

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 276/TT/2014

Coram:

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

**Date of Hearing : 13.1.2016
Date of Order : 29.1.2016**

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 for ATS of Kopili-Khandong (additional transmission Gohpur-Itanagar) in North Eastern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....**Petitioner**

Versus

1. Assam Electricity Grid Corporation Limited
(Formerly Assam State Electricity Board),
"Bijulee Bhawan", Paltanbazar, Guwahati- 781 001
2. Meghalaya Energy Corporation Ltd.
(Formerly Meghalaya State Electricity Board)
Short Round Road, "Lumjingshai", Shillong-793 001
3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh



4. Power and Electricity Department
Govt. of Mizoram, Aizawl
5. Manipur State Electricity Distribution Company Ltd. (Formerly Electricity
Department, Government of Manipur)
Keishampat, Imphal
6. Department of Power, Government of Nagaland
Kohima, Nagaland
7. Tripura State Electricity Corporation Ltd.,
Vidhyut Bhawan, North Banamalipur,
Agartala, Tripura (W) – 799001

.....**Respondents**

The following were present:-

For Petitioner:	Shri M.M. Mondal, PGCIL
	Shri Vivek Kumar Singh, PGCIL
	Shri S.S. Raju, PGCIL
	Shri D.K. Karma, PGCIL
	Shri J. Mazumder, PGCIL
	Shri Sashi Bhushan, PGCIL
	Shri Rakesh Prasad, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner"), for truing up of capital expenditure and tariff for ATS of Kopili-Khandong (additional transmission Gohpur-Itanagar) in North Eastern 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 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.

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

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 13.1.2016. 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 petitioner has built the transmission asset in the North Eastern Region. The date of the commercial operation of the transmission asset is progressively from March 1984 to July 1991.

(b) The tariff from 1.4.2007 to 31.3.2009 was initially allowed vide order dated 19.2.2008. The Commission in its order dated 19.2.2008 had approved tariff from 1.4.2007 based on certain capital cost. Hon’ble ATE vide its Judgment dated 4.11.2008 in appeal no. 76 of 2008 directed for re-



determination of tariff for the tariff period 2004-09 in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. Accordingly, tariff for the 2004-09 period was revised vide order dated 21.8.2009 in Petition No. 90/2006 considering the capital cost of ₹5533.37 lakh as on 1.4.2004 after accounting for additional capital expenditure of ₹95.07 lakh on works for the period from 1.4.1992 to 31.3.2004 over and above the capital expenditure of ₹5438.30 lakh as on 1.4.1992.

(c) The tariff for the 2009-14 period was allowed vide order dated 13.8.2012 in Petition No. 334/2010 in accordance with the 2009 Tariff Regulations.

The tariff allowed for the tariff period 2009-14 is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	100.77	109.98	117.30	117.30	123.86
Interest on Loan	0.00	1.15	1.15	0.00	0.00
Return on equity	483.86	488.98	494.10	494.10	496.76
Interest on Working Capital	57.80	60.73	63.75	66.66	69.93
O & M Expenses	911.93	963.95	1019.16	1077.88	1139.42
Total	1554.36	1624.79	1695.46	1755.94	1829.97

(d) The Commission, vide order dated 13.8.2012 in Petition No. 334/2010, has determined the tariff for the tariff period 2009-14 based on admitted capital cost of ₹5537.51 lakh as on 31.3.2009.

(e) 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.

(f) The instant petition was filed on 22.8.2014.

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

5. The truing up of tariff for 2009-14 tariff period has been determined as discussed below:-

Capital Cost

6. The petitioner has claimed admitted capital cost of ₹5537.51 lakh as on 31.3.2009 for the purpose of tariff.

7. Last proviso to Clause (2) of Regulation 7 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.”

8. The capital cost admitted as on 31.3.2009 vide order dated 13.8.2012 in Petition No. 334/2010 has been considered as the opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations. The admitted capital cost of ₹5537.51 lakh as on 31.3.2009 has been considered to work out the trued up tariff for the tariff period 2009-14.



Additional Capital Expenditure

9. The petitioner has claimed additional capitalization for expenditure incurred after cut-off date against transmission line under Clause (2)(v) of Regulation 9 of the 2009 Tariff Regulations.

10. Clause 2(v) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“(1) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

.....

(v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.”

11. The Commission vide its order dated 13.8.2012 in Petition No. 334/2010 has approved the additional capitalization of ₹244.70 lakh & ₹132.50 lakh and de-capitalization of ₹49.50 lakh & ₹31.14 lakh during 2010-11 & 2013-14, respectively, towards ICT replacement, isolators replacement and construction of protection wall at Haflong S/s under Clause 2(v) of Regulation 9 of the 2009 Tariff Regulation. Against this, the petitioner has claimed additional capitalization of ₹217.49 lakh, ₹169.64 lakh and ₹219.40 lakh and de-capitalization of ₹65.78 lakh, ₹1.15 lakh and ₹31.14 lakh in 2011-12, 2012-13 and 2013-14, respectively, towards construction of protection wall at Haflong S/s, installation &



commissioning of 10 MVA ICT at Nirjuli S/s, replacement of old & obsolete ETI PLCC panels, replacement of old isolators in Jiribam, Kumarghat, Aizawl, installation of fire alarm system and execution of pile foundation work at location no. 73 & 75 of Gohpur-Itanagar T/L under Clause 2(v) of Regulation 9 of the 2009 Tariff Regulations for the tariff period 2009-14.

12. During the hearing held on 13.1.2016, the petitioner submitted that additional capitalization for ICT replacement, isolators replacement and protection works for Halflong S/s have been claimed in accordance with the order dated 13.8.2012 in Petition No. 334/2010. The petitioner further submitted that it has claimed the additional capitalization for fire alarm system, replacement of PLCC and pile foundation works at loc no. 73 and 75 of Gohpur-Itanagar TL is in accordance with the 98th OCC meeting dated 10.6.2014. Further, fire detection, alarm and protection system was installed in all sub-stations in accordance with the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 and PLCC panels were replaced as the same had completed its useful life and were obsolete.

13. The Commission directed the petitioner to clarify the necessity to carry out pile foundation work. In this regard, the petitioner submitted that same was required due to change in the river course. Further, in response to the Commission query on the amount de-capitalized by the petitioner towards old foundation, the petitioner submitted that the gross amount of the asset has been deducted from the gross block.



14. In this regard, the Commission vide its letter dated 14.1.2016 directed the petitioner to provide item wise detailed justification for increase in the additional capitalization against the admitted additional capital expenditure. Further, the the petitioner was directed to submit the approval of competent authority for carrying out the replacement of ETI PLCC panels and pile foundation work at location nos. 73 and 75 of Gohpur-Itanagar transmission line in 2009-14. The petitioner in response submitted that the Commission vide order dated 13.8.2012 in Petition No. 334/2010 approved following additional capital expenditure along with actual cost incurred during the year:

S. No.	Activity proposed with petition	Additional capital expenditure approved in order dated 13.8.2012		Activity carried out as per actual	Actual expenditure incurred as per LoA
		2010-11	2013-14		
1.	10 MVA ICT at Nirjuli Sub-station	94.70	--	10 MVA ICT along with N2 injection fire protection and fire alarm system at Nirjuli Sub-station	199.38
2.	Replacement at isolators at Haflong, Jiribam, Aizwal and Kumarghat Sub-stations	--	132.50	Replacement at isolators at Haflong, Jiribam, Aizwal and Kumarghat Sub-stations	193.81
3.	Protection wall due to landslide at Haflong Sub-station	150.00	--	Protection wall due to landslide at Haflong Sub-station	212.96
	Total	244.70	132.50		616.15

15. The expenditure indicated in actual for all above items is as per LOA, however, earlier it was on estimated basis. Hence there is cost variation with respect to the estimated cost data submitted earlier in the petition during 2009-



14. As indicated above for ICT at Nirjuli Sub-station, additional nitrogen Injection Fire Protection & Fire alarm system also installed at Nirjuli Substation along-with ICT in order to comply with [CEA (Central Electricity Authority) Regulation 2010 (Technical Standards for Construction of Electrical Plants and Electric Lines)] for smooth and reliable operation of the grid and the same work was also approved by NERPC in 15th TCC & 15th NERPC meeting held on 20th & 21st August, 2015 at Guwahati. Regarding protection wall at Haflong sub-station, Powergrid vide affidavit dated 19.04.2011 in petition no. 334/2010 intimated CERC about the revised additional capitalization estimate of ₹370 lakh. The actual expenditure of ₹222.96 lakh is well within the revised estimate as submitted.

16. With regard to the replacement of PLCC, the petitioner submitted that there were M/s ABB make ETI-21/22 PLCC equipment and NSD-60/61 Protection coupler installed at Haflong, Khandong, Nirjuli, Gahpur, Iribam, Aizwal & Kumarghat sub-stations under ATS of Kopili - Khandong (additional transmission Gohpur - Itanagar). Component failures in ETI panels were experienced in number of cases and matter was taken up with M/s ABB for repair / procurement of the same. M/s ABB vide their letter dated 30.5.2012 intimated that these products are phased out from their regular manufacturing range since many years ago and presently it is very difficult for them to support the users for both ETI 21/22 and NSD-60-61 due to obsolete and non-availability of critical components required for repair. To maintain the tel-protection for stability and reliability of the grid, the ABB make ETI-21/22 PLCC equipment were replaced with new equipment.



17. With regard to pile foundation work, the petitioner submitted that various transmission lines in NERTS were becoming vulnerable from time to time due to frequent change in river course. In such cases, Powergrid is providing temporary embankment protection as immediate measure through boulder sausage, spars, porcupine, etc. However, in case the protection does not work, necessary diversion of line is done on pile foundation if safe space for normal foundation is not available.

18. The petitioner submitted that all the above activities carried out under replacement of old and obsolete ABB make ETI 21/22 PLCC panels at various substations & Pile foundation at Loc No. 73 & 75 of 132 kV Gohpur - Itanagar were approved by NERPC in 15th TCC & 15th NERPC meeting held on 20th & 21st August, 2015 at Guwahati.

19. The petitioner has also submitted the Auditor's Certificate to verify the actual additional capital expenditure incurred in 2009-14.

20. In view of the above justification provided by the petitioner, the petitioner has claimed the additional expenditure to comply statutory requirement and efficient operation of the transmission system and hence, additional capitalisation incurred after cut-off date has been considered under Clause (2)(v) of Regulation 9 of the 2009 Tariff Regulations.



(₹ in lakh)

Particulars	Admitted capital cost as on 31.3.2009	Additional Capitalization									Total additional capitalisation	Total capital cost including additional capitalisation
		09-10	10-11		11-12		12-13		13-14			
		Add-cap	Add-cap	De-cap	Add-cap	De-cap	Add-cap	De-cap	Add-cap	De-cap		
Approved in order dated 13.8.2012	5537.51	0.00	244.70	49.50	0.00	0.00	0.00	0.00	132.50	31.14	296.56	5834.07
Actual	5537.51	0.00	0.00	0.00	217.49	65.78	169.64	1.15	219.40	31.14	508.46	6045.97

Debt: Equity

21. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“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.”

22. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 50.01:49.99 as on 31.3.2009, admitted by the Commission in its order dated 13.8.2012 in Petition No. 334/2010, as opening debt:equity ratio as on 1.4.2009. The petitioner was directed to provide 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)	Actual Debt		Actual Equity	
		Amount ((₹ lakh)	%	Amount ((₹ lakh)	%
Cost admitted upto 1.4.2009	5537.51	2769.58	50.01	2767.93	49.99
Net addcap 2011-12	151.71	NIL	0%	151.71	100%
Net addcap 2012-13	168.49	NIL	0%	168.49	100%
Net addcap 2013-14	188.26	NIL	0%	188.26	100%

23. The petitioner submitted that during 2011-12, 2012-13 and 2013-14, no actual loan has been deployed, i.e., the entire additional capitalization amount has been funded through equity. In accordance with Clause 12(3) of the 2009 Tariff Regulations, excess equity over 30% has been treated as normative loan. Accordingly, normative equity of 30% and normative loan of 70% has been considered for additional capitalization to work out the transmission tariff.

24. The transmission assets covered in the instant petition are existing assets, as the COD is prior to 1.4.2009. The admitted debt:equity ratio of 50.01:49.99 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

(₹ in lakh)		
Funding	Amount	(%)
Debt	2769.58	50.01
Equity	2767.93	49.99
Total	5537.51	100.00



25. Further normative debt:equity ratio of 70:30 has been considered for additional capitalization for tariff period 2014-19 and the same has been allowed. The details of the debt:equity including additional capitalization as on 31.3.2014 is as follows:-

Particulars	Amount (in ₹ lakh)	(%)
Debt	3125.50	51.70
Equity	2920.47	48.30
Total	6045.97	100.00

Interest on Loan (“IOL”)

26. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan.

27. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. The petitioner has not claimed any interest on loan for the tariff period 2009-14, as the complete loan has already been repaid before 1.4.2009. Consequent to the additional capital expenditure during the tariff period 2009-14, there is an addition to the normative loan amounting to ₹106.20 lakh, ₹117.94 lakh and ₹131.78 lakh during 2011-12, 2012-13 and 2013-14, respectively. However, this loan too gets repaid during the same year as depreciation has been considered as repayment and the net loan closing is zero at the end of the above stated periods.

28. 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. Accordingly, IOL has been considered as NIL for the purpose of truing up of tariff.

Return on Equity ("ROE")

29. 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."

30. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 13.8.2012. However, 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)) %
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

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.8.2012	483.86	488.98	494.10	494.10	496.76
As claimed by petitioner	516.88	535.82	540.75	550.06	567.17
Allowed after true up	516.88	535.82	540.75	550.06	567.17

32. The return on equity allowed in the instant order is more than the return on equity allowed vide order dated 13.8.2012 due to increase in equity on account of additional capitalisation and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

Depreciation

33. 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."

34. The Commission, in its order dated 13.8.2012 in Petition No. 334/2010, has worked out the depreciation in accordance with Regulation 17 of the 2009



Tariff Regulations considering useful life of the asset as 31 years. As per the order dated 21.8.2009 in Petition No. 90/2006 and 13.8.2012 in Petition No. 334/2010, elapsed life of the asset was 15 years as on 1.4.2008, and depreciation was spread over the balance useful life. Accordingly, the same approach has been continued in the instant order. With regard to de-capitalization, the petitioner has deducted entire depreciated value corresponding to de-capitalization and hence, same has been considered to arrive remaining depreciable value during the year of de-capitalization.

35. 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 lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.8.2012	100.77	109.98	117.30	117.30	123.86
As claimed by petitioner	100.77	100.77	106.47	119.56	135.61
Allowed after true up	100.77	100.77	106.46	119.56	135.61

36. The depreciation allowed in the instant order is more than the depreciation allowed vide order 13.8.2012 due to increased additional capitalization for 2009-14.

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

37. The petitioner has computed O&M Expenses for the assets mentioned in the petition, in accordance with the O&M norms for 132 kV S/C single conductor transmission line and 220 kV D/C single conductor transmission line, 220 kV bay



and 132 kV & below bay specified in Regulation 19(g) of the 2009 Tariff Regulations. The petitioner has claimed O&M Expenses for 132 kV S/C single conductor transmission lines of 571.626 km line length, 220 kV D/C single conductor transmission lines of 107.23 km line length, 2 bays of 220 kV level and 27 bays of 132 kV & below level. Accordingly, the O&M Expenses have been worked out as given below:-

		(₹ in lakh)				
Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual line length (km)	Single Circuit (Single Conductor)	571.626	571.626	571.626	571.626	571.626
	Double Circuit (Single Conductor)	107.230	107.230	107.230	107.230	107.230
Actual (No. of bays)	220 kV Bays	2	2	2	2	2
	132 kV and below Bays	27	27	27	27	27
Norms as per Regulation	Single Circuit (Single Conductor)	0.179	0.189	0.200	0.212	0.224
	Double Circuit (Single Conductor)	0.269	0.284	0.301	0.318	0.336
	220 kV Bays	36.68	38.78	41.00	43.34	45.82
	132 kV and below Bays	26.20	27.70	29.28	30.96	32.73
Total (₹ in lakh)		911.93	963.95	1019.16	1077.88	1139.42

38. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 13.8.2012 in Petition No. 334/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and they are as follows:-

		(₹ in lakh)			
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.8.2012	911.93	963.95	1019.16	1077.88	1139.42



As claimed by the petitioner	911.93	963.95	1019.16	1077.88	1139.42
Allowed after trued up	911.93	963.95	1019.16	1077.88	1139.42

Interest on working capital("IWC")

39. 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.

40. The petitioner has submitted that the rate of interest on working capital has been considered as 12.25% 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.

41. The Commission, vide order dated 13.8.2012 in Petition No. 334/2010, has approved rate of interest on working capital as 12.25% as applicable for 2008-09. In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation prior to 1.4.2009, shall be equal to short-term Prime Lending Rate as applicable as on 1.4.2009. State Bank of India short-term Prime Lending Rate on 1.4.2009 was 12.25%. Therefore, interest rate of 12.25% has been considered to work out the interest on working capital in the instant case.



42. The IWC trued up is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	136.79	144.59	152.87	161.68	170.91
O & M expenses	75.99	80.33	84.93	89.82	94.95
Receivables	264.68	277.00	288.47	302.56	318.97
Total	477.46	501.93	526.28	554.07	584.84
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
Interest	58.49	61.49	64.47	67.87	71.64

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.8.2012	57.80	60.73	63.75	66.66	69.93
As claimed by petitioner	58.49	61.49	64.47	67.87	71.64
Allowed after true up	58.49	61.49	64.47	67.87	71.64

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

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

43. 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:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block					
Opening Gross Block	5537.51	5537.51	5537.51	5689.22	5857.71
Additional Capitalization	0.00	0.00	151.71	168.49	188.26
Closing Gross block	5537.51	5537.51	5689.22	5857.71	6045.97
Average Gross block	5537.51	5537.51	5613.37	5773.47	5951.84
Depreciation					
Rate of Depreciation (%)	1.820	1.820	1.897	2.071	2.279
Depreciable Value	4973.41	4973.41	5041.68	5185.77	5346.31



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Elapsed Life of the assets at beginning of the year	17	18	19	20	21
Weighted Balance Useful life of the assets	14	13	12	11	10
Remaining Depreciable Value	1410.81	1310.04	1277.53	1315.16	1356.14
Depreciation	100.77	100.77	106.46	119.56	135.61
Interest on Loan					
Gross Normative Loan	2769.58	2769.58	2769.58	2875.78	2993.72
Cumulative Repayment upto Previous Year	2769.58	2769.58	2769.58	2875.78	2993.72
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Additions	0.00	0.00	106.20	117.94	131.78
Repayment during the year	0.00	0.00	106.20	117.94	131.78
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	10.0000	10.0000
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	2767.93	2767.93	2767.93	2813.44	2863.99
Additions	0.00	0.00	45.51	50.55	56.48
Closing Equity	2767.93	2767.93	2813.44	2863.99	2920.47
Average Equity	2767.93	2767.93	2790.69	2838.72	2892.23
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	516.88	535.82	540.75	550.06	567.17
Interest on Working Capital					
Maintenance Spares	136.79	144.59	152.87	161.68	170.91
O & M Expenses	75.99	80.33	84.93	89.82	94.95
Receivables	264.68	277.00	288.47	302.56	318.97
Total	477.46	501.93	526.28	554.07	584.84



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Interest	58.49	61.49	64.47	67.87	71.64
Annual Transmission Charges					
Depreciation	100.77	100.77	106.46	119.56	135.61
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	516.88	535.82	540.75	550.06	567.17
Interest on Working Capital	58.49	61.49	64.47	67.87	71.64
O & M Expenses	911.93	963.95	1019.16	1077.88	1139.42
Total	1588.07	1662.02	1730.84	1815.38	1913.85

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	156.01	266.41	400.73	428.40	430.42
Interest on Loan	0.00	47.69	87.47	58.92	19.15
Return on equity	579.16	636.90	698.36	709.21	709.87
Interest on Working Capital	74.73	81.63	89.03	91.30	92.57
O & M Expenses	1046.43	1081.30	1117.19	1154.14	1192.50
Total	1856.33	2113.93	2392.78	2441.97	2444.51

45. 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	156.96	162.20	167.58	173.12	178.88
O & M expenses	87.20	90.11	93.10	96.18	99.38
Receivables	309.39	352.32	398.80	407.00	407.42
Total	553.55	604.63	659.48	676.30	685.68
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	74.73	81.63	89.03	91.30	92.57



Capital Cost

46. 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.”

47. The petitioner has claimed capital expenditure of ₹6045.97 lakh as on 31.3.2014. Further, the petitioner has also projected net additional capital expenditure of ₹2331.63 lakh during the tariff period 2014-19. The trued up capital cost of ₹6045.97 lakh as on 31.3.2014 is considered to workout tariff for tariff period 2014-19.

Additional Capital Expenditure

48. Clause 3(vii) and Clause 3(ix) 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:

.....

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural



calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level”;

“(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system”

49. The petitioner has claimed additional capitalization of ₹219.58 lakh, ₹2087.28 lakh, ₹400.00 lakh and ₹26.00 lakh in 2014-15, 2015-16, 2016-17 and 2017-18, respectively. Further, the petitioner has submitted de-capitalization of ₹344.15 lakh, ₹53.6 lakh and ₹3.48 lakh in 2015-16, 2016-17 and 2017-18, respectively. The additional capitalization has been claimed towards construction of protection wall at Haflong S/s, replacement of ICT, PLCC panels and isolators, and execution of pile foundation work at location no. 73 & 75 of Gohpur-Itanagar T/L under Clause 3(vii) and 3(ix) of Regulation 14 of the 2014 Tariff Regulations.

50. During hearing held on 13.1.2016, the petitioner submitted that proposed additional capital expenditure during 2014-19 period was approved in 98th OCC meeting dated 10.6.2014. In this regard, the Commission during the same hearing observed that the additional capitalization details were only intimated in the OCC meeting and no concurrence was given by the body. In this regard, the petitioner submitted that the sub-committee in 98th OCC meeting dated 10.6.2014 has not given approval for such additional capitalization, however, it has not disagreed and requested the petitioner to approach the Commission for approval of such additional capitalization.



51. With regard to the additional capital expenditure claimed during tariff period 2014-19, the Commission vide its letter dated 14.1.2016 directed the petitioner to provide (i) a copy of approval accorded by Competent Authority (As per Delegation of Powers) for undertaking this additional capitalisation for tariff period 2014-19; (ii) supporting documents such as correspondence with OEMs in support of petitioner's submission; and (iii) basis of cost estimates of items considered for additional capitalisation such as budgetary quotes, etc. along with administrative approval. The petitioner in response submitted that investment approval of competent authority is taken for execution of new projects being undertaken by Powergrid from time to time. All the new transmission projects, agreed in Standing Committee Meeting of Regional Planning after ratification in the Regional Power Committee (RPC), are taken up to the Board for approval for execution. In this case, the matter is not capitalization of new project, it is the replacement of problematic equipments due to ageing effect, through additional capitalization in tariff. Replacement of the same is required to be carried out for smooth operation of the grid with reliability and stability without any untoward incident. During 2009-14, the Commission approved replacement of problematic equipments under O&M through additional capitalization in tariff for seven projects for which proposal was submitted directly to CERC. Board approval for replacement of such equipment was taken up only after approval received from CERC.



52. The petitioner has further submitted that as per prevailing practices, for replacement of problematic equipments in any project under operation through additional capitalization in tariff, no prior approval is taken from the Board. However, following procedure is followed for carrying out additional capitalization related activities for O&M assets. The activities like investment approval & budget approval by Board, related to replacement work starts only after CERC approval. These replacement activities are spread over the tariff period. This is put up to the Board under the head of “Non-plan capital expenditure” in the annual revenue budget of the company based on the activities schedule during that year and the subsequent years. On approval of Budget by the Board, activities are carried out. The proposal submitted in CERC for the tariff period 2014-19 will also be taken up in the Board for approval under Non-capital Expenditure budget on yearly basis. After favourable outcome from CERC on the same under various transmission scheme and the expenditure on replacement through additional capitalization will be made progressively during tariff block 2014-19. It is also submitted that these sub-stations are completing 25 years of service and have one main & transfer bus arrangement without Breaker Fault Protection and Bus Bar Protection. As load flow has increased many folds and new lines have been added to these sub-stations, in order to enhance reliability /continuity of power supply, Powergrid approached NERPC with a proposal to upgrade the critical sub-station with GIS and other substations with Hybrid/AIS with incorporation of Double Bus Bar arrangement, Breaker failure protection and Bus Bar Protection. The same work was approved by NERPC in 15th TCC & 15th



NERPC meeting held on 20th & 21st August, 2015 at Guwahati. The budgetary estimates for additional capitalization during tariff period 2014-19 are based on the price in recent LoAs of similar equipments.

53. Further, it is observed that the some part of the additional capital expenditure for 2014-15 was on account of retention payment of protection wall at Haflong S/S, ICT, isolators and nitrogen injection system and installation of fire alarm system in control room. In this regard, the Commission vide its letter dated 14.1.2016 asked the petitioner to submit the amount of the balance and retention payment yet to be made. The petitioner in response submitted that the projected expenditure of ₹124.34 lakh for 2014-15 as submitted at the time of petition filing is on account of contract closing and final settlement of bill against the balance work of protection wall at Haflong Sub-station and ₹26.91 lakh for retention/balance payment for work of PLCC. The amount of ₹3.41 lakh is yet to be made against the contract closing and final settlement of bill against the balance work of protection wall at Haflong Sub-station.

54. In view of the above justification, the Commission has considered the petitioner's submission and allows additional capitalisation of ₹219.58 lakh, ₹2087.28 lakh, ₹400.00 lakh and ₹26.00 lakh in 2014-15, 2015-16, 2016-17 and 2017-18, respectively, and de-capitalization of ₹344.15 lakh, ₹53.60 lakh and ₹3.48 lakh in 2015-16, 2016-17 and 2017-18, respectively, as claimed by the petitioner in accordance with Clause 3(vii) and 3(ix) of Regulation 14 of the 2014 Tariff Regulations. The additional capitalisation for tariff period 2014-19 shall be



finally approved after the detailed scrutiny of additional capitalisation in true up petition.

(₹ in lakh)

Particulars	Capital Cost as on 31.3.2014	Projected Additional Capital Expenditure									Capital Cost as on 31.3.2019
		14-15	15-16		16-17		17-18		18-19	Total	
		Add-cap	Add-cap	De-cap	Add-cap	De-cap	Add-cap	De-cap	Add-cap		
Approved	6045.97	219.58	2087.28	344.15	400.00	53.60	26.00	3.48	0.00	2331.63	8377.60

Debt: Equity Ratio

55. 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.”

56. The petitioner has considered debt:equity ratio as 51.70:48.30 as on 31.3.2014. The admitted debt:equity ratio of 51.70:48.30 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	3125.50	51.70
Equity	2920.47	48.30
Total	6045.97	100.00



57. Further normative debt:equity ratio of 70:30 has been proposed for additional capitalization for tariff period 2014-19. The details of the debt:equity including additional capitalization is as follows:-

Particulars	Amount (in ₹lakh)	(%)
Debt	4757.64	56.79
Equity	3619.96	43.21
Total	8377.60	100.00

Interest on Loan (“IOL”)

2. 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.”

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

4. 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 loan opening	3125.50	3279.21	4499.40	4741.88	4757.64
Cumulative Repayment upto COD/previous year	3125.50	3279.21	3545.62	3946.35	4374.76
Net Loan-Opening	0.00	0.00	953.78	795.53	382.89
Additions during the year	153.71	1220.19	242.48	15.76	0.00
Repayment during the year	153.71	266.41	400.74	428.40	382.89
Net Loan-Closing	0.00	953.78	795.53	382.89	0.00
Average Loan	0.00	476.89	874.65	589.21	191.44
Rate of Interest (%)	10.0000	10.0000	10.0000	10.0000	10.0000
Interest	0.00	47.69	87.47	58.92	19.14

Return on Equity("ROE")

58. 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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."



59. 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.

60. 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.

61. 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	2920.47	2986.34	3509.28	3613.20	3619.96
Addition due to Additional Capitalisation	65.87	522.94	103.92	6.76	0.00
Closing Equity	2986.34	3509.28	3613.20	3619.96	3619.96
Average Equity	2953.41	3247.81	3561.24	3616.58	3619.96
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT 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)	579.16	636.90	698.36	709.21	709.87

Depreciation

62. 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."



63. The petitioner has computed depreciation considering capital expenditure of ₹6045.97 lakh as on 31.3.2014 and projected net additional capitalization of ₹2331.63 lakh for the tariff period 2014-19.

64. 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 hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	6045.97	6265.55	8008.68	8355.08	8377.60
Additional Capitalisation	219.58	1743.13	346.40	22.52	0.00
Gross block at the end of the year	6265.55	8008.68	8355.08	8377.60	8377.60
Average gross block	6155.76	7137.12	8181.88	8366.34	8377.60
Rate of Depreciation (%)	2.534	3.733	4.898	5.121	5.138
Depreciable Value	5529.83	6413.05	7353.34	7519.36	7529.49
Elapsed Life of the assets at beginning of the year	22	23	24	25	26
Weighted Balance Useful life of the assets	9	8	7	6	5
Remaining Depreciable Value	1404.05	2131.27	2805.15	2570.43	2152.16
Depreciation	156.01	266.41	400.74	428.40	430.43

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

65. 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:-



		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual line length (km)	Single Circuit (Single Conductor)	571.626	571.626	571.626	571.626	571.626
	Double Circuit (Single Conductor)	107.230	107.230	107.230	107.230	107.230
Actual (No. of bays)	220 kV Bays	2	2	2	2	2
	132 kV and below Bays	27	27	27	27	27
Norms as per Regulation	Single Circuit (Single Conductor)	0.202	0.209	0.216	0.223	0.23
	Double Circuit (Single Conductor)	0.303	0.313	0.324	0.334	0.346
	220 kV Bays	42.21	43.61	45.06	46.55	48.10
	132 kV and below Bays	30.15	31.15	32.18	33.25	34.36
Total (₹ in lakh)		1046.43	1081.30	1117.19	1154.14	1192.50

66. 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.

67. 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.

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Allowed	1046.43	1081.30	1117.19	1154.14	1192.50

Interest on Working Capital (“IWC”)

69. 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;”

70. 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%.

71. 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	156.96	162.20	167.58	173.12	178.87
O & M expenses	87.20	90.11	93.10	96.18	99.37
Receivables	309.39	352.32	398.80	407.00	407.42
Total	553.55	604.62	659.48	676.29	685.67
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	74.73	81.62	89.03	91.30	92.57

Annual Transmission Charges

72. 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	6045.97	6265.55	8008.68	8355.08	8377.60
Additional Capitalization	219.58	1743.13	346.40	22.52	0.00
Closing Gross Block	6265.55	8008.68	8355.08	8377.60	8377.60
Average Gross Block	6155.76	7137.12	8181.88	8366.34	8377.60
Depreciation					
Rate of Depreciation	2.534	3.733	4.898	5.121	5.138
Depreciable Value	5529.83	6413.05	7353.34	7519.36	7529.49
Elapsed Life of the assets at beginning of the year	22	23	24	25	26
Weighted Balance Useful life of the assets	9	8	7	6	5
Remaining Depreciable Value	1404.05	2131.27	2805.15	2570.43	2152.16
Depreciation	156.01	266.41	400.74	428.40	430.43
Interest on Loan					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	3125.50	3279.21	4499.40	4741.88	4757.64
Cumulative Repayment upto Previous Year	3125.50	3279.21	3545.62	3946.35	4374.76
Net Loan-Opening	0.00	0.00	953.78	795.53	382.89
Additions	153.71	1220.19	242.48	15.76	0.00
Repayment during the year	153.71	266.41	400.74	428.40	382.89
Net Loan-Closing	0.00	953.78	795.53	382.89	0.00
Average Loan	0.00	476.89	874.65	589.21	191.44
Weighted Average Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	10.0000	10.0000
Interest	0.00	47.69	87.47	58.92	19.14
Return on Equity					
Opening Equity	2920.47	2986.34	3509.28	3613.20	3619.96
Additions	65.87	522.94	103.92	6.76	0.00
Closing Equity	2986.34	3509.28	3613.20	3619.96	3619.96
Average Equity	2953.41	3247.81	3561.24	3616.58	3619.96
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)	579.16	636.90	698.36	709.21	709.87
Interest on Working Capital					
Maintenance Spares	156.96	162.20	167.58	173.12	178.87
O & M expenses	87.20	90.11	93.10	96.18	99.37
Receivables	309.39	352.32	398.80	407.00	407.42
Total	553.55	604.62	659.48	676.29	685.67
Interest	74.73	81.62	89.03	91.30	92.57
Annual Transmission Charges					
Depreciation	156.01	266.41	400.74	428.40	430.43
Interest on Loan	0.00	47.69	87.47	58.92	19.14
Return on Equity	579.16	636.90	698.36	709.21	709.87
Interest on Working Capital	74.73	81.62	89.03	91.30	92.57
O & M Expenses	1046.43	1081.30	1117.19	1154.14	1192.50
Total	1856.33	2113.92	2392.78	2441.97	2444.51



Filing Fee and Publication Expenses

73. 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

74. 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

75. 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.

Deferred Tax Liability

76. 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



under Regulation 49 of the 2014 Tariff Regulations. The deferred tax liability shall be dealt as per Regulation 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 materializes, directly from the beneficiaries or long term transmission customers /DICs.

Sharing of Transmission Charges

77. 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.

78. This Order disposes of Petition No. 276/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	2009-14			
	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
NHPC Bonds - DOCO Drawl on 01-Apr-1992	9.00	2.05	0.00	2.05
GOI loan @14.59% upto 12.9.2007 replaced with LIC-III @10% on 13.9.2007 - DOCO drawl on 1-Apr-1992	10.00	10.18	0.00	10.18
Total		12.23	0.00	12.23

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

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	12.23	12.23	12.23	12.23	12.23
Cumulative Repayments of Loans upto Previous Year	11.64	11.75	11.86	11.97	12.08
Net Loans Opening	0.59	0.48	0.37	0.26	0.15
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.11	0.11	0.11	0.11	0.11
Net Closing Loan	0.48	0.37	0.26	0.15	0.04
Average Net Loan	0.54	0.43	0.32	0.21	0.10
Interest on Loan	0.05	0.04	0.03	0.02	0.01
Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	10.0000	10.0000



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
NHPC Bonds - DOCO Drawl on 01-Apr-1992	9.00	2.05	0.00	2.05
GOI loan @14.59% upto 12.9.2007 replaced with LIC-III @10% on 13.9.2007 - DOCO drawl on 1-Apr-1992	10.00	10.18	0.00	10.18
Total		12.23	0.00	12.23

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	12.23	12.23	12.23	12.23	12.23
Cumulative Repayments of Loans upto Previous Year	12.19	12.23	12.23	12.23	12.23
Net Loans Opening	0.04	0.00	0.00	0.00	0.00
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.04	0.00	0.00	0.00	0.00
Net Closing Loan	0.00	0.00	0.00	0.00	0.00
Average Net Loan	0.02	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	10.0000	10.0000

