

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 495/TT/2014

Coram:

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

**Date of Hearing: 20.1.2016
Date of Order : 15.2.2016**

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 D/C Meerut-Kaithal (Quad) TL along with associated bays under “Northern Region System strengthening Scheme-XI” 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

.....Respondent(s)

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri M.M. Mondal, PGCIL
Shri Anshul Garg, PGCIL
Shri Jasbir Singh, 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 Pradeep Mishra, Advocate, Rajasthan Discoms
Shri Vinod Kumar Yadav, Rajasthan Discoms

ORDER

The petition has been filed 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 trueing 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 400 kV D/C Meerut-Kaithal (Quad) TL along with associated bays under “Northern



Region System strengthening scheme-XI” (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 scheme was accorded by the Board of Directors of the petitioner’s company vide Memorandum No. C/CP/NRSS-XI dated 26.12.2007 at an estimated cost ₹41776 lakh, including IDC of ₹3612 lakh based on 3rd quarter, 2007 price level. The transmission assets were commissioned on 1.11.2010.

b) The annual transmission charges for 2009-14 tariff period were determined vide order dated 21.6.2011 in Petition No. 327/2010 based on admitted capital cost of the transmission asset and debt:equity as on COD.

c) In addition to the above, the Commission had also allowed estimated additional capital expenditure amounting to ₹1725.62 lakh towards the balance and retention payments during 2010-13 period for determination of tariff for 2009-14 tariff period, as shown below:-

(₹ in lakh)

Approved apportioned cost	Admitted cost as on DOCO 1.11.2010	Allowed additional capital expenditure during 2010-13	Estimated total cost up to 31.3.2014
41775.74	28094.23	1725.62	29819.85

d) The tariff for 2009-14 tariff period was determined based on the above capital cost. The tariff allowed for 2009-14 tariff period vide order dated 21.6.2011 in Petition No.327/2010 is as follows:-

(₹ in lakh)				
Particulars	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Depreciation	627.90	1,550.23	1,574.04	1,576.51
Interest on Loan	738.06	1,724.65	1,611.39	1,471.16
Return on Equity	622.89	1,537.74	1,561.39	1,563.84
Interest on Working Capital	49.62	121.22	121.34	120.15
O & M Expenses	206.30	523.47	553.39	584.94
Total	2244.77	5457.32	5421.57	5316.60

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. In this context, the petitioner has filed the instant petition on 18.11.2014, 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. None of the respondents have filed the reply in the matter.

7. The hearing in this matter was held on 20.1.2016. The petitioner was directed to submit the details of undischarged liabilities and actual equity infused during 2009-14 and 2014-19 tariff periods. The petitioner was directed to clarify the discrepancy in the rates of interest used to compute interest on loan. The petitioner filed the reply vide affidavit dated 3.2.2016 and revised the tariff forms for 2009-14 and 2014-19 tariff periods.

8. 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:-

9. 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”.

10. 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

11. The petitioner has claimed capital cost of ₹28113.28 lakh as on COD in respect of the transmission asset for the purpose of tariff determination, after taking into the

consideration the disallowance of ₹217.64 lakh on account of excess initial spares claimed in the Petition.

12. The Regulation 7 of the 2009 Tariff Regulations provides that:-

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

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

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

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.

xxx
xxx”

13. The capital cost of ₹28112.17 lakh has been considered by the Commission as on COD for determination of trued up tariff in accordance with Regulation 7 of the 2009 Tariff Regulations, after disallowing excess initial spares of ₹218.75 lakh claimed in the petition, in accordance with Regulation 8 of the 2009 Tariff Regulations.

Initial Spares

14. The petitioner, vide Auditor's Certificate dated 26.9.2014 has submitted that the initial spares, pertaining to sub-station and transmission line capitalized are ₹387.77 lakh and ₹104.15 lakh respectively and the actual capital cost as on COD is ₹28330.92 lakh. The petitioner has further submitted, that excess initial spares, upto cut-off date of 31.3.2013, for transmission lines are ₹191.29 lakh and for sub-stations(including PLCC) are ₹26.35 lakh. Hence, the petitioner has claimed the Capital cost as on COD after reducing the excess initial spares of ₹217.64 lakh, i.e. ₹28113.28 lakh.

15. Regulation 8 of the 2009 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of sub-station at 2.50% and transmission line at 0.75%. Accordingly, the initial spares have been allowed as under:-

(₹ in lakh)

Particulars	Actual Capital Cost as on COD	Add Cap 2010-14	Total Capital Cost as on Cut-off Date	Initial Spares Capitalized	Ceiling limit (%)	Initial spares worked out	Excess initial spares
Transmission line	25667.55	721.36	26388.91	387.77	0.75	196.48	191.29
Sub-station+ PLCC	2663.37	431.58	3094.95	104.15	2.50	76.69	27.46
Total	26388.91	1152.94	29483.86	491.92		273.17	218.75

16. Accordingly, the capital cost as on COD considered for truing up of tariff for 2009-14 tariff period is as follows:-

Particulars	(₹ in lakh)
Capital cost as on COD	28330.92
Excess initial spares	218.75
Capital cost as on COD considered for tariff determination	28112.17

Additional Capital Expenditure

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

“...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...”

18. The petitioner has submitted that it has incurred an additional capital expenditure of ₹1196.36 lakh during 2010-14 period towards balance and retention payments as certified vide Auditor's Certificate dated 26.9.2014 as depicted below:-

Particulars	Capital cost as on COD	Additional capital expenditure				(₹ in lakh) Total cost as on 31.3.2014
		2010-11	2011-12	2012-13	2013-14	
Approved by the Commission	28094.23	823.54	808.73	93.35	0.00	29819.85
Actual capital expenditure claimed in the Instant petition	28113.28	133.19	836.11	183.64	43.42	29309.64

19. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14 period. The capital addition of ₹1196.36 lakh is based on actual capital expenditure incurred as per the Auditor's Certificate dated 26.9.2014 submitted by the petitioner. The additional capital expenditure incurred is within the original scope of work and the total capital expenditure during 2009-14 is within the limits of the total approved capital expenditure. We allow the same for the

purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations. Accordingly, the capital expenditure allowed during 2009-14 is as below:

(₹ in lakh)

Capital cost as on COD	2009-10	2010-11	2011-12	2012-13	2013-14	Total cost as on 31.3.2014
28112.17	0.00	133.19	836.11	183.64	43.42	29308.53

Debt: Equity

20. 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.”

21. The debt:equity ratio admitted by the Commission vide order dated 21.6.2011 in Petition No. 327/2010 as on COD has been considered for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. The petitioner, in response to the Commission`s query, vide affidavit dated 3.2.3016 submitted that the actual debt:equity infused for additional capital expenditure during 2010-11,2011-12,2012-13 and 2013-14 is 70:30, 70:30, 89.15:10.85 and 17.70:26.30 respectively.

22. 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 DOCO	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	19678.52	70.00	874.23	73.07	20552.74	70.13
Equity	8433.65	30.00	322.13	26.93	8755.79	29.87
Total	28112.17	100.00	1196.36	100.00	29308.53	100.00

Return on Equity ("ROE")

23. 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."

24. 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

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

(₹ in lakh)				
Return on Equity	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 21.6.2011	622.89	1537.74	1561.39	1563.84
Claimed by the petitioner	681.88	1666.30	1692.53	1715.95
Allowed in this Order	681.87	1666.23	1692.46	1715.93

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”)

26. 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”.

27. 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)

Interest on Loan	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 21.6.2011	738.06	1724.65	1611.39	1471.16
Claimed by the petitioner	729.78	1684.93	1579.61	1448.30
Allowed in this Order	729.76	1684.87	1579.55	1448.23

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

28. 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)

Depreciation	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 21.6.2011	627.90	1550.23	1574.04	1576.51
Claimed by the petitioner	620.64	1515.21	1542.29	1548.34
Allowed in this Order	620.62	1515.16	1542.23	1548.28

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")

29. 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)

O&M Expenses	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 21.6.2011	206.30	523.47	553.39	584.94
Claimed by the petitioner	206.30	523.47	553.39	584.94
Allowed in this Order	206.30	523.47	553.39	584.94

Interest on Working Capital (IWC)

30. 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)

Interest on Working Capital	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 21.6.2011	49.62	121.22	121.34	120.15
Claimed by the petitioner	47.20	114.35	114.72	114.23
Allowed in this Order	47.20	114.34	114.71	114.23

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

31. 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	2010-11	2011-12	2012-13	2013-14
Depreciation				
Opening Gross Block	28112.17	28245.36	29081.47	29265.11
Additional Capitalisation	133.19	836.11	183.64	43.42
Closing Gross Block	28245.36	29081.47	29265.11	29308.53

Particulars	2010-11	2011-12	2012-13	2013-14
Average Gross Block	28178.76	28663.41	29173.29	29286.82
Rate of Depreciation (%)	5.29	5.29	5.29	5.29
Depreciable Value	25360.89	25857.01	26632.21	26440.78
Balance Useful life of the asset	34	33	32	31
Elapsed Life	0	1	2	3
Remaining Depreciable Value	25360.89	25176.45	24120.18	22680.13
Depreciation during the year	620.62	1515.16	1542.23	1548.28
Cumulative depreciation (incl. of AAD)	620.62	2135.78	3678.01	5226.29
Interest on Loan				
Gross Normative Loan	19678.52	19771.75	20357.03	20520.74
Cumulative Repayment upto Previous Year	0.00	620.62	2135.78	3678.01
Net Loan-Opening	19678.52	19151.13	18221.24	16842.73
Additions	93.23	585.28	163.72	32.00
Repayment during the year	620.62	1515.16	1542.23	1548.28
Net Loan-Closing	19151.13	18221.24	16842.73	15326.45
Average Loan	19414.82	18686.19	17531.99	16084.59
Weighted Average Rate of Interest on Loan (%)	9.0210	9.0166	9.0095	9.0039
Interest on Loan	729.76	1684.87	1579.55	1448.23
Return on Equity				
Opening Equity	8433.65	8473.61	8724.44	8744.37
Additions	39.96	250.83	19.92	11.42
Closing Equity	8473.61	8724.44	8744.37	8755.79
Average Equity	8453.63	8599.02	8734.40	8750.08
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	19.931	20.008	20.008	20.961
Rate of Return on Equity (%)	19.358	19.377	19.377	19.610
Return on Equity	681.87	1666.23	1692.46	1715.93
Interest on Working Capital				
O & M expenses	41.26	43.62	46.12	48.75
Maintenance Spares	74.27	78.52	83.01	87.74
Receivables	914.30	917.35	913.72	901.94
Total	1029.82	1039.49	1042.85	1038.42
Rate of Interest (%)	11.00	11.00	11.00	11.00
Interest on Working Capital	47.20	114.34	114.71	114.23

Particulars	2010-11	2011-12	2012-13	2013-14
Annual Transmission Charges				
Depreciation	620.62	1515.16	1542.23	1548.28
Interest on Loan	729.76	1684.87	1579.55	1448.23
Return on Equity	681.87	1666.23	1692.46	1715.93
Interest on Working Capital	47.20	114.34	114.71	114.23
O & M Expenses	206.30	523.47	553.39	584.94
Total	2285.74	5504.07	5482.34	5411.61

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1549.48	1549.48	1549.48	1549.48	1549.48
Interest on Loan	1309.91	1170.29	1030.69	891.07	751.45
Return on Equity	1717.07	1717.07	1717.07	1717.07	1717.07
Interest on Working Capital	134.93	132.70	130.49	128.33	126.20
O & M Expenses	535.65	553.38	571.69	590.75	610.34
Total	5247.04	5122.92	4999.42	4876.70	4754.54

33. 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
O & M Expenses	44.64	46.12	47.64	49.23	50.86
Maintenance Spares	80.35	83.01	85.75	88.61	91.55
Receivables	874.51	853.82	833.24	812.78	792.42
Total	999.50	982.95	966.63	950.62	934.83
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	134.93	132.70	130.49	128.33	126.20

Capital Cost

34. 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;”

35. The capital cost of ₹29308.53 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

36. The petitioner has not claimed additional any capital expenditure for 2014-19 tariff period.

Debt: Equity

37. 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.”

38. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period are as follows:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	Total Cost as on 31.3.2019	(%)
Debt	20552.74	70.13%	0.00	20552.74	70.13%
Equity	8755.79	29.87%	0.00	8755.79	29.87%
Total	29308.53	100.00	0.00	29308.53	100.00

Return on Equity ("ROE")

39. 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."

40. 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	8755.79	8755.79	8755.79	8755.79	8755.79
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	8755.79	8755.79	8755.79	8755.79	8755.79
Average Equity	8755.79	8755.79	8755.79	8755.79	8755.79
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	1717.05	1717.05	1717.05	1717.05	1717.05

Interest on Loan ("IoL")

41. 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."

42. 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. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure 2, IoL allowed is as follows:-

(₹ in lakh)

Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	20552.74	20552.74	20552.74	20552.74	20552.74
Cumulative Repayment upto Previous Year	5226.29	6775.72	8325.15	9874.57	11424.00
Net Loan-Opening	15326.45	13777.03	12227.60	10678.17	9128.74
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1549.43	1549.43	1549.43	1549.43	1549.43
Net Loan-Closing	13777.03	12227.60	10678.17	9128.74	7579.32
Average Loan	14551.74	13002.31	11452.89	9903.46	8354.03
Weighted Average Rate of Interest on Loan (%)	9.0014	9.0003	8.9990	8.9972	8.9947
Interest on Loan	1309.86	1170.25	1030.64	891.03	751.42

Depreciation

43. 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."

44. 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 detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Additional Capitalisation	-	-	-	-	-
Closing Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Average Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Freehold Land (Av. Cost)	-	-	-	-	-
Rate of Depreciation (%)	5.29	5.29	5.29	5.29	5.29
Balance useful life of the asset	30	29	28	27	26
Elapsed life	4	5	6	7	8
Depreciation during the year	1,549.43	1,549.43	1,549.43	1,549.43	1,549.43
Depreciation upto previous year	5226.29	6775.72	8325.15	9874.57	11424.00
Cumulative depreciation (incl. of AAD)	6775.72	8325.15	9874.57	11424.00	12973.43

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

45. 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 submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

46. We have considered the submissions of the petitioner. 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 the prevailing norms.

47. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays :					
No. of Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
D/C Bundled(4 or more sub c):					
Length (Km)	163.7	163.7	163.7	163.7	163.7
Norms (₹ lakh/Km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expenses (₹ lakh)	535.65	553.38	571.69	590.75	610.34

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%.

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	44.64	46.11	47.64	49.23	50.86
Maintenance Spares	80.35	83.01	85.75	88.61	91.55
Receivables	874.49	853.80	833.22	812.77	792.41
Total	999.47	982.92	966.61	950.61	934.82
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	134.93	132.69	130.49	128.33	126.20

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
Depreciation					
Opening Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Average Gross Block	29308.53	29308.53	29308.53	29308.53	29308.53
Rate of Depreciation (%)	5.29	5.29	5.29	5.29	5.29
Depreciable Value	26397.22	26377.68	26377.68	26377.68	26377.68
Balance Useful life of the asset	30	29	28	27	26
Elapsed Life	4	5	6	7	8
Remaining Depreciable Value	21151.39	19601.96	18052.53	16503.10	14953.68
Depreciation	1549.43	1549.43	1549.43	1549.43	1549.43
Cumulative depreciation (incl. of AAD)	6775.72	8325.15	9874.57	11424.00	12973.43
Interest on Loan					
Gross Normative Loan	20552.74	20552.74	20552.74	20552.74	20552.74
Cumulative Repayment upto Previous Year	5226.29	6775.72	8325.15	9874.57	11424.00
Net Loan-Opening	15326.45	13777.03	12227.60	10678.17	9128.74
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1549.43	1549.43	1549.43	1549.43	1549.43
Net Loan-Closing	13777.03	12227.60	10678.17	9128.74	7579.32
Average Loan	14551.74	13002.31	11452.89	9903.46	8354.03
Weighted Average Rate of Interest on Loan (%)	9.0014	9.0003	8.9990	8.9972	8.9947

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest	1309.86	1170.25	1030.64	891.03	751.42
Return on Equity					
Opening Equity	8755.79	8755.79	8755.79	8755.79	8755.79
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	8755.79	8755.79	8755.79	8755.79	8755.79
Average Equity	8755.79	8755.79	8755.79	8755.79	8755.79
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	1717.05	1717.05	1717.05	1717.05	1717.05
Interest on Working Capital					
O & M expenses	44.64	46.11	47.64	49.23	50.86
Maintenance Spares	80.35	83.01	85.75	88.61	91.55
Receivables	874.49	853.80	833.22	812.77	792.41
Total	999.47	982.92	966.61	950.61	934.82
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	134.93	132.69	130.49	128.33	126.20
Annual Transmission Charges					
Depreciation	1549.43	1549.43	1549.43	1549.43	1549.43
Interest on Loan	1309.86	1170.25	1030.64	891.03	751.42
Return on Equity	1717.05	1717.05	1717.05	1717.05	1717.05
Interest on Working Capital	134.93	132.69	130.49	128.33	126.20
O & M Expenses	535.65	553.38	571.69	590.75	610.34
Total	5246.92	5122.80	4999.30	4876.59	4754.43

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. 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.495/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 XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	3300.00	0.00	3300.00
BOND XXIX-DOCO DRAWL ON 12-MAR-2009-	9.20	6536.00	0.00	6536.00
BOND XXX-DOCO DRAWL ON 29-SEP-2009-	8.80	4461.00	0.00	4461.00
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	3327.00	0.00	3327.00
BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap-	8.64	0.00	93.23	93.23
BOND XXXIII-ADDCAP FOR 2011-2012 Add-Cap-	0.00	0.00	449.00	449.00
BOND XXXIII-doco-	8.64	2055.29	0.00	2055.29
BOND XXXVIII-ADDCAP FOR 2011-2012 Add-Cap-	0.00	0.00	136.28	136.28
BOND XXXVIII-ADDCAP FOR 2012-2013 ADDCAP FOR 2012-2013 -	0.00	0.00	163.72	163.72
BOND - XLV-ADDCAP FOR 2013-2014 Add-Cap-	0.00	0.00	32.00	32.00
Total		19679.29	874.23	20553.52

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

(₹ in lakh)

Particulars	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	19679.29	19772.52	20357.80	20521.52
Cumulative Repayments of Loans up to Previous Year	0.00	0.00	0.00	819.67
Net Loans Opening	19679.29	19772.52	20357.80	19701.85
Add: Drawl(s) during the Year	93.23	585.28	163.72	32.00
Less: Repayments during the year	0.00	0.00	819.67	1468.67
Net Closing Loan	19772.52	20357.80	19701.85	18265.18
Average Net Loan	19725.91	20065.16	20029.83	18983.52
Rate of Interest on Loan (%)*	9.0210%	9.0166%	9.0095%	9.0039%
Interest on Loan	1779.48	1809.20	1804.59	1709.25

*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan up to 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 XXVIII-DOCO DRAWL ON 15-DEC-2008-	9.33	3300.00	0.00	3300.00
BOND XXIX-DOCO DRAWL ON 12-MAR-2009-	9.20	6536.00	0.00	6536.00
BOND XXX-DOCO DRAWL ON 29-SEP-2009-	8.80	4461.00	0.00	4461.00
BOND XXXI-DOCO DRAWL ON 25-FEB-2010-	8.90	3327.00	0.00	3327.00
BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap-	8.64	93.23	0.00	93.23
BOND XXXIII-ADDCAP FOR 2011-2012 Add-Cap-	8.64	449.00	0.00	449.00
BOND XXXIII-doco-	8.64	2055.29	0.00	2055.29
BOND XXXVIII-ADDCAP FOR 2011-2012 Add-Cap-	9.25	136.28	0.00	136.28
BOND XXXVIII-ADDCAP FOR 2012-2013 ADDCAP FOR 2012-2013 -	9.25	163.72	0.00	163.72
BOND - XLV-ADDCAP FOR 2013-2014 Add-Cap-	9.65	32.00	0.00	32.00
Total		20553.52	0.00	20553.52

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2018-19	2019-20
Gross Opening Loan	20553.52	20553.52	20553.52	20553.52	20553.52
Cumulative Repayments of Loans up to Previous Year	2288.34	3973.47	5658.60	7343.73	9031.53
Net Loans Opening	18265.18	16580.05	14894.92	13209.79	11521.99
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments during the year	1685.13	1685.13	1685.13	1687.80	1687.80
Net Closing Loan	16580.05	14894.92	13209.79	11521.99	9834.19
Average Net Loan	17422.62	15737.49	14052.36	12365.89	10678.09
Rate of Interest on Loan (%)*	9.0014%	9.0003%	8.9990%	8.9972%	8.9947%
Interest on Loan	1568.28	1416.43	1264.57	1112.58	960.46

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