

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.129/TT/2016

Coram:
Shri A.S. Bakshi, Member
Dr. M. K. Iyer, Member

Date of Hearing: 5.10.2016
Date of Order: 25.10.2016

In the Matter of:

Truing up of transmission tariff of 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 based on the RCE for Neelamangala - Mysore 400 kVD/C Transmission Line along with 2 x 315 MVA, 400/220 kV ICTs at Mysore Substation in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the Matter of:

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

.....Petitioner

Versus

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), KaveriBhawan, Bangalore – 560009
2. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), VidyutSoudha,
Hyderabad- 500082
3. Kerala State Electricity Board (KSEB),
VaidyuthiBhavanam,
Pattom, Thiruvananthapuram - 695 004
4. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO),



(Formerly Tamil Nadu Electricity Board - TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai - 600 002

5. Electricity Department, Govt. of Pondicherry,
Pondicherry - 605001
6. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL) P&T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Limited,
(APSPDCL), SrinivasasaKalyanaMandapam Backside,
Tiruchanoor Road, KesavayanaGunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Limited,
(APCPDCL), Corporate Office, Mint Compound,
Hyderabad - 500 063, Andhra Pradesh
9. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL), Opp. NIT Petrol Pump,
Chaitanyapuri, Kazipet, Warangal - 506 004, Andhra Pradesh
10. Bangalore Electricity Supply Company Ltd. (BESCOM),
Corporate Office, KR.Circle
Bangalore - 560001, Karnataka
11. Gulbarga Electricity Supply Company Ltd (GESCOM)
Station Main Road, Gulbarga, Karnataka
12. Hubli Electricity Supply Company Ltd, (HESCOM)
Navanagar, PB Road, Hubli, Karnataka
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore – 575001, Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd.,
(CESC), # 927, L J Avenue, Ground Floor,
New KantharajUrs Road, Saraswatipuram,
Mysore - 570 009, Karnataka

15. Electricity Department, Government of Goa,
VidyutiBhawan, Panaji, Goa - 403001

16. Transmission Corporation of Telangana Limited,
VidyutSudhaKhairatabad
Hyderabad 50082

....Respondent(s)

The following were present:

For Petitioner: Shri M.M. Mondal, PGCIL
Shri S.K. Venkatasan, PGCIL
Shri T. Vinodh Kumar, PGCIL

For respondents: None

ORDER

The instant petition is 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 “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 “2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 in respect of Neelamangala - Mysore 400 kVD/C Transmission Line along with 2 x 315 MVA, 400/220 kV ICTs at Mysore Sub-Station in Southern Region (hereinafter referred to as “the transmission assets”) based on RCE.

2. The petitioner filed Petition No. 216/TT/2014 for truing up of 2009-14 tariff period and determination of tariff for 2014-19 and the same was allowed vide order dated 30.12.2015 based on admitted capital cost of the transmission assets and debt: equity

as on 31.3.2009. The capital cost of the asset was restricted to the approved apportioned cost for the instant asset due to unavailability of RCE. However, the petitioner was given the liberty to approach the Commission with the RCE. The relevant portion of the said order is extracted below:-

"14The total capital cost of the transmission asset including additional capitalisation incurred during tariff period 2009-14 works out to ₹ 16308.94 lakh, which is more than the approved cost of ₹ 15493.00 lakh given in the investment approval dated 22.8.2003. As the additional capitalisation is on account of court directions, therefore, the Commission has considered the petitioner's submissions towards additional capital expenditure. However, as the petitioner is yet to submit the approval of RCE by competent authority, the Commission in this Order has restricted the allowed additional capitalization to the original cost estimate dated 22.8.2003 and provides a liberty to approach the Commission for approval of balance additional capital expenditure once RCE is approved. Accordingly, the additional capitalisation of ₹ 172.60 lakh, ₹ 334.43 lakh (addition of ₹ 1.26 lakh towards transmission line compensation and ₹ 333.17 lakh towards land compensation) and ₹ 58.68 lakh during 2011-12, 2012-13 and 2013-14, respectively, is allowed in accordance with Clause 2(i) of Regulation 9 of the 2009 Tariff Regulations."

3. Accordingly, the petitioner has filed the instant petition praying for revision of trueed up tariff of 2009-14 period and redetermination of tariff of 2014-19 period of based on RCE.

4. The Investment Approval for the transmission system was accorded by the Government of India vide its letter dated 22.8.2003 at an estimated cost of ₹15493 lakh including IDC of ₹1488 lakh. Subsequently, Board of Director of the petitioner's company, vide its letter No. C/CP/RCE-Neelamangla-Mysore dated 11.3.2016 accorded approval for revised cost estimate of ₹16889 lakh including IDC of ₹841 lakh (October 2015 price level).

5. The Commission vide order dated 30.12.2015 in Petition No. 216/TT/2014 has allowed following trueed up tariff for 2009-14 tariff period and tariff for 2014-19 tariff period with regard to asset:-

(₹in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	757.61	757.61	757.61	757.65	757.68
Interest on Loan	699.12	643.41	592.05	549.45	503.89
Return on Equity	750.56	778.05	783.83	798.57	819.74
Interest on Working Capital	76.91	78.09	79.01	80.40	81.98
O & M Expenses	617.81	653.19	690.58	730.04	771.74
Total	2902.01	2910.36	2903.09	2916.11	2935.03

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	757.68	757.68	757.68	757.68	757.68
Interest on Loan	449.72	394.32	339.65	287.17	237.77
Return on Equity	821.46	821.46	821.46	821.46	821.46
Interest on Working Capital	85.87	85.90	85.98	86.16	86.46
O & M Expenses	709.02	732.61	756.92	782.02	807.97
Total	2823.75	2791.97	2761.69	2734.49	2711.35

7. The petitioner has served the copy of the petition to the respondents. The hearing in this matter was held on 5.10.2016. Having heard the representatives of the parties and perused the material on record, we proceed to dispose of the petition.

8. The petitioner has submitted that the capital cost of asset was restricted to the approved cost of FR and it was given the liberty to approach the Commission with the RCE. The petitioner has submitted that the instant petition has been filed in accordance with the liberty given by the Commission in order dated 30.12.2015 in Petition No. 216/TT/2014 for revision of the trued up tariff of 2009-14 period and re-determination of 2014-19 tariff.

9. We have considered the submissions of the petitioner. It is observed that the RCE was approved by the petitioner's Board on 11.3.2016.

10. The petitioner has claimed following tariff for truing up of 2009-14 tariff period:-

(₹in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	757.62	757.62	757.62	757.65	757.68
Interest on Loan	699.11	643.41	592.05	549.45	525.39
Return on Equity	750.56	778.05	783.83	798.57	843.74
Interest on Working Capital	76.91	78.09	79.01	80.41	82.93
O & M Expenses	617.81	653.19	690.58	730.04	771.74
Total	2902.01	2910.36	2903.09	2916.12	2981.48

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

Capital Cost

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 ₹14927.29 lakh for admitted by the Commission as on 31.3.2009 has been considered as opening capital cost as on 1.4.2009 for determination of trued 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:-

“(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”

14. Clause 2(i) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

"(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, 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;"

15. The petitioner has submitted that it has actually incurred an additional capital expenditure of ₹1381.65lakh 2009-14 towards balance and retention payments, for the works completed before the cut-off date, as depicted below:-

(₹in lakh)

Apportioned approved cost as per RCE	Admitted cost as on 31.3.2009	Actual Additional capital expenditure						Estimated total cost up to 31.3.2014
		2009-10	2010-11	2011-12	2012-13	2013-14	Total	
16889	14927.29	0.00	0.00	172.60	334.43	874.62	1381.65	16308.94

15. 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 on account of undischarged liability towards balance and retention payments and the same has been certified by the Auditor vide Certificates dated 19.6.2014 for the instant transmission assets.

16. The total completion cost of the system is within the cost approved as per RCE dated 11.3.2016. Thus, the additional capital expenditure is allowed for the purpose of revision of tariff in accordance with Regulation 6 and Regulation 9(2)(i) of the 2009 Tariff Regulations.

Debt: Equity

17. 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.”

18. The debt: equity ratio of 73.07:26.93 for additional capital expenditure as claimed by the petitioner The admitted debt:equity ratio of 73.07:26.93 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff for tariff period 2009-14. The debt: equity ratio of 70:30 for additional capital expenditure as claimed by the petitioner is in accordance with the Regulation 12 (3) of the 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

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

(₹inlakh)

	Capital cost as on 31.3.2009		Additional capital expenditure during 2009-14		Total cost as on 31.3.2014	
	Debt	Equity	Debt	Equity	Debt	Equity
Amount	10908.01	4019.29	967.16	414.50	11875.17	4433.79
%	73.07%	26.93%	70.00%	30.00%	72.81%	27.19%

Return on Equity (“ROE”)

20. 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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



(5) The generating company or the transmission licensee, as the case 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.”

21. 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

22. The ROE as allowed is as follows:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	4019.29	4019.29	4019.29	4071.07	4171.40
Additions	0.00	0.00	51.78	100.33	262.39
Closing Equity	4019.29	4019.29	4071.07	4171.40	4433.79
Average Equity	4019.29	4019.29	4045.18	4121.23	4302.59
Return on Equity (%)	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	750.55	778.07	783.83	798.57	843.76

Interest on Loan (“IoL”)

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)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	10908.01	10908.01	10908.01	11028.83	11262.93
Cumulative Repayment upto Previous Year	1182.01	1939.62	2697.24	3454.85	4212.50
Net Loan-Opening	9726.00	8968.39	8210.77	7573.98	7050.43
Additions	0.00	0.00	120.82	234.10	612.23
Repayment during the year	757.61	757.61	757.61	757.65	757.68
Net Loan-Closing	8968.39	8210.77	7573.98	7050.43	6904.98
Average Loan	9347.19	8589.58	7892.37	7312.20	6977.71
Weighted Average Rate of Interest on Loan (%)	7.4794%	7.4906%	7.5015%	7.5142%	7.5296%
Interest on Loan	699.12	643.41	592.05	549.45	525.39

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)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation					
Opening Gross Block	14927.29	14927.29	14927.29	15099.89	15434.32
Additional Capitalisation	0.00	0.00	172.60	334.43	874.62
Closing Gross Block	14927.29	14927.29	15099.89	15434.32	16308.94
Average Gross Block	14927.29	14927.29	15013.59	15267.11	15871.63
Rate of Depreciation (%)	5.08%	5.08%	5.05%	4.96%	4.77%
Depreciable Value	13189.46	13189.46	13189.46	13190.03	13190.60
Balance useful life of the asset	30.00	29.00	28.00	27.00	26.00
Elapsed life	2.00	3.00	4.00	5.00	6.00
Remaining Depreciable	13189.46	12431.85	11751.90	11222.45	11008.88



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Value					
Depreciation during the year	757.61	757.61	757.61	757.65	757.68
Depreciation upto previous year	0.00	757.61	1515.23	2272.84	3030.49
Cumulative depreciation (incl. of AAD)	757.61	1515.23	2272.84	3030.49	3788.17

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

(₹in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
O&M Expenses	617.81	653.19	690.58	730.04	771.74

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 is as under:-

(₹in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	51.46	54.41	57.53	60.81	64.29
Maintenance Spares	92.67	97.98	103.59	109.51	115.76
Receivables	483.66	485.06	483.85	486.02	496.92
Total	627.80	637.45	644.96	656.34	676.96
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on Working Capital	76.91	78.09	79.01	80.40	82.93

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 tariff period 2009-14 is summarised below:-



(₹in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation					
Opening Gross Block	14927.29	14927.29	14927.29	15099.89	15434.32
Additional Capitalisation	0.00	0.00	172.60	334.43	874.62
Closing Gross Block	14927.29	14927.29	15099.89	15434.32	16308.94
Average Gross Block	14927.29	14927.29	15013.59	15267.11	15871.63
Rate of Depreciation (%)	5.08%	5.08%	5.05%	4.96%	4.77%
Depreciable Value	13189.46	13189.46	13189.46	13190.03	13190.60
Balance useful life of the asset	30.00	29.00	28.00	27.00	26.00
Elapsed life	2.00	3.00	4.00	5.00	6.00
Remaining Depreciable Value	13189.46	12431.85	11751.90	11222.45	11008.88
Depreciation during the year	757.61	757.61	757.61	757.65	757.68
Depreciation upto previous year	0.00	757.61	1515.23	2272.84	3030.49
Cumulative depreciation (incl. of AAD)	757.61	1515.23	2272.84	3030.49	3788.17
Interest on Loan					
Gross Normative Loan	10908.01	10908.01	10908.01	11028.83	11262.93
Cumulative Repayment upto Previous Year	1182.01	1939.62	2697.24	3454.85	4212.50
Net Loan-Opening	9726.00	8968.39	8210.77	7573.98	7050.43
Additions	0.00	0.00	120.82	234.10	612.23
Repayment during the year	757.61	757.61	757.61	757.65	757.68
Net Loan-Closing	8968.39	8210.77	7573.98	7050.43	6904.98
Average Loan	9347.19	8589.58	7892.37	7312.20	6977.71
Weighted Average Rate of Interest on Loan (%)	7.4794%	7.4906%	7.5015%	7.5142%	7.5296%
Interest on Loan	699.12	643.41	592.05	549.45	525.39
Return on Equity					
Opening Equity	4019.29	4019.29	4019.29	4071.07	4171.40
Additions	0.00	0.00	51.78	100.33	262.39
Closing Equity	4019.29	4019.29	4071.07	4171.40	4433.79
Average Equity	4019.29	4019.29	4045.18	4121.23	4302.59
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	750.55	778.07	783.83	798.57	843.76
Interest on Working Capital					
O & M expenses	51.46	54.41	57.53	60.81	64.29
Maintenance Spares	92.67	97.98	103.59	109.51	115.76
Receivables	483.66	485.06	483.85	486.02	496.92
Total	627.80	637.45	644.96	656.34	676.96



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on Working Capital	76.91	78.09	79.01	80.40	82.93
Annual Transmission Charges					
Depreciation	757.61	757.61	757.61	757.65	757.68
Interest on Loan	699.12	643.41	592.05	549.45	525.39
Return on Equity	750.55	778.07	783.83	798.57	843.76
Interest on Working Capital	76.91	78.09	79.01	80.40	82.93
O & M Expenses	617.81	653.19	690.58	730.04	771.74
Total	2901.99	2910.37	2903.08	2916.11	2981.50

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

29. The petitioner has claimed the following tariff for 2014-19 tariff period :-

Particulars	(₹in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	757.68	757.68	757.68	757.68	757.68
Interest on Loan	449.72	394.32	339.65	287.17	237.77
Return on Equity	821.46	821.46	821.46	821.46	821.46
Interest on Working Capital	85.87	85.90	85.98	86.16	86.46
O & M Expenses	709.02	732.61	756.92	782.02	807.97
Total	2823.75	2791.97	2761.69	2734.49	2711.35

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

Particulars	(₹in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	59.09	61.05	63.08	65.17	67.33
Maintenance Spares	106.35	109.89	113.54	117.30	121.20
Receivables	486.16	480.90	475.92	471.53	467.99
Total	651.60	651.84	652.54	654.00	656.52
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	87.97	88.00	88.09	88.29	88.63

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 ₹16038.94 lakh worked out 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. The petitioner has not claimed any additional capital expenditure for 2014-19 tariff period.

Debt: Equity

34. 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.”

35. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is 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	11875.17	72.81%	00.00	00.00	11875.17	72.81%
Equity	4433.79	27.19%	00.00	00.00	4433.79	27.19%
Total	16308.94	100.00	00.00	00.00	16308.94	100.00

Return on Equity (“ROE”)

36. 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.”

37. 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 as follows:-

(₹in lakh)



Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4433.79	4433.79	4433.79	4433.79	4433.79
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	4433.79	4433.79	4433.79	4433.79	4433.79
Average Equity	4433.79	4433.79	4433.79	4433.79	4433.79
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	869.49	869.49	869.49	869.49	869.49

Interest on Loan (“IoL”)

38. 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.”

39. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. 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)				
Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	11875.17	11875.17	11875.17	11875.17	11875.17
Cumulative Repayment upto Previous Year	4970.18	5727.86	6485.54	7243.23	8000.91



Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan-Opening	6904.98	6147.30	5389.62	4631.94	3874.26
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	757.68	757.68	757.68	757.68	757.68
Net Loan-Closing	6147.30	5389.62	4631.94	3874.26	3116.58
Average Loan	6526.14	5768.46	5010.78	4253.10	3495.42
Weighted Average Rate of Interest on Loan (%)	7.5519%	7.5871%	7.6505%	7.7993%	8.1310%
Interest on Loan	492.85	437.66	383.35	331.71	284.21

Depreciation

40. 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."

41. 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 assets will be completing 12 years beyond 2014-19 tariff period.Hence, depreciation up to 2014-19 tariff periodhas 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 are worked out and allowed as follows:-

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	16308.94	16308.94	16308.94	16308.94	16308.94
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	16308.94	16308.94	16308.94	16308.94	16308.94
Average Gross Block	16308.94	16308.94	16308.94	16308.94	16308.94
Rate of Depreciation (%)	4.65%	4.65%	4.65%	4.65%	4.65%
Depreciable Value	13190.60	13190.60	13190.60	13190.60	13190.60
Balance useful life of the asset	25.00	24.00	23.00	22.00	21.00
Elapsed life	7.00	8.00	9.00	10.00	11.00
Remaining Depreciable Value	10644.78	9887.10	9129.41	8371.73	7614.05
Depreciation during the year	757.68	757.68	757.68	757.68	757.68
Depreciation upto previous year	3788.17	4545.85	5303.53	6061.22	6818.90
Cumulative depreciation (incl. of AAD)	4545.85	5303.53	6061.22	6818.90	7576.58

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

42. 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:-

(₹in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400kV D/C (Twin Conductor)					
Line Length(km)	132.897	132.897	132.897	132.897	132.897
Norms (₹ lakh/km)	0.71	0.73	0.76	0.78	0.81
400 kV Bays:					
No. of Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays:					
No. of Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
Total O&M Expenses (₹ lakh)	709.02	732.61	756.92	782.02	807.97



Interest on Working Capital (IWC)

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 considered the rate of interest on working capital to be 13.50%.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 have been worked as follows:-

	(₹in lakh)				
Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses	59.06	61.03	63.05	65.14	67.30
Maintenance Spares	106.35	109.89	113.54	117.30	121.20
Receivables	486.17	480.90	475.92	471.53	468.00
Total	651.58	651.82	652.51	653.98	656.50
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	87.96	88.00	88.09	88.29	88.63

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

45. 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	16308.94	16308.94	16308.94	16308.94	16308.94
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	16308.94	16308.94	16308.94	16308.94	16308.94



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Gross Block	16308.94	16308.94	16308.94	16308.94	16308.94
Rate of Depreciation (%)	4.65%	4.65%	4.65%	4.65%	4.65%
Depreciable Value	13190.60	13190.60	13190.60	13190.60	13190.60
Balance useful life of the asset	25.00	24.00	23.00	22.00	21.00
Elapsed life	7.00	8.00	9.00	10.00	11.00
Remaining Depreciable Value	10644.78	9887.10	9129.41	8371.73	7614.05
Depreciation during the year	757.68	757.68	757.68	757.68	757.68
Depreciation upto previous year	3788.17	4545.85	5303.53	6061.22	6818.90
Cumulative depreciation (incl. of AAD)	4545.85	5303.53	6061.22	6818.90	7576.58
Interest on Loan					
Gross Normative Loan	11875.17	11875.17	11875.17	11875.17	11875.17
Cumulative Repayment upto Previous Year	4970.18	5727.86	6485.54	7243.23	8000.91
Net Loan-Opening	6904.98	6147.30	5389.62	4631.94	3874.26
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	757.68	757.68	757.68	757.68	757.68
Net Loan-Closing	6147.30	5389.62	4631.94	3874.26	3116.58
Average Loan	6526.14	5768.46	5010.78	4253.10	3495.42
Weighted Average Rate of Interest on Loan (%)	7.5519%	7.5871%	7.6505%	7.7993%	8.1310%
Interest on Loan	492.85	437.66	383.35	331.71	284.21
Return on Equity					
Opening Equity	4433.79	4433.79	4433.79	4433.79	4433.79
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	4433.79	4433.79	4433.79	4433.79	4433.79
Average Equity	4433.79	4433.79	4433.79	4433.79	4433.79
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	869.49	869.49	869.49	869.49	869.49
Interest on Working Capital					
O & M expenses	59.06	61.03	63.05	65.14	67.30
Maintenance Spares	106.35	109.89	113.54	117.30	121.20
Receivables	486.17	480.90	475.92	471.53	468.00
Total	651.58	651.82	652.51	653.98	656.50
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	87.96	88.00	88.09	88.29	88.63
Annual Transmission Charges					
Depreciation	757.68	757.68	757.68	757.68	757.68

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan	492.85	437.66	383.35	331.71	284.21
Return on Equity	869.49	869.49	869.49	869.49	869.49
Interest on Working Capital	87.96	88.00	88.09	88.29	88.63
O & M Expenses	709.02	732.61	756.92	782.02	807.97
Total	2917.00	2885.43	2855.52	2829.19	2807.98

46. Except for the above, all other terms contained in our order dated 30.12.2015 in Petition No. 216/TT/2014 remains unchanged.

47. This order disposes of Petition No. 129/TT/2016.

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

Sd/-
(A.S. Bakshi)
Member

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD**

(₹in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
				(Rs in lakh)
BOND XVI-DOCO-	7.10	4240.00	0.00	4240.00
BOND XVII-DOCO-	7.39	4550.00	0.00	4550.00
BOND XVIII-DOCO-	8.15	1385.00	0.00	1385.00
BOND XIX-DOCO-	9.25	98.00	0.00	98.00
BOND XXII-ADDCAP FOR 2008-2009-	8.68	360.00	0.00	360.00
BOND XXIX-ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009-	9.20	150.00	0.00	150.00
Total		10783.00	0.00	10783.00

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

(₹in lakh)

Particulars	2009-10	2010-11	2011-12	2013-14	2014-15
Gross Opening Loan	10783.00	10783.00	10783.00	10783.00	10783.00
Cumulative Repayments of Loans up to Previous Year	424.00	1418.42	2451.01	3483.60	4528.69
Net Loans Opening	10359.00	9364.58	8331.99	7299.40	6254.31
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments during the year	994.42	1032.59	1032.59	1045.09	1045.09
Net Closing Loan	9364.58	8331.99	7299.40	6254.31	5209.22
Average Net Loan	9861.79	8848.29	7815.70	6776.86	5731.77
Rate of Interest on Loan (%)*	7.4794%	7.4906%	7.5015%	7.5142%	7.5296%
Interest on Loan	737.60	662.79	586.29	509.22	431.58

*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 1.4.2009	Additions during the tariff period	Total
				(Rs in lakh)
BOND XVI-DOCO-	7.10	4240.00	0.00	4240.00
BOND XVII-DOCO-	7.39	4550.00	0.00	4550.00
BOND XVIII-DOCO-	8.15	1385.00	0.00	1385.00
BOND XIX-DOCO-	9.25	98.00	0.00	98.00
BOND XXII-ADDCAP FOR 2008-2009-	8.68	360.00	0.00	360.00
BOND XXIX-ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009-	9.20	150.00	0.00	150.00
Total		10783.00	0.00	10783.00

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	10783.00	10783.00	10783.00	10783.00	10783.00
Cumulative Repayments of Loans up to Previous Year	5573.78	6618.87	7663.96	8709.05	9754.14
Net Loans Opening	5209.22	4164.13	3119.04	2073.95	1028.86
Add: Drawl(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments during the year	1045.09	1045.09	1045.09	1045.09	621.09
Net Closing Loan	4164.13	3119.04	2073.95	1028.86	407.77
Average Net Loan	4686.68	3641.59	2596.50	1551.41	718.32
Rate of Interest on Loan (%)*	7.5519%	7.5871%	7.6505%	7.7993%	8.1310%
Interest on Loan	353.93	276.29	198.64	121.00	58.41

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