

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 250/GT/2013

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri M. Deena Dayalan, Member

Shri A.K.Singhal, Member

Ms. Neerja Mathur, Member (EO)

Date of Hearing: 18.03.2014

Date of Order: 12.11.2014

In the matter of

Revision of tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) for the period 1.4.2009 to 31.3.2014 -Truing up of tariff determined by order dated 27.8.2012 in Petition No. 257/2009

And

In the matter of

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

...Petitioner

Vs

1. Transmission Corporation of Andhra Pradesh, Hyderabad
2. Andhra Pradesh Eastern Power Distribution Company Ltd., Vishakapatnam
3. Andhra Pradesh Southern Power Distribution Company Ltd., Tirupathi
4. Andhra Pradesh Northern Power Distribution Company Ltd., Warangal
5. Andhra Pradesh Central Power Distribution Company Ltd., Hyderabad

...Respondents

Parties present:

For Petitioner: Shri Ajay Dua, NTPC
Shri Rohit Chabbra, NTPC
Shri A.S.Pandey, NTPC
Shri V.K.Garg, NTPC

For Respondents: None



ORDER

This petition has been filed by the petitioner, NTPC for revision of tariff of Simhadri Super Thermal Power Station Stage-I (1000 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014 in terms of the proviso to 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 1000 MW comprises of two units of 500 MW each. Unit-I of the generating station was declared under commercial operation on 1.9.2002 and Unit-II on 1.3.2003.

3. Petition No. 257/2009 was filed by the petitioner for approval of tariff of the generating station for the period 2009-14 and the Commission by order dated 27.8.2012 had approved the annual fixed charges considering the opening capital cost of ₹346317.92 lakh on cash basis as on 1.4.2009, after deduction of un-discharged liabilities of ₹5333.34 lakh as on 1.4.2009. The capital cost considered by the Commission for the purpose of determination of annual fixed charges for 2009-14 by order dated 27.8.2012 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	346317.92	345882.92	348733.02	351883.02	359143.02
Additional Capital expenditure , including discharge of liabilities made during 2009-11	(-) 435.00	2850.10	3150.00	7260.00	3730.00
Closing Capital Cost	345882.92	348733.02	351883.02	359143.02	362873.02
Average Capital cost	346100.42	347307.97	350308.02	355513.02	361008.02

4. Based on the above, the annual fixed charges approved by order dated 27.8.2012 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	17388.76	17449.43	17600.16	17861.67	18137.75
Interest on Loan	6402.56	5878.58	5385.84	4939.64	4493.22
Return on Equity	24380.35	24465.42	24676.75	25043.40	25430.49
Interest on Working Capital	6587.74	6621.50	6676.53	6713.73	6770.90
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00

Cost of Secondary fuel oil	1841.11	1841.11	1846.16	1841.11	1841.11
Compensation Allowance	0.00	0.00	0.00	0.00	150.00
Total	69600.53	69996.04	70715.43	71759.56	73063.47

5. The petitioner presently seeks 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. 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."

6. The annual fixed charges claimed by the petitioner in this petition are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	17391	17359	17457	17606	17767
Interest on Loan	6403	5852	5331	4819	4332
Return on Equity	24384	24097	23930	24063	24283
Interest on Working Capital	6588	6611	6657	6685	6737
O&M Expenses	13000	13740	14530	15360	16240
Secondary Fuel Oil Cost	1841	1841	1846	1841	1841
Compensation Allowance	0	0	0	0	150
Special Allowance	0	0	0	0	0
Total	69606	69501	69749	70377	71350

7. The petitioner has filed additional submissions as directed by the Commission. None of the respondents have filed reply in the matter. Considering the submissions and based on the documents available on record, we proceed to determine the tariff of the generating station as stated in the subsequent paragraphs.

Capital cost

8. 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.”

9. The admitted capital cost as on 31.3.2009 is ₹351651.25 lakh vide order dated 17.1.2012 in Petition No. 149/2009 and the approved capital cost as on 1.4.2009 works out to ₹346317.92 lakh, after deduction of un-discharged liabilities amounting to ₹5333.34 lakh (₹4721.07 lakh prior to period 1.4.2004 and ₹612.27 lakh pertaining to period 2004-09).

Actual/ Projected Additional Capital Expenditure

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

*“9. **Additional Capitalisation.** (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

(i) Un-discharged liabilities;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;

(iii) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in law:

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

(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.

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-materialisation 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.”

11. The additional capital expenditure claimed by the petitioner for 2009-14 in Petition No. 257/2009 and those allowed by order dated 27.8.2012 is summarized as under

	(₹ in lakh)					
	2009-10 Actual	2010-11 Projected	2011-12 Projected	2012-13 Projected	2013-14 Projected	Total
Additional Capital Expenditure claimed	226.54	6801.00	6500.00	7260.00	3730.00	24517.54
Additional Capital Expenditure allowed (excluding liabilities)	(-) 635.20	2821.00	3150.00	7260.00	3730.00	16325.80

12. The break-up of the additional capital expenditure allowed by the Commission in order dated 27.8.2012 in Petition No. 257/2009 is as under:

Sl. No.	Regulation	(₹ in lakh)					
		2009-10	2010-11	2011-12	2012-13	2013-14	
i	Ash Dyke Works						
1	Ash dyke raising	9(2)(iii)	149.43	2756.00	3000.0	3500.0	3500.00
2	Other capital works in Ash dyke	9(2)(iii)	0.00	40.00	125.00	200.00	200.00

3	Construction and raising of pedestal for ash disposal Line for lagoon 1 and 2	9(2)(iii)	14.00	25.00	25.00	30.00	30.00
4	Dry ash evacuation system augmentation	9(2)(ii)	0.00	0.00	0.00	3530.0	0.00
II	Capital Addition Schemes						
1	Ambient Air Quality Monitoring System	9(2)(ii)	92.67	0.00	0.00	0.00	0.00
	Sub-total (A)		256.10	2821.00	3150.00	7260.00	3730.00
III	Other Capital Works						
1	Ultrasonic thickness gauge		0.26	0.00	0.00	0.00	0.00
2	Cost adjustment of Cast basalt pipes		0.20	0.00	0.00	0.00	0.00
3	Gigabit up-gradation of Sankalp building		5.36	0.00	0.00	0.00	0.00
4	22 No. D-Type Quarters		(-) 3.37	0.00	0.00	0.00	0.00
5	Sweep frequency response analyzer		(-) 8.18	0.00	0.00	0.00	0.00
6	Make up water system		(-) 14.55	0.00	0.00	0.00	0.00
7	Disposal of vehicles (Sumo and Ambassador 1 no. each)		(-) 9.28	0.00	0.00	0.00	0.00
	Sub-total (B)		(-) 29.56	0.00	0.00	0.00	0.00
	Exclusions not allowed (C)		(-) 861.77	0.00	0.00	0.00	0.00
	Total (A+B+C)		(-) 635.23	2821.00	3150.00	7260.00	3730.00

13. The petitioner vide Form No. 9 has claimed actual additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 and projected additional capital expenditure for the year 2012-13 and 2013-14 as detailed hereunder:

Sl. No.	Package Name	Actual capitalization			Projected Capitalization		Total
		2009-10	2010-11	2011-12	2012-13	2013-14	
A	Ash Dyke Works						
1	Ash Dyke Raising	149.43	159.60	2863.20	943.00	1752.00	5867.24
2	Other capital works in Ash Dyke	0.00	5.76	0.00	0.00	978.73	984.49
3	Construction and raising of pedestal for ash disposal line for lagoon 1 & 2	14.00	0.00	0.00	0.00	0.00	14.00
4	Dry ash evacuation system augmentation	0.00	0.00	0.00	0.00	2700.0	2700.00
	Sub-Total (A)	163.43	165.37	2863.20	943.00	5430.70	9565.70
B	Capital Addition Schemes						
5	Ambient Air Quality Monitoring System	92.67	0.00	0.00	0.00	0.0	92.67
C	Other Capital Works						
6	Ultra thickness gauge	0.26	0.00	0.00	0.00	0.00	0.26
7	Cost adjustment of cast blast pipes	0.20	0.00	0.00	0.00	0.00	0.20
8	Gigabit up-gradation of	5.36	0.00	0.00	0.00	0.00	5.36

	Sankalp building						
	Sub-Total (C)	5.82	0.00	0.00	0.00	0.00	5.82
9	Total Additional Capital (A+B+C)	261.92	165.37	2863.20	943.00	5430.73	9664.22
10	22 No. D-type Quarters	0.00	0.00	0.00	0.00	0.00	0.00
11	Sweep frequency response analyzer	0.00	0.00	0.00	0.00	0.00	0.00
12	Make-up water system	0.00	0.00	0.00	0.00	0.00	0.00
13	Disposal of vehicles	(-) 9.28	0.00	0.00	0.00	0.00	(-) 9.28
	Sub Total (9-12)	0.00	0.00	0.00	0.00	0.00	0.00
14	Exclusions not allowed	(-) 814.72	0.00	0.00	0.00	0.00	(-) 814.72
	Grand Total (1 to 13)	(-) 562.08	165.37	2863.20	943.00	5430.73	8840.23

14. It is observed that the actual/ projected additional capital expenditure claimed for the period 2009-14 is ₹9664.22 lakh as against the additional capital expenditure of ₹17222.90 lakh allowed vide order dated 27.8.2012 in Petition No. 257/2009. Thus, there is reduction of ₹7558.68 lakh in the claim of the petitioner for additional capital expenditure in this petition. The main reason for such reduction in the claim is on account of the less claim of ₹7038.16 lakh towards Ash Dyke raising. In addition to this, there is decrease of an amount of ₹830.00 lakh in the claim for Dry Ash Evacuation system and an increase of ₹419.49 lakh for Other capital works in Ash Dyke. However, it is noticed that the claim towards Ambient Air Quality Monitoring System (AAQMS) for ₹92.07 lakh and for Other Capital works (viz. ultra thickness gauge, Gigabet up gradation etc) for ₹5.82 lakh remain unchanged against those allowed by the Commission by order dated 27.8.2012.

Ash Dyke Works

15. The Commission in order dated 27.8.2012 had allowed the expenditure of ₹17124.40 lakh for Ash Dyke Works during 2009-14 which includes Ash Dyke Raising works for ₹12905.40 lakh, other Capital works in Ash Dyke for ₹565.00 lakh, construction and raising of pedestal for ash disposal line for lagoon 1& 2 for ₹124.00 lakh and Dry ash evacuation system augmentation for ₹3530.00 lakh. However, the petitioner has claimed expenditure of ₹9565.70 lakh during 2009-14 for Ash Dyke Works, which includes

actual expenditure of ₹3192.00 lakh in 2009-12 and projected expenditure of ₹6373.70 lakh during 2012-14, the details of which are as under:

(a) Ash Dyke Raising: The Commission in order dated 27.8.2012 had allowed an expenditure of ₹12905.40 lakh for Ash Dyke raising for the period 2009-14. The petitioner has claimed actual expenditure of ₹3172.24 lakh during 2009-10, 2010-11 and 2011-12 and projected expenditure of ₹2695.00 lakh for Ash Dyke raising during 2012-14. The petitioner has submitted that the difference in the actual expenditure incurred against those claim on projected basis is account of the fact that the projected expenditure claimed in the original petition was based on the estimated quantum of work relating to raising of ash dyke which was envisaged at that point in time. The petitioner has submitted that the expenditure claimed in this petition is based on the actual expenditure incurred for the years 2009-10 to 2011-12 and a realistic estimated expenditure for the period 2012-14. As against the dyke raising of 4 nos. originally anticipated for the period 2010-14, only dyke raisings of 3 nos. had actually been undertaken and the accordingly the projected expenditure has been partly deferred to post 2013-14. Moreover, there is reduction in the actual dyke raising cost incurred as against the projected expenditure allowed during the period, due to better availability and reduced cost of inputs of construction materials. In view of this, the expenditure claimed by the petitioner has been allowed under Regulation 9(2)(iii) of the 2009 Tariff Regulations.

(b) Other Capital Works in Ash Dyke: The Commission in order dated 27.8.2012 in Petition No. 257/2009 had allowed expenditure of ₹565 .00 lakh for Other capital works in Ash Dyke for the period 2009-14. The petitioner has claimed actual expenditure of ₹5.76 lakh during 2010-11 and projected expenditure of ₹978.73 lakh in 2013-14 for Other capital works in Ash Dyke. The petitioner has submitted that the works under "Other capital works" in Ash dyke includes WBM roads & RCC

garland drains. The break-up of the projected expenditure of ₹978.73 lakh submitted by the petitioner is as under:

Work description	Value	Remark
Construction of WBM road	28.73 lakh	
Garland drains	950.0 lakh	Cost of RCC drains includes cost of cement & steel for RCC along with cost of construction.

The projected expenditure of ₹978.73 lakh for other capital works in Ash dyke such as construction of WBM road and garlanding of drains is higher than the expenditure originally projected by the petitioner and allowed by the Commission. However, considering the fact that the contract value awarded is more realistic than the value originally projected by the petitioner, the same is allowed under Regulation 9(2)(iii). However, the petitioner is directed to furnish a detailed justification for such a high projected expenditure, at the time of final truing-up of tariff in terms of Regulation 6(1) of the 2009 Tariff Regulations.

(c) Construction and Raising of pedestal for ash disposal line for lagoon 1& 2: The Commission vide order dated 27.8.2012 in Petition No. 257/2009 had allowed expenditure of ₹124.00 lakh for Construction and raising of pedestal for Ash disposal line for lagoon 1& 2 for the period 2009-14. However, the petitioner has claimed actual expenditure of ₹14.00 lakh during 2009-10 for Construction and raising of pedestal for ash disposal line for lagoon 1&2. The petitioner has submitted that expenditure for ₹124.00 lakh was envisaged for permanent pedestals to be erected at various places in the route of ash disposal line. However, it was subsequently observed that the orientation of ash disposal lines were required to be regularly changed for enabling uniform disposal all around and inside the dyke. The petitioner has submitted that this was necessary not only for safety of the dyke but also for effective utilization of the storage capacity. Consequent upon this, the need of construction of permanent support pedestal had been dispensed with and the ash disposal lines were supported on temporary pipe supports. Accordingly, the expenditure original projected for

construction of pedestals was not incurred and the same was revised and has been claimed in this petition. In view of the submissions, the actual expenditure of ₹14.00 lakh claimed by the petitioner has been allowed.

(d) Dry Ash Evacuation System Augmentation: The Commission in order dated 27.8.2012 in Petition No. 257/2009 had allowed projected expenditure of ₹3530.00 lakh for dry ash evacuation system augmentation during 2012-13. However, the petitioner has claimed projected expenditure of ₹ 2700.00 lakh during 2013-14 in this petition. The petitioner has submitted that the work of Dry Ash Evacuation System is under progress, and the system has not yet been commissioned and on account of this, the final payment has not been made to the concerned agency. The petitioner has further submitted that the Performance Guarantee Test shall be carried out before making final contractual payment to the agency. Accordingly, the petitioner has submitted that the projected cost of ₹2700.00 lakh for dry ash extraction system include the total scope of work of dry ash extraction system on cash basis, excluding the Trial Operation & Performance Guarantee payments, which are expected to be incurred beyond March, 2014. Due to this, the projected expenditure during 2013-14 has been revised against this work and is lesser than the projected expenditure allowed in the said order. Considering the fact that the Commission in order dated 27.8.2012 had allowed the projected expenditure to meet the statutory requirement of 100% ash utilization as per MOEF notification dated 3.10.2009 within a specified period of time, the expenditure claimed has been allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

Capital Addition Schemes

Ambient Air Quality Monitoring System

16. The Commission in order dated 27.8.2012 in Petition No. 257/2009 had allowed actual expenditure of ₹92.67 lakh in 2009-10 towards Ambient Air Quality Monitoring System (AAQMS). The petitioner in

this petition has claimed actual expenditure of ₹92.67 lakh during 2009-10. As the system is required for monitoring and maintaining air quality parameters as per statutory requirement of the State Pollution Control Board, the expenditure claimed has been allowed under Regulation 9(2)(ii).

Other Capital Works

17. The capital expenditure allowed on 'Other capital works' mainly include the capitalization and de-capitalization on balance of works / assets, in respect of assets which were already allowed by the Commission. The capitalization allowed on assets such as Ultrasonic thick gauge for ₹0.26 lakh, Cast blast pipe for ₹0.20 lakh and Up-gradation of Sankalp Building for ₹5.36 lakh is found to be in order and the same is allowed. As regards de-capitalization, the disposal of vehicle for ₹9.28 lakh is found to be in order and has been allowed.

18. It is observed that the petitioner in this petition has withdrawn the de-capitalization on assets totaling ₹ 26.10 lakh, such as (i) 22 no. D-type quarters for (-) ₹3.37 lakh, (ii) Sweep frequency response analyzer for (-) ₹8.18 lakh, and (iii) Make-up water system for (-) ₹14.55 lakh and has sought the exclusion of these assets as 'Reversal of liabilities' based on the following justification:

(i) The petitioner vide affidavit dated 20.11.2013 has submitted that the negative amounts were shown against 22 no. D-Type quarters, Sweep Frequency Response Analyzer and Make-up water system in Form-9 of the Petition No. 257/2009 because of liabilities reversed against these items. The petitioner has also submitted that vide affidavit dated 12.1.2012 it had clarified the same and also submitted the liability flow statement showing reversal of liabilities of ₹3.37 lakh, ₹8.18 lakh and ₹14.55 lakh towards 22 nos.D-Type quarters, Sweep frequency Response Analyzer and Makeup Water System respectively. The petitioner has further submitted that the Commission in order dated 27.8.2012 had erroneously deducted these items twice, firstly, while determining the capital cost of the generating station as on 1.4.2009 by upfront deduction as undischarged liabilities and secondly

by de-capitalization during the year 2009-10. The petitioner has stated that there was reversal of liabilities aggregating to ₹26.10 lakh against these items in 2009-10 and kept under exclusions and the same has been considered in this petition and has prayed for rectification.

(ii) The matter has been examined. It is noticed that there has been a double deduction of ₹26.10 lakh in the order dated 27.8.2012, once, as un-discharged liability in the capital cost allowed as on 1.4.2009 and another, in the form of de-capitalization allowed in 2009-10. As rectification of the same, we disallow the de-capitalization of ₹26.10 lakh in 2009-10 in the additional capitalization allowed in this order. As the de-capitalization is dis-allowed, the expenditure is not allowed as exclusion. Based on above discussions, the following assets have been allowed for 2009-10 under the head 'Other Capital Works':

(₹ in lakh)		
Sl. No.	Head of Work/ Equipment	2009-10
1	Ultrasonic thickness gauge	0.26
2	Cost adjustment of cast blast pipes	0.20
3	Gigabet Up-gradation of Sankalp Building	5.36
4	22 No. D type Quarters	0.0
5	Sweep frequency response analyzer	0.0
6	Make-up water system	0.0
7	Disposal of vehicles (sumo and ambassador 1 no each)	(-) 9.28
	Total	15.10

19. The petitioner has reconciled the actual additional capital expenditure for the period 2009-10 to 2011-12 with the books of accounts as under:

(₹ in lakh)				
		2009-10	2010-11	2011-12
1	Opening Gross Block of the year	355066.13	335839.30	355216.83
2	Closing Gross Block of the year	335839.30	355216.83	397440.56
3	Additional Capitalization as per the books (2 - 1)	(-) 19226.82	19377.53	42223.73
4	Exclusions for Additional Capitalization as per books of Accounts.	(-) 18520.17	19203.04	39171.24
6	Additional Capitalization allowed including liability(3-4)	(-) 706.65	174.49	3052.49
7	Un-discharged liability in above	(-) 144.58	9.12	189.28
8	Additional Capital Expenditure claimed excluding liability(6-7)	(-) 562.07	165.37	2863.21
9	Discharge of Un-discharged liability as per Form-9 (F)	217.84	39.50	81.49
10	Total Additional Capital Expenditure Claimed (8+9)	(-) 344.23	204.87	2944.71

20. The summary of exclusions claimed as per books of accounts is as under:

Sl. No.	Head	(₹ in lakh)			
		2009-10	2010-11	2011-12	Total
1	Capitalization of spares	484.21	854.33	543.29	1881.83
2	De-capitalization of spares	(-) 36.84	(-) 211.78	(-) 150.61	(-)399.23
3	Capitalization of MBOA items	813.04	564.15	0.00	1377.19
4	De-capitalization of MBOA items	0.00	(-)320.31	(-) 5.12	(-) 325.43
5	De-capitalization of other items	(-) 16.39	0.00	0.00	(-)16.39
6	FERV	(-) 19764.68	18313.21	31630.68	30179.21
7	Inter unit transfer	0.49	6.38	0.00	6.87
8	Items not allowed(Diesel Locos)	0.00	0.00	3069.39	3069.39
9	Items not allowed (Wagon Tippler)	0.00	0.00	3904.32	3904.32
10	Items not allowed(Misc. Civil Works)	0.00	0.00	189.48	189.48
11	Unserviceable Assets	0.00	0.42	0.00	0.42
12	Reversal of Liability	0.00	(-) 3.35	(-) 10.18	(-) 13.53
13	Total Exclusions	(-) 18520.17	19203.04	39171.24	39854.11

Exclusions

21. We consider the exclusions for the years 2009-10, 2010-11 and 2011-12 under different heads in the claim for the purpose of tariff as discussed in subsequent paragraphs:

Capitalization of spares

22. The petitioner has procured spares amounting to ₹484.21 lakh during 2009-10, ₹854.33 lakh during 2010-11 and ₹543.29 lakh during 2011-12 for maintaining stock of necessary spares. Since capitalization of capital spares over and above the initial spares procured after cut-off date are not allowed for the purpose of tariff as they form part of O&M expenses when consumed, the exclusions of the said amounts during the period 2009-12 are in order and are allowed.

De-capitalization of Spares

23. The petitioner has de-capitalized capital spares amounting to (-)₹36.84 lakh during 2009-10, (-) ₹ 211.78 lakh during 2010-11 and (-)₹150.61 lakh during 2011-12 in books of accounts on these spares becoming unserviceable. After examining the exclusions sought on de-capitalization of spares it

has been found that an amount of (-)₹25.94 lakh in 2009-10, (-)₹49.53 lakh in 2010-11 and (-)₹50.05 lakh in 2011-12 pertain to spares which were part of the capital cost of the generating station for the purpose of tariff. Hence, exclusion on account of de-capitalization of these spares is not justified and has not been allowed. The remaining amount of de-capitalized spares of (-)₹10.90 lakh in 2009-10, (-)₹162.25 lakh during 2010-11 and (-)₹100.56 lakh in 2011-12 do not form part of the capital cost considered for the purpose of tariff. Hence, exclusion of de-capitalization of these spares of the remaining amount as above is in order and has been allowed.

Capitalization of Miscellaneous Bought Out Assets (MBOA)

24. The petitioner has capitalized MBOA items in books of accounts amounting to ₹813.04 lakh during 2009-10 and ₹564.15 lakh during 2010-11. Since the capitalization of minor assets is not allowed after the cut-off date, the exclusion of ₹813.04 lakh during 2009-10 and ₹564.15 lakh during 2010-11 is in order and has been allowed.

De-capitalization of Miscellaneous Bought Out Assets (MBOA)

25. The petitioner has also excluded de-capitalized MBOA in books of accounts amounting to (-)₹ 320.31 lakh during 2010-11 and (-)₹5.12 lakh during 2011-12 in the in books of accounts on these MBOA becoming unserviceable. After examining the exclusions sought on de-capitalization of MOBA, it is noticed that an amount of (-)₹320.21 lakh in 2010-11 pertains to MBOA which were part of the capital cost of the generating station for the purpose of tariff. Hence, exclusion on account of de-capitalization of these spares is not justified and has not been allowed for the purpose of tariff. Some of the other de-capitalized MBOA amounting to (-)₹0.099 lakh in 2010-11 and (-)₹5.12 lakh in 2011-12 do not form part of the capital cost and had been earlier disallowed by the Commission. Hence, exclusion of de-capitalization of these assets is in order and has been allowed.

De-capitalization of Ash dyke / MBOA

26. The Commission vide its order dated 27.8.2012 in Petition No. 257/2009 had disallowed exclusion of de-capitalization of ₹861.80 lakh toward Ash dyke works and MBOA (₹814.72 lakh for Ash dyke works and ₹10.21lakh for MBOA items and Spares for ₹36.84 lakh) in 2009-10. The petitioner during the reconciliation of additional capitalization with the books of accounts has not claimed exclusion of de-capitalization of ₹814.93 lakhs towards Ash dyke works and hence the same is in order. Further, an amount of ₹36.84 lakh towards Spares have now been segregated towards admission and non-admission items in the Capital cost and has been shown under Exclusions. However, the balance de- capitalization of ₹10.21 lakh for MBOA assets which was disallowed by the Commission has not shown under exclusions by the petitioner. Since exclusion of de-capitalization of MBOA of ₹10.21 lakh was disallowed by the Commission during 2009-10, the same should have been included under the head 'Exclusions not allowed'. Accordingly, the exclusion of (-)₹10.21 lakh on MBOA assets has been considered under the head 'Exclusions not allowed' for the purpose of tariff.

De-capitalization of Other items

27. The petitioner has de-capitalized items amounting to (-)₹16.39 lakh in 2009-10 which do not form part of the capital cost and which was disallowed by the Commission for capitalization. Hence, the exclusion of de-capitalization of these assets is in order and has been allowed.

FERV

28. The petitioner has excluded an amount of (-)₹19764.68 lakh in 2009-10 and ₹18313.21 lakh in 2010-11 and ₹31630.68 lakh in 2011-12 on account of impact of FERV. As the petitioner has billed FERV directly on the beneficiaries, the exclusion of FERV is in order and has been allowed.

Inter unit transfer

29. An amount of ₹0.49 lakh in 2009-10 and ₹6.38 lakh in 2010-11 has been excluded under this head on account of transfer of certain assets. These inter-unit transfers are indicated to be of temporary

nature. The Commission while dealing with the petitions 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 temporary nature shall be ignored for the purpose of tariff. In consideration of the same, the exclusion of the amount of ₹0.49 lakh in 2009-10 and ₹6.38 lakh in 2010-11 on account of inter-unit transfer of equipment on temporary basis is in order and has been allowed.

Items not allowed (Diesel Locos and Wagon Tippler)

30. The petitioner has excluded an amount of ₹3069.39 lakh, 3904.32 lakh and ₹189.48 lakh in 2011-12 on account of other works, namely, Diesel locos, Wagon Tippler and Miscellaneous Civil Works respectively. Since the said items had not been allowed by the Commission vide order dated 27.8.2012, the exclusion on this account is in order and has been allowed.

Unserviceable Assets

31. The petitioner has excluded an amount of ₹0.42 lakh in 2010-11 on account of unserviceable assets like Chair, Refrigerator, Blue star water cooler, aquaquad water filter and Deep freezer. As these assets were held for disposal, the exclusion of the amount on this count is in order and has been allowed.

Reversal of Liability

32. The petitioner has excluded an amount of (-)₹3.35 lakh in 2010-11 for Fibre Optic Campus wide network and (-)₹10.18 lakh in 2011-12 for Developmental works in Township, Auditorium and Community Function Hall on account of reversal of liability. Accordingly, the said amounts have been considered in this order.

33. Based on the above discussions, the exclusions allowed and disallowed are summarized as under:

(₹ in lakh)				
Head	2009-10	2010-11	2011-12	Total
(A) Exclusions allowed under different heads				
Capitalization of spares	484.21	854.33	543.29	1881.83
De-Capitalization of spares	(-) 10.90	(-) 162.25	(-) 100.56	(-) 273.71
Capitalization of MBOA	813.04	564.15	0.00	1377.19
De-Capitalization of MBOA	0.00	(-) 0.099	(-) 5.12	(-) 5.22
De-capitalization of other items	(-) 16.39	0.00	0.00	(-) 16.39
FERV	(-) 19764.68	18313.21	31630.68	30179.21
Inter unit transfer	0.49	6.38	0.00	6.87
Items not allowed(Diesel Locos)	0.00	0.00	3069.39	3069.39
Items not allowed (Wagon Tippler)	0.0	0.00	3904.32	3904.32
Items not allowed(Misc. Civil Works)	0.00	0.00	189.48	189.48
Unserviceable Assets	0.00	0.42	0.00	0.42
Reversal of Liability	0.00	(-) 3.35	(-) 10.18	(-) 13.53
(B) Exclusion allowed (A)	(-) 18494.20	19572.79	39221.30	40299.86
(C) (B) Exclusions not allowed under different heads				
De-Capitalization of spares	(-) 25.94	(-) 49.53	(-) 50.05	(-) 125.52
De-Capitalization MBOA items	(-)10.21	(-) 320.21	0.00	(-) 330.42
Exclusion not allowed (B)	(-) 36.15	(-) 369.74	(-)0.05	(-)455.94
Total exclusion (A+B)	(-) 18530.31	19203.04	39171.24	39864.32

34. Based on the above discussions, the actual additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 and the projected additional capital expenditure for the year 2012-13 and 2013-14, is allowed as under:

(₹ in lakh)							
Sl. No.	Package Name	Actual			Projected Capitalization		Total
		2009-10	2010-11	2011-12	2012-13	2013-14	
1	Ash Dyke Raising	149.43	159.60	2863.20	943.00	1752.00	5867.24
2	Other capital works in Ash Dyke	0.00	5.76	0.00	0.00	978.73	984.49
3	Construction and raising of pedestal for ash disposal line for lagoon 1& 2	14.00	0.00	0.00	0.00	0.00	14.00
4	Dry ash evacuation system augmentation	0.00	0.00	0.00	0.00	2700.00	2700.0
5	Ambient Air Quality Monitoring System	92.67	0.00	0.00	0.00	0.00	92.67
6	Ultra thickness gauge	0.26	0.00	0.00	0.00	0.00	0.26
7	Cost adjustment of cast blast pipes	0.20	0.00	0.00	0.00	0.00	0.20
8	Gigabet up-gradation of	5.36	0.00	0.00	0.00	0.00	0.00

	Sankalp building						
9	22 No. D type Quarters	0.0	0.00	0.00	0.00	0.00	0.00
10	Sweep frequency response analyzer	0.0	0.00	0.00	0.00	0.00	0.00
11	Make-up water system	0.0	0.00	0.00	0.00	0.00	0.00
12	Disposal of vehicles	(-) 9.28	0.00	0.00	0.00	0.00	(-) 9.28
13	Exclusions not allowed on Ash Dyke work vide order dtd. 27.8.2012	(-) 814.72	0.00	0.00	0.00	0.00	(-) 814.72
14	Grand Total (1 to 13)	(-) 562.08	165.37	2863.20	943.00	5430.73	8840.22
15	Add : Exclusions not allowed(As per reconciliation statement furnished)	(-) 36.15	(-) 369.74	(-) 50.05	0.00	0.00	-455.94
16	Total Add-Cap allowed (14+15)	(-) 598.23	(-) 204.37	2813.15	943.00	5430.73	8384.28

Discharge of liabilities

35. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged an amount of ₹201.02 lakh, ₹31.71 lakh, ₹26.05 lakh and reversed ₹8.18 lakh, ₹3.35 lakh, ₹3.56 lakh during the year 2009-10, 2010-11 and 2011-12 respectively. In addition to above discharges and reversals, petitioner has also discharged ₹5.74 lakh and ₹16.62 lakh during the period 2010-11 and 2011-12 respectively (all pertaining to period 2009-14). The above discharges of liabilities have been allowed during respective years in addition to the admitted additional capital expenditure for the said years.

		(₹ in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
Un-discharged liabilities as on 1.4.2009 (corresponding to allowed assets)- A	5333.34	-	-	-	-	-
Discharges during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- B	-	201.02	31.71	26.05	0.00	0.00
Reversals during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- C	-	8.18	3.35	3.56	0.00	0.00
Addition during the period 2009-14 (corresponding to allowed assets)- D	-	22.75	0.00	52.05	0.00	0.00
Discharges during the period out of liabilities added during 2009-14 (corresponding to allowed assets)- E	-	0.00	5.74	16.62	0.00	0.00
Reversal of liabilities out of	-	0.00	0.00	0.00	0.00	0.00

liabilities added during 2009-14 (corresponding to allowed assets)- F						
Discharges of liabilities for the period (B+E)	-	201.02	37.45	42.67	0.00	0.00

36. The actual/projected additional capital expenditure allowed after adjustment of discharges of liabilities is as under:

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Net additional capital expenditure allowed prior to adjustment of discharges of liabilities	(-) 598.23	(-) 204.37	2813.15	943.00	5430.73	8384.28
Discharges of liabilities	201.02	37.45	42.67	0.00	0.00	281.14
Actual/ Projected additional capital expenditure allowed	(-) 397.21	(-) 166.92	2855.82	943.00	5430.73	8665.42

37. Based on the above, the capital cost considered for the purpose of tariff for 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2019-14
Opening Capital cost	346317.92	345920.71	345753.79	348609.61	349552.61
Projected/ Actual Additional Capital Expenditure	(-) 397.21	(-) 166.92	2855.82	943.00	5430.73
Closing capital cost	345920.71	345753.79	348609.61	349552.61	354983.34
Average Capital Cost	346119.31	345837.25	347181.70	349081.11	352267.97

Debt-Equity Ratio

38. In terms of the provisions of Regulation 12 of the 2009 Tariff Regulations gross loan and equity amounting to ₹242422.54 lakh and ₹103895.37 lakh, respectively has been considered after taking into account the position of un-discharged liabilities as on 1.4.2009. Further, the actual/projected additional expenditure approved above has been allocated in debt-equity ratio of 70:30. This is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

39. In terms of the provisions of Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011, Return on equity has been worked out based on the grossing up of the base rate with respect to actual tax rate applicable to the petitioner as a generating company for the years 2009-10, 2010-11

and 2011-12 and for the balance years, the rate of grossing up as applicable for the year 2011-12 per annum has been considered on the normative equity after accounting for actual/projected additional capital expenditure. Accordingly, return on equity worked out is as given under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	103895.37	103776.21	103726.14	104582.88	104865.78
Addition of Equity due to Additional Capital Expenditure	(-) 119.16	(-) 50.08	856.75	282.90	1629.22
Normative Equity-Closing	103776.21	103726.14	104582.88	104865.78	106495.00
Average Normative Equity	103835.79	103751.17	104154.51	104724.33	105680.39
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year 2008-09	33.990%	33.218%	32.445%	32.445%	32.445%
Rate of Return on Equity (Pre Tax)	23.481%	23.210%	22.944%	22.944%	22.944%
Return on Equity(Pre Tax)- Annualised	24381.68	24080.65	23897.21	24027.95	24247.31

Interest on loan

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

- (a) The gross normative loan of ₹242422.54 lakh as on 1.4.2009 has been considered.
- (b) Cumulative repayment amounting to ₹30776.48 lakh as on 1.4.2009 has been considered after taking into account the revised position of liabilities as on 1.4.2009.
- (c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹211646.06 lakh.
- (d) Addition to normative loan to the tune of 70% of additional capital expenditure approved above has been considered on year to year basis
- (e) The cumulative repayment has been adjusted @70% due to de-capitalization of assets/works considered for the purpose of tariff.

41. The necessary calculation for interest on loan is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	242422.54	242144.49	242027.65	244026.72	244686.82
Cumulative repayment of loan upto previous year	30776.48	47582.68	64674.38	82075.24	99603.88
Net Loan Opening	211646.06	194561.82	177353.27	161951.49	145082.95
Addition due to Additional capitalisation	(-) 278.05	(-) 116.84	1999.07	660.10	3801.51
Repayment of loan during the year	17389.71	17347.41	17433.27	17528.64	17688.67
Less: Repayment adjustment on account of de-capitalization	602.11	258.83	35.04	0.00	0.00
Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	18.59	3.12	2.63	0.00	0.00
Net Repayment	16806.20	17091.70	17400.86	17528.64	17688.67
Net Loan Closing	194561.82	177353.27	161951.49	145082.95	131195.79

Average Loan	203103.94	185957.54	169652.38	153517.22	138139.37
Weighted Average Rate of Interest on loan	3.1525%	3.1468%	3.1425%	3.1403%	3.1389%
Interest on Loan	6402.87	5851.63	5331.30	4820.84	4336.03

Depreciation

42. In terms of Regulation 17 of the 2009 Tariff Regulations the cumulative depreciation works out to ₹73268.04 lakh as on 1.4.2009 after accounting for adjustment of un-discharged liabilities. After considering the approved additional capital expenditure for the year 2009-10 above, the balance depreciable value before providing depreciation for the year 2009-10 works out to ₹231358.42 lakh. The value of freehold land amounting to ₹7645.47 has been considered. Depreciation has been calculated by applying weighted average rate of depreciation for the respective periods as the life of the instant station is below 12 years. Further, proportionate adjustment has been made to the cumulative depreciation on account of de-capitalization of assets and also on account of discharges/reversal of liabilities out of un-discharged liabilities deducted from capital cost as on 1.4.2009. The necessary calculations in support of depreciation are as shown below:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	346317.92	345920.71	345753.79	348609.61	349552.61
Closing capital cost	345920.71	345753.79	348609.61	349552.61	354983.34
Average capital cost	346119.31	345837.25	347181.70	349081.11	352267.97
Depreciable value @ 90%	304626.46	304372.60	305582.60	307292.07	310160.25
Balance depreciable value	231358.42	213900.51	197871.49	182159.75	167499.29
Depreciation (annualized)	17389.71	17347.41	17433.27	17528.64	17688.67
Cumulative depreciation at the end	90657.75	107819.50	125144.38	142660.96	160349.63
Less: Cumulative depreciation reduction due to de-capitalization	229.92	115.81	18.32	0.00	0.00
Add: Cumulative depreciation adjustment on account of discharges / reversal of liabilities out of liabilities deducted as on 1.4.2009	44.26	7.42	6.26	0.00	0.00
Net Cumulative depreciation (at the end of the period)	90472.09	107711.11	125132.32	142660.96	160349.63

O&M Expenses

43. O&M expenses as considered in order dated 27.8.2012 in Petition No. 257/2009 as stated below has been considered.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	13000.00	13740.00	14530.00	15360.00	16240.00

Interest on Working Capital

44. Cost of coal for 1.1/2 months and cost of secondary fuel for 2 months as considered in order dated 27.8.2012 in Petition No. 257/2009 as stated below, has been considered.

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 1.5 month	19093.60	19093.60	19145.92	19093.60	19093.60
Cost of secondary fuel oil – 2 month	306.85	306.85	307.69	306.85	306.85

45. Maintenance spares as considered in order dated 27.8.2012 in Petition No. 257/2009 as stated below, has been considered.

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	2600.00	2748.00	2906.00	3072.00	3248.00

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

	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	19093.60	19093.60	19145.92	19093.60	19093.60
Fixed Charges - 2 months	11600.53	11578.60	11615.60	11710.28	11872.79
Total	30694.13	30672.20	30761.52	30803.89	30966.39

47. O&M expenses for 1 month for the purpose of working capital as considered in order dated 27.8.2012 in Petition no. 257/2009 has been considered.

	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	1083.33	1145.00	1210.83	1280.00	1353.33

48. 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:

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 1.1/2 months	19093.60	19093.60	19145.92	19093.60	19093.60
Cost of secondary fuel oil –2 month	306.85	306.85	307.69	306.85	306.85
Maintenance Spares	2600.00	2748.00	2906.00	3072.00	3248.00
O&M expenses – 1 month	1083.33	1145.00	1210.83	1280.00	1353.33
Receivables – 2 months	30694.13	30672.20	30761.52	30803.89	30966.39
Total working capital	53777.92	53965.66	54331.96	54556.34	54968.18
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	6587.80	6610.79	6655.66	6683.15	6733.60

Annual Fixed Charges for 2009-14

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	17389.71	17347.41	17433.27	17528.64	17688.67
Interest on Loan	6402.87	5851.63	5331.30	4820.84	4336.03
Return on Equity	24381.68	24080.65	23897.21	24027.95	24247.31
Interest on Working Capital	6587.80	6610.79	6655.66	6683.15	6733.60
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of secondary fuel oil	1841.11	1841.11	1846.16	1841.11	1841.11
Compensation Allowance	0.00	0.00	0.00	0.00	150.00
Special allowance	0.00	0.00	0.00	0.00	0.00
Total	69603.17	69471.59	69693.60	70261.70	71236.72

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

50. The annual fixed charges allowed as above are subject to truing up as per Regulation 6(1) of the 2009 Tariff Regulations.

51. The difference in the annual fixed charges determined by order dated 27.8.2012 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

52. Petition No. 250/GT/2013 is disposed of in terms of the above.

Sd/-
(Neerja Mathur)
Member (EO)

Sd/-
(A.K.Singhal)
Member

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson