

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO. 375/TT/2014**

**Coram:**

**Shri. A.S. Bakshi, Member**

**Dr. M. K. Iyer, Member**

**Date of Hearing: 16.11.2015**

**Date of Order : 08.12.2015**

**In the matter of:**

(i) Truing up transmission tariff for 2009-14 tariff block and (ii) determination of transmission tariff for 2014-19 tariff block for 400 KV D/C Ramagundam-Bhadrawati (Chandrapur) Transmission System in Southern and Western Region under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

**And in the Matter of:**

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

**.....Petitioner**

**Versus**

1. Karnataka Power Transmission Corporation Ltd.,  
(KPTCL), Kaveri Bhavan, Bangalore - 560 009
2. Transmission Corporation of Andhra Pradesh Ltd. Hyderabad  
(APTRANSCO), Vidyut Soudha, Hyderabad- 500082
3. Kerala State Electricity Board, Thiruvananthapuram  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram - 695 004
4. Tamil Nadu Generation and Distribution Corporation Ltd  
(Formerly Tamilnadu 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,  
Tiruptai-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, PI3 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. Electricity Department  
Government of Goa  
Vidyuti Bhawan, Panaji  
Goa 403001
16. Madhya Pradesh Power Trading Company Ltd.  
Shakti Bhawan, Rampur  
Jabalpur - 482 008
17. Maharashtra State Electricity Distribution Co. Ltd.  
Prakashgad, 4th Floor  
Andheri (East), Mumbai - 400 052
18. Gujarat Urja Vikas Nigam Ltd.  
Sardar Patel Vidyut Bhawan,  
Race Course Road  
Vadodara - 390 007
19. Electricity Department Govt. Of Goa  
Vidyut Bhawan, Panaji,  
Ner Mandvi Hotel, Goa - 403 001
20. Electricity Department  
Administration Of Daman & Diu  
Daman - 396 210
21. Electricity Department  
Administration Of Dadra Nagar Haveli  
U.T., Silvassa - 396 230
22. Chhattisgarh State Electricity Board  
P.O.Sunder Nagar, Dangania, Raipur  
Chhatisgaarh-492013
23. Madhya Pradesh Audyogik Kendra  
Vikas Nigam (Indore) Ltd.  
3/54, Press Complex, Agra-Bombay Road,  
Indore-452 008

.....Respondent(s)

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL  
Shri M. M. Mondal, PGCIL  
Shri S. K. Venkatesan, PGCIL



Shri Shashi Bhushan, PGCIL  
Shri S. K. Venkatesan, PGCIL  
Shri Ved Prakash Rastogi, PGCIL  
Shri S. K. Niranjana, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri S. S. Raju, PGCIL

For Respondents: Shri. Vallinayagam, Advocate, TANGEDCO

### **ORDER**

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as "the petitioner"), a transmission licensee, for revision of tariff under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on truing up of capital expenditure for the period 1.4.2009 to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from 1.4.2014 to 31.3.2019 in respect of 400 KV D/C Ramagundam-Bhadrawati (Chandrapur) Transmission System in Southern and Western Region (hereinafter referred to as "the transmission asset").

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

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

- a) The transmission asset was put to commercial operation on 1.1.1991.



b) The petitioner had approached the Commission vide Petition No. 271/2009 for approval of additional capital expenditure towards strengthening of towers during 2011-12 and 2012-13 and determination of tariff for 2009-14 tariff period.

c) The Commission vide its order dated 12.7.2011 in Petition No. 271/2009 had approved the capital cost of ₹5185.97 lakh as on 31.3.2009 as under:-

Admitted as on 31.3.2009	Amount (in ₹ lakh)	Percentage (%)
Debt	2762.47	53.27
Equity	2423.50	46.73
Capital Cost	<b>5185.97</b>	<b>100.00</b>

d) In view of the change of wind zone and recommendation of the Committee of Experts for strengthening of towers, the Commission had allowed an additional capital expenditure of ₹212.00 lakh for 2011-12 and ₹112.00 lakh for 2012-13. The Commission determined the tariff for the transmission asset for tariff period 2009-14, based on admitted capital cost of ₹5185.97 lakh and estimated additional capital expenditure of ₹212.00 lakh for 2011-12 and ₹112.00 lakh for 2012-13 as given below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	89.39	89.39	96.21	107.42	111.62
Interest on Loan	-	-	2.31	3.33	1.02
Return on Equity	423.65	423.65	429.21	437.71	440.64
Interest on Working Capital	26.75	27.67	28.95	30.40	31.59
O & M Expenses	320.96	339.35	358.78	379.29	400.90
<b>Total</b>	<b>860.75</b>	<b>880.06</b>	<b>915.45</b>	<b>958.16</b>	<b>985.78</b>

4. As per Regulation 6 of the 2009 Tariff Regulations, the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up. Further, as per Regulation 15 of the 2009 Tariff Regulations, the petitioner is required to adjust the yearly impact of MAT rate in the truing up petition for 2009-14 tariff period.

5. In this context, the petitioner has filed the instant petition on 9.9.2014, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.

6. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the public in response to the notice in newspaper. No submissions have been made by the respondents. The hearing in this matter was held on 16.11.2015. During the hearing, the learned counsel for TANGEDCO, Respondent No. 4, sought two weeks time to file its reply to the petition. The Commission directed the respondents to file their reply by 27.11.2015 vide Record of Proceedings (ROP) dated 16.11.2015. TANGEDCO had filed the reply vide affidavit dated 27.11.2015. The petitioner has filed an affidavit dated 4.12.2015, revising Form 1, Form 13 A, Form 13B respectively. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

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

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

8. The petitioner has submitted the information as required under the 2009 Tariff Regulations for truing up of annual fixed charges for 2009-14 tariff period. The tariff for 2009-14 tariff period has been trued up in the subsequent paragraphs:-

### **Capital Cost**

9. The petitioner has claimed admitted capital cost of ₹5185.97 lakh as on 31.3.2009 for the purpose of tariff determination.

10. The last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that:-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff”.

11. The capital cost of ₹5185.97 lakh admitted by the Commission as on 31.3.2009 has been considered as opening capital cost as on 1.4.2009 for determination of trued up tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

## Additional Capital Expenditure

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

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

13. The petitioner has submitted that it has incurred an additional capital expenditure of ₹265.07 lakh (₹165.43 lakh in 2012-13 and ₹99.64 in 2013-14) towards tower strengthening works due to change in wind zone for efficient operation of the transmission system as certified by its Auditor vide certificate dated 18.11.2014 as depicted below:-

(₹ in lakh)

Capital cost admitted as on 31.3.2009	Additional capital expenditure	2011-12	2012-13	2013-14	Total additional capital expenditure during 2009-14	Total cost as on 31.3.2019
5185.97	Approved vide order dated 12.7.2011	212.00	112.00	-	324.00	5509.97
	Actual incurred during 2009-14	-	165.43	99.64	265.07	5451.04

14. The Respondent No. 4, TANGEDCO in its affidavit dated 27.11.2015 has made the following submissions:-

- a) The petitioner has claimed total additional capitalisation of ₹165.43 lakh and ₹99.64 lakh for 2012-13 and 2013-14 respectively, instead of ₹212 lakh and ₹112 lakh for 2011-12 and 2012-13 respectively, as approved by the Commission vide order 12.7.2011 in Petition No. 271/2009. No additional capitalization has been approved for the year 2013-14 and an excess amount ₹58.93 lakh has been claimed by the petitioner. The



petitioner has claimed the tariff for 2014-19 tariff block based on the truing up claim and hence, it has resulted in excess claim of transmission charges for ₹40.06 lakh for 2014-19 block.

b) It is prayed that the excess amount collected by the petitioner should be refunded to the beneficiaries with interest as per Regulation 6(6) of 2009 Tariff Regulations.

15. The petitioner has furnished Auditor`s Certificate dated 13.9.2014 providing actual expenditure incurred during 2009-14 tariff period.

16. We have considered the submissions of the petitioner and the respondent with regard to the actual capital expenditure in 2012-13 and 2013-14. Since the capital addition of ₹265.07 lakh is based on actual capital expenditure incurred as per the Auditor Certificate dated 13.9.2014 which is within the original scope of work and approved capital expenditure of ₹324 lakh, the same is allowed for the purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations.

17. The debt: equity ratio of 70:30 for additional capital expenditure as claimed by the petitioner is in accordance with the Regulation 12 (3) of the 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

### **Debt: Equity**

18. 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.”

19. The debt: equity ratio of 53.27:46.73 admitted by the Commission vide order dated 12.7.2011 in Petition No. 271/2009 as on 31.3.2009 has been considered as on 1.4.2009 for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. In respect of the additional capitalization, debt: equity ratio of 70:30 has been considered in line with the 2009 Tariff Regulations.

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

(in ₹ lakh)

Funding	Capital Cost as on 31.3.2009	(%)	Additional Capital Expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	2762.47	53.27	185.55	70.00	2948.02	54.08
Equity	2423.50	46.73	79.52	30.00	2503.02	45.92
<b>Total</b>	<b>5185.97</b>	<b>100.00</b>	<b>265.07</b>	<b>100.00</b>	<b>5451.04</b>	<b>100.00</b>

### **Return on Equity (ROE)**

21. TANGEDCO has submitted that no document has been placed on record by the petitioner for taxes claimed by it. The relevant document with description of tax

paid as per Finance Act may be submitted for due verification of grossed up tax claimed by the petitioner for 2009-14 block.

22. Clause (3), (4) and (5) of the 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.”

23. The variation in the tax rate during the 2009-14 tariff period applicable to the petitioner as per the Finance Act of the relevant year for the purpose of grossing up of return on equity (ROE) has been furnished as follows:-

Year	MAT Rate claimed in the current petition	Grossed up ROE (Base Rate/(1-t)) claimed in the current petition
2009-10	16.995%	18.674%
2010-11	19.931%	19.358%
2011-12	20.008%	19.377%
2012-13	20.008%	19.377%
2013-14	20.961%	19.610%

24. We have considered the submission of the respondent and the petitioner. The ROE has been worked out considering MAT rate as applicable as per the Finance Act of the relevant year and in accordance with Regulation 15 of 2009 Tariff Regulations. The trued up ROE is as follows:-

	(₹ in lakh)				
<b>Return on Equity</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 12.7.2011	423.65	423.65	429.21	437.71	440.64
Claimed by the petitioner	452.56	469.14	469.60	474.41	487.91
Allowed after truing up in this order	452.55	469.15	469.60	474.41	487.92

The return on equity allowed in the instant order is more than the return on equity allowed in earlier order due to increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Interest on Loan (IoL)**

25. Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL. However, it is seen that in the present case, normative loans and actual loans have been repaid before 31.3.2004. Normative loans during 2012-13 and 2013-14 amounting to ₹115.80 lakh and ₹69.75 lakh against the additional capital expenditure during the corresponding years are being repaid by the depreciation amounting to ₹95.12 lakh and ₹105.06 lakh respectively. The petitioner vide affidavit dated 4.12.2015, has revised form 13A and claimed interest on loan for 2012-13 and 2013-14 at the rate of interest of 8.84% during the 2009-14 tariff period which is in line with the interest rate approved in order dated 12.7.2011. The IoL worked out for the purpose of truing up of tariff is as follows:-

(₹ in lakh)

<b>Interest on Loan</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 12.7.2011	-	-	2.31	3.33	1.02
Claimed by the petitioner	-	-	-	0.91	0.91
Allowed after truing up in this order	-	-	-	0.91	0.91

The variation in IoL is on account of variation in additional capital expenditure and corresponding normative loans.

### **Depreciation**

26. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations. The depreciation allowed is as follows:-

(₹ in lakh)

<b>Depreciation</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 12.7.2011	89.39	89.39	96.21	107.42	111.62
Claimed by the petitioner	89.40	89.40	89.40	95.12	105.06
Allowed after truing up in this order	89.40	89.40	89.40	95.12	105.06

The variation in depreciation allowed is due to variation in the additional capital expenditure allowed in earlier order and actual submitted by the petitioner.

### **Interest on Working Capital (IWC)**

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

(₹ in lakh)

<b>Interest on Working Capital</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 12.7.2011	26.75	27.67	28.95	30.40	31.59
Claimed by the petitioner	27.35	28.62	29.60	30.86	32.43
Allowed after truing up in this order	27.35	28.61	29.60	30.86	32.43

The variation in IWC is due to variation in receivables on account of additional capitalization and variation of applicable MAT rate during 2009-14 tariff period.

### **Operation & Maintenance Expenses (O&M Expenses)**

28. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The normative O&M Expenses are not required to be trued up. Accordingly, the total allowable O&M expenses for the instant assets have been worked out based on norms of O&M Expenses and the details are as follows:-

(₹ in lakh)

<b>O&amp;M Expenses</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Approved vide order dated 12.7.2011	320.96	339.35	358.78	379.29	400.90
Claimed by the petitioner	320.96	339.35	358.78	379.29	400.90
Allowed after truing up in this order	320.96	339.35	358.78	379.29	400.90

### **APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

29. The detailed computation of the various components of the trued up annual fixed charges for the instant transmission assets for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Depreciation</b>					
Opening Gross Block	5,185.97	5,185.97	5,185.97	5,185.97	5,351.40
Additional Capitalisation	-	-	-	165.43	99.64
Closing Gross Block	5,185.97	5,185.97	5,185.97	5,351.40	5,451.04
Average Gross Block	5,185.97	5,185.97	5,185.97	5,268.69	5,401.22
Rate of Depreciation (%)	1.72	1.72	1.72	1.81	1.95
Depreciable Value	4667.37	4667.37	4667.37	4741.82	4935.54
Elapsed Life	19	20	21	22	23
Remaining Depreciable Value	1430.32	1340.93	1251.53	1236.58	1260.74
Depreciation during the year	89.40	89.40	89.40	95.12	105.06
Cumulative depreciation (incl. of AAD)	3326.45	3415.84	3505.24	3600.36	3705.42
<b>Interest on Loan</b>					
Gross Normative Loan	2762.47	2762.47	2762.47	2762.47	2878.27
Cumulative Repayment upto Previous Year	2762.47	2762.47	2762.47	2762.47	2857.59
Net Loan-Opening	-	-	-	0.00	20.68
Additions	-	-	-	115.80	69.75
Repayment during the year	-	-	-	95.12	90.43
Net Loan-Closing	-	-	-	20.68	0.00
Average Loan	-	-	-	10.34	10.34
Weighted Average Rate of Interest on Loan (%)	-	-	8.8400	8.8400	8.8400
Interest on Loan	-	-	-	0.91	0.91
<b>Return on Equity</b>					
Opening Equity	2,423.50	2,423.50	2,423.50	2,423.50	2,473.13
Additions	-	-	-	49.63	29.89
Closing Equity	2,423.50	2,423.50	2,423.50	2,473.13	2,503.02
Average Equity	2,423.50	2,423.50	2,423.50	2,448.31	2,488.08
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity	452.55	469.15	469.60	474.41	487.92
<b>Interest on Working Capital</b>					
O & M expenses	26.74	28.27	29.89	31.59	33.40
Maintenance Spares	48.14	50.90	53.82	56.89	60.14
Receivables	148.38	154.42	157.90	163.43	171.21
Total	223.26	233.59	241.60	251.92	264.74
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest	27.35	28.61	29.60	30.86	32.43



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Annual Transmission Charges</b>					
Depreciation	89.40	89.40	89.40	95.12	105.06
Interest on Loan	-	-	-	0.91	0.91
Return on Equity	452.55	469.15	469.60	474.41	487.92
Interest on Working Capital	27.35	28.61	29.60	30.86	32.43
O & M Expenses	320.96	339.35	358.78	379.29	400.90
<b>Total</b>	<b>890.26</b>	<b>926.51</b>	<b>947.37</b>	<b>980.59</b>	<b>1,027.22</b>

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

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	109.6	110.12	110.12	110.12	110.12
Interest on Loan	-	-	-	-	-
Return on Equity	491.18	491.51	491.51	491.51	491.51
Interest on Working Capital	34.09	34.79	35.48	36.2	36.94
O & M Expenses	366.77	379.03	391.57	404.57	417.99
<b>Total</b>	<b>1001.64</b>	<b>1015.45</b>	<b>1028.68</b>	<b>1042.40</b>	<b>1056.56</b>

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	30.56	31.59	32.63	33.71	34.83
Maintenance Spares	55.02	56.85	58.74	60.69	62.70
Receivables	166.94	169.24	171.45	173.73	176.09
Total	252.52	257.68	262.80	268.13	273.62
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	34.09	34.79	35.48	36.20	36.94



## **Capital Cost**

32. 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 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.”

“(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;”

33. The capital cost of ₹5451.04 lakh worked out by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

## **Additional Capital Expenditure**

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

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

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

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

“Cut - off Date means 31<sup>st</sup> 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 31<sup>st</sup> March of the year closing after three years of the year of commercial operation:”

Accordingly, the cut-off date in case of the instant asset is 31.3.2013.

36. The petitioner has claimed additional capital expenditure amounting to ₹11.42 lakh during 2014-15 towards balance payments for the work towards tower strengthening work approved vide order dated 12.7.2011. However, as per Auditor`s certificate dated 13.9.2014, the balance expenditure has been indicated during 2013-14. We rely on the Auditor`s Certificate and considered that there is no additional capital expenditure during 2014-15 for the purpose of tariff. The petitioner is at the liberty to raise this issue at the time of true-up for 2014-19 tariff period. Hence, no additional capital expenditure during 2014-19 tariff period has been considered.

### **Debt: Equity**

37. Clause (1), (3) and (5) of Regulation 19 of the 2014 Tariff Regulations provide as under:-

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.”

“(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

38. The petitioner has considered the debt: equity ratio of 54.08:45.92 as on 31.3.2014, which is in line with the 2014 Tariff Regulations.

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

<b>Funding</b>	<b>Total Cost as on 31.3.2014</b>	<b>(%)</b>	<b>Additional Capital Expenditure during 2014-19</b>	<b>Total Cost as on 31.3.2019</b>	<b>(%)</b>
Debt	2948.02	54.08	-	2948.02	54.08
Equity	2503.02	45.92	-	2503.02	45.92
<b>Total</b>	<b>5451.04</b>	<b>100.00</b>	-	<b>5451.04</b>	<b>100.00</b>

### **Return on Equity (ROE)**

40. Clause (1) and (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.”

41. It further provides that in case the generating company or transmission licensee paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of ROE. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

	(₹ in lakh)				
<b>Return on Equity</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
Additions	-	-	-	-	-
Closing Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
Average Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
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	490.85	490.85	490.85	490.85	490.85

### **Interest on Loan (IoL)**

42. The petitioner has not claimed any interest on loan for the 2014-19 tariff period as the entire loan has already been repaid prior to 1.4.2014. Accordingly, no IoL has been considered for the purpose of computation of tariff.

## Depreciation

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

"27. Depreciation:

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

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

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

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

44. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. Transmission assets have completed 12 years of its life on 1.1.2003 and thus depreciation for the subsequent period has been calculated based on the remaining depreciable value to be recovered in the balance useful life. 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
<b>Depreciation</b>					
Opening Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Additional Capitalization	-	-	-	-	-
Closing Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Average Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Freehold Land (Av. Cost)	-	-	-	-	-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Depreciation (%)	2.00	2.00	2.00	2.00	2.00
Elapsed Life	24	25	26	27	28
Remaining Depreciable Value	1,200.52	1,091.38	982.24	873.10	763.96
Depreciation during the year	109.14	109.14	109.14	109.14	109.14

### **Operation & Maintenance Expenses (O&M Expenses)**

45. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets have been worked out and allowed are as follows:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>400 kV Bays:</b>					
No. of Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
<b>Line: D/C Twin/Triple Conductor:</b>					
Line Length (km)	177.61	177.61	177.61	177.61	177.61
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>366.77</b>	<b>379.03</b>	<b>391.57</b>	<b>404.57</b>	<b>417.99</b>

46. The petitioner has further submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also prayed that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

47. TANGEDCO has submitted that the 2014 Tariff Regulations do not provide for any revision in the normative O&M charges based on the actual.

48. We have considered the submission of the petitioner and the respondents. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission asset as per prevailing norms.

### **Interest on Working Capital (IWC)**

49. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specifies as follows:

**“28. Interest on Working Capital**

- (c) (i) Receivables equivalent to two months of fixed cost;  
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

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

51. 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)

<b>Interest on Working Capital</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	30.55	31.57	32.62	33.70	34.82
Maintenance Spares	55.02	56.85	58.74	60.69	62.70
Receivables	166.80	168.96	171.17	173.45	175.81
<b>Total</b>	<b>252.37</b>	<b>257.39</b>	<b>262.52</b>	<b>267.84</b>	<b>273.33</b>
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	34.07	34.75	35.44	36.16	36.90

### **ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

52. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>					
Opening Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Additional Capitalisation	-	-	-	-	-
Closing Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Average Gross Block	5,451.04	5,451.04	5,451.04	5,451.04	5,451.04
Rate of Depreciation (%)	2.00	2.00	2.00	2.00	2.00
Depreciable Value	4950.77	4905.94	4905.94	4905.94	4905.94
Elapsed Life	24	25	26	27	28
Remaining Depreciable Value	1,200.52	1,091.38	982.24	873.10	763.96
Depreciation	109.14	109.14	109.14	109.14	109.14
Cumulative depreciation (incl. of AAD)	3814.56	3923.70	4032.83	4141.97	4251.11
<b>Interest on Loan</b>					
Gross Normative Loan	2,948.02	2,948.02	2,948.02	2,948.02	2,948.02
Cumulative Repayment upto Previous Year	2,962.65	3,071.79	3,180.93	3,290.07	3,399.20
Net Loan-Opening	-	-	-	-	-
Additions	-	-	-	-	-
Repayment during the year	-	-	-	-	-
Net Loan-Closing	-	-	-	-	-
Average Loan	-	-	-	-	-
Weighted Average Rate of Interest on Loan	-	-	-	-	-





<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Interest	-	-	-	-	-
<b>Return on Equity</b>					
Opening Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
Additions	-	-	-	-	-
Closing Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
Average Equity	2,503.02	2,503.02	2,503.02	2,503.02	2,503.02
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	490.85	490.85	490.85	490.85	490.85
<b>Interest on Working Capital</b>					
O & M expenses	30.55	31.57	32.62	33.70	34.82
Maintenance Spares	55.02	56.85	58.74	60.69	62.70
Receivables	166.80	168.96	171.17	173.45	175.81
Total	252.37	257.39	262.52	267.84	273.33
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	34.07	34.75	35.44	36.16	36.90
<b>Annual Transmission Charges</b>					
Depreciation	109.14	109.14	109.14	109.14	109.14
Interest on Loan	-	-	-	-	-
Return on Equity	490.85	490.85	490.85	490.85	490.85
Interest on Working Capital	34.07	34.75	35.44	36.16	36.90
O & M Expenses	366.77	379.03	391.57	404.57	417.99
<b>Total</b>	<b>1,000.83</b>	<b>1,013.77</b>	<b>1,027.00</b>	<b>1,040.72</b>	<b>1,054.88</b>

### **Deferred Tax Liability**

53. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. The deferred tax liability shall be dealt as per Regulations 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the

deferred tax liability upto 31.3.2009 whenever the same gets materialized directly from the beneficiaries or long term transmission customers /DICs.

#### **Filing Fee and the Publication Expenses**

54. 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**

55. 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**

56. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

#### **Sharing of Transmission Charges**

57. 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.

58. This order disposes of Petition No. 375/TT/2014.

sd/-

**(Dr. M.K. Iyer)**  
**Member**

sd/-

**(A.S. Bakshi)**  
**Member**