

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO. 169/TT/2014**

**Coram:**

**Shri. A.S. Bakshi, Member**

**Dr. M. K. Iyer, Member**

**Date of Hearing: 16.11.2015**

**Date of Order : 26.11.2015**

**In the Matter of:**

Approval under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 for determination of (i) Truing up of Transmission tariff for 2009-14 tariff block and (ii) Transmission tariff for 2014-19 tariff block for Transmission System associated with Kopli hydroelectric Stage-1 extension Project (2x50MW) in North Eastern Region

**And in the Matter of:**

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

**.....Petitioner**

**Versus**

1. Assam State Electricity Board  
Bijluee Bhawan, Paltan Bazar  
Guwahati-781001, Assam
2. Mehalaya Energy Corporation Limited  
(Formerly Meghalaya State Electricity Board)  
Short Round Road  
Shillong-793001
3. Government Of Arunachal Pradesh  
Itanagar, Arunachal Pradesh
4. Power & Electricity Deptt.



Govt. of Mizoram  
Mizoram, Aizawl

5. Electricity Department  
Govt. of Manipur, Keishampat  
Imphal

6. Department of Power  
Govt. Of Nagaland  
Kohima, Nagaland

7. Tripura State Electricity Corporation Limited  
Bidyut Bhawan, North Banamalipur,  
Agartala, Tripura-700001

....Respondent(s)

The following were present:

For Petitioner: Shri. S. K. Venkatesan, PGCIL  
Shri. M. M. Mondal, PGCIL  
Shri. Shashi Bhushan, PGCIL  
Shri. Ved Prakash Rastogi, PGCIL  
Shri. S. K. Niranjana, PGCIL  
Shri. Jasbir Singh, PGCIL  
Shri. S. S. Raju, PGCIL

For Respondents: None

### **ORDER**

The petition has been preferred by Power Grid Corporation of India Limited (“the petitioner”), a transmission licensee, for revision of tariff 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 truing up of 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 in respect of transmission system associated with Kopli hydroelectric Stage-1 extension Project (2x50MW) in North Eastern Region (hereinafter referred to as “the transmission Asset”).

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

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

a) The petitioner had built the transmission asset in North Eastern Region and the same was put under commercial operation with effect from 1.2.2000. The Commission approved the transmission charges vide order dated 1.1.2002 in Petition No. 40/2000 filed by the petitioner.

b) The Commission approved the transmission tariff in respect of the transmission asset for the period 1.4.2004 to 31.3.2009 vide order dated 16.1.2008 in Petition No. 85/2006. Thereafter, the petitioner filed Petition No. 110/2010 for approval of transmission tariff for the 2009-14 tariff period requesting the Commission to (i) allow grossing up of base rate of return with applicable tax rate (ii) allow to bill and adjust the impact of change in interest on loan on account of floating interest of loan.

c) The Commission, vide order dated 22.9.2010, had approved the tariff of the transmission asset for the period 1.4.2009 to 31.3.2014. The summary of the same is given overleaf:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	101.00	101.00	101.00	34.17	34.17
Interest on Loan	59.84	52.93	46.03	41.40	39.07
Return on Equity	49.83	49.83	49.83	49.83	49.83
Interest on Working Capital	8.74	8.84	8.96	7.75	8.00
O & M Expenses	86.93	91.88	97.16	102.75	108.62
<b>Total</b>	<b>306.34</b>	<b>304.48</b>	<b>302.98</b>	<b>235.90</b>	<b>239.69</b>

d) The capital cost of ₹1898.23 lakh as on 1.4.2009 was admitted by the Commission vide order dated 16.1.2008 in Petition no.85/2006, with no additional capitalization during the 2009-2014 tariff period.

4. As per Regulation 6 of the 2009 Tariff Regulations, the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up. Further, as per Regulation 15 of the 2009 Tariff Regulations, the petitioner is required to adjust the yearly impact of MAT rate in the truing up petition for 2009-14 tariff period. The petitioner had submitted that in case Interest on Loan (IoL) was calculated on the basis of prevailing rates for the determination of tariff, any change in the rate of interest subsequently during the tariff period will be considered at the time of truing up.

5. 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. None of the respondents have submitted response. No comments/objections have been received from the public in response to the notice in newspaper. The hearing in this matter was held on 16.11.2015. Having heard

the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

6. Clause (3) of the Regulation 6 of the 2009 Tariff Regulations provides as under:-

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors”.

7. The petitioner has submitted the information as required under the 2009 Tariff Regulations for true up of annual fixed charges for 2009-14 tariff period. The tariff for 2009-14 tariff period has been trued up in the subsequent paragraphs:-

**Capital Cost**

8. The last proviso to Regulation 7(2) 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 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”.

9. The capital cost of ₹1898.23 lakh admitted by the Commission vide order dated 16.1.2008 in Petition no. 85/2006 as on 31.3.2009 , has been considered as opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

## **Additional Capital Expenditure**

10. Regulation 6(1) of the 2009 Tariff Regulations provides that:-

“(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014...”

11. The petitioner has not claimed any additional capital expenditure for 2009-14 tariff period.

## **Debt: Equity**

12. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (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:

.....

(2) 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.

(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.”

13. The debt:equity ratio of 84.98:15.02 admitted by the Commission vide order dated 16.1.2008 in Petition No. 85/2006 as on 31.3.2009 has been considered as on 1.4.2009 for determination of tariff in accordance with the Regulation 12 of the

2009 Tariff Regulations. The debt:equity considered for the purpose of truing up of tariff for 2009-14 tariff period is as follows:-

Funding	Amount (₹ in lakh)	(%)
Debt	1613.15	84.98
Equity	285.08	15.02
Total	1898.23	100.00

### **Return on Equity (“ROE”)**

14. Clause (3), (4) and (5) of the 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:

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.”

15. The variation in the tax rate during the 2009-14 tariff period applicable to the petitioner as per the Finance Act of the relevant year for the purpose of grossing up of Return on Equity (ROE) has been furnished as follows:-

Year	MAT Rate claimed in the current petition	Grossed up ROE (Base Rate/(1-t)) claimed in the current petition
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%

16. Regulation 15 of the 2009 Tariff Regulations provides for grossing up of ROE with the actual tax rate for the purpose of ROE. The petitioner has submitted that MAT rate was applicable during the various years of 2009-14 tariff period. The ROE has been worked out by considering year wise MAT rate submitted by the petitioner in accordance with Regulation 15 of the 2009 Tariff Regulations. The ROE allowed is as follows:-

	(₹ in lakh)				
Return on Equity	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 22.9.2010	49.83	49.83	49.83	49.83	49.83
Claimed by the petitioner	53.24	55.19	55.24	55.24	55.90
Allowed in this order after trueing up	53.23	55.19	55.24	55.24	55.91

### **Interest on Loan (“IoL”)**

17. Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL. 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”.



18. The petitioner has submitted the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, the IoL has been calculated based on actual interest rate submitted by the petitioner, in accordance with the Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at Annexure-1. The IoL worked out is as follows:-

(₹ in lakh)

<b>Interest on Loan</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 22.9.2010	59.84	52.93	46.03	41.40	39.07
Claimed by the petitioner	54.21	41.20	35.53	34.20	35.27
Allowed in this order after truing up	54.21	41.21	35.53	34.20	35.27

### **Depreciation**

19. Regulation 17 of 2009 Tariff Regulations provides the methodology for computation of depreciation.

20. The petitioner has submitted that transmission asset was put under commercial operation from 1.2.2000 and accordingly, the transmission asset has completed 12 years as on 31.1.2012. Therefore the depreciation for the remaining period has been calculated based on the remaining depreciable value to be recovered in the balance useful life as per the methodology provided in the Regulation 17(4) of the 2009 Tariff Regulations.

21. The depreciation has been worked out in accordance with Regulation 17 of 2009 Tariff Regulations and is as follows:-

(₹ in lakh)

<b>Depreciation</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 22.9.2010	101.00	101.00	101.00	34.17	34.17
Claimed by the petitioner	101.00	101.00	101.00	34.17	34.17
Allowed in this order after truing up	100.99	100.99	100.99	34.17	34.17

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

22. Sub-clause (c) of clause (1) of Regulations 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulations 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

23. 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 Regulations 18 of the 2009 Regulations. The interest rate of 12.25% is claimed, which is in line with the Regulation 18 of 2009 Tariff Regulations

24. The IWC has been worked out as per the methodology provided in the Regulation 18 of the 2009 Tariff Regulations and allowed as under:-

(₹ in lakh)

<b>Interest on Working Capital</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 22.9.2010	8.74	8.84	8.96	7.75	8.00
Claimed by the petitioner	8.69	8.71	8.86	7.72	8.05
Allowed in this order after truing up	8.69	8.71	8.86	7.72	8.05

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

25. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The normative O&M Expenses are not required to be trued up. Accordingly, the total allowable O&M Expenses for the instant assets have been worked out based on the norms of O&M Expenses and allowed as follows:-

(₹ in lakh)

<b>O&amp;M Expenses</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 22.9.2010	86.93	91.88	97.16	102.75	108.62
Claimed by the petitioner	86.93	91.88	97.16	102.75	108.62
Allowed in this order after truing up	86.93	91.88	97.16	102.75	108.62

### **APPROVED 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 instant transmission asset for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>Depreciation</b>					
Opening Gross Block	1898.23	1898.23	1898.23	1898.23	1898.23
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	1898.23	1898.23	1898.23	1898.23	1898.23
Average Gross Block	1898.23	1898.23	1898.23	1898.23	1898.23
Rate of Depreciation(%)	5.32	5.32	5.32	1.80	1.80
Depreciable Value	1708.41	1708.41	1708.41	1708.41	1708.41
Balance Useful life of the asset	24.00	23.00	22.00	21.00	20.00
Elapsed Life	9.00	10.00	11.00	12.00	13.00
Remaining Depreciable Value	1020.65	919.65	818.66	717.66	683.49
Depreciation during the year	100.99	100.99	100.99	34.17	34.17
Cumulative depreciation (incl. of AAD)	788.75	889.75	990.74	1024.92	1059.09
<b>Interest on Loan</b>					
Gross Normative Loan	1613.15	1613.15	1613.15	1613.15	1613.15

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Cumulative Repayment upto Previous Year	687.76	788.75	889.75	990.74	1024.92
Net Loan-Opening	925.39	824.40	723.40	622.41	588.23
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	100.99	100.99	100.99	34.17	34.17
Net Loan-Closing	824.40	723.40	622.41	588.23	554.06
Average Loan	874.89	773.90	672.90	605.32	571.14
Weighted Average Rate of Interest on Loan (%)	6.1966	5.3244	5.2806	5.6500	6.1760
Interest on Loan	54.21	41.21	35.53	34.20	35.27
<b>Return on Equity</b>					
Opening Equity	285.08	285.08	285.08	285.08	285.08
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	285.08	285.08	285.08	285.08	285.08
Average Equity	285.08	285.08	285.08	285.08	285.08
Return on Equity (Base Rate )(%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity(%)	18.674	19.358	19.377	19.377	19.610
Return on Equity	53.23	55.19	55.24	55.24	55.91
<b>Interest on Working Capital</b>					
O & M expenses	7.24	7.65	8.09	8.56	9.05
Maintenance Spares	13.04	13.78	14.57	15.41	16.29
Receivables	50.68	49.66	49.63	39.01	40.34
Total	70.96	71.10	72.30	62.98	65.68
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest on Working Capital	8.69	8.71	8.86	7.72	8.05
<b>Annual Transmission Charges</b>					
Depreciation	100.99	100.99	100.99	34.17	34.17
Interest on Loan	54.21	41.21	35.53	34.20	35.27
Return on Equity	53.23	55.19	55.24	55.24	55.91
Interest on Working Capital	8.69	8.71	8.86	7.72	8.05
O & M Expenses	86.93	91.88	97.16	102.75	108.62
<b>Total</b>	<b>304.06</b>	<b>297.98</b>	<b>297.78</b>	<b>234.08</b>	<b>242.02</b>

**DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD:-**

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	34.18	34.18	34.18	34.18	34.18
Interest on Loan	34.74	32.53	30.32	28.11	25.90
Return on Equity	55.9	55.9	55.9	55.9	55.9
Interest on Working Capital	8.38	8.52	8.65	8.80	8.95
O & M Expenses	99.73	103.06	106.49	110	113.63
<b>Total</b>	<b>232.93</b>	<b>234.19</b>	<b>235.54</b>	<b>236.99</b>	<b>238.56</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	14.96	15.46	15.97	16.5	17.04
O & M Expenses	8.31	8.59	8.87	9.17	9.47
Receivables	38.82	39.03	39.26	39.50	39.76
Total	62.09	63.08	64.10	65.17	66.27
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	8.38	8.52	8.65	8.80	8.95

### **Capital Cost**

29. Clause (3) and clause (6) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

“(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.”

“(6) The following shall be excluded or removed from the capital cost of the existing and new project:

(a) The assets forming part of the project, but not in use; (b) Decapitalisation of Asset;”

30. The capital cost of ₹1898.23 lakh admitted by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations. The petitioner has not claimed any additional capital expenditure during 2014-19 tariff period.

### **Additional Capital Expenditure**

31. The petitioner has not claimed any additional capital expenditure during 2014-19 tariff period.

### **Debt: Equity**

32. Clause (1) and Clause (3) Regulation 19 of the 2014 Tariff Regulations provides as under:-

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.”

“(3) In case of the generating station and the transmission system including communication 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.”

33. The petitioner has considered the debt:equity ratio of 84.98:15.02, which is in line with the 2014 Tariff Regulations, hence same is considered for calculation of tariff.

34. The debt:equity considered for tariff of 2014-19 tariff period is as follows:-

Funding	Amount (₹ in lakh)	(%)
Debt	1613.15	84.98
Equity	285.08	15.02
Total	1898.23	100.00

### **Return on Equity (“ROE”)**

35. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specifies 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.”

36. It further provides that in case the generating company or transmission licensee paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of ROE. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of



Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

(₹ in lakh)

Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	285.08	285.08	285.08	285.08	285.08
Additions	-	-	-	-	-
Closing Equity	285.08	285.08	285.08	285.08	285.08
Average Equity	285.08	285.08	285.08	285.08	285.08
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	55.91	55.91	55.91	55.91	55.91

### **Interest on Loan (“IoL”)**

37. Clause 5 and Clause 6 of Regulation 26 of the 2014 Tariff Regulations provides that:-

“.....(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.”

38. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be



considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed at Annexure-2 and the IoL has been worked out and allowed as follows:-

(₹ in lakh)

Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1,613.15	1,613.15	1,613.15	1,613.15	1,613.15
Cumulative Repayment up to Previous Year	1,059.09	1,093.27	1,127.44	1,161.62	1,195.79
Net Loan-Opening	554.06	519.88	485.71	451.53	417.36
Additions	-	-	-	-	-
Repayment during the year	34.17	34.17	34.17	34.17	34.17
Net Loan-Closing	519.88	485.71	451.53	417.36	383.19
Average Loan	536.97	502.80	468.62	434.45	400.27
Weighted Average Rate of Interest on Loan (%)	6.4700	6.4700	6.4700	6.4700	6.4700
Interest on Loan	34.74	32.53	30.32	28.11	25.90

### **Depreciation**

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

"27. Depreciation:

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

...

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

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

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

40. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The transmission asset was put under commercial operation from 1.2.2000 and accordingly, the transmission asset has completed 12 years on 31.1.2012. Therefore the depreciation for the remaining period has been calculated based on the remaining depreciable value to be recovered in the balance useful life in accordance with the Clause 27 of the 2014 Tariff Regulations. The depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Additional Capitalization	-	-	-	-	-
Closing Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Average Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Rate of Depreciation (%)	1.80	1.80	1.80	1.80	1.80
Balance Useful life of the asset	1708.41	1708.41	1708.41	1708.41	1708.41
Remaining Depreciable Value	14.00	15.00	16.00	17.00	18.00
Depreciation during the year	19.00	18.00	17.00	16.00	15.00

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

41. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specifies the norms for O&M expenses for the transmission system. The total allowable O&M expenses for the instant assets have been worked out and allowed are as follows:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>220 kV Bays:</b>					
No. of Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
<b>Line: S/C Single Conductor:</b>					
Line Length (km)	75.788	75.788	75.788	75.788	75.788
Norms (₹ lakh/km)	0.202	0.209	0.216	0.223	0.23
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>99.73</b>	<b>103.06</b>	<b>106.49</b>	<b>110.00</b>	<b>113.63</b>

42. 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 from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also prayed that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per prevailing norms.

### **Interest on Working Capital**

43. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specifies as follows:

**“28. Interest on Working Capital**

- (c) (i) Receivables equivalent to two months of fixed cost;  
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month”

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

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

45. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)					
<b>Interest on Working Capital</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	8.31	8.58	8.87	9.16	9.47
Maintenance Spares	14.96	15.46	15.97	16.50	17.04
Receivables	38.82	39.03	39.26	39.50	39.76
Total	62.09	63.07	64.10	65.16	66.27
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	8.38	8.52	8.65	8.80	8.95

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

46. The detailed computation of transmission charges allowed for the instant transmission asset for the 2014-19 tariff period are summarised below:-

(₹ in lakh)					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>					
Opening Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Additional Capitalisation	-	-	-	-	-
Closing Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Average Gross Block	1,898.23	1,898.23	1,898.23	1,898.23	1,898.23
Rate of Depreciation (%)	1.80	1.80	1.80	1.80	1.80



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciable Value	1708.41	1708.41	1708.41	1708.41	1708.41
Elapsed Life	14	15	16	17	18
Balance Useful life of the asset	19	18	17	16	15
Remaining Depreciable Value	649.31	615.14	580.97	546.79	512.62
Depreciation	34.17	34.17	34.17	34.17	34.17
Cumulative depreciation (incl. of AAD)	1093.27	1127.44	1161.62	1195.79	1229.96
<b>Interest on Loan</b>					
Gross Normative Loan	1,613.15	1,613.15	1,613.15	1,613.15	1,613.15
Cumulative Repayment upto Previous Year	1,059.09	1,093.27	1,127.44	1,161.62	1,195.79
Net Loan-Opening	554.06	519.88	485.71	451.53	417.36
Additions	-	-	-	-	-
Repayment during the year	34.17	34.17	34.17	34.17	34.17
Net Loan-Closing	519.88	485.71	451.53	417.36	383.19
Average Loan	536.97	502.80	468.62	434.45	400.27
Weighted Average Rate of Interest on Loan (%)	6.4700	6.4700	6.4700	6.4700	6.4700
Interest	34.74	32.53	30.32	28.11	25.90
<b>Return on Equity</b>					
Opening Equity	285.08	285.08	285.08	285.08	285.08
Additions	-	-	-	-	-
Closing Equity	285.08	285.08	285.08	285.08	285.08
Average Equity	285.08	285.08	285.08	285.08	285.08
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	55.91	55.91	55.91	55.91	55.91
<b>Interest on Working Capital</b>					
O & M expenses	8.31	8.58	8.87	9.16	9.47
Maintenance Spares	14.96	15.46	15.97	16.50	17.04
Receivables	38.82	39.03	39.26	39.50	39.76
Total	62.09	63.07	64.10	65.16	66.27
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	8.38	8.52	8.65	8.80	8.95
<b>Annual Transmission Charges</b>					
Depreciation	34.17	34.17	34.17	34.17	34.17
Interest on Loan	34.74	32.53	30.32	28.11	25.90
Return on Equity	55.91	55.91	55.91	55.91	55.91
Interest on Working Capital	8.38	8.52	8.65	8.80	8.95

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M Expenses	99.73	103.06	106.49	110.00	113.63
<b>Total</b>	<b>232.93</b>	<b>234.19</b>	<b>235.54</b>	<b>236.99</b>	<b>238.56</b>

### **Deferred Tax Liability**

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

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

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

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

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

### **Service Tax**

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

### **Foreign Exchange Rate Variation**

51. The petitioner has sought recovery of FERV on foreign loans deployed under clause 50 of 2014 Tariff Regulations. The petitioner is entitled to recover the FERV directly from the beneficiaries or the long term transmission customers / DICs, as the case may be, in accordance with Regulation 51(1) of the 2014 Tariff Regulations

### **Sharing of Transmission Charges**

52. 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.

53. This order disposes of Petition No. 169/TT/2014.

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

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



## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>ADB-I-DOCO-44.31</b>					
Gross Opening Loan	1584.12	1584.12	1584.12	1584.12	1584.12
Cumulative Repayments of Loans up to Previous Year	667.52	785.58	915.74	1059.23	1217.43
<b>Net Loans Opening</b>	<b>916.60</b>	<b>798.54</b>	<b>668.38</b>	<b>524.89</b>	<b>366.69</b>
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	118.06	130.16	143.49	158.20	174.41
<b>Net Closing Loan</b>	<b>798.54</b>	<b>668.38</b>	<b>524.89</b>	<b>366.69</b>	<b>192.28</b>
Average Net Loan	857.57	733.46	596.64	445.79	279.49
Rate of Interest on Loan (%)	6.1966	5.3244	5.2806	5.6500	6.1760
<b>Interest on Loan</b>	<b>53.17</b>	<b>39.02</b>	<b>31.50</b>	<b>25.19</b>	<b>17.27</b>
<b>Summary</b>					
Gross Opening Loan	1584.12	1584.12	1584.12	1584.12	1584.12
Cumulative Repayments of Loans up to Previous Year	667.52	785.58	915.74	1059.23	1217.43
<b>Net Loans Opening</b>	<b>916.60</b>	<b>798.54</b>	<b>668.38</b>	<b>524.89</b>	<b>366.69</b>
Add: Draw(s) during the Year					
Less: Repayments of Loan during the year	118.06	130.16	143.49	158.20	174.41
<b>Net Closing Loan</b>	<b>798.54</b>	<b>668.38</b>	<b>524.89</b>	<b>366.69</b>	<b>192.28</b>
Average Net Loan	857.57	733.46	596.64	445.79	279.49
Rate of Interest on Loan (%)	6.1966	5.3244	5.2806	5.6500	6.1760
<b>Interest on Loan</b>	<b>53.17</b>	<b>39.02</b>	<b>31.50</b>	<b>25.19</b>	<b>17.27</b>



## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>ADB-I-DOCO-44.31</b>					
Gross Opening Loan	1584.12	1584.12	1584.12	1584.12	1584.12
Cumulative Repayments of Loans up to Previous Year	1391.84	1584.13	1584.13	1584.13	1584.13
<b>Net Loans Opening</b>	<b>192.28</b>	-	-	-	-
Add: Draw(s) during the Year	-	-	-	-	-
Less: Repayments of Loan during the year	192.29	-	-	-	-
<b>Net Closing Loan</b>					
Average Net Loan	96.14	-	-	-	-
Rate of Interest on Loan (%)	6.4700	6.4700	6.4700	6.4700	6.4700
<b>Interest on Loan</b>	<b>6.22</b>	-	-	-	-
<b>Summary</b>					
Gross Opening Loan	1584.12	1584.12	1584.12	1584.12	1584.12
Cumulative Repayments of Loans up to Previous Year	1391.84	1584.13	1584.13	1584.13	1584.13
<b>Net Loans Opening</b>	<b>192.28</b>	-	-	-	-
Add: Draw(s) during the Year	-	-	-	-	-
Less: Repayments of Loan during the year	192.29	-	-	-	-
<b>Net Closing Loan</b>					
Average Net Loan	96.14	-	-	-	-
Rate of Interest on Loan (%)	6.4700	6.4700	6.4700	6.4700	6.4700
<b>Interest on Loan</b>	<b>6.22</b>	-	-	-	-