

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 148/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 Vindhyachal Super Thermal Power Station Stage-III (1000 MW) for the period from 1.4.2009 to 31.3.2014 - Truing up of tariff determined by order dated 28.5.2012 in Petition No. 260/2009 and order dated 3.5.2013 in R.P. No.19/2012.

And

In the matter of

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

...Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhavan, Vidyut Nagar, Jabalpur-482 008
2. Maharashtra State Electricity Distribution Company Ltd,
'Prakashgad', Bandra (EAST), Mumbai-400 051
3. Gujarat Urja Vikas Nigam Limited,
Vidyut Bhavan, Race Course, Vadodara-390 007
4. Chhattisgarh State Power Distribution Company Ltd,
Dhagania, Raipur-492 013
5. Electricity Department, Govt. of Goa,
Vidyut Bhavan, Panaji, Goa
6. Electricity Department, Administration of Daman & Diu,
Daman-396 210
7. Electricity Department Administration of Dadra and Nagar Haveli,
Silvassa Via VAPI

...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: None

ORDER

This petition has been filed by the petitioner, NTPC, for revision of tariff of Vindhyaachal Super Thermal Power Station Stage-III (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 the said units of the generating station are as under:

	Date of commercial operation
Unit-I	1.12.2006
Unit-II/Generating Station	15.7.2007

3. Petition No. 260/2009 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 28.5.2012 approved the annual fixed charges considering the capital cost of ₹346665.81 lakh, after deduction of un-discharged liabilities of ₹10609.92 lakh as on 1.4.2009. The annual fixed charges approved by order dated 28.5.2012 was as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	18025.28	18217.90	18309.54	18604.11	18906.43
Interest on Loan	16457.04	15248.08	13902.07	12746.19	11580.69
Return on Equity	24570.14	24832.70	24957.62	25359.14	25771.23
Interest on working capital	5213.11	5239.05	5268.87	5297.09	5337.21
O & M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of secondary fuel oil	1692.37	1692.37	1697.01	1692.37	1692.37
Compensation allowance	0.00	0.00	0.00	0.00	0.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
Total	78957.95	78970.09	78665.10	79058.90	79527.92

4. 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 revised projected estimated 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."

5. In terms of the above, the petitioner has filed this petition for revision of tariff of the generating station for the period 2009-14. The annual fixed charges claimed by the petitioner for the period 2009-14 in this petition are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	18109	18206	18313	18345	18630
Interest on Loan	16331	15271	14401	12914	11628
Return on Equity	24562	24542	24405	24439	24821
Interest on Working Capital	5210	5233	5268	5276	5313
O&M Expenses	13000	13740	14530	15360	16240
Cost of Secondary Fuel Oil	1692	1692	1697	1692	1692
Total	78814.76	78683.88	78613.50	78025.93	78323.56

6. Reply to the petition has been filed by the Respondent No.2. Maharashtra State Electricity Distribution Company Ltd (MSEDCL) and the petitioner has filed its rejoinder to the said reply. The petitioner has also filed additional submissions as directed by the Commission. The petition was listed for directions on 15.4.2014 and the petitioner, during the hearing submitted that all information as sought for by the Commission has been filed and copies served on the respondents. He further prayed that tariff of the generating station may accordingly be revised for the generating station for the period 2009-14.

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. In accordance with the above, the capital cost of ₹357275.73 lakh (on accrual basis) as on 31.3.2009, considered by the Commission in order dated 28.5.2012 has been considered as the basis for revision of the annual fixed charges.

Actual/ Projected 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 kilometers 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. 260/2009 is summarized as under:

	(₹ in lakh)				
	2009-10 (actual)	2010-11	2011-12	2012-13	2013-14
Actual/Projected additional capital expenditure claimed	5036.00	2923.00	632.00	11050.00	680.00

11. Out of the above, the break-up of the additional capital expenditure allowed by the Commission in its order dated 28.5.2012 in Petition No. 260/2009 is as under.

Sl. No		Actual/Projected Capital Expenditure					Amount allowed
		2009-10	2010-11	2011-12	2012-13	2013-14	
A	Ash Handling System						
i	Ash Dyke Raising Works (V-3)- 1 st Raising	0.00	0.00	0.00	0.00	450.00	450.00
ii	Ash Slurry Pumps & Piping System	0.00	0.00	0.00	0.00	200.00	200.00
iii	Augmentation of Dry Fly Ash transportation system	440.00	0.00	0.00	0.00	0.00	440.00
iv	Civil Works of Ash Dyke For Lagoon V-3	1.00	0.00	0.00	0.00	0.00	1.00
	Total Ash Handling System	441.00	0.00	0.00	0.00	650.00	1091.00
B	Environmental System						
i	On line CO ₂ monitoring	0.00	0.00	0.00	0.00	0.00	0.00

ii	Energy management system	0.00	0.00	0.00	0.00	0.00	0.00
	Total Environmental system	0.00	0.00	0.00	0.00	0.00	0.00
C	Other Capitalizations						
i	Wagon Tippler	0.00	0.00	0.00	11050.00	0.00	11050.00
ii	Locomotive	0.00	2923.00	0.00	0.00	0.00	2923.00
iii	ICT and Shunt Reactor	0.00	0.00	350.00	0.00	0.00	350.00
iv	MGR-Wagons	0.00	0.00	0.00	0.00	0.00	0.00
	Elevator	0.00	0.00	0.00	0.00	0.00	0.00
v	Augmentation of Railway Sliding & MGR system	2473.00	0.00	0.00	0.00	0.00	2473.00
vi	Construction of Boundary wall & Road in Matwai area	0.00	0.00	0.00	0.00	0.00	0.00
vii	Construction of parking shed near gate complex	0.00	0.00	0.00	0.00	0.00	0.00
viii	Paving around ETP area and others Stage-III areas	0.00	0.00	0.00	0.00	0.00	0.00
ix	Area development and horticulture works in transformer yard and cooling tower area	0.00	0.00	0.00	0.00	0.00	0.00
x	Construction of Badminton hall at VEWA	0.00	0.00	0.00	0.00	0.00	0.00
xi	Supply, installation and commissioning of Electronic weigh bridge	0.00	0.00	0.00	0.00	0.00	0.00
xii	Electrical works package for construction of boundary wall in Matwai area.	0.00	0.00	0.00	0.00	0.00	0.00
xiii	Electricals works for providing area lighting	0.00	0.00	0.00	0.00	0.00	0.00
xiv	Balance Works	17.00	0.00	0.00	0.00	0.00	17.00
xv	Plant and Machinery	0.00	0.00	0.00	0.00	0.00	0.00
xvi	Capital Spares	810.18	0.00	0.00	0.00	0.00	810.18
	Total-Other Capitalizations	3300.18	0.00	0.00	0.00	0.00	3300.18
	Grand Total	3741.18	2923.00	350.00	11050.00	650.00	18714.18
	De-capitalization of capital spares	249.00	0.00	0.00	0.00	0.00	0.00

12. The details of the actual and projected additional capital expenditure claimed in this petition are as under.

(₹ in lakh)

Package Name	Actual			Projected		Total
	2009-10	2010-11	2011-12	2012-13	2013-14	
Ash Dyke Raising Works. (V-3) 1 st Raising	0.00	0.00	0.00	0.00	450.00	450.00
Ash Slurry Pumps & Piping System	0.00	0.00	0.00	0.00	200.00	200.00
Augmentation of Dry fly ash transportation System.	0.00	0.00	0.00	0.00	0.00	0.00
Civil Works of Ash Dyke For Lagoon V-3	0.80	0.00	0.00	0.00	0.00	0.80
Total Ash System	0.80	0.00	0.00	0.00	650.00	650.80
Wagon Tippler	0.00	0.00	0.00	0.00	10000.0	10000.05

Locomotives	0.00	2952.05	0.00	0.00	0.00	2952.05
ICT & Shunt Reactor	0.00	0.00	0.00	350.0	0.00	350.00
Augmentation of Railway Siding & MGR System.	2473.48	105.17	0.00	0.00	0.00	2578.65
Work Adjustment	195.00	14.01	1.89	0.00	0.00	210.90
Capital Spares	810.17	0.00	0.00	0.00	0.00	810.17
Sub- Total	3478.65	3071.18	1.89	350.00	10000.0	16901.72
Grand Total	3479.45	3071.18	1.89	350.0	10650.00	17552.52
De-Capitalization of Spares	(-) 249.00	0.00	0.00	0.00	0.00	(-) 249.00
On line CEMS Package.	0.00	0.00	0.00	0.00	32.00	32.00
Equipment for Cable TV network	0.00	9.26	0.00	0.00	0.00	9.26
Equipment for Cable TV (Supply)	0.00	0.10	1.19	0.00	0.00	1.29
Acoustic Steam Leak Detection	0.00	0.00	0.00	0.00	70.00	70.00
Supply & installation of CCTV System	0.00	42.90	0.73	0.00	0.00	43.63
ED Cess	0.00	0.00	74.01	0.00	0.00	74.01
Supply & installation of new lift for Administration Building	15.62	0.00	0.00	0.00	0.00	15.62
Fire System	0.00	0.00	303.52	0.00	0.00	303.52
Commissioning of AC in Administration Building	2.16	0.00	0.00	0.00	0.00	2.16
Digital audio conference sys. For conference hall of Administration Building	10.62	0.00	0.00	0.00	0.00	10.62
Sub-Total (New Claim)	28.40	52.26	379.45	0.00	102.00	562.11
Total Additional Capitalization	3508.08	3123.49	381.44	350	10752	18115.01
De-Capitalization of Spares	(-) 249.00	0.00	0.00	0.00	0.00	(-) 249.00

13. The total claim of the petitioner for capitalization of additional expenditure in the present petition is ₹17552.52 lakh as against the additional capital expenditure of ₹18714.18 lakh allowed vide order dated 28.5.2012. The petitioner has further claimed expenditure of ₹562.11 lakh for new claims. Thus, the total claim of the petitioner is ₹18115.01 lakh, excluding discharge of un-discharged liabilities of ₹516.56 lakh in 2009-10, ₹287.45 lakh in 2010-11 and ₹194.1 lakh in 2011-12. We now proceed to consider the claims of the petitioner for capitalization based on the available records and submissions of the parties as stated in the subsequent paragraphs

Ash Handling System

14. The Commission in order dated 28. 5.2012 had allowed expenditure of ₹1091.0 lakh for Ash Handling System during 2009-14 which included projected expenditure of ₹450.00 lakh in 2013-14 for Ash Dyke Raising works, ₹200.0 lakh in 2013-14 for Ash Slurry Pumps & Piping System, actual expenditure of ₹440.0 lakh in 2009-10 for Augmentation of Dry fly ash transportation System and actual expenditure of ₹1.0 lakh in 2009-10 for Civil Works of Ash Dyke for Lagoon V-3. The petitioner in this petition has claimed ₹650.80 lakh during 2009-14 for Ash handling system. This includes projected expenditure of ₹450.00 lakh in 2013-14 for Ash Dyke Raising works, ₹200.0

lakh in 2013-14 for Ash Slurry Pumps & Piping System and actual expenditure of ₹0.80 lakh in 2009-10 for Civil Works of Ash Dyke for Lagoon V-3. These works were allowed by the Commission after prudent check, in its order dated 28.5.2012 considering the requirement and the justification submitted by the petitioner for such expenditure. The claim for ₹650.80 lakh is less than the expenditure for ₹1091.00 lakh allowed by the Commission in order dated 28.5.2012. However, the work of Augmentation of Dry fly ash transportation System of ₹440.00 lakh for which actual expenditure was claimed and allowed in order dated 28.5.2012, correspond to Stage-II of this generating station and was inadvertently shown in Stage-III. Accordingly, the petitioner has now claimed this expenditure for Stage-II and had withdrawn the expenditure from Stage-III (this generating station). Considering the discussions above, the additional capital expenditure of ₹650.80 lakh claimed for Ash handling system is found to be in order and has been allowed.

Other Capitalizations

Wagon Tippler

15. The Commission in order dated 28.5.2012 had allowed projected expenditure of ₹11050.0 lakh in 2012-13 for Wagon Tippler. The petitioner has now claimed projected expenditure of ₹10000.00 lakh in 2013-14. The petitioner has shifted this work projected during 2012-13 to 2013-14 due to the delay in the commissioning of Wagon Tippler. Since, the projected expenditure has already been approved by order date 28.5.2012, the proposed additional capital expenditure of ₹10000.0 lakh for 2013-14 has been allowed.

Locomotive

16. The Commission in order dated 28.5.2012 had allowed the projected expenditure of ₹2923.00 lakh in 2010-11 for Locomotive. The petitioner has now claimed actual expenditure of ₹2952.05 lakh in 2010-11. Since the actual expenditure claimed has already been approved by the Commission in order dated 28.5.2012, this additional capital expenditure of ₹2952.05 lakh claimed has been allowed.

ICT & Shunt Reactor

17. The Commission in order dated 28.5.2012 had allowed the projected expenditure of ₹350.00 lakh in 2011-12 for ICT & Shunt Reactor. The petitioner has now claimed projected expenditure of ₹350.00 lakh in 2012-13. The petitioner has submitted that the award for supply of Shunt Reactor has been placed on M/s Crompton Greaves Ltd on 6.5.2011 and due to procedural delay, the placement of award got delayed. It has also been submitted that the Shunt Reactor is expected to be commissioned during 2012-13 instead 2011-12. As the expenditure claimed has already been allowed by the Commission in order dated 28.5.2012, the expenditure is allowed.

Augmentation of Railway Siding & MGR System

18. The Commission in order dated 28.5.2012 had allowed actual expenditure of ₹2473.00 lakh in 2009-10 for Augmentation of Railway Siding & MGR System. The petitioner has now claimed actual expenditure of ₹2473.48 lakh in 2009-10 and ₹105.17 lakh in 2010-11. It is noticed that the actual expenditure claimed is higher than the expenditure approved by the Commission in order dated 28.5.2012. Since, no justification has been furnished by the petitioner justifying the increase in the actual expenditure; we do not allow the increased expenditure. In view of the above, expenditure of ₹2473.48 lakh as approved by the Commission is allowed.

Works Adjustment

19. The Commission in its order dated 28.5.2012 had allowed expenditure of ₹17.00 lakh in 2009-10 under Regulation 9(2)(viii) towards adjustment against the claim for final payment of various works which were capitalized before 1.4.2009. The petitioner has now claimed actual expenditure of ₹195.00 lakh in 2009-10 (in place of ₹17.00 lakh), ₹14.01 lakh in 2010-11 and ₹1.89 lakh in 2011-12 as adjustment amount.

20. Regulation 9(2)(viii) of the 2009 Tariff Regulations provides as under:

"(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."

No justification has been submitted by the petitioner in support of its claim in terms of Regulation 9(2)(viii). In view of this, prudence check of these deferred liabilities could not be undertaken. Accordingly, the expenditure of ₹195.00 lakh in 2009-10, ₹14.01 lakh in 2010-11 and ₹1.89 lakh in 2011-12 as claimed as adjustment amount has not been allowed.

Capital Spares

21. The Commission in its order dated 28.5.2012 had allowed expenditure of ₹810.18 lakh towards capitalization of spares with de-capitalization of ₹249.00 lakh during 2009-10. The petitioner has now claimed actual expenditure of ₹810.17 lakh in 2009-10 along with de-capitalization of spares in 2009-10. As the expenditure claimed is the same as allowed in order dated 28.5.2012, the expenditure is allowed.

New Claims

On-line CEMS Package

22. The petitioner has claimed projected expenditure of ₹32.00 lakh for installation of the Continuous Emission Monitoring System (CEMS) to monitor the Stack emission as well as the Ambient Air Quality on continuous basis. This is a statutory requirement as per guidelines dated 6.4.2011 issued by the Ministry of Environment & Forests, Govt. of India. Hence, the expenditure claimed on this count is allowed under Regulation 9(2) (ii) i.e. Change in law.

Acoustic Steam Leak detection

23. The petitioner has claimed projected expenditure of ₹70.00 lakh in 2013-14 for installation of Acoustic Steam Leak detection. The petitioner has submitted that this system would help in early and correct detection of boiler tube leakage points resulting in reduction of unit shut down time and enhancement of availability. It has also been submitted that this asset is necessary to meet higher availability norms specified by the Commission in the 2009 Tariff Regulations and accordingly, claim has been made under Change in law. We appreciate the submission of petitioner that this system helps in the early detection of boiler tube leakage. However, we are of the view that if the boiler and water system of the generating station is properly maintained there would be no reason for tube leakages and consequent unavailability of the generating station. We notice that the

generating station has been provided with reasonable O& M expenses for effective and efficiently maintenance of different systems/ components of the units/ generating station. We also hold that the requirement to meet higher availability of norms specified by the Commission in the 2009 Tariff Regulations cannot fall under 'Change in Law' as per definition provided under the 2009 Tariff Regulations. In view of the above, the claim has not been allowed.

Supply and Installation of CCTV System

24. The petitioner has claimed actual expenditure of ₹42.90 lakh in 2010-11 and ₹0.73 lakh in 2011-12 for supply and installation of CCTV system at sensitive points in the plant and on the boundary of the plant premises. The petitioner has submitted that Intelligence Bureau (IB) and CISF had advised for more vigilance of the sensitive areas and to install CCTV cameras in the plant and the boundary. The petitioner has furnished documentary evidence in support of this. The petitioner has incurred/projected the expenditure for installation of CCTV cameras. Considering the submissions of the petitioner and the requirement to maintain the security of the generating station, we allow the expenditure claimed by the petitioner under this head.

Electricity Duty & CESS

25. The petitioner has claimed actual expenditure of ₹74.01 lakh in 2011-12 for Excise Duty & Cess paid to the Government of Madhya Pradesh for construction power used for this project during the period prior to its COD. Due to revision of rates in the tariff order issued by the MP State Electricity Regulatory Commission (MPSERC) which is applicable for the period prior to the COD of the project, an additional amount was paid to the Govt. of MP towards EDuty & Cess on construction power. Since ED & Cess are statutory expenditure incurred, the claim under this head is allowed.

Fire System

26. The petitioner has claimed actual expenditure of ₹303.52 lakh in 2011-12 for Fire system. This work is part of the Main Plant order dated 20.3.2003 placed on M/S BHEL. The petitioner has submitted that due to the nature of work, the same could only be executed after completion of all other activities. It has also submitted that M/s BHEL had completed all the works in 2011-12. Since

the work was within the original scope of work and considering the safety of the plant and personnel, the capitalization of the expenditure for this work is allowed.

Deferred Works under Original Scope of Work

27. The petitioner has claimed expenditure for the following assets /works, as deferred works in the new claim as per the list of deferred works submitted to the Commission vide its affidavit dated 1.4.2008 in Petition No. 155/2007.

(i) **Cable laying for cable TV network & Equipment for Cable TV system (Supply):** The petitioner has claimed actual expenditure of ₹9.26 lakh for Cable laying for cable TV network in 2010-11 and ₹0.10 lakh in 2010-11 and ₹1.19 lakh in 2011-12 for Equipment for cable TV system (Supply). The petitioner has submitted that this work corresponds to equipment supply for cable TV network & cable laying in township. The contract for cable laying for revamping of cable TV Network in Township was awarded to M/s Star Electrical on 28.1.2009 for the period from 16.1.2009 to 15.1.2010. M/s Star Electrical had to lay cable as per design supplied by another party M/s Naveen communication (Lucknow). M/s Naveen communication was responsible for FO cable network designing and equipment supplier. M/s Naveen communication could not complete the job and left the work in between due to unknown reason. Later on risk and cost proposal was initiated and new contract for cable TV revamping was awarded to M/s Mehta Infocom, Mumbai. Therefore, both works could not be completed in time and got delayed. M/s Star Electrical finally finished the cable laying work by 10.2.2011 in association with M/s Mehta infocom. Both works were left out inadvertently in the claim made in original petition. The petitioner in Petition No. 155/2007 had submitted the list of balance works at page number 127. At item no. 12 of above mentioned list 'the Miscellaneous Expansion works in township' was indicated. The Commission in Petition no. 185/2009 (the instant station) had also approved an expenditure of ₹13176.03 lakh vide order dated 10.2.2011 for deferred works for Execution for the period 2007-09 and in the petition also at page no. 18 line item no. 67 'Construction & associated Electrical Works at township' was indicated.

(ii) **Supply & installation of new lift for Administration building:** The petitioner has claimed actual expenditure of ₹15.62 lakh in 2009-10 for supply & installation of new lift for Administrative Building. The petitioner has submitted that the list of balance works had been submitted in Petition No. 155/2007 which was disposed off vide order dated 31.7.2008. The contract for installation of 1 no. of lift in administrative building was placed on M/s Kone Elevators on 11/4/2008 but the installation of lift could be carried out only after the completion of civil works.

(iii) **Commissioning of AC in Administration Building and Digital audio conference system for conference hall of Administration Building:** The petitioner has claimed actual expenditure of ₹2.16 lakh in 2009-10 for Commissioning of AC in administration building and ₹10.62 lakh in 2009-10 for digital audio conference system for conference hall of administration building. The petitioner has submitted that these works corresponds to miscellaneous works in administration building. New air-conditioning system was commissioned in administration building at NTPC Vindhyachal. Similarly, to upgrade the communication facilities in conference room of administration building Digital Audio Conference system was installed.

28. It is noticed from the above submissions that the expenditure claimed for the above said works was furnished as the balance work by the petitioner in Petition No.155/2007 which was disposed off by the Commission's order dated 31.7.2008 . Since these are balance works under original scope of work and since the order was placed before the cut-off date of the generating station, the expenditure claimed above has been allowed to be capitalized.

Discharge of Un-discharged Liabilities & Reversal of liabilities

29. As stated, the approved capital cost as on 1.4.2009 is ₹346665.81 lakh after deduction of un-discharged liabilities of ₹10609.92 lakh (pertaining to period 2004-09). Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged an amount of ₹516.56 lakh and ₹273.67 lakh and reversed ₹176.99 lakh and ₹130.97 lakh during the year 2009-10 and 2010-11 respectively (all pertaining to period 2004-09). In addition to above discharges and reversals, the petitioner has also discharged ₹189.78 lakh (₹167.06 lakh pertaining to period 2004-09 and ₹22.72

lakh pertaining to period 2009-14) during the year 2011-12. The above discharges of liabilities have been allowed during the respective years in addition to the admitted additional capital expenditure.

Reconciliation of Additional Capital Expenditure with Books of Accounts

30. The petitioner has claimed additional capital expenditure as per books of accounts for the years 2009-10, 2010-11 and 2011-12 as given below:

		(₹ in lakh)		
		2009-10	2010-11	2011-12
1	Opening gross block of the year	363209.06	363225.34	366367.43
2	Closing gross block of the year	363225.34	366367.43	370839.03
3	Additional Capitalization as per the books (2 - 1)	16.28	3142.09	4471.60
4	Exclusions for Additional Capitalization as per the books of accounts.	(-) 3647.85	(-) 25.59	3988.41
5	Additional Capital Expenditure Claimed including liability(3-4)	3664.13	3167.68	483.19
6	Un-discharged liability in above	156.05	44.19	101.75
7	Additional Capital Expenditure claimed on cash basis for the purpose of tariff.(5-6)	3508.08	3123.49	381.44
8	Discharge of Un-discharged liability prior to 1.4.2009	516.56	273.66	167.06
9	Discharge of Un-discharged liability after to 1.4.2009	0.00	13.78	27.04
10	Total Additional Capital Expenditure Claimed (7+8)	4024.64	3410.93	575.54

Exclusions

31. The petitioner has sought exclusions of certain expenses capitalized in its books of accounts. The details of exclusions claimed by the petitioner during 2009-10 to 2011-12 are summarized below.

		(₹ in lakh)			
SI No.		2009-10	2010-11	2011-12	Total
1	Capitalization of spares	739.73	358.07	177.29	1275.09
2	De-Capitalization MBOA items	(-) 30.50	(-) 36.47	(-) 16.84	(-) 83.81
3	FERV	(-) 3430.98	(-) 129.68	3806.08	245.42
4	Inter unit transfer	(-) 1342.15	(-) 136.15	0.00	(-) 1478.3
5	Items disallowed	297.38	31.82	22.55	351.75
6	Plant & Machinery	295.66	18.71	0	314.37
7	Reversal of Liability	(-) 176.99	(-) 131.89	(-) 0.66	(-) 309.54
	Total Exclusions	(-) 3647.85	(-) 25.59	3988.41	314.98

32. 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

33. The petitioner has procured spares amounting to ₹739.73 lakh during the year 2009-10, ₹358.07 lakh during the year 2010-11 and ₹177.29 lakh during the year 2011-12 for maintaining stock of necessary spares. Since capitalization of spares over and above 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 petitioner has accordingly excluded the said amount from tariff. The exclusion of the said amount is in order and has been allowed.

De-Capitalization of Miscellaneous Bought Out Assets (MBOA)

34. The petitioner has capitalized MBOA items in books of accounts amounting to (-) ₹30.50 lakh during the year 2009-10, (-) ₹36.47 lakh during the year 2010-11 and (-) ₹16.84 lakh during the year 2011-12. However, the petitioner has not submitted the details of the MBOA. It appears that the MBOA claimed under is after netting-off the positive additions of MBOA. The reasons furnished by the petitioner for considering exclusion of (-) ₹30.50 lakh during 2009-10, (-) ₹36.47 lakh during 2010-11 and (-) ₹16.84 lakh during 2011-12 is that since MBOA items are not allowed to be capitalized after the cut-off date, the de-capitalization of the same should be excluded. However, from the details submitted by the petitioner in Annexure-H of the affidavit dated 2.4.2013, it is observed that these MBOA were capitalized prior to the cut-off date and were part of capital cost. In line with the consistent methodology adopted by the Commission of not allowing tariff on un-serviceable assets, the de-capitalization of these MBOA items cannot be excluded for the purpose of tariff. In view of this, the exclusions sought by the petitioner are not allowed. The petitioner is however directed to furnish separate details of the additions and deletions of MBOA at the time of truing-up of tariff in terms of the provisions of Regulation 6 of the 2009 Tariff Regulations. .

FERV

35. The petitioner has excluded an amount of (-) ₹3430.98 lakh in the year 2009-10, (-) ₹ 129.68 lakh in the year 2010-11 and ₹3806.08 lakh in the year 2012-13 on account of impact of FERV. As

the petitioner has billed the said amount directly to the beneficiaries in accordance with the 2009 Tariff Regulations, the exclusion of FERV is in order and has been allowed.

Inter unit transfer

36. An amount of (-) ₹1342.15 lakh in the year 2009-10 and (-) ₹136.15 lakh in the year 2010-11 has been excluded under this head on account of transfer of certain assets. This amount pertains to items transferred from this generating station to various locations and *vice versa*. The petitioner has submitted that these inter-unit transfers are temporary. The Commission while dealing with applications for additional capitalization in respect of other generating stations of the petitioner, during the period 2009-14 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 (-) ₹1342.15 lakh in the year 2009-10 and (-) ₹136.15 lakh in the year 2010-11 on account of inter-unit transfer of equipment on temporary basis is in order and has been allowed.

Items disallowed

37. The petitioner has excluded amounts of ₹297.38 lakh in the year 2009-10, ₹31.82 lakh in the year 2010-11 and ₹22.55 lakh in the year 2011-12 on account of items like construction of boundary wall & Road in Matwai area, construction of parking shed, commissioning of Electronic Weighbridge of 60MT & 100MT, construction of Badminton Hall at VEWA etc. disallowed in Commission's order dated 28.5.2012. As such, exclusion of amounts as above, is in order and has been allowed.

Plant & Machinery

38. The petitioner has excluded an amount of ₹295.66 lakh in the year 2009-10 and ₹18.71 lakh in the year 2010-11 on account of items like Four wheeled Ladder Trolley, Ion Chromatograph / HPLH, Transformer for Township, Portable ultrasonic flow meter with aux., Gasket cutting Machine, etc. disallowed in Commission's order dated 28.5.2012. As such, exclusion is in order and has been allowed.

Reversal of Liability

39. As stated, the petitioner has excluded an amount of (-) ₹176.99 lakh in the year 2009-10, (-) ₹131.89 lakh in the year 2010-11 and (-) ₹0.66 lakh in the year 2011-12 on account of reversal of liability. However, out of these, reversals amounting to ₹176.99 lakh for 2009-10 and ₹130.97 lakh for 2010-11 corresponds to the admitted capital cost. As such, the exclusion of these reversal amounts of ₹176.99 lakh and ₹130.97 lakh for the years 2009-10 and 2010-11 respectively has been allowed.

40. Accordingly, the summary of exclusions allowed and disallowed is tabulated below:

	2009-10	2010-11	2011-12	Total
(₹ in lakh)				
(A) Exclusions allowed under different heads				
Capitalization of spares	739.73	358.07	177.29	1275.09
MBOA items	0.00	0.00	0.00	0.00
FERV	(-) 3430.98	(-)129.68	3806.08	245.42
Inter-unit transfer	(-) 1342.15	(-) 136.15	0.00	(-) 1478.3
Items disallowed	297.38	31.82	22.55	351.75
Plant & Machinery	295.66	18.71	0.00	314.37
Reversal of Liability	176.99	130.97	0.00	0.00
Total Exclusion admissible (A)	(-) 3440.36	142.77	4005.92	708.33
(B) Exclusions not admissible under different heads				
MBOA items	(-) 30.50	(-) 36.47	(-) 16.84	(-) 83.81
Exclusion not admissible (B)	(-) 30.50	(-) 36.47	(-) 16.84	(-) 83.81

41. The actual additional capital expenditure allowed for the years 2009-10, 2010-11 and 2011-12 and projected additional capital expenditure allowed for the years 2012-13 and 2013-14 is as before adjustment of liabilities follows:

Sl. No	Head of Work/Equipment	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13	2013-14	Total
(₹ in lakh)							
A	Ash Handling System						
i	Ash Dyke Raising Works. (V-3) I st Raising	0.00	0.00	0.00	0.00	450.00	450.00
ii	Ash Slurry Pumps & Piping System	0.00	0.00	0.00	0.00	200.00	200.00
iii	Civil Works of Ash Dyke For Lagoon V-3	0.80	0.00	0.00	0.00	0.00	0.80
iv	Wagon Tippler	0.00	0.00	0.00	0.00	10000.0	10000.00
v	Locomotives	0.00	2952.05	0.00	0.00	0.00	2952.05
vi	ICT & Shunt Reactor	0.00	0.00	0.00	350.0	0.00	350.00
vii	Augmentation of Railway Siding & MGR System.	2473.48	105.17	0.00	0.00	0.00	2578.65
viii	Work Adjustment	0.00	0.00	0.00	0.00	0.00	0.00
ix	Capital Spares	810.17	0.00	0.00	0.00	0.00	810.17
x	On-line CEMS Package.	0.00	0.00	0.00	0.00	32.00	32.00
xi	Equipment for Cable TV network	0.00	9.26	0.00	0.00	0.00	9.26
xii	Equipment for Cable TV (Supply)	0.00	0.10	1.19	0.00	0.00	1.29
xiii	Acoustic Steam Leak Detection	0.00	0.00	0.00	0.00	0.00	0.00

xiv	Supply & installation of CCTV System	0.00	42.90	0.73	0.00	0.00	43.63
xv	ED Cess	0.00	0.00	74.01	0.00	0.00	74.01
xvi	Supply & installation of new lift for Administration Building.	15.62	0.00	0.00	0.00	0.00	15.62
xvii	Fire System	0.00	0.00	303.52	0.00	0.00	303.52
xviii	Commissioning of AC in Administration Building	2.16	0.00	0.00	0.00	0.00	2.16
xix	Digital audio conference sys. For conference hall of Administration Building.	10.62	0.00	0.00	0.00	0.00	10.62
B	Total (I to xix)	3312.85	3109.48	379.45	350.00	10682.00	17833.80
C	Add : Exclusions not allowed	(-) 30.50	(-) 36.47	(-) 16.84	0.00	0.00	(-) 83.81
	Total Additional Capitalization allowed (B+C)	3282.35	3073.01	362.61	350.00	10682.00	17749.97

42. The discharge of liabilities allowed during the respective years in addition to the admitted additional capital expenditure is detailed 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	10609.92					
Discharges during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- B		516.56	273.57	167.06	0.00	0.00
Reversals during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- C		176.99	130.97	0.00	0.00	0.00
Addition during the period 2009-14 (corresponding to allowed assets)- D		92.25	43.89	101.17	0.00	0.00
Discharges during the period 2009-14 (corresponding to allowed assets)- E		0.00	0.00	22.72	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)		516.56	273.67	189.78	0.00	0.00

43. 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		3282.35	3073.01	362.61	350.00	10682.00
Discharges of liabilities		516.56	273.67	189.78	0.00	0.00
Actual/ Projected additional capital expenditure allowed		3798.91	3346.68	552.39	350.00	10682.00

44. 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	346665.81	350464.72	353811.40	354363.79	354713.79
Additional capital expenditure Allowed	3798.91	3346.68	552.39	350.00	10682.00
Closing capital cost	350464.72	353811.40	354363.79	354713.79	365395.79
Average Capital Cost	348565.27	352138.06	354087.59	354538.79	360054.79

Debt-Equity Ratio

45. 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.

46. Accordingly, gross loan and equity amounting to ₹242666.07 lakh and ₹103999.74 lakh, respectively as allowed in order dated 28.5.2012 in Petition No. 260/2009 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

47. 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.”

48. 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	103999.74	105139.42	106143.42	106309.14	106414.14
Addition of Equity due to additional capital expenditure	1139.67	1004.00	165.72	105.00	3204.60
Normative Equity-Closing	105139.42	106143.42	106309.14	106414.14	109618.74
Average Normative Equity	104569.58	105641.42	106226.28	106361.64	108016.44
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year	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)	24553.98	24519.37	24372.56	24403.61	24783.29

Interest on loan

49. 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.

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

- (a) The gross normative loan of ₹242666.07 lakh as on 1.4.2009 has been considered.
- (b) Cumulative repayment as on 1.4.2009 amounting to ₹27099.85 lakh as considered in order dated 28.5.2012 in Petition No.260/2009 has been considered.
- (c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹215566.21 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. 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.

51. 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	242666.07	245325.31	247667.98	248054.65	248299.65
Cumulative repayment of loan upto previous year	27099.85	44971.72	63167.22	81457.77	99774.69
Net Loan Opening	215566.21	200353.58	184500.76	166596.88	148524.96
Addition due to Additional capitalisation	2659.24	2342.67	386.67	245.00	7477.40
Repayment of loan during the year	18013.42	18189.40	18289.27	18316.93	18601.91
Less: Repayment adjustment on account of de-capitalization	195.77	25.53	11.79	0.00	0.00
Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	54.22	31.63	13.06	0.00	0.00
Net Repayment	17871.87	18195.50	18290.54	18316.93	18601.91
Net Loan Closing	200353.58	184500.76	166596.88	148524.96	137400.45
Average Loan	207959.90	192427.17	175548.82	157560.92	142962.70
Weighted Average Rate of Interest on Loan	7.8501%	7.9277%	8.1911%	8.1823%	8.1185%
Interest on Loan	16324.97	15255.09	14379.46	12892.05	11606.43

Depreciation

52. 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.”

53. The cumulative depreciation works out to ₹27099.85 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 ₹286608.89 lakh. Depreciation has been calculated by applying the weighted average rate of depreciation for the period 2009-14. 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 for depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	346665.81	350464.72	353811.40	354363.79	354713.79
Closing capital cost	350464.72	353811.40	354363.79	354713.79	365395.79
Average capital cost	348565.27	352138.06	354087.59	354538.79	360054.79
Depreciable value @ 90%	313708.74	316924.25	318678.83	319084.91	324049.31
Remaining useful life at the beginning of the year	5.1679%	5.1654%	5.1652%	5.1664%	5.1664%
Balance depreciable value	286608.89	271779.25	255317.65	237424.53	224072.00
Depreciation (annualized)	18013.42	18189.40	18289.27	18316.93	18601.91
Cumulative depreciation at the end	45113.27	63334.41	81650.45	99977.31	118579.21
Less: Cumulative depreciation reduction due to de-capitalization	22.49	4.86	3.13	0.00	0.00
Add: Cumulative depreciation adjustment on account of discharges / reversal of liabilities out of liabilities deducted as on 1.4.2009	54.22	31.63	13.06	0.00	0.00
Net Cumulative depreciation (at the end of the period)	45145.01	63361.18	81660.38	99977.31	118579.21

Normative Annual Plant Availability Factor (NAPAF)

54. The NAPAF of the generating station is considered as 85% for the period 1.4.2009 to 31.3.2014.

O&M Expenses

55. O&M expenses as considered in order dated 28.5.2012 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

56. Cost of coal for 1.1/2 months and cost of secondary fuel for 2 months as considered in order dated 3.5.2013 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	10898.99	10898.99	10928.85	10898.99	10898.99
Cost of secondary fuel oil – 2 month	282.06	282.06	282.83	282.06	282.06

57. Maintenance spares as considered in order dated 3.5.2013 as stated below, has been considered.

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

58. 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	14531.99	14531.99	14571.81	14531.99	14531.99
Fixed Charges - 2 months	13132.42	13104.72	13089.08	12989.86	13039.13
Total	27664.41	27636.71	27660.89	27521.86	27571.13

59. O&M expenses for 1 month for the purpose of working capital as allowed in order dated 26.12.2011 in Petition No. 258/2009 has been considered.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	2600.00	2748.00	2906.00	3072.00	3248.00

60. 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 given under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 1.1/2 months	10898.99	10898.99	10928.85	10898.99	10898.99
Cost of secondary fuel oil –2 month	282.06	282.06	282.83	282.06	282.06
Maintenance Spares	1083.33	1145.00	1210.83	1280.00	1353.33
O&M expenses – 1 month	2600.00	2748.00	2906.00	3072.00	3248.00
Receivables – 2 months	27664.41	27636.71	27660.89	27521.86	27571.13
Total working capital	42528.80	42710.76	42989.41	43054.91	43353.52
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	5209.78	5232.07	5266.20	5274.23	5310.81

Annual Fixed Charges for 2009-14

61. 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	18013.42	18189.40	18289.27	18316.93	18601.91
Interest on Loan	16324.97	15255.09	14379.46	12892.05	11606.43
Return on Equity	24553.98	24519.37	24372.56	24403.61	24783.29
Interest on Working Capital	5209.78	5232.07	5266.20	5274.23	5310.81
O&M Expenses	13000.00	13740.00	14530.00	15360.00	16240.00
Cost of secondary fuel oil	1692.37	1692.37	1697.01	1692.37	1692.37
Compensation Allowance	0.00	0.00	0.00	0.00	0.00
Special allowance	0.00	0.00	0.00	0.00	0.00
Total	78794.52	78628.30	78534.50	77939.19	78234.80

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.

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

63. The difference in the annual fixed charges determined by order dated 28.5.2012/3.5.2013 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

64. Petition No. 148/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