

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 304/GT/2014**

**Coram:**

Shri Gireesh B. Pradhan, Chairperson  
Shri A.K.Singhal, Member  
Shri A.S.Bakshi, Member

**Date of Hearing: 27.02.2015**

**Date of Order: 02.11.2015**

**In the matter of**

Revision of tariff of Simhadri Super Thermal Power Station, Stage-I (1000 MW) for the period from 1.4.2009 to 31.3.2014 -Truing up of tariff determined by Commission's order dated 12.11.2014 in Petition No. 250/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. Andhra Pradesh Power Coordination Committee  
Vidyut Soudha, Khairatabad,  
Hyderabad-500 082

2. Andhra Pradesh Eastern Power Distribution Company Ltd  
Corporate Office P&T Colony,  
Seethammadhara,  
Visakhapatnam-530013-(AP)

3. Andhra Pradesh Southern Power Distribution Company Ltd,  
Corporate Office, Back side Srinivasa Kalyana Mandapam  
Tiruchhanur Road,  
Kesavayana Gunta,  
Tirupati-517503-(AP)

4. Telangana State Southern Power Distribution Company Ltd  
Mint Compound  
Corporate Office,  
Hyderabad-500 063

5. Telangana State Northern Power Distribution Company Ltd  
H.No 2-5-31/2, Vidyut Bhawan  
Nakkalagutta, Hanamkonda, Warangal-506001

**...Respondents**



**Parties present:**

**For Petitioner:**

Shri Ajay Dua, NTPC  
Shri B.S Rajput, NTPC  
Shri T Vinodh Kumar, NTPC  
Shri Bhupinder Kumar, NTPC  
Shri Ajay Mehta, NTPC  
Shri Nishant Gupta, NTPC

**For Respondents:**

None

**ORDER**

The present petition has been filed by the petitioner, NTPC for revision of tariff of Simhadri Super Thermal Power Station, Stage-I (2 x 500 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014 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 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. The Commission by order dated 27.8.2012 in Petition No. 257/2009 had approved the annual fixed charges of the generating station for the period 2009-14 considering the opening capital cost of ₹346317.92 lakh on cash basis as on 1.4.2009 and after deduction of un-discharged liabilities of ₹5333.34 lakh as on 1.4.2009. Thereafter, the annual fixed charges of the generating station for the period 2009-14 was revised by Commission’s order dated 12.11.2014 in Petition No. 250/GT/2013 after truing up, considering the capital cost of ₹346317.92 lakh and after deduction of un-discharged liabilities of ₹5333.34 lakh as on 1.4.2009. The annual fixed charges approved by the said order dated 12.11.2014 was 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
<b>Total</b>	<b>69603.17</b>	<b>69471.59</b>	<b>69693.60</b>	<b>70261.70</b>	<b>71236.72</b>

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 in this petition filed vide affidavit dated on 12.8.2014 has sought the revision of the annual fixed charges based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 and the admitted capital cost as on 31.3.2009 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 2009-14 in this petition are as under:

### Capital Cost

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	346317.92	345973.68	346178.55	349123.26	350801.22
Add: Additional Capital Expenditure	(-) 344.24	204.87	2944.71	1677.96	3050.39
Closing capital cost	345973.68	346178.55	349123.26	350801.22	353851.61

### Annual Fixed charges

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	17391.04	17359.39	17456.83	17624.80	17718.85
Interest on loan	6402.97	5851.78	5331.24	4823.76	4314.65
Return on equity	24383.55	24097.28	23929.51	24088.60	24818.93
Interest on working capital	6587.86	6611.39	6656.83	6686.48	6751.01
O&M expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Secondary fuel oil cost	1841.11	1841.11	1846.16	1841.11	1841.11
Compensation Allowance	0.00	0.00	0.00	0.00	150.00
<b>Total</b>	<b>69606.53</b>	<b>69500.95</b>	<b>69750.57</b>	<b>70424.75</b>	<b>71834.55</b>



6. The petitioner has filed additional information in compliance with the directions of the Commission. None of the respondents have filed reply in the matter. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions and the documents available on records 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 Commission in order dated 12.11.2014 in Petition No. 250/GT/2013 had approved the capital cost of ₹346317.92 lakh on cash basis as on 1.4.2009, after deduction of un-discharged liabilities amounting to ₹5333.94 lakh. Accordingly, the opening capital cost of ₹346317.92 lakh as on 1.4.2009 has been considered for revision of annual fixed charges of the generating station for the period 2009-14.

## **Additional Capital Expenditure**

9. 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 kilometres of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

10. The additional capital expenditure claimed by the petitioner for 2009-14 in Petition No. 250/GT/2013 and those allowed by order dated 12.11.2014 in the said petition is as under:

	(₹ in lakh)				
	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Projected)	2013-14 (Projected)
Total additional capital claimed	(-) 562.08	165.37	2863.20	943.00	5430.73
Exclusions not allowed	(-) 36.15	(-) 369.74	(-) 50.05	0.00	0.00
Total additional capital allowed prior to adjustment of discharge of liabilities	<b>(-) 598.23</b>	<b>(-) 204.37</b>	<b>2813.15</b>	<b>943.00</b>	<b>5430.73</b>
Discharge of liabilities allowed	201.02	37.45	42.67	0.00	0.00
<b>Actual/Projected additional capital expenditure allowed with discharge of liability</b>	<b>(-) 397.21</b>	<b>(-) 166.92</b>	<b>2855.82</b>	<b>943.00</b>	<b>5430.73</b>

11. The Commission vide order dated 12.11.2014 in Petition No.250/GT/2013 had revised the additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 based on the actual additional capital expenditure incurred for the said years after reconciliation with the books of accounts. Accordingly, the break-up details of 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 allowed by order dated 12.11.2014 is as under:

Sl. No.	Package Name	Actual Capitalization			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	Gigabit up-gradation of Sankalp building	5.36	0.00	0.00	0.00	0.00	0.00
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 dated 27.8.2012	(-) 814.72	0.00	0.00	0.00	0.00	(-) 814.72
14	<b>Grand Total (1 to 13)</b>	<b>(-) 562.08</b>	<b>165.37</b>	<b>2863.20</b>	<b>943.00</b>	<b>5430.73</b>	<b>8840.22</b>
15	Add : Exclusions not allowed(As per reconciliation statement furnished )	(-) 36.15	(-) 369.74	(-) 50.05	0.00	0.00	(-) 455.94
16	<b>Total Additional capital expenditure allowed (14+15)</b>	<b>(-) 598.23</b>	<b>(-) 204.37</b>	<b>2813.15</b>	<b>943.00</b>	<b>5430.73</b>	<b>8384.28</b>

12. The details of the actual additional capital expenditure claimed by the petitioner for the years 2009-10, 2010-11, 2011-12 2012-13 and 2013-14 in this petition are as under:

Sl. No.	Package Name	Actual additional capital expenditure					Total
		2009-10	2010-11	2011-12	2012-13	2013-14	
<b>A</b>	<b>Ash Dyke Works</b>						
1	Ash Dyke Raising	149.43	159.60	2863.20	1438.95	1627.46	6238.66
2	Other capital works in Ash Dyke	0.00	5.76	0.00	0.00	1353.04	1358.81
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	0.00	0.00
	<b>Sub-Total (A)</b>	<b>163.43</b>	<b>165.37</b>	<b>2863.20</b>	<b>1438.95</b>	<b>2980.50</b>	<b>7611.47</b>
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	Gigabit up-gradation of Sankalp building	5.36	0.00	0.00	0.00	0.00	5.36
9	Disposal of vehicles	(-) 9.28	0.00	0.00	0.00	0.00	(-) 9.28
10	Exclusion not allowed	(-) 814.72	0.00	0.00	0.00	0.00	(-) 814.72
11	<b>Grand Total (1 to 11)</b>	<b>(-) 562.08</b>	<b>165.37</b>	<b>2863.20</b>	<b>1438.95</b>	<b>2980.50</b>	<b>6885.96</b>
12	Add: Exclusion not allowed	0.00	0.00	0.00	0.00	0.00	0.00
13	De-capitalization of SAP software	0.00	0.00	0.00	(-) 3.56	0.00	(-) 3.56
14	Discharge of liabilities	217.84	39.50	81.49	242.56	69.90	651.30
15	<b>Total additional capital expenditure claimed</b>	<b>(-) 344.23</b>	<b>204.87</b>	<b>2944.71</b>	<b>1677.95</b>	<b>3050.40</b>	<b>7533.70</b>



13. It is noticed that the petitioner has claimed additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 as claimed in Petition No.250/GT/2013 even though there is no revision of the actual additional capital expenditure allowed by order dated 12.11.2014 in Petition No.250/GT/2013. It is also noticed from the above table that against the additional capital expenditure of ₹8384.28 lakh allowed vide order dated 12.11.2014, the total additional capital expenditure claimed by the petitioner in this petition during the period 2009-14 is ₹7533.70 lakh. Thus, there is reduced claim of ₹850.58 lakh towards the additional capital expenditure claimed in this petition. The main reason for reduction in the said claim is on account of 'nil' claim towards Dry Ash evacuation system augmentation in 2013-14. However, there is an increase of ₹495.95 lakh in 2012-13 and a decrease of ₹124.54 lakh in 2013-14 towards the claim for Ash dyke raising. In addition, there is also an increase of ₹374.31 lakh towards other capital works in Ash dyke. It is however noticed that the claim towards Ambient Air Quality Monitoring System (AAQMS) for ₹92.07 lakh and ₹5.82 lakh towards Other Capital works (namely. ultra thickness gauge, gigabit up gradation etc.) remain unchanged as against those allowed by order dated 12.11.2014. Considering the fact that the petitioner has claimed additional capital expenditure for the period 2009-12, we proceed to consider the additional capital expenditure for the period 2009-14 for truing-up, based on actuals as discussed in subsequent paragraphs.

### **Ash Dyke Works**

14. The Commission in the order dated 12.11.2014 had allowed the total additional capital expenditure of ₹9565.69 lakh towards Ash dyke works in 2009-14 comprising of ₹5867.20 lakh for Ash Dyke Raising in 2009-14, ₹984.49 lakh (₹5.76 in 2010-11 and ₹978.73 lakh in 2013-14) for Other Capital works in Ash Dyke, ₹14.00 lakh for Construction and raising of pedestal for Ash disposal line for lagoon 1 & 2 in 2009-10 and ₹2700.00 lakh for Dry Ash Evacuation System augmentation in 2013-14. However, the petitioner in this petition has claimed total additional capital expenditure of ₹7611.47 lakh in 2009-14 for Ash Dyke works comprising of ₹6238.66 lakh for Ash Dyke Raising in 2009-14, ₹1358.81 lakh (₹5.76 in 2010-11 and ₹1353.04 lakh in 2013-



14) for Other Capital works in Ash Dyke, ₹14.00 lakh for Construction and raising of pedestal for Ash disposal line for lagoon 1 & 2 in 2009-10 and 'nil' for Dry Ash Evacuation System augmentation in 2013-14. As the claims of the petitioner for the period 2009-12 remains unchanged, only the additional capital expenditure claimed under the head Ash Dyke works for the period 2012-14 is examined as under.

### **Ash Dyke Raising**

15. The Commission in its order dated 12.11.2014 in Petition No.250/GT/2013 had allowed the projected additional capital expenditure of ₹943.00 lakh in 2012-13 and ₹1752.00 lakh in 2013-14 for Ash Dyke Raising. Against this, the petitioner has claimed additional capital expenditure of ₹1438.95 lakh in 2012-13 and ₹1627.46 lakh in 2013-14 under this head. In justification of its claim for the year 2012-13 the petitioner has submitted that the projected additional capital expenditure for Ash Dyke raising submitted in Petition No.250/GT/2013 was towards the 2<sup>nd</sup> raising of Lagoon 2 only and whereas the actual additional capital expenditure claimed includes the balance amount of ₹501.00 lakh against 2<sup>nd</sup> raising of Lagoon 1, which was capitalized in 2011-12. In justification of the claim for 2013-14, the petitioner has submitted that the main dyke raising work has been completed and expenditure capitalized and the variation with the projected additional capital expenditure represents the association and ancillary works like drains, ramps, WBM roads, turfing etc. which are being executed and is expected to be completed during the next tariff period. In view of above submissions and considering the fact that the expenditure on Ash Dyke raising was allowed in Commission's order dated 12.11.2014, after prudence check, and capitalized, we allow the capitalization of the actual additional capital expenditure incurred under Regulation 9(2)(iii) of the 2009 Tariff Regulations.

### **Other Capital Works in Ash Dyke**

16. The Commission in its order dated 12.11.2014 had allowed the expenditure of ₹978.73 lakh in 2013-14 towards Other capital works in Ash Dyke. The petitioner in this petition has claimed additional capital expenditure of ₹1353.04 lakh in 2013-14 for the said work. In justification of its claim, the petitioner has submitted that for the year 2013-14 garland drains work is completed



and final bill along with corresponding liabilities will be discharged during next tariff period. The petitioner has submitted that ₹390.61 lakh towards cast basalt pipes for Ash transportation, which was not part of the projected additional capital expenditure in the Petition No. 250/GT/2013 has been capitalized. In view of above submission and considering the fact that the expenditure on Ash dyke works was allowed by the Commission in order dated 12.11.2014 after prudence check, and has been capitalized, the expenditure claimed by the petitioner has been allowed under Regulation 9(2) (iii) of the 2009 Tariff Regulations.

### **Dry Ash Evacuation System**

17. The Commission in order dated 12.11.2014 had allowed the expenditure of ₹2700 lakh for dry Ash evacuation system augmentation during 2013-14. However, the petitioner has not capitalized any expenditure during 2013-14 for the said item. The petitioner has submitted that this item was awarded in 2010-11 but could not be capitalized in the tariff period 2009-14 due to delay in civil works, structural works and silo execution works and due to lack of resource mobilization by the agency. The petitioner has further requested the Commission to allow the expenditure of ₹3100 lakh (approx) lying towards Capital Work in Progress, which is now expected to be completed and put to use during the next tariff period (2014-19). Since the work is expected to be completed and capitalized only during the next tariff period (2014-19), the claim of the petitioner shall be considered as per provisions of the 2014 Tariff Regulations. Accordingly, the capitalization of this item has not been allowed in this order.

### **De-capitalization**

18. The petitioner has de-capitalized an amount ₹3.56 lakh towards the implementation of SAP in 2012-13. Since the asset is not in use, the de-capitalization of ₹3.56 lakh has been allowed. Some of the assets like Ambient Air Quality Monitoring System, Ultra thickness gauge, Cast blast pipes, Gigabit up-gradation of Sankalp building, disposal of vehicles etc., capitalized for the period 2009-12 had been reconciled vide order dated 12.11.2014 in Petition No. 250/GT/2013 and hence not discussed in this order.



## Reconciliation of actual additional capital expenditure for the period 2012-14

19. The petitioner vide affidavit dated 18.3.2015 has reconciled the actual additional capital expenditure for the period 2012-14 duly certified by the auditor as under

(₹ in lakh)			
Sl. no		2012-13	2013-14
1	Opening Gross Block	397440.56	388242.49
2	Adjustment for asset held for disposal	0.98	0.00
3	Revised Opening Gross Block (1-2)	397439.58	388242.49
4	Closing Gross Block	388242.49	396269.56
5	Addition in Gross Block (4-3)	(-) 9197.09	8027.07
<b>EXCLUSIONS</b>			
6	Capitalization of Spares	522.02	712.99
7	Capitalization of MBOA and other items	86.16	667.79
8	Inter Unit-transfer	(-)1023.33	0.00
9	Reversal of liabilities	0.00	0.00
10	De-capitalization of capital spares	(-) 201.82	(-)194.22
11	De-capitalization of MBOA	(-) 23.63	(-) 41.24
12	De-capitalization of other items	0.00	(-)12.27
13	FERV	(-) 10443.68	3458.18
14	Total exclusions from capital cost	(-) 11084.28	4591.24
15	Additional capital expenditure claimed (5-14)	1887.20	3435.83
16	Liability in additional capital expenditure	451.80	455.33
17	Additional capitalization on cash basis (15-16)	1435.39	2980.51
18	Discharge of liabilities	242.56	69.90
<b>19</b>	<b>Total additional capital expenditure claimed (17 + 18)</b>	<b>1677.96</b>	<b>3050.40</b>

20. 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 exclusion of liabilities in the additional capital expenditure considered for the purpose of tariff.

### Exclusions

21. The summary of exclusions claimed as per books of accounts and those allowed are discussed as under:

(₹ in lakh)			
<b>EXCLUSIONS</b>			
		2012-13	2013-14
1	Capitalization of Spares	522.02	712.99
2	Capitalization of MBOA and other items	86.16	667.79
3	Inter Unit Transfer	(-)1023.33	0.00
4	Liability Reversal	0.00	0.00



5	<b>De-capitalization of Capital Spares</b>		
	A. De-capitalization of Spares part of capital cost	(-) 52.51	(-)16.53
	B. De-capitalization of Spares not part of capital cost	(-) 149.30	(-)177.69
6	<b>De-capitalization of MBOA</b>		
	A. De-capitalization of (MBOA) part of capital cost	(-)23.21	(-) 0.24
	B. De-capitalization of (MBOA) not part of capital cost	(-) 0.41	(-) 41
7	De-capitalization of other items	0.00	(-)12.27
8	FERV	(-)10443.68	3458.18
9	Total Exclusions claimed (A)	(-)11084.28	4591.24
10	<b>Exclusions allowed (B)</b>	<b>(-)11008.54</b>	<b>4608.00</b>
11	<b>Exclusions not allowed (B-A)</b>	<b>(-) 75.72</b>	<b>(-)16.77</b>

### Capitalization of Spares

22. The petitioner has procured spares amounting to ₹522.02 lakh in 2012-13 and ₹712.99 lakh in 2013-14 for maintaining stock of necessary spares. As 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 exclusion of the said amounts are allowed.

### De-capitalization of spares part of capital cost

23. The petitioner has de-capitalized capital spares amounting to (-) ₹52.51 lakh in 2012-13, (-) ₹16.53 lakh in 2013-14 in books of accounts on these spares becoming unserviceable. It is observed from the submission of the petitioner that these spares were part of capital cost of the project which was allowed in tariff and these spares, on becoming un-serviceable, had been taken out of the capital cost. Since the expenditure form part of the capital cost, the exclusion for de-capitalization of spares for the said amounts has not been allowed.

### De-capitalization of spares not part of capital cost

24. The petitioner has de-capitalized capital spares amounting to (-) ₹149.30 lakh in 2012-13 and (-) ₹177.69 lakh in 2013-14 in books of accounts on these spares becoming unserviceable. It is noticed that these spares were not allowed in tariff and do not form part of the capital cost



of the project. Since, these expenses were not part of capital cost, the exclusion for de-capitalization of these spares for the said amounts has been allowed.

#### **Capitalization of Miscellaneous Bought out Assets (MBOA) and other items**

25. The petitioner has capitalized MBOA items for ₹86.16 lakh in 2012-13 and ₹667.79 lakh in 2013-14. Since the capitalization of minor assets is not allowed after the cut-off date, the exclusion of the said amounts has been allowed.

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

26. The petitioner has de-capitalized in the books of accounts, MBOA items amounting to (-) ₹18.66 lakh as part of capital cost, (-) ₹23.21 lakh in 2012-13 and (-) ₹0.24 lakh in 2013-14, on these assets becoming un-serviceable. It is observed that these MBOA items were part of capital cost which was allowed in tariff and these MBOA items have been taken out of the capital cost on becoming un-serviceable. Since these expenses were part of the capital cost, the exclusion for de-capitalization of these spares for (-) ₹23.21 lakh during 2012-13 and (-) ₹0.24 lakh in 2013-14 has not been allowed.

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

27. The petitioner has de-capitalized MBOA items amounting to (-) ₹0.41 lakh in 2012-13 and (-) ₹41 lakh in 2013-14 in books of accounts on these spares becoming un-serviceable. It is observed that these MBOA items were not allowed in tariff and do not form part of the capital cost. Since these expenses were not part of capital cost, the exclusion for de-capitalization of these MBOA items has been allowed.

#### **Inter-Unit Transfer**

28. An amount of (-) ₹1023.33 lakh in 2012-13 has been excluded on account of Inter-unit transfer of assets like diesel locomotives. The Commission in its various orders 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 line with the said decisions, the exclusion of (-) ₹1023.33 lakh in 2012-13 on account of inter-unit transfer has been allowed.

#### **De-capitalization of Other items**

29. The petitioner has de-capitalized items amounting to (-) ₹12.27 lakh in 2013-14, (i.e. ₹9.19 lakh for multipurpose hall and ₹3.08 lakh for Air-conditioning for auditorium), which do not form part of the capital cost. Since, these expenses are not part of capital cost, the exclusion for de-capitalization of other items has been allowed.

#### **FERV**

30. The petitioner has excluded amounts of (-) ₹10443.68 lakh in 2012-13 and ₹3458.18 lakh in 2013-14. As the petitioner shall bill FERV directly on the beneficiaries, the exclusion of these amounts is in order and has been allowed.

31. The details of the exclusions claimed *vis-à-vis* allowed on cash basis is as under:

	(₹ in lakh)	
	<b>2012-13</b>	<b>2013-14</b>
Exclusions claimed (A)	(-)11084.28	4591.24
Exclusions allowed (B)	(-)11008.54	4608.00
Exclusions not allowed (B-A)	(-)75.72	(-)16.77

32. Based on the above discussions, the actual additional capital expenditure allowed for the period 2012-14, is summarized as under:

		(₹ in lakh)	
		<b>2012-13</b>	<b>2013-14</b>
<b>ASH DYKE WORKS</b>			
1	Ash dyke raising	1438.95	1627.46
2	Other capital works in Ash dyke	0.00	1353.04
3	Total additional capital expenditure allowed (a)	1438.95	2980.50
4	De-capitalization of implementation of SAP (b)	(-) 3.56	0.00
5	Additional capital expenditure allowed (a-b)=c	1435.39	2980.50
6	Exclusions not allowed (d)	(-) 75.72	(-) 16.77
<b>7</b>	<b>Net additional capital expenditure allowed (c-d)</b>	<b>1359.67</b>	<b>2963.73</b>

33. On scrutiny of the submissions of the petitioner in this petition and in Petition No. 250/GT/2013 the reversal and discharges of liabilities (on actual basis), is revised as under:



	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Discharges approved earlier	201.02	37.45	42.67	0.00	0.00
Discharges approved now	217.84	39.50	84.91	242.56	69.90
<b>Difference</b>	<b>16.83</b>	<b>2.05</b>	<b>42.24</b>	<b>242.56</b>	<b>69.90</b>
Reversals approved earlier	0.00	(-) 3.35	(-) 10.18	0.00	0.00
Reversals approved now	26.11	(-) 3.35	(-) 10.18	0.00	0.00
<b>Difference</b>	<b>26.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

34. Considering the additional capital expenditure along with discharge of liabilities, the additional capital expenditure allowed for 2009-14 is worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure	(-) 598.23	(-) 204.38	2813.16	1359.67	2963.74
Add: Discharge of liabilities	217.84	39.50	84.91	242.56	69.90
<b>Total Additional capital expenditure allowed</b>	<b>(-) 380.38</b>	<b>(-) 164.88</b>	<b>2898.07</b>	<b>1602.23</b>	<b>3033.63</b>

35. Accordingly, the capital cost approved for the purpose of tariff is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	346317.92	345937.53	345772.65	348670.72	350272.95
Add: Admitted additional capital expenditure	(-) 380.38	(-) 164.88	2898.07	1602.23	3033.63
<b>Closing capital cost</b>	<b>345937.53</b>	<b>345772.65</b>	<b>348670.72</b>	<b>350272.95</b>	<b>353306.58</b>
<b>Average capital cost</b>	<b>346127.72</b>	<b>345855.09</b>	<b>347221.68</b>	<b>349471.83</b>	<b>351789.77</b>

### Debt–Equity Ratio

36. In terms of the provisions of Regulation 12 of the 2009 Tariff Regulations, the petitioner has considered the debt-equity ratio of 70:30 for the period 2009-14. Accordingly, considering the admitted additional capital expenditure, the debt- equity ratio of 70.30 has been considered for the year ending 31.3.2010, 31.3.2011, 31.3.2012, 31.3.2013 and 31.3.2014 respectively.

### Return on Equity

37. The notional equity of ₹103895.37 lakh as on 1.4.2009 has been considered after adjustment of un-discharged liability of ₹1600.00 lakh (30% of total un-discharged liability as on 1.4.2009). The petitioner has claimed ROE considering the base rate of 15.50% and the actual



tax rate for the respective years of the tariff period and the same has been considered. Return on Equity has been computed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Normative Equity - Opening	103895.37	103781.26	103731.80	104601.22	105081.89
Addition to equity on account of additional capital expenditure	(-)114.11	(-) 49.47	869.42	480.67	910.09
Normative Equity - Closing	103781.26	103731.80	104601.22	105081.89	105991.98
Average Equity	103838.32	103756.53	104166.51	104841.55	105536.93
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate	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%
<b>Return on Equity (Pre Tax) - annualized</b>	<b>24382.28</b>	<b>24081.89</b>	<b>23899.96</b>	<b>24054.85</b>	<b>24781.13</b>

### Normative Annual Plant Availability Factor

38. The Normative Annual Plant Availability Factor of 85% as considered in order dated 12.11.2014 has been considered.

### Interest on loan

39. 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 after adjustment of un-discharged liability of ₹3733.34 lakh (70% of total un-discharged liability as on 1.4.2009).

(b) Cumulative repayment of loan of ₹31250.44 lakh as on 31.3.2009 as considered in order dated 12.11.2014 in Petition No.250/GT/2013 has been considered as cumulative repayment as on 1.4.2009. However, after taking into account the proportionate adjustment (duly taking into account the liability and debt position during the period 2004-09) 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 ₹30776.48 lakh.

(c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹ 211646.07 lakh.



(d) Addition to normative loan on account of the admitted additional capital expenditure has been considered on year to year basis.

(e) Depreciation allowed for the period has been considered as repayment. Further, proportionate adjustment has been made to the repayments corresponding to discharges/reversal of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(f) Average net loan is calculated as average of opening and closing.

(g) Weighted average rate of interest has been calculated considering draws up to 31.3.2014.

40. 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	242156.27	242040.86	244069.50	245191.07
Cumulative repayment of loan upto previous year / period	30776.47	47593.33	64686.10	82092.40	99660.18
Net Loan Opening	211646.07	194562.95	177354.75	161977.10	145530.89
Addition due to Additional capitalisation	(-) 266.27	(-) 115.42	2028.65	1121.56	2123.54
Repayment of loan during the year	17390.14	17348.31	17435.25	17600.24	17691.74
Less: Repayment adjustment on account of de-capitalization	594.96	258.83	35.04	53.01	11.74
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	21.68	3.30	6.08	20.55	3.26
Net Repayment	16816.86	17092.78	17406.30	17567.78	17683.27
Net Loan Closing	194562.95	177354.75	161977.10	145530.89	129971.17
Average Loan	203104.51	185958.85	169665.93	153754.00	137751.03
Weighted Average Rate of Interest on Loan	3.15%	3.15%	3.14%	3.14%	3.14%
<b>Interest on Loan</b>	<b>6402.89</b>	<b>5851.67</b>	<b>5331.73</b>	<b>4828.28</b>	<b>4323.84</b>

## Depreciation

41. Cumulative depreciation as on 1.4.2009 after adjustment of un-discharged liabilities deducted as on 1.4.2009 works out as ₹73268.04 lakh and the same has been considered. The petitioner has claimed depreciation considering the weighted average rate of depreciation of 5.0242% for 2009-10, 5.0161% for 2010-11, 5.0214% for 2011-12, 5.0362% for 2012-13 and



5.2091% for 2013-14 respectively. The same is in order and hence considered. Necessary calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Average Capital Cost	346127.72	345855.09	347221.68	349471.83	351789.77
Value of land included above on average	7675.47	7675.47	7675.47	7855.54	8035.61
Rate of depreciation	5.0242%	5.0161%	5.0214%	5.0362%	5.0291%
Depreciable value	304607.03	304361.66	305591.59	307454.67	309378.74
Remaining Depreciable Value	231338.99	213923.47	197980.67	182415.03	166720.30
Depreciation (for the period)	17390.14	17348.31	17435.25	17600.24	17691.74
<b>Depreciation (annualized)</b>	<b>17390.14</b>	<b>17348.31</b>	<b>17435.25</b>	<b>17600.24</b>	<b>17691.74</b>
Cumulative depreciation (at the end of the period)	90658.18	107786.50	125046.17	142639.87	160350.18
Less: Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009	(-)51.61	(-)7.85	(-)14.48	(-)48.92	(-)7.77
Less: Cumulative depreciation reduction due to de-capitalization	271.59	183.43	21.02	30.35	8.73
Cumulative depreciation after adjustment due to de-capitalization (at the end of the period)	90438.19	107610.92	125039.63	142658.44	160349.22

### O&M Expenses

42. O&M expenses as considered in order dated 12.11.2014 has been considered as under:

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

### Interest on Working Capital

43. Cost of coal for 2 months and cost of secondary fuel for 2 months as considered in order dated 12.11.2014 in Petition No. 250/GT/2013 as stated below, has been considered.

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 2 months	19093.60	19093.60	19145.92	19093.60	19093.60
Cost of secondary fuel oil – 2 months	306.85	306.85	307.69	306.85	306.85



44. Maintenance spares as considered in order dated 12.11.2014 in Petition No. 250/GT/2013 as stated below, has been considered.

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
2600.00	2748.00	2906.00	3072.00	3248.00

45. 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 -2 months	19093.60	19093.60	19145.92	19093.60	19093.60
Fixed Charges -2 months	11600.70	11578.97	11616.48	11728.30	11962.06
<b>Total</b>	<b>30694.31</b>	<b>30672.57</b>	<b>30762.39</b>	<b>30821.91</b>	<b>31055.66</b>

46. O&M expenses for 1 month for the purpose of working capital as considered in order dated 12.11.2014 in Petition No. 250/GT/2013 as stated below, has been considered

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
1083.33	1145.00	1210.83	1280.00	1353.33

47. 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
Cost of coal – Two months	19093.60	19093.60	19145.92	19093.60	19093.60
Cost of secondary fuel oil – Two months	306.85	306.85	307.69	306.85	306.85
O&M expenses	1083.33	1145.00	1210.83	1280.00	1353.33
Maintenance Spares	2600.00	2748.00	2906.00	3072.00	3248.00
Receivables	30694.31	30672.57	30762.39	30821.91	31055.66
<b>Total Working Capital</b>	<b>53778.10</b>	<b>53966.03</b>	<b>54332.84</b>	<b>54574.37</b>	<b>55057.45</b>
Rate of Interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
<b>Interest on Working Capital</b>	<b>6587.82</b>	<b>6610.84</b>	<b>6655.77</b>	<b>6685.36</b>	<b>6744.54</b>

### Compensation Allowance

48. The Compensation allowance as allowed in order dated 12.11.2014 in Petition No. 250/GT/2013 has been considered in this order.



## Annual Fixed Charges

49. 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
Return on Equity	24382.28	24081.89	23899.96	24054.85	24781.13
Interest on Loan	6402.89	5851.67	5331.73	4828.28	4323.84
Depreciation	17390.14	17348.31	17435.25	17600.24	17691.74
Interest on Working Capital	6587.82	6610.84	6655.77	6685.36	6744.54
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
<b>Total</b>	<b>69604.23</b>	<b>69473.82</b>	<b>69698.87</b>	<b>70369.83</b>	<b>71772.36</b>

**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 difference in the annual fixed charges determined by order dated 12.11.2014 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

51. Petition No. 304/GT/2014 is disposed of in terms of the above.

**Sd/-**  
**(A.S Bakshi)**  
**Member**

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

**Sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**

