

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 176/GT/2013

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri M. Deena Dayalan, Member

Shri A.K.Singhal, Member

Smt. Neerja Mathur, Member (EO)

Date of Hearing: 15.4.2014

Date of Order: 15.5.2014

In the matter of

Revision of tariff of Rihand 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 order dated 7.6.2012 in Petition No. 261/2009 and order dated 22.4.2013 in R. P. No. 22/2012.

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 Bhavan, 14, Ashok Marg,
Lucknow – 226001(Uttar Pradesh)

2. Jaipur Vidyut Vitran Nigam Ltd
Vidyut Bhawan, Janpath,
Jaipur – 302 205

3. Ajmer Vidyut Vitran Nigam Ltd
Old Power House,
Hatthi Bhatta, Jaipur Road,
Ajmer – 305 001

4. Jodhpur Vidyut Vitran Nigam Ltd
New Power House, Industrial Area,
Jodhpur – 342 003

5. Tata Power Delhi Distribution Ltd
33 KV Sub-station, Kingsway Camp
Delhi – 110 009

6. BSES Rajdhani Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110 019

7. BSES Yamuna Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110 019

8. Haryana Power Purchase Centre,
Shakti Bhawan, Sector 6,
Panchkula – 134 109

9. Punjab State Power Corporation Ltd
The Mall, Secretariat Complex,
Patiala – 147 001

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

11. Power Development Department,
Government of J&K,
New secretariat,
Srinagar (J&K)

12. Power Department,
UT Secretariat,
UT Secretariat, Sector 9D
Chandigarh-160009

13. Uttrakhand Power Corporation Ltd
Urja Bhawan, Kanwali Road,
Dehradun – 248 001

...Respondents

Parties present:

For Petitioner: Shri Vivek Kumar, NTPC
Shri A.S.Pandey, NTPC
Shri S.K.Jain, NTPC
Shri A.K.Srivastava, NTPC

For Respondents: Shri R.B.Sharma, Advocate, BRPL
Shri Manish Garg, UPPCL & BYPL
Shri Sanjay Srivastav, BRPL
Shri Megha Bajpeyi, BRPL

ORDER

This petition has been filed by the petitioner, NTPC, for revision of tariff of Rihand 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. The dates of commercial operation of different units of the generating station are as under:

Unit-I	1.1.1990
Unit-II	1.1.1991

3. Petition No. 261/2009 was filed by the petitioner for approval of tariff of the generating station for the period 2009-14 and the Commission by its order dated 7.6.2012 approved the annual fixed charges considering the capital cost of ₹240456.49 lakh as on 1.4.2009, after deduction of un-discharged liabilities of ₹2660.77 lakh as on 1.4.2009. Thereafter, the petitioner filed Review Petition No. 22/2012 seeking review of the said order dated 7.6.2012 and the Commission by its order dated 22.4.2013 revised the annual fixed charges approved vide order dated 7.6.2012. The annual fixed charges approved by order dated 22.4.2013 was as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4659.64	4669.23	4688.83	4753.00	5211.65
Interest on Loan	28.52	0.00	0.00	0.00	23.18
Return on Equity	28081.66	28178.98	28275.37	28296.71	28796.86
Interest on Working Capital	4618.95	4665.35	4724.11	4763.84	4833.83
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of Secondary fuel Oil	1603.37	1603.37	1607.76	1603.37	1603.37
Compensation Allowance	350.00	500.00	650.00	650.00	650.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
Total	52342.14	53356.93	54476.07	55426.91	57358.88

4. The petitioner 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. For the years 2012-13 and 2013-14, the petitioner has indicated the projected capital expenditure based on latest estimates and status of work.

5. 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 petitioner vide its affidavit dated 31.1.2013 claimed annual fixed charges for 2009-14 in this petition. Subsequently, vide its affidavit dated 21.11.2013, the petitioner revised its claim for Annual Fixed Charges based on the directions of the Commission during the proceedings held on 1.10.2013. Accordingly, the annual fixed charges claimed are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4659.63	4683.98	4722.02	4926.15	5161.73
Interest on Loan	28.56	0.00	0.00	0.00	0.00
Return on Equity	28081.77	27860.91	27646.43	27708.98	27767.54
Interest on Working Capital	4618.96	4659.03	4711.70	4755.20	4810.86
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Secondary Fuel Oil Cost	1603.37	1603.37	1607.76	1603.37	1603.37
Compensation Allowance	350.00	500.00	650.00	650.00	650.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
Total	52342.27	53047.29	53867.90	55003.70	56233.49

7. Reply to the petition has been filed by the Respondent No.1. Uttar Pradesh Power Company Ltd (UPPCL) and the Respondent No 6, BSES Rajdhani Power Ltd (BRPL) and the petitioner has filed its rejoinder to the said replies. The petitioner has also filed additional submissions as directed by the

Commission. The petition was listed for directions on 15.4.2014 and the representative of the respondents UPPCL and BYPL submitted that the petitioner shall be directed to file audited statement of the actual capital expenditure for 2009-12 in terms of the regulations of the Commission. The representative of the petitioner clarified that the same has been filed vide its affidavit dated 21.11.2013 and copies have been served on all the respondents. Based on the available records and submissions of the parties, we proceed to consider the claims of the petitioner for revision of tariff 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. In accordance with the above, the capital cost of ₹240456.49 lakh (on accrual basis) after deduction of un-discharged liabilities of ₹2660.77 lakh as on 1.4.2009, considered by the Commission in order dated 7.6.2012 in Petition No. 261/2009 and order dated 22.4.2013 in R. P. No. 22/2012 has been considered for revision of the annual fixed charges.

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 for 2009-14 allowed by order dated 22.4.2013 in Review Petition No. 22/2012 (in Petition No. 261/2009) is as under:

(₹ in lakh)						
Head of work/ Equipment	2009-10 (Actual)	2010-11 (Projected)	2011-12 (Projected)	2012-13 (Projected)	2013-14 (Projected)	Total
Ash Handling System						
Central Ash Dyke Raising	3.36	0.00	6.00	0.00	0.00	9.36
1st raising of Mithini Ash Dyke Lagoon-I	0.00	0.00	0.00	600.00	600.00	1200.00
1st raising of Cental Ash Dyke Lagoon-II	0.00	0.00	0.00	0.00	0.00	0.00
Total- Ash Handling System (A)	3.36	0.00	6.00	600.00	600.00	1209.36
Change of law						
Phasing out of Halon Fire Fighting System with alternate Inert Gas	0.00	192.38	0.00	0.00	0.00	192.38
De-capitalization	0.00	55.23	0.00	0.00	0.00	55.23
Net amount allowed	0.00	137.15	0.00	0.00	0.00	137.15
R&M of ESPs	0.00	0.00	0.00	0.00	13000.00	13000.00
Total- Environmental System (B)	0.00	137.15	0.00	0.00	13000.00	13137.15
New items/Works claimed						
Land	0.00	0.00	0.00	0.00	0.00	-
Renovation of PLC system	0.00	0.00	0.00	0.00	0.00	-
De-cap of PLC system	0.00	0.00	0.00	0.00	0.00	-
MGR coal TPT system	0.00	0.00	0.00	0.00	0.00	-
Renovation of breaker in 400 kV system	0.00	0.00	0.00	0.00	0.00	-
Engineering design, supply, erection & testing of PA system for old community centre auditorium and new executive club	0.00	0.00	0.00	0.00	0.00	-
220 kV Main Battery Set	0.00	0.00	0.00	0.00	0.00	-
Total (C)	0.00	0.00	0.00	0.00	0.00	-
Grand Total (A+B+C)	3.36	137.15	6.00	600.00	13600.00	14346.51

12. The details of the actual/projected additional capital expenditure claimed in this petition vide affidavit dated 21.11.2013 is summarized as under:

(₹ in lakh)

Head of work/ Equipment	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Projected)	2013-14 (Projected)	Total
Ash Handling System						
Central Ash Dyke Raising	1.75	0.00	0.00	0.00	0.00	1.75
1st raising of Mithini Ash Dyke Lagoon-I	0.00	0.00	0.00	789.91	0.00	789.91
1st raising of Central Ash Dyke Lagoon-II	0.00	0.00	0.00	911.55	0.00	911.55
Total-Ash Handling system (A)	1.75	0.00	0.00	1701.46	0.00	1703.22
Change-in-Law						
Phasing out of Halon Fire Fighting System with alternate Inert Gas	0.00	0.00	170.15	0.00	0.00	170.15
De-capitalization	0.00	0.00	55.23	0.00	0.00	55.23
Net amount allowed	0.00	0.00	114.92	0.00	0.00	114.92
R&M of ESPs	0.00	0.00	0.00	0.00	0.00	0.00
Total- Environmental System (B)	0.00	0.00	114.92	0.00	0.00	114.92
New Items/Works						
Land	0.00	327.38	0.00	0.00	0.00	327.38
Renovation of PLC system	2.73	0.00	0.00	0.00	0.00	2.73
De-capitalization of PLC system	(-) 0.12	0.00	0.00	0.00	0.00	(-) 0.12
MGR coal TPT system	1.72	0.00	0.00	0.00	0.00	1.72
Renovation of breaker in 400 kV system	0.19	0.00	0.00	0.00	0.00	0.19
Engineering Design, supply, erection & testing of PA system for old community centre auditorium and new executive club	0.00	8.55	0.00	0.00	0.00	8.55
220 kV Main Battery Set	0.00	0.00	0.00	0.00	0.00	0.00
Total (C)	4.51	335.93	0.00	0.00	0.00	340.44
Grand Total (A+B+C)	6.27	335.93	114.92	1701.46	0.00	2158.58

13. It is observed from the above table that against the additional capital expenditure of ₹14346.51 lakh allowed in Commission's order dated 22.4.2013 in R.P No. 22/2012, the total claim of the petitioner in this petition is ₹2158.58 lakh. Accordingly, there is a reduction of ₹12187.93 lakh in the claim of the petitioner. This reduction is mainly on account of the petitioner not claiming the expenditure of ₹13000.00 lakh towards R&M of ESPs and ₹22.23 lakh for phasing out of Halon Fire Fighting System with Inert Gas, and excess claim of ₹493.86 lakh for Ash Handling System and new claim of ₹340.44 lakh for Public Address (PA) system, Land compensation, Renovation of PLC system etc. There is variation in the actual capital expenditure claimed for 2009-10 as against those

allowed vide order dated 7.6.2012 in Petition No. 261/2009 and revised vide order dated 22.4.2013 in Review Petition No. 22/2012 due to non reconciliation of un-discharged liability earlier and the claims on new items/works as per gross block.

Ash Handling System-Regulation 9(2)(iii)

14. It is observed that there is an increase in the expenditure of ₹493.86 lakh towards Ash Dyke Work / Ash handling system claimed in this petition as against the expenditure approved by the Commission earlier. The petitioner vide its affidavit dated 8.3.2013 has submitted that against the projected capitalization of ₹1206.00 lakh for both the schemes of Ash dyke considered together, the revised projected expenditure is ₹1701.46 lakh. According to the petitioner, the projection made earlier was based on cost estimates prepared on DSR basis, whereas, the revised projections are based on the actual award price discovered through bidding process. It has also been submitted that the change in quantity of stripping and grading for foundation has contributed towards increase in revised projection. The reason furnished by the petitioner for variation in the projected cost for Ash dyke work is found justified and hence considered. The petitioner has claimed actual capital expenditure of ₹1.75 lakh, on cash basis excluding un-discharged liability of ₹1.61 lakh towards Central Ash Dyke raising during 2009-10 as against expenditure of ₹3.36 lakh allowed in order dated 7.6.2012. Since there is no change in the claim of the petitioner in the present petition against the expenditure allowed in order dated 7.6.2012, the actual capital expenditure of ₹1.75 lakh during 2009-10 and the projected capital expenditure of ₹1701.46 lakh during 2012-13 which is found justified has been allowed.

Environmental System under Change-in-Law-Regulation 9(2)(ii)

R&M of ESPs

15. The Commission in its order dated 7.6.2012/22.4.2013 had allowed the projected capital expenditure of ₹13000.00 lakh for R&M of ESPs during 2013-14. The petitioner in this petition has not claimed the additional capital expenditure on this count during the period 2009-14. However, the petitioner vide its affidavit dated 8.3.2013 while submitting that the package was awarded to M/s Hitachi on 1.3.2013 after incorporating the environment norm for ESP emission has also stated that considering the timelines in the contract and the requirement of shutdowns, the actual capitalization would stretch beyond 2013-14 and would continue till the year 2015-16. The petitioner shall have the option to avail Special Allowance since then and in case the said option is exercised, the expenditure on R&M shall be met from the special allowance, by the petitioner.

Phasing out of Halon Fire fighting System with Inert Gas

16. The Commission vide its order dated 7.6.2012 in Petition No. 261/2009 had rejected the capitalization of the expenditure for various R&M Schemes (which includes Phasing out of Halon Fire fighting System) on the ground that the generating station was not eligible for R&M scheme prior to completion of useful life of 25 years as per Regulation 10 of the 2009 Tariff Regulations and that the petitioner was entitled to Compensation Allowance in terms of Regulation 19(e) of the 2009 Regulations to meet the expenditure on new assets of capital nature. The petitioner filed Review Petition No. 22/2012 and had submitted that the said asset was required for statutory compliance under National Fire Protection Association Standard on Clean Agent Fire Extinguishing System (NFPA-2001) and would be admissible under the Regulation 9(2)(ii) i.e Change-in Law. Considering this, the Commission by order dated 22.4.2013 in R.P. No.22/2012 had allowed the capitalization of ₹137.15 lakh towards the Phasing out of Halon Fire Fighting System with alternate Inert Gas during 2010-11 under Regulation 9(2)(ii). The petitioner vide its affidavit dated 21.11.2013 in Form-9 of the

petition has claimed ₹170.15 lakh in the year 2011-12, excluding liability of ₹24.46 lakh, and with the corresponding de-capitalization value of ₹55.23 lakh of the asset replaced. In view of the above, the actual additional capital expenditure of ₹114.92 lakh (170.15-55.23) on net basis, has been allowed for 2011-12.

New items /Works

17. It is noticed that the petitioner has claimed capitalization of expenditure of ₹340.44 lakh towards new items/works in the present petition. This includes actual expenditure of ₹327.38 lakh during 2010-11 claimed under Regulation 9(2)(i) towards land compensation as per judgment dated 15.9.2006 of the Hon'ble Supreme Court and ₹2.73 lakh for PLC system with de-capitalization of ₹0.13 lakh i.e. on net , ₹2.60 lakh as final balance payment, ₹1.72 lakh as final arbitration payment, ₹0.19 lakh on Renovation of breaker in 400 kV system under the Regulation 9(2)(viii) towards cost adjustment during 2009-10 and ₹8.55 during 2010-11 under the Regulation 5,6 &7 towards Public Address (PA) system. No claim has been made by the petitioner on cash basis for 220 kV Main Battery Set during 2011-12 under Regulation 5,6&7 and the petitioner has submitted that Battery Banks replaced as a one-time capital expenditure and pending testing of the same, the expenditure of ₹18.42 lakh has been shown as liability. The petitioner has furnished sufficient justification/documentary evidence towards claim for land compensation and the same has been allowed under Regulation 9(2) (i) of the 2009 Tariff Regulations.

18. The petitioner's claim of actual capital expenditure of ₹2.60 lakh (2.73-0.13) towards Renovation of PLC System, ₹1.72 lakh for MGR Coal Transport system as final balance payments and ₹0.19 lakh for Renovation of breaker in 400 kV system as cost adjustment has also been allowed under Regulation 9(2)(viii). The capital expenditure of ₹18.42 lakh on Battery Bank and ₹8.55 lakh for

Public Address (PA) system has not been allowed and the same may be met from the Compensation Allowance allowed to the generating station in line with the observations made by the Commission in its order dated 7.6.2012.

19. The petitioner's claim for additional capital expenditure as per books of accounts for the year 2009-10, 2010-11 and 2011-12 is as under:

		(₹ in lakh)		
Sl. No.		2009-10	2010-11	2011-12
a	Opening Gross Block as per audited balance sheet (A)	239877.06	240619.00	242651.99
b	Closing Gross Block as per audited Balance Sheet (B)	240619.00	242651.99	246863.93
c	Addition during the year 2009-10 C=(B-A) (as per books)	741.94	2032.99	4211.94
d	Exclusions (D)	495.50	1600.06	4015.66
6	Liabilities included in additional capital expenditure (E)	240.17	96.99	81.35
	Additional capital expenditure claimed on cash basis (C-D-E)	6.27	335.93	114.92

Exclusions

20. The actual additional capital expenditure claimed by the petitioner has been reconciled with gross block of the balance sheet. It is observed 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 for the purpose of tariff. The details of exclusions claimed by the petitioner for the purpose of tariff during 2009-10 to 2011-12, under different heads in the claim for the purpose of tariff are discussed in subsequent paragraphs:

FERV

21. The petitioner has excluded an amount of (-) ₹76.59 lakh during 2009-10, ₹1.26 lakh during 2010-11 and ₹7.87 lakh during 2011-12 on account of impact of FERV. As the petitioner has billed the said amount directly to the beneficiaries in accordance with the Tariff Regulations, 2004, the exclusion of FERV is in order and has been allowed.

Inter-Unit transfers

22. The petitioner has excluded an amount of ₹0.37 lakh during 2009-10 and (-) ₹0.61 lakh during 2010-11 under this head on account of transfer of certain assets. These inter-unit transfers are temporary in nature. The Commission while dealing with applications for additional capitalization in respect of other generating stations of the petitioner, has 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 exclusions of the amount of ₹0.37 lakh during 2009-10 and (-) ₹0.61 lakh during year 2010-11 on account of inter-unit transfer of equipment on temporary basis is also in order and has been allowed.

Capitalization of Capital Spares

23. The petitioner has capitalized capital spares in books of accounts amounting to ₹149.25 lakh during 2009-10, ₹418.38 during 2010-11 (excluding un-discharged liabilities of ₹4.57 lakh) and ₹3915.45 lakh during 2011-12 (excluding un-discharged liabilities of ₹0.09 lakh). The 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. Hence, the exclusion of ₹149.25 lakh during 2009-10, ₹418.38 during 2010-11 (excluding un-discharged liabilities of ₹4.57 lakh) and ₹3915.45 lakh during 2011-12 (excluding un-discharged liabilities of ₹0.09 lakh) are in order and is allowed.

Capital Spares de-capitalized

24. The petitioner has de-capitalized capital spares amounting to ₹27.16 lakh in books of account during 2009-10 and ₹39.39 lakh during 2010-11 on these spares becoming unserviceable. It is observed from the de-capitalization of spares that capital spares amounting to ₹27.16 lakh during 2011-12 and ₹39.39 lakh during 2010-11 were allowed as part of the capital cost in tariff. Hence, de-

capitalization of spares for ₹27.16 lakh during 2009-10 and ₹39.39 lakh during 2010-11 which were allowed in tariff has not been allowed under exclusions.

Capitalization of Minor Bought out Assets (MBOA)

25. The petitioner has capitalized MBOA items in books of accounts amounting to ₹0.32 lakh during 2009-10. Since capitalization of minor assets is not allowed after cut-off date, the exclusions of ₹0.32 lakh is in order and is allowed.

De-capitalization of Miscellaneous Bought Out Assets (MBOA)

26. The petitioner has also excluded the de-capitalized MBOA in books of accounts amounting to ₹7.78 lakh during 2010-11 and ₹29.02 lakh during 2011-12 on the same being rendered unserviceable. Out of de-capitalized amount of ₹7.78 lakh, MBOA items amounting to ₹4.37 lakh were allowed as part of the capital cost in tariff and MBOA items amounting to ₹3.41 lakh were not allowed in capital cost prior to 31.3.1992 for tariff purpose and ₹29.02 lakh towards de-capitalized MBOA were allowed as part of capital cost prior to 31.3.2001. Hence, the de-capitalization of MBOA items for ₹4.37 lakh which form part of capital cost has not been allowed under exclusion. The de-capitalization of spares for ₹3.41 lakh which does not form part of capital cost for the purpose of tariff, has been allowed under exclusions during 2010-11. Also, the de-capitalization of MBOA items for ₹29.02 lakh which form part of capital cost has not been allowed as exclusion during 2011-12.

Items disallowed

27. The petitioner has excluded amounts of ₹536.35 lakh with corresponding de-capitalization of (-) ₹114.21 lakh, disallowed during 2009-10, ₹1975.70 lakh with corresponding de-capitalization of (-) ₹526.38 lakh during 2010-11 and ₹275.68 lakh with corresponding de-capitalization of (-) ₹62.77 lakh, on assets disallowed by the Commission, on cash basis, under different heads in books of accounts. Since assets amounting to ₹536.35 lakh during 2009-10, ₹1975.70 lakh during 2010-11 and ₹275.68

lakh during 2011-12 were not allowed in tariff and does not form part of capital cost, the same has been allowed under exclusions. However, the corresponding de-capitalization of (-)₹114.21 during 2009-10, (-)₹526.38 lakh during 2010-11 and (-)₹62.77 lakh during 2011-12 were due to replacement of assets (by new assets not allowed in tariff) and has not been allowed as exclusion as they form part of the capital cost.

28. The petitioner has excluded an amount of ₹0.49 lakh for Simens (Indian make) X-Ray machine in 2011-12. The petitioner vide its affidavit dated 21.11.2013 has submitted that as per accounting policy, the asset has been de-capitalized in the gross block and again restored at 10% of the book value. Accordingly, the exclusion sought by the petitioner is allowed.

29. In view of the above, the details of exclusions claimed *vis-à-vis* allowed is as under:

	(₹ in lakh)		
	2009-10	2010-11	2011-12
Exclusions Claimed (A)	495.50	1600.06	4015.66
Exclusions Allowed (B)	609.70	2391.29	4199.48
Exclusions not Allowed (A-B)	(-) 114.21	(-) 791.23	(-) 183.82

30. Based on the above discussions, the actual additional capital expenditure for the period 2009-10 to 2011-12 and the projected additional capital expenditure during 2012-13 and 2013-14 allowed are as under:

(₹ in lakh)						
Sl. No.	Head of work / Equipment	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Projected)	2013-14 (Projected)
A	Ash Handling System					
i	Central Ash Dyke Raising work	1.75	-	-	-	-
ii	1 st raising of Mithini Ash Dyke Lagoon-I	-	-	-	789.91	-
iii	1 st raising of Central Ash Dyke Lagoon-II	-	-	-	911.55	-
	Sub Total-Ash Handling System (A)	1.75	-	-	1701.46	-
B	Environmental System					
i	Phasing out of Halon Fire Fighting System with Inert Gas	-	-	114.92	-	-
ii	R&M of ESPs	-	-	-	-	-
	Sub-Total Environmental system (B)	-	-	114.92	-	-
C	New Items/ Works					

i	Land	-	327.38	-	-	-
ii	Renovation of PLC system	2.60	-	-	-	-
iii	MGR coal TPT system	1.72	-	-	-	-
iv	Renovation of breaker in 400 kV system	0.19	-	-	-	-
v	Engineering Design, supply, erection & testing of PA system for old community centre auditorium and new executive club	-	0.00	-	-	-
vi	220 kV Main Battery Set	-	-	0.00	-	-
	Sub Total- New Items/Works (C)	4.51	327.38	114.92	1701.46	-
1	Total (A+B+C)	6.27	327.38	114.92	1701.46	0.00
2	Exclusions not allowed	(-) 114.21	(-) 791.23	(-) 183.82	0.00	0.00
	Total additional capital expenditure allowed (1+2)	(-) 107.94	(-) 463.85	(-) 68.90	1701.46	0.00

Un-discharged liabilities

31. As stated, the approved capital cost as on 1.4.2009 is ₹240456.49 lakh after deduction of un-discharged liabilities of ₹2660.76 lakh (all pertaining to period 2004-09). Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged an amount of ₹29.16 lakh, ₹2593.38 lakh during the year 2009-10 and 2010-11 respectively (all liabilities pertaining to period 2004-09). In addition to above discharges, the petitioner has also discharged ₹0.55 lakh and ₹1.06 lakh during the years 2010-11 and 2011-12, respectively, corresponding to assets admitted during the period 2009-14. The above discharges of liabilities have been allowed during the respective years of discharges in addition to the admitted additional capital expenditure. The details of liabilities discharged during 2009-10 to 2013-14 are as under:

		(₹ 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	2660.76					
Discharges during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- B		29.16	2593.38	0.00	0.00	0.00
Reversals during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- C		0.00	0.00	0.00	0.00	0.00

Addition during the period 2009-14 (corresponding to allowed assets)- D		193.05	0.00	24.46	0.00	0.00
Discharges during the period 2009-14 (corresponding to allowed assets)- E		0.00	0.55	1.06	0.00	0.00
Reversal of liabilities out of liabilities added during 2009-14 (corresponding to allowed assets)- F		0.00	0.00	0.00	0.00	0.00
Discharges of liabilities for the period (B+E)		29.16	2593.93	1.06	0.00	0.00

Actual/Projected Additional Capital Expenditure

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Net additional capital expenditure allowed prior to adjustment of discharges of liabilities	(-) 107.94	(-) 463.85	(-) 68.90	1701.46	0.00
Discharges of liabilities	29.16	2593.93	1.06	0.00	0.00
Actual/ Projected additional capital expenditure allowed	(-) 78.78	2130.08	(-) 67.84	1701.46	0.00

33. 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	240456.49	240377.72	242507.80	242439.96	244141.42
Additional capital expenditure Allowed	(-) 78.78	2130.08	(-) 67.84	1701.46	0.00
Closing capital cost	240377.72	242507.80	242439.96	244141.42	244141.42
Average Capital Cost	240417.11	241442.76	242473.88	243290.69	244141.42

Debt-Equity Ratio

34. Regulation 12 of the 2009 Tariff Regulations provides that:

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

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

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

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

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

35. Accordingly, gross loan and equity amounting to ₹120868.24 lakh and ₹119588.26 lakh, respectively as allowed in order dated 22.4.2013 in R.P.No.22/2012 has been considered as gross loan and equity as on 1.4.2009. Further, the admitted actual/ projected additional expenditure as 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

36. Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides that:

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

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation.

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

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

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

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

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

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

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

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

37. 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 as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	119588.26	119564.62	120203.65	120183.29	120693.73
Addition of Equity due to additional capital expenditure	(-) 23.63	639.02	(-) 20.35	510.44	0.00
Normative Equity-Closing	119564.62	120203.65	120183.29	120693.73	120693.73
Average Normative Equity	119576.44	119884.13	120193.47	120438.51	120693.73
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)	28077.74	27825.11	27577.19	27633.41	27691.97

Interest on loan

38. Regulation 16 of the 2009 Tariff Regulations provides that:

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

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

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

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

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

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

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

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

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

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

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

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

39. The interest on loan has been worked out as under:

- (a) The gross normative loan of ₹120868.24 lakh as on 1.4.2009 has been considered.
- (b) Cumulative repayment as on 1.4.2009 amounting to ₹118071.58 lakh as considered in order dated 22.4.2013 in R. P. No.22/2012 has been considered.
- (c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹2796.66 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) In line with the provisions of the Regulation 16(5) stated above, the weighted average rate of interest has been calculated considering the actual loan portfolio existing as on 1.4.2009. In case of loans carrying floating rate of interest, the rate of interest as provided by the petitioner has been considered for the purpose of tariff. This is subject to truing-up.

(f) The cumulative repayment has been adjusted @70% due to de-capitalization of assets/works.

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	120868.24	120813.10	122304.16	122256.67	123447.69
Cumulative repayment of loan upto previous year	118071.58	120813.10	122304.16	122256.67	123447.69
Net Loan Opening	2796.66	-	-	-	-
Addition due to Additional capitalisation	(-) 55.14	1491.06	(-) 47.49	1191.02	-
Repayment of loan during the year	2845.64	2341.31	55.42	1191.02	-
Less: Repayment adjustment on account of de-capitalization	99.05	399.10	102.91	-	-
Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	(-) 5.07	(-) 451.15	-	-	-
Net Repayment	2741.52	1491.06	(-) 47.49	1191.02	-
Net Loan Closing	-	-	-	-	-
Average Loan	1398.33	-	-	-	-
Weighted Average Rate of Interest on Loan	2.0422%	1.2381%	1.2201%	1.4104%	1.3902%
Interest on Loan	28.56	-	-	-	-

Depreciation

41. Regulation 17 of the 2009 Tariff Regulations provides that:

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

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

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

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

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

“(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system.

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting 3[the cumulative depreciation including Advance against Depreciation] as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

42. The cumulative depreciation works out to ₹179863.28 lakh as on 1.4.2009 after accounting for adjustment of un-discharged liabilities. Further, the value of freehold land as considered in order dated 22.4.2013 as on 1.4.2009 is ₹5669.37 (on accrual basis) and un-discharged liabilities in land is ₹2580.67 lakh. 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 ₹33732.28 lakh. The depreciation has been calculated by spreading over of the balance depreciable value i.e. over 7.25 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 computation of depreciation is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	240456.49	240377.72	242507.80	242439.96	244141.42
Closing capital cost	240377.72	242507.80	242439.96	244141.42	244141.42
Average capital cost	240417.11	241442.76	242473.88	243290.69	244141.42
Depreciable value @ 90%	213595.57	213210.03	212829.41	213564.54	214330.20
Remaining useful life at the beginning of the year	7.25	6.25	5.25	4.25	3.25
Balance depreciable value	33732.28	28799.26	24314.26	20550.42	16480.69
Depreciation (annualized)	4652.73	4607.88	4631.29	4835.39	5070.98
Cumulative depreciation at the end	184516.01	189018.65	193146.44	197849.51	202920.49
Less: Cumulative depreciation reduction due to de-capitalization	127.34	513.13	132.32	-	-
Add: Cumulative depreciation adjustment on account of discharges / reversal of liabilities out of liabilities deducted as on 1.4.2009	22.10	9.63	-	-	-
Net Cumulative depreciation (at the end of the period)	184410.77	188515.15	193014.12	198749.51	202920.49

O&M Expenses

43. O&M expenses as considered in order dated 22.4.2013 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 22.4.2013 as stated below, has been considered.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 1.1/2 months	10727.76	10727.76	10757.15	10727.76	10727.76
Cost of secondary fuel oil – 2 month	267.23	267.23	267.96	267.23	267.23

45. Maintenance spares as considered in order dated 22.4.2013 as stated below, has been considered.

	(₹ in lakh)				
	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:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	14303.68	14303.68	14342.87	14303.68	14303.68
Fixed Charges - 2 months	8721.85	8822.18	8950.77	9138.98	9343.95
Total	23025.54	23125.86	23293.64	23442.67	23647.63

47. O&M expenses for 1 month for the purpose of working capital as allowed in order dated 22.4.2013 inn R.P. No. 22/2012 has been considered.

	(₹ in lakh)				
	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% as on 1.4.2009 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 – 1.1/2 months	10727.76	10727.76	10757.15	10727.76	10727.76
Cost of secondary fuel oil –2 month	267.23	267.23	267.96	267.23	267.23
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	23025.54	23125.86	23293.64	23442.67	23647.63
Total working capital	37703.86	38013.85	38435.58	38789.66	39243.96
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	4618.72	4656.70	4708.36	4751.73	4807.38

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	4652.73	4607.88	4631.29	4835.39	5070.98
Interest on Loan	28.56	0.00	0.00	0.00	0.00
Return on Equity	28077.74	27825.11	27577.19	27633.41	27691.97
Interest on Working Capital	4618.72	4656.70	4708.36	4751.73	4807.38
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of secondary fuel oil	1603.37	1603.37	1607.76	1603.37	1603.37
Compensation Allowance	350.00	500.00	650.00	650.00	650.00
Special allowance	0.00	0.00	0.00	0.00	0.00
Total	52331.12	52933.05	53704.60	54833.91	56063.70

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 of the 2009 Tariff Regulations.

51. The difference in the annual fixed charges determined by order dated 7.6.2012/22.4.2013 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

52. Petition No. 176/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