CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 492/TT/2014

Coram:

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

Date of Hearing : 27.01.2016 Date of Order : 18.02.2016

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 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for Hassan-Mysore 400 kV D/C transmission line and extension of 400/220 kV Hassan & Mysore Sub-station under System Strengthening-IX in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd. 'SAUDAMINI', Plot No-2, Sector-29, Gurgaon -122 001 (Haryana).

.....Petitioner

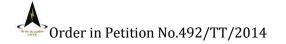
Versus

- 1. Karnataka Power Transmission Corporation Ltd., (KPTCL), Kaveri Bhawan, Bangalore 560009
- 2. Transmission Corporation of Andhra Pradesh Ltd., (APTRANSCO), Vidyut Soundha, Hyderabad- 500082
- Kerala State Electricity Board (KSEB) Vaidhyuthi Bhavanam Pattom, Thiruvananthapuram - 695004
- 4. Tamil Nadu Generation and Distribution Corporation Ltd.,

Order in Petition No.492/TT/2014

(Formerly Tamil Nadu Electricity Board – TNEB) NPKRR Maaligai, 800, Anna Salai Chennai - 600002

- 5. Electricity Department Govt of Pondicherry, Pondicherry - 605001
- Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) APEPDCL, P&T Colony, Seethmmadhara, VISHAKHAPATNAM Andhra Pradesh
- Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL) Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road, Kesavayana Gunta, Tirupati – 517501 Chitoor District, Andhra Pradesh
- Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL) Corporate Office, Mint Compound, Hyderabad – 500063 Andhra Pradesh
- Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL) Opp. NIT Petrol Pump Chaitanyapuri, Kazipet, Warangal – 506004 Andhra Pradesh
- Bangalore Electricity Supply Company Ltd., (BESCOM), Corporate Office, K.R.Circle Bangalore – 560001 Karnataka
- Gulbarga Electricity Supply Company Ltd., (GESCOM), Station Main Road, GULBARGA Karnataka
- Hubli Electricity Supply Company Itd., (HESCOM) Navanagar, PB Road HUBLI, Karnataka
- MESCOM Corporate Office, Paradigm Plaza, AB Shetty Circle MANGALORE – 575001 Karnataka



- Chamundeswari Electricity Supply Corporation Ltd.,(CESC) #927, L J Avenue Ground Floor, New KantharajUrs Road Saraswatipuram, Mysore – 570009 KARNATAKA
- Electricity Department Government of Goa Vidyuti Bhawan, Panaji Goa 403001

.....Respondents

The following were present:-

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

<u>ORDER</u>

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner"), for truing up of capital expenditure under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulation, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on actual 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) Regulation, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from 1.4.2014 to 31.3.2019 of Hassan-Mysore

400 kV D/C transmission line and extension of 400/220 kV Hassan & Mysore Sub-station under System Strengthening-IX in Southern Region.

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

3. 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 ("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. None of the respondents have filed reply to the petition. The hearing in this matter was held on 27.1.2016. In response to letter dated 20.1.2016, the petitioner has submitted its reply vide affidavit dated 11.2.2016. 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 ref:- C/CP/SR-IX dated 16.2.2009 at an estimated cost of ₹12062 lakh including IDC of ₹956 lakh. The petitioner has built the transmission asset in the Southern Region. The date of the commercial operation of the transmission asset is

1.7.2011. The transmission assets have been commissioned within schedule completion date of 1.3.2012.

- (b) The tariff from 1.7.2011 to 31.3.2014 was initially allowed vide order dated 11.3.2013 in Petition No. 190/TT/2011 considering the capital cost of ₹8741.49 lakh as on COD.
- (c) Additional ROE of 0.5% was allowed for the instant assets for commissioning of the assets within the timeline specified in the 2014 Tariff regulations.
- (d) The tariff for the 2009-14 period was allowed vide order dated 11.3.2013
 in Petition No. 190/TT/2011 in accordance with the 2009 Tariff
 Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

			(₹ in lakh)
Approved in 2009-14	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	386.88	573.08	576.47
Interest on Loan	441.42	613.30	566.30
Return on Equity	383.94	568.78	572.14
Interest on WC	35.05	50.34	50.41
O&M Expenses	226.12	318.72	336.91
Total	1473.41	2124.22	2102.23

(e) The Commission, vide order dated 11.3.2013 in Petition No. 190/TT/2014, has determined the tariff for 2009-14 tariff period considering the capital cost of ₹8741.49 lakh as on COD i.e. 1.7.2011. The initial spares claimed by the petitioner is more than the ceiling limit by ₹111.21 lakh and the same was disallowed. (f) 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.

Initial Spares

7. The petitioner has submitted the actual initial spares of ₹145.52 lakh pertaining to the sub-station which exceeds the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulation by ₹112.56 lakh. The petitioner has however, claimed initial spares of ₹32.95 lakh as per the norms specified in the regulations.

8. Regulation 8 of the 2009 tariff Regulations Provides that:-

"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%"

9. The details of initial spares claimed and allowed are shown in the table given below.

Description	Project cost as on cut-off date	Apportion ed initial spares claimed	Ceiling limits as per Regulation 8 of 2009 tariff regulation	Initial spares worked out and allowed as part of capital cost	Excess initial spares claimed and deducted
	(a)	(b)	(c)	(d)=((a- b)*c)/(100-c)%	(e)=(d)-(b)
Sub-station (including PLCC)	1430.74	145.52	2.50%	32.95	112.56

Capital Cost

10. It was observed that there is mismatch in the capital cost figure mentioned in the petition. The capital cost claimed as on COD on page 13 of the petition is mentioned as ₹8740.13 lakh whereas in Form 6 of the petition it is mentioned as ₹8741.07 lakh. The petitioner was directed to clarify the same. In response, the petitioner vide affidavit dated 10.2.2016 has submitted that there was inadvertent error in the capital cost considered for tariff computation. The petitioner has corrected the same and submitted revised tariff forms for 2009-14 and 2014-19 tariff period. The petitioner has claimed revised capital cost of ₹8740.13 lakh as

on 1.7.2011 for the purpose of tariff.

11. Clause (1) and (2) of Regulation 7 of the 2009 Tariff Regulations provides that:-

"(1) Capital cost for a project shall include:-

(a)The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund 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.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff......"

12. The petitioner has submitted the Auditor's Certificate certifying the capital

cost and additional capitalization claimed. We have considered revised capital

cost of ₹8740.13 lakh excluding excess initial spares of ₹112.56 lakh as on COD for the 2009-14 tariff period.

Additional Capital Expenditure

13. The petitioner has submitted additional capitalization of ₹1315.36 lakh, ₹140.36 lakh & ₹34.82 lakh during 2011-12, 2012-13 and 2013-14 period respectively, towards balance and retention payment for sub-station, under Regulation 9(1)(i) of the 2009 Tariff Regulations for the tariff period 2009-14.

14. With regard to additional capital expenditure, clause 9(1) of the 2009 Regulations provides as under:-

"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 also submitted the Auditor's Certificate in support of the actual capital expenditure and additional capital expenditure incurred during the tariff period 2009-14. It is observed that actual additional capitalization claimed by the petitioner is lower than the additional capitalization approved in order dated 11.03.2013. We have considered the petitioner's submission and have allowed additional capitalisation incurred within cut-off date against balance and

retention payment under Regulation 9(1)(i) of the 2009 Tariff Regulations. The details are as follows:-

	(₹ in iakn)
ditional	Total capital cost

(The lates)

Approved Apportioned Cost: ₹12062 Lakh					
Particulars	Capital cost up to COD	Total additional capital expenditure	Including additional		
Approved in order dated 11.3.2013	8741.49	2168.63	10910.12		
Actual	8740.13	1490.54	10230.67		

Debt: Equity

16. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provides as

follows:-

"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."

17. The petitioner has claimed trued up Annual Fixed Charge based on debt-

equity ratio of 70.01:29.99 as on COD, as opening debt:equity ratio as on

1.7.2011. However, in the order dated 11.3.2013 in Petition No. 190/TT/2011 the

Commission has allowed 70:30 debt:equity ratio. The petitioner was directed vide

letter dated 20.1.2016 to submit an undertaking on affidavit that actual equity

infused for the additional capitalisation during 2009-14 period is not less than 30% for the given transmission asset. In this regard, the petitioner submitted the actual equity infused during the tariff period 2009-14 is as tabulated below:-

Particulars Cash Expenditure/Add cap during the year ((₹lakh)	Actua	l Debt	Actual	Equity	
	Amount (₹lakh)	%	Amount (₹lakh)	%	
2011-12	1315.36	996.65	75.80	318.71	24.20
2012-13	140.36	98.25	69.50	42.11	30.50
2013-14	34.82	26.00	74.66	8.82	25.30

18. The revised debt:equity ratio of 70.01:29.99 as on COD has been considered as opening debt:equity ratio as on 1.7.2011 for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

		(₹ in lakh <u>)</u>
Funding	Amount	(%)
Debt	6118.75	70.01
Equity	2621.38	29.99
Total	8740.13	100.00

19. Further, debt:equity ratio of 75.80:24.20 for the additional capitalisation during the year 2011-12, ratio of 70:30 for year 2012-13 and ratio of 74.67:25.33 for the year 2013-14 has been considered for additional capital for tariff period 2014-19. The details of the debt:equity including additional capitalization as on 31.3.2014 is as follows:-

Particulars	Amount (in ₹ lakh)	(%)
Debt	7239.65	70.76
Equity	2991.02	29.24
Total	10230.67	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 petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 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. 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:-

			(₹ in lakh)
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 11.3.2013	441.42	613.30	566.30
As claimed by the petitioner	428.75	582.01	539.77
Allowed after trued up	428.76	582.01	539.78

22. The IOL has decreased due to decrease in additional capitalization during the 2009-14 tariff period.

Return on Equity ("ROE")

23. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide that:-

"(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

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

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

Where "t" is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations."

24. For truing up purpose, the computation of RoE for the tariff period 2009-14

has been done on the basis of actual MAT rate applicable during 2009-14. 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)) %
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

25. Accordingly, the ROE trued up is as shown in the table below:-

			(₹ in lakh)
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 11.3.2013	383.94	568.78	572.14
As claimed by the petitioner	404.12	573.78	585.67
Allowed after trued up	404.12	573.78	585.67

26. The ROE allowed in the instant order is higher than the ROE allowed vide order 11.3.2011 due to increase in MAT rate.

Depreciation

27. 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 year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets."

28. The Commission, in its order dated 11.3.2013 in Petition No. 190/TT/2011,

has worked out the depreciation in accordance with Regulation 17 of the 2009

Tariff Regulations considering useful life of the asset as 34 years. Accordingly,

the same approach has been continued in the instant order.

29. 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 and additional capitalisation as under:-

			(₹ in lak
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 11.3.2013	386.88	573.08	576.47
As claimed by the petitioner	372.46	535.04	539.55
Allowed after trued up	372.47	535.03	539.54

30. The depreciation allowed in the instant order is less than the depreciation allowed vide order 11.3.2011 due to lower actual additional capitalization vis-à-vis that approved for 2009-14.

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

31. 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, allowed and trued up are the same, and are as follows:-

		(₹ in lakh)		
Particulars	2011-12 (Pro-rata)	2012-13	2013-14	
Approved vide order dated 11.3.2013	226.12	318.72	336.91	
As claimed by the petitioner	226.12	318.72	336.91	
Allowed after trued up	226.12	318.72	336.91	

Interest on working capital ("IWC")

32. 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.

33. The petitioner has submitted that the rate of interest on working capital as 11.75% as per clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Subclause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

34. In accordance with Clause (3)(ii) of Regulation 18 of the 2009 Tariff Regulations (Second Amendment), rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.7.2010 shall be equal to SBI Base Rate plus 350 basis points as on 1st April of the year in which the transmission asset was declared under commercial operation. State Bank of India base Bate as on 1.4.2011 was 8.25%. Therefore, interest rate of 11.75% for Asset-I & II has been considered to work out the interest on working capital in the instant case.

35. The IWC trued up is as under:-

			(₹ in lakh)
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 11.3.2013	35.05	50.34	50.41
As claimed by the petitioner	34.91	49.05	49.41
Allowed after trued up	34.92	49.05	49.41

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

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

Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Gross Block			
Opening Gross Block	8740.13	10055.49	10195.85
Additional Capitalization	1315.36	140.36	34.82
Closing Gross block	10055.49	10195.85	10230.67
Average Gross block	9397.81	10125.67	10213.26
Depreciation			
Rate of Depreciation (%)	5.284	5.284	5.283
Depreciable Value	8458.03	9113.10	9191.93
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	34	33	32
Remaining Depreciable Value	8458.03	8740.63	8284.42
Depreciation	372.47	535.03	539.54
Interest on Loan			
Gross Normative Loan	6118.75	7115.40	7213.65
Cumulative Repayment upto Previous Year	0.00	372.47	907.51
Net Loan-Opening	6118.75	6742.93	6306.14
Additions	996.65	98.25	26.00
Repayment during the year	372.47	535.03	539.54
Net Loan-Closing	6742.93	6306.14	5792.60
Average Loan	6430.84	6524.53	6049.37
Weighted Average Rate of Interest on Loan (%)	8.8895	8.9203	8.9228
Interest	428.76	582.01	539.78
Return on Equity			
Opening Equity	2621.38	2940.09	2982.20
Additions	318.71	42.11	8.82
Closing Equity	2940.09	2982.20	2991.02
Average Equity	2780.74	2961.14	2986.61
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610

Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Return on Equity (Pre Tax)	404.12	573.78	585.67
Interest on Working Capital			
Maintenance Spares	33.92	47.81	50.54
O & M Expenses	18.84	26.56	28.08
Receivables	244.40	343.10	341.89
Total	297.16	417.47	420.50
Interest	34.92	49.05	49.41
Annual Transmission Charges			
Depreciation	372.47	535.03	539.54
Interest on Loan	428.76	582.01	539.78
Return on Equity	404.12	573.78	585.67
Interest on Working Capital	34.92	49.05	49.41
O & M Expenses	226.12	318.72	336.91
Total	1466.39	2058.60	2051.31

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

37. The petitioner has claimed the transmission charges as under:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	540.37	540.37	540.37	540.37	540.37
Interest on Loan	493.11	445.22	397.11	348.94	300.77
Return on Equity	586.54	586.54	586.54	586.54	586.54
Interest on WC	54.36	53.83	53.30	52.80	52.31
O&M Expenses	308.98	319.28	329.87	340.82	352.12
Total	1983.36	1945.24	1907.19	1869.47	1832.11

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

				(₹ in ia	KN)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	46.35	47.89	49.48	51.12	52.82
O & M expenses	25.75	26.61	27.49	28.40	29.34
Receivables	330.56	324.21	317.87	311.58	305.35
Total	402.66	398.73	394.83	391.10	387.51
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	54.36	53.83	53.30	52.80	52.31

(₹ in lakh)

Capital Cost

39. 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 trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15."

40. The petitioner has claimed capital expenditure of ₹10230.67 lakh as on 31.3.2014.The trued up capital cost of ₹10230.67 lakh as on 31.3.2014 is considered to workout tariff for tariff period 2014-19.

Additional Capital Expenditure

41. The petitioner has not projected any additional capitalization for the tariff period 2014-19. The Commission vide its letter dated 20.1.2016 sought the

amount of balance and retention payment yet to be made along with the details of contract for which the payment has been retained. In response the petitioner vide affidavit dated 10.2.2016 submitted that retention payment in the instant petition is NIL. Accordingly, no additional capitalization has been considered for the tariff computation.

Debt:Equity Ratio

42. Clause 1 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

"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."

43. The petitioner has considered debt:equity ratio as 70.76:29.24 as on

31.3.2014. The admitted debt:equity ratio of 70.76:29.24 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	7239.00	70.76
Equity	2991.68	29.24
Capital Cost	10230.67	100.00



Interest on Loan ("IOL")

44. 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:

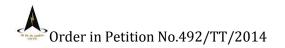
Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

45. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014.

46. It is observed that the debt funding in the instant case is through bonds and GoI loan, which bear a fixed interest rate. 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 Normative Loan	7239.65	7239.65	7239.65	7239.65	7239.65
Cumulative Repayment upto Previous Year	1447.05	1987.42	2527.79	3068.16	3608.53
Net Loan-Opening	5792.60	5252.23	4711.86	4171.49	3631.13
Additions	0.00	0.00	0.00	0.00	0.00



Repayment during the year	540.37	540.37	540.37	540.37	540.37
Net Loan-Closing	5252.23	4711.86	4171.49	3631.13	3090.76
Average Loan	5522.41	4982.05	4441.68	3901.31	3360.94
Weighted Average Rate of Interest on Loan (%)	8.9293	8.9364	8.9405	8.9443	8.9490
Interest	493.12	445.21	397.11	348.94	300.77

Return on Equity ("ROE")

47. 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."

48. The petitioner has computed ROE at the rate of 19.610% after grossing up

the ROE 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.

49. 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.

50. 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:-

				(₹	t in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2991.02	2991.02	2991.02	2991.02	2991.02
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	2991.02	2991.02	2991.02	2991.02	2991.02

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Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Equity	2991.02	2991.02	2991.02	2991.02	2991.02
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)	586.54	586.54	586.54	586.54	586.54

Depreciation

51. 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."

52. The petitioner has computed depreciation considering capital expenditure

of ₹10230.67 lakh as on 31.3.2014.

53. We have considered the submission made by the petitioner with reference

to depreciation. Depreciation is allowed as provided under Regulation 27 of the

2014 Tariff Regulations. The details of the depreciation allowed is given here under:-

				(₹ i	in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	10230.67	10230.67	10230.67	10230.67	10230.67
Addition during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	10230.67	10230.67	10230.67	10230.67	10230.67
Rate of Depreciation (%)	5.282	5.282	5.282	5.282	5.282
Depreciable Value	9207.60	9207.60	9207.60	9207.60	9207.60
Remaining Depreciable Value	7760.55	7220.18	6679.81	6139.44	5599.08
Depreciation	540.37	540.37	540.37	540.37	540.37

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

54. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner's entitlement to O&M expenses have been worked out as given hereunder:-

Part	iculars	2014-15	2015-16	2016-17	2017-18	2018-19
Actual	Double Circuit (Twin & Triple Conductor)	95.875	95.875	95.875	95.875	95.875
	400 kV Bays	4	4	4	4	4
Norms as per Regulation	Double Circuit (Twin & Triple Conductor)	0.707	0.731	0.755	0.78	0.806
	400 kV Bays	60.30	62.30	64.37	66.51	68.71
Total (₹ in Lakh)		308.98	319.28	329.87	340.82	352.12



55. 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 2009-14.

56. 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 Company is due during 2014-19 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.

57. 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, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

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

(₹ in lakh)

Particulars	Year					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Allowed	308.98	319.28	329.87	340.82	352.12	



Interest on Working Capital ("IWC")

59. 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;"

60. 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%.

61. 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 as determined by the Commission is shown in the table below:-

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	46.35	47.89	49.48	51.12	52.82
O & M expenses	25.75	26.61	27.49	28.40	29.34
Receivables	330.56	324.21	317.86	311.58	305.35
Total	402.66	398.70	394.83	391.10	387.51
Interest	54.36	53.83	53.30	52.80	52.31



Annual Transmission Charges

62. 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 lak
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	10230.67	10230.67	10230.67	10230.67	10230.67
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	10230.67	10230.67	10230.67	10230.67	10230.67
Average Gross Block	10230.67	10230.67	10230.67	10230.67	10230.67
Depreciation					
Rate of Depreciation	5.282	5.282	5.282	5.282	5.282
Depreciable Value	9207.60	9207.60	9207.60	9207.60	9207.60
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	7760.55	7220.18	6679.81	6139.44	5599.08
Depreciation	540.37	540.37	540.37	540.37	540.37
Interest on Loan					
Gross Normative Loan	7239.65	7239.65	7239.65	7239.65	7239.65
Cumulative Repayment upto Previous Year	1447.05	1987.42	2527.79	3068.16	3608.53
Net Loan-Opening	5792.60	5252.23	4711.86	4171.49	3631.13
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	540.37	540.37	540.37	540.37	540.37
Net Loan-Closing	5252.23	4711.86	4171.49	3631.13	3090.76
Average Loan	5522.41	4982.05	4441.68	3901.31	3360.94
Weighted Average Rate of Interest on Loan (%)	8.9293	8.9364	8.9405	8.9443	8.9490

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Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest	493.12	445.21	397.11	348.94	300.77
Return on Equity					
Opening Equity	2991.02	2991.02	2991.02	2991.02	2991.02
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	2991.02	2991.02	2991.02	2991.02	2991.02
Average Equity	2991.02	2991.02	2991.02	2991.02	2991.02
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)	586.54	586.54	586.54	586.54	586.54
Interest on Working Capital					
Maintenance Spares	46.35	47.89	49.48	51.12	52.82
O & M expenses	25.75	26.61	27.49	28.40	29.34
Receivables	330.56	324.21	317.86	311.58	305.35
Total	402.66	398.70	394.83	391.10	387.51
Interest	54.36	53.83	53.30	52.80	52.31
Annual Transmission Charges					
Depreciation	540.37	540.37	540.37	540.37	540.37
Interest on Loan	493.12	445.21	397.11	348.94	300.77
Return on Equity	586.54	586.54	586.54	586.54	586.54
Interest on Working Capital	54.36	53.83	53.30	52.80	52.31
O & M Expenses	308.98	319.28	329.87	340.82	352.12
Total	1983.36	1945.23	1907.18	1869.47	1832.11

Filing Fee and Publication Expenses

63. 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

64. 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

65. 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. We are of the view that the petitioner's prayer is premature.



Sharing of Transmission Charges

66. 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.

67. This Order disposes of Petition No. 492/TT/2014.

(Dr. M. K. Iyer) Member (A.S. Bakshi) Member



Annexure – 1

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2009-14

			(₹ in lakh)	
Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XXX-DOCO DRAWL ON 29-SEP- 2009-	0.00	0.00	0.00	0.00
BOND XXXI-DOCO DRAWL ON 25-FEB- 2010-	0.00	0.00	0.00	0.00
BOND XXXIII-DOCO DRAWL ON 08-JUL- 2010-	0.00	0.00	0.00	0.00
BOND XXXIV-DOCO DRAWL ON 21-OCT- 2010-	0.00	0.00	0.00	0.00
BOND-XXXV-ADDCAP FOR-2011-12 ADDCAP FOR 2011-2012 Add Cap Loan-	0.00	0.00	78.25	78.25
BOND XXXV-DOCO DRWAL ON 31-MAY- 2011-	0.00	0.00	0.00	0.00
BOND XXXVI-ADDCAP FOR 2011-2012 ADD CAP-2011-12-	0.00	0.00	418.00	418.00
BOND XXXVII-ADDCAP FOR 2011-12 ADDCAP-2011-12-	0.00	0.00	313.00	313.00
BOND XXXVIII-ADDCAP FOR 2011-12 ADDCAP FOR 2011-12 ADD CAP-2011-12-	0.00	0.00	187.40	187.40
BOND XXXVIII-ADDCAP FOR 2012-13 ADD CAP LOAN-	0.00	0.00	23.60	23.60
BOND XL-ADDCAP FOR 2012-2013 ADD CAP-2012-13-	0.00	0.00	11.00	11.00
BOND XLI-ADDCAP FOR 2012-13 ADD CAP-2012-13-	0.00	0.00	63.00	63.00
BOND XLV-ADDCAP FOR 2013-2014 ADD CAP FOR 2013-2014 ADDCAP 2013-14-	0.00	0.00	26.00	26.00
Summary		0.00	1120.25	1120.25

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

			(₹ in lakh)
Particulars	2011-12	2012-13	2013-14
Gross Opening Loan	6118.75	7115.40	7213.00
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
Net Loans Opening	6118.75	7115.40	7213.00
Add: Drawl(s) during the year	996.65	97.60	26.00
Less: Repayment(s) of Loan during the year	0.00	0.00	252.08
Net Closing Loan	7115.40	7213.00	6986.92
Average Net Loan	6617.08	7164.20	7099.96
Interest on Loan	588.22	639.07	633.52
Rate of Interest on Loan (%)	8.8895	8.9203	8.9228



Annexure –2

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 XXX-DOCO DRAWL ON 29-SEP- 2009-	8.80	474.00	0.00	474.00
BOND XXXI-DOCO DRAWL ON 25-FEB- 2010-	8.90	2551.00	0.00	2551.00
BOND XXXIII-DOCO DRAWL ON 08-JUL- 2010-	8.64	1855.00	0.00	1855.00
BOND XXXIV-DOCO DRAWL ON 21-OCT- 2010-	8.84	834.00	0.00	834.00
BOND-XXXV-ADDCAP FOR-2011-12 ADDCAP FOR 2011-2012 Add Cap Loan-	9.64	78.25	0.00	78.25
BOND XXXV-DOCO DRWAL ON 31-MAY- 2011-	9.64	404.75	0.00	404.75
BOND XXXVI-ADDCAP FOR 2011-2012 ADD CAP-2011-12-	9.35	418.00	0.00	418.00
BOND XXXVII-ADDCAP FOR 2011-12 ADDCAP-2011-12-	9.25	313.00	0.00	313.00
BOND XXXVIII-ADDCAP FOR 2011-12 ADDCAP FOR 2011-12 ADD CAP-2011-12-	9.25	187.40	0.00	187.40
BOND XXXVIII-ADDCAP FOR 2012-13 ADD CAP LOAN-	9.25	23.60	0.00	23.60
BOND XL-ADDCAP FOR 2012-2013 ADD CAP-2012-13-	9.30	11.00	0.00	11.00
BOND XLI-ADDCAP FOR 2012-13 ADD CAP- 2012-13-	8.85	63.00	0.00	63.00
BOND XLV-ADDCAP FOR 2013-2014 ADD CAP FOR 2013-2014 ADDCAP 2013-14-	9.65	26.00	0.00	26.00
Summary		7239.00	0.00	7239.00

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

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	7239.00	7239.00	7239.00	7239.00	7239.00
Cumulative Repayments of Loans upto Previous Year	252.08	728.24	1270.73	1847.26	2425.96
Net Loans Opening	6986.92	6510.76	5968.27	5391.74	4813.04
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	476.16	542.49	576.53	578.70	578.70
Net Closing Loan	6510.76	5968.27	5391.74	4813.04	4234.34
Average Net Loan	6748.84	6239.52	5680.01	5102.39	4523.69
Interest on Loan	602.63	557.59	507.82	456.37	404.82
Rate of Interest on Loan (%)	8.9293	8.9364	8.9405	8.9443	8.9490

