

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 52/TT/2016**

**Coram:**

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

**Date of Hearing : 13.06.2016  
Date of Order : 27.06.2016**

**In the matter of:**

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for **Asset-I:** 400/220 kV, 315 MVA ICT –I at Fatehpur Extension, **Asset-II:** 400/220 kV, 315 MVA ICT –II at Fatehpur Extension, **Asset-III:** LILO of Singrauli Kanpur at Fatehpur, **Asset-IV:** LILO of Fatehpur (UPPCL)-Kanpur(UPPCL) 220kV D/C line at Fatehpur, **Asset-V:** LILO of Allahabad-Kanpur 400 kV S/C line at Fatehpur, **Asset-VI:** 765 kV Sasaram- Fatehpur S/C Transmission line, **Asset-VII:** LILO of Ckt- I 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays, **Asset-VIII:** LILO of Ckt- II 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays, **Asset-IX:** 315 MVA 400/220 kV ICT-I at Gaya Extension, **Asset-X:** 315 MVA 400/220 kV ICT-II at Gaya Extension, **Asset-XI:** 765 kV S/C Fatehpur-Agra Transmission Line under supplementary transmission system under DVC and Maithon Right Bank Project in Northern Region 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 -122 001 (Haryana).

.....**Petitioner**

**Versus**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.  
Vidyut Bhawan, Vidyut Marg,  
Jaipur-302 005



2. Ajmer Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan,  
Kumar House Complex Building II  
Shimla-171004
6. Punjab State Electricity Board,  
Thermal Shed T1 A, Near 22 Phatak  
Patiala-147001
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6  
Panchkula (Haryana) 134 109
8. Power Development Department  
Govt. of Jammu & Kashmir  
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Ltd.  
Shakti Bhawan, 14, Ashok Marg  
Lucknow- 226001
10. Delhi Transco Ltd.  
Shakti Sadan, Kotla Road  
New Delhi- 110002
11. BSES Yamuna Power Ltd.  
BSES Bhawan, Nehru Place  
New Delhi
12. BSES Rajdhani Power Ltd.



BSES Bhawan, Nehru Place  
New Delhi

13. North Delhi Power Ltd.  
Power Trading & Load Dispatch Group  
Cennet Building  
Pitampura, New Delhi-110034
14. Chandigarh Administration  
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road  
Dehradun
16. North Central Railway  
Allahabad
17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg  
New Delhi-110002

.....Respondents

The following were present:-

For Petitioner:                      Shri M. M. Mondal, PGCIL  
   Shri S. S. Raju, PGCIL  
   Shri Rakesh Prasad, PGCIL  
   Shri Jasbir Singh, PGCIL

For Respondent:                      Shri Manoj Kumar Sharma, Advocate, Rajasthan  
   Discoms  
   Shri Pradeep Misra, Advocate, Rajasthan Discoms

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for truing up of capital expenditure of 400/220 kV, 315 MVA ICT-I at Fatehpur Extension (referred as "**Asset-I**"), 400/220 kV, 315 MVA ICT –II at



Fatehpur Extension (referred as “**Asset-II**”), LILO of Singrauli Kanpur at Fatehpur, **Asset-IV**: LILO of Fatehpur (UPPCL)-Kanpur(UPPCL) 220 kV D/C line at Fatehpur (referred as “**Asset-III**”), LILO of Allahabad-Kanpur 400 kV S/C line at Fatehpur (referred as “**Asset-V**”), 765 kV Sasaram- Fatehpur S/C Transmission line (referred as “**Asset-VI**”), LILO of Ckt- I 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays (referred as “**Asset-VII**”), LILO of Ckt- II 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays (referred as “**Asset-VIII**”), 315 MVA 400/220 kV ICT-I at Gaya Extension (referred as “**Asset-IX**”), 315 MVA 400/220 kV ICT-II at Gaya Extension (referred as “**Asset-X**”), 765 kV S/C Fatehpur-Agra Transmission Line (referred as “**Asset-XI**”) under supplementary transmission system under DVC and Maithon Right Bank Project in Northern Region (hereinafter referred as “transmission assets”) under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on actual capital expenditure for the period from COD of respective assets to 31.3.2014 and 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 1.4.2014 to 31.3.2019 for Combined Assets.

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



3. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of 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. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No.15 has filed its reply vide affidavit dated 25.4.2016. The hearing in this matter was held on 13.6.2016. The petitioner was directed to file additional information which has been submitted by the petitioner vide affidavit dated 21.6.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

(a) The investment approval (IA) for the Project was accorded by the Board of Directors of the petitioner vide Memorandum No. C/CP/Suppl. for DVC and Maithon RB project dated 29.8.2008 at an estimated cost of for ₹236095 lakh, including IDC of ₹23593 lakh (based on 1<sup>st</sup> Quarter, 2008 price level). The petitioner submitted, the revised Investment Approval at an estimated cost of ₹258090 lakh including IDC of ₹24441 lakh (based on December, 2012 price level) approved in the 286<sup>th</sup> meeting of the Board held on 1.5.2013, vide affidavit dated 4.10.2013. The details of the assets along with COD and approved apportioned cost are as under:-



Assets name		Actual date of commercial operation	Approved apporportioned cost (₹ in lakh) as per RCE
Asset-I	400/220 kV, 315 MVA ICT –I at Fatehpur Extension	1.1.2012	2506.66
Asset-II	400/220 kV, 315 MVA ICT –II at Fatehpur Extension	1.1.2012	2506.66
Asset-III	LILO of Singrauli Kanpur at Fatehpur	1.2.2012	3783.36
Asset-IV	LILO of Fatehpur (UPPCL)- Kanpur(UPPCL) 220kV D/C line at Fatehpur	1.1.2012	1604.20
Asset-V	LILO of Allahabad-Kanpur 400 kV S/C line at Fatehpur (COD: 1.1.2012)	1.1.2012	2958.76
Asset-VI	765 kV Sasaram- Fatehpur S/C Transmission line	1.4.2012	56387.04
Asset-VII	LILO of Ckt- I 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays	1.2.2012	1512.26
Asset-VIII	LILO of Ckt- II 220 kV D/C Dehri Bodhgaya at Gaya Sub-station and associated 220 kV line bays	1.4.2012	1512.26
Asset-IX	315 MVA 400/220 kV ICT-I at Gaya Extension	1.2.2012	2450.52
Asset-X	315 MVA 400/220 kV ICT-II at Gaya Extension	1.2.2012	2450.52
Asset- XI	765 kV S/C Fatehpur-Agra Transmission Line	1.6.2012	51093.40
<b>Total</b>			<b>128765.64</b>

(b) The tariff from respective COD to 31.3.2014 was determined for Assets-I to X vide order dated 22.1.2015 in Petition No. 70/TT/2012 and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI in accordance with the 2009 Tariff Regulations. The tariff allowed for the 2009-14 tariff period is as under:-

Particulars	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012					
	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Depreciation	26.48	117.82	127.33	26.48	117.82	127.33
Interest on Loan	32.20	136.72	137.04	32.20	136.72	137.04
Return on Equity	26.30	117.02	126.47	26.30	117.02	126.47
Interest on WC	2.89	12.47	13.14	2.89	12.47	13.14
O&M Expenses	24.89	105.26	111.28	24.89	105.26	111.28
<b>Total</b>	<b>112.77</b>	<b>489.28</b>	<b>515.26</b>	<b>112.77</b>	<b>489.28</b>	<b>515.26</b>



(₹ in lakh)

Particulars	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012					
	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Depreciation	12.88	129.37	159.23	13.73	72.50	76.80
Interest on Loan	15.62	147.10	168.60	16.55	83.54	81.81
Return on Equity	12.74	128.21	157.86	13.56	71.55	75.74
Interest on WC	1.88	14.75	16.75	0.92	4.72	4.87
O&M Expenses	21.93	139.11	147.06	0.86	3.64	3.85
<b>Total</b>	<b>65.04</b>	<b>558.55</b>	<b>649.50</b>	<b>45.62</b>	<b>235.96</b>	<b>243.06</b>

(₹ in lakh)

Particulars	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012							
	Asset-V			Asset-VI		Asset-VII		
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Depreciation	25.35	147.38	156.47	2776.43	2873.34	9.54	71.82	76.07
Interest on Loan	31.22	174.03	171.00	3157.76	3018.02	11.34	82.25	80.89
Return on Equity	25.12	146.08	155.05	2757.66	2853.91	9.42	70.90	75.06
Interest on WC	1.76	9.90	10.23	211.88	213.78	1.29	8.84	9.23
O&M Expenses	2.76	11.69	12.35	213.87	225.99	14.30	90.72	95.91
<b>Total</b>	<b>86.22</b>	<b>489.07</b>	<b>505.10</b>	<b>9117.60</b>	<b>9185.05</b>	<b>45.88</b>	<b>324.54</b>	<b>337.16</b>

(₹ in lakh)

Particulars	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012				
	Asset-VIII		Asset-IX		
	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Depreciation	74.73	78.99	13.20	86.44	90.24
Interest on Loan	86.97	85.08	15.50	97.42	94.04
Return on Equity	73.76	77.92	13.11	85.86	89.63
Interest on WC	10.40	10.84	1.63	10.43	10.81
O&M Expenses	90.18	95.33	16.60	105.26	111.28
<b>Total</b>	<b>336.05</b>	<b>348.15</b>	<b>60.03</b>	<b>385.41</b>	<b>396.00</b>

(₹ in lakh)

Particulars	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012			10.02.2015 in Petition No. 200/TT/2012	
	Asset-X			Asset-XI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	15.44	95.99	96.94	1874.50	2287.58
Interest on Loan	18.93	112.50	104.70	2194.15	2492.35
Return on Equity	15.34	95.35	96.28	1861.82	2272.11
Interest on WC	1.79	11.12	11.29	146.31	174.75
O&M Expenses	16.60	105.26	111.28	177.38	224.92
<b>Total</b>	<b>68.09</b>	<b>420.21</b>	<b>420.48</b>	<b>6254.16</b>	<b>7451.71</b>



(c) We have considered the capital cost as on COD for the assets for determination of tariff in order dated 22.1.2015 in Petition No. 70/TT/2012 for Assets-I to X and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI as given below:-

**(₹ in lakh)**

Particulars	Capital cost considered before adjustment of IDC and IEDC & initial spares as on COD	Disallowed			Capital cost as on COD allowed for tariff calculation
		IDC	IEDC	Excess initial spares as on COD	
		(A)	(B)	(C)	
Asset-I	1961.32	0.00	0.00	0.00	1961.32
Asset-II	1961.32	0.00	0.00	0.00	1961.32
Asset-III	679.23	0.00	0.00	0.00	679.23
Asset-IV	784.29	0.00	0.00	0.00	784.29
Asset-V	1217.06	0.00	0.00	0.00	1217.06
Asset-VI	52033.49	0.00	0.00	0.00	52033.49
Asset-VII	858.54	0.00	0.00	0.00	858.54
Asset-VIII	1351.01	0.00	0.00	0.00	1351.01
Asset-IX	1379.90	0.00	0.00	0.00	1379.9
Asset-X	1708.82	0.00	0.00	0.00	1708.82
Asset- XI	43622.80	1505.18	0.00	0.00	42117.62
Total	107557.78	1505.18	0.00	0.00	106052.60

(d) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.

#### **TRUING UP OF ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14**

5. The truing up of tariff for the 2009-14 tariff period for the assets has been determined as discussed below.





## **Capital Cost**

6. The petitioner has submitted the actual capital expenditure incurred upto COD and submitted Auditor's Certificate in support of claim of the capital cost as on COD and additional capitalization claimed from COD to 31.3.2014. This capital cost includes the undischarged liabilities accrued upto COD. In accordance with Regulation 7(1) read with Regulation 6 of the 2009 Tariff Regulations, the actual capital cost incurred for the subject assets has been considered as below:-

<b>(₹ in lakh)</b>	
Particulars	Capital cost considered before adjustment of IDC and IEDC & initial spares as on COD
Asset-I	1195.36
Asset-II	1195.06
Asset-III	679.24
Asset-IV	923.68
Asset-V	1814.87
Asset-VI	52403.49
Asset-VII	840.54
Asset-VIII	1315.01
Asset-IX	1379.90
Asset-X	1623.82
Asset- XI	43172.81
<b>Total</b>	<b>106543.78</b>

7. The petitioner has claimed the capital cost as on COD after adjustment of IDC, IEDC and initial spares for the purpose of tariff as given below:-

<b>(₹ in lakh)</b>	
Particulars	Capital cost as on COD as claimed by the petitioner
Asset-I	1167.37
Asset-II	1167.37
Asset-III	657.64



Particulars	Capital cost as on COD as claimed by the petitioner
Asset-IV	899.87
Asset-V	1760.96
Asset-VI	51037.08
Asset-VII	808.20
Asset-VIII	1278.36
Asset-IX	1332.24
Asset-X	1578.87
Asset- XI	42144.90
<b>Total</b>	<b>103832.86</b>

8. Clause (1) of Regulation 7 of the 2009 Tariff Regulations provides that:-

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

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

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

9. The capital cost is worked out in accordance with the 2009 Tariff Regulations as discussed in the subsequent paragraphs.

### **Cost Over-run**

10. The details of approved apportioned as per RCE and the estimated completion cost are as given below:-



(₹ in lakh)

Asset	COD	Approved apportioned cost as per RCE	Estimated completion cost an on 31.3.2019
Asset-I	1.1.2012	2506.66	1832.23
Asset-II	1.1.2012	2506.66	1831.93
Asset-III	1.2.2012	3783.36	3430.42
Asset-IV	1.1.2012	1604.20	1540.78
Asset-V	1.1.2012	2958.76	2610.40
Asset-VI	1.4.2012	56387.04	56087.37
Asset-VII	1.2.2012	1512.26	1458.71
Asset-VIII	1.4.2012	1512.26	1495.41
Asset-IX	1.2.2012	2450.52	1654.99
Asset-X	1.2.2012	2450.52	1798.45
Asset- XI	1.6.2012	51093.40	45924.08
<b>Total</b>		<b>128765.64</b>	<b>119664.77</b>

The completion cost of the instant assets is within the approved apportioned costs given in the RCE and hence there is no cost over-run.

### Time over-run

12. As per the investment approval dated 29.8.2008, the instant assets were scheduled to be commissioned within 48 months from the date of investment approval. Accordingly, the schedule completion date works out to 1.9.2012.

Against this, the actual commissioning of assets are as given below:-

Assets name	SCOD as per IA dated 29.8.2008	Date of commercial operation	Delay in months
Asset-I	1.9.2012	1.1.2012	No delay
Asset-II		1.1.2012	
Asset-III		1.2.2012	
Asset-IV		1.1.2012	
Asset-V		1.1.2012	
Asset-VI		1.4.2012	
Asset-VII		1.2.2012	
Asset-VIII		1.4.2012	
Asset-IX		1.2.2012	
Asset-X		1.2.2012	
Asset- XI		1.6.2012	



13. The assets have been put under commercial operation on or prior to 1.9.2012 and are within the schedule date of commercial operation.

### **IDC and IEDC**

14. The petitioner in its original petition has submitted the break-up of IDC and IDC for only Asset-XI on cash basis as given in the table below. The petitioner was directed to submit the break-up of IDC and IEDC for Asset-I to X on cash basis. In response, the petitioner in its affidavit dated 21.6.2016 has submitted the breakup of IDC and IEDC for Assets-I to X on cash basis as follows:-

**(₹ in lakh)**

Particulars	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V	Asset-VI
IDC as per Certificate	43.54	43.24	69.85	42.25	135.26	6435.39
IDC discharged upto COD	15.55	15.55	48.25	18.44	81.35	5068.98
IDC discharged in 2011-12	0.00	0.00	2.33	0.00	0.00	0.00
IDC discharged in 2012-13	27.99	27.69	19.27	23.81	53.91	1366.41

**(₹ in lakh)**

Particulars	Asset-VII	Asset-VIII	Asset-IX	Asset-X	Asset-XI
IDC as per Certificate	61.06	88.42	126.76	72.38	4180.40
IDC discharged upto COD	28.72	51.77	79.10	27.44	3152.49
IDC discharged in 2011-12	19.46	0.00	18.30	5.26	0.00
IDC discharged in 2012-13	12.88	36.65	29.36	39.69	1027.91

Further, the petitioner has submitted that IEDC for all the assets are discharged upto COD of the respective assets.

15. The IDC and IEDC discharged upto COD have been considered for the purpose of capitalization.

### **Initial Spares**

16. The petitioner has claimed initial spares for the assets as given below:-



**(₹ in lakh)**

Assets name	Initial Spares	
	Sub-station	Transmission line
Asset-I	5.19	0.00
Asset-II	5.19	0.00
Asset-III	1.82	0.00
Asset-IV	21.58	0.00
Asset-V	1.82	0.00
Asset-VI	0.00	0.00
Asset-VII	14.75	3.75
Asset-VIII	14.75	3.75
Asset-IX	17.74	0.00
Asset-X	17.74	0.00
Asset- XI	0.00	0.00
<b>Total</b>	<b>100.58</b>	<b>7.50</b>

17. In this regard, the petitioner has submitted that the initial spares after merging the assets covered in the instant petition is within the specified limit in accordance with Regulation 8 of the 2009 Tariff Regulations. Accordingly, the petitioner has prayed to allow such initial spare for determination of tariff.

18. The petitioner has submitted actual capital expenditure for true up of tariff during 2009-14 tariff period as per the 2009 Tariff Regulations and also submitted the estimated capital expenditure for determination of tariff during 2014-19 tariff period in accordance with the 2014 Tariff Regulations. The initial spares have been worked out by considering the additional capital expenditure upto cut-off date by considering the additional capitalization beyond 31.3.2014. The petitioner has claimed the additional capitalization for 2014-19 tariff period in the instant petition and as the cut-off date falls beyond the 31.3.2014, we have



considered the additional capitalization as shown below to work out the capital cost upto cut-off date.

19. Regulation 8 of the 2009 tariff Regulations provides that:-

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

- (iv) Transmission system
  - (a) Transmission line - 0.75%
  - (b) Transmission Sub-station - 2.5%
  - (c) Series Compensation devices and HVDC Station - 3.5%.....”

20. The details of the initial spares claimed and allowed for the assets covered in the instant petition are given in the table below:-

(₹ in lakh)

Description	Cut-off date	Project cost pertaining to transmission line/Sub-station as on cut-off date	Initial spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulation	Initial spares worked out	Initial Spares allowed	Excess initial spares claimed
		(a)	(b)	(c)	(d)=*((a-b)*c)/(100-c)%		(e)=(d)-(b)
<b>Sub-station (including PLCC)</b>							
Asset-I	31.3.2015	1832.23	5.19	2.50%	46.85	5.19	0.00
Asset-II	31.3.2015	1831.93	5.19	2.50%	46.84	5.19	0.00
Asset-III	31.3.2015	596.58	1.82	2.50%	15.25	1.82	0.00
Asset-IV	31.3.2015	965.03	21.58	2.50%	24.19	21.58	0.00
Asset-V	31.3.2015	496.58	1.82	2.50%	12.69	1.82	0.00
Asset-VII	31.3.2015	691.82	14.75	2.50%	17.36	14.75	0.00
Asset-VIII	31.3.2015	697.11	14.75	2.50%	17.50	14.75	0.00
Asset-IX	31.3.2015	1654.99	17.74	2.50%	41.98	17.74	0.00
Asset-X	31.3.2015	1798.45	17.74	2.50%	45.66	17.74	0.00
<b>Transmission Line</b>							
Asset-VII	31.3.2015	766.89	3.75	0.75%	5.77	3.75	0.00
Asset-VIII	31.3.2015	798.30	3.75	0.75%	6.00	3.75	0.00



The capital cost upto cut-off date has been worked out by considering the additional capital expenditure during 2014-16 which is beyond 31.3.2014 as set forth in subsequent paragraphs.

21. The capital cost as on COD has been worked out after adjusting discharged IDC and excess initial spares as under:-

(₹ in lakh)

Assets	Capital cost as on COD as per Auditor's Certificate	IDC discharged in 2011-12 and 2012-13	Capital cost after adjusting IDC and IDC discharged during 2012-14	Excess initial spares	Capital cost of individual assets considered as on COD
	(a)	(b)	(c)=(a)-(b)	(d)	(e)=(c)-(d)
Asset-I	1195.36	27.99	1167.37	0.00	1167.37
Asset-II	1195.06	27.69	1167.37	0.00	1167.37
Asset-III	679.24	21.6	657.64	0.00	657.64
Asset-IV	923.68	23.81	899.87	0.00	899.87
Asset-V	1814.87	53.91	1760.96	0.00	1760.96
Asset-VI	52403.49	1366.41	51037.08	0.00	51037.08
Asset-VII	840.54	32.34	808.20	0.00	808.20
Asset-VIII	1315.01	36.65	1278.36	0.00	1278.36
Asset-IX	1379.90	47.66	1332.24	0.00	1332.24
Asset-X	1623.82	44.95	1578.87	0.00	1578.87
Asset- XI	43172.81	1027.91	42144.90	0.00	42144.90
	<b>106543.78</b>	<b>2710.92</b>	<b>103832.86</b>	<b>0.00</b>	<b>103832.86</b>

### Additional Capital Expenditure

22. The petitioner has claimed additional capitalization for tariff period from COD to 31.3.2014 for all the assets on account of balance and retention payment towards building and civil works, sub-station, transmission line and PLCC within cut-off date under Regulation 9(1)(i) of the 2009 Tariff Regulations.



23. UPPCL has submitted that the petitioner should provide justification for increase in additional capitalization by ₹30.35 lakh in 2013-14 in case of Asset-I and ₹646.96 lakh in 2013-14 in case of Asset-XI. UPPCL has further submitted that the petitioner should provide justification for increase in capital cost as on COD by ₹139.39 lakh in case of Asset-IV and ₹995.19 lakh in case of Asset-XI. In response, the petitioner, vide its affidavit dated 5.5.2016, has submitted that the additional capitalization claimed in order dated 22.1.2015 in Petition No. 70/TT/2012 for Assets-I to X and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI was on estimated basis whereas the capital cost claimed in the instant petition is on actual basis duly audited by the Auditor. Hence, there is a change in the cost at the time of truing up of the assets.

24. Clause (1), sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

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

(i) Undischarged liabilities...;”

25. The total capital cost (including actual additional capitalization) is within the overall approved cost of the assets. The claim of additional capitalization falls within the meaning of Regulation 9(1) of the 2009 Tariff Regulations and hence, we have allowed additional capitalization as claimed by the petitioner under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-





(₹ in lakh)

Name of the asset	Particulars	Appor-tioned approved cost	Capital cost as on COD#	Additional Capital Expenditure (2009-14)				Capital cost as on 31.3.2014
				2011-12##	2012-13###	2013-14	Total	
Asset-I	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	2506.66	1961.32	89.90	360.32	0.00	450.22	2411.54
	Claimed in Petition	2506.66	1167.37	309.89	86.97	183.39	580.25	1747.62
	Allowed in this order	2506.66	1167.37 (1195.36-27.99)	309.89	86.97 (58.98+27.99)	183.39	580.25	1747.62
Asset-II	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	2506.66	1961.32	89.90	360.32	0.00	450.22	2411.54
	Claimed in Petition	2506.66	1167.37	309.89	86.67	183.39	579.95	1747.32
	Allowed in this order	2506.66	1167.37 (1195.06-27.69)	309.89	86.67 (58.98+27.69)	183.39	579.95	1747.32
Asset-III	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	3783.36	679.23	1557.05	416.85	713.84	2687.74	3366.97
	Claimed in Petition	3783.36	657.64	1559.38	436.12	744.20	2739.70	3397.34
	Allowed in this order	3783.36	657.64 (679.24-2.33-19.27)	1559.38 (1557.05+2.33)	436.12 (416.85+19.27)	744.20	2739.70	3397.34
Asset-IV	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1604.20	784.29	500.35	159.50	0.00	659.85	1444.14
	Claimed in Petition	1604.20	899.87	383.21	156.05	41.58	580.84	1480.71
	Allowed in this order	1604.20	899.87 (923.68-23.81-19.27)	383.21	156.05 (132.24+23.81)	41.58	580.84	1480.71
Asset-V	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	2958.76	1217.06	1397.27	342.23	0.00	1739.50	2956.56
	Claimed in Petition	2958.76	1760.96	540.79	91.21	181.13	813.13	2574.09



Name of the asset	Particulars	Appor-tioned approved cost	Capital cost as on COD <sup>#</sup>	Additional Capital Expenditure (2009-14)				Capital cost as on 31.3.2014
				2011-12 <sup>##</sup>	2012-13 <sup>###</sup>	2013-14	Total	
	Allowed in this order	2958.76	1760.96 (1814.87-53.91)	540.79	91.22 (37.31+53.91)	181.13	813.14	2574.10
Asset-VI	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	56387.04	52033.49	0.00	1100.83	2570.05	3670.88	55704.37
	Claimed in Petition	56387.04	51037.08	0.00	2467.24	484.81	2952.05	53989.13
	Allowed in this order	56387.04	51037.08 (52403.49 - 1366.41)	0.00	2467.24 (1100.83 +1366.41)	484.81	2952.05	53989.13
Asset-VII	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1512.26	858.54	437.78	111.41	46.99	596.18	1454.72
	Claimed in Petition	1512.26	808.20	457.24	124.29	32.50	614.03	1422.23
	Allowed in this order	1512.26	808.20 (840.54 - 19.46-12.88)	457.24 (437.78 +19.46)	124.29 (111.41+12.88)	32.50	614.03	1422.23
Asset-VIII	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1512.26	1351.01	0.00	111.42	46.99	158.41	1509.42
	Claimed in Petition	1512.26	1278.36	0.00	148.07	32.50	180.57	1458.93
	Allowed in this order	1512.26	1278.36 (1315.01 - 36.65)	0.00	148.07 (111.42 +36.65)	32.50	180.57	1458.93
Asset-IX	Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	2450.52	1379.90	239.41	35.68	108.24	383.33	1763.23
	Claimed in Petition	2450.52	1332.24	257.71	65.04	0.00	322.75	1654.99
	Allowed in this order	2450.52	1332.24 (1379.90 - 18.30-29.36)	257.71 (239.41 +18.30)	65.04 (35.68 +29.36)	0.00	322.75	1654.99
Asset-X	Approved in order dated 22.1.2015 in	2450.52	1708.82	91.41	35.68	0.00	127.09	1835.91



Name of the asset	Particulars	Appor-tioned approved cost	Capital cost as on COD <sup>#</sup>	Additional Capital Expenditure (2009-14)				Capital cost as on 31.3.2014
				2011-12 <sup>##</sup>	2012-13 <sup>###</sup>	2013-14	Total	
	Petition No. 70/TT/2012							
	Claimed in Petition	2450.52	1578.87	96.67	75.37	0.00	172.04	1750.91
	Allowed in this order	2450.52	1578.87 (1623.82 - 5.26- 39.69)	96.67 (91.41 +5.26)	75.37 (35.68 +39.69)	0.00	172.04	1750.91
Asset-XI	Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	51093.40	42117.62	0.00	969.11	477.29	1446.40	43564.02
	Claimed in Petition	51093.40	42144.90	0.00	1997.02	1124.25	3121.27	45266.17
	Allowed in this order	51093.40	42144.90 (43172.81 -1027.91)	0.00	1997.02 (969.11 +1027.91)	1124.25	3121.27	45266.17

<sup>#</sup>deducted IDC discharged during 2011-13 <sup>##</sup> added IDC discharged during 2011-12

<sup>###</sup> added IDC discharged during 2012-13

### **Debt: Equity**

26. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provide as follows:-

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

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

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

.....

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



27. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 70:30 for the assets. The debt:equity ratio of 70:30 as on COD for the instant assets is in accordance with the 2009 Tariff Regulations and is considered for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	817.16	70.00	817.16	70.00	460.35	70.00	629.91	70.00
Equity	350.21	30.00	350.21	30.00	197.29	30.00	269.96	30.00
<b>Total</b>	<b>1167.37</b>	<b>100.00</b>	<b>1167.37</b>	<b>100.00</b>	<b>657.64</b>	<b>100.00</b>	<b>899.87</b>	<b>100.00</b>

(₹ in lakh)

Particulars	Asset-V		Asset-VI		Asset-VII		Asset-VIII	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1232.67	70.00	35725.96	70.00	565.74	70.00	894.85	70.00
Equity	528.29	30.00	15311.12	30.00	242.46	30.00	383.51	30.00
<b>Total</b>	<b>1760.96</b>	<b>100.00</b>	<b>51037.08</b>	<b>100.00</b>	<b>808.20</b>	<b>100.00</b>	<b>1278.36</b>	<b>100.00</b>

(₹ in lakh)

Particulars	Asset-IX		Asset-X		Asset-XI	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	932.57	70.00	1105.21	70.00	29501.43	70.00
Equity	399.67	30.00	473.66	30.00	12643.47	30.00
<b>Total</b>	<b>1332.24</b>	<b>100.00</b>	<b>1578.87</b>	<b>100.00</b>	<b>42144.90</b>	<b>100.00</b>

28. With respect to additional capitalization during 2009-14 tariff period, the petitioner has claimed the debt:equity ratio of 70:30 as on COD for the instant assets. The petitioner was directed to submit an undertaking that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. However, the petitioner has not provided any undertaking.

29. The overall debt equity ratio as on 31.3.2014 for the Asset including additional capitalization is as under:-



(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1223.33	70.00	1223.12	70.00	2378.14	70.00	1036.50	70.00
Equity	524.29	30.00	524.20	30.00	1019.20	30.00	444.21	30.00
<b>Total</b>	<b>1747.62</b>	<b>100.00</b>	<b>1747.32</b>	<b>100.00</b>	<b>3397.34</b>	<b>100.00</b>	<b>1480.71</b>	<b>100.00</b>

(₹ in lakh)

Particulars	Asset-V		Asset-VI		Asset-VII		Asset-VIII	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1801.87	70.00	37792.39	70.00	995.56	70.00	1021.25	70.00
Equity	772.23	30.00	16196.74	30.00	426.67	30.00	437.68	30.00
<b>Total</b>	<b>2574.10</b>	<b>100.00</b>	<b>53989.13</b>	<b>100.00</b>	<b>1422.23</b>	<b>100.00</b>	<b>1458.93</b>	<b>100.00</b>

(₹ in lakh)

Particulars	Asset-IX		Asset-X		Asset-XI	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1158.49	70.00	1225.64	70.00	31686.32	70.00
Equity	496.50	30.00	525.27	30.00	13579.85	30.00
<b>Total</b>	<b>1654.99</b>	<b>100.00</b>	<b>1750.91</b>	<b>100.00</b>	<b>45266.17</b>	<b>100.00</b>

### Interest on Loan (“IOL”)

30. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. We have considered the submissions of the petitioner. IOL is worked out on the basis of the actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	32.20	136.72	137.04	32.20	136.72	137.04
As claimed by the petitioner	21.10	92.78	93.07	21.18	93.08	93.75
Allowed after trued up	21.10	92.78	93.06	21.19	93.09	93.75



(₹ in lakh)

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	15.62	147.10	168.60	16.55	83.54	81.81
As claimed by the petitioner	15.41	151.15	173.05	17.53	83.68	82.97
Allowed after trued up	15.41	151.16	173.05	17.53	83.69	82.97

(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	31.22	174.03	171.00	3157.76	3018.02
As claimed by the petitioner	31.50	139.82	136.34	3141.47	2983.90
Allowed after trued up	31.50	139.81	136.34	3141.47	2983.90

(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	11.34	82.25	80.89	86.97	85.08
As claimed by the petitioner	10.96	80.93	79.35	83.33	82.38
Allowed after trued up	10.96	80.93	79.35	83.33	82.38

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	15.50	97.42	94.04	18.93	112.50	104.70
As claimed by the petitioner	15.23	97.42	91.67	17.55	106.00	99.92
Allowed after trued up	15.23	97.42	91.67	17.55	106.00	99.92



(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	2194.15	2492.35
As claimed by the petitioner	2227.58	2583.11
Allowed after trued up	2227.57	2583.11

The variation in interest on loan is due to variation in capital cost as on COD and variation in actual additional capitalization during 2011-14 tariff period.

### **Return on Equity (“ROE”)**

31. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provides that:-

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

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

32. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 22.1.2015 in Petition No. 70/TT/2012



for Assets-I to X and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI. However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (t) %	Grossed up ROE (Base rate/(1-t)) %
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

33. We have considered the submissions of the petitioner and have approved ROE in accordance with the provisions of the 2009-14 Tariff Regulations. Accordingly, the ROE as trued up in accordance with the 2009 Tariff Regulations is shown in the table below:-

(₹ in lakh)

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	26.30	117.02	126.47	26.30	117.02	126.47
As claimed by the petitioner	19.22	88.40	97.42	19.22	88.39	97.40
Allowed after trued up	19.22	88.40	97.42	19.22	88.39	97.40

(₹ in lakh)

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	12.74	128.21	157.86	13.56	71.55	75.74
As claimed by the petitioner	13.93	141.55	177.97	15.86	79.12	85.89
Allowed after trued up	13.93	141.55	177.97	15.86	79.12	85.89





(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	25.12	146.08	155.05	2757.66	2853.91
As claimed by the petitioner	29.52	136.45	146.10	3038.55	3161.92
Allowed after trued up	29.52	136.45	146.11	3038.55	3161.92

(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	9.42	70.90	75.06	73.76	77.92
As claimed by the petitioner	10.05	77.17	82.71	78.62	84.87
Allowed after trued up	10.05	77.17	82.71	78.62	84.87

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	13.11	85.86	89.63	15.34	95.35	96.28
As claimed by the petitioner	14.16	94.32	97.36	15.77	99.59	103.01
Allowed after trued up	14.16	94.32	97.36	15.77	99.59	103.01

(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	1861.82	2272.11
As claimed by the petitioner	2089.97	2629.94
Allowed after trued up	2089.97	2629.94



The variation in return on equity is on account of increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity, variation in capital cost and actual additional capitalization.

### **Depreciation**

34. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“‘**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

.....	
(c) AC and DC sub-station	25 years
(d) Hydro generating station	35 years
(e) Transmission line	35 years”

35. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

**"17. Depreciation:**

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

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

36. Depreciation was worked out in order dated 22.1.2015 in Petition No. 70/TT/2012 for Assets-I to X and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI in accordance with Regulation 17 of the 2009 Tariff Regulations.

37. The weighted average useful life of the transmission asset has been considered as per Regulations 3(42) and 17(4) of the 2009 Tariff Regulations.



For the purpose of calculation, the weighted average useful life of the asset as on COD has been considered as given in the table below:-

Assets	weighted average useful life
Asset-I	25 years
Asset-II	25 years
Asset-III	28 years
Asset-IV	30 years
Asset-V	33 years
Asset-VI	35 years
Asset-VII	29 years
Asset-VIII	30 years
Asset-IX	25 years
Asset-X	25 years
Asset- XI	35 years

38. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under.

**(₹ in lakh)**

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	26.48	117.82	127.33	26.48	117.82	127.33
As claimed by the petitioner	17.45	80.30	87.43	17.45	80.29	87.42
Allowed after trued up	17.45	80.30	87.43	17.45	80.29	87.42

**(₹ in lakh)**

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	12.88	129.37	159.23	13.73	72.50	76.80
As claimed by the petitioner	12.69	128.86	160.03	14.51	72.33	77.61
Allowed after trued up	12.70	128.86	160.03	14.50	72.33	77.62



(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	25.35	147.38	156.47	2776.43	2873.34
As claimed by the petitioner	26.88	124.24	131.43	2759.89	2837.83
Allowed after trued up	26.88	124.23	131.43	2759.89	2837.83

(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	9.54	71.82	76.07	74.73	78.99
As claimed by the petitioner	9.18	70.53	74.78	71.84	76.73
Allowed after trued up	9.18	70.52	74.78	71.84	76.73

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	13.20	86.44	90.24	15.44	95.99	96.94
As claimed by the petitioner	12.86	85.67	87.38	14.32	90.46	92.45
Allowed after trued up	12.86	85.67	87.38	14.32	90.46	92.45

(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	1874.50	2287.58
As claimed by the petitioner	1898.31	2360.37
Allowed after trued up	1898.31	2360.37

The variation in depreciation is on account of variation in capital cost as on COD and variation in additional capitalization vis-à-vis that approved in the order.



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

39. The petitioner has computed O&M Expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the order dated 22.1.2015 in Petition No. 70/TT/2012 for Assets-I to X and order dated 10.02.2015 in Petition No. 200/TT/2012 for Asset-XI.

40. The O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

**(₹ in lakh)**

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	24.89	105.26	111.28	24.89	105.26	111.28
As claimed by the petitioner	24.89	105.26	111.28	24.89	105.26	111.28
Allowed after trued up	24.89	105.26	111.28	24.89	105.26	111.28

**(₹ in lakh)**

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	21.93	139.11	147.06	0.86	3.64	3.85
As claimed by the petitioner	21.93	139.11	147.06	0.86	3.64	3.85
Allowed after trued up	21.93	139.11	147.06	0.86	3.64	3.85

**(₹ in lakh)**

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in	2.76	11.69	12.35	213.87	225.99



Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
order dated 22.1.2015 in Petition No. 70/TT/2012					
As claimed by the petitioner	2.76	11.69	12.35	213.87	225.99
Allowed after trued up	2.76	11.69	12.35	213.87	225.99

(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	14.30	90.72	95.91	90.18	95.33
As claimed by the petitioner	14.30	90.72	95.91	90.18	95.33
Allowed after trued up	14.30	90.72	95.91	90.18	95.33

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	16.60	105.26	111.28	16.60	105.26	111.28
As claimed by the petitioner	16.60	105.26	111.28	16.60	105.26	111.28
Allowed after trued up	16.60	105.26	111.28	16.60	105.26	111.28

(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	177.38	224.92
As claimed by the petitioner	177.38	224.92
Allowed after trued up	177.38	224.92

### **Interest on working capital("IWC")**

41. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission



system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

42. The petitioner submitted the rate of interest on working capital as 11.75% for Assets-I, II, III, IV, V, VII, IX, and X and 13.50% for Assets-VI, VIII and XI for the period from COD to 31.3.2014 as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

43. Rate of interest in working capital is considered on normative basis in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations. It is calculated equal to State Bank of India Base Rate as applicable as on 1.4.2011 and 1.4.2012 plus 350 basis points. State Bank of India Base Rate on 1.4.2011 was 8.25% and as on 1.4.2012 was 10.00%. Therefore, interest rate of 11.75% (8.25% plus 350 basis points) for Assets-I, II, III, IV, V, VII, IX, and X and 13.50% (10.00% plus 350 basis points) for Assets-VI, VIII and XI has been considered to work out the interest on working capital in the instant case.

44. The IWC trued up is as under:-

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Maintenance Spares	3.73	15.79	16.69	3.73	15.79	16.69
O & M expenses	2.07	8.77	9.27	2.07	8.77	9.27
Receivables	14.17	62.83	66.68	14.18	62.88	66.79
Total	19.98	87.40	92.65	19.99	87.44	92.76
Rate of Interest (%)	11.75	11.75	11.75	11.75	11.75	11.75
<b>Interest</b>	<b>2.35</b>	<b>10.27</b>	<b>10.89</b>	<b>2.35</b>	<b>10.27</b>	<b>10.90</b>



(₹ in lakh)

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Maintenance Spares	3.29	20.87	22.06	0.13	0.55	0.58
O & M expenses	1.83	11.59	12.26	0.07	0.30	0.32
Receivables	10.97	95.96	112.56	8.29	40.61	42.57
Total	16.09	128.42	146.88	8.49	41.46	43.47
Rate of Interest (%)	11.75	11.75	11.75	11.75	11.75	11.75
<b>Interest</b>	<b>1.89</b>	<b>15.09</b>	<b>17.26</b>	<b>1.00</b>	<b>4.87</b>	<b>5.11</b>

(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	0.41	1.75	1.85	32.08	33.90
O & M expenses	0.23	0.97	1.03	17.82	18.83
Receivables	15.43	70.12	72.51	1561.90	1571.49
Total	16.07	72.85	75.40	1611.80	1624.22
Rate of Interest (%)	11.75	11.75	11.75	13.50	13.50
<b>Interest</b>	<b>1.89</b>	<b>8.56</b>	<b>8.86</b>	<b>217.59</b>	<b>219.27</b>

(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Maintenance Spares	2.15	13.61	14.39	13.53	14.30
O & M expenses	1.19	7.56	7.99	7.51	7.94
Receivables	7.63	54.71	57.01	55.72	58.37
Total	10.97	75.88	79.39	76.76	80.61
Rate of Interest (%)	11.75	11.75	11.75	13.50	13.50
<b>Interest</b>	<b>1.29</b>	<b>8.92</b>	<b>9.33</b>	<b>10.36</b>	<b>10.88</b>

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Maintenance Spares	2.49	15.79	16.69	2.49	15.79	16.69
O & M expenses	1.38	8.77	9.27	1.38	8.77	9.27
Receivables	10.08	65.54	66.42	11.00	68.71	69.65
Total	13.95	90.10	92.39	14.87	93.27	95.61
Rate of Interest (%)	11.75	11.75	11.75	11.75	11.75	11.75
<b>Interest</b>	<b>1.64</b>	<b>10.59</b>	<b>10.86</b>	<b>1.75</b>	<b>10.96</b>	<b>11.23</b>





(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Maintenance Spares	26.61	33.74
O & M expenses	14.78	18.74
Receivables	1091.02	1330.85
Total	1132.41	1383.33
Rate of Interest (%)	13.50	13.50
<b>Interest</b>	<b>152.87</b>	<b>186.75</b>

45. The IWC claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)

Particulars	Asset-I			Asset-II		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	2.89	12.47	13.14	2.89	12.47	13.14
As claimed by the petitioner	2.35	10.27	10.89	2.35	10.27	10.90
Allowed after trued up	2.35	10.27	10.89	2.35	10.27	10.90

(₹ in lakh)

Particulars	Asset-III			Asset-IV		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1.88	14.75	16.75	0.92	4.72	4.87
As claimed by the petitioner	1.89	15.09	17.26	1.00	4.87	5.10
Allowed after trued up	1.89	15.09	17.26	1.00	4.87	5.11

(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1.76	9.90	10.23	211.88	213.78
As claimed by the petitioner	1.89	8.56	8.86	217.59	219.27
Allowed after trued up	1.89	8.56	8.86	219.27	219.27



(₹ in lakh)

Particulars	Asset-VII			Asset-VIII	
	2011-12 (pro-rata)	2012-13	2013-14	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1.29	8.84	9.23	10.40	10.84
As claimed by the petitioner	1.29	8.92	9.33	10.36	10.88
Allowed after trued up	9.33	9.33	9.33	10.88	10.88

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (pro-rata)	2012-13	2013-14	2011-12 (pro-rata)	2012-13	2013-14
Approved in order dated 22.1.2015 in Petition No. 70/TT/2012	1.63	10.43	10.81	1.79	11.12	11.29
As claimed by the petitioner	1.64	10.59	10.86	1.75	10.96	11.23
Allowed after trued up	1.64	10.59	10.86	1.75	10.96	11.23

(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (pro-rata)	2013-14
Approved in order dated 10.02.2015 in Petition No. 200/TT/2012	177.38	224.92
As claimed by the petitioner	152.88	186.75
Allowed after trued up	152.87	186.75

46. The variation in IWC is on account of variation in IOL, depreciation and ROE due to variation in capital cost, actual additional capitalization and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

### **ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

47. The detailed computation of the various components of the trued up annual fixed charges for the Assets for the tariff period 2009-14 is summarised below:-



(₹ in lakh)

Particulars	Asset-I			Asset-II		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12	2012-13 (Pro-rata)	2013-14
<b>Gross Block</b>						
Opening Gross Block	1167.37	1477.26	1564.23	1167.37	1477.26	1563.93
Additional Capitalization	309.89	86.97	183.39	309.89	86.67	183.39
Closing Gross block	1477.26	1564.23	1747.62	1477.26	1563.93	1747.32
Average Gross block	1322.32	1520.75	1655.93	1322.32	1520.60	1655.63
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1190.08	1368.67	1490.33	1190.08	1368.54	1490.06
Elapsed Life of the assets at beginning of the year	0	1	2	0	1	2
Weighted Balance Useful life of the assets	25	24	23	25	24	23
Remaining Depreciable Value	1190.08	1351.22	1392.58	1190.08	1351.08	1392.32
Depreciation	17.45	80.30	87.43	17.45	80.29	87.42
<b>Interest on Loan</b>						
Gross Normative Loan	817.16	1034.08	1094.96	817.16	1034.08	1094.75
Cumulative Repayment upto Previous Year	0.00	17.45	97.75	0.00	17.45	97.74
Net Loan-Opening	817.16	1016.63	997.21	817.16	1016.63	997.01
Additions	216.92	60.88	128.37	216.92	60.67	128.37
Repayment during the year	17.45	80.30	87.43	17.45	80.29	87.42
Net Loan-Closing	1016.63	997.21	1038.15	1016.63	997.01	1037.97
Average Loan	916.89	1006.92	1017.68	916.89	1006.82	1017.49
Weighted Average Rate of Interest on Loan (%)	9.2057	9.2145	9.1447	9.2423	9.2458	9.2136
Interest	21.10	92.78	93.06	21.19	93.09	93.75
<b>Return on Equity</b>						
Opening Equity	350.21	443.18	469.27	350.21	443.18	469.18
Additions	92.97	26.09	55.02	92.97	26.00	55.02



Particulars	Asset-I			Asset-II		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12	2012-13 (Pro-rata)	2013-14
Closing Equity	443.18	469.27	524.29	443.18	469.18	524.20
Average Equity	396.69	456.22	496.78	396.69	456.18	496.69
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610	19.377	19.377	19.610
Return on Equity (Pre Tax)	19.22	88.40	97.42	19.22	88.39	97.40
<b>Interest on Working Capital</b>						
Maintenance Spares	3.73	15.79	16.69	3.73	15.79	16.69
O & M Expenses	2.07	8.77	9.27	2.07	8.77	9.27
Receivables	14.17	62.83	66.68	14.18	62.88	66.79
Total	19.98	87.40	92.65	19.99	87.44	92.76
Interest	2.35	10.27	10.89	2.35	10.27	10.90
<b>Annual Transmission Charges</b>						
Depreciation	17.45	80.30	87.43	17.45	80.29	87.42
Interest on Loan	21.10	92.78	93.06	21.19	93.09	93.75
Return on Equity	19.22	88.40	97.42	19.22	88.39	97.40
Interest on Working Capital	2.35	10.27	10.89	2.35	10.27	10.90
O & M Expenses	24.89	105.26	111.28	24.89	105.26	111.28
<b>Total</b>	<b>85.01</b>	<b>377.01</b>	<b>400.08</b>	<b>85.10</b>	<b>377.30</b>	<b>400.74</b>

(₹ in lakh)

Particulars	Asset-III			Asset-IV		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12 (Pro-rata)	2012-13	2013-14
<b>Gross Block</b>						
Opening Gross Block	657.64	2217.02	2653.14	899.87	1283.08	1439.13
Additional Capitalization	1559.38	436.12	744.20	383.21	156.05	41.58



Particulars	Asset-III			Asset-IV		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12 (Pro-rata)	2012-13	2013-14
Closing Gross block	2217.02	2653.14	3397.34	1283.08	1439.13	1480.71
Average Gross block	1437.33	2435.08	3025.24	1091.48	1361.11	1459.92
Rate of Depreciation (%)	5.300	5.292	5.290	5.313	5.314	5.317
Depreciable Value	1293.60	2191.57	2722.72	982.33	1224.99	1313.93
Elapsed Life of the assets at beginning of the year	0	1	2	0	1	1
Weighted Balance Useful life of the assets	28	27	26	30	29	29
Remaining Depreciable Value	1293.60	2178.88	2581.16	982.33	1210.50	1227.10
Depreciation	12.70	128.86	160.03	14.50	72.33	77.62
<b>Interest on Loan</b>						
Gross Normative Loan	460.35	1551.91	1857.20	629.91	898.16	1007.39
Cumulative Repayment upto Previous Year	0.00	12.70	141.56	0.00	14.50	86.83
Net Loan-Opening	460.35	1539.22	1715.64	629.91	883.66	920.56
Additions	1091.57	305.28	520.94	268.25	109.24	29.11
Repayment during the year	12.70	128.86	160.03	14.50	72.33	77.62
Net Loan-Closing	1539.22	1715.64	2076.55	883.66	920.56	872.05
Average Loan	999.78	1627.43	1896.09	756.78	902.11	896.31
Weighted Average Rate of Interest on Loan (%)	9.2454	9.2881	9.1268	9.2640	9.2771	9.2568
Interest	15.41	151.16	173.05	17.53	83.69	82.97
<b>Return on Equity</b>						
Opening Equity	197.29	665.11	795.94	269.96	384.92	431.74
Additions	467.81	130.84	223.26	114.96	46.82	12.47
Closing Equity	665.11	795.94	1019.20	384.92	431.74	444.21
Average Equity	431.20	730.52	907.57	327.44	408.33	437.98
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50	15.50



Particulars	Asset-III			Asset-IV		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12 (Pro-rata)	2012-13	2013-14
MAT rate for the respective year (%)	20.008	20.008	20.961	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610	19.377	19.377	19.610
Return on Equity (Pre Tax)	13.93	141.55	177.97	15.86	79.12	85.89
<b>Interest on Working Capital</b>						
Maintenance Spares	3.29	20.87	22.06	0.13	0.55	0.58
O & M Expenses	1.83	11.59	12.26	0.07	0.30	0.32
Receivables	10.97	95.96	112.56	8.29	40.61	42.57
Total	16.09	128.42	146.88	8.49	41.46	43.47
Interest	1.89	15.09	17.26	1.00	4.87	5.11
<b>Annual Transmission Charges</b>						
Depreciation	12.70	128.86	160.03	14.50	72.33	77.62
Interest on Loan	15.41	151.16	173.05	17.53	83.69	82.97
Return on Equity	13.93	141.55	177.97	15.86	79.12	85.89
Interest on Working Capital	1.89	15.09	17.26	1.00	4.87	5.11
O & M Expenses	21.93	139.11	147.06	0.86	3.64	3.85
<b>Total</b>	<b>65.85</b>	<b>575.78</b>	<b>675.38</b>	<b>49.75</b>	<b>243.65</b>	<b>255.43</b>

(₹ in lakh)

Particulars	Asset-V			Asset-VI	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
<b>Gross Block</b>					
Opening Gross Block	1760.96	2301.75	2392.97	51037.08	53504.32
Additional Capitalization	540.79	91.22	181.13	2467.24	484.81
Closing Gross block	2301.75	2392.97	2574.10	53504.32	53989.13
Average Gross block	2031.36	2347.36	2483.54	52270.70	53746.73
Rate of Depreciation (%)	5.294	5.292	5.292	5.280	5.280
Depreciable Value	1828.22	2112.62	2235.18	47043.63	48372.05
Elapsed Life of the assets at beginning of the year	0	1	2	0.00	1.00



Particulars	Asset-V			Asset-VI	
Weighted Balance Useful life of the assets	33	32	31	35.00	34.00
Remaining Depreciable Value	1828.22	2085.74	2084.07	47043.63	45612.16
Depreciation	26.88	124.23	131.43	2759.89	2837.83
<b>Interest on Loan</b>					
Gross Normative Loan	1232.67	1611.23	1675.08	35725.96	37453.02
Cumulative Repayment upto Previous Year	0.00	26.88	151.11	0.00	2759.89
Net Loan-Opening	1232.67	1584.34	1523.96	35725.96	34693.13
Additions	378.55	63.85	126.79	1727.07	339.37
Repayment during the year	26.88	124.23	131.43	2759.89	2837.83
Net Loan-Closing	1584.34	1523.96	1519.32	34693.13	32194.67
Average Loan	1408.51	1554.15	1521.64	35209.54	33443.90
Weighted Average Rate of Interest on Loan (%)	8.9462	8.9961	8.9602	8.9222	8.9221
Interest	31.50	139.81	136.34	3141.47	2983.90
<b>Return on Equity</b>					
Opening Equity	528.29	690.53	717.89	15311.12	16051.30
Additions	162.24	27.37	54.34	740.17	145.44
Closing Equity	690.53	717.89	772.23	16051.30	16196.74
Average Equity	609.41	704.21	745.06	15681.21	16124.02
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.008	20.008	20.961	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610	19.377	19.610
Return on Equity (Pre Tax)	29.52	136.45	146.11	3038.55	3161.92
<b>Interest on Working Capital</b>					
Maintenance Spares	0.41	1.75	1.85	32.08	33.90
O & M Expenses	0.23	0.97	1.03	17.82	18.83
Receivables	15.43	70.12	72.51	1561.90	1571.49
Total	16.07	72.85	75.40	1611.80	1624.22
Interest	1.89	8.56	8.86	217.59	219.27



Particulars	Asset-V			Asset-VI	
<b>Annual Transmission Charges</b>					
Depreciation	26.88	124.23	131.43	2759.89	2837.83
Interest on Loan	31.50	139.81	136.34	3141.47	2983.90
Return on Equity	29.52	136.45	146.11	3038.55	3161.92
Interest on Working Capital	1.89	8.56	8.86	217.59	219.27
O & M Expenses	2.76	11.69	12.35	213.87	225.99
<b>Total</b>	<b>92.56</b>	<b>420.75</b>	<b>435.09</b>	<b>9371.37</b>	<b>9428.91</b>

Particulars	Asset-VII			Asset-VIII	
	2011-12 (Pro-rata)	2012-13	2013-14	2012-13	2013-14
<b>Gross Block</b>					
Opening Gross Block	808.20	1265.44	1389.73	1278.36	1426.43
Additional Capitalization	457.24	124.29	32.50	148.07	32.50
Closing Gross block	1265.44	1389.73	1422.23	1426.43	1458.93
Average Gross block	1036.82	1327.59	1405.98	1352.40	1442.68
Rate of Depreciation (%)	5.311	5.312	5.318	5.312	5.318
Depreciable Value	933.14	1194.83	1265.38	1217.16	1298.41
Elapsed Life of the assets at beginning of the year	0.00	1.00	1.00	0.00	1.00
Weighted Balance Useful life of the assets	25.00	24.00	23.00	30.00	29.00
Remaining Depreciable Value	933.14	1185.65	1185.68	1217.16	1226.57
Depreciation	9.18	70.52	74.78	71.84	76.73
<b>Interest on Loan</b>					
Gross Normative Loan	565.74	885.81	972.81	894.85	998.50
Cumulative Repayment upto Previous Year	0.00	9.18	79.70	0.00	71.84
Net Loan-Opening	565.74	876.63	893.11	894.85	926.66
Additions	320.07	87.00	22.75	103.65	22.75
Repayment during the year	9.18	70.52	74.78	71.84	76.73
Net Loan-Closing	876.63	893.11	841.08	926.66	872.68
Average Loan	721.19	884.87	867.10	910.76	899.67
Weighted Average Rate of Interest on Loan (%)	9.1158	9.1454	9.1518	9.1499	9.1568





Interest	10.96	80.93	79.35	83.33	82.38
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### Return on Equity

Opening Equity	242.46	379.63	416.92	383.51	427.93
Additions	137.17	37.29	9.75	44.42	9.75
Closing Equity	379.63	416.92	426.67	427.93	437.68
Average Equity	311.05	398.28	421.79	405.72	432.80
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961	20.01	20.96
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610	19.38	19.61
Return on Equity (Pre Tax)	10.05	77.17	82.71	78.62	84.87

### Interest on Working Capital

Maintenance Spares	2.15	13.61	14.39	13.53	14.30
O & M Expenses	1.19	7.56	7.99	7.51	7.94
Receivables	7.63	54.71	57.01	55.72	58.37
Total	10.97	75.88	79.39	76.76	80.61
Interest	1.29	8.92	9.33	10.36	10.88

### Annual Transmission Charges

Depreciation	9.18	70.52	74.78	71.84	76.73
Interest on Loan	10.96	80.93	79.35	83.33	82.38
Return on Equity	10.05	77.17	82.71	78.62	84.87
Interest on Working Capital	1.29	8.92	9.33	10.36	10.88
O & M Expenses	14.30	90.72	95.91	90.18	95.33
<b>Total</b>	<b>45.77</b>	<b>328.26</b>	<b>342.08</b>	<b>334.33</b>	<b>350.20</b>

(₹ in lakh)

Particulars	Asset-IX			Asset-X		
	2011-12 (Pro-rata)	2012-13	2013-14	2011-12 (Pro-rata)	2012-13	2013-14
<b>Gross Block</b>						
Opening Gross Block	1332.24	1589.95	1654.99	1578.87	1675.54	1750.91
Additional Capitalization	257.71	65.04	0.00	96.67	75.37	0.00
Closing Gross block	1589.95	1654.99	1654.99	1675.54	1750.91	1750.91



Average Gross block	1461.10	1622.47	1654.99	1627.21	1713.23	1750.91
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1314.99	1460.22	1489.49	1464.48	1541.90	1575.82
Elapsed Life of the assets at beginning of the year	0.00	1.00	2.00	0.00	1.00	2.00
Weighted Balance Useful life of the assets	25.00	24.00	23.00	25.00	24.00	23.00
Remaining Depreciable Value	1314.99	1447.37	1390.97	1464.48	1527.58	1471.04
Depreciation	12.86	85.67	87.38	14.32	90.46	92.45

#### Interest on Loan

Gross Normative Loan	932.57	1112.97	1158.49	1105.21	1172.88	1225.64
Cumulative Repayment upto Previous Year	0.00	12.86	98.52	0.00	14.32	104.78
Net Loan-Opening	932.57	1100.11	1059.97	1105.21	1158.56	1120.86
Additions	180.40	45.53	0.00	67.67	52.76	0.00
Repayment during the year	12.86	85.67	87.38	14.32	90.46	92.45
Net Loan-Closing	1100.11	1059.97	972.59	1158.56	1120.86	1028.41
Average Loan	1016.34	1080.04	1016.28	1131.88	1139.71	1074.64
Weighted Average Rate of Interest on Loan (%)	8.9922	9.0203	9.0199	9.3043	9.3009	9.2983
Interest	15.23	97.42	91.67	17.55	106.00	99.92

#### Return on Equity

Opening Equity	399.67	476.99	496.50	473.66	502.66	525.27
Additions	77.31	19.51	0.00	29.00	22.61	0.00
Closing Equity	476.99	496.50	496.50	502.66	525.27	525.27
Average Equity	438.33	486.74	496.50	488.16	513.97	525.27
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.008	20.008	20.961	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610	19.377	19.377	19.610
Return on Equity (Pre Tax)	14.16	94.32	97.36	15.77	99.59	103.01



**Interest on Working Capital**

Maintenance Spares	2.49	15.79	16.69	2.49	15.79	16.69
O & M Expenses	1.38	8.77	9.27	1.38	8.77	9.27
Receivables	10.08	65.54	66.42	11.00	68.71	69.65
Total	13.95	90.10	92.39	14.87	93.27	95.61
Interest	1.64	10.59	10.86	1.75	10.96	11.23

**Annual Transmission Charges**

Depreciation	12.86	85.67	87.38	14.32	90.46	92.45
Interest on Loan	15.23	97.42	91.67	17.55	106.00	99.92
Return on Equity	14.16	94.32	97.36	15.77	99.59	103.01
Interest on Working Capital	1.64	10.59	10.86	1.75	10.96	11.23
O & M Expenses	16.60	105.26	111.28	16.60	105.26	111.28
<b>Total</b>	<b>60.48</b>	<b>393.25</b>	<b>398.55</b>	<b>65.98</b>	<b>412.27</b>	<b>417.89</b>

(₹ in lakh)

Particulars	Asset-XI	
	2012-13 (Pro-rata)	2013-14
<b>Gross Block</b>		
Opening Gross Block	42144.90	44141.92
Additional Capitalization	1997.02	1124.25
Closing Gross block	44141.92	45266.17
Average Gross block	43143.41	44704.05
Rate of Depreciation (%)	5.280	5.280
Depreciable Value	38829.07	40233.64
Elapsed Life of the assets at beginning of the year	0.00	1.00
Weighted Balance Useful life of the assets	35.00	34.00
Remaining Depreciable Value	38829.07	38335.33
Depreciation	1898.31	2360.37
<b>Interest on Loan</b>		
Gross Normative Loan	29501.43	30899.34
Cumulative Repayment upto Previous Year	0.00	1898.31



Particulars	Asset-XI	
	2012-13 (Pro-rata)	2013-14
Net Loan-Opening	29501.43	29001.03
Additions	1397.91	786.98
Repayment during the year	1898.31	2360.37
Net Loan-Closing	29001.03	27427.64
Average Loan	29251.23	28214.33
Weighted Average Rate of Interest on Loan (%)	9.1384	9.1553
Interest	2227.57	2583.11
<b>Return on Equity</b>		
Opening Equity	12643.47	13242.58
Additions	599.11	337.28
Closing Equity	13242.58	13579.85
Average Equity	12943.02	13411.21
Return on Equity (Base Rate) (%)	15.500	15.500
MAT rate for the respective year (%)	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.610
Return on Equity (Pre Tax)	2089.97	2629.94
<b>Interest on Working Capital</b>		
Maintenance Spares	26.61	33.74
O & M Expenses	14.78	18.74
Receivables	1091.02	1330.85
Total	1132.41	1383.33
Interest	152.87	186.75
<b>Annual Transmission Charges</b>		
Depreciation	1898.31	2360.37
Interest on Loan	2227.57	2583.11
Return on Equity	2089.97	2629.94
Interest on Working Capital	152.87	186.75
O & M Expenses	177.38	224.92
<b>Total</b>	<b>6546.11</b>	<b>7985.10</b>



## **DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19**

48. The petitioner has claimed the transmission charges for Combined Asset for the 2014-19 tariff period as under:-

(₹ in lakh)					
Combined Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	6224.04	6307.90	6320.85	6320.85	6320.85
Interest on Loan	6123.94	5659.79	5105.58	4533.96	3962.75
Return on equity	6932.05	7059.49	7073.97	7073.97	7073.97
Interest on Working Capital	506.93	503.24	493.26	482.35	471.51
O & M Expenses	1143.09	1181.63	1220.35	1261.15	1302.91
<b>Total</b>	<b>20930.05</b>	<b>20712.05</b>	<b>20214.01</b>	<b>19672.28</b>	<b>19131.99</b>

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	171.46	177.24	183.05	189.17	195.44
O & M expenses	95.26	98.47	101.70	105.10	108.58
Receivables	3488.34	3452.01	3369.00	3278.71	3188.67
Total	3755.06	3727.72	3653.75	3572.98	3492.68
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>506.93</b>	<b>503.24</b>	<b>493.26</b>	<b>482.35</b>	<b>471.51</b>

### **Capital Cost**

50. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(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.”

“(3) The Capital cost of an existing project shall include the following:



- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

51. The petitioner has claimed capital cost as on 1.4.2014 of ₹116489.45 lakh for Combined Asset for the 2014-19 tariff period.

52. The following trued up capital cost for the assets, totalling to ₹116489.45 lakh for combined assets, as on 31.3.2014 is considered to work out tariff for 2014-19 tariff period.

(₹ in lakh)	
Assets name	Trued up capital cost as on 31.3.2014
Asset-I	1747.62
Asset-II	1747.32
Asset-III	3397.34
Asset-IV	1480.71
Asset-V	2574.10
Asset-VI	53989.13
Asset-VII	1422.23
Asset-VIII	1458.93
Asset-IX	1654.99
Asset-X	1750.91
Asset- XI	45266.17
<b>Total</b>	<b>116489.45</b>

### **Additional Capital Expenditure**

53. The petitioner has proposed additional capital expenditure of ₹2685.14 lakh in 2014-15 for Combined Asset, towards balance and retention payments under Clause 1(i) of Regulation 14 of the 2014 Tariff Regulations. Further the



petitioner has proposed additional capital expenditure of ₹490.17 lakh in 2015-16 for Combined Asset, towards balance and retention payments under Clause 2(i) of Regulation 14 of the 2014 Tariff Regulations.

54. Uttar Pradesh Power Corporation Ltd. has submitted that the petitioner should provide justification for increase in additional capitalization by ₹30.35 lakh in 2013-14 in case of Asset-I and ₹646.96 lakh in 2013-14 in case of Asset-XI. Further, the petitioner should provide justification for increase in capital cost as on COD by ₹139.39 lakh in case of Asset-IV and ₹995.19 lakh in case of Asset-XI. Further, as the figures of capital cost from 2014-15 to 2018-19 are based on true up figures, the tariff for the period 2014-19 cannot be determined. In response, the petitioner vide its affidavit dated 5.5.2016 submitted that the additional capital expenditure for 2015-16 is on estimated basis. Actual expenditure will be submitted at the time of truing up of tariff period 2014-19.

55. Clause 1(i) and 3(v) of Regulation 14 of the 2014 Tariff Regulations provides as follows:

“(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;

...

...

(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;”



56. The petitioner was directed to confirm whether all the balance/retention payments for assets under the instant petition have been claimed or some payments are still to be claimed. The petitioner has not provided any details for the same.

57. The total capital cost of the transmission asset including additional capitalization incurred during the 2014-19 tariff period is within the approved apportioned cost of the asset. It is observed that the additional capitalization proposed is mainly towards balance and retention payments. Accordingly, the capital cost claimed by the petitioner is allowed in accordance with Clause 1(i) of Regulation 14 of the 2014 Tariff Regulations for period 2014-15 and Clause 2(i) of Regulation 14 of the 2014 Tariff Regulations for period 2015-16. The additional capitalisation for tariff period 2014-19 shall be finally approved after the detailed scrutiny of additional capitalisation while carrying out the true up for 2014-19 tariff period.

58. The total capital cost of the transmission asset including additional capitalization projected to be incurred during 2014-19 is shown below:-

**(₹ in lakh)**

Particulars	Approved Apportioned Cost	Admitted capital cost as on 31.3.2014	Additional capital Expenditure			Total capital cost including additional capitalization
			2014-15	2015-16	Total	
Asset-I	2506.66	1747.62	41.10	43.51	84.61	1832.23
Asset-II	2506.66	1747.32	41.10	43.51	84.61	1831.93
Asset-III	3783.36	3397.34	12.98	20.10	33.08	3430.42
Asset-IV	1604.20	1480.71	22.53	37.53	60.06	1540.77
Asset-V	2958.76	2574.10	16.20	20.10	36.30	2610.40
Asset-VI	56387.04	53989.13	1916.64	181.60	2098.24	56087.37
Asset-VII	1512.26	1422.23	20.84	15.64	36.48	1458.71





Particulars	Approved Apportioned Cost	Admitted capital cost as on 31.3.2014	Additional capital Expenditure			Total capital cost including additional capitalization
			2014-15	2015-16	Total	
Asset-VIII	1512.26	1458.93	20.84	15.64	36.48	1495.41
Asset-IX	2450.52	1654.99	0.00	0.00	0.00	1654.99
Asset-X	2450.52	1750.91	47.54	0.00	47.54	1798.45
Asset- XI	51093.40	45266.17	545.37	112.54	657.91	45924.08
<b>Combined Asset</b>	<b>128765.64</b>	<b>116489.45</b>	<b>2685.14</b>	<b>490.17</b>	<b>3175.31</b>	<b>119664.76</b>

### Debt:Equity Ratio

59. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

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

60. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)		
Particulars	Amount	(%)
Debt	81542.62	70.00
Equity	34946.84	30.00
<b>Total</b>	<b>116489.45</b>	<b>100.00</b>

61. For additional capitalization, the petitioner has proposed debt:equity ratio of 70:30 for 2014-16 and the same has been considered. The details of the debt:equity including additional capitalization as on 31.3.2019 is as follows:-

(₹ in lakh)		
Particulars	Amount	(%)



Debt	83765.33	70.00
Equity	35899.43	30.00
<b>Total</b>	<b>119664.76</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

62. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced 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.”

63. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	81542.62	83422.21	83765.33	83765.33	83765.33
Cumulative Repayment up to previous year	11661.51	17885.55	24193.44	30514.29	36835.15
Net Loan-Opening	69881.11	65536.67	59571.89	53251.04	46930.19
Additions during the year	1879.60	343.12	0.00	0.00	0.00
Repayment during the year	6224.04	6307.89	6320.85	6320.85	6320.85
Net Loan-Closing	65536.67	59571.89	53251.04	46930.19	40609.34



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Loan	67708.89	62554.28	56411.46	50090.61	43769.76
Rate of Interest (%)	9.0445	9.0479	9.0507	9.0515	9.0536
<b>Interest</b>	<b>6123.93</b>	<b>5659.85</b>	<b>5105.61</b>	<b>4533.97</b>	<b>3962.75</b>

### **Return on Equity("ROE")**

64. Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.  
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

**“25. Tax on Return on Equity:**

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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.”

65. The petitioner has submitted ROE at the rate of 19.610% for 2014-15 and 19.705% for period 2015-19 after grossing up the ROE of 15.50% with MAT rate as per the above regulation. 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.

66. 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.

67. 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. Accordingly, the ROE allowed is given below:-

<b>(₹ in lakh)</b>					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	34946.84	35752.38	35899.43	35899.43	35899.43
Additional Capitalization	805.54	147.05	0.00	0.00	0.00
Closing Equity	35752.38	35899.43	35899.43	35899.43	35899.43
Average Equity	35349.61	35825.90	35899.43	35899.43	35899.43
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961	20.961



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
<b>Return on Equity (Pre Tax)</b>	<b>6932.06</b>	<b>7025.46</b>	<b>7039.88</b>	<b>7039.88</b>	<b>7039.88</b>

### **Depreciation**

68. 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."

69. The petitioner has computed depreciation considering capital expenditure of ₹116489.45 lakh as on 31.3.2014 with additional capital expenditure of ₹2685.14 lakh and ₹490.17 lakh in 2014-15 and 2015-16 during the tariff period 2014-19. The effective date of commercial operation (May, 2012) and weighted average useful life of 34 years has been considered in accordance to Regulation 26 of the 2014 Tariff Regulations considering actual COD and capital cost of all



the elements of the transmission system for working out the depreciation for Combined Asset.

70. We have considered the submissions of the petitioner. The depreciation is allowed considering capital expenditure of ₹116489.45 lakh as on 31.3.2014 and additional capital expenditure of ₹2685.14 lakh and ₹490.17 lakh in 2014-15 and 2015-16 under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	116489.45	119174.60	119664.77	119664.77	119664.77
Additional Capitalization	2685.14	490.17	0.00	0.00	0.00
Gross block at the end of the year	119174.60	119664.77	119664.77	119664.77	119664.77
Average gross block	117832.03	119419.69	119664.77	119664.77	119664.77
Rate of Depreciation (%)	5.282	5.282	5.282	5.282	5.282
Depreciable Value	106048.82	107477.71	107698.28	107698.28	107698.28
Elapsed Life of the assets at beginning of the year	1	2	3	4	5
Weighted Balance Useful life of the assets	33	32	31	30	29
Remaining Depreciable Value	94387.31	89592.16	83504.84	77183.99	70863.14
<b>Depreciation</b>	<b>6224.04</b>	<b>6307.89</b>	<b>6320.85</b>	<b>6320.85</b>	<b>6320.85</b>

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

71. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M Expenses has been worked out as given hereunder:-

(₹ in lakh)



Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual	Double Circuit (twin conductor) (kms)	34.753	34.753	34.753	34.753	34.753
	Double Circuit (Single conductor) (kms)	35.143	35.143	35.143	35.143	35.143
	Double circuit bundled conductor (km)	0.689	0.689	0.689	0.689	0.689
	Single Circuit (twin conductor) (kms)	2.862	2.862	2.862	2.862	2.862
	Single circuit(bundled conductor) (kms)	670.80	670.8	670.8	670.8	670.8
	400 kV Bays (nos)	6	6	6	6	6
	220 kV Bays(nos)	8	8	8	8	8
Norms as per Regulation	Double circuit (Twin conductor) (in lakh/km)	0.707	0.731	0.755	0.78	0.806
	Double circuit (Single conductor) (in lakh/km)	0.303	0.313	0.324	0.334	0.346
	Double circuit bundled conductor (in lakh/km)	1.062	1.097	1.133	1.171	1.21
	Single Circuit (Twin conductor) (in lakh/km)	0.404	0.418	0.432	0.446	0.461
	Single circuit(bundled conductor) (in lakh/km)	0.606	0.627	0.647	0.669	0.691
	400 kV Bays (in lakh/bay)	60.30	62.30	64.37	66.51	68.71
	220 kV Bays (in lakh/bay)	42.21	43.61	45.06	46.55	48.1
<b>Total</b>	<b>1143.09</b>	<b>1181.63</b>	<b>1220.35</b>	<b>1261.15</b>	<b>1302.91</b>	

72. 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.



73. We have considered the submissions made by the petitioner. 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, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

74. The details of O&M Expenses allowed for the instant assets are given hereunder:-

<b>(₹ in lakh)</b>					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>O&amp;M Expenses Allowed</b>	<b>1143.09</b>	<b>1181.63</b>	<b>1220.35</b>	<b>1261.15</b>	<b>1302.91</b>

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

75. 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).

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



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	171.46	177.24	183.05	189.17	195.44
O & M Expenses	95.26	98.47	101.70	105.10	108.58
Receivables	3488.34	3446.22	3363.19	3272.90	3182.85
Total	3755.06	3721.93	3647.94	3567.17	3486.86
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>506.93</b>	<b>502.46</b>	<b>492.47</b>	<b>481.57</b>	<b>470.73</b>

### Annual Transmission Charges

77. 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:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Gross Block</b>					
Opening Gross Block	116489.45	119174.60	119664.77	119664.77	119664.77
Additional Capitalisation	2685.14	490.17	0.00	0.00	0.00
Closing Gross Block	119174.60	119664.77	119664.77	119664.77	119664.77
Average Gross Block	117832.03	119419.69	119664.77	119664.77	119664.77
<b>Depreciation</b>					
Rate of Depreciation	5.282	5.282	5.282	5.282	5.282
Depreciable Value	106048.82	107477.71	107698.28	107698.28	107698.28
Elapsed Life of the assets at beginning of the year	1	2	3	4	5
Weighted Balance Useful life of the assets	33	32	31	30	29
Remaining Depreciable Value	94387.31	89592.16	83504.84	77183.99	70863.14
Depreciation	6224.04	6307.89	6320.85	6320.85	6320.85
<b>Interest on Loan</b>					
Gross Normative Loan	81542.62	83422.21	83765.33	83765.33	83765.33
Cumulative Repayment upto Previous Year	11661.51	17885.55	24193.44	30514.29	36835.15
Net Loan-Opening	69881.11	65536.67	59571.89	53251.04	46930.19
Additions	1879.60	343.12	0.00	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Repayment during the year	6224.04	6307.89	6320.85	6320.85	6320.85
Net Loan-Closing	65536.67	59571.89	53251.04	46930.19	40609.34
Average Loan	67708.89	62554.28	56411.46	50090.61	43769.76
Weighted Average Rate of Interest on Loan (%)	9.0445	9.0479	9.0507	9.0515	9.0536
Interest	6123.93	5659.85	5105.61	4533.97	3962.75
<b>Return on Equity</b>					
Opening Equity	34946.84	35752.38	35899.43	35899.43	35899.43
Additions	805.54	147.05	0.00	0.00	0.00
Closing Equity	35752.38	35899.43	35899.43	35899.43	35899.43
Average Equity	35349.61	35825.90	35899.43	35899.43	35899.43
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	6932.06	7025.46	7039.88	7039.88	7039.88
<b>Interest on Working Capital</b>					
Maintenance Spares	171.46	177.24	183.05	189.17	195.44
O & M expenses	95.26	98.47	101.70	105.10	108.58
Receivables	3488.34	3446.22	3363.19	3272.90	3182.85
Total	3755.06	3721.93	3647.94	3567.17	3486.86
Interest	506.93	502.46	492.47	481.57	470.73
<b>Annual Transmission Charges</b>					
Depreciation	6224.04	6307.89	6320.85	6320.85	6320.85
Interest on Loan	6123.93	5659.85	5105.61	4533.97	3962.75
Return on Equity	6932.06	7025.46	7039.88	7039.88	7039.88
Interest on Working Capital	506.93	502.46	492.47	481.57	470.73
O & M Expenses	1143.09	1181.63	1220.35	1261.15	1302.91
<b>Total</b>	<b>20930.06</b>	<b>20677.29</b>	<b>20179.16</b>	<b>19637.42</b>	<b>19097.11</b>

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



78. 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 is 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**

79. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. Uttar Pradesh Power Corporation Ltd. has submitted that licence fee is the liability of the petitioner and it is a part of O&M expenditure for which the petitioner is duly reimbursed. 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**

80. 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. Uttar Pradesh Power Corporation Ltd. has submitted that at present there is no service tax and, therefore, the claim of the petitioner is premature. We are of the view that the petitioner's prayer is premature.

### **Deferred Tax Liability**



81. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized under Regulation 49 of the 2014 Tariff Regulations. Uttar Pradesh Power Corporation Ltd. has submitted that the petitioner should submit the certificate of the statutory auditor about the deferred tax liability before 1.4.2009. As the COD of the instant assets is after 1.1.2012, therefore, the above prayer is not applicable.

### **Sharing of Transmission Charges**

82. 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.

83. This order disposes of Petition No. 52/TT/2016.

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

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



**ANNEXURE-I****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2009-14****(₹ in lakh)**

Asset-I	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 1-	8.64%	180.00	0.00	180.00
BOND- XXXV-DOCO Loan 2-	9.64%	10.00	0.00	10.00
BOND XXXVI-ADD CAP FOR 2011-2012 Add cap-	9.35%	0.00	41.29	41.29
BOND XXXVI- ADDCAP FOR 2012-2013 ADD CAP accrual IDC-	9.35%	0.00	19.59	19.59
BOND XXXVI-Doco Loan-	9.35%	627.16	0.00	627.16
BOND-XXXVII-ADD CAP FOR 2011-2012 Add cap-	9.25%	0.00	175.63	175.63
BOND XXXVII-ADD CAP FOR 2012-2013 Add cap-	9.25%	0.00	41.29	41.29
BOND XLIII- ADD CAP FOR 2013-2014 ADD CAP Loan 3-	7.93%	0.00	128.37	128.37
<b>Total</b>		<b>817.16</b>	<b>406.17</b>	<b>1223.33</b>

**(₹ in lakh)**

Asset-II	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 1-	8.64%	180.00	0.00	180.00
BOND -XXXV-DOCO Loan 2-	9.64%	89.18	0.00	89.18
BOND XXXVI-ADDCAP FOR 2011-2012 ADD CAP Loan 1-	9.35%	0.00	216.92	216.92
BOND XXXVI-DOCO Loan 3-	9.35%	567.36	0.00	567.36
BOND XLI ADDCAP FOR 2012-13 ADD CAP Loan 2-	8.85%	0.00	41.29	41.29
BOND-XLII-ADDCAP FOR 2013-2014 ADD CAP Loan 3-	8.80%	0.00	128.37	128.37
<b>Total</b>		<b>836.54</b>	<b>386.58</b>	<b>1223.12</b>



(₹ in lakh)

Asset-III	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXX-DOCO Loan 1-	8.80%	260.00	0.00	260.00
BOND XXXI-DOCO Loan 2-	8.90%	28.00	0.00	28.00
BOND-XXXV-Add Cap for 2011-12 Addcap accrual IDC-	9.64%	0.00	1.63	1.63
BOND XXXV-ADDCAP FOR 2012-2013 ADD CAP-Accrual IDC-	9.64%	0.00	13.49	13.49
BOND XXXV-DOCO-	9.64%	172.34	0.00	172.34
BOND-XXXVI-ADD CAP FOR 2011-12 Addcap-	9.35%	0.00	1089.94	1089.94
BOND-XXXVI-ADD CAP FOR 2012-13 Addcap-	9.35%	0.00	234.69	234.69
BOND XXXVII-ADDCAP FOR 2012-2013 Addcap-	9.25%	0.00	57.11	57.11
BOND-XLIII-ADD CAP for 2013-2014 Add Cap-	7.93%	0.00	520.93	520.93
<b>Total</b>		<b>460.34</b>	<b>1917.79</b>	<b>2378.13</b>

(₹ in lakh)

Asset-IV	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 1-	8.64%	150.00	0.00	150.00
BOND-XXXIV-DOCO Loan 2-	8.84%	62.00	0.00	62.00
BOND-XXXV-DOCO Loan 3-	9.64%	250.00	0.00	250.00
BOND XXXVI-ADD CAP for 2011-2012 Add Cap-	9.35%	0.00	268.25	268.25
BOND-XXXVI-ADD CAP for 2012-13 Add Cap-	8.85%	0.00	75.05	75.05
BOND-XXXVI-ADD CAP for 2012-13 Add Cap- accrual IDC-	9.35%	0.00	16.67	16.67
BOND XXXVI-DOCO-	9.35%	167.91	0.00	167.91
BOND-XLI-ADDCAP FOR 2012-2013 Addcap-	8.85%	0.00	17.52	17.52
BOND XLIII-ADD CAP FOR 2012-2013 Add cap-	7.93%	0.00	29.11	29.11
<b>Total</b>		<b>629.91</b>	<b>406.60</b>	<b>1036.51</b>



(₹ in lakh)

Asset-V	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 1-	8.64%	875.00	0.00	875.00
BOND-XXXIV-DOCO Loan 2-	8.84%	65.00	0.00	65.00
BOND-XXXV-DOCO Loan 3-	9.64%	275.00	0.00	275.00
BOND-XXXVI-ADDCAP FOR 2011-2012-DOCO	9.35%	0.00	378.55	378.55
BOND-XXXVI-ADDCAP FOR 2012-2013 DOCO	9.35%	0.00	37.74	37.74
BOND XXXVI-DOCO-	9.35%	17.67	0.00	17.67
BOND-XLI-ADD CAP FOR 2012-2013 ADDCAP LOAN 1-	8.85%	0.00	26.12	26.12
BOND-XLIII-ADD CAP for 2013-2014 Add Cap-	5.03%	0.00	126.79	126.79
<b>Total</b>		<b>1232.67</b>	<b>569.20</b>	<b>1801.87</b>

(₹ in lakh)

Asset-VI	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO loan 1-	9.33%	1675.00	0.00	1675.00
BOND XXIX-DOCO Loan 2-	9.20%	1825.00	0.00	1825.00
BOND XXX-DOCO Loan 3-	8.80%	9140.00	0.00	9140.00
BOND XXXI-DOCO Loan 4-	8.90%	8090.00	0.00	8090.00
BOND XXXIII-DOCO Loan 6-	8.64%	7475.00	0.00	7475.00
BOND XXXII-DOCO Loan 5-	8.84%	2000.00	0.00	2000.00
BOND XXXIV DOCO-	9.64%	536.26	0.00	536.26
BOND XXXV-DOCO-	9.64%	479.88	0.00	479.88
BOND-XLII-ADD CAP FOR 2012-13 ADD CAP Loan 2-	8.80%	0.00	605.78	605.78
BOND XLIII-ADDCAP FOR 2013-2014 ADDCAP Loan 3-	7.93%	0.00	339.37	339.37
BOND XXXVI-ADDCAP FOR 2012-2013 Add cap-	9.35%	0.00	164.80	164.80
BOND XXXVI-ADDCAP FOR 2012-2013 Add cap-accrual IDC	9.35%	0.00	956.49	956.49
BOND XXXVI- DOCO-	9.35%	4504.82	0.00	4504.82
<b>Total</b>		<b>35725.96</b>	<b>2066.44</b>	<b>37792.40</b>





(₹ in lakh)

Asset-VII	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 2-	8.64%	50.00	0.00	50.00
BOND XXXII-DOCO Loan 1-	8.84%	260.00	0.00	260.00
BOND-XXXIV-DOCO Loan 3-	8.84%	16.00	0.00	16.00
BOND-XXXV-DOCO Loan 4-	9.64%	20.00	0.00	20.00
BOND XXXVI-Add cap for 2011-12 Add cap-	9.35%	0.00	306.45	306.45
BOND XXXVI-Add cap for 2011-12 Add cap-accrual IDC	9.35%	0.00	13.62	13.62
BOND XXXVI-Add cap for 2012-13 Add cap-	9.35%	0.00	9.02	9.02
BOND XXXVI-DOCO-	9.35%	219.74	0.00	219.74
SBI (21.03.2012)-ADD CAP FOR 2013-2014 Add cap-	1.17%	0.00	22.75	22.75
BOND-XLI-ADD CAP FOR 2012-2013 ADD CAP Loan 1-	8.85%	0.00	77.99	77.99
<b>Total</b>		<b>565.74</b>	<b>429.83</b>	<b>995.57</b>

(₹ in lakh)

Asset-VIII	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIII-DOCO Loan 2-	8.64%	50.00	0.00	50.00
BOND XXXII-DOCO Loan 1-	8.84%	260.00	0.00	260.00
BOND-XXXIV-DOCO Loan 3-	8.84%	16.00	0.00	16.00
BOND-XXXV-DOCO Loan 4-	9.64%	20.00	0.00	20.00
BOND XXXVI-Add cap for 2012-13 Add cap-accrual IDC-	9.35%	0.00	25.66	25.66
BOND-XXXVI-DOCO-	8.85%	548.85	0.00	548.85
SBI (21.03.2012)- ADD CAP FOR 2013-2014 Add cap-	10.29%	0.00	22.75	22.75
BOND-XLI- ADD CAP FOR 2012-2013 ADD CAP Loan 1-	8.85%	0.00	77.99	77.99
<b>Total</b>		<b>894.85</b>	<b>126.40</b>	<b>1021.25</b>

(₹ in lakh)

Asset-IX	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND-XXVIII-DOCO Loan 1-	9.33%	41.00	0.00	41.00
BOND XXIX-DOCO Loan 2-	9.20%	70.00	0.00	70.00



Asset-IX	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXX-DOCO Loan 3-	8.80%	29.00	0.00	29.00
BOND XXXI-DOCO Loan 4-	8.90%	132.00	0.00	132.00
BOND XXXIII-DOCO Loan 6-	8.64%	323.00	0.00	323.00
BOND XXXII-DOCO Loan 5-	8.84%	21.00	0.00	21.00
BOND-XXXIV-DOCO Loan 7-	8.84%	92.00	0.00	92.00
BOND-XXXV-DOCO Loan 8-	9.64%	25.00	0.00	25.00
BOND XXXVI-ADD CAP FOR 2011-2012 Addcap-Accrual IDC-	9.35%	0.00	12.81	12.81
BOND-XXXVI-ADD CAP FOR 2011-2012 DOCO-	9.35%	0.00	167.59	167.59
BOND XXXVI-ADD CAP FOR 2012-2013 Addcap-Accrual IDC-	9.35%	0.00	20.55	20.55
BOND XXXVI-DOCO-	9.35%	199.57	0.00	199.57
BOND XLII-ADD CAP FOR 2012-2013 Add cap-	8.80%	0.00	24.98	24.98
<b>Total</b>		<b>932.57</b>	<b>225.93</b>	<b>1158.50</b>

(₹ in lakh)

Asset-X	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO Loan 1-	9.33%	40.00	0.00	40.00
BOND XXIX-DOCO-Loan 2-	9.20%	25.00	0.00	25.00
BOND XXX-DOCO Loan 3-	8.80%	40.00	0.00	40.00
BOND XXXI-DOCO Loan 4-	8.90%	25.00	0.00	25.00
BOND XXXIII-DOCO Loan 6-	8.64%	5.00	0.00	5.00
BOND XXXII-DOCO Loan 5-	8.84%	15.00	0.00	15.00
BOND-XXXIV-DOCO Loan 7-	8.84%	7.00	0.00	7.00
BOND XXXVI-Add cap for 2011-2012 Add cap-	9.35%	0.00	63.99	63.99
BOND XXXVI-ADD CAP FOR 2011-2012 Add cap-Accrual IDC-	9.35%	0.00	3.68	3.68
BOND XXXVI-ADD CAP FOR 2011-2012 Add cap-Accrual IDC-	9.35%	0.00	27.78	27.78
BOND XXXVI-DOCO-	9.35%	948.21	0.00	948.21
BOND-XLI-ADD CAP FOR 2012-2013 ADD CAP Loan 1-	8.85%	0.00	24.98	24.98
<b>Total</b>		<b>1105.21</b>	<b>120.43</b>	<b>1225.64</b>



(₹ in lakh)

Asset-XI	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO Loan 1-	9.33%	3108.00	0.00	3108.00
BOND XXIX-DOCO Loan 2-	9.20%	1880.00	0.00	1880.00
BOND XXX-DOCO Loan 3-	8.80%	4092.00	0.00	4092.00
BOND XXXI-DOCO Loan 4-	8.90%	2256.00	0.00	2256.00
BOND XXXIII- DOCO-Loan 6-	8.64%	2546.77	0.00	2546.77
BOND XXXII-DOCO-Loan 5-	8.84%	944.00	0.00	944.00
BOND-XXXIV- DOCO Loan 7-	8.84%	362.97	0.00	362.97
BOND XXXV-DOCO loan 8-	9.64%	2298.59	0.00	2298.59
BOND XXXVI-DOCO Loan 9-	9.35%	3775.10	0.00	3775.10
BOND XXXVII-ADDCAP FOR 2012-13 ADDCAP LOAN 1-	9.25%	0.00	719.54	719.54
BOND XXXVII-DOCO Loan-	9.25%	8238.00	0.00	8238.00
SBI(21.3.2012)- addcap for 2013-14 Add cap Loan 4-	10.29%	0.00	786.98	786.98
BOND XL-ADDCAP FOR 2012-2013 ADDCAP Loan 2-	9.30%	0.00	410.81	410.81
BOND XLII-ADDCAP FOR 2012-2013 ADDCAP Loan 3-	8.80%	0.00	267.57	267.57
<b>Total</b>		<b>29501.43</b>	<b>2184.90</b>	<b>31686.33</b>

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2009-14**

(₹ in lakh)

Asset-I	2011-12	2012-13	2013-14
Gross Opening Loan	817.16	1034.08	1094.96
Cumulative Repayments of Loans upto Previous Year	0	0.00	0.00
Net Loans Opening	817.16	1034.08	1094.96
ADD: Drawl(s) During the year	216.92	60.88	128.37
Less: Repayment(s) of Loan During the year	0.00	0.00	0.00
Net Closing Loan	1034.08	1094.96	1223.33
Average Net Loan	925.62	1064.52	1159.15
Rate of Interest on Loan (%)	9.2057%	9.2145%	9.1447%
Interest on Loan	85.21	98.09	106.00



(₹ in lakh)

<b>Asset-II</b>	2011-12	2012-13	2013-14
Gross Opening Loan	836.54	1053.46	1094.75
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	836.54	1053.46	1094.75
ADD: Drawl(s) During the year	216.92	41.29	128.37
Less: Repayment(s) of Loan During the year	0.00	0.00	0.00
Net Closing Loan	1053.46	1094.75	1223.12
Average Net Loan	945.00	1074.11	1158.94
Rate of Interest on Loan (%)	9.2423%	9.2458%	9.2136%
Interest on Loan	87.34	99.31	106.78

(₹ in lakh)

<b>Asset-III</b>	2011-12	2012-13	2013-14
Gross Opening Loan	460.34	1551.91	1857.20
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	460.34	1551.91	1857.20
ADD: Drawl(s) During the year	1091.57	305.29	520.93
Less: Repayment(s) of Loan During the year	0.00	0.00	24.00
Net Closing Loan	1551.91	1857.20	2354.13
Average Net Loan	1006.13	1704.56	2105.67
Rate of Interest on Loan (%)	9.2454%	9.2881%	9.1268%
Interest on Loan	93.02	158.32	192.18

(₹ in lakh)

<b>Asset-IV</b>	2011-12	2012-13	2013-14
Gross Opening Loan	629.91	898.16	1007.40
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	629.91	898.16	1007.40
ADD: Drawl(s) During the year	268.25	109.24	29.11
Less: Repayment(s) of Loan During the year	0.00	0.00	0.00
Net Closing Loan	898.16	1007.40	1036.51
Average Net Loan	764.04	952.78	1021.96
Rate of Interest on Loan (%)	9.2640%	9.2771%	9.2568%



Interest on Loan	70.78	88.39	94.60
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**(₹ in lakh)**

<b>Asset-V</b>	2011-12	2012-13	2013-14
Gross Opening Loan	1232.67	1611.22	1675.08
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	1232.67	1611.22	1675.08
ADD: Drawl(s) During the year	378.55	63.86	126.79
Less: Repayment(s) of Loan During the year	0.00	0.00	0.00
Net Closing Loan	1611.22	1675.08	1801.87
Average Net Loan	1421.95	1643.15	1738.48
Rate of Interest on Loan (%)	8.9462%	8.9961%	8.9602%
Interest on Loan	127.21	147.82	155.77

**(₹ in lakh)**

<b>Asset-VI</b>	2012-13	2013-14
Gross Opening Loan	35725.96	37453.03
Cumulative Repayments of Loans upto Previous Year	0.00	291.66
Net Loans Opening	35725.96	37161.37
ADD: Drawl(s) During the year	1727.07	339.37
Less: Repayment(s) of Loan During the year	291.66	1894.17
Net Closing Loan	37161.37	35606.57
Average Net Loan	36443.67	36383.97
Rate of Interest on Loan (%)	8.9222%	8.9221%
Interest on Loan	3251.58	3246.22

**(₹ in lakh)**

<b>Asset-VII</b>	2011-12	2012-13	2013-14
Gross Opening Loan	565.74	885.81	972.82
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	565.74	885.81	972.82
ADD: Drawl(s) During the year	320.07	87.01	22.75



<b>Asset-VII</b>	2011-12	2012-13	2013-14
Less: Repayment(s) of Loan During the year	0.00	0.00	21.67
Net Closing Loan	885.81	972.82	973.90
Average Net Loan	725.78	929.32	973.36
Rate of Interest on Loan (%)	9.1158%	9.1454%	9.1518%
Interest on Loan	66.16	84.99	89.08

(₹ in lakh)

<b>Asset-VIII</b>	2012-13	2013-14
Gross Opening Loan	894.85	998.50
Cumulative Repayments of Loans upto Previous Year	0.00	0.00
Net Loans Opening	894.85	998.50
ADD: Drawl(s) During the year	103.65	22.75
Less: Repayment(s) of Loan During the year	0.00	21.67
Net Closing Loan	998.50	999.58
Average Net Loan	946.68	999.04
Rate of Interest on Loan (%)	9.1499%	9.1568%
Interest on Loan	86.62	91.48

(₹ in lakh)

<b>Asset-IX</b>	2011-12	2012-13	2013-14
Gross Opening Loan	932.57	1112.97	1158.50
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	9.25
Net Loans Opening	932.57	1112.97	1149.25
ADD: Drawl(s) During the year	180.40	45.53	0.00
Less: Repayment(s) of Loan During the year	0.00	9.25	24.42
Net Closing Loan	1112.97	1149.25	1124.83
Average Net Loan	1022.77	1131.11	1137.04
Rate of Interest on Loan (%)	8.9922%	9.0203%	9.0199%
Interest on Loan	91.97	102.03	102.56



(₹ in lakh)

<b>Asset-X</b>	2011-12	2012-13	2013-14
Gross Opening Loan	1105.21	1172.88	1225.64
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	5.41
Net Loans Opening	1105.21	1172.88	1220.23
ADD: Drawl(s) During the year	67.67	52.76	0.00
Less: Repayment(s) of Loan During the year	0.00	5.41	12.07
Net Closing Loan	1172.88	1220.23	1208.16
Average Net Loan	1139.05	1196.56	1214.20
Rate of Interest on Loan (%)	9.3043%	9.3009%	9.2983%
Interest on Loan	105.98	111.29	112.90

(₹ in lakh)

<b>Asset-XI</b>	2012-13	2013-14
Gross Opening Loan	29501.43	30899.35
Cumulative Repayments of Loans upto Previous Year	0.00	415.67
Net Loans Opening	29501.43	30483.68
ADD: Drawl(s) During the year	1397.92	786.98
Less: Repayment(s) of Loan During the year	415.67	1023.34
Net Closing Loan	30483.68	30247.32
Average Net Loan	29992.56	30365.50
Rate of Interest on Loan (%)	9.1384%	9.1553%
Interest on Loan	2740.83	2780.06



**ANNEXURE-II****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)****(₹ in lakh)**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO loan 1-	9.33%	4864.00	0.00	4864.00
BOND XXIX-DOCO Loan 2-	9.20%	3800.00	0.00	3800.00
BOND XXX-DOCO	8.80%	13561.00	0.00	13561.00
BOND XXXI-DOCO	8.90%	10531.00	0.00	10531.00
BOND XXXIII-DOCO-	8.64%	11834.77	0.00	11834.77
BOND XXXII-DOCO-	8.84%	3500.00	0.00	3500.00
BOND-XXXIV-DOCO-	8.84%	1157.23	0.00	1157.23
BOND-XXXV-DOCO	9.64%	3655.11	0.00	3655.11
BOND XXXVI-DOCO-	9.35%	15727.51	0.00	15727.51
BOND XXXVII-DOCO-	9.25%	9231.57	0.00	9231.57
SBI(21.3.2012)-DOCO-	10.25%	832.48	0.00	832.48
BOND XL-DOCO-	9.30%	410.81	0.00	410.81
BOND-XLI-DOCO-	8.85%	265.89	0.00	265.89
BOND-XLII-DOCO-	8.80%	1026.70	0.00	1026.70
BOND-XLIII-DOCO-	7.93%	1144.57	0.00	1144.57
SBI(2014-15)-ADDCAP FOR 2014-2015 Add cap-	10.25%	0.00	463.49	463.49
BOND XLVII-ADD CAP FOR 2014-2015 Add Cap-	8.93%	0.00	44.00	44.00
BOND XLVIII-ADD CAP FOR 2014-2015 Add Cap-	8.20%	0.00	1372.10	1372.10
<b>Total</b>		<b>81542.64</b>	<b>1879.59</b>	<b>83422.23</b>

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19****(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	81542.64	83422.23	83422.23	83422.23	83422.23
Cumulative Repayments of Loans upto Previous Year	3743.33	7847.33	13025.23	19383.69	25837.53
Net Loans Opening	77799.31	75574.90	70397.00	64038.54	57584.70
ADD: Drawl(s) During the year	1879.59	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan During the year	4104.00	5177.9	6358.46	6453.84	6457.51





<b>Particulars</b>	2014-15	2015-16	2016-17	2017-18	2018-19
Net Closing Loan	75574.90	70397.00	64038.54	57584.70	51127.19
Average Net Loan	76687.11	72985.95	67217.77	60811.62	54355.95
Rate of Interest on Loan (%)	9.0445%	9.0479%	9.0507%	9.0515%	9.0536%
Interest on Loan	6935.97	6603.7	6083.65	5504.38	4921.18

