

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 160/TT/2016

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

Date of Hearing : 05.10.2016
Date of Order : 26.10.2016

In the Matter of:

Truing up of transmission tariff of 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 Vallur TPS-Melakottiyur 400 kV D/C line under Supplementary Transmission System associated with Vallur TPS in Southern Region

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 Ltd., (KPTCL),
Kaveri Bhavan, Bangalore - 560 009
2. Transmission Corporation of Andhra Pradesh Ltd.,
(APTRANSCO), Vidyut Soudha, Hyderabad- 500082
3. Kerala State Electricity Board (KSEB)
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram - 695 004
4. 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)
APEPDCL, P&T Colony,
Seethmmadhara, Vishakhapatnam
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
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, K.R-Circle
BANGALORE, 560 001
Karnataka
11. Gulbarga Electricity Supply Company Ltd., (GESCOM)
Station Main Road, GULBURGA
Karnataka
12. Hubli Electricity Supply Company Ltd., (HESCOM)
Navanagar, PB Road
HUBLI, Karnataka
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle
MANGALORE - 575 001
Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd., (CESC)
927, L J Avenue
Ground Floor, New Kantharaj Urs Road
Saraswatipuram, MYSORE - 570 009
KARNATAKA



15. Transmission Corporation of Telangana Limited,
Vidhyut Sudha Khairatabad,
Hyderabad – 500082

16. Electricity Department
Government of Goa
Vidyuti Bhawan, Panaji
Goa 403001

....Respondent(s)

The following were present:

For petitioner: Shri A M Pavgi, PGCIL
Shri S. S. Raju, PGCIL
Shri M M Mondal, PGCIL
Shri S K Venkatesan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL

For respondents: Shri S. Vallinayagam, Advocate, TANGEDCO

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 “the 2009 Tariff Regulations”) based on truing up of capital expenditure for the period from date of commercial operation (COD) 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 Vallur TPS-Melakottiyur 400 kV D/C line under Supplementary Transmission System associated with Vallur TPS (hereinafter referred to as “asset”).



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

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

a) The investment approval of the project was accorded by the Board of Directors of PGCIL vide Memorandum No. /CP/Suppl. Vallur dated 26.8.2010, at an estimated cost of ₹17036 lakh including IDC of ₹1344 lakh (based on 1st Quarter, 2010 price level). The Revised Cost Estimate (RCE) was approved by the Board of Directors of the petitioner's Company vide Memorandum No. No.C/CP/RCE - Suppl. Vallur TPS dated 1.2.2016 at an estimated cost of ₹16856 lakh including IDC of ₹831 lakh based on June, 2015 price level. The petitioner has submitted the apportioned approved cost for the instant asset as ₹5964 lakh.

The scope of work covered under the project is as under:-

Transmission Lines:

- i. Vallur TPS – Alamanthy 400 kV D/C Line; (by extending one 400 kV D/C Line of original Vallur TPS transmission system from LILO point to Alamanthy by suitably utilizing LILO of Nellore – Sriperumbudur 400 kV D/C line at Alamanthy)
- ii. Vallur TPS – Melakottaiyur 400 kV D/C Line; (by extending second 400 kV D/C Line of original Vallur TPS transmission system from LILO point to Alamanthy by suitably utilizing LILO of Kolar – Sriperumbudur line at Melakottaiyur)
- iii. Tiruvelam (PGCIL) – Chittoor 400 kV D/C quad line.



Sub-stations:

- i. Establishment of New 765/400 kV Sub-Station at Tiruvalam (initially charged at 400 kV);
 - ii. Extension of 400/220 kV Sub-Station at Chitoor (APTRANSCO)
- b) The instant asset was scheduled to be commissioned on 1.5.2013 and the asset was commissioned on 1.4.2013. Hence there was no time over-run in commissioning of the instant asset.
- c) The transmission tariff allowed for the instant asset vide order dated 27.11.2015 in Petition No. 48/TT/2013 is as follows:-

(₹ in lakh)	
Particulars	2013-14 (Pro-rata)
Depreciation	244.89
Interest on Loan	283.87
Return on Equity	272.85
Interest on Working Capital	19.55
O & M Expenses	28.19
Total	849.35

- d) The revised transmission tariff claimed by the petitioner is as follows:-

Particulars	2013-14 (Pro-rata)
Depreciation	284.38
Interest on Loan	329.84
Return on Equity	316.86
Interest on Working Capital	22.47
O & M Expenses	28.19
Total	981.74

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 and the change in interest rate on loan. The petitioner has filed the this petition for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations based on actual capital expenditure, actual MAT rate and interest rate of loan.

5. The petitioner has served the petition on 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. Respondent No. 4, TANGEDCO vide affidavit dated 18.10.2016 has filed reply to the petition. However, the petitioner has not filed any rejoinder to the reply. The hearing in this matter was held on 5.10.2016.

6. 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 revised on account of true up of expenditure as discussed in the subsequent paragraphs.

Capital Cost

9. The capital cost as on COD claimed by the petitioner is as follows:-

(₹ in lakh)				
Apportioned approved cost (RCE)	Particulars	Capital cost approved as on COD	Addition capital expenditure	Total capital cost as on 31.3.2014
			2013-14	
5964.00	Approved in Petition No. 48/TT/2013	5286.73	394.26	5680.99
	Actual (Claimed)	5091.12	589.87	5680.99

10. Clause (1) of Regulation 7 of the 2009 Tariff Regulations provides that:-

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

(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:

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

11. The petitioner has submitted the Auditor’s Certificate dated 2.8.2016 in support of capital expenditure claimed. The capital cost of the transmission assets has been worked out in the subsequent paragraphs taking into consideration the IEDC and IDC.

12. TANGEDCO has submitted that the petitioner had claimed total estimated completion cost of ₹5749.00 lakh as against FR cost of ₹4638.00 lakh in Petition No.



48/TT/2013. TANGEDCO raised the issue of cost over-run in the said petition. Increase in the cost of the asset was approved in order dated 27.11.2015. TANGEDCO has filed an appeal before Hon'ble Appellate Tribunal for Electricity (APTEL) against order dated 27.11.2015 in Petition No. 48/TT/2013. TANGEDCO has submitted that the cost increase should not be allowed and this true up petition deserves to be dismissed.

13. We have considered the submissions of TANGEDCO. The completion cost of the instant asset was restricted to the FR cost however the increase in cost of the asset was approved vide order dated 27.11.2015 taking into consideration the justification submitted by the petitioner. TANGEDCO has filed an appeal before APTEL. The tariff allowed for 2009-14 tariff period is trued up and tariff of 2014-19 tariff is determined subject to the outcome of Appeal No.230 of 2016 before the APTEL.

IDC and IEDC

14. The petitioner has claimed IDC of ₹331.09 lakh and IEDC of ₹464.55 lakh. The petitioner vide affidavit dated 14.10.2016 has submitted that entire IEDC has been discharged upto COD. The IDC discharged on cash basis are as below:-

(₹ in lakh)	
IDC discharged upto COD	IEDC discharged during 2013-14
135.48	195.61

15. TANGEDCO has submitted that the petitioner has deliberately omitted to submit the year wise details of actual IEDC discharged till COD. We have considered the submission of TANGEDCO. It is observed that the petitioner vide affidavit dated 14.10.2016 has submitted that the entire IEDC has been discharged by up to COD.



16. The petitioner has not claimed initial spares for the instant asset.

Additional Capital Expenditure

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

“The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014”

18. Regulation 9(1) provides that:-

"9. Additional Capitalisation. (1) The capital expenditure 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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law:

19. Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff." The petitioner has submitted actual additional capital expenditure during 2009-14 towards balance and retention payments for the works completed before the “cut-off” date. The petitioner has claimed the admissibility of additional capital expenditure before the “cut-off” date under Regulation 9(1)(i) of 2009 Tariff Regulations. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

"**cut-off date**' means 31st March of the year closing after two years of the year of commercial operation of the project, and in case 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;"



20. The additional capital expenditure claimed by the petitioner is towards actual balance and retention payments and the same is supported by Auditor certificate dated 2.8.2016. Further, the total capital expenditure during 2009-14 is within the total approved capital expenditure and the total cost as on 31.3.2014 is within the RCE submitted by the petitioner. Thus, the same is considered for the purpose of revision of tariff in accordance with Regulation 9(1)(i) and Regulation 6 of the 2009 Tariff Regulations.

21. The capital expenditure as on COD and additional capital expenditure from COD to 31.3.2014 allowed is as depicted below:-

(₹ in lakh)

Particulars	Capital cost as on COD	Addition capital expenditure	Total capital cost as on 31.3.2014
		2013-14	
Approved in Petition No. 48/TT/2013	5286.73	394.26	5680.99
Actual (Claimed)	5091.12	589.87	5680.99
Allowed in this Order	5091.12	589.87	5680.99

Debt: Equity

22. 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.

23. 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.”

24. In respect of the additional capitalization, debt: equity ratio of 70:30 has been considered in line with Regulation 12 of the 2009 Tariff Regulations. The details of the debt: equity is on COD and as on 31.3.2014 is as follows:-

(₹ in lakh)

Funding	Capital cost as on COD	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	3563.78	70.00	412.91	70.00	3976.69	70.00
Equity	1527.34	30.00	176.96	30.00	1704.30	30.00
Total	5091.12	100.00	589.87	100.00	5680.99	100.00

Return on Equity (“ROE”)

25. 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 maybe, 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.”

26. 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
2013-14	20.961%	19.610%

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

Particulars	(₹ in lakh)	
	2013-14 (pro-rata)	
Approved in Petition No. 48/TT/2013	272.85	
Claimed by the petitioner	316.86	
Allowed after true up in this order	316.87	

Interest on Loan (“IoL”)

28. 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:-

Particulars	(₹ in lakh)	
	2013-14 (pro-rata)	
Approved in Petition No. 48/TT/2013	283.87	
Claimed by the petitioner	329.84	
Allowed after true up in this order	329.84	



Depreciation

29. 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	2013-14 (Pro-rata)
Approved in Petition No. 48/TT/2013	244.89
Claimed by the petitioner	284.38
Allowed after true up in this order	284.38

Operation & Maintenance Expenses (O&M Expenses)

30. 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 trueed 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)

Particulars	2013-14 (pro-rata)
Approved in Petition No. 48/TT/2013	28.19
Claimed by the petitioner	28.19
Allowed after true up in this order	28.19

Interest on Working Capital (IWC)

31. 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)

Particulars	2013-14 (pro-rata)
Approved in Petition No. 48/TT/2013	19.55
Claimed by the petitioner	22.47
Allowed after true up in this order	22.47



APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

32. 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	2013-14 (pro-rata)
Depreciation	
Opening Gross Block	5091.12
Additional Capitalisation	589.87
Closing Gross Block	5680.99
Average Gross Block	5386.06
Rate of Depreciation (%)	5.28
Depreciable Value	4847.45
Balance useful life of the asset	25.00
Elapsed life	0.00
Remaining Depreciable Value	4847.45
Depreciation during the year	284.38
Cumulative depreciation	284.38
Interest on Loan	
Gross Normative Loan	3563.78
Cumulative Repayments upto Previous Year	0.00
Net Loan-Opening	3563.78
Additions	412.91
Repayment during the year	284.38
Net Loan-Closing	3692.31
Average Loan	3628.05
Weighted Average Rate of Interest on Loan (%)	9.0913
Interest on Loan	329.84
Return on Equity	
Opening Equity	1527.34
Additions	176.96
Closing Equity	1704.30
Average Equity	1615.82
Return on Equity (Base Rate) (%)	15.500
MAT Rate for respective year (%)	20.961
Rate of Return on Equity (%)	19.610
Return on Equity	316.87
Interest on Working Capital	
O & M Expenses	2.35
Maintenance Spares	4.23
Receivables	163.62



Particulars	2013-14 (pro-rata)
Total Working Capital	170.20
Rate of Interest (%)	13.20
Interest of working capital	22.47
Annual Transmission Charges	
Depreciation	284.38
Interest on Loan	329.84
Return on Equity	316.87
Interest on Working Capital	22.47
O & M Expenses	28.19
Total	981.75

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

33. The tariff claimed by the petitioner for 2014-19 tariff period is as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	304.17	311.13	313.88	313.88	313.88
Interest on Loan	328.73	309.92	284.89	256.01	227.14
Return on Equity	338.90	346.65	349.71	349.71	349.71
Interest on Working Capital	23.77	23.73	23.33	22.72	22.11
O & M Expenses	25.45	26.32	27.18	28.08	29.02
Total	1021.02	1017.75	998.99	970.40	941.86

Capital Cost

34. Clause (3) and (6) of Regulation 9 of 2014 Tariff Regulation provide as follows:-

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

“(6) The following shall be excluded or removed from the capital cost of the existing and new project:

- (a) The assets forming part of the project, but not in use; (b) Decapitalisation of Asset;”



35. The capital cost was restricted to ₹4638.00 lakh as on 31.3.2014 as per approved apportioned cost given in investment approval. The petitioner has submitted RCE according to which apportioned approved cost has been increased to ₹5964.00 lakh. The petitioner has claimed capital cost of ₹5680.99 lakh as on 31.3.2014 and the same is considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations. The petitioner has claimed total estimated capital cost ₹5944.43 lakh as on 31.3.2019 which is within the apportioned approved cost.

Additional Capital Expenditure

36. 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 13;
- (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.”

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

“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 comm^{er}cial operation.”

38. The “cut-off” date for the assets works out to be 31.3.2016. The petitioner has claimed additional capital expenditure for 2014-19 as per Regulation 14(1)(i) of the 2014 Tariff Regulation as shown below:-



(₹ in lakh)

Particulars	Capital cost as on 1.4.2014	Addition capital expenditure 2014-19			Total capital cost as on 31.3.2019
		2014-15	2015-16	Total	
Claimed	5680.99	159.35	104.09	263.44	5944.43
Approved in this order	5680.99	159.35	104.09	263.44	5944.43

39. The petitioner's claim of additional capital expenditure on account of undischarged liabilities falls within the meaning of clause 14(1)(i) of the 2014 Tariff Regulations and hence, the same has been considered to work out the tariff. The total capital cost as on 31.3.2019 is within the approved apportioned cost of ₹5964.00 lakh. Thus, the same is allowed for the purpose of revision of tariff.

Debt: Equity

40. 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."

41. 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 1.4.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	3976.69	70.00	184.41	70.00	4161.10	70.00
Equity	1704.30	30.00	79.03	30.00	1783.33	30.00
Total	5680.99	100.00	263.44	100.00	5944.43	100.00

Return on Equity (ROE)

42. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

xxx”

“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.”

43. The petitioner has claimed ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above said Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid



along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

44. 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.

45. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity.

46. 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	1704.30	1752.10	1783.33	1783.33	1783.33
Additions	47.81	31.23	0.00	0.00	0.00
Closing Equity	1752.10	1783.33	1783.33	1783.33	1783.33
Average Equity	1728.20	1767.72	1783.33	1783.33	1783.33
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	338.91	346.66	349.72	349.72	349.72



Interest on Loan (“IoL”)

47. 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.”

48. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure-2 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	3976.69	4088.24	4161.10	4161.10	4161.10
Cumulative Repayment upto Previous Year	284.38	588.55	899.68	1213.56	1527.44
Net Loan-Opening	3692.31	3499.68	3261.42	2947.54	2633.66
Additions	111.55	72.86	0.00	0.00	0.00
Repayment during the year	304.17	311.13	313.88	313.88	313.88
Net Loan-Closing	3499.68	3261.42	2947.54	2633.66	2319.78
Average Loan	3596.00	3380.55	3104.48	2790.60	2476.72
Weighted Average Rate of Interest on Loan (%)	9.1416	9.1677	9.1766	9.1740	9.1709
Interest on Loan	328.73	309.92	284.89	256.01	227.14



Depreciation

49. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"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."

50. 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 instant asset will complete 12 years beyond 2014-19 tariff period. Hence, depreciation for 2014-19 tariff period has been calculated annually based on straight line method at rates specified in Appendix II of 2014 Tariff Regulations. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	5680.99	5840.34	5944.43	5944.43	5944.43
Additional Capitalisation	159.35	104.09	0.00	0.00	0.00
Closing Gross Block	5840.34	5944.43	5944.43	5944.43	5944.43
Average Gross Block	5760.67	5892.39	5944.43	5944.43	5944.43
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	5184.60	5303.15	5349.99	5349.99	5349.99
Balance useful life of the asset	24.00	23.00	22.00	21.00	20.00
Elapsed life	1.00	2.00	3.00	4.00	5.00
Remaining Depreciable Value	4900.21	4714.59	4450.30	4136.42	3822.54
Depreciation during the year	304.17	311.13	313.88	313.88	313.88
Cumulative depreciation	588.55	899.68	1213.56	1527.44	1841.32



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

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Twin/Triple Conductor					
Line (KM)	36	36	36	36	36
Line((₹ lakh per KM)	0.707	0.731	0.755	0.780	0.806
Total O&M Expenses	25.45	26.32	27.18	28.08	29.02

52. 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 while fixing the normative O&M rates 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 increase in wages.

53. We have considered the submissions of the petitioner. Any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

Interest on Working Capital (“IWC”)

54. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

(i) Receivables



As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

55. 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	2.12	2.19	2.27	2.34	2.42
Maintenance Spares	3.82	3.95	4.08	4.21	4.35
Receivables	170.17	169.63	166.50	161.73	156.98
Total	176.11	175.77	172.84	168.29	163.75
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	23.78	23.73	23.33	22.72	22.11

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

56. 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	5680.99	5840.34	5944.43	5944.43	5944.43
Additional Capitalisation	159.35	104.09	0.00	0.00	0.00
Closing Gross Block	5840.34	5944.43	5944.43	5944.43	5944.43
Average Gross Block	5760.67	5892.39	5944.43	5944.43	5944.43
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	5184.60	5303.15	5349.99	5349.99	5349.99
Balance useful life of the asset	24.00	23.00	22.00	21.00	20.00
Elapsed life	1.00	2.00	3.00	4.00	5.00
Remaining Depreciable Value	4900.21	4714.59	4450.30	4136.42	3822.54
Depreciation during the year	304.17	311.13	313.88	313.88	313.88
Cumulative depreciation	588.55	899.68	1213.56	1527.44	1841.32
Interest on Loan					
Gross Normative Loan	3976.69	4088.24	4161.10	4161.10	4161.10
Cumulative Repayments upto Previous Year	284.38	588.55	899.68	1213.56	1527.44
Net Loan-Opening	3692.31	3499.68	3261.42	2947.54	2633.66



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Additions	111.55	72.86	0.00	0.00	0.00
Repayment during the year	304.17	311.13	313.88	313.88	313.88
Net Loan-Closing	3499.68	3261.42	2947.54	2633.66	2319.78
Average Loan	3596.00	3380.55	3104.48	2790.60	2476.72
Weighted Average Rate of Interest on Loan (%)	9.1416	9.1677	9.1766	9.1740	9.1709
Interest on Loan	328.73	309.92	284.89	256.01	227.14
Return on Equity					
Opening Equity	1704.30	1752.10	1783.33	1783.33	1783.33
Additions	47.81	31.23	0.00	0.00	0.00
Closing Equity	1752.10	1783.33	1783.33	1783.33	1783.33
Average Equity	1728.20	1767.72	1783.33	1783.33	1783.33
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	338.91	346.66	349.72	349.72	349.72
Interest on Working Capital					
O & M Expenses	2.12	2.19	2.27	2.34	2.42
Maintenance Spares	3.82	3.95	4.08	4.21	4.35
Receivables	170.17	169.63	166.50	161.73	156.98
Total Working Capital	176.11	175.77	172.84	168.29	163.75
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	23.78	23.73	23.33	22.72	22.11
Annual Transmission Charges					
Depreciation	304.17	311.13	313.88	313.88	313.88
Interest on Loan	328.73	309.92	284.89	256.01	227.14
Return on Equity	338.91	346.66	349.72	349.72	349.72
Interest on Working Capital	23.78	23.73	23.33	22.72	22.11
O & M Expenses	25.45	26.32	27.18	28.08	29.02
Total	1021.04	1017.75	999.00	970.41	941.86

Filing Fee and the Publication Expenses

57. 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

58. 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

59. 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.

Goods & Services Tax (GST)

60. The petitioner has prayed to allow reimbursement of GST, if any, on account of the proposed implementation of GST. The impact of GST, if any, will be dealt at the time of truing up of 2014-19.

Sharing of Transmission Charges

61. 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.

62. This order disposes of Petition No. 160/TT/2016.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2009-14

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Repayment	Total
Bond-XXXIV-DOCO	8.84	300.00	0.00	0.00	300.00
Bond XXXVII-DOCO-	9.25	888.00	0.00	0.00	888.00
SBI (21.3.2012)- ADDCAP FOR 2013-14 Add Cap 1-	10.29	0.00	275.98	0.00	275.98
Bond XLI-DOCO-	9.30	875.00	0.00	0.00	875.00
Bond XLI-DOCO-	8.85	875.00	0.00	0.00	875.00
BOND-XLII-ADDCAP FOR 2013-14 addcap 1	8.80	0.00	136.93	0.00	136.93
BOND-XLII-DOCO	8.80	625.78	0.00	0.00	625.78
		3563.78	412.91	0.00	3976.69

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
Bond-XXXIV-DOCO	8.84	300.00	0.00	125.00	175.00
Bond XXXVII-DOCO-	9.25	888.00	0.00	296.00	592.00
SBI (21.3.2012)- ADDCAP FOR 2013-14 Add Cap 1-	10.29	275.98	0.00	75.27	200.71
SBI (21.3.2012)- ADDCAP FOR 2014-15 Add Cap -	10.25	0.00	3.71	1.02	2.69
Bond XLI-DOCO-	9.30	875.00	0.00	218.76	656.24
Bond XLI-DOCO-	8.85	875.00	0.00	218.76	656.24
BOND-XLII-ADDCAP FOR 2013-14 addcap 1	8.80	136.93	0.00	0.00	136.93
BOND-XLII-DOCO	8.80	625.78	0.00	0.00	625.78
SBI (2014-15)- ADDCAP FOR 2014-15 add cap	10.25	0.00	107.84	0.00	107.84
SBI (2014-15)- ADDCAP FOR 2015-16 add cap 1-	10.25	0.00	72.86	0.00	72.86
		3976.69	184.41	934.81	3226.29



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

	(₹ in lakh)
Summary	2013-14
Gross Opening Loan	3563.78
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	3563.78
Add: Draw(s) during the Year	412.91
Less: Repayments of Loan during the year	0.00
Net Closing Loan	3976.69
Average Net Loan	3770.24
Rate of Interest on Loan (%)	9.091
Interest on Loan	342.77

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

	(₹ in lakh)				
Summary	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	3976.69	4088.24	4161.1	4161.10	4161.10
Cumulative Repayments of Loans upto Previous Year	0.00	25.00	124.00	394.27	664.54
Net Loans Opening	3976.69	4063.24	4037.10	3766.83	3496.56
Add: Draw(s) during the Year	111.55	72.86	0.00	0.00	0.00
Less: Repayments of Loan during the year	25.00	99.00	270.27	270.27	270.27
Net Closing Loan	4063.24	4037.10	3766.83	3496.56	3226.29
Average Net Loan	4019.97	4050.17	3901.97	3631.70	3361.43
Rate of Interest on Loan (%)	9.142	9.168	9.177	9.174	9.171
Interest on Loan	367.49	371.31	358.07	333.17	308.27

