

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 485/TT/2014

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

Date of Hearing: 23.11.2015
Date of Order: 22.12.2015

In the Matter of:

Truing up of transmission tariff for 2009-14 tariff block and determination of transmission tariff for 2014-19 tariff block for combined asset of System Strengthening Scheme for Eastern Region (ERSS) (Formerly part of Tala Supplementary Scheme) in Eastern Region under Regulation, 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the Matter of:

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

.....Petitioner

Versus

1. Bihar State Electricity Board,
Vidyut Bhawan, Bailey Road,
Patna – 800001
2. West Bengal State Electricity Distribution Company
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector – II, Salt Lake City,
Calcutta - 700091



3. Grid Corporation of Orrisa Limited,
Shahid Nagar, Bhubaneswar – 751007
4. Damodar Valley Corporation,
DVC Tower Maniktala,
Civic Centre, VIP road, Calcutta - 700054
5. Power Department,
Government of Sikkim,
Gangtok – 737101
6. Jharkhand State Electricity Board
In Front of Main Secretariat,
Doranda, Ranchi – 834002

....Respondent(s)

The following were present:

For Petitioner: Shri S.K. Niranjana, PGCIL
 Shri S.S. Raju, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri Anshul Garg, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri M.M. Mondal, PGCIL
 Shri S.K Venkatesan, PGCIL

For Respondents: None

ORDER

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”), a transmission licensee, for revision of tariff under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on truing up of capital expenditure for the period 1.4.2009 to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 in respect of



combined asset of System Strengthening of Eastern Region (ERSS) (Formerly part of Tala Supplementary Scheme) in Eastern Region (hereinafter referred as “the transmission asset”).

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

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

a) The investment approval for the transmission scheme was accorded by the Board of Directors of the petitioner company vide letter dated 25.2.2003 at an estimated cost of ₹24791 lakh, which included IDC of ₹2364 lakh. Subsequently, the revised cost estimate for the transmission scheme was approved by Board of Directors of the petitioner company vide its letter dated 9.7.2007 at an estimated cost of ₹33618 lakh, which included an IDC of ₹1837 lakh.

b) The notional date of commercial operation for the transmission asset is 1.4.2007. The Commission, vide its order dated 16.5.2011 in Petition No. 276/2010, had approved the capital cost of ₹31572.08 lakh as on 31.3.2009 as under:-

Admitted as on 31.3.2009	Amount (in ₹ lakh)	Percentage (%)
Debt	22125.7	70.08
Equity	9446.38	29.92
Capital Cost	31572.08	100.00



c) The petitioner had filed Petition No. 276/2010 for approval of estimated additional capital expenditure towards balance retention payments during 2009-10 and 2010-11 and determination of tariff for 2009-14 tariff period.

d) The additional capital expenditure of ₹398.38 lakh for 2009-10 and ₹92.30 lakh for 2010-11 was allowed vide order dated 16.5.2011. The tariff for the transmission asset for period 2009-14 was allowed based on admitted capital cost of ₹31572.08 lakh as on 31.3.2009 and estimated additional capital expenditure of ₹398.38 lakh for 2009-10 and ₹92.30 lakh for 2010-11 as given below:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1655.32	1665.48	1667.61	1667.61	1667.61
Interest on Loan	1522.39	1411.24	1286.68	1158.39	1029.95
Return on Equity	1661.77	1674.63	1677.05	1677.05	1677.05
Interest on Working Capital	143.45	144.06	144.13	144.18	144.37
O & M Expenses	851.39	900.15	951.68	1006.05	1063.51
Total	5834.32	5795.57	5727.16	5653.28	5582.50

4. Regulation 6 of the 2009 Tariff Regulations provides for 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, admitted 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. In this context, the petitioner has filed the instant petition on 17.11.2014, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.



5. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the public in response to the notice in newspaper. No submissions have been made by the respondents. The hearing in this matter was held on 23.11.2015. The petitioner was directed to submit the additional information through letter dated 16.11.2015. The petitioner has submitted the additional information vide rejoinder dated 21.11.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

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

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

7. The petitioner has submitted the information as required under the 2009 Tariff Regulations for 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

8. The petitioner has claimed admitted capital cost of ₹31572.08 lakh as on 31.3.2009 for the purpose of tariff determination.



9. 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”.

10. The admitted capital cost of ₹31572.08 lakh 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

11. 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...”

12. The petitioner has submitted that it has incurred an additional capital expenditure of ₹427.07 lakh in 2009-10, ₹12.01 lakh in 2010-11, ₹19.87 lakh in 2011-12 and ₹50.97 lakh in 2013-14 towards balance and retention payments as certified by its Auditor as depicted below:-

(₹ in lakh)

Capital cost admitted as on 31.3.2009	Additional capital expenditure	2009-10	2010-11	2011-12	2012-13	2013-14	Total cost as on 31.3.2014
31572.08	Approved vide order dated 16.5.2011	398.38	92.30	-	-	-	32062.76



Capital cost admitted as on 31.3.2009	Additional capital expenditure	2009-10	2010-11	2011-12	2012-13	2013-14	Total cost as on 31.3.2014
31572.08	Actual incurred during 2009-14	427.07	12.01	19.87	-	50.97	32082.00

13. The petitioner, vide rejoinder dated 21.11.2015, has submitted the asset wise comparison of actual capital expenditure during the 2009-14 tariff period and the approved capital expenditure in the order dated 16.5.2011. The petitioner has also submitted that the difference in the approved and the actual expenditure is due to the spill over of the previous year payments and reconciliation with the contractors which was not projected earlier.

14. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-10, 2010-11, 2011-12 and 2013-14. The additional capital expenditure is based on actual expenditure incurred as per the Auditor Certificate 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.

15. 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, the same has been considered towards financing of the additional capital expenditure.

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 petitioner has claimed the tariff based on the admitted debt: equity ratio of 70.08: 29.92 as on 31.3.2009. The same has been considered as opening debt:equity ratio on 1.4.2009 for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. In respect of the additional capitalization, debt:equity ratio of 70:30 has been considered which is in line with the 2009 Tariff Regulations.

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



Capital Structure	Capital cost as on 31.3.2009		Additional capital expenditure during 2009-14		Capital cost as on 31.3.2014	
	(₹ in lakh)	(%)	(₹ in lakh)	(%)	(₹ in lakh)	(%)
Debt	22125.7	70.08	356.94	70	22482.64	70.08
Equity	9446.38	29.92	152.98	30	9599.36	29.92
Total	31572.08	100	509.92	100	32082.00	100

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:

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

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.”

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

	(₹ in lakh)				
Return on Equity	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 16.5.2011	1661.77	1674.63	1677.05	1677.05	1677.05
Claimed by the petitioner	1775.98	1853.78	1856.53	1857.10	1880.93
Allowed after true up in this order	1775.94	1853.81	1856.52	1857.10	1880.98

The variation in the return on equity is on account of change in the applicable MAT rate considered for the purpose of grossing up of base rate of return on equity.

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. The petitioner has submitted the weighted average rate of IoL, based on its actual loan portfolio and rate of interest for the tariff period 2009-14. Regulation 16 of the 2009 Tariff Regulations provides that the weighted average interest rate of loan is to be worked out based on actual loan portfolio. The weighted average rate of interest is worked out based on the actual loan interest rate and repayments submitted by the petitioner and placed in Annexure - 1. Accordingly, the IoL has been calculated based on actual weighted average interest rate worked out as above, in accordance with the Regulation 16 of the 2009 Tariff Regulations. The IoL worked out is as follows:-

(₹ in lakh)

Interest on Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 16.5.2011	1522.39	1411.24	1286.68	1158.39	1029.95
Claimed by the petitioner	1524.14	1412.47	1286.13	1158.30	1031.04
Allowed after true up in this order	1524.15	1412.46	1286.14	1158.31	1031.06

The variation in IoL for the assets is on account of change in additional capitalization and weighted average rate of interest.

Depreciation

24. 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	2009-10	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 16.5.2011	1655.32	1665.48	1667.61	1667.61	1667.61
Claimed by the petitioner	1657.21	1667.46	1668.30	1668.83	1670.17
Allowed after true up in this order	1657.21	1667.45	1668.30	1668.82	1670.17

The variation in depreciation is due to change in additional capital expenditure and corresponding gross block during the 2009-14 tariff period.

Interest on Working Capital ('IWC')

25. 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	2009-10	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 16.5.2011	143.45	144.06	144.13	144.18	144.38
Claimed by the petitioner	145.91	147.86	147.88	147.95	148.70
Allowed after true up in this order	145.91	147.85	147.87	147.95	148.70

The variation in IWC is due to change in additional capital expenditure, corresponding receivables and change in ROE on account of variation in applicable MAT rate 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)

O&M Expenses	2009-10	2010-11	2011-12	2012-13	2013-14
Approved in Order dated 16.5.2011	851.39	900.15	951.68	1006.05	1063.51
Claimed by the petitioner	851.39	900.15	951.68	1006.05	1063.51
Allowed after true up in this order	851.39	900.15	951.68	1006.05	1063.51

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

27. 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
Depreciation					
Opening Gross Block	31572.08	31999.15	32011.16	32031.03	32031.03
Additional Capitalization	427.07	12.01	19.87	0.00	50.97
Closing Gross Block	31999.15	32011.16	32031.03	32031.03	32082.00
Average Gross Block	31785.62	32005.16	32021.10	32031.03	32056.52
Rate of Depreciation (%)	5.21	5.21	5.21	5.21	5.21
Depreciable Value	28402.37	28792.13	28619.70	28632.18	28646.18
Balance useful life of the asset	30	29	28	27	26
Elapsed life	2	3	4	5	6
Remaining Depreciable Value	26410.79	24951.17	23298.06	21638.71	19992.82
Depreciation during the year	1657.21	1667.45	1668.30	1668.82	1670.17
Cumulative depreciation (incl. of AAD)	3648.78	5316.24	6984.53	8653.35	10323.52
Interest on Loan					
Gross Normative Loan	22125.70	22424.65	22433.06	22446.97	22446.97
Cumulative Repayments upto Previous Year	1991.59	3648.80	5316.25	6984.55	8653.37
Net Loan-Opening	20134.11	18775.85	17116.81	15462.42	13793.60
Additions	298.95	8.41	13.91	0.00	35.68



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Repayment during the year	1657.21	1667.45	1668.30	1668.82	1670.17
Net Loan-Closing	18775.85	17116.81	15462.42	13793.60	12159.11
Average Loan	19454.98	17946.33	16289.61	14628.01	12976.35
Weighted Average Rate of Interest on Loan (%)	7.8343	7.8705	7.8955	7.9185	7.9456
Interest on Loan	1524.15	1412.46	1286.13	1158.31	1031.06
Return on Equity					
Opening Equity	9446.38	9574.50	9578.10	9584.07	9584.07
Additions	128.12	3.60	5.96	0.00	15.29
Closing Equity	9574.50	9578.10	9584.07	9584.07	9599.36
Average Equity	9510.44	9576.30	9581.08	9584.07	9591.71
Return on Equity (Base Rate)(%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for 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	1775.94	1853.81	1856.52	1857.10	1880.98
Interest on Working Capital					
O & M Expenses	70.92	74.98	79.27	83.80	88.59
Maintenance Spares	127.71	135.02	142.75	150.91	159.53
Receivables	992.43	996.95	985.08	973.04	965.73
Total Working Capital	1191.06	1206.96	1207.11	1207.75	1213.85
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest of working capital	145.91	147.85	147.87	147.95	148.70
Annual Transmission Charges					
Depreciation	1657.21	1667.45	1668.30	1668.82	1670.17
Interest on Loan	1524.15	1412.46	1286.14	1158.31	1031.06
Return on Equity	1775.94	1853.81	1856.52	1857.10	1880.98
Interest on Working Capital	145.91	147.85	147.87	147.95	148.70
O & M Expenses	851.39	900.15	951.68	1006.05	1063.51
Total	5954.60	5981.73	5910.51	5838.23	5794.41

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

28. 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	1671.78	1672.05	1672.05	1672.05	1672.05
Interest on Loan	904.12	776.15	648.75	523.34	400.56
Return on Equity	1882.73	1883.02	1883.02	1883.02	1883.02
Interest on Working Capital	156.59	155.46	154.38	153.4	152.55
O & M Expenses	976.89	1009.4	1042.89	1077.49	1113.24
Total	5592.11	5496.08	5401.09	5309.30	5221.42

29. 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	81.41	84.12	86.91	89.79	92.77
Maintenance Spares	146.53	151.41	156.43	161.62	166.99
Receivables	932.02	916.01	900.18	884.88	870.24
Total	1159.96	1151.54	1143.52	1136.29	1130.00
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	156.59	155.46	154.38	153.40	152.55

Capital Cost

30. 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;”



31. The capital cost of ₹32082.00 lakh admitted 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

32. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law.”

33. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines

“Cut - off Date” means 31st 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 31st March of the year closing after three years of the year of commercial operation.”

34. The petitioner has claimed additional capital expenditure amounting to ₹10.00 lakh during 2014-15 under the provision of Regulation 14(2)(iv) of the 2014 Tariff Regulations on account of balance and retention payments pertaining to the construction of storm water drain at Subhasgram Sub-station. The petitioner has submitted in its affidavit dated 21.11.2015 that contractor for the above work has gone for arbitration and claimed ₹9.26 lakh, which might go upto ₹10.00 lakh including



interest after resolving the matter in arbitration, and hence the petitioner has claimed the additional capitalisation of ₹10.00 lakh for 2014-15. The Commission has considered the submission of the petitioner and is of the view that the estimated additional capital expenditure of ₹10.00 lakh is still under arbitration and hence, the same has not been allowed. The petitioner is at the liberty to approach the Commission at the time of true-up and the same can be allowed on actual basis.

Debt: Equity

35. 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 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.”

36. The petitioner has considered the debt:equity ratio of 70.08:29.92 as on 31.3.2014, which is in line with the 2014 Tariff Regulations.

37. In respect of the additional capital expenditure, debt:equity ratio of 70:30 has been adopted as mandated by clause (5) read with clause (1) of Regulation 19 of the 2014 Tariff Regulations. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-



Funding	Total Ccost as on 31.3.2014		Additional capital expenditure during 2014-19		Total cost as on 31.3.2019	
	(₹ in lakh)	(%)	(₹ in lakh)	(%)	(₹ in lakh)	(%)
Debt	22482.64	70.08	-	-	22482.64	70.08
Equity	9599.36	29.92	-	-	9599.36	29.92
Total	32082.00	100.00	-	-	32082.00	100.00

Return on Equity ('ROE')

38. 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.”

39. 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 allowed is as follows:-



	(₹ in lakh)				
Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	9599.36	9599.36	9599.36	9599.36	9599.36
Additions	-	-	-	-	-
Closing Equity	9599.36	9599.36	9599.36	9599.36	9599.36
Average Equity	9599.36	9599.36	9599.36	9599.36	9599.36
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	1882.48	1882.48	1882.48	1882.48	1882.48

Interest on Loan ('IoL')

40. 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.”

41. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014 as per 2014 Tariff Regulations taking into account interest rate of individual loan and repayment. 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 and the IoL has been worked out and allowed as follows:-

(₹ in lakh)

Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	22482.64	22482.64	22482.64	22482.64	22482.64
Cumulative Repayment upto Previous Year	10323.53	11995.05	13666.56	15338.07	17009.58
Net Loan-Opening	12159.11	10487.60	8816.08	7144.57	5473.06
Additions	-	-	-	-	-
Repayment during the year	1671.51	1671.51	1671.51	1671.51	1671.51
Net Loan-Closing	10487.60	8816.08	7144.57	5473.06	3801.55
Average Loan	11323.35	9651.84	7980.33	6308.82	4637.30
Weighted Average Rate of Interest on Loan (%)	7.9824	8.0362	8.1233	8.2886	8.6284
Interest on Loan	903.88	775.64	648.26	522.91	400.12

Depreciation

42. 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.”

43. 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
Depreciation					
Opening Gross Block	32082.00	32082.00	32082.00	32082.00	32082.00
Additional Capitalization	-	-	-	-	-
Closing Gross Block	32082.00	32082.00	32082.00	32082.00	32082.00
Average Gross Block	32082.00	32082.00	32082.00	32082.00	32082.00
Freehold Land (Av. Cost)	227.43	227.43	227.43	227.43	227.43
Rate of Depreciation (%)	5.21	5.21	5.21	5.21	5.21
Balance Useful life of the asset	25	24	23	22	21
Elapsed Life	7	8	9	10	11
Remaining Depreciable Value	18345.59	16674.08	15002.57	13331.05	11659.54
Depreciation During the year	1671.51	1671.51	1671.51	1671.51	1671.51
Depreciation upto previous year	10323.52	11995.03	13666.55	15338.06	17009.57
Cumulative depreciation (incl. of AAD)	11995.03	13666.55	15338.06	17009.57	18681.08



Operation & Maintenance Expenses ('O&M Expenses')

44. 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 have been worked out and allowed are as follows:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV Bays:					
No. of Bays	7	7	7	7	7
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
400 kV Bays:					
No. of Bays	9	9	9	9	9
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
Line: D/C Twin/Triple Conductor					
Line Length (km)	196.21	196.21	196.21	196.21	196.21
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
Total O&M Expenses (₹ lakh)	976.89	1009.40	1042.89	1077.48	1113.24

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

Interest on Working Capital ('IWC')

46. 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;”

47. 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%.

48. 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	84.08	86.87	89.75	92.73	84.08
Maintenance Spares	151.41	156.43	161.62	166.99	151.41
Receivables	915.74	899.91	884.62	869.98	915.74
Total	1151.23	1143.22	1136.00	1129.69	1151.23
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	155.42	154.33	153.36	152.51	155.42



ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

49. 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	32082.00	32082.00	32082.00	32082.00	32082.00
Additional Capitalisation	-	-	-	-	-
Closing Gross Block	32082.00	32082.00	32082.00	32082.00	32082.00
Average Gross Block	32082.00	32082.00	32082.00	32082.00	32082.00
Rate of Depreciation (%)	5.21	5.21	5.21	5.21	5.21
Depreciable Value	28692.05	28669.11	28669.11	28669.11	28669.11
Balance useful life of the asset	25	24	23	22	21
Elapsed life	7	8	9	10	11
Remaining Depreciable Value	18345.59	16674.08	15002.57	13331.05	11659.54
Depreciation during the year	1671.51	1671.51	1671.51	1671.51	1671.51
Cumulative depreciation (incl. of AAD)	11995.03	13666.55	15338.06	17009.57	18681.08
Interest on Loan					
Gross Normative Loan	22482.64	22482.64	22482.64	22482.64	22482.64
Cumulative Repayments upto Previous Year	10323.53	11995.05	13666.56	15338.07	17009.58
Net Loan-Opening	12159.11	10487.60	8816.08	7144.57	5473.06
Additions	-	-	-	-	-
Repayment during the year	1671.51	1671.51	1671.51	1671.51	1671.51
Net Loan-Closing	10487.60	8816.08	7144.57	5473.06	3801.55
Average Loan	11323.35	9651.84	7980.33	6308.82	4637.30
Weighted Average Rate of Interest on Loan (%)	7.9824	8.0362	8.1233	8.2886	8.6284
Interest on Loan	903.88	775.64	648.26	522.91	400.12
Return on Equity					
Opening Equity	9599.36	9599.36	9599.36	9599.36	9599.36
Additions	-	-	-	-	-
Closing Equity	9599.36	9599.36	9599.36	9599.36	9599.36
Average Equity	9599.36	9599.36	9599.36	9599.36	9599.36
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



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	1882.48	1882.48	1882.48	1882.48	1882.48
Interest on Working Capital					
O & M Expenses	81.37	84.08	86.87	89.75	92.73
Maintenance Spares	146.53	151.41	156.43	161.62	166.99
Receivables	931.89	915.74	899.91	884.62	869.98
Total Working Capital	1159.80	1151.23	1143.22	1136.00	1129.69
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	156.57	155.42	154.33	153.36	152.51
Annual Transmission Charges					
Depreciation	1671.51	1671.51	1671.51	1671.51	1671.51
Interest on Loan	903.88	775.64	648.26	522.91	400.12
Return on Equity	1882.48	1882.48	1882.48	1882.48	1882.48
Interest on Working Capital	156.57	155.42	154.33	153.36	152.51
O & M Expenses	976.89	1009.40	1042.89	1077.48	1113.24
Total	5591.33	5494.45	5399.48	5307.74	5219.86

Deferred Tax Liability

50. 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

51. 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

52. 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

53. 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

54. 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.

55. This order disposes of Petition No. 485/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XV-DOCO 01-NOV-2006	6.68	448.00	0.00	448.00
BOND XV-DOCO 01-OCT-2006	6.68	25.00	0.00	25.00
BOND XV-DOCO 01-MAR-2007	6.68	227.00	0.00	227.00
BOND XVI-DOCO - 01-NOV-2006-	7.10	2013.00	0.00	2013.00
BOND XVI-DOCO - 01-OCT-2006-	7.10	111.00	0.00	111.00
BOND XVI-DOCO 01-APR-2007	7.10	680.00	0.00	680.00
BOND XVI-DOCO 01-MAR-2007	7.10	340.00	0.00	340.00
BOND XVII-DOCO - 01-NOV-2006-	7.39	7335.00	0.00	7335.00
BOND XVII-DOCO - 01-OCT-2006-	7.39	361.50	0.00	361.50
BOND XVII-DOCO 01-MAR-2007	7.39	3757.50	0.00	3757.50
BOND XVIII-DOCO - 01-NOV-2006-	8.15	1975.00	0.00	1975.00
BOND XVIII-DOCO - 01-OCT-2006-	8.15	109.00	0.00	109.00
BOND XVIII-DOCO 01-MAR-2007	8.15	1001.00	0.00	1001.00
BOND XIX-ADDCAP FOR 2006 - 200702-NOV-06	9.25	145.00	0.00	145.00
BOND XIX-ADDCAP FOR 2006-2007 –31-MAR-2007-	9.25	38.00	0.00	38.00
BOND XIX-ADDCAP FOR 31-MAR-2007 –31-MAR-07-	9.25	102.00	0.00	102.00
BOND XIX-DOCO - 01-NOV-2006	9.25	456.00	0.00	456.00
BOND XIX-DOCO 01-APR-2007	9.25	46.00	0.00	46.00
BOND XIX-DOCO 01-MAR-2007	9.25	1436.00	0.00	1436.00
ADB - I-ADDCAP FOR 2008-2009 15-DEC-2008	6.20	0.00	0.00	0.00
BOND XXVII-ADDCAP FOR 2007-2008 - 31-MAR-2008	9.47	821.21	0.00	821.21
BOND XXVII-ADDCAP FOR 2007-2008 31-MAR-2008	9.47	651.26	0.00	651.26
BOND XXVIII-ADDCAP FOR 2008-2009 15-DEC-2008	9.33	556.02	0.00	556.02
BOND XXX-ADDCAP FOR 2009-2010 ADD CAP	8.80	0.00	110.01	110.01
BOND XXXI-ADDCAP FOR 2009-2010 ADD CAP	8.90	0.00	115.00	115.00
BOND-XXXIV-ADDCAP FOR 2010-2011 ADD CAP	0.00	0.00	8.41	8.41
Total		22634.49	233.42	22867.91

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

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	22634.49	22859.50	22867.91	22867.91	22867.91
Cumulative Repayments of Loans upto Previous Year	431.07	2206.28	4166.74	6249.90	8379.40
Net Loans Opening	22203.42	20653.22	18701.17	16618.01	14488.51
Add: Drawl(s) during year	225.01	8.41	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	1775.21	1960.46	2083.16	2129.50	2148.25
Net Closing Loan	20653.22	18701.17	16618.01	14488.51	12340.26
Average Net Loan	21428.32	19677.20	17659.59	15553.26	13414.39
Interest on Loan	1678.75	1548.69	1394.31	1231.58	1065.86
Rate of Interest on Loan (%)	7.8343%	7.8705%	7.8955%	7.9185%	7.9456%



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XV-DOCO - 01-NOV-2006-	6.68	448.00	0.00	448.00
BOND XV-DOCO - 01-OCT-2006-	6.68	25.00	0.00	25.00
BOND XV-DOCO 01-MAR-2007 - 01-MAR-2007-	6.68	227.00	0.00	227.00
BOND XVI-DOCO - 01-NOV-2006-	7.10	2013.00	0.00	2013.00
BOND XVI-DOCO - 01-OCT-2006-	7.10	111.00	0.00	111.00
BOND XVI-DOCO 01-APR-2007 - 01-APR-2007-	7.10	680.00	0.00	680.00
BOND XVI-DOCO 01-MAR-2007 - 01-MAR-2007-	7.10	340.00	0.00	340.00
BOND XVII-DOCO - 01-NOV-2006-	7.39	7335.00	0.00	7335.00
BOND XVII-DOCO - 01-OCT-2006-	7.39	361.50	0.00	361.50
BOND XVII-DOCO 01-MAR-2007 - 01-MAR-2007-	7.39	3757.50	0.00	3757.50
BOND XVIII-DOCO - 01-NOV-2006-	8.15	1975.00	0.00	1975.00
BOND XVIII-DOCO - 01-OCT-2006-	8.15	109.00	0.00	109.00
BOND XVIII-DOCO 01-MAR-2007 - 01-MAR-2007-	8.15	1001.00	0.00	1001.00
BOND XIX-ADDCAP FOR 2006 - 2007 - 02-NOV 06	9.25	145.00	0.00	145.00
BOND XIX-ADDCAP FOR 2006-2007 - 31-MAR-07-	9.25	38.00	0.00	38.00
BOND XIX-ADDCAP FOR 31-MAR-2007 - 31-MAR-07	9.25	102.00	0.00	102.00
BOND XIX-DOCO - 01-NOV-2006-	9.25	456.00	0.00	456.00
BOND XIX-DOCO 01-APR-2007 - 01-APR-2007-	9.25	46.00	0.00	46.00
BOND XIX-DOCO 01-MAR-2007 - 01-MAR-2007-	9.25	1436.00	0.00	1436.00
ADB - I-ADDCAP FOR 2008-2009 15-DEC-2008	6.47	0.00	0.00	0.00
BOND XXVII-ADDCAP FOR 2007-2008 - 31-MAR-08	9.47	821.21	0.00	821.21
BOND XXVII-ADDCAP FOR 2007-2008 31-MAR-2008	9.47	651.26	0.00	651.26
BOND XXVIII-ADDCAP FOR 2008-2009 15-DEC-2008	9.33	556.02	0.00	556.02
BOND XXX-ADDCAP FOR 2009-2010 ADD Cap	8.80	110.01	0.00	110.01
BOND XXXI-ADDCAP FOR 2009-2010 ADD Cap	8.90	115.00	0.00	115.00
BOND-XXXIV-ADDCAP FOR 2010-2011 ADD Cap	8.84	8.41	0.00	8.41
Total		22867.91	0.00	22867.91

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	22867.91	22867.91	22867.91	22867.91	22867.91
Cumulative Repayments of Loans upto Previous Year	10527.65	12676.6	14825.55	16974.5	19123.45
Net Loans Opening	12340.26	10191.31	8042.36	5893.41	3744.46
Add: Drawl(s) during the year	0	0	0	0	0
Less: Repayment(s) of Loan during the year	2148.95	2148.95	2148.95	2148.95	1834.55
Net Closing Loan	10191.31	8042.36	5893.41	3744.46	1909.91
Average Net Loan	11265.785	9116.835	6967.885	4818.935	2827.185
Rate of Interest on Loan (%)	7.9824%	8.0362%	8.1233%	8.2886%	8.6284%

