

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO.431/TT/2014**

**Coram:**

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

**Date of Hearing: 20.1.2016  
Date of Order : 29.1.2016**

**In the Matter of:**

Truing up of transmission tariff for 2009-14 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for 400 kV Kankroli-Jodhpur Transmission line along with associated bays under System Strengthening Scheme in South-Western Part of Northern Grid (Part-B) 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-122001 (Haryana)

**.....Petitioner**

**Versus**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur - 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.,



400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur

5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla - 171 004.
6. Punjab State Electricity Board,  
The Mall, Patiala - 147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector - 6  
Panchkula (Haryana) - 134 109
8. Power Development Department,  
Govt. of Jammu and Kashmir  
Mini Secretariat, Jammu .
9. Uttar Pradesh Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi - 110 002
11. BSES Yamuna Power Ltd.,  
Shakti Kiran Building, Karkardooma,  
Delhi – 110 092.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. North Delhi Power Ltd.,  
Power Trading & Load Dispatch Group,  
Cennet Building,  
Adjacent to 66/11kV Pitampura - ,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi - 110 034
14. Chandigarh Administration,  
Sector - 9, Chandigarh
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun
16. North Central Railway,



Allahabad

17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi - 110 002

.....Respondents

The following were present:

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

For Respondents: Shri Vinod Kumar Yadav, Advocate, Rajasthan Discoms

### **ORDER**

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as "the petitioner") 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 for 400 kV Kankroli-Jodhpur Transmission line along with associated bays under



System Strengthening Scheme in South-Western Part of Northern Grid (Part-B)(hereinafter referred to as “the transmission asset”).

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

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

a) The administrative approval and expenditure sanction of the transmission project was accorded by the Board of Directors of the petitioner’s company vide Memorandum No. C/CP/SSSWng-part-B dated 27.10.2006 for ₹15026 lakh, including IDC of ₹907 lakh based on 2<sup>nd</sup> quarter, 2006 price level. The transmission assets were commissioned on 1.8.2010.

b) The annual transmissions charges for 2009-14 tariff period for the transmission asset were determined vide order dated 16.9.2011 in Petition No. 324/2010 based on admitted capital cost of ₹13411.14 lakh for the transmission asset and debt:equity of 70:30 as on 31.3.2009. The estimated additional capital expenditure of ₹496.99 lakh and ₹331.11 lakh was considered towards balance and retention payments during 2010-11 and 2011-12 for determination of tariff for 2009-14 tariff period. The details of capital cost are as shown below:-

(₹ in lakh)

Total approved cost	Admitted cost as on COD	Allowed Additional capital expenditure during 2009-14			Cost as on 31.3.2014
		2010-11	2011-12	Total	
15026.00	13411.14	496.99	331.11	828.10	14239.24



c) The annual fixed charges were determined vide order dated 16.9.2011 in Petition No. 324/2010 based the above capital cost and estimated additional capital expenditure for the transmission assets during 2009-14 as given below:-

(₹ in lakh)

Particulars	2010-11	2011-12	2012-13	2013-14
Depreciation	481.11	742.85	751.25	751.25
Interest on Loan	572.42	828.43	769.44	699.51
Return on Equity	477.54	738.03	746.71	746.71
Interest on Working Capital	34.06	51.81	51.52	50.74
O & M Expenses	122.03	193.59	204.68	216.35
<b>Total</b>	<b>1687.17</b>	<b>2554.71</b>	<b>2523.60</b>	<b>2464.56</b>

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.

5. The petitioner has filed the instant petition on 28.10.2014, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.

6. 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. No comments/objections have been received from the public in response to the notice in newspaper. Rajasthan Discoms, viz- Ajmer Vidyut Vitran Nigam Limited, Jaipur Vidyut Vitran Nigam Limited and Jodhpur Vidyut Vitran Nigam



Limited have filed the reply to the petition vide affidavit dated 9.12.2014. The hearing in this matter was held on 20.1.2016. The petitioner was directed to submit the details in respect of the additional capital expenditure, undischarged liabilities and actual equity infused during 2009-14 and 2014-19 tariff periods which has been submitted by the petitioner through affidavit dated 28.1.2016.

7. Having heard the representatives of the parties and perused the material on record, we proceed to dispose of the petition.

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

8. 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”.

9. The petitioner has submitted the information as required under the 2009 Tariff Regulations for truing 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**

10. The petitioner has claimed capital cost of ₹13411.13 lakh as on 31.3.2009 in respect of the transmission asset for the purpose of tariff determination.

11. 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 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”.

12. Accordingly, the capital cost of ₹13411.13 lakh admitted by the Commission as on 31.3.2009 has been considered as opening capital cost on 1.4.2009 for determination of true up tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

### **Additional Capital Expenditure**

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

“The Commission shall carry out true 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”

14. The petitioner has submitted that it has actually incurred an additional capital expenditure of ₹279.04 lakh during 2009-14 towards balance and retention payments for the works completed before the cut-off date, as depicted below:-

(₹ in lakh)

Capital cost as on COD	Additional capital expenditure				Capital cost as on 31.3.2014
	2010-11	2011-12	2013-14	Total	
13411.13	56.96	75.34	146.74	279.04	13690.17

15. The petitioner has submitted, vide affidavit 28.1.2016, the break-up of additional capital expenditure incurred during 2009-14 period. The petitioner has claimed the admissibility of additional capital expenditure before the cut-off date under Regulation 9(1)(i) and that after the cut-off date under Regulation 9(2)(viii) of 2009 Tariff Regulations. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14. The above mentioned additional capital expenditure is towards balance and retention payments and the same has been



certified by the Auditor vide certificate dated 23.8.2014. Further, the total capital expenditure during 2009-14 is within the limits of the total approved capital expenditure and the total cost as on 31.3.2014 is within the approved cost of the project. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 9(1)(i), Regulation 9(2)(viii) and Regulation 6 of the 2009 Tariff Regulations.

### **Debt: Equity**

16. 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.”

17. The debt:equity ratio admitted by the Commission vide order dated 16.9.2011 in Petition No. 324/2010 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 petitioner was directed to confirm that actual equity corresponding to additional capital expenditure is not less than 30%. In response, the petitioner vide affidavit dated 28.1.2016, has submitted that the actual equity infusion during 2009-14 period is not less than 30%.





18. The details of the debt:equity considered for the purpose of tariff for 2009-14 tariff period is as follows:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2009	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	9388.00	70.00	195.33	70.00	9583.33	70.00
Equity	4023.13	30.00	83.71	30.00	4106.84	30.00
<b>Total</b>	<b>13411.13</b>	<b>100.00</b>	<b>279.04</b>	<b>100.00</b>	<b>13690.17</b>	<b>100.00</b>

### **Return on Equity (“ROE”)**

19. Clause (3), (4) and (5) of the 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.”

20. 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

21. The ROE as trued up and allowed is as follows:-

(₹ in lakh)				
Return on Equity	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 16.9.2011	477.54	738.03	746.71	746.71
Claimed by the petitioner	520.30	785.06	787.25	801.04
Allowed after truing up in this order	520.31	785.06	787.25	801.05

The difference in the approved ROE and that allowed after truing up is on account of actual grossed up ROE based on actual MAT rate and increase due to actual additional capital expenditure.

### **Interest on Loan ("IoL")**

22. 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 dealt with similar issue and 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".

23. 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 dealt with similar issue and 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".



24. 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 in Annexure-1. The IoL worked out is as follows:-

(₹ in lakh)

<b>Interest on Loan</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 16.9.2011	572.42	828.43	769.44	699.51
Claimed by the petitioner	563.19	793.87	729.64	667.75
Allowed after truing up in this order	563.19	793.86	729.64	667.76

The difference in the approved IoL and that allowed after truing up is on account of change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.

### **Depreciation**

25. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations. The depreciation allowed is as follows:-

(₹ in lakh)

<b>Depreciation</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 16.9.2011	481.11	742.85	751.25	751.25
Claimed by the petitioner	473.59	713.87	715.86	719.74
Allowed after truing up in this order	473.59	713.88	715.86	719.74

The difference in the approved depreciation and that allowed after truing up is on account of change in gross block during the 2009-14 tariff period.



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

26. 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 norms of O&M Expenses and the details are as follows:-

	(₹ in lakh)			
<b>O&amp;M Expenses</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 16.9.2011	122.03	193.59	204.68	216.35
Claimed by the petitioner	122.03	193.59	204.68	216.35
Allowed after truing up in this order	122.03	193.59	204.68	216.35

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

27. 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>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 16.9.2011	34.06	51.81	51.52	50.74
Claimed by the petitioner	34.55	51.50	50.87	50.57
Allowed after truing up in this order	34.55	51.50	50.87	50.57

The difference in the approved IWC and that allowed after truing up is on account of change in the receivables during the 2009-14 tariff period.



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

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Depreciation</b>					
Opening Gross Block	0.00	13411.13	13468.09	13543.43	13543.43
Additional Capitalisation	0.00	56.96	75.34	0.00	146.74
Closing Gross Block	0.00	13468.09	13543.43	13543.43	13690.17
Average Gross Block	0.00	13439.61	13505.76	13543.43	13616.80
Rate of Depreciation	5.29	5.29	5.29	5.29	5.29
Depreciable Value	0.00	12095.65	12180.82	12222.99	12255.12
Balance Useful life of the asset	0.00	34	33	32	31
Elapsed Life	0.00	0	1	2	3
Remaining Depreciable Value	0.00	12095.65	11681.60	11001.62	10351.79
Depreciation during the year	0.00	473.59	713.88	715.86	719.74
<b>Interest on Loan</b>					
Gross Normative Loan	0.00	9388.00	9427.87	9480.61	9480.61
Cumulative Repayment upto Previous Year	0.00	0.00	473.59	1187.46	1903.33
Net Loan-Opening	0.00	9388.00	8954.28	8293.15	7577.28
Additions	0.00	39.87	52.74	0.00	102.72
Repayment during the year	0.00	473.59	713.88	715.86	719.74
Net Loan-Closing	0.00	8954.28	8293.15	7577.28	6960.26
Average Loan	0.00	9171.14	8623.71	7935.21	7268.77
Weighted Average Rate of Interest on Loan (%)	0.0000	9.2114	9.2056	9.1949	9.1866
Interest on Loan	0.00	563.19	793.86	729.64	667.76
<b>Return on Equity</b>					
Opening Equity	0.00	4023.13	4040.22	4062.82	4062.82
Additions	0.00	17.09	22.60	0.00	44.02
Closing Equity	0.00	4040.22	4062.82	4062.82	4106.84
Average Equity	0.00	4031.67	4051.52	4062.82	4084.83
Return on Equity (Base Rate )	15.500	15.500	15.500	15.500	15.500
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	0.00	520.31	785.06	787.25	801.05
<b>Interest on Working Capital</b>					



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	0.00	15.25	16.13	17.05	18.02
Maintenance Spares	0.00	27.46	29.04	30.70	32.45
Receivables	0.00	428.42	422.98	414.72	409.24
Total	0.00	471.13	468.15	462.47	459.72
Rate of Interest	11.00	11.00	11.00	11.00	11.00
Interest on Working Capital	0.00	34.55	51.50	50.87	50.57
<b>Annual Transmission Charges</b>					
Depreciation	0.00	473.59	713.88	715.86	719.74
Interest on Loan	0.00	563.19	793.86	729.64	667.76
Return on Equity	0.00	520.31	785.06	787.25	801.05
Interest on Working Capital	0.00	34.55	51.50	50.87	50.57
O & M Expenses	0.00	122.03	193.59	204.68	216.35
<b>Total</b>	<b>0.00</b>	<b>1713.67</b>	<b>2537.89</b>	<b>2488.31</b>	<b>2455.47</b>

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

29. The petitioner has claimed the tariff charges for 2014-19 tariff period as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	723.74	723.87	723.87	723.87	723.87
Interest on Loan	606.11	539.6	472.93	406.25	339.55
Return on Equity	805.49	805.63	805.63	805.63	805.63
Interest on Working Capital	60.08	58.92	57.77	56.61	55.48
O & M Expenses	197.81	204.48	211.3	218.25	225.52
<b>Total</b>	<b>2393.23</b>	<b>2332.5</b>	<b>2271.5</b>	<b>2210.61</b>	<b>2150.05</b>

(₹ in lakh)

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

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	16.48	17.04	17.61	18.19	18.79
Maintenance Spares	29.67	30.67	31.70	32.74	33.83
Receivables	398.87	388.75	378.58	368.44	358.34
Total	<b>445.02</b>	<b>436.46</b>	<b>427.89</b>	<b>419.37</b>	<b>410.96</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	60.08	58.92	57.77	56.61	55.48

(₹ in lakh)



## **Capital Cost**

31. Clause (3) and (6) of Regulation 9 of 2014 Tariff Regulation provide 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;”

32. The capital cost of ₹13690.17 lakh worked out 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.

## **Additional Capital Expenditure**

33. Clause (3) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments.”

34. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” as follows:-



“Cut - off Date” means 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation:”

35. The petitioner has claimed additional capital expenditure of ₹4.69 lakh for 2014-19 tariff period on account of balance and retention payments, after the cut-off date of 31.3.2013, under Regulation 14(3)(vi) of the 2014 Tariff Regulations.

36. We have considered the submissions of the petitioner with regard to the projected capital expenditure during 2014-19. The additional capital expenditure claimed is towards balance and retention payments for works executed before the cut-off date and the same has been certified by the Auditor vide Certificate dated 23.8.2014. The petitioner has submitted, vide affidavit 28.1.2016, the break-up of additional capital expenditure projected during 2014-15 period. Further, the total capital expenditure during 2014-19 is within the limits of the total approved capital expenditure and the total cost as on 31.3.2019 is within the approved cost of the project. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 14(3)(v) of the 2014 Tariff Regulations, subject to true-up on actual basis.

37. Accordingly, the capital cost including the additional capital expenditure during 2014-19 tariff period is as below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	13690.17	13694.86	13694.86	13694.86	13694.86
Addition during 2014-19	4.69	00.00	00.00	00.00	00.00
<b>Gross Block</b>	<b>13694.86</b>	13694.86	13694.86	13694.86	13694.86





## **Debt: Equity**

38. Clause (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provide 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.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe 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.”

39. The normative debt:equity ratio has been considered to work out the tariff in accordance with the 2014 Tariff Regulations as given below:-

(₹ in lakh)

<b>Funding</b>	<b>Capital cost as on 31.3.2014</b>	<b>(%)</b>	<b>Additional capital expenditure during 2014-15</b>	<b>(%)</b>	<b>Total Cost as on 31.3.2019</b>	<b>(%)</b>
Debt	9583.33	70.00	3.28	70.00	9586.61	70.00
Equity	4106.84	30.00	1.41	30.00	4108.25	30.00
<b>Total</b>	<b>13690.17</b>	<b>100.00</b>	<b>4.69</b>	<b>100.00</b>	<b>13694.86</b>	<b>100.00</b>

## **Return on Equity (“ROE”)**

40. Clause (1) and (2) of Regulations 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.”

41. 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	4106.84	4108.25	4108.25	4108.25	4108.25
Additions	1.41	0.00	0.00	0.00	0.00
Closing Equity	4108.25	4108.25	4108.25	4108.25	4108.25
Average Equity	4107.55	4108.25	4108.25	4108.25	4108.25
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	805.51	805.65	805.65	805.65	805.65

### **Interest on Loan (“IoL”)**

42. 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.”

43. 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 in Annexure 2. IoL has been worked out and allowed as follows:-

(₹ in lakh)

<b>Interest on Loan</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	9583.33	9586.61	9586.61	9586.61	9586.61
Cumulative Repayment upto Previous Year	2623.07	3346.81	4070.67	4794.54	5518.41
Net Loan-Opening	6960.26	6239.80	5515.94	4792.07	4068.20
Additions	3.28	0.00	0.00	0.00	0.00
Repayment during the year	723.74	723.87	723.87	723.87	723.87
Net Loan-Closing	6239.80	5515.94	4792.07	4068.20	3344.34
Average Loan	6600.03	5877.87	5154.00	4430.14	3706.27
Weighted Average Rate of Interest on Loan (%)	9.1835	9.1802	9.1759	9.1701	9.1616
Interest on Loan	606.12	539.60	472.93	406.25	339.56

### **Depreciation**

44. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide 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.”

45. 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 transmissions asset will be completing 12 beyond 2014-19 perio, hence depreciation up to 2014-19 tariff period has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of the 2014 Tariff Regulations. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

<b>Depreciation</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	13690.17	13694.86	13694.86	13694.86	13694.86
Additional Capitalisation	4.69	0.00	0.00	0.00	0.00
Closing Gross Block	13694.86	13694.86	13694.86	13694.86	13694.86
Average Gross Block	13692.52	13694.86	13694.86	13694.86	13694.86
Rate of Depreciation	5.29	5.29	5.29	5.29	5.29
Depreciable Value	12389.30	12327.48	12325.37	12325.37	12325.37
Balance Useful life of the asset	30	29	28	27	26
Elapsed Life	4	5	6	7	8
Remaining Depreciable Value	9700.19	8978.57	8254.70	7530.83	6806.97
Depreciation	723.74	723.87	723.87	723.87	723.87



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

46. 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:-

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>400 kV Bays:</b>					
No. of Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
<b>Transmission Line:</b>					
S/C (Twin/Triple) (km)	183.848	183.848	183.848	183.848	183.848
Norms (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
D/C Twin/Triple conductor (km)	4.152	4.152	4.152	4.152	4.152
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>197.81</b>	<b>204.48</b>	<b>211.30</b>	<b>218.25</b>	<b>225.52</b>

47. The Rajasthan Discoms have submitted that O&M Expenses and the effect of wage rise should be allowed as per the regulations. The petitioner has submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also 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 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.

**Interest on Working Capital (IWC)**

48. 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;”

49. 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%. Rajasthan Discoms have submitted that interest on working capital should be allowed as per the norms specified in the Tariff Regulations.

50. 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)

Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	16.48	17.03	17.60	18.18	18.79
Maintenance Spares	29.67	30.67	31.69	32.74	33.83
Receivables	398.88	388.75	378.58	368.44	358.34
Total	445.02	436.46	427.88	419.36	410.96
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	60.08	58.92	57.76	56.61	55.48

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

51. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	13690.17	13694.86	13694.86	13694.86	13694.86
Additional Capitalisation	4.69	0.00	0.00	0.00	0.00
Closing Gross Block	13694.86	13694.86	13694.86	13694.86	13694.86
Average Gross Block	13692.52	13694.86	13694.86	13694.86	13694.86
Rate of Depreciation	5.29	5.29	5.29	5.29	5.29
Depreciable Value	12389.30	12327.48	12325.37	12325.37	12325.37
Balance Useful life of the asset	30	29	28	27	26
Elapsed Life	4	5	6	7	8
Remaining Depreciable Value	9700.19	8978.57	8254.70	7530.83	6806.97
Depreciation	723.74	723.87	723.87	723.87	723.87
<b>Interest on Loan</b>					
Gross Normative Loan	9583.33	9586.61	9586.61	9586.61	9586.61
Cumulative Repayment upto Previous Year	2623.07	3346.81	4070.67	4794.54	5518.41
Net Loan-Opening	6960.26	6239.80	5515.94	4792.07	4068.20
Additions	3.28	0.00	0.00	0.00	0.00
Repayment during the year	723.74	723.87	723.87	723.87	723.87
Net Loan-Closing	6239.80	5515.94	4792.07	4068.20	3344.34
Average Loan	6600.03	5877.87	5154.00	4430.14	3706.27



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Weighted Average Rate of Interest on Loan	9.1835	9.1802	9.1759	9.1701	9.1616
Interest	606.12	539.60	472.93	406.25	339.56
<b>Return on Equity</b>					
Opening Equity	4106.84	4108.25	4108.25	4108.25	4108.25
Additions	1.41	0.00	0.00	0.00	0.00
Closing Equity	4108.25	4108.25	4108.25	4108.25	4108.25
Average Equity	4107.55	4108.25	4108.25	4108.25	4108.25
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	805.51	805.65	805.65	805.65	805.65
<b>Interest on Working Capital</b>					
O & M expenses	16.48	17.03	17.60	18.18	18.79
Maintenance Spares	29.67	30.67	31.69	32.74	33.83
Receivables	398.88	388.75	378.58	368.44	358.34
Total	445.02	436.46	427.88	419.36	410.96
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	60.08	58.92	57.76	56.61	55.48
<b>Annual Transmission Charges</b>					
Depreciation	723.74	723.87	723.87	723.87	723.87
Interest on Loan	606.12	539.60	472.93	406.25	339.56
Return on Equity	805.51	805.65	805.65	805.65	805.65
Interest on Working Capital	60.08	58.92	57.76	56.61	55.48
O & M Expenses	197.81	204.48	211.30	218.25	225.52
<b>Total</b>	<b>2393.25</b>	<b>2332.52</b>	<b>2271.50</b>	<b>2210.63</b>	<b>2150.07</b>

### **Deferred Tax Liability**

52. 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 the same gets materialized directly from the beneficiaries or long term transmission customers /DICs.





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

53. 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 Fee & RLDC Fees and Charges**

54. 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**

55. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. Rajasthan Discoms have submitted that the petitioner's prayer is on presumption basis and hence it should not be allowed. We are of the view that the petitioner's prayer is premature.

### **Sharing of Transmission Charges**

56. 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.

57. This order disposes of Petition No.431/TT/2014.

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

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



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2010	Additions during the tariff period	Total
BOND XXIV-DOCO DRAWL ON 26-MAR-2007-	9.95	459.00	0.00	459.00
BOND XXVII-DOCO DRAWL ON 31-MAR-2008-	9.47	2329.00	0.00	2329.00
BOND XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	2899.00	0.00	2899.00
BOND XXIX-DOCO DRAWL ON 12-MAR-2009-	9.20	733.00	0.00	733.00
BOND XXX-DOCO DRAWL ON 29-SEP-2009-	8.80	321.00	0.00	321.00
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	1468.00	0.00	1468.00
BOND XXXIII-DOCO DRAWL ON 08-JUL-2010-	8.64	1179.00	0.00	1179.00
BOND - XLV-ADDCAP FOR 2013-2014 Loan 8-	0.00	0.00	102.72	102.72
<b>Total</b>		<b>9388.00</b>	<b>102.72</b>	<b>9490.72</b>

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	0.00	9388.00	9388.00	9388.00	9388.00
Cumulative Repayments of Loans up to Previous Year	0.00	0.00	38.25	270.58	805.57
Net Loans Opening	<b>0.00</b>	<b>9388.00</b>	<b>9349.75</b>	<b>9117.42</b>	<b>8582.43</b>
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	102.72
Less: Repayments during the year	0.00	38.25	232.33	534.99	684.07
Net Closing Loan	<b>0.00</b>	<b>9349.75</b>	<b>9117.42</b>	<b>8582.43</b>	<b>8001.08</b>
Average Net Loan	0.00	9368.88	9233.59	8849.93	8291.76
Rate of Interest on Loan (%)*	0.00	9.2114%	9.2056%	9.1949%	9.1866%
Interest on Loan	<b>0.00</b>	863.00	850.01	813.74	761.73

\*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXIV-DOCO DRAWL ON 26-MAR-2007-	9.95	459.00	0.00	459.00
BOND XXVII-DOCO DRAWL ON 31-MAR-2008-	9.47	2329.00	0.00	2329.00
BOND XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	2899.00	0.00	2899.00
BOND XXIX-DOCO DRAWL ON 12-MAR-2009-	9.20	733.00	0.00	733.00
BOND XXX-DOCO DRAWL ON 29-SEP-2009-	8.80	321.00	0.00	321.00
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	1468.00	0.00	1468.00
BOND XXXIII-DOCO DRAWL ON 08-JUL-2010-	8.64	1179.00	0.00	1179.00
BOND - XLV-ADDCAP FOR 2013-2014 Loan 8-	9.65	102.72	0.00	102.72
<b>Total</b>		<b>9490.72</b>	<b>0.00</b>	<b>9490.72</b>

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	9490.72	9490.72	9490.72	9490.72	9490.72
Cumulative Repayments of Loans up to Previous Year	1489.64	2271.96	3054.28	3836.60	4627.48
Net Loans Opening	8001.08	7218.76	6436.44	5654.12	4863.24
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments during the year	782.32	782.32	782.32	790.88	790.88
Net Closing Loan	7218.76	6436.44	5654.12	4863.24	4072.36
Average Net Loan	7609.92	6827.60	6045.28	5258.68	4467.80
Rate of Interest on Loan (%)*	9.1835%	9.1802%	9.1759%	9.1701%	9.1616%
<b>Interest on Loan</b>	<b>698.86</b>	<b>626.79</b>	<b>554.71</b>	<b>482.22</b>	<b>409.32</b>

\*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.

