

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.240/TT/2014

Coram:

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

**Date of Hearing: 13.01.2016
Date of Order : 28.01.2016**

In the Matter of:

Truing up of transmission tariff for 2009-14 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and determination of transmission tariff for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 of combined assets i.e. Asset-I (220 kV Dimapur-Misa TL, LILO 220 kV D/C Kopili-Samaguri TL and LILO 132kV D/C Mariani-Dimapur TL) and Asset-II (132 kV D/C Doyang-Dimapur TL, 132 kV S/C Dimapur-Imphal TL with associated bays) for transmission System associated with Doyang HEP 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-122001 (Haryana)

.....Petitioner

Versus

1. Assam State Electricity Board
Bijluee Bhawan, Paltan Bazar
Guwahati-781001, Assam

2. Mehalaya Energy Corporation Limited
(Formerly Meghalaya State Electricity Board)
Short Round Road
Shillong-793001



3. Government of Arunachal Pradesh
Itanagar, Arunachal Pradesh
4. Power & Electricity Department
Government of Mizoram
Aizawl, Mizoram
5. Manipur State Electricity Distribution Company Limited
Keishampat, Imphal
6. Department of Power
Government of Nagaland
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited
Bidyut Bhawan, North Banamalipur,
Agartala, Tripura-700001

.....Respondents

The following were present:

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

For Respondents: None

ORDER

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”), a transmission licensee, for revision of tariff under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on truing up of capital expenditure for the period 1.4.2009 to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to



as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 in respect of the combined assets i.e. Asset-I (220 kV Dimapur-Misa TL, LILO 220 kV D/C Kopili-Samaguri TL and LILO 132 kV D/C Mariani-Dimapur TL) and Asset-II (132 kV D/C Doyang-Dimapur TL, 132 kV S/C Dimapur-Imphal TL with associated bays) for transmission System associated with Doyang HEP in North Eastern Region (hereinafter referred to as “the transmission assets”).

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

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

a) Investment approval for the transmission assets was accorded by Ministry of Home Affairs under its letter dated 29.3.1985 at an estimated cost of ₹4087 lakh. Subsequently, the revised cost estimates I and II for the transmission assets were approved by Ministry of Power vide its letters dated 14.5.1993 and 30.6.2000 respectively at an estimated cost of ₹6966 lakh and ₹11778 lakh.

b) The final transmission charges for 2009-14 tariff period in respect of the transmission assets were approved vide order dated 1.6.2011 in Petition No.197/2010 based on admitted capital cost of ₹11040.90 lakh and no additional capital expenditure was claimed for the transmission assets.

(₹ in lakh)

Funding	Capital cost as on 31.3.2009	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	7002.41	63.42	0.00	0.00	7002.41	63.42
Equity	4038.50	36.58	0.00	0.00	4038.50	36.58
Total	11040.90	100.00	0.00	0.00	11040.90	100.00

c) The Commission determined the tariff for the transmission assets for tariff period 2009-14 as given below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	552.36	179.94	179.94	179.94	179.94
Interest on Loan	140.37	103.76	85.76	67.77	49.78
Return on Equity	705.97	705.97	705.97	705.97	705.97
Interest on Working Capital	61.88	55.22	56.83	58.55	60.39
O & M Expenses	654.26	691.59	731.32	773.20	817.37
Total	2114.84	1736.47	1759.82	1785.43	1813.44

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

5. The petitioner has filed the instant petition on 12.8.2014, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.

6. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments/objections have been received from the public in response to the notice in newspaper. None of the respondents have filed any reply. The hearing in this matter was held on 13.1.2016. The Commission, vide letter dated 14.1.2016, directed the petitioner to submit additional information in respect of the additional capital expenditure claimed for 2009-14 tariff period and estimated during

2014-19 period by 20.1.2016. The petitioner has submitted the information vide affidavit dated 25.1.2016.

7. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

8. 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”.

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

Capital Cost

10. The petitioner has claimed capital cost of ₹11040.90 lakh as on 1.4.2009 in respect of the transmission assets for the purpose of tariff determination.

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

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

12. Accordingly, the capital cost of ₹11040.90 lakh as on 31.3.2009 admitted by the Commission in order dated 1.6.2011 in Petition No.197/2010, has been considered as



opening capital cost as on 1.4.2009 for truing up tariff in accordance with Regulation 7 of the 2009 Tariff Regulations.

Additional Capital Expenditure

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

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

14. Regulation 9(2) of the 2009 Regulations provides that:-

“(2) 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:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (ii) Change in law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and
- (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”

15. The petitioner has submitted that it has incurred additional capital expenditure of ₹25.78lakh, ₹40.84 lakh, and ₹0.63 lakh during 2011-12, 2012-13 and 2013-14 respectively and de-capitalisation to the tune of ₹27.57 lakh during 2011-12. The details



of additional capital expenditure and de-capitalisation claimed during 2009-14 tariff period are as depicted below:-

(₹ in lakh)

	Additional capital expenditure/ De-capitalisation		Remarks
		18744.00	Apportioned approved cost
Cost as on 31.3.2009		11040.90	Admitted cost
2011-12	Additional capital exp.	25.78	Replacement of PLCC
	De-capitalisation	-27.57	Old PLCC
Total		-1.79	Net Add-cap
2012-13	Additional capital exp.	1.89	Replacement of PLCC
	Additional capital exp.	38.95	Relay and Nitrogen injection fire alarm system
Total		40.84	
2013-14	Add-cap	0.63	Relay and Nitrogen injection fire alarm system
Total cost as on 31.3.2014		11080.58	

16. The petitioner has submitted that the above mentioned additional capital expenditure is after the cut-off date and is on account of replacement of old PLCC system and payment for installation of relay and nitrogen injection fire fighting system. In response to query of the Commission during the hearing, the petitioner submitted that the aforementioned expenditure was made towards fire fighting equipment which are mandatory requirements in accordance with the Central Electricity Authority (CEA) notification dated 20.8.2010 and towards replacement of old PLCC equipment. Further, the petitioner has submitted, vide affidavit dated 25.1.2016, that the actual equity infused during 2009-14 is not less than 30% and excess equity over 30% has been treated as deemed loan in accordance with Regulation 12(3) of the 2009 Tariff Regulations.

17. We have considered the submissions of the petitioner with regard to the actual capital expenditure during 2009-14 period. The total additional capital expenditure of ₹39.68 lakh is based on actual additional capital expenditure incurred as per the Auditor's Certificate dated 16.7.2014. Further, since the expenditure is incurred to comply with the statutory requirement in accordance with the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, dated 20.8.2010, the same is allowed for the purpose of revision of tariff in accordance with Regulation 9(2) of the 2009 Tariff Regulations.

(₹ in lakh)

Capital cost as on 31.3.2009	Additional capital expenditure during 2009-14				Total Cost as on 31.3.2014
	2011-12	2012-13	2013-14		
11040.90	25.78	-27.57	38.95	0.63	11080.58

Debt: Equity

18. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio. (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”



19. The admitted debt:equity ratio of 63.42:36.58, vide order dated 1.6.2011 in Petition No.197/2010 as on 31.3.2009, has been considered for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. In respect of the additional capitalization, debt: equity ratio of 70:30 has been considered in line with the 2009 Tariff Regulations.

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

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

(₹ in lakh)

Funding	Capital cost as on 1.4.2009	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
Debt	7002.41	63.42	27.78	70.00	7030.19	63.45
Equity	4038.50	36.58	11.90	30.00	4050.39	36.55
Total	11040.90	100.00	39.68	100.00	11080.58	100.00

Return on Equity (“ROE”)

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

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

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

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

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

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

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

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

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

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

Return on Equity	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 1.6.2011	705.97	705.97	705.97	705.97	705.97
Claimed by the petitioner	754.15	781.77	782.49	783.62	794.26
Allowed after truing up in this order	754.13	781.78	782.48	783.62	794.28

The difference in the approved ROE and that allowed after truing up is on account of actual grossed up ROE based on actual MAT rate.

Interest on Loan (“IoL”)

25. Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has dealt with similar issue and 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”.

26. The petitioner has submitted the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, the IoL has been calculated based on actual interest rate submitted by the petitioner, in accordance with the Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed in Annexure-1. The IoL worked out is as follows:-

	(₹ in lakh)				
Interest on Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 1.6.2011	140.37	103.76	85.76	67.77	49.78
Claimed by the petitioner	140.37	103.76	85.71	69.03	52.33
Allowed after truing up in this order	140.37	103.76	85.70	69.03	52.33

The difference in the approved IoL and that allowed after truing up is on account of change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.

Depreciation

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

(₹ in lakh)

Depreciation	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 1.6.2011	552.36	179.94	179.94	179.94	179.94
Claimed by the petitioner	552.34	179.94	179.89	180.93	182.09
Allowed after truing up in this order	552.36	179.94	179.89	180.92	182.09

The difference in the approved depreciation and that allowed after truing up is on account of change in gross block during the 2009-14 tariff period.

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

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

(₹ in lakh)

O&M Expenses	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 1.6.2011	654.26	691.59	731.32	773.20	817.37
Claimed by the petitioner	654.26	691.59	731.32	773.20	817.37
Allowed after truing up in this order	654.26	691.59	731.32	773.20	817.37

Interest on Working Capital (“IWC”)

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

(₹ in lakh)

Interest on Working Capital	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 1.6.2011	61.88	55.22	56.83	58.55	60.39
Claimed by the petitioner	62.88	56.80	58.43	60.22	62.33
Allowed after truing up in this order	62.88	56.80	58.43	60.22	62.33

The variation in IWC is on account of change in the receivables during the 2009-14 tariff period on account of change in MAT rate and additional capital expenditure.

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation					
Opening Gross Block	11040.90	11040.90	11040.90	11039.11	11079.95
Additional Capitalisation	0.00	0.00	-1.79	40.84	0.63
Closing Gross Block	11040.90	11040.90	11039.11	11079.95	11080.58
Average Gross Block	11040.90	11040.90	11040.01	11059.53	11080.27
Rate of Depreciation	5.00	1.63	1.63	1.64	1.64
Depreciable Value	9909.80	9909.80	9909.00	9925.76	9963.61
Balance Useful life of the asset	20	19	18	17	16
Elapsed Life	11	12	13	14	15
Remaining Depreciable Value	3971.14	3418.78	3238.04	3075.72	2913.46
Depreciation during the year	552.36	179.94	179.89	180.92	182.09
Interest on Loan					
Gross Normative Loan	7002.41	7002.41	7002.41	7001.16	7029.75
Cumulative Repayment upto Previous Year	5322.51	5874.87	6054.80	6234.69	6415.62
Net Loan-Opening	1679.90	1127.54	947.61	766.46	614.13
Additions	0.00	0.00	-1.25	28.59	0.44
Repayment during the year	552.36	179.94	179.89	180.92	182.09
Net Loan-Closing	1127.54	947.61	766.46	614.13	432.48
Average Loan	1403.72	1037.57	857.03	690.29	523.30
Weighted Average Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	10.0000	10.0000



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Interest on Loan	140.37	103.76	85.70	69.03	52.33
Return on Equity					
Opening Equity	4038.49	4038.49	4038.49	4037.95	4050.21
Additions	0.00	0.00	-0.54	12.25	0.19
Closing Equity	4038.49	4038.49	4037.95	4050.21	4050.39
Average Equity	4038.49	4038.49	4038.22	4044.08	4050.30
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity	18.674	19.358	19.377	19.377	19.610
Return on Equity	754.13	781.78	782.48	783.62	794.28
Interest on Working Capital					
O & M expenses	54.52	57.63	60.94	64.43	68.11
Maintenance Spares	98.14	103.74	109.70	115.98	122.61
Receivables	360.67	302.31	306.30	311.17	318.07
Total	513.33	463.68	476.95	491.58	508.79
Rate of Interest	12.25	12.25	12.25	12.25	12.25
Interest on Working Capital	62.88	56.80	58.43	60.22	62.33
Annual Transmission Charges					
Depreciation	552.36	179.94	179.89	180.92	182.09
Interest on Loan	140.37	103.76	85.70	69.03	52.33
Return on Equity	754.13	781.78	782.48	783.62	794.28
Interest on Working Capital	62.88	56.80	58.43	60.22	62.33
O & M Expenses	654.26	691.59	731.32	773.20	817.37
Total	2164.01	1813.87	1837.83	1866.99	1908.40

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	183.86	185.96	186.19	186.20	186.19
Interest on Loan	36.10	19.89	5.42	0.00	0.00
Return on Equity	796.00	797.92	798.12	798.12	798.12
Interest on Working Capital	64.86	65.96	67.06	68.40	69.93
O & M Expenses	750.81	775.76	801.63	828.02	855.73
Total	1831.63	1845.49	1858.42	1880.74	1909.97



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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	62.57	64.65	66.80	69.00	71.31
Maintenance Spares	112.62	116.36	120.24	124.20	128.36
Receivables	305.27	307.58	309.74	313.46	318.33
Total	480.46	488.59	496.78	506.66	518.00
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	64.86	65.96	67.06	68.40	69.93

Capital Cost

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

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

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

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

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

34. The capital cost of ₹11080.58lakh worked out by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

Additional Capital Expenditure

35. Clause (3) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:



- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments.”

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

“Cut - off Date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31st March of the year closing after three years of the year of commercial operation.”

37. The petitioner has projected additional capital expenditure of ₹58.40 lakh and ₹6.82 lakh during 2014-15 and 2015-16 respectively. The details of additional capital expenditure claimed during 2014-19 tariff period are as depicted below:-

(₹ in lakh)

	Additional capital expenditure	Remarks
Cost as on 31.3.2014	11080.58	
2014-15	7.99	Balance & Retention payment against PLCC
	0.11	Retention payment against Relay
	0.30	Retention payment against Nitrogen injection fire alarm system as per CEA notification dated 20.8.2010
	40.00	Installation bus bar protection scheme at Dimapur Sub-station
	10.00	Expenditure against installation of fire alarm system in Control room at Dimapur as per CEA notification dated 28.2.2010
Total	58.40	
2015-16	5.00	Installation bus bar protection scheme at Dimapur Sub-station



	1.82	Expenditure against installation of fire alarm system in Control room at Dimapur as per CEA notification dated 28.2.2010
Total	6.82	
Cost as on 31.3.2019	11145.80	

38. The petitioner has submitted that the above mentioned additional capital expenditure is projected partly on account of balance/retention payments and installation of bus bars protection scheme and fire alarm system at Dimapur Sub-station. The petitioner, vide affidavit dated 25.1.2016, has submitted that the Dimapur Sub-station has been commissioned and put under commercial operation w.e.f. 1.7.1995 and one main bus and one transfer bus was without bus bar protection. Thus, the bus bar protection has been installed as per CEA Regulations, 2007. In response to the query about the undischarged liabilities, the petitioner has submitted that the projected expenditure of ₹7.99 lakh for 2014-15 is on account of contract closing and final settlement of bill against the balance and retention payment of PLCC to M/s ABB and M/s Siemens. Further, the petitioner has submitted that the actual equity infused during 2014-19 tariff period is not less than 30% and excess equity over 30% has been treated as deemed loan in accordance with Regulation 19 of the 2014 Tariff Regulations.

39. We have considered the submissions of the petitioner with regard to the projected capital expenditure during 2014-19 period. The total additional capital expenditure of ₹65.22 lakh is as per the Auditor's Certificate dated 16.7.2014. Further, since the expenditure is proposed to comply with the statutory requirements in accordance with the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, dated 20.8.2010 and Central Electricity

Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 dated 21.2.2007, the same is allowed for the purpose of revision of tariff in accordance with Regulation 14(3) of the 2014 Tariff Regulations, subject to true up based on actual expenditure.

(₹ in lakh)

Capital cost as on 1.4.2014	Additional capital expenditure during 2014-19		Total Cost as on 31.3.2019
	2014-15	2015-16	
11080.58	58.40	6.82	11145.80

Debt: Equity

40. Clause (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provides as under:-

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

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

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

41. Debt:equity ratio considered for working out the transmission charges is as under:-

(₹ in lakh)

Funding	Capital cost as on 1.4.2014	(%)	Additional capital expenditure during 2014-19				Total Cost as on 31.3.2019	(%)
			2014-15	(%)	2015-16	(%)		
Debt	7030.19	63.45	40.88	70.00	4.77	70.00	7075.84	63.48
Equity	4050.39	36.55	17.52	30.00	2.05	30.00	4069.96	36.52
Total	11080.58	100.00	58.40	100.00	6.82	100.00	11145.80	100.00



Return on Equity (“ROE”)

42. Clause (1) and (2) of Regulations 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.”

43. The petitioner has submitted that MAT rate is applicable to the petitioner's Company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-

	(₹ in lakh)				
Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4050.39	4067.91	4069.96	4069.96	4069.96
Additions	17.52	2.05	0.00	0.00	0.00
Closing Equity	4067.91	4069.96	4069.96	4069.96	4069.96
Average Equity	4059.15	4068.94	4069.96	4069.96	4069.96
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961



Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	796.02	797.94	798.14	798.14	798.14

Interest on Loan (“IoL”)

44. Clause 5 and Clause 6 of Regulation 26 of the 2014 Tariff Regulations provides that:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

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

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

45. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure 2. IoL has been worked out and allowed as follows:-

(₹ in lakh)					
Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	7030.19	7071.07	7075.84	7075.84	7075.84
Cumulative Repayment upto Previous Year	6597.71	6781.57	6967.53	7075.84	7075.84
Net Loan-Opening	432.48	289.49	108.31	0.00	0.00



Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Additions	40.88	4.77	0.00	0.00	0.00
Repayment during the year	183.86	185.96	108.31	0.00	0.00
Net Loan-Closing	289.49	108.31	0.00	0.00	0.00
Average Loan	360.98	198.90	54.15	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	10.0000	10.0000	10.0000	0.0000	0.0000
Interest on Loan	36.10	19.89	5.42	0.00	0.00

Depreciation

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

"27. Depreciation:

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

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

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

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

47. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The transmissions asset has completed 12 years in 2009-10, and thus depreciation during 2014-19 tariff period has been calculated based on the remaining depreciable value to be recovered in the balance useful life as per clause 27 of the 2014 Tariff Regulations.

The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	11080.58	11138.98	11145.80	11145.80	11145.80
Additional Capitalisation	58.40	6.82	0.00	0.00	0.00
Closing Gross Block	11138.98	11145.80	11145.80	11145.80	11145.80
Average Gross Block	11109.78	11142.39	11145.80	11145.80	11145.80
Rate of Depreciation	1.65	1.67	1.67	1.67	1.67
Depreciable Value	9972.08	10027.42	10007.28	10004.21	10004.21
Balance Useful life of the asset	15	14	13	12	11
Elapsed Life	16	17	18	19	20
Remaining Depreciable Value	2757.93	2603.42	2420.53	2234.33	2048.14
Depreciation	183.86	185.96	186.19	186.19	186.19
Cumulative depreciation	7213.87	7397.73	7583.69	7769.89	7956.08

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

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

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV Bays:					
No. of Bays	9	9	9	9	9
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
132 kV and below Bays:					
No. of Bays	9	9	9	9	9
Norms (₹ lakh/Bay)	30.15	31.15	32.18	33.25	34.36
Transmission Line:					
S/C (Single Conductor) (km)	168.865	168.865	168.865	168.865	168.865
Norms (₹ lakh/km)	0.202	0.209	0.216	0.223	0.23
D/C Single conductor (km)	216.046	216.046	216.046	216.046	216.046
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
Total O&M Expenses (₹ lakh)	750.81	775.76	801.63	828.02	855.73



49. The petitioner has further submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also prayed that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission asset as per prevailing norms.

Interest on Working Capital (“IWC”)

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

“28. Interest on Working Capital

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

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

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

52. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is

13.50% (SBI Base Rate of 10% plus 350 basis points). The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)

Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses	62.57	64.65	66.80	69.00	71.31
Maintenance Spares	112.62	116.36	120.25	124.20	128.36
Receivables	305.28	307.58	309.74	313.46	318.33
Total	480.47	488.59	496.79	506.66	518.00
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	64.86	65.96	67.07	68.40	69.93

ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	11080.58	11138.98	11145.80	11145.80	11145.80
Additional Capitalisation	58.40	6.82	0.00	0.00	0.00
Closing Gross Block	11138.98	11145.80	11145.80	11145.80	11145.80
Average Gross Block	11109.78	11142.39	11145.80	11145.80	11145.80
Rate of Depreciation	1.65	1.67	1.67	1.67	1.67
Depreciable Value	9972.08	10027.42	10007.28	10004.21	10004.21
Balance Useful life of the asset	15	14	13	12	11
Elapsed Life	16	17	18	19	20
Remaining Depreciable Value	2757.93	2603.42	2420.53	2234.33	2048.14
Depreciation	183.86	185.96	186.19	186.19	186.19
Cumulative depreciation (incl. of AAD)	7213.87	7397.73	7583.69	7769.89	7956.08
Interest on Loan					
Gross Normative Loan	7030.19	7071.07	7075.84	7075.84	7075.84
Cumulative Repayment upto Previous Year	6597.71	6781.57	6967.53	7075.84	7075.84
Net Loan-Opening	432.48	289.49	108.31	0.00	0.00
Additions	40.88	4.77	0.00	0.00	0.00
Repayment during the year	183.86	185.96	108.31	0.00	0.00
Net Loan-Closing	289.49	108.31	0.00	0.00	0.00
Average Loan	360.98	198.90	54.15	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Weighted Average Rate of Interest on Loan	10.0000	10.0000	10.0000	0.0000	0.0000
Interest	36.10	19.89	5.42	0.00	0.00
Return on Equity					
Opening Equity	4050.39	4067.91	4069.96	4069.96	4069.96
Additions	17.52	2.05	0.00	0.00	0.00
Closing Equity	4067.91	4069.96	4069.96	4069.96	4069.96
Average Equity	4059.15	4068.94	4069.96	4069.96	4069.96
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610	19.610
Return on Equity	796.02	797.94	798.14	798.14	798.14
Interest on Working Capital					
O & M expenses	62.57	64.65	66.80	69.00	71.31
Maintenance Spares	112.62	116.36	120.25	124.20	128.36
Receivables	305.28	307.58	309.74	313.46	318.33
Total	480.47	488.59	496.79	506.66	518.00
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on working capital	64.86	65.96	67.07	68.40	69.93
Annual Transmission Charges					
Depreciation	183.86	185.96	186.19	186.19	186.19
Interest on Loan	36.10	19.89	5.42	0.00	0.00
Return on Equity	796.02	797.94	798.14	798.14	798.14
Interest on Working Capital	64.86	65.96	67.07	68.40	69.93
O & M Expenses	750.81	775.76	801.63	828.02	855.73
Total	1831.65	1845.50	1858.45	1880.75	1909.99

Deferred Tax Liability

54. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. The deferred tax liability shall be dealt as per Regulations 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same gets materialized directly from the beneficiaries or long term transmission customers /DICs.



Filing Fee and the Publication Expenses

55. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 52 (1) of the 2014 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

56. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 52 (2) (b) of the 2014 Tariff Regulations for 2014-19 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 52 (2) (a) of the 2014 Tariff Regulations for 2014-19 tariff period.

Service Tax

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

Sharing of Transmission Charges

58. 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.

59. This order disposes of Petition No.240/TT/2014.

sd/-

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

sd/-

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



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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
GOI loan @ 14.59% upto 12.9.2007 replaced with LIC-III @ 10% on 13.09.2007-DOCO - 01-APR-1997-	10.00	3310.00	0.00	3310.00
GOI loan @ 14.59% upto 12.9.2007 replaced with LIC-III @ 10% on 13.09.2007-COD - 01-JUL-1995-	10.00	1683.49	0.00	1683.49
Total		4993.49	0.00	4993.49

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	4993.49	4993.49	4993.49	4993.49	4993.49
Cumulative Repayments of Loans upto Previous Year	3165.87	3497.89	3829.91	4161.93	4493.95
Net Loans Opening	1827.62	1495.60	1163.58	831.56	499.54
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	332.02	332.02	332.02	332.02	332.02
Net Closing Loan	1495.60	1163.58	831.56	499.54	167.52
Average Net Loan	1661.61	1329.59	997.57	665.55	333.53
*Rate of Interest on Loan (%)	10.0000%	10.0000%	10.0000%	10.0000%	10.0000%
Interest on Loan	166.16	132.96	99.76	66.56	33.35

*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.

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
GOI loan @ 14.59% upto 12.9.2007 replaced with LIC-III @ 10% on 13.09.2007-DOCO - 01-APR-1997-	10.00	3310.00	0.00	3310.00
GOI loan @ 14.59% upto 12.9.2007 replaced with LIC-III @ 10% on 13.09.2007-D0c0 - 01-JUL-1995-	10.00	1683.49	0.00	1683.49
Total		4993.49	0.00	4993.49

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	4993.49	4993.49	4993.49	4993.49	4993.49
Cumulative Repayments of Loans upto Previous Year	4825.97	4945.69	4982.20	4993.48	4993.48
Net Loans Opening	167.52	47.80	11.28	0.00	0.00
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	119.72	36.51	11.28	0.00	0.00
Net Closing Loan	47.80	11.29	0.00	0.00	0.00
Average Net Loan	107.66	29.55	5.64	0.00	0.00
*Rate of Interest on Loan (%)	10.0000%	10.0000%	10.0000%	-	-
Interest on Loan	10.77	2.95	0.56	0.00	0.00

*Petitioner, in the tariff computation submitted with the petition, has considered rate of interest on loan upto two decimal points.

