

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 236/GT/2013

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri M. Deena Dayalan, Member
Shri A. K. Singhal, Member
Smt. Neerja Mathur, Member (EO)**

Date of Hearing : 04.3.2014

Date of Order : 02.7.2014

IN THE MATTER OF

Petition for revision of tariff for the period 1.4.2009 to 31.3.2014 based on actual capital expenditure incurred during the financial years 2009-10 to 2011-12 and projected capital expenditure during the financial years 2012-13 and 2013-14 in respect of Khandong Hydro Power Station (50 MW) of North Eastern Electric Power Corporation Limited (NEEPCO), Shillong.

AND IN THE MATTER OF

North Eastern Electric Power Corporation Ltd
Brookland Compound
Lower New Colony
Shillong-793 003

..... Petitioner

Vs

1. Assam Power Distribution Company Ltd.
"Bijulee Bhawan", Paltanbazar
Guwahati-781 001
2. Meghalaya Energy Corporation Ltd.
Meter Factory Area, Short Round Road
Integrated Office Complex
Shillong-793 001
3. Tripura State Electricity Corporation Ltd.
Bidyut Bhavan, North Banamalipur
Agartala-799 001

4. Power and Electricity Department
Govt. of Mizoram
P&E Office Complex, Electric Veng
Aizwal-796 001

5. Electricity Department
Govt. of Manipur, Keishampat
Imphal-795 001

6. Department of Power
Govt. of Arunachal Pradesh
Vidyut Bhawan
Itanagar-791 111

7. Department of Power
Govt. of Nagaland
Kohima-797 001

8. North Eastern Regional Power Committee
Meghalaya State Housing Finance Co-operative
Society Ltd. Building
Nongrim Hills
Shillong-793 003

9. North Eastern Regional Load Despatch Centre
Dongtieh, Lower Nongrah
Lapalang
Shillong-793 006

.....Respondents

Parties Present

Petitioner: Shri Rana Bose, NEEPCO
Shri Bhaskar Goswami, NEEPCO
Ms. Elizabeth Pyrbot, NEEPCO

Respondents: None

ORDER

The present petition has been filed for revision of annual fixed charges in respect of Khandong Hydroelectric Project (50 MW) ('the generating station') of the petitioner for the period 2009-14 based on actual additional capital expenditure incurred during the

years 2009-10, 2010-11, and 2011-12 and revised projected capital expenditure for the years 2012-13 and 2013-14 in terms of second proviso to clause (1) of Regulation 6 of the Central Electricity Regulatory Commission (Terms and conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations').

2. The generating station was commissioned in May 1984. The tariff of the generating station for the period 2009-14 was determined by the Commission vide order dated 30.9.2011 in Petition No.297/2009 based on capital cost of ₹12194 lakh as on 1.4.2009. The annual fixed charges approved by the Commission vide order dated 30.9.2011 is as follows:

	<i>(₹ In lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1073.25	1103.55	1252.17	1496.51	1624.48
Interest on Loan	0.00	1.30	100.11	263.72	265.69
Depreciation	517.13	576.68	902.14	1499.75	1867.03
Interest on Working Capital	79.49	84.04	98.78	122.70	136.19
O & M Expenses	926.39	979.38	1035.40	1094.62	1157.23
Total	2596.26	2744.95	3388.60	4477.31	5050.62

3. The annual fixed charges approved were based on the year-wise projected additional capital expenditure (including de-capitalization) for the period 2009-14 as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Projected additional capital expenditure	284.70	870.57	4797.75	4520.81	359.60

4. The petitioner, in this petition, has claimed the actual capital expenditure for the years 2009-10, 2010-11 and 2011-12 and the revised projected capital expenditure for the years 2012-13 and 2013-14 as under:

<i>(₹ in lakh)</i>					
	2009-10	2010-11	2011-12	2012-13	2013-14
	Actual			Projected	
Capital Expenditure claimed after accounting for de-capitalisation	40.53	168.93	238.98	37.55	1282.58

5. Accordingly, the petitioner has claimed the revised annual fixed charges for the generating station for the period 2009-14, after taking into account the above capital expenditure incurred/to be incurred. The petitioner by affidavit dated 9.10.2013 has confirmed that there was no additional capital expenditure and de-capitalization during the previous tariff periods 2001-04 and 2004-09 respectively and that there was no undischarged liabilities as on 31.3.2009.

6. The petitioner has capitalized various expenditures incurred during the years 2009-10, 2010-11 and 2011-12 in the books of the generating station and projected to capitalize the expenditure of capital nature proposed to be incurred during the years 2012-13 and 2013-14. The impact on the annual fixed charges due to capitalization is being claimed after excluding the amount incurred on minor items, expenditures of O&M nature and spares, which are not allowed for additional capitalization for the purpose of tariff as per provisions of the 2009 Tariff Regulations.

7. There are certain works which were necessarily required for efficient operation of the generating station. These works have been undertaken till 31.3.2012 or have been proposed to be undertaken during 2012-13 and 2013-14. The capital expenditure on this account and justification for carrying out these works has been included in the claim.

8. Certain expenditure of the nature of repairs and maintenance was allowed by the Commission vide its order dated 30.9.2011 as projected additional capital expenditure for the period 2009-14, while determining the tariff of the generating station, considering the water acidity problems specific to the generating station, causing damage to the underwater parts. The petitioner has already incurred a major part of the allowed expenditure during the period 2009-12 and has also projected expenditure during the years 2012-13 and 2013-14. However, considering the nature of such activities as well as to ensure compliance with the relevant accounting standards/policy, the expenditure has not been claimed as capital expenditure and has been excluded from the scope of the present petition for the purpose of revision of the annual fixed charges. The petitioner has stated that it proposes to approach the Commission for recovery of such expenditure said to be essential on account of the circumstances peculiar to the generating station and has already been approved by the Commission as projected additional capital expenditure separately as "one time re-imburement" after completion of tariff period 2009-14. At this stage we refrain from making any comments on the averments made by the petitioner. However, the same would be reviewed in line with the 2014 Tariff Regulations based on merits.

9. None of the respondents has filed reply to the petition.

10. Clause (1) of Regulation 6 of the 2009 Tariff Regulations empowers the Commission to carry out the exercise of truing up of the capital expenditure incurred during the tariff period and consequent revision of tariff during the next tariff period, that is, the tariff period 2014-19. Second proviso to clause (1) of Regulation 6 (1)

permits the generating company to file a petition for truing up of the capital expenditure incurred during the tariff period. Clause (1) of Regulation 6 (1) so far as relevant is reproduced here under:

“6. Truing up of Capital Expenditure and Tariff

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.

.....
Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff.”

11. Accordingly, the present petition is maintainable under second proviso to clause (1) of Regulation 6 of the 2009 tariff Regulations.

12. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides for capitalization of the expenditure incurred or projected to be incurred after the date of commercial operation but before the cut-off date, whereas clause (2) of Regulation 9 makes provision for capitalization of expenditure incurred or projected to be incurred after the cut-off date. Under clause (2), the capitalization of the expenditure incurred after the “cut-off date” is to be allowed on exercise of prudence check by the Central Commission. As defined under clause (11) of Regulation 3 of the 2009 tariff Regulations, “cut-off date” means the 31st March of the year closing after two years of the year of commercial operation of the project, and in case 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. Since in

case of this generating station, the cut-off date had expired before the start of the tariff period 2009-14 and hence the petitioner's claim for truing up of the capital expenditure is to be considered in accordance with clause (2) of Regulation 9 of the 2009 Tariff Regulations. Clause (2) of Regulation 9 is extracted hereunder:

"9. Additional Capitalization.-

(2) The capital expenditure incurred or projected to be 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:

(vi) In case of gas/ liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M

expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

(vii) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receipt system arising due to non-materialization of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station.

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

13. Before we proceed to examine the petitioner’s claim for capitalization of the expenditure claimed, it is pointed out that the petitioner has claimed de-capitalization of ₹23.12 lakh in the year 2011-12. However, as seen from the audited financial statements, the de-capitalization actually belongs to the year 2010-11. Accordingly, after reconciliation of the discrepancy, the actual capital expenditure claimed for capitalization for the years 2009-10, 2010-11 and 2011-12 stands modified as follows:

	(₹ in lakh)		
	2009-10	2010-11	2011-12
Additions in books	46.14	154.2	264.30
De-capitalization as per books	0.00	23.12	0.00
Additional capital expenditure as per books (net)	46.14	131.08	264.30
Additional capitalization claimed for the purpose of tariff			
Expenditure on security of the power station as well as to officials engaged in operation & maintenance- claimed under Regulation 9(2)(iv)	40.53	0.00	0.00
Replacement of existing damaged/ obsolete assets for smooth operation of the plant-claimed under the Regulation 9(2)(iv)	0.00	69.75	3.47
New assets installed for enhancing plant operational efficiency- claimed under the Regulation 9(2)(iv)	0.00	111.01	259.17

Sub-total- Additions claimed (a)	40.53	180.76	262.64
Deletions considered for the purpose of tariff			
De-capitalization of old assets against replacement by new assets	0.00	(-) 11.83	(-)0.54
De-capitalization of old assets without replacement	0.00	(-)23.12	0.00
Total deletions* (b)	0.00	(-) 34.95	(-)0.54
Net Additional capital expenditure claimed c= (a-b)	40.53	145.81	262.10
Exclusion (not claimed for the purpose of tariff)			
Not related to core activity	0.00	4.40	0.00
Minor assets	0.90	3.92	0.00
Assets of the nature of stocks and spares/ T&P	4.71	2.95	2.61
De-cap related to excluded additions	0.00	(-)0.66	0.00
Sub-total of exclusions (d)	5.61	10.61	2.61
Additional capital expenditure considered for the purpose of tariff (c)	40.53	145.81	262.10
Additional capital expenditure including exclusions (c +d)	46.14	156.42	264.71
Difference with books*		25.33*	0.41*

**Due to shifting of capitalization and de-capitalization pertaining to year 2012-13 during the years 2010-11 and 2011-12*

14. In response to the Commission's directions, the petitioner has explained the reasons for claiming certain expenditure during the years 2010-11 and 2011-12 whereas the same has been capitalized in books of accounts during the year 2012-13. The petitioner has submitted that the expenditure on replacement of assets (gate valves, non-return valve, pressure reducing valves, 70:30 Cu: Ni Tubes for generator air cooler and generator transformers) though of capital nature was wrongly booked under "Maintenance-Plant and machinery" during the years 2010-11 and 2011-12 and that the error has been rectified during 2012-13 and accounted for under proper head with retrospective effect. The Commission in its order dated 30.9.2011 in Petition No. 297/2009 had allowed additional capital expenditure on above assets along with de-capitalization of old assets, based on the recommendation of expert committee comprising CEA, CWC and CSMRS. As such, retrospective adjustment claimed by the petitioner is being considered for prudence check.

15. The petitioner was directed to furnish the reasons for wide variation between the projected capital expenditure allowed in the order dated 30.9.2011 in Petition No. 297/2009 and actual capital expenditure now claimed for the years 2009-10, 2010-11 and 2011-12. In response, the petitioner vide affidavit dated 10.10.2013 has furnished reasons as follows:

- (a) Placement of orders for the different items for the generating station took longer time than expected because several rounds of discussions were necessary at various levels as part of the pre-procurement formalities in view of the unique nature of activities which arose mainly out of the reservoir turning acidic in nature.
- (b) Poor communication for the remotely located generating station has adversely affected the delivery of materials on schedule.
- (c) The dearth of skilled manpower in the area both in the technical as well as non-technical areas is also a deterrent factor to completion of works on time.
- (d) Acidification of the reservoir water is a unique occurrence without precedence and therefore its impact on the hydraulic structures as well the underwater parts and the required re-medial measures requires extensive studies by experts. In view of the uniqueness of the problem no standard or proven methodology to approach the same is available for application. Hence, formulation of remedial measures has taken more time than could be envisaged earlier. The petitioner has engaged WAPCOS and National Metallurgical Laboratory (CSIR), Jamshedpur as consultants to study the phenomenon and suggest suitable measures in respect of the following areas:
 - (i) Reservoir water treatment;
 - (ii) Methodology for repairing under water parts; and
 - (iii) Detailed technical specifications for repairing / modification of hydraulic structures.

16. In the light of the above clarifications, the admissibility of the actual additional capital expenditure in terms of the 2009 Tariff Regulations for the years 2009-10, 2010-11 and 2011-12 under various heads is being discussed in the subsequent paragraphs.

17. The details of works/assets, actual expenditure incurred against these works along with admissibility of the actual expenditure in terms of the 2009 Tariff Regulations is as follows:

2009-10

Sl. No.	Assets/works	Actual expenditure incurred/ claimed (₹ in lakh)	Remarks on admissibility
1	Construction of permanent residential building for stationing O&M and security personnel	24.84	Buildings were constructed for stationing O&M staff and security personnel inside PH premises for longer duration to avoid risk of movement due to law & order situation. The expenditure has been allowed under sub-clause (iv) of clause (2) of Regulation 9 for security of O&M staff and security personnel.
2	Construction of permanent non-residential building for stationing O&M and security personnel	13.59	
3	Electrification of field hostel required for operation team	2.10	The expenditure has been allowed under sub-clause (iv) of clause (2) of Regulation 9 for security of O&M staff and security personnel located at a remote location.
	Total claimed	40.53	
	Total allowed		40.53

2010-11

Sl. No.	Assets/works	Actual exp. incurred/ claimed (₹ In lakh)	Remarks on admissibility
1	Trial for Acid protecting treatment at dam	9.48	Acid protecting treatment carried out at the dam based on recommendations of experts in a National Seminar on 'Acidity of Reservoir water - a challenge to Kopili Plant. Commission has allowed an amount of ₹20.00 lakh for implementation of recommendations during the year 2012-13. However, the petitioner has carried out trial test in 2010-11. The expenditure is allowed under Regulation 9(2) (iv), for already approved works.
2	Procurement of breakers (3 nos.)	10.26	MOCBs installed in the year 1988 got damaged and were replaced for maintaining plant efficiency. The expenditure is allowed under Regulation 9(2) (iv).
3	Procurement of tubes for Generator air coolers, USB tubes	21.67	Due to acidic nature of reservoir water, Cu: Ni tubes got damaged and were replaced to maintain plant efficiency. Expenditure is allowed under Regulation 9(2) (iv) for already approved works.
4.	Replacement of Gate valves, non-return valve, Pressure reducer valve	17.72	Replacements of valves were made on account of their frequent failures due to acidic nature of water. The expenditure is allowed under Regulation 9(2) (iv) for already approved works.
5	Procurement of 70:30 CU:Ni tubes for Generator air cooler, UGB cooler	17.33	Replacement made on account of failures of Generator air cooler tubes due to acidic nature of water. The expenditure is allowed under Regulation 9(2) (iv) for already approved works.
6	Purchase of Bullet proof vehicles (one bus & one Car)	101.53	Purchase of Bullet proof vehicles was made as per direction of state administration for movement of NEEPCO personnel & escorting police due to prevailing law & order situation. The expenditure is allowed under Regulation 9(2)(iv) due to security reasons.

7	Procurement of Cooler tubes for Generator Transformer	2.77	Due to acidic nature of reservoir water, Cu:Ni tubes got damaged frequently and were replaced for maintaining plant operative. The expenditure is allowed under Regulation 9(2)(iv) for already approved works.
	Total claimed	180.76	
	Total allowed		180.76

2011-12

Sl. No.	Assets/works	Actual exp. incurred/ claimed (₹ in lakh)	Remarks on admissibility
1	Procurement of new stator assembly	259.77	Stator core of unit # 1 got damaged and replaced by new stator as advised by OEM, BHEL, for efficient operation of plant. Commission has allowed an amount of ₹604.55 lakh during 2010-11. The expenditure is allowed under Regulation 9(2)(iv) for already approved works.
2	Procurement of cooler tubes for Generator Transformer	2.52	Due to acidic nature of reservoir water, 90:10 Cu:Ni tubes got damaged frequently and were replaced for maintaining plant operative. The expenditure is allowed under Regulation 9(2) (iv) for already approved works.
3	Construction of security wall at Khandong dam	0.35	Construction of wall is required for protection of Khandong dam as security measures. The expenditure is allowed under Regulation 9(2)(iv) for security reasons.
	Total claimed	262.64	
	Total allowed		262.64

18. Accordingly, the following actual additional capital expenditure on account of addition of assets has been allowed during the period 2009-12:

	(₹ In lakh)		
	2009-10	2010-11	2011-12
Additional Capital Expenditure claimed	40.53	180.76	262.64
Additional Capital Expenditure allowed	40.53	180.76	262.64

Deletions

19. The deletions for the different years to be considered for the purpose of tariff are as follows:

	(₹ In lakh)		
	2009-10	2010-11	2011-12
De-capitalization claimed	0.00	(-) 34.95	(-) 0.54

20. It has been observed that de-capitalization amount of ₹34.95 lakh for the year 2010-11 includes de-capitalization amount of ₹23.12 lakh which is an excess provision written back on settlement of the contractor's final dues. The petitioner was directed to provide the year of capitalization of this excessive provision. The petitioner vide its affidavit dated 9.10.2013 has submitted that the excess provision amounting to ₹23.12 lakh was capitalized during March, 1991. Accordingly, the deduction of the same from the opening capital cost of ₹12194.00 lakh as on 1.4.2009 has been allowed in order to arrive at the revised opening capital cost for the purpose of tariff after reducing the un-discharged liabilities which existed on 31.3.2009, as per the 2009 Tariff Regulations. As such, the opening capital cost as on 1.4.2009 is revised to ₹12170.88 lakh. The remaining de-capitalization against replacement of assets has been allowed for the purpose of tariff during the period 2009-12 as the corresponding assets do not render any useful service in the operation of the generating station.

21. The petitioner has not submitted the de-capitalization value of old Stator core of Unit-I against the capitalization of ₹259.77 lakh allowed during the year 2011-12. In order dated 30.9.2011, an amount of ₹120.75 lakh as gross value of the old stator assembly of Unit-I was deducted against the projected capitalization of ₹604.55 lakh. Presently though the expenditure has reduced from ₹604.55 lakh (projected) to ₹259.77 lakh (actual), the gross value of the old asset as provided in the petition i.e. ₹120.75 lakh is required to be deducted for the purpose of tariff. Accordingly, the following deletions have been considered for the purpose of tariff for the period 2009-12:

	(₹ In lakh)		
	2009-10	2010-11	2011-12
De-capitalization allowed	0.00	(-) 11.83	(-) 0.54
Assumed de-capitalisation for stator assembly of Unit-I	0.00	0.00	(-)120.75
Total deletions	0.00	(-)11.83	(-)121.29

Exclusions in additions and deletions (incurred, capitalized in books but not to be claimed for tariff purpose)

22. The petitioner has prayed that following positive entries affected in books of accounts on account of replacement of minor assets, purchase of capital spares, purchase of miscellaneous assets may be excluded/ignored for the purpose of tariff:

	(₹ In lakh)		
	2009-10	2010-11	2011-12
Not related to core activity	0.00	4.40	0.00
Minor assets	0.90	3.92	0.00
Assets of the nature of stocks and spares/ T&P	4.71	2.95	2.61
De-cap related to excluded additions	0.00	(-)0.66	0.00
Sub-total of exclusions (d)	5.61	10.61	2.61

23. The expenditure not related to core activity and the expenditure incurred on procurement/replacement of minor assets is not allowable for the purpose of tariff after

the cut-off date, as per the 2009 tariff Regulations. Accordingly, the petitioner itself has put these additions under exclusions category i.e. positive entries are to be ignored for the purpose of tariff. As such, the above exclusions of the positive entries are allowed for the purpose of tariff. Further negative entry of ₹0.66 lakh pertaining to de-capitalization of assets in lieu of excluded additions i.e. additions not claimed/considered for the purpose of tariff, are also allowed to be ignored/excluded for the purpose of tariff.

Actual Additional capital expenditure allowed

24. In view of above deliberations, following actual additional capital expenditure for period 2009-12 is allowed for the purpose of tariff:

	(₹ In lakh)		
	2009-10	2010-11	2011-12
Additions allowed (a) Additions against works approved/ additions not projected earlier but incurred and claimed under Regulation 9(2)(iv)	40.53	180.76	262.64
Deletions allowed (b)	0.00	(-)11.83	(-)121.29
Net Add cap allowed for tariff purpose (c)= (a)+(b)	40.53	168.93	141.35

Projected Additional Capital Expenditure for 2012-13 and 2013-14

25. The petitioner has revised the projected additional capital expenditure for the years 2012-13 and 2013-14 from ₹4520.81 lakh and ₹359.60 lakh respectively allowed vide order dated 30.9.2011 in Petition No. 297/2009 to ₹37.55 lakh and ₹1282.58 lakh respectively. The overall projected expenditure now claimed is less than the expenditure allowed earlier. This has been allowed presently, subject to truing up in accordance with clause (1) of Regulation 6 of the 2009 Tariff Regulations.

Additional Capital Expenditure Allowed

26. Accordingly, the additional capital expenditure allowed for the purpose of is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
	Actual	Actual	Actual	Projected	Projected
Additional Capital Expenditure allowed	40.53	168.93	141.35	37.55	1282.58

Capital Cost

27. As stated, the petitioner vide its affidavit dated 9.10.2013 has submitted that the excess provision amounting to ₹23.12 lakh was capitalized during March, 1991. The same has been deducted from the opening capital cost to arrive at the opening capital cost of ₹12170.88 lakh for the purpose of tariff. Based on this, the year-wise capital cost considered for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost as on 1 st April of the financial year	12170.88	12211.41	12380.34	12521.69	12559.24
Additional Capital Expenditure allowed	40.53	168.93	141.35	37.55	1282.58
Capital cost as on 31 st March of the financial year	12211.41	12380.34	12521.69	12559.24	13841.82

Return on Equity

28. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 12.”

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this Regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(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 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 financial year during the tariff period shall be trued up in accordance with Regulation 6 of these Regulations".

29. As already noted, an adjustment of ₹23.12 lakh has been made in the opening capital cost as on 1.4.2009. Since the normative loan had already been repaid, the deduction in capital cost amounting to ₹23.12 lakh has been made against the opening equity as on 1.4.2009.

30. The petitioner has claimed Return on Equity (RoE) at the rate of 15.5% in accordance with clause (2) of Regulation 15 *ibid* which has been allowed. The detailed calculations in support of RoE allowed are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	6073.88	6086.04	6136.72	6179.12	6190.39
Addition due to Additional Capitalisation	12.16	50.68	42.41	11.27	384.77
Closing Equity	6086.04	6136.72	6179.12	6190.39	6575.16
Average Equity	6079.96	6111.38	6157.92	6184.76	6382.78
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year (MAT)	16.995%	19.931%	20.008%	20.008%	20.961%
Rate of Return on Equity (Pre Tax)	18.674%	19.358%	19.377%	19.689%	20.876%
Return on Equity (Pre Tax)	1135.37	1183.04	1193.22	1217.72	1332.47

31. Regulation 16 of the 2009 Tariff Regulations provides as under:-

*“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in Regulation 12 shall be considered as gross normative loan for calculation of interest on loan.*

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

32. The normative loan in case of the generating station has already been repaid. The normative loan on account of admitted additional capital expenditure during the period 2009-13 has also been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. However, for the year 2013-14, the admitted depreciation is less than the amount of normative loan. Since the actual loan has been repaid up to the year 2010-11, last available weighted average rate (7.94%) has been applied for the purpose of calculation of Interest on loan as per First Proviso to clause (5) of Regulation 16. As such interest on loan has been calculated as follows:

	(₹ In lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	6097.00	6125.37	6243.62	6342.57	6368.85
Cumulative Repayment up to Previous Year	6097.00	6125.37	6243.62	6342.57	6368.85
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Repayment during the year	28.37	118.25	98.95	26.29	652.86
Addition due to Additional Capitalization(2009-14)	28.37	118.25	98.95	26.29	897.81
Net Loan-Closing	0.00	0.00	0.00	0.00	244.95
Average Loan	0.00	0.00	0.00	0.00	122.47
Weighted Average Rate of Interest on Loan	7.94%	7.94%	7.94%	7.94%	7.94%
Interest	0.00	0.00	0.00	0.00	9.72

Depreciation

33. Regulation 17 of the 2009 Tariff Regulations provides as under:-

*“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(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.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

34. The generating station declared under commercial operation on 4.5.1984 and has completed 12 years of operation on 4.5.1996. Accordingly, the remaining depreciable value has been spread over the balance useful life of the generating station. The petitioner, vide its affidavit dated 21.3.2014 has submitted that the accumulated depreciation on excess provision amounting to ₹23.12 lakh was ₹8.83 lakh. The amount of ₹8.83 lakh has been adjusted against the cumulative depreciation of the year of de-capitalization as on 1.4.2009. Assets amount of ₹11.83 lakh, ₹121.29 lakh, and ₹6.22 lakh have been de-capitalized during 2010-11, 2011-12, and 2012-13 respectively. There is no de-capitalization during 2009-10 and 2013-14. As per the prevailing practice, the amount of cumulative depreciation allowed in tariff against those de-capitalized assets has been calculated on *pro rata* basis. The same has been adjusted against the cumulative depreciation of the year of de-capitalization. Accordingly, the depreciation has been computed as follows:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block as on 31.3.2009	12170.88	12211.41	12380.34	12521.69	12559.24
Additional capital expenditure during 2009-14	40.53	168.93	141.35	37.55	1282.58
Closing gross block	12211.41	12380.34	12521.69	12559.24	13841.82
Average gross block	12191.15	12295.88	12451.02	12540.47	13200.53
Land related Cost	176.00	176.00	176.00	176.00	176.00
Depreciable Value	10813.63	10907.89	11047.51	11128.02	11722.08
Balance Useful life of the asset	10.1	9.1	8.1	7.1	6.1
Remaining Depreciable Value	5096.81	4686.02	4316.70	3933.81	3977.00
Depreciation	505.05	515.42	533.47	554.71	652.86

O&M Expenses

35. The following O & M Expenses as allowed in the order dated 30.9.2011 in Petition No. 297/2009 is considered:

	<i>(₹ In lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M Expenses	926.39	979.38	1035.40	1094.62	1157.23

Interest on Working Capital

36. The petitioner is entitled to claim interest on working capital as per the 2009 tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder.

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 tariff Regulations, receivables as a component of working capital will be equivalent to two months' of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual fixed charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' annual fixed charges.

(ii) Maintenance spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of interest on working capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate as on 1st April 2009 or on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.6.2010. The State Bank of India Base Rate was 12.25% as on 1.4.2009. The interest on working capital for the assets covered in the petition has been worked out accordingly.

39. Necessary computations in support of interest on working capital are appended below:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	138.96	146.91	155.31	164.19	173.58
O & M expenses	77.20	81.62	86.28	91.22	96.44
Receivables	441.22	460.37	474.98	493.13	541.95
Total	657.38	688.90	716.57	748.54	811.97
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on Working Capital	80.53	84.39	87.78	91.70	99.47

Annual Fixed Charges

40. The revised annual fixed charges allowed for 2009-14 are summarized hereunder:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1135.37	1183.04	1193.22	1217.72	1332.47
Interest on Loan	0.00	0.00	0.00	0.00	9.72
Depreciation	505.05	515.42	533.47	554.71	652.86
Interest on Working Capital	80.53	84.39	87.78	91.70	99.47
O & M Expenses	926.39	979.38	1035.40	1094.62	1157.23
Total	2647.34	2762.23	2849.88	2958.74	3251.75

41. In all other aspects, the order dated 30.9.2011 shall continue to apply. The annual fixed charges allowed as above are subject to truing-up as per Regulation 6 (1) of the 2009 Tariff Regulations.

42. The difference in the annual fixed charges determined by order dated 30.9.2011 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

43. Petition No 236/GT/2013 stands disposed of.

Sd/-
(Neerja Mathur)
Member (EO)

Sd/-
(A. K. Singhal)
Member

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson