

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 147/TT/2015

Coram:

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

Date of Hearing : 20.01.2016

Date of Order : 24.02.2016

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 of LILO of existing Bangalore-Salem 400 kV S/C line at Hosur under System Strengthening – XVIII in Southern Regional Grid 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 -122 001 (Haryana).

.....**Petitioner**

Versus

1. Karnataka Power Transmission Corporation Ltd.
(KPTCL), KaveriBhavan, Bangalore -560 009
2. Transmission Corporation of Andhra Pradesh Ltd.
(APTRANSCO), VidyutSoudha, Hyderabad- 500082
3. Kerala State Electricity Board (KSEB)
VaidyuthiBhavanam, Pattom,
Thiruvananthapuram- 695 004
4. Tami Nadu Generation and Distribution
Corporation Ltd., NPKRR Maaligai, 800,
Anna Salai, Chennai- 600 002
5. Electricity Department



Government of f Pondicherry,
Pondicherry- 605 001

6. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL), P&T Colony, Seethmmadhara, Vishakhapatnam
7. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL), Tirupati- 517 501, Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL), Corporate Office, Mint Compound, Hyderabad- 500 063
9. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL), Opp. NIT Petrol Pump, Chaitanyapuri, Warangal- 506 004
10. Bangalore Electricity Supply Company Limited (BESCOM) Corporate Office, K.R Circle, Bangalore- 560 001, Karnataka
11. Gulbarga Electricity Supply Company Limited (GESCOM) Station Road, Gulbarga, Karnataka
12. Hubli Electricity Supply Company Limited (HESCOM) Navanagar, PB Road, Hubli, Karnataka
13. MESCOM Corporate Office Paradigm Plaza, AB Shetty Circle, Mangalore- 575 001
14. Chamundeswari Electricity Supply Corporation Limited (CESC) #927, L J Avenue, Ground Floor, Saraswatipuram, Mysore- 570 009
15. Electricity Department Government of Goa, VidyutiBhawan, Panaji, Goa- 403001

....Respondents

The following were present:-



For Petitioner: Shri M. M. Mondal, PGCIL
Shri S. K. Venkatesan, PGCIL
Shri Y. K. Sehgal, PGCIL
Shri Nitish Kumar, PGCIL
Shri G. C. Dhal, PGCIL
Shri Amit Yadav, PGCIL
Shri Rakesh Prasad, PGCIL
Shri S. S. Raju, PGCIL
Shri Jasbir Singh, PGCIL
Shri AnshulGarg, PGCIL

For Respondent: None.

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”)for truing up of capital expenditure of LLO of existing Bangalore-Salem 400 kV S/C line at Hosur under system strengthening – XVIII (COD: 1.2.2014) in Southern Region (hereinafter referred as “transmission asset”) 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 actual capital expenditure for the period from 1.2.2014(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.



2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Southern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 20.1.2016. Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO), i.e., Respondent No.4 has filed a reply vide letter dated 3.2.2016. In response, the petitioner has submitted the rejoinder to the reply filed by TANGEDCO vide affidavit dated 12.2.2016. The petitioner was directed to submit information vide letter dated 18.1.2016. In response, the petitioner has submitted the information vide affidavit dated 5.2.2016. The concerns expressed by respondents are being addressed in the respective paras of this order. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide Memorandum No.C/CP/SRSS-XVIII, dated 4.6.2012 at an estimated cost of ₹126326lakh, which included IDC of ₹7855lakh. The petitioner has built the transmission asset in the



Southern Region. The date of the commercial operation of the Transmission Asset is 1.2.2014.

(b) The tariff from 1.2.2014 to 31.3.2014 for the asset was allowed vide order dated 29.1.2015 in Petition No. 165/TT/2013 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

(₹ in lakh)	
Particulars	2013-14 (pro-rata)
Depreciation	17.11
Interest on Loan	19.68
Return on Equity	17.10
Interest on Working Capital	2.48
O&M Expenses	23.43
Total	79.80

(c) Tariff was allowed vide order dated 29.1.2015 in Petition No. 165/TT/2013, from COD to 31.3.2014 considering the capital cost of ₹1938.74 lakh.

(d) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.

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

5. 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”.

6. 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

7. The petitioner has claimed capital cost of ₹1934.68 lakh for the instant asset as on COD after deducting excess initial spares of ₹25.94 lakh from ₹1960.62 lakh (as per Auditor's Certificate) for the purpose of truing up of tariff.

8. Regulation 7(1) of the 2009 Tariff Regulations provides as follows:-

“(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.”



9. The petitioner has submitted the Auditor's Certificate certifying the capital cost as on COD and additional capitalization claimed thereafter.

Initial Spares

10. Regulation 8 of the 2009 tariff Regulations provides as follows:-

“Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

- (i) Transmission system
 - (a) Transmission line - 0.75%
 - (b) Transmission Sub-station - 2.5%
 - (c) Series Compensation devices and HVDC Station - 3.5%”

11. The initial spares claimed by the petitioner and allowed as per the 2009 Tariff Regulations are given below:-

(₹ in lakh)					
Description	Capital cost as on cut-off date	Initial Spares claimed	Ceiling limit as per Regulation 8 of 2009 Tariff Regulations	Initial spares worked out	Excess initial spares claimed
Asset	(a)	(b)	(c)	(d)=((a-b)*c)/(100-c)%	(e)=(b)-(d)
Transmission line	1368.00	12.25	0.75%	10.24	2.01
Substation	649.29	56.48	2.50%	15.20	41.28

12. The total capital cost as on the cut-off date exceeds the approved apportioned cost. Therefore, we have restricted the capital cost upto cut-off date to approved apportioned cost.



Additional Capital Expenditure

13. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations.

14. Regulation 9(1)(i) of the 2009 Tariff Regulations provides as follows:-

“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...;”

15. The petitioner has claimed additional capitalization of ₹603.48 lakh for the instant transmission asset from COD to 31.3.2014 towards balance and retention payment for works executed within cut-off date.

16. It is observed that total completion cost of ₹2538.16 lakh as on 31.3.2014 claimed by the petitioner exceeds the approved cost of ₹1974.00 lakh. In this regard, the petitioner was directed to submit approval for RCE. In response, the petitioner vide affidavit dated 5.2.2016 submitted that the management approval for the same has already been obtained and is put upto the board for approval and will be submitted shortly. However, the petitioner has not filed the RCE. Therefore, we have restricted the completion cost to approved apportioned cost. Accordingly, the true up of the transmission tariff is being worked out to the extent of variation in floating rate of interest and MAT rate by restricting capital cost to the ₹1917.34 lakh after deducting excess initial spares of ₹43.29 lakh from actual cost as on COD.



(₹ in lakh)

Approved Apportioned Cost: ₹1974.00 lakh			
Particulars	Capital cost up to COD	Total add cap	Total capital cost including additional capitalization as on 31.3.2014
Approved in order dated 29.1.2015	1938.75	35.25	1974.00
Allowed in this order	1917.34	56.66	1974.00

Debt: Equity

17. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provide that:-

“(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:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

.....

(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 petitioner has claimed true up Annual Fixed Charge based on admitted debt-equity ratio of 70:30 as on 1.2.2014, i.e. as on COD. The same has been considered for the purpose of true up of the tariff of 2013-14 tariff period, as given under:-

(₹ in lakh)

Funding	Amount	(%)
Debt	1342.13	70.00
Equity	575.20	30.00
Capital Cost	1917.34	100.00



19. With respect to additional capitalization, the petitioner has claimed the debt:equity ratio of 70:30 for 2013-14. The petitioner was directed vide letter dated 18.1.2016 to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. In response, the petitioner vide affidavit dated 5.2.2016 has submitted that the actual equity infused for the additional capitalization during the tariff period 2009-14 is 30% of the capital cost. The overall debt equity ratio as on 31.3.2014 for the instant transmission set including additional capitalization is as under:-

(₹ in lakh)		
Funding	Amount	(%)
Debt	1381.80	70.00
Equity	592.20	30.00
Total	1974.00	100.00

Interest on Loan (“IOL”)

20. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 29.1.2015 in Petition No. 165/TT/2013 has 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”.

21. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the



2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Approved vide order dated 29.1.2015	19.68
As claimed by the petitioner	23.01
Allowed after trued up	20.02

22. The interest on loan has increased due to increase in actual weighted average rate of interest during 2013-14 tariff period.

Return on Equity (“ROE”)

23. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provides 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.”



24. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 29.1.2015. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (t) %	Grossed up ROE (Base rate/(1-t)) %
2013-14	20.961	19.691

25. We have considered the revised MAT rate of 20.961% for grossing up ROE and the approved ROE is as shown in the table below:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Approved vide order dated 29.1.2015	17.10
As claimed by the petitioner	21.93
Allowed after trued up	19.08

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

Depreciation

27. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

.....	
(c) AC and DC sub-station	25 years
(d) Hydro generating station	35 years
(e) Transmission line	35 years”



28. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

"17. Depreciation:

...

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 yearclosing after a period of 12 years from date of commercial operation shall bespread over the balance useful life of the assets."

29. The depreciation was allowed in accordance with Regulation 17 of the 2009 Tariff Regulations in its order dated 29.1.2015 in Petition No. 165/TT/2013.

30. Theweighted average useful life of the transmission asset has been considered as per Regulations3 (42) and 17 (4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the asset as on COD has been considered as 32years for the Asset. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under.

	(₹ in lakh)
Particulars	2013-14 (pro-rata)
Approved vide order dated 29.1.2015	17.11
As claimed by the petitioner	19.53
Allowed after trued up	17.01



31. The variation in depreciation is on account of difference in capital cost as on COD and additional capitalization considered from COD to 31.3.2014.

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

32. The petitioner has computed O&M Expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 29.1.2015 in Petition No. 165/TT/2013. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)	
Particulars	2013-14 (pro-rata)
Approved vide order dated 29.1.2015	23.43
As claimed by the petitioner	23.43
Allowed after trued up	23.43

Interest on working capital (“IWC”)

33. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

34. The petitioner submitted the rate of interest on working capital as 13.20% for the period 1.3.2014 to 31.3.2014 as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also



considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

35. The Commission in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, has considered the rate of interest on working capital on normative basis, i.e., equal to State Bank of India Base Rate as applicable as on 1.4.2013 plus 350 basis points. State Bank of India Base Rate on 1.4.2013 was 9.70%. Therefore, interest rate of 13.20% (9.70% plus 350 basis points) has been considered to work out the interest on working capital in the instant case.

36. The IWC trued up is as under:-

(₹ in lakh)	
Particulars	2013-14 (pro-rata)
Maintenance Spares	3.51
O & M expenses	1.95
Receivables	13.68
Total	19.14
Rate of Interest (%)	13.20
Interest	2.53

(₹ in lakh)	
Particulars	2013-14 (pro-rata)
Approved vide order dated 29.1.2015	2.48
As claimed by the petitioner	2.72
Allowed after trued up	2.53



37. The variation in IWC is on account of variation in IOL, depreciation and ROE and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

38. The detailed computation of the various components of the trued up annual fixed charges of the instant asset for the 2013-14 tariff period is summarised below:-

Particulars	(₹ in lakh)
	2013-14 (pro-rata)
Gross Block	
Gross Opening Block	1917.34
Additional Capitalization	56.66
Gross Closing Block	1974.00
Average Gross Block	1945.67
Depreciation	
Rate of Depreciation (%)	5.246
Depreciable Value	1751.10
Elapsed Life (Beginning of the year)	0
Weighted Balance Useful life of the assets	32
Remaining Depreciable Value	1751.10
Depreciation	17.01
Interest on Loan	
Gross Normative Loan	1342.13
Cumulative Repayment upto Previous Year	0.00
Net Loan-Opening	1342.13
Additional Capitalization	39.67
Repayment during the year	17.01
Net Loan-Closing	1364.79
Average Loan	1353.46
Weighted Average Rate of Interest on Loan (%)	8.8757
Interest	20.02



Particulars	2013-14 (pro-rata)
Return on Equity	
Opening Equity	575.20
Additional Capitalization	17.00
Closing Equity	592.20
Average Equity	583.70
Return on Equity (Base Rate) (%)	15.50
MAT rate for the year (%)	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610
Return on Equity (Pre Tax)	19.08
Interest on Working Capital	
Maintenance Spares	3.51
O & M expenses	1.95
Receivables	13.68
Total	19.14
Interest	2.53
Annual Transmission Charges	
Depreciation	17.01
Interest on Loan	20.02
Return on Equity	19.08
Interest on Working Capital	2.53
O & M Expenses	23.43
Total	82.06

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

39. The petitioner has claimed the transmission charges as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	138.26	149.42	155.14	155.14	155.14
Interest on Loan	158.98	159.98	153.54	139.16	125.39
Return on Equity	155.32	168.34	175.36	175.36	175.36
Interest on Working Capital	17.56	18.38	18.77	18.69	18.63
O&M Expenses	129.30	133.59	138.03	142.61	147.33
Total	599.42	629.71	640.84	630.96	621.85



40. 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
Maintenance Spares	19.40	20.04	20.70	21.39	22.10
O & M Expenses	10.78	11.13	11.50	11.88	12.28
Receivables	99.90	104.95	106.81	105.16	103.64
Total	130.08	136.12	139.01	138.43	138.02
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	17.56	18.38	18.77	18.69	18.63

Capital Cost

41. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

“(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 tried 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.”

42. The petitioner has claimed capital cost of ₹2538.16 lakh as on 31.3.2014 and additional capitalization of ₹442.62 lakh for the 2014-19 tariff period. We have considered capital cost of ₹1974 lakh as on 31.3.2014 for the tariff determination for the 2014-19 tariff period.



Additional Capital Expenditure

43. The petitioner has proposed additional capitalization of ₹442.62 lakh for the 2014-19 tariff period towards balance and retention payments under Clause 1(i) of Regulation 14 of the 2014 Tariff Regulations.

44. Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after 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;

45. TANGEDCO has submitted in its reply that the petitioner has not furnished the details with the works executed prior to the cut-off date, total estimated cost of package, reasons for such withholding of payment etc. as required under Regulation 14(2) of Tariff Regulation 2014. Hence, in the absence of the above, the claim of the petitioner is unreasonable. In response, the petitioner vide affidavit dated 12.2.2016 has submitted that the cut-off date is 31.3.2015. The additional capital expenditure projected during 2014-19 period is to be dealt in accordance with the provision of Regulation 14 (1) (i) of 2014 Tariff Regulations. The additional capitalization proposed in the contextual assets is on account of Balance/Retention payments.

46. Further, TANGEDCO vide affidavit dated 3.2.2016 has submitted that the petitioner has not submitted RCE even after one year from the date of issue of



final tariff order, further any documental evidence showing capital cost over-run, the works deferred for execution under different contracts, and undischarged liabilities due to retention payments have not been furnished by the petitioner. Further, TANGEDCO has submitted that if the cost over-run is due to price variation in supply of materials, then it should be settled with the supplier since it is a mutual issue. TANGEDCO also submitted that the petitioner should be directed to furnish the details and explanation to the beneficiaries, failing which, the projected additional capitalization should be disallowed and accordingly the initial spares must be restricted to originally approved apportioned cost. In response, the petitioner vide affidavit dated 12.2.2016 submitted that the RCE for the project is under advance stage of approval. The petitioner has also submitted that technical approval for the same has already been obtained and is put up to COIP/ Board for approval and the same will be submitted shortly.

47. As discussed above, we have restricted the completion cost as on 31.3.2014 to approved apportioned cost. Accordingly, the additional capital expenditure during the 2014-19 tariff period claimed by the petitioner is not allowed.

Debt:EquityRatio

48. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission 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.”



49. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

Particulars	Amount	(₹ in lakh)
		(%)
Debt	1381.80	70.00
Equity	592.20	30.00
Total	1974.00	100.00

Interest on Loan (“IOL”)

50. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

“(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.”

51. TANGEDCO, vide affidavit dated 3.2.2016, has submitted that the petitioner has not taken any efforts to refinance the high cost loans, which in turn is burdening beneficiaries at large. TANGEDCO, referring to Regulation 26(7) of



the 2014 Tariff Regulations submitted that the petitioner should have made efforts to refinance the loans as it would have resulted in net savings on interest.

52. TANGEDCO has further submitted that the rate of interest on loans should be restricted to the actual for 2014-15 and the petitioner should be directed to furnish the steps taken to reduce the interest on loan. In response, the petitioner vide affidavit dated 12.2.2016 submitted that wherever possible the petitioner shall make effort to refinance its high cost loans. However, in the instant petition, major part of loans deployed are through corporate bonds where rate of interest is fixed, but, since loans are repayable in annual instalments from 4th year onwards, the interest burden gets reduced gradually unlike cases for loans with bullet repayments.

53. We have considered the submissions of the petitioner and TANGEDCO. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	1381.80	1381.80	1381.80	1381.80	1381.80
Cumulative Repayment upto previous year	17.01	120.53	224.05	327.57	431.09
Net Loan-Opening	1364.79	1261.27	1157.75	1054.23	950.71
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	103.52	103.52	103.52	103.52	103.52



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan-Closing	1261.27	1157.75	1054.23	950.71	847.19
Average Loan	1313.03	1209.51	1105.99	1002.47	898.95
Rate of Interest (%)	9.0354	9.0354	9.0224	8.9979	9.0113
Interest	118.64	109.28	99.79	90.20	81.01

Return on Equity("ROE")

54. Clause (1)& (2) of Regulation 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."

55. The petitioner has submitted ROE at the rate of 20.961% after grossing up the ROE of 15.5% with MAT rate as per the above 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.

56. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year. In this regard, TANGEDCO has submitted that the effective tax rate should be considered on the basis of actual tax paid in respect of the financial year in line with the provision of the relevant Acts by the concerned generating company or the transmission licensee, as the case may be, as provided under Regulation 25(1) of the 2014 Tariff Regulations. TANGEDCO has further submitted that the petitioner cannot claim the difference in tax from the beneficiaries and is entitled for grossing up of ROE only on the actual tax paid during the respective financial year. Hence, in accordance with the 2014 Tariff Regulations, the difference in tax liabilities should not be billed separately from the beneficiaries unless there is any amendment in the provisions in Income Tax Act providing retrospective effect. The petitioner, in response has submitted that the petitioner is liable to pay income tax at MAT rate, the ROE has been calculated @ 19.610% after grossing up the ROE with MAT rate of 20.961% as provided under Regulations 25(2)(1) of the 2014 Tariff Regulations. As per Clause 25(3) of the 2014 Tariff Regulations, the grossed up rate of ROE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received



from the IT Authorities for the tariff period 2014-19 on actual gross income of any financial year. Any under recovery or over recovery of grossed up rate on ROE after truing up shall be recovered or refunded to beneficiaries on a year to year basis. Further, adjustment in any tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/ adjustable during/after completion of income assessment of the financial year.

57. 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. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE determined by the Commission is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	592.20	592.20	592.20	592.20	592.20
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	592.20	592.20	592.20	592.20	592.20



Average Equity	592.20	592.20	592.20	592.20	592.20
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	116.13	116.13	116.13	116.13	116.13

Depreciation

58. 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."

59. The petitioner has computed depreciation considering capital expenditure of ₹2538.16 lakh as on 31.3.2014 with additional capitalization of ₹442.62 lakh for the 2014-19 tariff period.



60. We have computed depreciation considering capital expenditure of ₹1974lakh as on 31.3.2014. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	1974.00	1974.00	1974.00	1974.00	1974.00
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	1974.00	1974.00	1974.00	1974.00	1974.00
Average Gross block	1974.00	1974.00	1974.00	1974.00	1974.00
Rate of Depreciation(%)	5.244	5.244	5.244	5.244	5.244
Depreciable Value	1776.60	1776.60	1776.60	1776.60	1776.60
Elapsed Life of the assets at beginning of the year	1	2	3	4	5
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	1759.59	1656.07	1552.55	1449.03	1345.51
Depreciation	103.52	103.52	103.52	103.52	103.52

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

61. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. The petitioner has computed O&M Expenses for the assets mentioned in the petition, in accordance with the O&M norms for D/C transmission line and 400 kV Bay specified in Regulation 19(g) of the 2009 Tariff Regulations. The petitioner has claimed O&M Expenses for D/C transmission line of 12.3 km line length and 400 kV Bays for substation. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 29.1.2015 in



Petition No. 165/TT/2013. Accordingly, the petitioner's entitlement to O&M Expenses has been worked out as given hereunder:-

Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual	Double Circuit (Bundled conductor with four or more sub-conductors) (kms)	12.3	12.3	12.3	12.3	12.3
	400 kV Bays (Nos)	2	2	2	2	2
Norms as per Regulation	Double Circuit (Bundled conductor with four or more sub-conductors) (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
	400 kV Bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total (₹ in lakh)		129.30	133.59	138.03	142.61	147.33

62. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

63. TANGEDCO has submitted that the petitioner's claim to include actual impact of wage revision in O&M Expenses should be disallowed and petitioner should approach the Commission through review petition. In response, the



petitioner vide affidavit dated 12.2.2016 submitted that norms for O&M Expenses for transmission system has been specified under Regulation 29(3)(a) of the 2014 Tariff Regulations after considering (i) normalized actual O&M expenses of the petitioner on its various projects and various regions during the year 2008-13. It is further submitted that being a CPSU, wage revision is binding on the petitioner. However, actual impact of wage hike (due w.e.f. 1.1.2017) has not been factored in the fixation of the normative O&M rates prescribed for the tariff period 2014-19. Further, the petitioner has submitted that in line with Regulation 19(f)(ii) of the 2009 Tariff Regulations, for the tariff period 2009-14, norms for O&M Expenses for the year 2009-10 were derived considering impact of wage hike of the employees under PSUs.

64. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

65. The details of O&M Expenses allowed are given hereunder:-

Particulars	Year				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed	129.30	133.59	138.03	142.61	147.33

(₹ in lakh)

Interest on Working Capital ("IWC")

66. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify 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;”

67. The petitioner has submitted that it has computed Interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.

68. 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 interest on working capital allowed is shown in the table below:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	19.39	20.04	20.70	21.39	22.10
O & M expenses	10.77	11.13	11.50	11.88	12.28
Receivables	80.42	79.58	78.74	77.91	77.18
Total	110.59	110.75	110.95	111.19	111.55
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	14.93	14.95	14.98	15.01	15.06



Annual Transmission Charges

69. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	1974.00	1974.00	1974.00	1974.00	1974.00
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	1974.00	1974.00	1974.00	1974.00	1974.00
Average Gross Block	1974.00	1974.00	1974.00	1974.00	1974.00
Depreciation					
Rate of Depreciation (%)	5.244	5.244	5.244	5.244	5.244
Depreciable Value	1776.60	1776.60	1776.60	1776.60	1776.60
Elapsed Life of the assets at beginning of the year	1	2	3	4	5
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	1759.59	1656.07	1552.55	1449.03	1345.51
Depreciation	103.52	103.52	103.52	103.52	103.52
Interest on Loan					
Gross Normative Loan	1381.80	1381.80	1381.80	1381.80	1381.80
Cumulative Repayment upto Previous Year	17.01	120.53	224.05	327.57	431.09
Net Loan-Opening	1364.79	1261.27	1157.75	1054.23	950.71
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	103.52	103.52	103.52	103.52	103.52
Net Loan-Closing	1261.27	1157.75	1054.23	950.71	847.19
Average Loan	1313.03	1209.51	1105.99	1002.47	898.95
Weighted Average Rate of Interest on Loan (%)	9.0354	9.0354	9.0224	8.9979	9.0113
Interest	118.64	109.28	99.79	90.20	81.01
Return on Equity					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	592.20	592.20	592.20	592.20	592.20
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	592.20	592.20	592.20	592.20	592.20
Average Equity	592.20	592.20	592.20	592.20	592.20
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	116.13	116.13	116.13	116.13	116.13
Interest on Working Capital					
Maintenance Spares	19.39	20.04	20.70	21.39	22.10
O & M expenses	10.77	11.13	11.50	11.88	12.28
Receivables	80.42	79.58	78.74	77.91	77.18
Total	110.59	110.75	110.95	111.19	111.55
Interest	14.93	14.95	14.98	15.01	15.06
Annual Transmission Charges					
Depreciation	103.52	103.52	103.52	103.52	103.52
Interest on Loan	118.64	109.28	99.79	90.20	81.01
Return on Equity	116.13	116.13	116.13	116.13	116.13
Interest on Working Capital	14.93	14.95	14.98	15.01	15.06
O & M Expenses	129.30	133.59	138.03	142.61	147.33
Total	482.51	477.48	472.44	467.48	463.05

Filing Fee and Publication Expenses

70. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

71. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

72. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future.

73. The TANGEDCO vide affidavit dated 3.2.2016 submitted that since service tax for transmission system is currently under negative list, the claim of the petitioner is premature. Further, TANGEDCO submitted that the claim of petitioner to collect taxes if any paid directly from beneficiaries is not reasonable. In response the petitioner vide affidavit dated 12.2.2016 submitted that it is evident from its claim in the petition that service tax is to be paid by respondents only if the same is paid by the petitioner. We are of the view that the petitioner's prayer of Service Tax is premature.



Sharing of Transmission Charges

74. 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.

75. This order disposes of Petition No. 147/TT/2015.

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 1.4.2013	Additions during the tariff period	Total
Bond XXXVIII - Drawl on 1-FEB-2014-	9.25	1.00	0.00	1.00
SBI (21.3.2012)-ADDCAP FOR 2013-2014 add cap-	10.25	0.00	414.74	414.74
Bond XL - Drawl on 1-FEB-2014-	9.30	36.00	0.00	36.00
Bond- XLI-Drawl on 1-FEB-2014-	8.85	53.00	0.00	53.00
Bond-XLIII - Drawl on 1-FEB-2014-	7.93	100.00	0.00	100.00
Bond - XLIV-ADDCAP FOR 2013-2014 Drawl on 31-MAR-2014-	8.70	0.00	7.70	7.70
Bond - XLIV-doco-	8.70	1164.28	0.00	1164.28
Total		1354.28	422.44	1776.72

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

(₹ in lakh)

Particulars	2013-14
Gross Opening Loan	1354.28
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	1354.28
Add: Drawal(s) during the year	422.44
Less: Repayment(s) of Loan during the year	0.00
Net Closing Loan	1776.72
Average Net Loan	1565.50
Rate of Interest on Loan (%)	8.8757
Interest on Loan	138.95

ANNEXURE-II



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
Bond XXXVIII - Drawal on 1-FEB-2014-	9.25	1.00	0.00	1.00
SBI (21.3.2012)-ADDCAP FOR 2013-2014 add cap-	10.25	414.74	0.00	414.74
Bond XL - Drawal on 1-FEB-2014-	9.30	36.00	0.00	36.00
Bond- XLI-Drawal on 1-FEB-2014-	8.85	53.00	0.00	53.00
Bond-XLIII - Drawal on 1-FEB-2014-	7.93	100.00	0.00	100.00
Bond - XLIV-ADDCAP FOR 2013-2014 Drawal on 31-MAR-2014-	8.70	7.70	0.00	7.70
Bond - XLIV-doco-	8.70	1164.28	0.00	1164.28
Total		1776.72	0.00	1776.72

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1776.72	1776.72	1776.72	1776.72	1776.72
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	45.12	98.57
Net Loans Opening	1776.72	1776.72	1776.72	1731.60	1678.15
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	45.12	53.45	444.11
Net Closing Loan	1776.72	1776.72	1731.60	1678.15	1234.04
Average Net Loan	1776.72	1776.72	1754.16	1704.88	1456.10
Rate of Interest on Loan (%)	9.0354	9.0354	9.0224	8.9979	9.0113
Interest on Loan	160.53	160.53	158.27	153.40	131.21

