

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 331/GT/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson
Shri A.K.Singhal, Member
Dr. M.K.Iyer, Member

Date Hearing: 03.03.2016

Date of Order: 25.05.2016

In the matter of

Revision of tariff of Anta Gas Power Station (419.33 MW) for the period from 1.4.2009 to 31.3.2014-Truing up of tariff determined by Commission's Order dated 15.5.2014 in Petition No.139/GT/2013

And

In the matter of

NTPC Ltd
NTPC Bhawan,
Core-7, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

...**Petitioner**

Vs

1. Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashok Marg, Lucknow –
226001

2. Jaipur Vidyut Vitaran Nigam Ltd.,
Vidyut Bhawan, Janpath,
Jaipur – 302005

3. Jodhpur Vidyut Vitaran Nigam Ltd.
New Power House, Industrial Area,
Jodhpur-342003

4. Ajmer Vidyut Vitaran Nigam Ltd
Old Power House,
Hatthi Bhatta, Jaipur Road,
Ajmer-305001(Rajasthan)

5. Tata Power Delhi Distribution Limited
33 kV Sub Station Building,
Hudson Lane, Kingsway Camp
New Delhi

6. BSES Rajdhani Power Ltd.
BSES Bhawan, Nehru Place,
New Delhi – 110019



7. BSES Yamuna Power Ltd.,
Shakti Kiran Building,
Karkardooma Delhi

8. Haryana Power Purchase
Centre, Shakti Bhawan, Sector, 6
Panchkula – 134109

9. Punjab State Power Corporation
Limited The Mall, Secretariat Complex,
Patiala – 147001

10. Himachal Pradesh State Electricity
Board, Vidyut Bhawan, Kumar House,
Shimla-171004

11. Power Development Department,
New secretariat,
Jammu-180001 (J&K)

12. Power Department, Union Territory of
Chandigarh Addl. Office Building, Sector –9 D,
Chandigarh

13. Uttarakhand Power Corporation Ltd,
Urja Bhawan, Kanwali Road,
Dehradun-248001(Uttarakhand)

.....Respondents

Parties present:

For Petitioner:

Shri Ajay Dua, NTPC
Shri Nishant Gupta, NTPC
Shri Ajay Mehta, NTPC
Shri Shakar Saran, NTPC
Shri Neeraj Kumar, NTPC
Shri S.P Kesarwani, NTPC

For Respondents:

Shri Gurav Gupta, Advocate, PSPCL
Shri R.B Sharma, Advocate, BRPL
Shri Sanjay Srivastav, BRPL
Shri Manish Garg, UPPCL

ORDER

This petition has been filed by the petitioner, NTPC for revision of tariff of Anta Gas Power Station, (419.33 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014 based on truing up exercise in terms of Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. The generating station with a capacity of 419.33 MW comprises of three Gas Turbine



units of 88.71 MW each and one Steam Turbine unit of 153.20 MW. The dates of commercial operation of different units of the generating station are as under:

	Date of Commercial operation (COD)
Unit-I (GT)	1.4.1989
Unit-II (GT)	1.5.1989
Unit-III (GT)	1.7.1989
Unit-IV (ST) / Generating station	1.8.1990

3. The Commission vide order dated 20.4.2012 in Petition No. 239/2009 had determined the tariff of the generating station for the period from 1.4.2009 to 31.3.2014 considering the capital cost of ₹70579.79 lakh (after removing un-discharged liabilities amounting to ₹1078.14 lakh as on 1.4.2009). Subsequently, the annual fixed charges determined by order dated 20.4.2012 were revised by Commission's order dated 2.4.2013 in Review Petition No.24/2011. Thereafter, the petitioner filed Petition No.139/GT/2013 for revision of the annual fixed charges based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11 and 2011-12 and the projected additional capital expenditure for the years 2012-13 and 2013-14. The Commission vide order dated 15.5.2014 in Petition No. 139/GT/2013 revised the tariff of the generating station. In the review petition 20/RP/2014 filed in respect of order dated 15.5.2014, the Commission vide its order dated 25.09.2014 had directed that the error in the computation of cumulative depreciation and liability adjustment for the year 2011-12 shall be considered at the time of truing-up of tariff of the generating station for the period 2009-14 in terms of Regulation 6(1) of the 2009 Tariff Regulations. The annual fixed charges approved for the generating station by order dated 15.5.2014 is as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2119.42	2662.18	2743.38	2771.16	2813.20
Interest on Loan	513.43	419.55	453.29	413.03	365.81
Return on Equity	7464.96	7713.13	7638.47	7655.55	7679.06
Interest on Working Capital	2437.94	2476.98	2508.42	2530.98	2560.21
O&M Expenses	6206.08	6562.51	6935.72	7334.08	7753.41
Total	18741.83	19834.35	20279.28	20704.81	21171.69



4. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

"6. Truing up of Capital Expenditure and Tariff

(1) 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."

5. The petitioner has sought the revision of the annual fixed charges based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11 and 2011-12 and projected additional capital expenditure for the years 2012-13 and 2013-14 in accordance with clause (1) of Regulation 6 of the 2009 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 vide affidavit dated 8.8.2014 are as under:

Capital Cost

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	70579.79	79815.97	80193.17	80225.91	80458.33
Add: Additional capital expenditure	9236.18	377.20	32.74	232.42	140.70
Closing Capital Cost	79815.97	80193.17	80225.91	80458.33	80599.03
Average Capital Cost	75197.88	80004.57	80209.54	80342.12	80528.68

Annual Fixed Charges

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2119.42	2662.61	2744.29	2759.45	2772.56
Interest on Loan	513.43	419.61	453.34	337.54	218.86
Return on Equity	7464.96	7713.50	7639.20	7648.33	7840.48
Interest on Working Capital	2437.94	2477.00	2508.46	2529.02	2559.66
O&M Expenses	6206.08	6562.51	6935.72	7334.08	7753.41
Total	18741.84	19835.24	20281.00	20608.41	21144.97

6. The petitioner has filed additional information with copy to the respondent. Accordingly, the petition was heard on 3.3.2016 and the Commission reserved its orders. The respondents, UPPCL and BRPL have filed replies in the matter and the petitioner has filed its rejoinders to the same. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions and the documents available on record, as



stated in the subsequent paragraphs.

CAPITAL COST

7. The last proviso to Regulation 7 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides as under:

“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 annual fixed charges claimed by the petitioner is based on the opening capital cost of ₹70579.79 lakh, as on 1.4.2009 as determined by the Commission in order dated 20.4.2012 in Petition No.239/2009.

9. Accordingly, in terms of the proviso to Regulation 7 of the 2009 Tariff Regulations, the capital cost as on 1.4.2009, after removal of un-discharged liabilities amounting to ₹1078.14 lakh, works out to ₹70579.79 lakh, on cash basis. Further, out of un-discharged liabilities amounting to ₹1078.14 lakh deducted as on 1.4.2009, the petitioner has discharged by way of payment liability of ₹572.40 lakh, ₹400.77 lakh, ₹29.95 lakh, ₹134.95 lakh and ₹1.62 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 and has also reversed liability amounting to ₹10.64 lakh, ₹5.58 lakh and ₹1.24 lakh in 2011-12, 2012-13 and 2013-14 respectively. The discharges of liabilities along with discharges corresponding to the assets admitted on cash basis for the period 2009-14 has been allowed under additional capital expenditure during the respective year.

Additional Capital Expenditure

10. Regulation 9 (2) of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012 provides as under:

“9. (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:*

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009.

(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.*

(vii) *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.*

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

(ix) *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.*

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

11. The break-up details of the actual/ projected additional capital expenditure allowed by the Commission in order dated 15.5.2014 in Petition No. 139/GT/2013 for the period 2009-14 is as under:



(₹ in lakh)

S. No.		2009-10	2010-11	2011-12	2012-13	2013-14
		Actual	Actual	Actual	Projected	Projected
1	Renovation of Gas Turbines	8232.79	222.34	0.00	0.00	0.00
2	Up-gradation of GT & ST (C&I) System Rotor of GT 3	70.27	(-)423.23	24.31	144.35	0.00
3	Rotor of GT 3	4.27	0.01	0.00	0.00	0.00
4	Fire Protection & Detection System	30.4	0.59	0.00	0.00	0.00
5	Augmentation of Raw Water Capacity Reservoir	364.4	0.00	1.47	90	0.00
6	Replacement of Hot Water Pipe Line of Cooling Tower	0.00	120.43	0.00	0.00	0.00
7	Increase in Stack Height of WHRB	0.00	117.07	0.00	0.00	0.00
8	Phasing out of Halon Fire Fighting System	0.00	0.00	0.00	146.78	0.00
9	Installation of On Line Gas measurement	0.00	0.00	0.00	82.47	41.23
10	Replacement of U/G Fire Fighting Pipelines	0.00	0.00	0.00	0.00	178.21
11	Total (1)	8702.13	37.21	25.78	463.60	219.44
2. New Claims						
12	Lift at CCR Bldg	(-)6.06	0.00	0.00	0.00	0.00
13	GT Inlet Air Cooling System	0.00	0.00	0.00	0.00	0.00
14	Energy Management System	0.00	0.00	0.00	0.00	0.00
15	Portable Effluent Analyzer	0.00	0.00	0.00	0.00	0.00
16	Portable Flue Gas Analyzer	0.00	0.00	0.00	0.00	0.00
17	Construction of Two Additional Rooms at KV	0.00	0.00	0.00	0.00	0.00
18	Ultra Sonic Leak & Corana Detector UP9000KT	0.00	0.00	0.00	0.00	0.00
19	Oxygen Concentrator for health Centre	0.00	0.00	0.00	0.00	0.00
20	Binocular Microscope for health Centre	0.00	0.00	0.00	0.00	0.00
21	Automated External Defibrillator	0.00	0.00	0.00	0.00	0.00
22	Total (2)	(-)6.06	0.00	0.00	0.00	0.00
3. Reclaim of disallowed assets						
23	Welfare Centre Building	0.00	0.00	0.00	0.00	0.00
24	Online compressor Cleaning R&M GT-1	0.00	0.00	0.00	0.00	0.00
25	Installation of Additional CT Pump	0.00	0.00	0.00	0.00	0.00
26	Total (3)	0.00	0.00	0.00	0.00	0.00
27	Total Additional Capitalization claimed (1+2+3)	8595.07	37.21	25.78	463.60	219.44
28	Exclusions not Allowed	(-)32.29	(-)60.78	(-)22.99	0.00	0.00
Net Additional Capitalization Allowed (25+26)		8663.78	(-)23.57	2.79	463.60	219.44



12. The details of the actual additional capital expenditure claimed for the period 2009-14

is as under:

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	Regulation
Assets already allowed by the Commission						
Renovation of Gas Turbines	10079.37	378.19	0.00	0.00	0.00	9(2)(vi)
Decapitalisation of Sl. No.1	1846.58	155.85	0.00	0.00	0.00	
Upgradation of GT & ST Control System (C&I)	385.70	298.98	24.31	7.20	0.00	9(2)(vi)
Decapitalisation of Sl. No.3	315.43	722.21	0.00	0.00	0.06	
Rotor of GT-3	4.27	0.01	0.00	0.00	0.00	9(2)(vi)
Fire Protection & Detection System for cable galleries	30.40	0.59	0.00	0.00	0.00	9(2)(vi)
Augmentation of Raw Water Reservoir Capacity	364.40	0.00	1.47	21.91	0.00	9(2)(vi)
Replacement of Hot Water Pipelines	0.00	146.86	0.00	0.00	0.00	9(2)(vi)
Decapitalisation of Sl. No.8	0.00	26.43	0.00	0.00	0.00	
Increase in stack height of WHRB	0.00	117.07	0.00	0.00	0.00	9(2)(vi)
Phasing out of Halon Fire Fighting System	0.00	0.00	0.00	0.00	0.00	9(2)(vi)
Installation of On Line Gas Measurement	0.00	0.00	0.00	0.00	114.21	9(2)(vi)
Replacement of U/G Fire Fighting Pipelines	0.00	0.00	0.00	0.00	0.00	9(2)(vi)
Lift at CCR building	11.74	0.00	0.00	0.00	0.00	9(2)(vi)
Decapitalisation of Sl. no.11	17.80	0.00	0.00	0.00	0.00	
New claimed						
Fire Protection & Detection System for Administrative Building	0.00	0.00	0.00	8.91	0.00	9(2)(vi)
Multi Channel Vibration Analyser	0.00	0.00	0.00	14.45	0.00	9(2)(vi)
PH Analyser Chemical/Liquid Analysis system	0.00	0.00	0.00	2.24	0.00	9(2)(vi)
LED based Solar Street Lighting System at Reservoir	0.00	0.00	0.00	39.21	0.00	9(2)(vi)
Infrared Thermal Image Camera	0.00	0.00	0.00	4.87	0.00	9(2)(vi)
Software SAP ERP OSI PI historian (Decapitalisation)	0.00	0.00	0.00	1.32	0.00	
Installation of energy efficient LED Lights	0.00	0.00	0.00	0.00	11.06	9(2)(vi)



80 MT Fully Electronics Weigh Bridge	0.00	0.00	0.00	0.00	13.87	9(2)(vi)
Total Additional capitalisation	10875.88	941.70	25.78	98.79	139.14	
Total Notional Decapitalization allowed	2179.81	904.49	0.00	1.32	0.06	
Exclusion not allowed	(-)32.29	(-)60.78	(-)22.99	0.00	0.00	
Decapitalization	2212.10	965.27	22.99	1.32	0.06	
Total additional capital expenditure claimed	8663.78	(-)23.57	2.79	97.47	139.08	

13. The Commission vide order dated 15.5.2014 in Petition No. 139/GT/2013 has tried-up the actual additional capital expenditure for the period 2009-12. Accordingly, the actual additional capital expenditure claimed in the petition against the projected additional capital expenditure as allowed vide order dated 15.5.2014 for the period 2012-13 & 2013-14 have been considered and discussed in the subsequent paragraphs.

Up-gradation of GT & ST control system (C&I)

14. As against the projected additional capital expenditure of ₹144.35 lakh allowed vide order dated 15.5.2014 in Petition No. 139/GT/2013 in 2012-13 towards Up-gradation of GT & ST Control System, the petitioner has claimed ₹7.20 lakh on cash basis (claim on accrual basis being ₹9.41 lakh implying un-discharged liability of ₹2.22 lakh). It is observed that there is reduction of ₹137.15 lakh in the claim made by the petitioner. The petitioner vide affidavit dated 6.1.2016 has submitted that liability amounting to ₹138.21 lakh towards these works is recognized during the earlier years and have been discharged in the year 2012-13 and 2013-14. Thus, the increase in actual capital expenditure is of ₹1.06 lakh which is minor in nature and is accepted since, the earlier claim was on projected basis. In view of the justification furnished by the petitioner, the actual additional capital expenditure of ₹7.20 lakh on cash basis and discharge of earlier recognized liabilities amounting to ₹138.21 lakh for the years 2012-13 and 2013-14 is allowed. Moreover, the petitioner has de-capitalized ₹0.06 lakh in 2013-14 which is allowed on this count.



Augmentation of Raw Water Reservoir capacity

15. As against the projected additional capital expenditure of ₹90.00 lakh allowed vide order dated 15.5.2014 in Petition No. 139/GT/2013, the petitioner has capitalized an amount of ₹21.91 lakh on cash basis (claim on accrual basis being ₹31.22 lakh implying un-discharged liability of ₹9.31 lakh) towards augmentation of raw water reservoir capacity in 2012-13. It is observed that there is reduction of ₹68.09 lakh in the claim made by the petitioner. The petitioner vide affidavit dated 6.1.2016 has submitted that the work was awarded in 2008 and major work on the said package was completed in 2009-10. However, the contractor abandoned balance work in 2009-10 and the contract was terminated. The matter is under arbitration and thus the balance work awarded to various parties will be completed / capitalized in 2014-19. The work on which expenditure is claimed has already been approved by the Commission for capitalization. Thus, the actual additional capital expenditure on this count for the year 2012-13 amounting to ₹ 21.91 lakh is allowed.

Phasing out of Halon Fire Fighting System

16. As against the projected additional capital expenditure of ₹146.78 lakh allowed in 2012-13 towards phasing out of Halon Fire Fighting System under Regulation 9(2)(ii) of the 2009 Tariff Regulations, the petitioner has not claimed any actual additional capital expenditure for the period 2009-14. In justification of the same, the petitioner has submitted that the work was projected to be completed in 2012-13, however the work got delayed as erection of the system requires the unit to be shut down. Further the cable laying for the system is to be done in such a manner so that the running equipment's are not affected which has also resulted in delay for completion of work and was due to be completed and capitalised in 2014-15. We have considered the submission of the petitioner. The revision of tariff incurred is based on the true-up exercise till 31.3.2014 and no expenditure is considered for this scheme for the period 2009-14. Moreover, the actual capitalisation of this scheme after completion of the work will occur only during the period 2014-19, the same shall be considered in terms of the provisions of the 2014 Tariff Regulations.



Installation of on-line gas measurement

17. As against the projected additional capital expenditure of ₹82.47 lakh in 2012-13 and ₹41.23 lakh in 2013-14 allowed towards this scheme under Regulation 9(2)(vi) of the 2009 Tariff Regulations, the petitioner has capitalised ₹114.21 lakh on cash basis (claim on accrual basis being ₹116.37 lakh implying un-discharged liability of ₹2.17 lakh) in 2013-14. It is observed that the claimed expenditure is less than the amount allowed in the previous order, therefore, the actual capital expenditure of ₹114.21 lakh claimed in 2013-14 is allowed.

Replacement of underground Fire Fighting System

18. As against the additional capital expenditure of ₹178.21 lakh in 2013-14 allowed on projection basis towards this scheme, the petitioner has not claimed any actual additional capital expenditure for the period 2009-14. In justification of the same, the petitioner has submitted that earlier the work was projected to be completed in 2013-14. However due to non- mobilization of manpower/work the contract was terminated and fresh contract has been awarded in 2013. Accordingly the said scheme will be completed and capitalised during 2014-19. The submission of the petitioner has been considered. Since, the revision of tariff is based on truing-up exercise till 31.3.2014, no expenditure is considered for this scheme for the period 2009-14. However, the actual capitalisation of this scheme after completion of the work will occur only during the tariff period 2014-19, the same will be considered in terms of the provisions of the 2014 Tariff Regulations.

Capitalization against New claims

19. The petitioner has claimed the actual additional capital expenditure of ₹69.68 lakh (₹8.91 lakh towards Fire protection & Detection system, ₹14.45 lakh towards Multi-Channel Vibration Analyser, ₹39.21 lakh towards LED based solar Street lighting system, ₹2.24 lakh towards PH Analyser, ₹4.87 lakh infrared thermal image camera etc.) in 2012-13 and ₹11.06 lakh towards installation of energy efficient LED lights and ₹13.87 lakh towards 80MT fully electronic weigh bridge in 2013-14 under the Regulation 9(2)(vi) of the 2009 Tariff



Regulations. The Commission has considered the justification furnished by the petitioner for its claim on the above items/assets.

20. Regulation 9(2) (vi) of the Tariff Regulations, 2014 provides as under:

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

21. It is observed from above that actual capital expenditure claimed for new items has not been due to obsolescence or non-availability of spares necessary for successful and efficient operation of the generating station. Hence, the actual capitalization of ₹69.68 lakh claimed towards new items/assets does not fall under the scope of Regulation 9(2)(vi) of the 2009 Tariff Regulations and thus, are not allowed. Similarly, the actual capital expenditure of ₹11.06 lakh in 2013-14 towards installation of energy efficient LED lights also do not fall under the scope of Regulation 9(2)(vi) of the 2009 Tariff Regulations. Also, the actual capital expenditure of ₹13.87 lakh towards 80 MT Fully electronic weigh bridge in 2013-14 does not fall under the scope of Regulation 9(2)(vi) of the 2009 Tariff Regulations. Hence, the actual capital expenditure of ₹11.06 lakh towards installation of energy efficient LED lights and ₹13.87 lakh towards 80 MT fully electronic weigh bridge in 2013-14 is not allowed. Further, the petitioner has de-capitalized (-) ₹1.32 lakh as final bill settlement during 2012-13 for software SAP ERP which is allowed.

Reconciliation of actual additional capital expenditure with the books of account for the period 2012-14

22. The petitioner vide affidavit dated 8.8.2014 (subsequently through affidavit dated 30.9.2014 duly certified by the Auditor) has reconciled the actual additional capital



expenditure for the period 2012-14 with the books of accounts as detailed under:

(₹ in lakh)		
	2012-13	2013-14
Opening Gross Block as per audited balance sheet as on 1st April of year (A)	94918.73	96550.95
Closing Gross Block as per audited balance sheet as on 31 st March of year (B)	96550.95	100570.43
Additions during the year C=(B-A) (as per books of accounts)	1632.22	4019.48
Exclusions (D)	1522.95	3878.24
Additional capital expenditure including liabilities	109.27	141.24
less Un-discharged Liabilities (E)	11.80	2.16
Net Additional capital expenditure claimed on cash basis (C-D-E)	97.47	139.08

23. It is observed from the above table that the actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts due to exclusions of certain expenditure and un-discharged liabilities in the additional capital expenditure considered for the purpose of tariff.

Exclusions

24. The summary of exclusions for the year 2012-13, & 2013-14 under different heads in the claim and those allowed for the purpose of tariff is as under:

(₹ in lakh)								
Sl. No	Year / Description	Gross Block		Remarks	Liability		Net Additional capitalisation	
		2012-13	2013-14		2012-13	2013-14	2012-13	2013-14
A	Items disallowed							
1	Welfare Centre Building	1.09	0.00	Allowed			1.09	0.00
2	construction of two additional rooms at KV	0.12	0.00	Allowed			0.12	0.00
3	Additional CT pump	0.00	245.32	Allowed		23.25	0.00	222.07
	Total (A)	1.21	245.32					
B	Miscellaneous							
1	Decapitalisation of Assets (part of capital cost)	(-)38.32		Not Allowed			(-)38.32	0.00
2	Capitalization of spares	367.37	129.09	Allowed	7.38	9.39	359.99	119.70
3	Capitalisation of MBOA items	85.79	82.31	Allowed	37.95	5.58	47.84	76.73



4	Inter-unit transfer	1.01	(-)3.20	Allowed			1.01	(-)3.20
5	Decapitalisation of spares not part of capital cost	(-)497.98	(-)26.35	Allowed			(-)497.98	(-)26.35
6	Decapitalisation of spares part of capital cost	(-)98.31	(-)14.24	Not allowed	0.00		(-)98.31	(-)14.24
7	Decapitalisation of MBOA items part of capital cost	(-)35.17	(-)35.39	Not allowed			(-)35.17	(-)35.39
8	Decapitalisation of MBOA items not part of capital cost	(-)4.75	(-)8.00	Allowed			(-)4.75	(-)8.00
9	Liability reversal	(-)10.80	(-)1.24	Allowed			(-)10.80	(-)1.24
10	Loan FERV	1752.90	3509.94	Allowed			1752.90	3509.94
	Total (B)	1521.74	3632.92					
	Total Exclusion claimed (A+B)	1522.95	3878.24		45.33	38.22	1477.62	3840.02
	Exclusions Allowed	1694.75	3927.87				1649.42	3889.65
	Exclusions not allowed	(-)171.80	(-)49.63				(-)171.80	(-)49.63

25. We now consider the exclusions under different heads in the claim for the purpose of tariff as discussed in subsequent paragraphs.

Items disallowed

26. The petitioner has excluded amounts of ₹1.09 lakh towards welfare Centre Building and ₹1.21 lakh towards Construction of Two Additional Rooms at Kendriya Vidyalaya during 2012-13 and ₹222.07 lakh (excluding liability of ₹23.25 lakh) towards additional CT pump in 2013-14 on not being allowed by the Commission. Since these items were not allowed by the Commission and do not form part of capital cost, the exclusion of these amounts is allowed.

Loan FERV

27. The petitioner has excluded amounts of ₹1752.90 lakh in 2012-13 and ₹3509.94 lakh in 2013-14 on account of impact of FERV. Since, the petitioner is billing the said amount directly to the beneficiaries in accordance with the 2009 Tariff Regulations accordingly, the exclusion of the same is in order and is allowed.



Inter-Unit Transfers

28. The petitioner has excluded amounts of ₹1.1 lakh in 2012-13 and (-) ₹3.20 lakh in 2013-14 under this head on account of inter-unit transfer of certain assets such as office equipment's and EDP & SATCOM equipment's. The Commission in its various orders while dealing with the application for additional capitalization in respect of other generating stations of the petitioner had decided that both positive and negative entries arising out of inter-unit transfers of a temporary nature shall be ignored for the purposes of tariff. In line with the said decision, the exclusion of the said amounts on account of inter-unit transfer is allowed.

Capitalization of Capital Spares

29. The petitioner has capitalized capital spares in books of accounts amounting to ₹359.99 lakh (excluding liability of ₹7.38 lakh) in 2012-13 and ₹119.70 lakh (excluding liability of ₹9.39 lakh) in 2013-14. Since capitalization of capital spares over and above the initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff, the exclusion of the same by the petitioner is in order and has been allowed.

De-capitalization of Assets

30. The petitioner has de-capitalized amount of (-) ₹38.32 lakh in 2012-13 under this head on account of assets viz. Vehicles, Construction equipment and Plant & Machinery on the same becoming un-serviceable. It is observed from the submissions of the petitioner that these assets were part of capital cost hence, exclusion sought on this count being part of capital cost is not allowed.

De-capitalization of Capital Spares

31. The petitioner has de-capitalized in the books of accounts capital spares amounting to (-) ₹98.31 lakh in 2012-13 and (-) ₹14.24 lakh in 2013-14 as these spares have become un-serviceable. It is observed from the submission of the petitioner that these spares were part of the capital cost allowed in tariff and these spares on becoming un-serviceable have been taken out of the capital cost. Since, these expenses were part of the capital cost, the



exclusion for de-capitalization of these spares for the said amounts has not been allowed.

De-capitalization of spares not part of capital cost

32. The petitioner has de-capitalized capital spares amounting to (-) ₹497.98 lakh in 2012-13 and (-) ₹26.35 lakh in 2013-14 in books of accounts as these spares have become unserviceable. It is observed from the submission of the petitioner that these spares were not allowed in tariff and hence do not form part of capital cost. Since, these expenses do not form part of the capital cost, the exclusion for de-capitalization of these spares for the said amounts is allowed.

Capitalization of Miscellaneous Bought out Assets (MBOA) items

33. The petitioner has capitalized MBOA items in books of accounts amounting to ₹85.79 lakh in 2012-13 (including liabilities of ₹37.95 lakh) and ₹82.31 lakh (including liabilities of ₹5.57 lakh) in 2013-14. Since the capitalization of MBOA items after the cut-off-date are not allowed for the purpose of tariff, the exclusion of the said amounts are in order and has been allowed.

De-capitalization of Miscellaneous Bought out Assets (MBOA) items part of capital cost

34. The petitioner has de-capitalized in the books of accounts MBOA items for (-) ₹35.17 lakh in 2012-13 and (-) ₹35.39 lakh in 2013-14 on these assets becoming un-serviceable. It is observed from the submissions of the petitioner that these MBOA items were part of the capital cost allowed in tariff and these MBOA items on becoming un-serviceable have been taken out of the capital cost. Since, these expenses form part of the capital cost, the exclusion for de-capitalization of these MBOA for the said amounts are not allowed.

De-capitalization of Miscellaneous Bought out Assets (MBOA) items not part of capital cost

35. The petitioner has de-capitalized MBOA items for (-) ₹4.75 lakh in 2012-13 and (-) ₹8.00 lakh in 2013-14 in books of accounts on these assets becoming unserviceable. It is observed from the submissions of the petitioner that these MBOA items have not been



allowed in tariff and do not form part of the capital cost. Since, these expenses do not form part of the capital cost, the exclusion for de-capitalization of these MBOA items for the said amounts are allowed.

Reversal of Liabilities

36. The petitioner has excluded liability reversal of (-) ₹10.80 lakh in 2012-13 and (-) ₹1.24 lakh in 2013-14. The petitioner in its justification has submitted that since tariff is on cash basis, this liability reversal is kept under exclusion. In view of the submission of the petitioner, the reversal of liability is allowed.

37. Based on the above discussions, the summary of exclusions allowed and disallowed for the period 2009-14 are as under:

	(₹ in lakh)	
	2012-13	2013-14
Exclusions claimed (A)	1522.95	3878.24
Exclusions allowed (B)	1694.75	3927.88
Exclusions not allowed (A-B)	(-)171.79	(-)49.63

38. Based on the above discussions, the actual additional capital expenditure allowed for the period 2009-14 is summarized as under:

	(₹ in lakh)	
Name of Work	2012-13	2013-14
Allowed		
Up-gradation of GT & ST Control System (C&I)	7.20	0.00
Augmentation of Raw Water Reservoir Capacity	21.91	0.00
Increase in stack height of WHRB	0.00	0.00
Installation of On Line Gas Measurement	0.00	114.21
New claim		
Fire Protection & Detection System for Administrative Building	0.00	0.00
Multi Channel Vibration Analyser	0.00	0.00
PH Analyser Chemical/Liquid Analysis system	0.00	0.00
LED based Solar Street Lighting System at Reservoir	0.00	0.00
Infrared Thermal Image Camera	0.00	0.00
Installation of energy efficient LED Lights	0.00	0.00
80 MT Fully Electronics Weigh Bridge	0.00	0.00
Total additional capital expenditure (A)	29.11	114.21
Total Notional De-capitalization allowed (B)	1.32	0.06
Total additional capital expenditure allowed (C = A-B)	27.79	114.15
Exclusion not allowed (D)	171.80	49.63
Net additional capital expenditure allowed (C-D)	(-)144.01	64.52



39. Based on the above, the capital cost allowed for the purpose of tariff for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2019-14
Opening Capital cost	70579.79	79815.97	80182.53	80215.27	80206.22
Additional capital expenditure allowed	8663.78	(-)34.21	2.79	(-)144.01	64.52
Discharge of liability	572.4	400.77	29.95	134.95	1.62
Closing capital cost	79815.97	80182.53	80215.27	80206.22	80272.36
Average Capital Cost	75197.88	79999.25	80198.90	80210.75	80239.29

Debt–Equity Ratio

40. The gross loan and equity amounting to ₹40173.72 lakh and ₹30406.07 lakh respectively (on cash basis) as allowed in order dated 2.4.2013 in Review Petition No. 12/2012 have been considered as on 1.4.2009. Further, the admitted additional expenditure has been allocated in the debt-equity ratio of 70:30.

Return on Equity

41. In terms of Regulation 15 of the 2009 Tariff Regulations, Return on Equity has been computed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Normative Equity- Opening	30406.07	33176.92	33286.89	33296.71	33294.00
Addition of Equity due to additional capital expenditure	2770.85	109.97	9.82	(-)2.72	19.84
Normative Equity-Closing	33176.92	33286.89	33296.71	33294.00	33313.84
Average Normative Equity	31791.50	33231.91	33291.80	33295.36	33303.92
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the respective years	33.990%	33.218%	32.445%	32.445%	33.990%
Rate of Return on Equity (Pre-Tax)	23.481%	23.210%	22.944%	22.944%	23.481%
Return on Equity (Pre Tax) - Annualised	7464.96	7713.13	7638.47	7639.29	7820.09

Interest on loan

42. In terms of Regulation 16 of the 2009 Tariff Regulations, Interest on loan has been worked out as under:

- i) The gross normative loan of ₹40173.72 lakh as on 1.4.2009 has been considered.



ii) Cumulative repayment amounting to ₹19466.88 lakh as on 31.3.2009 as considered in order dated 12.10.2011 in Petition No. 127/2009 has been considered as cumulative repayment as on 1.4.2009. However, after taking in to account proportionate adjustment (duly taking into account the liability and debt position as on 1.4.2004 along with additions during the period 2004-09, if any) to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised to ₹19493.65 lakh.

iii) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹20680.07 lakh.

iv) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2009-14. Further proportionate adjustment has been made to the repayments corresponding to discharges and reversals of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

43. Necessary calculations for interest on loan are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	40173.72	46639.05	46895.64	46918.56	46912.22
Cumulative repayment of loan upto previous year / period	19493.65	20050.47	22027.17	24754.30	27377.93
Net Loan Opening	20680.07	26588.57	24868.47	22164.26	19534.30
Addition due to Additional capitalisation	6465.33	256.59	22.92	(-)6.34	46.30
Repayment of loan during the year	2119.51	2662.21	2743.37	2746.46	2760.61
Less: Repayment adjustment on account of de-capitalization	1548.47	675.69	16.09	120.26	34.74
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	(-)14.21	(-)9.83	(-)0.15	(-)2.58	0.00
Net Repayment	556.82	1976.69	2727.13	2623.63	2725.87
Net Loan Closing	26588.57	24868.47	22164.26	19534.30	16854.72
Average Loan	23634.32	25728.52	23516.37	20849.28	18194.51
Weighted Average Rate of Interest on Loan	2.1724%	1.6306%	1.9273%	1.6170%	1.1965%
Interest on Loan	513.43	419.54	453.22	337.14	217.70

Depreciation

44. The cumulative depreciation as on 31.3.2009 as per order dated 12.10.2011 in Petition No. 127/2009 is ₹42786.95 lakh. Further proportionate adjustment has been made to this cumulative depreciation on account of un-discharged liabilities deducted as on



1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹42142.18 lakh. Further, the value of freehold land considered in said order as on 31.3.2009 is ₹113.17 lakh and the same has been considered for the purpose of calculating depreciable value. Also, cumulative depreciation has been adjusted for de-capitalisation, if any, considered during tariff period 2009-14.

45. Accordingly, the calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	70579.79	79815.97	80182.53	80215.27	80206.22
Add: Additional capital expenditure	9236.18	366.56	32.74	(-)9.05	66.14
Closing Capital Cost	79815.97	80182.53	80215.27	80206.22	80272.36
Average Capital Cost	75197.88	79999.25	80198.90	80210.75	80239.29
Depreciable value (excluding land@ 90%)	67576.24	71897.47	72077.16	72087.82	72113.51
Balance Useful life of the asset	12.00	11.00	10.00	9.00	8.00
Balance depreciable value	25434.06	29284.36	27433.73	24718.14	22084.89
Depreciation (annualized)	2119.51	2662.21	2743.37	2746.46	2760.61
Cumulative depreciation at the end	44261.68	45275.33	47386.80	50116.14	52789.23
Less: Cumulative Depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009	(-)342.32	-236.84	-3.57	-62.04	0.00
Less: Cumulative Depreciation reduction due to decapitalization	1990.89	868.74	20.69	149.57	35.46
Cumulative depreciation (at the end of the period)	42613.11	44643.42	47369.68	50028.61	52753.77

Normative Annual Plant Availability Factor

46. The Normative Annual Plant Availability Factor of 85% as considered in order dated 15.5.2014 in Petition No.139/GT/2013 has been considered.



O&M Expenses

47. O&M expenses as considered in order dated 15.5.2014 in Petition No.139/GT/2013 has been considered as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
6206.08	6562.51	6935.72	7334.08	7753.41

Interest on Working Capital

48. The components of the working capital have been worked out as under:

Fuel Cost

49. The fuel components and energy charges (for two months) as worked out in order dated 15.5.2014 in Petition No.139/GT/2013 has been considered and is as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of Main Fuel – one month	4491.37	4491.37	4503.68	4491.37	4491.37
Cost of Liquid Fuel oil –1/2 month	924.79	924.79	927.32	924.79	924.79

50. Maintenance spares as allowed in order dated 15.5.2014 has been considered for the purpose of tariff as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
1861.83	1968.75	2080.72	2200.22	2326.02

51. Receivables have been worked out on the basis of two months of fixed and energy charges as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable charges for 2 months	8982.74	8982.74	9007.35	8982.74	8982.74
Fixed Charges – for 2 months	3123.65	3305.73	3379.87	3430.92	3518.46
Total	12106.39	12288.47	12387.22	12413.66	12501.20

O&M Expenses

52. O&M expenses for 1 month for the purpose of working capital are allowed as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
517.17	546.88	577.98	611.17	646.12



53. SBI PLR of 12.25% has been considered in the computation of the interest on working capital. Necessary computations in support of calculation of interest on working capital are given as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost - 1 months	4491.37	4491.37	4503.68	4491.37	4491.37
Liquid Fuel Cost - 1/2 months	924.79	924.79	927.32	924.79	924.79
Maintenance Spares	1861.83	1968.75	2080.72	2200.22	2326.02
O & M expenses - 1 months	517.17	546.88	577.98	611.17	646.12
Receivables - 2 months	12106.39	12288.47	12387.22	12413.66	12501.20
Total Working Capital	19901.55	20220.26	20476.91	20641.22	20889.50
Rate of Interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Total Interest on Working capital	2437.94	2476.98	2508.42	2528.55	2558.96

Annual Fixed Charges

54. The annual fixed charges in respect of the generating station for the period 2009-14 are summarized as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2,119.51	2,662.21	2,743.37	2,746.46	2,760.61
Interest on Loan	513.43	419.54	453.22	337.14	217.70
Return on Equity	7,464.96	7,713.13	7,638.47	7,639.29	7,820.09
Interest on Working Capital	2,437.94	2,476.98	2,508.42	2,528.55	2,558.96
O&M Expenses	6,206.08	6,562.51	6,935.72	7,334.08	7,753.41
Total	18,741.92	19,834.37	20,279.20	20,585.52	21,110.78

Note: (1) All figures are on annualized basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.

55. The difference in the annual fixed charges determined by order dated 15.5.2014 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

56. Petition No. 331/GT/2014 is disposed of in terms of the above.

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

-Sd/-
(A.K.Singhal)
Member

-Sd/-
(Gireesh B. Pradhan)
Chairperson

