SBI (2014-15)- ADDCAP FOR 2014-15 Loan 8 (Accrual IDC)-	10.25	0.00	12.71	12.71
SBI (2014-15)- Loan 6-	10.25	24.55	0.00	24.55
BOND XLIX-ADDCAP FOR 2014-15 Loan 7-	8.15	0.00	399.22	399.22
<b>Total</b>		<b>672.05</b>	<b>411.93</b>	<b>1083.98</b>

### Asset 3C

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVI- Loan 1-	9.35	27.95	0.00	27.95
BOND XXXVII - Loan 2-	9.25	42.05	0.00	42.05
BOND - XLI- Loan 3	8.85	100.00	0.00	100.00
BOND XLII - Loan 4-	8.80	100.00	0.00	100.00
BOND XLIII-Loan 5 -	7.93	275.00	0.00	275.00
BOND XLV-Loan 6-	9.65	32.00	0.00	32.00
SBI (2014-15)- ADDCAP For 2014-15 Loan 9 (Accrual IDC)	10.25	0.00	11.30	11.30
SBI (2014-15)- Loan 7	10.25	25.06	0.00	25.06
BOND XLIX- ADDCAP FOR 2014-15 Loan 8-	8.15	0.00	398.39	398.39
<b>Total</b>		<b>602.06</b>	<b>409.69</b>	<b>1011.75</b>





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

**Asset 1**

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2231.20	2583.92	2583.92	2583.92	2583.92
Cumulative Repayment of loan upto previous year	0.00	0.00	195.57	401.52	552.74
Net Loan Opening	2231.20	2583.92	2388.35	2182.40	2031.18
Additions during the year	352.72	0.00	0.00	0.00	0.00
Repayment during the year	0.00	195.57	205.95	151.22	152.89
Net Loan Closing	2583.92	2388.35	2182.40	2031.18	1878.29
Average Loan	2407.56	2486.14	2285.38	2106.79	1954.74
Rate of Interest (%)	7.9631%	8.0489%	8.1411%	8.1666%	8.1115%
Interest on Loan	191.72	200.11	186.05	172.05	158.56

**Asset 2**

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2643.95	3725.07	3725.07	3725.07	3725.07
Cumulative Repayment of loan upto previous year	0.00	0.00	237.82	487.39	651.44
Net Loan Opening	2643.95	3725.07	3487.25	3237.68	3073.63
Additions during the year	1081.12	0.00	0.00	0.00	0.00
Repayment during the year	0.00	237.82	249.57	164.05	169.05
Net Loan Closing	3725.07	3487.25	3237.68	3073.63	2904.58
Average Loan	3184.51	3606.16	3362.47	3155.66	2989.11
Rate of Interest (%)	7.5856	7.7200	7.8217	7.8561	7.8111
Interest	241.56	278.40	263.00	247.91	233.48

**Asset 3A**

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	97885.78	98982.10	98982.10	98982.10	98982.10
Cumulative Repayment of loan upto previous year	0.00	0.00	3999.29	10440.52	14831.83
Net Loan Opening	97885.78	98982.10	94982.81	88541.58	84150.27



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Additions during the year	1096.32	0.00	0.00	0.00	0.00
Repayment during the year	0.00	3999.29	6441.23	4391.31	7276.18
Net Loan Closing	98982.10	94982.81	88541.58	84150.27	76874.09
Average Loan	98433.94	96982.46	91762.20	86345.93	80512.18
Rate of Interest (%)	7.3508	7.4573	7.6486	7.7244	7.6704
Interest	7235.66	7232.25	7018.53	6669.70	6175.61

### Asset 3B

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	672.05	1083.98	1083.98	1083.98	1083.98
Cumulative Repayment of loan upto previous year	0.00	0.00	0.00	13.16	42.99
Net Loan Opening	672.05	1083.98	1083.98	1070.82	1040.99
Additions during the year	411.93	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	13.16	29.83	88.16
Net Loan Closing	1083.98	1083.98	1070.82	1040.99	952.83
Average Loan	878.02	1083.98	1077.40	1055.91	996.91
Rate of Interest	8.5363	8.4752	8.4718	8.4691	8.4639
Interest	74.95	91.87	91.27	89.43	84.38

### Asset 3C

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	602.06	1011.75	1011.75	1011.75	1011.75
Cumulative Repayment of loan upto previous year	0.00	0.00	3.50	17.19	56.47
Net Loan Opening	602.06	1011.75	1008.25	994.56	955.28
Additions during the year	409.69	0.00	0.00	0.00	0.00
Repayment during the year	0.00	3.50	13.69	39.28	39.28
Net Loan Closing	1011.75	1008.25	994.56	955.28	916.00
Average Loan	806.91	1010.00	1001.41	974.92	935.64
Rate of Interest	8.4806	8.4240	8.4185	8.4141	8.4135
Interest	68.43	85.08	84.30	82.03	78.72

