

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 60/TT/2015

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

Date of Hearing : 2.12.2015
Date of Order : 8.1.2016

In the Matter of:

Truing up of transmission tariff for 2009-14 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and determination of transmission tariff for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 for Chukka Transmission System in Eastern 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. 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 Orissa Limited,
Shahid Nagar, Bhubaneswar – 751007
4. Damodar Valley Corporation,
DVC Tower, Maniktala,



Civic Centre, VIP Road, Calcutta – 700054

5. Power Department,
Govt. Of Sikkim,
Gangtok - 737101

6. Jharkhand State Electricity Board,
In Front off Main Secretariat Doranda,
Ranchi – 834002

.....Respondent(s)

The following were present:

For Petitioner: Shri S.K. Niranjana, PGCIL
Shri S.S. Raju, PGCIL
Shri Angaru Naresh Kumar PGCIL
Shri Jasbir Singh, PGCIL
Shri Shashi Bhushan, PGCIL
Shri J. Mazumder, PGCIL
Shri R. Prasad, PGCIL
Shri Sunil Kumar, PGCIL
Shri Anshul Garg, 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

Chukka Transmission System in Eastern Region (hereinafter referred to as “the transmission asset”).

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

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

a) The Chukka Transmission System is associated with evacuation of power generated from Chukka Hydroelectric Power Project situated in Bhutan. The Transmission System was initially implemented by NHPC and was subsequently taken over by the petitioner. The Central Government in Ministry of Power accorded its approval to the revised cost estimates of ₹13909 lakh, including IDC of ₹824 lakh vide its letter dated 4.9.1998.

b) The notional DOCO of the transmission asset is considered as 1.4.1987. The Commission vide its order dated 6.8.2013 in Petition No. 331/2010 had approved the capital cost of ₹13789.43 lakh as on 31.3.2009 as under:-

Admitted as on 31.3.2009	Amount (₹ in lakh)	Percentage (%)
Debt	6894.72	50.00
Equity	6894.72	50.00
Capital Cost	13789.43	100.00

c) The commission had allowed the additional capital expenditure of ₹387.00 lakh for 2010-11, ₹1064.31 lakh for 2012-13 and ₹944.47 lakh for 2013-14 and de-capitalisation of ₹339.19 lakh for 2012-13 and ₹223.61 lakh for 2013-14.

d) The Commission determined the tariff for the transmission asset for tariff period 2009-14, based on admitted capital cost of ₹13789.43 lakh as on 31.3.2009 and estimated additional capital expenditure of ₹387.00 lakh for 2010-11, ₹1064.31 lakh for 2012-13 and ₹944.47 lakh for 2013-14 and de-capitalisation of ₹339.19 lakh for 2012-13 and ₹223.61 lakh for 2013-14 as given below:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	279.15	296.57	315.92	386.1	500.98
Interest on Loan	0	0	0	5.25	10.65
Return on Equity	1205.27	1215.41	1225.56	1244.57	1282.49
Interest on Working Capital	115.58	120.99	126.75	134.12	143.13
O & M Expenses	1692.18	1788.83	1891.64	1999.57	2113.84
Total	3292.18	3421.80	3559.87	3769.61	4051.09

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 30.1.2015, 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. No submissions have been made by the respondents. The hearing in this matter was held on 2.12.2015. The Commission had directed the petitioner to submit the incidence report in support of replacement of BPL make PLCC panels and details of installation of BIMCO make isolators and any inspection and testing report in support of proposal for replacement. In response to the Commission's directions the petitioner has submitted its replies vide affidavit dated 23.12.2015. The petitioner has further submitted affidavit dated 31.12.2015 and revised certain tariff forms in its submission. 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

7. 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”.

8. 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

9. The petitioner has claimed admitted capital cost of ₹13789.43 lakh as on 31.3.2009 for the purpose of tariff determination.

10. 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”.

11. The capital cost of ₹13789.43 lakh admitted by the Commission as on 31.3.2009 has been considered as opening capital cost as on 1.4.2009 for truing up of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

Additional Capital Expenditure

12. 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”

13. The petitioner has submitted that it has incurred the additional capital expenditure and de-capitalization towards tower strengthening works and replacement of equipments as depicted below:-

(₹ in lakh)

Capital cost admitted as on 31.3.2009	Particulars	Add Cap / De-Cap	2009-10	2010-11	2011-12	2012-13	2013-14	Total cost as on 31.3.2014
13789.43	Approved vide order dated 6.8.2013	Add Cap	-	387.00	-	1064.31	944.47	15622.41
		De-Cap	-	-	-	339.19	223.61	
		Net Add Cap	-	387.00	-	725.12	720.86	
	Actual incurred during 2009-14	Add Cap	-	361.32	97.13	74.18	437.2	14572.65
		De-Cap	-	-	24.15	16.4	146.05	
		Net Add Cap	-	361.32	72.98	57.78	291.15	



14. The petitioner has submitted that the additional capital expenditure incurred during 2009-14 tariff period is on account of tower strengthening and replacement of equipments that have completed useful life and as approved by the Hon'ble Commission in its order dated 6.8.2013 in Petition No. 331/2010. The petitioner has also submitted the Auditor's Certificate dated 15.1.2015 certifying the actual capital cost.

15. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14 tariff period. Since the net capital addition of ₹783.23 lakh during 2009-14 tariff period is based on actual capital expenditure incurred as per the Auditor Certificate dated 15.1.2015, and is within the scope of work as approved by the Commission in its order dated 6.8.2013 in Petition No. 331/2010, the same is allowed for the purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations.

16. 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.

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 50:50 admitted by the Commission vide order dated 6.8.2013 in Petition No. 331/2010 as on 31.3.2009 has been considered as on 1.4.2009 for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. In respect of the additional capitalization, debt: equity ratio of 70:30 has been considered in line with the 2009 Tariff Regulations.

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

(₹ in lakh)

Funding	Capital cost as on 31.3.2009	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	6894.715	50.00	548.26	70.00	7442.97	51.07
Equity	6894.715	50.00	234.97	30.00	7129.68	48.93
Total	13789.43	100.00	783.23	100.00	14572.65	100.00

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 petitioner has claimed the additional capital expenditure in the debt:equity ratio of 70:30, which is in line with Regulation 12 of the 2009 Tariff Regulations.

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

Return on Equity	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide Order dated 6.8.2013	1205.27	1215.41	1225.56	1244.57	1282.49
Claimed by the petitioner	1287.52	1345.17	1359.11	1362.91	1389.56
Allowed after true up in this order	1287.49	1345.19	1359.11	1362.91	1389.60



The difference in the approved ROE and that allowed after true up is on account of actual grossed up ROE based on actual MAT rate.

Interest on Loan (IoL)

24. 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”.

25. In the instant petition the petitioner has not claimed normative IoL for the 2009-14 tariff period. The loan amount due to the additional capital expenditure during 2009-14 tariff period is getting repaid by the depreciation during the period. Hence the no IoL has been allowed during the 2009-14 tariff period.

(₹ in lakh)

Interest on Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide Order dated 6.8.2013	0.00	0.00	0.00	5.25	10.65
Claimed by the petitioner	0.00	0.00	0.00	0.00	0.00
Allowed after true up in this order	0.00	0.00	0.00	0.00	0.00

Depreciation

26. 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 vide Order dated 6.8.2013	279.15	296.57	315.92	386.10	500.98
Claimed by the petitioner	279.15	295.43	318.86	327.55	363.49
Allowed after true up in this order	279.15	295.41	318.96	327.73	364.99

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

Interest on Working Capital (IWC)

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

(₹ in lakh)					
Interest on Working Capital	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide Order dated 6.8.2013	115.58	120.99	126.75	134.12	143.13
Claimed by the petitioner	117.30	123.67	129.60	135.25	142.27
Allowed after true up in this order	117.29	123.67	129.59	135.25	142.30

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.

Operation & Maintenance Expenses (O&M Expenses)

28. 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 vide Order dated 6.8.2013	1692.18	1788.83	1891.64	1999.57	2113.84
Claimed by the petitioner	1692.18	1788.83	1891.64	1999.57	2113.84
Allowed after true up in this order	1692.18	1788.83	1891.64	1999.57	2113.84

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

29. 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:-

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
(₹ in lakh)					
Depreciation					
Opening Gross Block	13789.43	13789.43	14150.75	14223.73	14281.51
Additional Capitalisation	0.00	361.32	72.98	57.78	291.14
Closing Gross Block	13789.43	14150.75	14223.73	14281.51	14572.65
Average Gross Block	13789.43	13970.09	14187.24	14252.62	14427.08
Rate of Depreciation (%)	2.02	2.11	2.25	2.30	2.53
Depreciable Value	12005.49	12168.08	12363.52	12422.36	12579.37
Balance useful life of the asset	11.00	10.00	9.00	8.00	7.00
Elapsed life	22.00	23.00	24.00	25.00	26.00
Remaining Depreciable Value	3070.70	2954.14	2870.60	2621.83	2554.90
Depreciation during the year	279.15	295.41	318.96	327.73	364.99
Cumulative depreciation (incl. of AAD)	9213.94	9509.36	9811.87	10128.26	10389.46
Interest on Loan					
Gross Normative Loan	6894.72	6894.72	7147.64	7198.73	7239.17
Cumulative Repayments upto Previous Year	6894.72	6894.72	7147.64	7198.73	7239.17
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Additions	0.00	252.92	51.09	40.45	203.80
Repayment during the year	0.00	252.92	51.09	40.45	203.80
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	0.0000	0.0000	0.0000	0.0000	0.0000
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	6894.72	6894.72	7003.11	7025.01	7042.34
Additions	0.00	108.40	21.89	17.33	87.34
Closing Equity	6894.72	7003.11	7025.01	7042.34	7129.68
Average Equity	6894.72	6948.91	7014.06	7033.67	7086.01
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

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1287.49	1345.19	1359.11	1362.91	1389.60
Interest on Working Capital					
O & M Expenses	140.96	149.01	157.57	166.56	176.08
Maintenance Spares	253.83	268.32	283.75	299.94	317.08
Receivables	562.69	592.18	616.55	637.58	668.45
Total Working Capital	957.47	1009.52	1057.87	1104.08	1161.61
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest of working capital	117.29	123.67	129.59	135.25	142.30
Annual Transmission Charges					
Depreciation	279.15	295.41	318.96	327.73	364.99
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1287.49	1345.19	1359.11	1362.91	1389.60
Interest on Working Capital	117.29	123.67	129.59	135.25	142.30
O & M Expenses	1692.18	1788.83	1891.64	1999.57	2113.84
Total	3376.11	3553.10	3699.30	3825.46	4010.73

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

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

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	443.75	616.27	753.59	753.58	753.59
Interest on Loan	0.00	10.00	0.00	0.00	0.00
Return on Equity	1411.85	1461.48	1497.38	1497.38	1497.38
Interest on Working Capital	150.04	158.95	166.41	170.18	174.14
O & M Expenses	1942.88	2007.33	2074.38	2142.62	2214.39
Total	3948.52	4254.03	4491.76	4563.76	4639.50

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

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	161.91	167.28	172.87	178.55	184.53
Maintenance Spares	291.43	301.10	311.16	321.39	332.16
Receivables	658.09	709.00	748.63	760.63	773.25
Total	1111.43	1177.38	1232.66	1260.57	1289.94



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	150.04	158.95	166.41	170.18	174.14

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 ₹14572.65 lakh worked out by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

Additional Capital Expenditure

33. Clause (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.”

34. 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:”

35. The petitioner has claimed the net additional capital expenditure of ₹466.54 lakh for 2014-15 and ₹1220.53 lakh for 2015-16 on account of balance payments for tower foundation works of transmission lines and replacement of sub-station equipments as approved by the Hon'ble Commission in its order dated 6.8.2013 in Petition No. 331/2010. The petitioner has also submitted the Auditor's Certificate dated 15.1.2015 certifying the estimated expenditure during 2014-15 and 2015-16. The details of the projected additional capital expenditure and de-capitalization during 2014-19 tariff period are depicted below:-

(₹ in lakh)

Capital cost admitted as on 31.3.2014	Additional capital expenditure during 2014-19				Total cost as on 31.3.2019
	Add Cap/De-Cap	2014-15	2015-16	2016-19	
14572.65	Add Cap	683.26	1380.31	-	16259.72
	De-Cap	216.72	159.78	-	
	Net Add Cap	466.54	1220.53	-	

36. The Commission takes note of the petitioner's submission. As the net additional capital expenditure is within the scope of work as approved by the Commission in its order dated 6.8.2013 in Petition No. 331/2010 hence, the same is allowed.

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 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.”

38. The petitioner has considered the debt:equity ratio of 51.07:48.93. as on 31.3.2014, which is in line with the 2014 Tariff Regulations.

39. 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:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	7442.97	51.07	1180.95	70.00	8623.92	53.04
Equity	7129.68	48.93	506.12	30.00	7635.80	46.96
Total	14572.65	100.00	1687.07	100.00	16259.72	100.00

Return on Equity (ROE)

40. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.



(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

“25. Tax on Return on Equity:

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

41. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

	(₹ in lakh)				
Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	7129.68	7269.64	7635.80	7635.80	7635.80
Additions	139.96	366.16	0.00	0.00	0.00
Closing Equity	7269.64	7635.80	7635.80	7635.80	7635.80
Average Equity	7199.66	7452.72	7635.80	7635.80	7635.80
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	1411.89	1461.51	1497.41	1497.41	1497.41

Interest on Loan (IoL)

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

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



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

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

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

43. As per the petitioner’s submission dated 21.1.2015, the petitioner has not claimed normative IoL for the 2014-19 tariff period. However in the revised submission made by the petitioner vide affidavit dated 31.12.2015, the petitioner has claimed IoL for 2015-16 to the tune of ₹10.00 lakh at an interest rate of 8.40%. The petitioner has submitted proposed bond for considering the interest rate of 8.40% for 2015-16. The Commission has considered the submission of the petitioner. The IoL worked out is as follows:-

(₹ in lakh)					
Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	7442.97	7769.55	8623.92	8623.92	8623.92
Cumulative Repayment upto Previous Year	7442.97	7769.55	8392.26	8623.92	8623.92
Net Loan-Opening	0.00	0.00	231.66	0.00	0.00
Additions	326.58	854.37	0.00	0.00	0.00
Repayment during the year	326.58	622.71	231.66	0.00	0.00
Net Loan-Closing	0.00	231.66	0.00	0.00	0.00
Average Loan	0.00	115.83	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	0.0000	8.4000	0.0000	0.0000	0.0000
Interest on Loan	0.00	9.73	0.00	0.00	0.00

During 2016-17, though there is net outstanding loan, the petitioner has not claimed IoL and net opening loan. The petitioner has not mentioned about advance repayment of loan. We have not considered the outstanding loan during 2016-17 in line with the submission of the petitioner, however, the petitioner may claim the same based on actual at the time of true up.

Depreciation

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

"27. Depreciation:

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

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

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

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

45. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	14572.65	15039.19	16259.72	16259.72	16259.72
Additional Capitalization	466.54	1220.53	0.00	0.00	0.00
Closing Gross Block	15039.19	16259.72	16259.72	16259.72	16259.72
Average Gross Block	14805.92	15649.46	16259.72	16259.72	16259.72
Freehold Land (Av. Cost)	450.00	450.00	450.00	450.00	450.00
Rate of Depreciation (%)	3.02	3.98	4.67	4.67	4.67
Elapsed life	27	28	29	30	31
Balance Useful life of the asset	6	5	4	3	2
Remaining Depreciable Value	2686.94	3113.56	3040.09	2280.07	1520.04
Depreciation during the year	447.82	622.71	760.02	760.02	760.02



Operation & Maintenance Expenses (O&M Expenses)

46. 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
132KV & below Bays:					
No. of Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	30.150	31.150	32.180	33.250	34.360
220 kV Bays:					
No. of Bays	34	34	34	34	34
Norms (₹ lakh/Bay)	42.210	43.610	45.060	46.550	48.100
400 kV Bays:					
No. of Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	60.300	62.300	64.370	66.510	68.710
Line: S/C (Single Conductor):					
Line Length (km)	38	38	38	38	38
Norms (₹ lakh/km)	0.202	0.209	0.216	0.223	0.230
Line: D/C Twin/Triple Conductor:					
Line Length (km)	40	40	40	40	40
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
Line: D/C Single Conductor:					
Line Length (km)	562	562	562	562	562
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
Total O&M Expenses (₹ lakh)	1942.88	2007.33	2074.38	2142.62	2214.39

47. 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)

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	161.84	167.21	172.80	178.48	184.46
Maintenance Spares	291.43	301.10	311.16	321.39	332.16
Receivables	658.79	710.06	749.73	761.73	774.35
Total	1112.06	1178.37	1233.68	1261.60	1290.97
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	150.13	159.08	166.55	170.32	174.28



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	14572.65	15039.19	16259.72	16259.72	16259.72
Additional Capitalisation	466.54	1220.53	0.00	0.00	0.00
Closing Gross Block	15039.19	16259.72	16259.72	16259.72	16259.72
Average Gross Block	14805.92	15649.46	16259.72	16259.72	16259.72
Rate of Depreciation (%)	3.02	3.98	4.67	4.67	4.67
Depreciable Value	12920.33	13679.51	14228.75	14228.75	14228.75
Balance useful life of the asset	6.00	5.00	4.00	3.00	2.00
Elapsed life	27.00	28.00	29.00	30.00	31.00
Remaining Depreciable Value	2686.94	3113.56	3040.09	2280.07	1520.04
Depreciation during the year	447.82	622.71	760.02	760.02	760.02
Cumulative depreciation (incl. of AAD)	10681.21	11188.66	11948.68	12708.70	13468.73
Interest on Loan					
Gross Normative Loan	7442.97	7769.55	8623.92	8623.92	8623.92
Cumulative Repayments upto Previous Year	7442.97	7769.55	8392.26	8623.92	8623.92
Net Loan-Opening	0.00	0.00	231.66	0.00	0.00
Additions	326.58	854.37	0.00	0.00	0.00
Repayment during the year	326.58	622.71	231.66	0.00	0.00
Net Loan-Closing	0.00	231.66	0.00	0.00	0.00
Average Loan	0.00	115.83	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	0.0000	8.4000	0.0000	0.0000	0.0000
Interest on Loan	0.00	9.73	0.00	0.00	0.00
Return on Equity					
Opening Equity	7129.68	7269.64	7635.80	7635.80	7635.80
Additions	139.96	366.16	0.00	0.00	0.00
Closing Equity	7269.64	7635.80	7635.80	7635.80	7635.80
Average Equity	7199.66	7452.72	7635.80	7635.80	7635.80
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	1411.89	1461.51	1497.41	1497.41	1497.41
Interest on Working Capital					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	161.84	167.21	172.80	178.48	184.46
Maintenance Spares	291.43	301.10	311.16	321.39	332.16
Receivables	658.79	710.06	749.73	761.73	774.35
Total Working Capital	1112.06	1178.37	1233.68	1261.60	1290.97
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	150.13	159.08	166.55	170.32	174.28
Annual Transmission Charges					
Depreciation	447.82	622.71	760.02	760.02	760.02
Interest on Loan	0.00	9.73	0.00	0.00	0.00
Return on Equity	1411.89	1461.51	1497.41	1497.41	1497.41
Interest on Working Capital	150.13	159.08	166.55	170.32	174.28
O & M Expenses	1942.88	2007.33	2074.38	2142.62	2214.39
Total	3952.72	4260.36	4498.36	4570.38	4646.11

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. 60/TT/2015.

S/d
(Dr. M.K. Iyer)
Member

S/d
(A.S. Bakshi)
Member

