

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 538/TT/2014**

**Coram:**

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

**Date of Hearing : 13.01.2016  
Date of Order : 25.01.2016**

**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 400 kV Jeypore-Talcher Transmission System in Eastern 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. North Bihar Power Distribution Company Limited  
2<sup>nd</sup> Floor Vidyut Bhawan  
Bailey Road, Patna-800001
2. South Bihar Power Distribution Company Limited  
2<sup>nd</sup> Floor Vidyut Bhawan  
Bailey Road, Patna-800001
3. West Bengal State Electricity Distribution Company Limited  
Bidyut Bhawan, Bidhan Nagar,  
Salt Lake City, Kolkata-700091



4. Grid Corporation of Orissa Ltd.  
Shahid Nagar,  
Bhubaneswar- 751007
5. Damodar Valley Corporation  
DVC Tower, Maniktala  
Civic Centre, VIP Road,  
Kolkata-700054
6. Power Department  
Govt of Sikkim,  
Gangtok-737101
7. Jharkhand State Electricity Board  
Doranda, Ranchi-834002

.....**Respondents**

The following were present:-

For Petitioner:        Shri M. M. Mondal, PGCIL  
                              Shri Vivek Kumar Singh, PGCIL  
                              Shri S. S. Raju, PGCIL  
                              Shri D. K. Karma, PGCIL  
                              Shri J. Mazumder, PGCIL  
                              Shri Shashi Bhushan, PGCIL

For Respondent:        None

### **ORDER**

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner"), a transmission licensee, for truing up of capital expenditure and tariff for 400 kV Jeypore-Talcher Transmission System in Eastern 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 1.4.2009 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. 400 kV Indravati-Rengali line is also a part of the transmission system. The petitioner has preferred determination of tariff by considering additional capitalization due to tower strengthening work of 400 kV Indravati-Rengali line

2. The respondents are distribution licensees and transmission licensees who are procuring transmission service from the petitioner, mainly beneficiaries of the Eastern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. None of the respondents have filed reply to the petition. The hearing in this matter was held on 13.1.2016. 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 petitioner has developed the transmission asset in the Eastern Region. The commercial operation of the instant transmission asset is 1.12.1990.



(b) The tariff from 1.4.2004 to 31.3.2009 was allowed vide order dated 14.9.2005 in Petition No. 122/2004 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. Further, the tariff was revised vide order dated 31.3.2008 in Petition No. 122/2004 in the process of implementation of the Judgment of the Appellate Tribunal for Electricity (ATE) dated 16.5.2007 in Appeal No. 121 of 2005 resulting change in capital cost as on 31.3.2009.

(c) The tariff for the 2009-14 period was allowed vide order dated 8.3.2011 in Petition No. 195/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	256.97	256.97	256.97	256.97	269.43
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1052.36	1052.36	1052.36	1052.36	1058.89
Interest on Working Capital	55.90	57.53	59.27	61.10	63.43
O & M Expenses	572.07	604.61	639.36	675.98	714.55
<b>Total</b>	<b>1937.30</b>	<b>1971.47</b>	<b>2007.95</b>	<b>2046.41</b>	<b>2106.31</b>

(d) The Commission, vide order dated 8.3.2011 in Petition No. 195/2010, has determined the tariff for the tariff period 2009-14 based on admitted capital cost of ₹12040.00 lakh as on 31.3.2009.

(e) 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.



(f) The instant petition was filed on 5.12.2014.

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

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

**Capital Cost**

6. The petitioner has claimed admitted capital cost of ₹12040.00 lakh as on 31.3.2009 for the purpose of tariff. Further, the petitioner has not claimed any additional capitalisation for 2009-14 tariff period.

7. Last proviso to Clause (2) of Regulation 7 of the 2009 Tariff Regulations provides that:-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

8. The capital cost admitted as on 31.3.2009 vide order dated 31.3.2008 in Petition No. 122/2004 has been considered as the opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations. The admitted capital cost of ₹12040.00 lakh as on 31.3.2009 has been considered to work out the trued up tariff for the tariff period 2009-14.



### **Additional Capital Expenditure**

9. The petitioner has not claimed any additional capitalization for the tariff period 2009-14. Accordingly, no additional capital expenditure has been considered for the 2009-14 tariff period.

### **Debt: Equity**

10. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:-

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

11. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 50:50 as on 31.3.2009 admitted by the Commission in its order dated 8.3.2011 in Petition No. 195/2010. The transmission assets covered in the instant petition are existing assets, as the COD is prior to 1.4.2009. The admitted debt:equity ratio of 50:50 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

(₹ in lakh)		
Funding	Amount	(%)
Debt	6020.00	50.00
Equity	6020.00	50.00
Total	12040.00	100.00

### **Interest on Loan (“IOL”)**

12. The petitioner has not claimed any interest on loan for the tariff period 2009-14 as the entire loan has already been repaid prior to 1.4.2009. Accordingly, IOL has been considered as NIL for the purpose of truing up of tariff.



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

13. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide 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:  
Rate of pre-tax return on equity = Base rate / (1-t)

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

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

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

14. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 8.3.2011. 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

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 8.3.2011	1052.36	1052.36	1052.36	1052.36	1058.89
As claimed by petitioner	1124.17	1165.35	1166.50	1166.50	1180.52
Allowed after true up	1124.17	1165.35	1166.50	1166.50	1180.52

The variation in return on equity is due to increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

16. 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”

17. 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.”

18. The Commission, in its order dated 8.3.2011, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

19. The weighted average useful life of the transmission asset has been considered in accordance with clause (4) of Regulations 17 read with clause 42 of Regulation 3 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 31 years. 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	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 8.3.2011	256.97	256.97	256.97	256.97	269.43
As claimed by petitioner	256.97	256.97	256.97	256.97	256.97
Allowed after true up	256.97	256.97	256.97	256.97	256.97

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

20. 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 tariff order dated 8.3.2011 in Petition No. 195/2010. Accordingly, the O&M Expenses



claimed by the petitioner, allowed and trued up are the same, and they are as follows:-

	(₹ in lakh)				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 8.3.2011	572.07	604.61	639.36	675.98	714.55
As claimed by petitioner	572.07	604.61	639.36	675.98	714.55
Allowed after true up	572.07	604.61	639.36	675.98	714.55

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

21. 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.

22. The petitioner has submitted that the rate of interest on working capital has been considered as 12.25% 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.

23. The Commission, vide order dated 8.3.2011 in Petition No. 195/2010, has approved rate of interest on working capital as 12.25% as applicable for 2008-09. In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation prior to 1.4.2009, shall be equal to short-term Prime Lending Rate as applicable as on



1.4.2009. The petitioner has submitted that State Bank of India short-term Prime Lending Rate on 1.4.2009 was 12.25% and accordingly, interest rate of 12.25% has been considered to work out the interest on working capital in the instant case.

24. The IWC trued up is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	85.81	90.69	95.90	101.40	107.18
O & M expenses	47.67	50.38	53.28	56.33	59.55
Receivables	335.10	347.80	354.08	360.49	369.62
Total	468.58	488.88	503.26	518.22	536.35
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
<b>Interest</b>	<b>57.40</b>	<b>59.89</b>	<b>61.65</b>	<b>63.48</b>	<b>65.70</b>

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 8.3.2011	55.90	57.53	59.27	61.10	63.43
As claimed by petitioner	57.40	59.89	61.65	63.48	65.70
Allowed after true up	57.40	59.89	61.65	63.48	65.70

25. The variation in IWC is on account of increase in receivables due to variation in ROE on account of applicable MAT rate during 2009-14 tariff period.

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

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Gross Block</b>					
Gross Opening Block	12040.00	12040.00	12040.00	12040.00	12040.00



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Closing Block	12040.00	12040.00	12040.00	12040.00	12040.00
Average Gross Block	12040.00	12040.00	12040.00	12040.00	12040.00
<b>Depreciation</b>					
Rate of Depreciation (%)	2.134	2.134	2.134	2.134	2.134
Depreciable Value	10818.58	10818.58	10818.58	10818.58	10818.58
Elapsed Life (Beginning of the year)	18	19	20	21	22
Weighted Balance Useful life of the assets	13	12	11	10	9
Remaining Depreciable Value	3340.57	3083.60	2826.63	2569.67	2312.70
Depreciation	256.97	256.97	256.97	256.97	256.97
<b>Interest on Loan</b>					
Gross Normative Loan	-	-	-	-	-
Cumulative Repayment upto Previous Year	-	-	-	-	-
Net Loan-Opening	-	-	-	-	-
Addition due to Additional Capitalisation	-	-	-	-	-
Repayment during the year	-	-	-	-	-
Net Loan-Closing	-	-	-	-	-
Average Loan	-	-	-	-	-
Weighted Average Rate of Interest on Loan	-	-	-	-	-
Interest	-	-	-	-	-
<b>Return on Equity</b>					
Opening Equity	6020.00	6020.00	6020.00	6020.00	6020.00
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Equity	6020.00	6020.00	6020.00	6020.00	6020.00
Average Equity	6020.00	6020.00	6020.00	6020.00	6020.00
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax rate for the year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	1124.17	1165.35	1166.50	1166.50	1180.52
<b>Interest on Working Capital</b>					



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	85.81	90.69	95.90	101.40	107.18
O & M expenses	47.67	50.38	53.28	56.33	59.55
Receivables	335.10	347.80	354.08	360.49	369.62
Total	468.58	488.88	503.26	518.22	536.35
Interest	57.40	59.89	61.65	63.48	65.70
<b>Annual Transmission Charges</b>					
Depreciation	256.97	256.97	256.97	256.97	256.97
Interest on Loan	-	-	-	-	-
Return on Equity	1124.17	1165.35	1166.50	1166.50	1180.52
Interest on Working Capital	57.40	59.89	61.65	63.48	65.70
O & M Expenses	572.07	604.61	639.36	675.98	714.55
<b>Total</b>	<b>2010.61</b>	<b>2086.81</b>	<b>2124.47</b>	<b>2162.92</b>	<b>2217.74</b>

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

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	256.97	264.99	283.69	294.90	294.91
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	1180.52	1184.19	1191.52	1195.19	1195.19
Interest on Working Capital	69.27	70.75	72.59	74.21	75.54
O & M Expenses	654.91	676.89	699.42	722.52	746.53
<b>Total</b>	<b>2161.67</b>	<b>2196.82</b>	<b>2247.22</b>	<b>2286.82</b>	<b>2312.17</b>

28. 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	98.24	101.53	104.91	108.38	111.98
O & M expenses	54.58	56.41	58.29	60.21	62.21
Receivables	360.28	366.14	374.54	381.14	385.36
Total	513.10	524.08	537.74	549.73	559.55
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>69.27</b>	<b>70.75</b>	<b>72.59</b>	<b>74.21</b>	<b>75.54</b>



## **Capital Cost**

29. 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.”

30. The petitioner has claimed capital expenditure of ₹12040.00 lakh as on 31.3.2014. Further, the petitioner has projected additional capital expenditure of ₹249.33 lakh towards tower strengthening of 400 kV Indravati-Rengali line during the tariff period 2014-19. The trued up capital cost of ₹12040.00 lakh as on 31.3.2014 is considered to workout tariff for tariff period 2014-19.

## **Additional Capital Expenditure**

31. Clause 3(vii) and Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

“(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level”;



“(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system”

32. The petitioner has claimed additional capitalization of ₹124.67 lakh and ₹124.66 lakh for 2015-16 and 2016-17, respectively, amounting to ₹249.33 lakh towards tower strengthening of 400 kV Indravati-Rengali line. The Commission approved ₹249.33 lakh additional capital expenditure for 2013-14 vide order dated 8.3.2011 in order in Petition No. 195/2010. The petitioner has further submitted that due to other ongoing works, the approved additional capitalization is shifted to 2015-16 and 2016-17. The additional capitalization has been claimed under Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations beyond cut-off date.

33. We observe that the additional capitalization is towards tower strengthening of 400 kV Indravati-Rengali line which was already approved by the Commission. In response to the Commission's query on the reasons for deferring of such works, the representative of the petitioner submitted that priority was given to actual tower failures and hence, the tower strengthening works of the 400 kV Indravati-Rengali line was taken up later on.

34. The additional capitalisation proposed by the petitioner towards tower strengthening works under Clause 3(ix) of Regulation 14 of the 2014 Tariff



Regulations is approved as the same has been already approved by the Commission vide its order dated 8.3.2011.

**(₹ in lakh)**

Particulars	Admitted capital cost as on 31.3.2014	Additional capitalisation projected					Total additional capitalisation	Total capital cost including additional capitalisation as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19		
400 kV Jeypore-Talcher Transmission System	12040.00	0.00	124.67	124.66	0.00	0.00	249.33	12289.33

### **Debt:Equity Ratio**

35. 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.”

36. The petitioner has considered debt:equity ratio as 50:50 as on 31.3.2014. The admitted debt:equity ratio of 50:50 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:-





Particulars	Amount (in ₹ lakh)	(%)
Debt	6020.00	50.00
Equity	6020.00	50.00
<b>Total</b>	<b>12040.00</b>	<b>100.00</b>

37. Further normative debt:equity ratio of 70:30 has been proposed for additional capitalization for tariff period 2014-19. The details of the debt:equity including additional capitalization is as follows:-

Particulars	Amount (in ₹ lakh)	(%)
Debt	6194.53	50.41
Equity	6094.80	49.59
<b>Total</b>	<b>12289.33</b>	<b>100.00</b>

#### **Interest on Loan (“IOL”)**

38. The petitioner has not claimed any interest on loan for the tariff period 2014-19 as the complete loan has already been repaid before the tariff period 2014-19. As regards additional capital expenditure projected during the tariff period 2014-19, the petitioner has submitted that the funding has been done through debt:equity ratio of 70:30 and it has claimed debt corresponding to 70% of the additional capitalisation. The Commission observes that the petitioner has not claimed any interest on loan as the loan amount added corresponding to year-wise additional capitalisation is less than the depreciation allowed for the respective years and therefore, the same is getting repaid in the same year. The petitioner has therefore, not claimed any IOL during 2014-19 tariff period. Accordingly, Interest on Loan has been considered as NIL for the purpose of tariff.



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

39. 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:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."

40. The petitioner has 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.



41. 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.

42. 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 determined by the Commission is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	6020.00	6020.00	6057.40	6094.80	6094.80
Additional Capitalisation	0.00	37.40	37.40	0.00	0.00
Closing Equity	6020.00	6057.40	6094.80	6094.80	6094.80
Average Equity	6020.00	6038.70	6076.10	6094.80	6094.80
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
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>1180.52</b>	<b>1184.19</b>	<b>1191.52</b>	<b>1195.19</b>	<b>1195.19</b>



## **Depreciation**

43. 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."

44. The petitioner has computed depreciation considering capital expenditure of ₹12040.00 lakh as on 31.3.2014 and projected additional capitalization of ₹249.33 lakh for the tariff period 2014-19.

45. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed is given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	12040.00	12040.00	12164.67	12289.33	12289.33
Additional Capitalisation	0.00	124.67	124.66	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross block at the end of the year	12040.00	12164.67	12289.33	12289.33	12289.33
Average gross block	12040.00	12102.34	12227.00	12289.33	12289.33
Freehold Land	19.36	19.36	19.36	19.36	19.36
Rate of Depreciation (%)	2.134	2.190	2.320	2.400	2.400
Depreciable Value	10818.58	10874.68	10986.88	11042.97	11042.97
Elapsed Life of the assets at beginning of the year	23	24	25	26	27
Weighted Balance Useful life of the assets	8	7	6	5	4
Remaining Depreciable Value	2055.73	1854.87	1702.09	1474.50	1179.60
<b>Depreciation</b>	<b>256.97</b>	<b>264.98</b>	<b>283.68</b>	<b>294.90</b>	<b>294.90</b>

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

46. 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:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>O&amp;M Expense for line</b>					
<b>Norm (₹ lakh/km)</b>					
Single Circuit (Twin and Triple Conductor)	0.404	0.418	0.432	0.446	0.461
<b>Asset (km)</b>					
400 kV S/C Indravati-Rengali	356.00	356.00	356.00	356.00	356.00
400 kV S/C Jeypore-Indravati	71.00	71.00	71.00	71.00	71.00
<b>Total O&amp;M Expense (line) (₹ lakh)</b>	<b>172.51</b>	<b>178.49</b>	<b>184.46</b>	<b>190.44</b>	<b>196.85</b>
<b>O&amp;M Expense for Bay</b>					
<b>Norm (₹ lakh/Bay)</b>					
400 kV	60.30	62.30	64.37	66.51	68.71
<b>Bays</b>					
400 kV	8	8	8	8	8
<b>Total O&amp;M expense (Bay) (₹ lakh)</b>	<b>482.40</b>	<b>498.40</b>	<b>514.96</b>	<b>532.08</b>	<b>549.68</b>
<b>Total O&amp;M expense (Line and bays) (₹ lakh)</b>	<b>654.91</b>	<b>676.89</b>	<b>699.42</b>	<b>722.52</b>	<b>746.53</b>



47. 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.

48. 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.

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>O&amp;M Expenses Allowed</b>	<b>654.91</b>	<b>676.89</b>	<b>699.42</b>	<b>722.52</b>	<b>746.53</b>

### **Interest on Working Capital ("IWC")**

50. 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;”

51. 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%.

52. 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	98.24	101.53	104.91	108.38	111.98
O & M expenses	54.58	56.41	58.29	60.21	62.21
Receivables	360.28	366.13	374.54	381.14	385.36
Total	513.09	524.07	537.74	549.73	559.55
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest</b>	<b>69.27</b>	<b>70.75</b>	<b>72.59</b>	<b>74.21</b>	<b>75.54</b>

### **Annual Transmission Charges**

53. 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	12040.00	12040.00	12164.67	12289.33	12289.33
Additional Capitalisation	0.00	124.67	124.66	0.00	0.00
Closing Gross Block	12040.00	12164.67	12289.33	12289.33	12289.33
Average Gross Block	12040.00	12102.34	12227.00	12289.33	12289.33
<b>Depreciation</b>					
Rate of Depreciation (%)	2.134	2.190	2.320	2.400	2.400
Depreciable Value	10818.58	10874.68	10986.88	11042.97	11042.97
Elapsed Life (Beginning of the year)	23	24	25	26	27
Weighted Balance Useful life of the assets	8	7	6	5	4
Remaining Depreciable Value	2055.73	1854.87	1702.09	1474.50	1179.60
Depreciation	256.97	264.98	283.68	294.90	294.90
<b>Interest on Loan</b>					
Gross Normative Loan	-	-	-	-	-
Cumulative Repayment upto Previous Year	-	-	-	-	-
Net Loan-Opening	-	-	-	-	-
Additions	-	-	-	-	-
Repayment during the year	-	-	-	-	-
Net Loan-Closing	-	-	-	-	-
Average Loan	-	-	-	-	-
Weighted Average Rate of Interest on Loan	-	-	-	-	-
Interest	-	-	-	-	-
<b>Return on Equity</b>					
Opening Equity	6020.00	6020.00	6057.40	6094.80	6094.80
Additions	0.00	37.40	37.40	0.00	0.00
Closing Equity	6020.00	6057.40	6094.80	6094.80	6094.80
Average Equity	6020.00	6038.70	6076.10	6094.80	6094.80
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
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre	1180.52	1184.19	1191.52	1195.19	1195.19





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Tax)					
<b>Interest on Working Capital</b>					
Maintenance Spares	98.24	101.53	104.91	108.38	111.98
O & M expenses	54.58	56.41	58.29	60.21	62.21
Receivables	360.28	366.13	374.54	381.14	385.36
Total	513.09	524.07	537.74	549.73	559.55
Interest	69.27	70.75	72.59	74.21	75.54
<b>Annual Transmission Charges</b>					
Depreciation	256.97	264.98	283.68	294.90	294.90
Interest on Loan	-	-	-	-	-
Return on Equity	1180.52	1184.19	1191.52	1195.19	1195.19
Interest on Working Capital	69.27	70.75	72.59	74.21	75.54
O & M Expenses	654.91	676.89	699.42	722.52	746.53
<b>Total</b>	<b>2161.66</b>	<b>2196.81</b>	<b>2247.22</b>	<b>2286.83</b>	<b>2312.16</b>

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

54. 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**

55. 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**

56. 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 is premature.

### **Deferred Tax Liability**

57. 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. The deferred tax liability shall be dealt as per Regulation 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same materializes, directly from the beneficiaries or long term transmission customers /DICs.



### **Sharing of Transmission Charges**

58. 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.

59. This Order disposes of Petition No. 538/TT/2014.

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

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

