

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 001/TT/2015**

**Coram:**

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

**Date of Hearing : 20.01.2016**

**Date of Order : 14.03.2016**

**In the matter of:**

Truing up of transmission tariff of 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 transmission system associated with SEWA-II HEP 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 Limited  
Vidyut Bhawan, Vidyut Marg,  
Jaipur – 302 005
2. Ajmer Vidyut Vitran Nigam Limited  
400 KV GSS Building (Ground floor), Ajmer Road,  
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited  
400 KV GSS Building (Ground floor), Ajmer Road,  
Heerapura, Jaipur



4. Jodhpur Vidyut Vitran Nigam Limited  
400 KV GSS Building (Ground floor), Ajmer Road,  
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board  
Vidyut Bhawan, Kumar House Complex Building II  
Shimla – 171 004
6. Punjab State Power Corporation Limited,  
Thermal Shed TIA, Near 22 Phatak,  
Patiala – 147 001
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 Limited  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow – 226 001
10. Delhi Transco Limited  
Shakti Sadan, Kotla Road,  
New Delhi – 110 002
11. BSES Yamuna Power Limited  
BSES Bhawan, Nehru Place,  
New Delhi
12. BSES Rajdhani Power Limited  
BSES Bhawan, Nehru Place,  
New Delhi
13. North Delhi Power Limited  
Power Trading & Load Dispatch group  
Cennet Building, Adjacent to 66/11 KV Pitampura-3  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi – 110 034
14. Chandigarh Administration  
Sector-9, Chandigarh



15. Uttarakhand Power Corporation Limited  
Urja Bhawan, Kanwali Road,  
Dehradun
16. North Central Railway  
Allahabad
17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi – 110 002

.....Respondents

The following were present:-

For Petitioner: Shri M.M Mondal, PGCIL  
Shri S.K Venkatesan, PGCIL  
Smt. Sangeeta Edwards, PGCIL  
Shri S. C. Taneja, PGCIL  
Shri Y. K. Sehgal, PGCIL  
Shri Nitish Kumar, PGCIL  
Shri G. C. Dhal, PGCIL  
Shri Amit Yadav, PGCIL  
Shri Vinod Kumar Yadav, PGCIL  
Shri Rakesh Prasad, PGCIL  
Shri S. S. Raju, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri Anshul Garg, PGCIL

For Respondent: None.

### **ORDER**

The present petition has been preferred by Power Grid Corporation of India Ltd. (“the petitioner”), for truing up of capital expenditure and tariff of transmission system associated with SEWA-II HEP in Northern Region (hereinafter referred as “transmission asset”) under Regulation 6 of 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 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.

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

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 20.1.2016. None of the respondents have filed their reply. In response to letter dated 19.1.2016, the petitioner has submitted its replies vide affidavit dated 3.2.2016. 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 administrative approval and expenditure sanction for the transmission project was accorded by Board of Directors of PGCIL vide C/CP/SEWA-II dated 18.7.2005 for ₹9847 lakh, including IDC of ₹473 (based on 4th



Quarter, 2004 price level). The approved apportioned cost of Asset-I is ₹7225.50 lakh and Asset-II is ₹718.64 lakh.

(b) The date of the commercial operation of the assets is as given below:-

<b>Asset</b>	<b>Actual DOCO</b>
One circuit of 132kV D/C SEWA-II Hiranagar line along with associated bays at Hiranagar Sub-station and one circuit of 132 kV D/C SEWA-II Mahanpur line and associated bays at Mahanpur (hereafter " <b>Asset-I</b> ")	1.9.2009
Second circuit of 132 kV D/C SEWA-II Hiranagar line along with associated bays at Hiranagar Sub-station (hereafter " <b>Asset-II</b> ")	1.7.2010
132 kV S/C SEWA-II Mahanpur-Kathua transmission line along with associated bays at Kathua and 132 kV S/C Mahanpur-Kathua transmission line along with bays at Mahanpur and Kathua (hereafter " <b>Asset-III</b> ")	1.9.2011

(c) The tariff for Asset-I was allowed, from 1.9.2009 (COD of Asset-I) to 31.3.2014, vide order dated 15.2.2011 in Petition No. 73/2010 in accordance with the 2009 Tariff Regulations. Thereafter, the combined tariff for Asset-I and Asset-II was allowed from 1.7.2010 (COD of Asset-II) to 31.3.2014 vide order dated 10.8.2011 in Petition No. 325/2010. Further, the combined tariff of Asset-I, Asset-II and Asset-III from 1.9.2011 (COD of Asset-III) to 31.3.2014 was approved vide order dated 25.4.2012 in Petition No. 95/TT/2011.

(d) The tariff allowed for the instant assets for the tariff period 2009-14 is as under:-



(₹ in lakh)

Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11	2010-11 (Pro-rata)	2011-12	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010		1.7.2010 to 31.3.2011		1.9.2011 to 31.3.2012		
Depreciation	151.39	280.38	238.64	328.75	254.73	452.60	454.16
Interest on Loan	188.75	329.31	279.23	358.13	278.49	463.08	421.72
Return on Equity	150.66	279.12	237.49	327.23	253.25	449.94	451.49
Interest on Working Capital	12.00	22.33	17.85	24.22	21.73	38.18	38.04
O & M Expenses	42.02	76.14	83.47	117.71	125.51	227.47	240.45
<b>Total</b>	<b>544.83</b>	<b>987.28</b>	<b>856.69</b>	<b>1156.04</b>	<b>933.71</b>	<b>1631.27</b>	<b>1605.86</b>

(e) The Commission, vide order dated 15.2.2011 in Petition No. 73/2010, has determined the tariff from 1.9.2009 to 31.3.2014 considering the capital cost of ₹4712.17 lakh for **Asset-I** as on COD of 1.9.2009. Further, in order dated 10.8.2011 in Petition No. 325/2010, the tariff was determined from 1.7.2010 to 31.3.2014 considering the capital cost of ₹5843.68 lakh for **Combined Asset-I & II** as on 1.7.2010 (COD of Asset-II). Further, in order dated 25.4.2012 in Petition No. 95/TT/2011, the tariff was determined from 1.9.2011 to 31.3.2014 considering the capital cost of ₹8006.77 lakh for **Combined Asset-I, II & III** as on 1.9.2011 (COD of Asset-III).

(f) 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 has been determined as discussed below:

#### **Capital Cost**

6. The petitioner has claimed capital cost (including IDC and IEDC) of ₹4901.68 lakh for Asset-I, ₹774.92 lakh for Asset-II and ₹2136.93 lakh for Asset-III as on COD (as per Auditor's Certificate) for the purpose of tariff.

7. 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.”

8. The petitioner has submitted the Auditor's Certificate certifying the capital cost as on COD and additional capitalization claimed thereafter. Accordingly, the capital cost as on COD including IDC and IEDC has been considered as ₹4901.68 lakh for Asset-I as on COD of 1.9.2009, ₹774.92 lakh for Asset-II as on



COD of 1.7.2010 and ₹ 2079.51 lakh for Asset-III as on COD of 1.9.2011 to work out the trued up tariff for the tariff period 2009-14.

### **IDC and IEDC**

9. IDC/IEDC of ₹189.51 lakh and ₹68.65 lakh for **Asset-I** and **Asset-II**, respectively was disallowed vide order dated 10.8.2011 in Petition No. 325/2010. The same was considered by the Commission in its order dated 25.4.2012 in Petition No. 95/TT/2011 as extracted below:

“18. IDC and IEDC of ₹189.51 and ₹68.65 lakh for Asset 1 and Asset 2 respectively for the delayed period of 5 months (April 2009 to August 2009) was disallowed, vide order dated 15.2.2011 in Petition No. 73/2010 which has been upheld by the Hon'ble Appellate Tribunal for Electricity by its order dated 12.1.2012 in Appeal No.104 of 2011.

19. Accordingly, disallowed IDC & IEDC amounting to ₹189.51 lakh and ₹68.65 lakh for Asset 1 and Asset 2 respectively, vide order dated 15.2.2011 in Petition No. 73/2010 and order dated 10.8.2011 in Petition No. 325/2010 has been deducted from the capital cost claimed.”

10. The petitioner has submitted that it has filed an appeal before the Hon'ble Supreme Court against the disallowance of IDC/IEDC and the appeal is pending. The IDC & IEDC amounting to ₹189.51 lakh and ₹68.65 lakh disallowed in case of Asset 1 and Asset 2 respectively, vide order dated 25.4.2012 in Petition No. 95/TT/2011 has been deducted from the capital cost claimed by the petitioner.

11. In case of Asset-III, the Commission vide its order dated 25.4.2012 in Petition No. 95/TT/2011 had condoned the time over-run of 11 months up to 31.3.2009 and 29 months from 1.4.2009 to 1.9.2011. Accordingly, the capital cost excluding IDC and IEDC (without adjustment of excess initial spares) has been considered as ₹4712.17 lakh for Asset-I as on COD i.e. 1.9.2009, and





₹706.27 lakh for Asset-II as on COD i.e. 1.7.2011. In case of Asset-III, capital cost of ₹079.51 lakh as on COD i.e. 1.9.2011 has been considered for truing up of tariff.

### **Initial Spares**

12. Regulation 8 of the 2009 tariff Regulations provides as follows:-

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

(i) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

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

13. The details of initial spares claimed and allowed is given in the table below:-

(₹ in lakh)					
Description	Capital cost as on cut-off date	Initial Spares claimed	Ceiling limit as per Regulation 8 of 2009 regulations	Initial spares worked out and allowed	Excess initial spares claimed
	(a)	(b)	(c)	(d)=((a-b)*c)/(100-c)%	(e)=(b)-(d)
Sub-station					
Asset-I	418.06	3.23	2.50%	10.64	0.00
Asset-II	131.62	0	2.50%	3.37	0.00
Asset-III	455.60	0	2.50%	11.68	0.00
Transmission Line					
Asset-I	5089.15	38.18	0.75%	38.17	0.01
Asset-II	612.18	0.00	0.75%	4.63	0.00
Asset-III	1681.33	0.00	0.75%	12.71	0.00

14. The capital cost upto cut-off date i.e. 31.3.2012, 31.3.2013 and 31.3.2014 in case of Asset-I, Asset-II and Asset-III respectively has been considered. The petitioner has submitted the Auditor's Certificate certifying the capital cost and additional capitalization claimed. The initial spares claimed by the petitioner in case of Asset-II and III are within the ceiling limit specified in the 2009 Tariff Regulations and hence it is allowed. However, initial spares claimed by the petitioner exceeds



by ₹0.01 lakh in case of Asset-I. As such, the excess initial spares of ₹0.01 lakh has been deducted from the capital cost of Asset-I. Accordingly, the capital cost of ₹4712.16 lakh and ₹706.27 in case of Assets-I and II as on COD, excluding IDC/IEDC and excess initial spares has been considered for the purpose of truing up. In case of Asset-III, capital cost of ₹2079.51 lakh as on COD has been considered.

### **Additional Capital Expenditure**

15. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations. Clause (1), sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

**“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...;”

16. The petitioner has submitted the Auditor’s Certificate to justify its additional capitalization incurred during 2009-14 for Asset-I, II and III. As the total capital cost including additional capital expenditure during 2009-14 period is within the approved apportioned cost, we have considered the petitioner’s submission and allowed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

							(₹ in lakh)	
Particulars	Capital cost as on	Additional Capital Expenditure (2009-14)				Total Add	Capital Cost as	



	COD	2009-10	2010-11 (1.4.2011 to 30.6.2011)	2010-11 (1.7.2011 to 31.3.2011)	2011-12 (1.4.2011- 31.8.2011)	2011-12 (1.9.2011 to 31.3.2012)	2012-13	2013-14	Cap	on 31.3.2014
Asset-I (COD- 1.9.2009): Approved apportioned cost: ₹7225.50 lakh										
Approved in order dtd 15.2.2011 in Petition No.73/2010	4712.17	425.24	369.80							
Approved in this order	4712.16 (=4712.17-0.01)	224.83	30.47 <sup>#</sup>	183.52 <sup>#</sup>						
Combined Asset-I&II (COD- 1.7.2010): Approved apportioned cost: ₹7944.14lakh										
Approved in order dtd 10.8.2011 in Petition No.325/2010	5843.68		388.87		14.46					
Approved in this order	5673.74 (Asset-I: 712.16+224.83+30.47 + Asset-II:706.27)		194.35 (Asset-I: 183.52 + Asset-II:10.83)		32.32*	350.60*				
Combined Asset-I, II & III (COD- 1.9.2011): Approved apportioned cost: ₹9847.00 lakh										
Approved in order dtd 25.4.2012 in Petition No.95/TT/2011	8006.77				543.30	59.00	0.00	602.30	8609.07	
Approved in this order	8037.33 (Asset-I&II: 5673.74+194.35+32.32 + Asset-III:2136.93)				394.80 (Asset-I&II 350.60+ Asset-III: 44.20)		136.44	13.90	545.14	8582.47

# Pro-rata allocation of additional capitalization of ₹213.99 lakh for Asset-I incurred in 2010-11

\* Pro-rata allocation of additional capitalization of ₹382.92 lakh for Combined Asset-I&II incurred in 2011-12

### **Debt: Equity**

17. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provide that:-

“(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.”

18. The petitioner has claimed true up Annual Fixed Charge based on debt-equity ratio of 70:30 admitted as on 1.9.2009/1.7.2010/1.9.2011, i.e., as on COD by the Commission in its order dated 25.4.2012 in Petition No. 95/TT/2011. The admitted debt:equity ratio of 70:30 as on COD of 1.9.2009 for Asset-I, 1.7.2010 for Asset-II and 1.9.2011 for Asset-III has been considered for the purpose of trueing up of the approved tariff of tariff period 2011-14, as given under:-

(₹ in lakh)		
Funding	Amount	(%)
<b>Asset-I (as on COD 1.9.2009)</b>		
Debt	3298.51	70.00
Equity	1413.65	30.00
<b>Total</b>	<b>4712.16</b>	<b>100.00</b>
<b>Combined Asset-I&amp;II (as on COD 1.7.2010)</b>		
Debt	3971.61	70.00
Equity	1702.12	30.00
<b>Total</b>	<b>5673.73</b>	<b>100.00</b>
<b>Combined Asset-I, II &amp; III (as on COD 1.9.2011)</b>		
Debt	5626.13	70.00
Equity	2411.20	30.00
<b>Total</b>	<b>8037.33</b>	<b>100.00</b>

19. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for Asset-I, Asset-II and Asset-III. In this regard, the petitioner was directed to provide an undertaking on affidavit that actual equity infused for the additional capitalisation in 2011-12 is not less than 30%. In response, the petitioner vide affidavit dated 3.2.2016 has submitted that for additional capitalization of Asset-I, II & III in 2009-10 to 2013-14, the actual debt



equity ratio is 70:30 in accordance with Regulation 12(1) of the 2009 Tariff Regulations.

20. The overall debt equity ratio as on 31.3.2014 for Combined Asset-I, II & III including additional capitalization is as under:-

(₹ in lakh)		
Funding	Amount	(%)
<b>Combined Asset-I, II &amp; III</b>		
Debt	6007.73	70.00
Equity	2574.74	30.00
<b>Total</b>	<b>8582.47</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

21. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

22. 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 and accordingly calculated the IOL based on 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 allowed is as follows:-

(₹ in lakh)



Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Approved vide order dated 15.2.2011, 10.8.2011 & 25.4.2012	188.75	329.31*	279.23	358.13*	278.49	463.08	421.72
As claimed by petitioner	185.21	80.33	266.31	148.58	278.16	460.18	422.06
Allowed after true up	185.21	80.33	266.31	148.46	278.00	459.66	421.58

\* Figures for full year not on pro-rata basis

23. There is variation in interest on loan due to variation in capital cost as on COD and variation in actual additional capitalization during 2009-14 tariff period.

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

24. 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.”

25. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 20.1.2014. 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 variation in 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)) %
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

26. Accordingly, the ROE as trued up is as shown in the table below:-

**(₹ in lakh)**

Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Approved vide orders dated 15.2.2011, 10.8.2011 & 25.4.2012	150.66	279.12*	237.49	327.23*	253.25	449.94	451.49
As claimed by petitioner	157.67	73.23	251.35	146.87	279.38	494.63	505.00
Allowed after true up	157.66	73.23	251.35	146.77	279.24	494.13	504.50

\* Figures for full year not on pro-rata basis



27. There is variation in return on equity due to variation in equity on account of additional capitalisation and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

28. 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”

29. 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.”

30. The Commission in its orders dated 15.2.2011, 10.8.2011 and 25.4.2012 in Petition No. 73/2010, Petition No. 325/2010 and Petition No. 95/TT/2011,





respectively, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

31. 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 34 years for the Asset-I, 34 years for Combined Asset-I & II and 34 years for Combined Asset-I, II & III. 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		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Approved vide order dated 15.2.2011, 10.8.2011 & 25.4.2012	151.39	280.38*	238.64	328.75*	254.73	452.60	454.16
As claimed by petitioner	148.28	66.42	228.04	133.13	253.56	449.03	453.00
Allowed after true up	148.27	66.41	228.03	133.04	253.42	448.57	452.55

\* Figures for full year not on pro-rata basis

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



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

33. 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 was approved in the earlier orders. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and they are as follows:-

(₹ in lakh)

Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Approved vide order dated 15.2.2011, 10.8.2011 & 25.4.2012	42.02	76.14*	83.47	117.71*	125.51	227.47	240.45
As claimed by petitioner	42.02	19.03	83.47	49.05	125.51	227.47	240.45
Allowed after true up	42.02	19.03	83.47	49.05	125.51	227.47	240.45

\* Figures for full year not on pro-rata basis

### **Interest on working capital (“IWC”)**

34. 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.



35. The petitioner has submitted the rate of interest on working capital as 12.25% for the period 1.9.2009 to 30.6.2010, 11.00% for the period 1.7.2010 to 31.8.2011 and 11.75% for the period 1.9.2011 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.

36. The Commission in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, has considered the rate of interest on working capital on normative basis, as follows:-

- a. equal to State Bank of India short-term Prime Lending Rate on 1.4.2009 (= 12.25%) for the period 1.9.2009 to 30.6.2010,
- b. equal to State Bank of India Base Rate as applicable as on 1.4.2010 plus 350 basis points (=7.50% plus 350 basis points = 11.00%) for the period 1.7.2010 to 31.8.2011.
- c. equal to State Bank of India Base Rate as applicable as on 1.4.2011 plus 350 basis points (=8.25% plus 350 basis points = 11.75%) for the period 1.9.2011 to 31.3.2014.

37. Therefore, interest rate has been considered as 12.25% for the period 1.9.2009 to 30.6.2010, 11.00% for the period 1.7.2010 to 31.8.2011 and 11.75% for the period 1.9.2011 to 31.3.2014 to work out the interest on working capital in the instant case.



38. The IWC trued up is as under:-

(₹ in lakh)

Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Maintenance Spares	6.30	2.86	12.52	7.36	18.83	34.12	36.07
O & M expenses	3.50	1.59	6.96	4.09	10.46	18.96	20.04
Receivables	90.92	40.76	141.14	81.25	159.73	278.13	276.36
Total	100.72	45.20	160.62	92.70	189.02	331.20	332.46
Rate of Interest (%)	12.25%	12.25%	11.00%	11.00%	11.75%	11.75%	11.75%
<b>Interest</b>	<b>12.34</b>	<b>5.54</b>	<b>17.67</b>	<b>10.20</b>	<b>22.21</b>	<b>38.92</b>	<b>39.06</b>

(₹ in lakh)

Particulars	Asset-I		Combined Asset-I & II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Approved vide order dated 15.2.2011, 10.8.2011 & 25.4.2012	12.00	22.33*	17.85	24.22*	21.73	38.18	38.04
As claimed by petitioner	12.34	5.54	17.67	10.20	22.22	38.95	39.09
Allowed after true up	12.34	5.54	17.67	10.20	22.21	38.92	39.06

\* Figures for full year not on pro-rata basis

39. The variation in IWC is on account of variation in IOL, depreciation and ROE due to variation in capital cost, 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

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

(₹  
in lakh)

Particulars	Asset-I		Combined Asset-I&II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
<b>Gross Block</b>							
Opening Gross Block	4712.16	4936.99	5673.73	5868.08	8037.33	8432.13	8568.57
Additional Capitalization	224.83	213.99	194.35	382.92	394.80	136.44	13.90
Closing Gross block	4936.99	5150.98	5868.08	6251.00	8432.13	8568.57	8582.47
Average Gross block	4824.57	5043.98	5770.90	6059.54	8234.73	8500.35	8575.52
<b>Depreciation</b>							
Rate of Depreciation (%)	5.268	5.267	5.269	5.269	3.077	5.277	5.277
Depreciable Value	4342.12	4539.59	5193.81	5453.58	7411.26	7650.31	7717.97
Elapsed Life of the assets at beginning of the year	0	1	0	1	0	1	2
Weighted Balance Useful life of the assets	34	33	34	33	34	33	32
Remaining Depreciable Value	4342.12	4391.31	4979.13	5010.87	6835.50	6821.14	6440.23
Depreciation	148.27	66.41	228.03	133.04	253.42	448.57	452.55
<b>Interest on Loan</b>							
Gross Normative Loan	3298.51	3455.89	3971.61	4107.65	5626.13	5902.49	5998.00
Cumulative Repayment upto	0.00	148.27	214.69	442.72	575.76	829.17	1277.74



Particulars	Asset-I		Combined Asset-I&II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
Previous Year							
Net Loan-Opening	3298.51	3307.62	3756.92	3664.93	5050.37	5073.32	4720.26
Additions	157.38	149.79	136.04	268.04	276.36	95.51	9.73
Repayment during the year	148.27	66.41	228.03	133.04	253.42	448.57	452.55
Net Loan-Closing	3307.62	3391.00	3664.93	3799.94	5073.32	4720.26	4277.44
Average Loan	3303.07	3349.31	3710.93	3732.43	5061.85	4896.79	4498.85
Weighted Average Rate of Interest on Loan (%)	9.6123	9.5942	9.5684	9.5462	9.4151	9.3870	9.3708
Interest	185.21	80.33	266.31	148.46	278.00	459.66	421.58
<b>Return on Equity</b>							
Opening Equity	1413.65	1481.10	1702.12	1760.42	2411.20	2529.64	2570.57
Additions	67.45	64.20	58.31	114.88	118.44	40.93	4.17
Closing Equity	1481.10	1545.29	1760.42	1875.30	2529.64	2570.57	2574.74
Average Equity	1447.37	1513.20	1731.27	1817.86	2470.42	2550.10	2572.66
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	16.995	19.931	19.931	20.008	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	18.674	19.358	19.358	19.377	19.377	19.377	19.610
Return on Equity (Pre Tax)	157.66	73.23	251.35	146.77	279.24	494.13	504.50
<b>Interest on Working Capital</b>							
Maintenance Spares	6.30	2.86	12.52	7.36	18.83	34.12	36.07
O & M Expenses	3.50	1.59	6.96	4.09	10.46	18.96	20.04
Receivables	90.92	40.76	141.14	81.25	159.73	278.13	276.36
Total	100.72	45.20	160.62	92.70	189.02	331.20	332.46
Interest	12.34	5.54	17.67	10.20	22.21	38.92	39.06
<b>Annual Transmission</b>							



Particulars	Asset-I		Combined Asset-I&II		Combined Asset-I, II & III		
	2009-10 (Pro-rata)	2010-11 (Pro-rata)	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
	1.9.2009 to 31.3.2010	1.4.2010 to 30.6.2010	1.7.2010 to 31.3.2011	1.4.2011 to 31.8.2011	1.9.2011 to 31.3.2012		
<b>Charges</b>							
Depreciation	148.27	66.41	228.03	133.04	253.42	448.57	452.55
Interest on Loan	185.21	80.33	266.31	148.46	278.00	459.66	421.58
Return on Equity	157.66	73.23	251.35	146.77	279.24	494.13	504.50
Interest on Working Capital	12.34	5.54	17.67	10.20	22.21	38.92	39.06
O & M Expenses	42.02	19.03	83.47	49.05	125.51	227.47	240.45
<b>Total</b>	<b>545.51</b>	<b>244.55</b>	<b>846.83</b>	<b>487.51</b>	<b>958.38</b>	<b>1668.75</b>	<b>1658.14</b>

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

41. The petitioner has claimed the transmission charges as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	454.08	454.87	454.87	454.87	454.87
Interest on Loan	380.64	338.82	295.94	253.07	210.20
Return on equity	506.34	507.28	507.28	507.28	507.28
Interest on Working Capital	43.06	42.54	41.97	41.41	40.88
O & M Expenses	220.64	227.96	235.58	243.31	251.54
<b>Total</b>	<b>1604.76</b>	<b>1571.47</b>	<b>1535.64</b>	<b>1499.94</b>	<b>1464.77</b>

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	33.10	34.19	35.34	36.50	37.73
O & M expenses	18.39	19.00	19.63	20.28	20.96
Receivables	267.46	261.91	255.94	249.99	244.13
Total	318.95	315.10	310.91	306.77	302.82
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>43.06</b>	<b>42.54</b>	<b>41.97</b>	<b>41.41</b>	<b>40.88</b>

### **Capital Cost**



43. 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.”

44. The petitioner has claimed capital cost of ₹8591.08 lakh as on 31.3.2014 and has projected additional capital expenditure of ₹31.67 lakh during 2014-15 for Combined Asset-I, II & III. The trued up capital cost of ₹8582.47 lakh as on 31.3.2014 is considered to work out tariff for tariff period 2014-19.

#### **Additional Capital Expenditure**

45. The petitioner has claimed additional expenditure of ₹31.67 lakh during 2014-15 for Combined Asset- I, II & III during 2014-15 for the tariff period 2014-19 towards balance and retention payments under Clause 1 of Regulation 14 of the 2014 Tariff Regulations.

46. The petitioner was directed vide letter dated 19.1.2016 to confirm the amount of balance and retention payment yet to be made along with the details of contract for which the payment has been retained. In response, the petitioner vide





its affidavit dated 3.2.2016 has submitted that projected expenditure of ₹31.67 lakh during 2014-15 is on account of contract closing and final settlement of bill.

47. Clause 1 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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

48. The total capital cost of the transmission asset for the asset including additional capitalisation of ₹31.67 lakh works out to ₹8614.14 lakh, which is less than the approved apportioned cost of ₹9847.00 lakh for the asset given in the investment approval dated 18.7.2005. Accordingly, additional capitalisation of ₹31.67 lakh in 2014-15 towards balance and retention payment claimed by the petitioner is allowed in accordance with Clause 1(i) of Regulation 14 of the 2014 Tariff Regulations. 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 of 2014-19 period.

**(₹ in lakh)**



<b>Apportioned approved cost: ₹9847.00 lakh</b>							
Capital cost as on 31.3.2014	Additional capitalisation					Total additional capitalisation	Total capital cost including additional capitalisation
	2014-15	2015-16	2016- 17	2017-18	2018- 19		
8582.47	31.67	0.00	0.00	0.00	0.00	31.67	8614.14

### **Debt:Equity Ratio**

49. 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.”

50. The petitioner has considered debt: equity ratio as 70.00:30.00 as on 31.3.2014. The admitted debt:equity ratio of 70.00:30.00 has been considered as opening debt:equity ratio as on 1.4.2014. Further, for additional capital expenditure during 2014-19 period, the normative debt:equity ratio of 70:30 as proposed by the petitioner has been considered. The details of the debt:equity including additional capitalisation during 2014-19 period for Combined Asset-I, II & III considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

<b>(₹ in lakh)</b>		
Funding	Amount	(%)
<b>Combined Asset-I, II &amp; III</b>		
Debt	6029.90	70.00
Equity	2584.24	30.00
<b>Total</b>	<b>8614.14</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**



51. 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.”

52. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014.

53. It is observed that the debt funding in the instant case is through bonds, which bear a fixed interest rate. 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	6007.73	6029.90	6029.90	6029.90	6029.90
Cumulative Repayment upto previous year	1730.28	2183.91	2638.33	3092.74	3547.16
Net Loan-Opening	4277.44	3845.99	3391.57	2937.15	2482.74
Additions during the year	22.17	0.00	0.00	0.00	0.00
Repayment during the	453.63	454.42	454.42	454.42	454.42



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
year					
Net Loan-Closing	3845.99	3391.57	2937.15	2482.74	2028.32
Average Loan	4061.72	3618.78	3164.36	2709.95	2255.53
Rate of Interest (%)	9.3607	9.3521	9.3413	9.3271	9.3075
<b>Interest</b>	<b>380.20</b>	<b>338.43</b>	<b>295.59</b>	<b>252.76</b>	<b>209.93</b>

### **Return on Equity (“ROE”)**

54. Clause (1) & (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.”

55. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE 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.

56. 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.

57. 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 for Combined Asset-I, II & III is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2574.74	2584.24	2584.24	2584.24	2584.24
Additional Capitalization	9.50	0.00	0.00	0.00	0.00
Closing Equity	2584.24	2584.24	2584.24	2584.24	2584.24
Average Equity	2579.49	2584.24	2584.24	2584.24	2584.24
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>505.84</b>	<b>506.77</b>	<b>506.77</b>	<b>506.77</b>	<b>506.77</b>

### **Depreciation**

58. 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."

59. The petitioner has computed depreciation considering capital expenditure of ₹8582.47 lakh as on 31.3.2014.

60. We have considered the submissions of the petitioner and have allowed depreciation considering capital expenditure of ₹8582.47 lakh as on 31.3.2014 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	8582.47	8614.14	8614.14	8614.14	8614.14
Additional Capitalisation	31.67	0.00	0.00	0.00	0.00
Gross block at the end of the year	8614.14	8614.14	8614.14	8614.14	8614.14
Average gross block	8598.30	8614.14	8614.14	8614.14	8614.14
Rate of Depreciation (%)	5.276	5.275	5.275	5.275	5.275
Depreciable Value	7738.47	7752.72	7752.72	7752.72	7752.72
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	6008.19	5568.82	5114.40	4659.98	4205.57
<b>Depreciation</b>	<b>453.63</b>	<b>454.42</b>	<b>454.42</b>	<b>454.42</b>	<b>454.42</b>

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

61. 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 have been worked out as given hereunder:-

Particulars		(₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19
Actual line length (km)	Double Circuit (Single Conductor)	131.167	131.167	131.167	131.167	131.167
Actual (No. of bays)	132 kV & below Bays	6	6	6	6	6
Norms as per Regulation	Double Circuit (Single Conductor) (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
	132 kV & below Bays (₹ lakh/bay)	30.15	31.15	32.18	33.25	34.36
<b>Total</b>		<b>220.64</b>	<b>227.96</b>	<b>235.58</b>	<b>243.31</b>	<b>251.54</b>



62. 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 Company is due during 2014-19 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.

63. 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.

64. The details of O&M Expenses allowed are given hereunder:-

Particulars	Year				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Allowed</b>	<b>220.64</b>	<b>227.96</b>	<b>235.58</b>	<b>243.31</b>	<b>251.54</b>

(₹ in lakh)

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

65. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-





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

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month”

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

66. The petitioner has submitted that it has computed Interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.

67. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The 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	33.10	34.19	35.34	36.50	37.73
O & M Expenses	18.39	19.00	19.63	20.28	20.96
Receivables	267.22	261.68	255.72	249.77	243.92
Total	318.71	314.87	310.68	306.55	302.61
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>43.03</b>	<b>42.51</b>	<b>41.94</b>	<b>41.38</b>	<b>40.85</b>

## **Annual Transmission Charges**

68. The detailed computation of the various components of the annual fixed charges for the Combined Asset - I, II & III for the tariff period 2014-19 is summarised below:-



(₹ in lakh)

Particulars	Combined Asset- I, II & III				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Gross Block</b>					
Opening Gross Block	8582.47	8614.14	8614.14	8614.14	8614.14
Additional Capitalisation	31.67	0.00	0.00	0.00	0.00
Closing Gross Block	8614.14	8614.14	8614.14	8614.14	8614.14
Average Gross Block	8598.30	8614.14	8614.14	8614.14	8614.14
<b>Depreciation</b>					
Rate of Depreciation	5.276	5.275	5.275	5.275	5.275
Depreciable Value	7738.47	7752.72	7752.72	7752.72	7752.72
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	6008.19	5568.82	5114.40	4659.98	4205.57
Depreciation	453.63	454.42	454.42	454.42	454.42
<b>Interest on Loan</b>					
Gross Normative Loan	6007.73	6029.90	6029.90	6029.90	6029.90
Cumulative Repayment upto Previous Year	1730.28	2183.91	2638.33	3092.74	3547.16
Net Loan-Opening	4277.44	3845.99	3391.57	2937.15	2482.74
Additions	22.17	0.00	0.00	0.00	0.00
Repayment during the year	453.63	454.42	454.42	454.42	454.42
Net Loan-Closing	3845.99	3391.57	2937.15	2482.74	2028.32
Average Loan	4061.72	3618.78	3164.36	2709.95	2255.53
Weighted Average Rate of Interest on Loan (%)	9.3607	9.3521	9.3413	9.3271	9.3075
Interest	380.20	338.43	295.59	252.76	209.93
<b>Return on Equity</b>					
Opening Equity	2574.74	2584.24	2584.24	2584.24	2584.24
Additions	9.50	0.00	0.00	0.00	0.00
Closing Equity	2584.24	2584.24	2584.24	2584.24	2584.24
Average Equity	2579.49	2584.24	2584.24	2584.24	2584.24
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961



Particulars	Combined Asset- I, II & III				
	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
Return on Equity (Pre Tax)	505.84	506.77	506.77	506.77	506.77
<b>Interest on Working Capital</b>					
Maintenance Spares	33.10	34.19	35.34	36.50	37.73
O & M expenses	18.39	19.00	19.63	20.28	20.96
Receivables	267.22	261.68	255.72	249.77	243.92
<b>Total</b>	<b>318.71</b>	<b>314.87</b>	<b>310.68</b>	<b>306.55</b>	<b>302.61</b>
Interest	43.03	42.51	41.94	41.38	40.85
<b>Annual Transmission Charges</b>					
Depreciation	453.63	454.42	454.42	454.42	454.42
Interest on Loan	380.20	338.43	295.59	252.76	209.93
Return on Equity	505.84	506.77	506.77	506.77	506.77
Interest on Working Capital	43.03	42.51	41.94	41.38	40.85
O & M Expenses	220.64	227.96	235.58	243.31	251.54
<b>Total</b>	<b>1603.34</b>	<b>1570.08</b>	<b>1534.30</b>	<b>1498.64</b>	<b>1463.52</b>

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

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

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

70. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and



charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

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

### **Sharing of Transmission Charges**

72. 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.

73. This order disposes of Petition No. 001/TT/2015.

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)**

Particulars	Period from 1.9.2009 to 30.6.2010				Period from from 1.7.2010 to 31.8.2011			
	Asset-I				Combined Asset-I&II			
	Interest Rate (%)	Loan deployed as on 1.9.2009	Addition from 1.9.2009 to 30.6.2010	Total	Interest Rate (%)	Loan deployed as on 1.7.2010	Addition from 1.7.2010 to 31.8.2011	Total
BOND XXIV- DOCO DRAWL ON 26-MAR-2007-	9.95	1650.00	0.00	1650.00	9.95	1811.45	0.00	1811.45
BOND XXVII- DOCO DRAWL ON 31-MAR-2008-	9.47	660.00	0.00	660.00	9.47	810.00	0.00	810.00
BOND XXVIII- DOCO DRAWL ON 15-DEC-2008-	9.33	570.00	0.00	570.00	9.33	720.00	0.00	720.00
BOND XXIX - ADDCAP FOR 2009-2010 Add Cap-	9.20	0.00	48.05	48.05	9.20	0.00	0.00	0.00
BOND XXIX- DOCO-	9.20	230.00	0.00	230.00	9.20	311.00	0.00	311.00
BOND XXX - ADDCAP FOR ADDCAP FOR 2010-2011 Add Cap-	8.80	0.00	21.33	21.33	8.80	0.00	81.59	81.59
BOND XXX- ADDCAP FOR 2009-2010 Add Cap-	8.80	0.00	109.33	109.33	8.80	0.00	0.00	0.00
BOND XXX- DOCO-	8.80	188.50	0.00	188.50	8.80	319.16	0.00	319.16
BOND XXXI- DOCO DRAWL ON 25-FEB-2010-	8.90	0.00	0.00	0.00	8.90	0.00	0.00	0.00
BOND XXXIII- DOCO DRAWL ON 08-JUL-2010-	8.64	0.00	0.00	0.00	8.64	0.00	0.00	0.00
BOND-XXXIV- ADDCAP FOR 2010-2011 Add Cap-	8.84	0.00	0.00	0.00	8.84	0.00	54.45	54.45
BOND-XXXIV- ADDCAP FOR 2011-2012 Add Cap-	8.84	0.00	0.00	0.00	8.84	0.00	22.63	22.63
BOND-XXXIV- DOCO-	8.84	0.00	0.00	0.00	8.84	0.00	0.00	0.00



Particulars	Period from 1.9.2009 to 30.6.2010				Period from from 1.7.2010 to 31.8.2011			
	Asset-I				Combined Asset-I&II			
	Interest Rate (%)	Loan deployed as on 1.9.2009	Addition from 1.9.2009 to 30.6.2010	Total	Interest Rate (%)	Loan deployed as on 1.7.2010	Addition from 1.7.2010 to 31.8.2011	Total
BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap-	9.35	0.00	0.00	0.00	9.35	0.00	0.00	0.00
BOND XXXVIII-ADDCA FOR 2011-2012 Add Cap-	9.25	0.00	0.00	0.00	9.25	0.00	0.00	0.00
BOND XXXVIII-ADDCAP FOR 2012-2013 Add Cap-	9.25	0.00	0.00	0.00	9.25	0.00	0.00	0.00
BOND XL-ADDCAP FOR 2012-2013 Add Cap-	9.30	0.00	0.00	0.00	9.30	0.00	0.00	0.00
BOND XL-ADDCAP FOR 2013-2014 ADD CAP-	9.30	0.00	0.00	0.00	9.30	0.00	0.00	0.00
<b>Total</b>		<b>3298.50</b>	<b>178.71</b>	<b>3477.21</b>		<b>3971.61</b>	<b>158.67</b>	<b>4130.28</b>

(₹ in lakh)

Particulars	Period from 1.9.2011 to 31.3.2014			
	Combined Asset-I, II & III			
	Interest Rate (%)	Loan deployed as on 1.9.2011	Addition from 1.9.2011 to 31.3.2014	Total
BOND XXIV-DOCO DRAWL ON 26-MAR-2007-	9.95	2122.00	0.00	2122.00
BOND XXVII-DOCO DRAWL ON 31-MAR-2008-	9.47	900.00	0.00	900.00
BOND XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	920.00	0.00	920.00
BOND XXIX -ADDCAP FOR 2009-2010 Add Cap-	9.20	0.00	0.00	0.00
BOND XXIX-DOCO-	9.20	311.00	0.00	311.00
BOND XXX -ADDCAP FOR ADDCAP FOR 2010-2011 Add Cap-	8.80	0.00	0.00	0.00
BOND XXX-ADDCAP FOR 2009-2010 Add Cap-	8.80	0.00	0.00	0.00
BOND XXX-DOCO-	8.80	708.75	0.00	708.75
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	182.00	0.00	182.00



Particulars	Period from 1.9.2011 to 31.3.2014			
	Combined Asset-I, II & III			
	Interest Rate (%)	Loan deployed as on 1.9.2011	Addition from 1.9.2011 to 31.3.2014	Total
BOND XXXIII-DOCO DRAWL ON 08-JUL-2010-	8.64	185.00	0.00	185.00
BOND-XXXIV-ADDCAP FOR 2010-2011 Add Cap-	8.84	0.00	0.00	0.00
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap-	8.84	0.00	159.62	159.62
BOND-XXXIV-DOCO-	8.84	297.38	0.00	297.38
BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap-	9.35	0.00	100.00	100.00
BOND XXXVIII-ADDCA FOR 2011-2012 Add Cap-	9.25	0.00	22.76	22.76
BOND XXXVIII-ADDCAP FOR 2012-2013 Add Cap-	9.25	0.00	52.24	52.24
BOND XL-ADDCAP FOR 2012-2013 Add Cap-	9.30	0.00	43.27	43.27
BOND XL-ADDCAP FOR 2013-2014 ADD CAP-	9.30	0.00	9.73	9.73
<b>Total</b>		<b>5626.13</b>	<b>387.62</b>	<b>6013.75</b>

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

(₹ in lakh)

Particulars	Asset-I		Combined Asset-I&II		Combined Asset-I, II & III		
	2009-10 1.9.2009 to 31.3.2010	2010-11 1.4.2010 to 30.6.2010	2010-11 1.7.2010 to 31.3.2011	2011-12 1.4.2011 to 31.8.2011	2011-12 1.9.2011 to 31.3.2012	2012-13	2013-14
Gross Opening Loan	3298.50	3455.88	3971.61	4107.65	5626.13	5908.51	6004.02
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	150.95	176.83	428.66	783.08
Net Loans Opening	3298.50	3455.88	3971.61	3956.70	5449.30	5479.85	5220.94
Add: Drawl(s) during the year	157.38	21.33	136.04	22.63	282.38	95.51	9.73
Less: Repayment(s) of Loan during the year	0.00	0.00	150.95	0.00	251.83	354.42	428.65
Net Closing Loan	3455.88	3477.21	3956.70	3979.33	5479.85	5220.94	4802.02
Average Net Loan	3377.19	3466.55	3964.16	3968.02	5464.58	5350.40	5011.48
Interest on Loan	324.63	332.59	379.31	378.79	514.50	502.24	469.61



Particulars	Asset-I		Combined Asset-I&II		Combined Asset-I, II & III		
	2009-10 1.9.2009 to 31.3.2010	2010-11 1.4.2010 to 30.6.2010	2010-11 1.7.2010 to 31.3.2011	2011-12 1.4.2011 to 31.8.2011	2011-12 1.9.2011 to 31.3.2012	2012-13	2013-14
Rate of Interest on Loan (%)	9.6123	9.5942	9.5684	9.5462	9.4151	9.3870	9.3708





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

Particulars	2014-19			
	Combined Asset-I, II & III			
	Interest Rate (%)	Loan deployed as on 1.4.2014	Addition from 1.4.2014 to 31.3.2019	Total
BOND XXIV-DOCO DRAWL ON 26-MAR-2007-	9.95	2122.00	0.00	2122.00
BOND XXVII-DOCO DRAWL ON 31-MAR-2008-	9.47	900.00	0.00	900.00
BOND XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	920.00	0.00	920.00
BOND XXIX -ADDCAP FOR 2009-2010 Add Cap-	9.20	0.00	0.00	0.00
BOND XXIX-DOCO-	9.20	311.00	0.00	311.00
BOND XXX -ADDCAP FOR ADDCAP FOR 2010-2011 Add Cap-	8.80	0.00	0.00	0.00
BOND XXX-ADDCAP FOR 2009-2010 Add Cap-	8.80	0.00	0.00	0.00
BOND XXX-DOCO-	8.80	708.75	0.00	708.75
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	182.00	0.00	182.00
BOND XXXIII-DOCO DRAWL ON 08-JUL-2010-	8.64	185.00	0.00	185.00
BOND-XXXIV-ADDCAP FOR 2010-2011 Add Cap-	8.84	0.00	0.00	0.00
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap-	8.84	159.62	0.00	159.62
BOND-XXXIV-DOCO-	8.84	297.38	0.00	297.38
BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap-	9.35	100.00	0.00	100.00
BOND XXXVIII-ADDCA FOR 2011-2012 Add Cap-	9.25	22.76	0.00	22.76
BOND XXXVIII-ADDCAP FOR 2012-2013 Add Cap-	9.25	52.24	0.00	52.24
BOND XL-ADDCAP FOR 2012-2013 Add Cap-	9.30	43.27	0.00	43.27
BOND XL-ADDCAP FOR 2013-2014 ADD CAP-	9.30	9.73	0.00	9.73
<b>Total</b>		<b>6013.75</b>	<b>0.00</b>	<b>6013.75</b>



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

(₹ in lakh)

Particulars	Combined Asset-I, II & III				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	6013.75	6013.75	6013.75	6013.75	6013.75
Cumulative Repayments of Loans upto Previous Year	1211.73	1693.88	2176.03	2669.27	3162.51
Net Loans Opening	4802.02	4319.87	3837.72	3344.48	2851.24
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	482.15	482.15	493.24	493.24	493.24
Net Closing Loan	4319.87	3837.72	3344.48	2851.24	2358.00
Average Net Loan	4560.95	4078.80	3591.10	3097.86	2604.62
Interest on Loan	426.93	381.45	335.46	288.94	242.42
Rate of Interest on Loan (%)	9.3607	9.3521	9.3413	9.3271	9.3075

