

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 345/GT/2014**

**Coram:**

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

**Date of Hearing : 19.04.2016**

**Date of Order : 25.01.2017**

**In the matter of**

Revision of tariff of Korba Super Thermal Power Station Stage-I & II (2100 MW) for the period from 1.4.2009 to 31.3.2014- Truing up of tariff determined by order dated 5.11.2014 in Petition No.230/GT/2013

**And in the matter of**

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

**.....Petitioner**

**Vs**

1. Madhya Pradesh Power Management Company Limited,  
Shakti Bhavan, Vidyut Nagar, Jabalpur-482 008

2. Maharashtra State Electricity Distribution Company Limited  
'Prakashgard', Bandra(East)  
Mumbai-400 051

3. Gujarat Urja Vikas Nigam Limited  
Sardar Patel Vidyut Bhawan  
Race Course, Baroda – 390007

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



**Parties present:**

For Petitioner: Shri Ajay Dua, NTPC  
Shri Nishant Gupta, NTPC  
Shri Bhupinder Kumar, NTPC  
Shri Rajeev Choudhary, NTPC

For Respondents: Shri Rishabh Singh, Advocate, MPPMCL

**ORDER**

This petition has been filed by the petitioner, NTPC for revision of the annual fixed charges in respect of Korba Super Thermal Power Station Stage-I & II (2100 MW) ('the generating station') for the period from 1.4.2009 to 31.3.2014 in terms of clause (1) of Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations').

2. The generating station with a capacity of 2100 MW comprises of three units of 200 MW each and three units of 500 MW each. The dates of commercial operation (COD) of the different units of the generating station are as under:

<b>Unit</b>	<b>COD</b>
Unit-I	1.8.1983
Unit-II	1.1.1984
Unit-III	1.6.1984
Unit-IV	1.3.1988
Unit-V	1.4.1989
Unit-VI	1.6.1990

3. Petition No. 264/2009 was filed by the petitioner for approval of tariff of the generating station for the period 2009-14 and the Commission by order dated 12.10.2012 had approved the annual fixed charges of the generating station based on the capital cost of ₹175653.11 lakh, after removing the un-discharged liabilities amounting to ₹553.44 lakh as on 1.4.2009. Thereafter, in Petition No. 230/GT/2013, the Commission vide order dated 5.11.2014 had revised the annual fixed charges of



the generating station based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11, 2011-12, 2012-13 and projected additional capital expenditure for the year 2013-14, based on the latest estimates and status of works. Aggrieved by the said order dated 5.11.2014, the petitioner filed review petition (Petition No. 3/RP/2015) on various issues and the Commission by order dated 18.3.2015 had directed that the impact of the rectification of errors shall be considered at the time of tariff revision based on trueing up exercise for the period 2009-14. The annual fixed charges approved by order dated 5.11.2014 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2105.21	2032.33	2063.11	1843.55	262.62
Interest on Loan	588.19	478.05	395.43	239.43	187.73
Return on Equity	20216.65	19977.13	19753.83	19733.46	19731.68
Interest on Working Capital	5382.94	5493.43	5607.01	5703.73	5848.02
O&M Expenses	30420.00	32154.00	33999.00	35946.00	38004.00
Secondary fuel oil cost	6085.34	6085.34	6102.01	6085.34	6085.34
Compensation Allowance	955.00	825.00	975.00	975.00	650.00
Special allowance	2000.00	3171.60	3353.02	3544.81	6870.55
<b>Total</b>	<b>67753.33</b>	<b>70216.88</b>	<b>72248.41</b>	<b>74071.32</b>	<b>77639.94</b>

4. The petitioner had also filed Appeal No. 29/2015 against the order dated 5.11.2014 on the following issues:-

*“A. Disallowance of capital expenditure incurred on Ash Handling System amounting to Rs. 2965.56 lakhs, as against the 5661.53 claimed on the ground that the same is covered by Special Allowance;*

*B. Disallowance of Capital Expenditure on Procurement and installation of Energy Meter amounting to Rs 25.89 Lakhs on the ground that the benefit in reduction of auxiliary consumption is not being passed onto the beneficiaries;*

*C. Disallowance of Capital Expenditure on modification of Fire Water Pipeline amounting to Rs 253 Lakhs on the ground that the cost incurred is covered under the compensation allowance and/or Special Allowance;*

*D. Disallowance of capital expenditure on implementation of the RGMO amounting to Rs 51.73 Lakhs, as against the Rs. 98.75 lakhs claimed, on the ground that the cost incurred is covered under the Special Allowance;*

*E. Disallowance of the exclusion claimed in respect of de-capitalisation of the spares amounting to Rs 2379.01 Lakhs which were acquired after the tariff year 1997-98 and were never a part of the capital cost;*



*F. Disallowance of the exclusion claimed in respect of de-capitalisation of the Miscellaneous Bought Out Assets (MBOAs) amounting to Rs 5.47 lakhs which were never a part of the capital cost; and*

*G. Computational error in the calculation of the pro-rated additional capital expenditure for the work of Ash Handling System and the implementation of the Restricted Governor Mode of Operation (RGMO)."*

The Tribunal in its judgment dated 12.5.2015 and 22.3.2016 has upheld the findings of the Commission in the order dated 5.11.2014.

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. In terms of the above, the petitioner vide affidavit dated 8.8.2014 has filed this petition for revision of tariff of the generating station for the period 2009-14 based on the truing up exercise of the actual additional capital expenditure incurred for the year 2013-14. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the said years are as under:

### **Capital Cost**

	<i>(₹ in lakh)</i>
	<b>2013-14</b>
Opening Capital Cost	179658.18
Add: Additional capital expenditure	3679.11
Closing Capital Cost	183337.29
Average Capital Cost	181497.73

### **Annual Fixed Charges**

	<i>(₹ in lakh)</i>
	<b>2013-14</b>
Depreciation	2435.35
Interest on Loan	16.31



Return on Equity	20688.98
Interest on Working Capital	5932.72
O&M Expenses	38004.00
Secondary fuel oil cost	6085.34
Compensation Allowance	650.00
Special allowance	6870.55
<b>Total</b>	<b>80683.24</b>

7. In compliance with the directions of the Commission, the petitioner has filed the additional information and has served copies on the respondents. The respondents, MPPMCL and CSPDCL have filed their replies and the petitioner filed its rejoinder to said replies. We now proceed to examine the claim of the petitioner based on the submissions of the parties and the documents available on record, as discussed in the subsequent paragraphs.

### Capital Cost

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

*“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”*

9. The petitioner has claimed annual fixed charges for 2013-14 based on the admitted opening capital cost of ₹176206.55 lakh, as on 1.4.2009 in terms of the Commission’s order dated 29.9.2011 in Petition No. 128/2009. As stated, the opening capital cost as on 1.4.2009 approved by the Commission in order dated 5.11.2014 in Petition No. 230/GT/2013 is ₹174734.05 lakh after removal un-discharged liabilities of ₹1472.51 lakh (₹919.07 lakh pertaining to period prior to 1.4.2004 and ₹553.44 lakh pertaining to period 2004-09).

10. The Commission, in order dated 5.11.2014, had considered the opening undischarged liability as ₹1472.51 lakh and had directed the petitioner to submit reconciliation for the upward revision of undischarged liabilities from ₹553.44 lakh to ₹1472.51 lakh as on 1.4.2009, at the time of truing up of tariff of the generating station.



11. In compliance with the above, the petitioner has submitted that the undischarged liability towards Ash related works is on account of restatement of liability due to Exchange Rate Variation. The petitioner also indicated an amount of ₹67.80 lakh as liability against this item in the additional capital expenditure for the year 2013-14 under the head "Works ERV adjustments". Since, the liability amounting of ₹919.00 lakh as on 1.4.2009 towards Ash handling system and subsequent addition of liability during the period 2009-14 towards the works of Ash Handling system is on account of works ERV, the undischarged liability on 1.4.2009 considered for the purpose of tariff is ₹1472.51 lakh (₹553.44 lakh + ₹919.00 lakh). Based on this, the capital cost as on 1.4.2009 is considered as ₹174734.05 lakh, after removal of un-discharged liabilities amounting to ₹1472.51 lakh.

12. In terms of the last proviso to Regulation 7 of the 2009 Tariff Regulations, the capital cost as on 1.4.2009, after removal of un-discharged liabilities, is considered at ₹174734.05 lakh, on cash basis. Further, out of the un-discharged liabilities of ₹1472.51 lakh deducted as on 1.4.2009, the petitioner has discharged amounts of ₹151.01 lakh, ₹57.76 lakh, ₹1.74 lakh, ₹14.65 lakh, and ₹34.13 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively. The petitioner has also reversed amounts of ₹69.95 lakh, ₹33.25 lakh, ₹13.44 lakh, and ₹32.26 lakh during 2009-10, 2010-11, 2011-12, and 2013-14 respectively. The discharges of liabilities along with the discharges corresponding to assets admitted on cash basis, during the period 2009-14 has been allowed as the additional capital expenditure during the respective years.

### **Actual Additional Capital Expenditure**

13. Clause (2) of Regulation 9 of the 2009 Tariff Regulations provides as under:

*"9. (2) The capital expenditure incurred or projected to be incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:*

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (ii) Change in law;*
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;*



(iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

(v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

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

(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.

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."

14. The break-up details of the actual/ projected additional capital expenditure allowed by Commission's order dated 5.11.2014 in Petition No. 230/GT/2013 for the period 2009-14 are as under:

								(₹ in lakh)
	Head of work / Equipment	2009-10	2010-11	2011-12	2012-13	2013-14	Total	
						Actual	Projected	
<b>A</b>	<b>Ash Handling System</b>							
1	Existing Dhanras Ash Dyke raising works.	243.68	145.39	312.54	60.11	142.86	904.58	
2	Ash evacuation from Dhanras Ash Dyke	0.00	0.00	807.10	127.15	857.14	1791.39	



	Head of work / Equipment	2009-10	2010-11	2011-12	2012-13	2013-14	Total
	<b>Total (1 to 2)</b>	<b>243.68</b>	<b>145.39</b>	<b>1119.64</b>	<b>187.26</b>	<b>1000.00</b>	<b>2695.97</b>
3	Ambient Air Quality Measurement System	120.77	0.91	0.00	1.44	0.00	123.12
4	Fugitive ash control System	106.34	0.00	24.56	0.00	0.00	130.90
5	Air conditioner based vapor absorption system	39.16	0.00	0.00	0.00	0.00	39.16
	<b>Total (3 to 5)</b>	<b>266.27</b>	<b>0.91</b>	<b>24.56</b>	<b>1.44</b>	<b>0.00</b>	<b>293.18</b>
6	Energy Meters (Procurement and installation)	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total (1 to 6)</b>	<b>509.95</b>	<b>146.30</b>	<b>1144.20</b>	<b>188.70</b>	<b>1000.00</b>	<b>2989.15</b>
7	Implementation of RGMO	0.00	0.00	47.02	0.00	0.00	47.02
9	Afforestation cost of diverted land	0.00	48.60	0.00	0.00	0.00	48.60
	<b>Total (1 to 9)</b>	<b>509.95</b>	<b>194.90</b>	<b>1191.22</b>	<b>188.70</b>	<b>1000.00</b>	<b>3084.77</b>
	Add : Exclusions not allowed	(-)543.68	(-)558.52	(-)738.57	(-)1628.02	0.00	(-)3468.79
	<b>Total Additional Capital Expenditure</b>	<b>(-)33.73</b>	<b>(-)363.63</b>	<b>452.65</b>	<b>(-)1439.30</b>	<b>1000.00</b>	<b>(-)384.02</b>
	Discharge of liabilities	<b>151.01</b>	<b>68.31</b>	<b>6.92</b>	<b>387.76</b>	<b>0.00</b>	
	<b>Total Additional Capital Expenditure</b>	<b>117.28</b>	<b>(-)295.32</b>	<b>459.57</b>	<b>(-)1051.54</b>	<b>1000.00</b>	<b>229.99</b>

15. The petitioner has revised the additional capital expenditure for 2013-14 on actual basis as against the projected additional capital expenditure allowed in order dated 5.11.2014. Since, the annual fixed charges for the period 2009-13 were revised based on actual additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 vide order dated 5.11.2014, the actual additional capital expenditure incurred during 2013-14 has only been considered in this order. However, the computational error towards allowable exclusions as admitted vide order dated 18.3.2015 in 3/RP/2015 has been corrected and considered in the relevant paras in this order.

16. The break-up details of the actual additional capital expenditure claimed for the year 2013-14 is as under:

<i>(₹ in lakh)</i>			
Sr. No.	Head of Work/Equipment	Regulations	2013-14
1	Ash Evacuation from Dhanras Ash Dyke	9(2)(iii)	335.40



2	Existing Dhanras Ash dyke raising works	9(2)(iii)	2903.57
3	High Mast Lighting System-Network & cable laying-Dhanras	9(2)(iii)	11.26
	<b>Sub-total (1 to 3)</b>		<b>3250.22</b>
4	Environment Action Plan - Fugitive Ash control system	9(2)(ii)	259.55
5	Energy meters (Procurement & Installation)		22.27
6	Afforestation cost of the diverted land	9(2)(ii)	<b>5.00</b>
	<b>Sub-total (4 to 6)</b>		<b>3537.05</b>
7	Discharge of Un-discharged liability for 2004-09 period	9(2)(ii)	<b>34.13</b>
8	Discharge of Un-discharged liability for the additional capital expenditure during 2009-14		<b>107.93</b>
	<b>Total (7 to 8)</b>	9(2)(viii)	<b>142.06</b>
	Total Additional capital expenditure		3537.05
	Total Liability discharged		142.06
	<b>Total Additional capital expenditure</b>		<b>3679.11</b>

17. The petitioner has claimed additional capital expenditure of ₹3679.11 lakh in 2013-14 as against the estimated additional capital expenditure of ₹1000.00 lakh allowed vide order dated 5.11.2014. Thus, there is an increase of ₹2679.11 lakh in the claim for additional capital expenditure in 2013-14 and the same is mainly on account of expenditure towards Ash dyke raising and Ash evacuation from Dhanras Ash dyke.

18. The Respondent, MPPMCL has submitted that the COD of the generating station is 1.6.1990 and hence any claim shall be examined in terms of Regulation 9(2) of the 2009 Tariff Regulations. It has also submitted that the additional capital expenditure claimed by the petitioner does not fall within the ambit and scope of the provisions of the 2009 Tariff Regulations and, hence, are without any basis. We now examine the claim of the petitioner and their admissibility, on prudence check, based on available records as stated in the subsequent paragraphs.

### **Regulation 9(2)(iii)**

#### **Ash Handling System**

19. The petitioner has claimed additional capital expenditure of ₹3250.22 lakh (₹335.40 lakh towards Ash evacuation from Dhanras ash dyke, ₹2903.57 lakh for the existing dhanras ash dyke raising works, and ₹11.26 lakh for the High Mast lightening system) in 2013-14 under Regulation 9(2)(iii) of the 2009 Tariff Regulations. In justification of the same, the petitioner has submitted that



the new ash dyke which was envisaged to be operational in 2013-14 was required as the existing ash dyke has already reached the permissible limit. It has also submitted that due to delay in land acquisition, the construction of new ash dyke for meeting the future requirement has been shifted to next control period i.e. 2014-19, and therefore in order to sustain generation, further raising of existing Dhanras ash dyke was required immediately for enhancement of capacity. Accordingly, the petitioner has submitted that it had approached the Chhattisgarh Environment Conservation Board (CECB) for permission for raising of Lagoon-I of Dhanras ash dyke by further 10 M which has already reached the final height of 350 M after four raisings. The petitioner has further submitted that the CECB, vide letter dated 25.1.2012, had accorded approval for raising of Lagoon-I and the expenditure incurred in 2013-14 mainly pertains to the buttressing work of Lagoon -I of Dhanras ash dyke as part of the fifth raising work from 350 M to 355 M. It has further submitted that as the expenditure do not form part of the projected additional capital expenditure allowed vide order dated 12.10.2012 in Petition No. 264/2009, there is increase in the claim for additional capital expenditure on account of the raising work of Dhanras Ash dyke.

20. As regards Ash evacuation from Dhanras Ash dyke, the petitioner has submitted that the Commission had allowed these works in the order dated 12.10.2012 in Petition No. 264/2009 and has accordingly claimed an expenditure of ₹335.40 lakh in 2013-14 for the said work.

21. The respondents MPPMCL and CSPDCL have objected to the claims of the petitioner and have submitted that Ash related works claimed by the petitioner during the period 2009-14 tariff period are not covered under the original scope of work in terms of Regulation 9(2)(iii) and may be disallowed. The petitioner has however clarified that the Commission vide orders dated 12.10.2012 and 5.11.2014 in Petition No. 264/2009 and Petition No. 230/GT/2013 respectively has already allowed the capitalization works of Ash evacuation and raising of existing Dhanras ash dyke under Regulation 9(2)(iii) of the 2009 Tariff Regulations.



22. In response to the Commission's query vide the Record of Proceedings in hearing dated 19.4.2016, the petitioner has submitted vide affidavit dated 23.6.2016, that it had envisaged the construction of a new ash dyke to meet the future requirements of ash disposal before exhausting the capacity of the existing Dhanras ash dyke. It has also submitted that due to delay in the construction of new ash dyke and in order to sustain the generation and further raising of existing Dhanras ash dyke, the petitioner had engaged NIT Rourkela and IIT Kanpur as Consultants for exploring the possibility of enhancing the life of existing ash dyke. It has further submitted that the Consultants had recommended a scheme for enhancing Lagoon-I capacity by raising the height by 10 M in two steps of 5 M each. Accordingly, the petitioner has submitted that in terms of these recommendations, it has undertaken the Ash evacuation work from Lagoon-I and carried out the Civil work (buttressing) by depositing the Ash on the slope of the dyke for enhancing the slope stability for future raising. The petitioner has also stated that the Ash evacuation work of Lagoon-I had created additional ash dyke capacity which was used for disposing of the ash up to the year 2014-15 and with the completion of buttressing work in 2014-15, the petitioner had started the 5<sup>th</sup> raising work of Lagoon-I by raising the height by 5 meters which resulted in progressive creation of capacity for ash disposal. It has also submitted that after the completion of 5<sup>th</sup> raising by the year 2016-17, the petitioner shall carry out the 6<sup>th</sup> raising of Lagoon-I dyke increasing the height of the dyke by another 5 meters which is expected to cater to Ash disposal up to the year 2018-19.

23. We have examined the matter. The Commission in order dated 5.11.2014 had allowed the projected additional capital expenditure of ₹1000.00 lakh pertaining to works related to Ash handling system under Regulation 9(2)(iii) of the 2009 Tariff Regulations. The above expenditure includes the work of construction of new Ash dyke and ash evacuation for Unit-V and VI of Stage-II. Accordingly, the Commission had allowed these works, only in respect of Unit-V and VI on pro-rata basis, since the other Units viz. Unit-I, II, III of Stage-I and Unit-IV of Stage-II have completed their useful life either prior to or during this tariff period and there remain no deferred work for Ash Handling system



under the original scope of work corresponding to those units. The observations of the Commission in this regard are as below:

*“18. We have examined the matter. It is observed that on completion of useful life of 25 years by Units-I & II in 2008-09, Unit-III in 2009-10 and Unit-IV of Stage-II in 2013-14, the petitioner was allowed Special Allowance of `18940 lakh, by order dated 12.10.2012. Since these Units have completed their useful life either prior to or during this tariff period, there remains no deferred work for Ash Handling system under the original scope of work. Once the useful life of the units /generating station have expired and Special Allowance has been allowed as compensation for meeting the requirement of expenses including renovation & modernization beyond the useful life under Clause-4 of Regulation 10 of the 2009 Tariff Regulations, the claim of the petitioner under Regulation 9(2)(iii) i.e. deferred work relating to ash pond and ash handling system in the original scope of work cannot be permitted. However, the expenditure on Ash handling system has been pro rated based on the capacity of Units V and VI which are yet to complete their useful life, to the actual/projected additional capital expenditure claimed by the petitioner and the same is allowed as under:”*

24. Further, the Tribunal in judgment dated 22.3.2016 in Appeal No. 29 of 2015, has affirmed the findings of the Commission. The relevant extract of the judgment in this regard is as under:

*“(d) After going through the material on record and the impugned order, we observe that the Central Commission has not erred in calculating the pro-rated additional capital expenditure for the Ash Handling System and the implementation of the Restricted Governor Mode of Operation (RGMO) on the basis that the 4 units of Korba, Stage I and II, namely Units 1 to 4, were eligible for availing Special Allowance for the entire control period i.e. 2009-14. We are also unable to accept the contention of the Appellant that the Central Commission has failed to consider that Unit 3 had completed the useful life of 25 years in FY 2009-10 and Unit 4 in FY 2013-14. The Central Commission has rightly, legally and properly calculated the pro-rated additional capital expenditure for the entire control period i.e. 2009-14. We do not find any justification or merit in this contention of the Appellant that the Central Commission ought to have calculated the said charges on a year-wise basis, subject to the number of Units having completed the useful life of 25 years. The contention of the Appellant does not find support from the relevant regulations of the Central Commission or the provision of the Electricity Act, 2003, etc.*

*(e) In view of the above discussions, we do not find any merit in the said contentions of the Appellant and we are constrained to uphold the impugned order as the same suffers from no illegality or any kind of perversity. Consequently, the sole issue regarding computational error in the calculation of the pro-rated additional capital expenditure for the work of Ash Handling System and the implementation of the Restricted Governor Mode of Operation (RGMO) is decided against the Appellant.”*

25. In line with the above decision and since Special Allowance has been allowed to the petitioner to take care of the expenditure of such nature beyond the useful life of units, the claim of the petitioner under Regulation 9(2)(iii) i.e. deferred work relating to ash pond and ash handling



system in the original scope of work is not permitted. Based on this, we approve the expenditure on Ash handling system during 2013-14, pro rated based on the capacity of Units V and VI, to the actual /projected additional capital expenditure claimed by the petitioner during the year 2013-14, since these units are yet to complete their useful life.

26. The petitioner has also claimed additional capital expenditure of ₹11.26 lakh towards High Mast Lighting System – Network & cable laying at Dhanras. In justification of the same, the petitioner has submitted that this system is required for carrying out raising works throughout the day and that these lights will help in carrying out surveillance and emergency works during night time. The petitioner has further submitted that since the ash dyke is located far away, a network cable laying has been done between site and main plant thereby facilitating better communication & safer operation. Accordingly, the petitioner has submitted that the expenditure claimed may be allowed.

27. The respondents, MPPMCL and CSPDCL have objected to the claims of the petitioner and have submitted that Ash related works claimed by the petitioner during the period 2009-14 is not covered under the original scope of works in terms of Regulation 9(2)(iii) and thus may be disallowed.

28. In response, the petitioner has clarified that the installation of High Mast Lighting System is a necessary requirement for surveillance of Ash dyke area and execution of emergency works during the night time and thus the same may be allowed under Regulation 9(2)(iii) as the work relates to ash dyke related works.

29. We have examined the matter. As regards the claim for High Mast Lighting system, we are of the considered view that the expenditure incurred is minor in nature. Since the generating station is entitled for compensation allowance in terms of Regulations 19(e) of the 2009 Tariff Regulations



to meet the expenses on new assets of capital nature including in the nature of minor assets, we are not inclined to allow the expenditure on this count. Accordingly, the expenditure on these assets is disallowed as the petitioner can meet the same from the compensation allowance admissible to the generating station. Based on the above discussion, the pro-rata additional capital expenditure allowed for Ash handling system based on the capacity of Units V and VI of the generating station is as under:

*(₹ in lakh)*

S.N.	Ash handling System	Actual expenditure incurred	Expenditure allowed
1	Ash Evacuation from Dhanras Ash Dyke	335.40	159.71
2	Existing Dhanras Ash dyke raising works	2903.57	1382.65
3	High Mast Lighting System- Network & cable laying- Dhanras	11.26	0.00
	<b>Total</b>	<b>3250.22</b>	<b>1542.36</b>

### **Fugitive Ash Control System**

30. The Commission in the order dated 12.10.2012 in Petition No. 264/2009, had allowed additional capital expenditure of ₹106.34 lakh in 2009-10, ₹50.00 lakh in 2010-11, ₹150.00 lakh in 2011-12 and ₹157.00 lakh in 2012-13 for suppression of ash from Ash dyke. Subsequently, by order dated 5.11.2014 in Petition No. 230/GT/2013, an actual expenditure of ₹106.34 lakh in 2009-10 and ₹24.56 lakh in 2011-12 was allowed for the said work. The petitioner has now claimed actual additional capital expenditure of ₹259.55 lakh in 2013-14 and has submitted that this work has been admitted vide order dated 12.10.2012 in Petition No. 264/2009.

31. The respondent, MPPMCL has submitted that fugitive ash control does not fall under Regulation 9(2)(ii) of the 2009 Tariff Regulations and a similar expenditure has been disallowed by the Commission in the order dated 28.5.2012 in Petition No. 260/2009 which has also been upheld by the Appellate Tribunal of Electricity vide judgment dated 12.5.2015 in Appeal No. 150/2012. In response, the petitioner has clarified that Appeal No. 150/2012 refers to the tariff order of the



Commission in respect of Vindhyachal STPS, Stage-III and no claim for the Ambient Air Quality Management System (AAQMS) was made in the said Appeal and thus the contention of the Respondent is liable to be rejected. The petitioner has further submitted that the AAQMS has been implemented in accordance with the Air Act 1981 and in compliance to the specific direction of Chhattisgarh Environment Conservation Board (CECB) vide letter dated 2.1.2008 and the Commission in order dated 12.10.2012 in Petition No. 264/2009 has allowed the expenditure on AAQMS under Regulation 9(2)(ii), as the expenditure on AAQMS is required towards compliance of statute and directions of the statutory authority. It has further submitted that the petitioner has been directed to have appropriate dust suppression systems in place which has necessitated the installation of Fugitive Ash Control System.

32. We have examined the matter. It is noticed that the petitioner has not made any claim regarding the AAQMS in this petition. However, the petitioner has claimed an actual additional capital expenditure of ₹259.55 lakh in 2013-14 towards Fugitive ash control system and has submitted that the same was allowed by the Commission in orders dated 12.10.2012 and 5.11.2014. Considering the fact that the additional capital expenditure towards fugitive ash control system for ash suppression from ash dyke is within the projected expenditure approved in order dated 12.10.2012, the additional capital expenditure of ₹259.55 lakh in 2013-14 has been allowed under Regulation 9 (2)(ii) of the 2009 Tariff Regulations, in line with the decision of the Commission in orders dated 12.10.2012 and 5.11.2014 in Petition No. 264/2009 and 230/GT/2013 respectively.

### **Procurement and installation of Energy Meter**

33. The Commission in order dated 12.10.2012 had allowed the additional capital expenditure of ₹40.00 lakh in 2010-11 towards the procurement of Energy Meters. The petitioner has claimed actual additional capital expenditure of ₹22.27 lakh in 2013-14 and has submitted that in terms of the provisions of the Energy Conservation Act, 2001, Energy Meters are required to be installed in all HT & LT drives above 100 kW, for energy management system in the generating station.



34. The respondent, MPPMCL has submitted that the claim of the petitioner is not covered under the provisions of change in law and no documentary evidence has been submitted by the petitioner to suggest the requirement.

35. It is observed that the Commission in order dated 5.11.2014 has disallowed an expenditure of ₹25.89 lakh towards the Procurement and Installation of energy meter on the ground that the benefit of reduction in the auxiliary power consumption is not passed on to the beneficiaries during the period 2009-14. On Appeal by the petitioner, the Tribunal vide judgment dated 22.3.2016 has upheld the order of the Commission. In this background, the additional capital expenditure of 22.27 lakh claimed in the year 2013-14 is disallowed.

#### **Afforestation cost of diverted land**

36. The petitioner has claimed additional capital expenditure of ₹5.00 lakh in 2013-14 towards Cost of afforestation of diverted land under Regulation 9(2)(ii) of the 2009 Tariff Regulations. In justification, the petitioner has submitted that the Commission vide order dated 11.1.2010 in Petition No. 128/2009 had allowed the capitalization of ₹776.01 lakh towards cost of 87.002 hectare of forest land diverted for construction of Oxidation Pond, Link Road and Township and vide order dated 5.11.2014 in Petition No. 230/GT/2013 has allowed a payment of ₹48.60 lakh to the Forest division, Korba district of Chattisgarh against the demand of differential amount on the rates for the above said afforestation of 87.002 Ha of the same forest land. It has further submitted that in addition to the above payment, the Forest department has raised a new demand for ₹5.00 lakh for the said diverted land in 2013-14 as per the stipulation at point 10 of MoEF which directs providing alternate fuel to the labourers working at site. Accordingly, the petitioner in compliance with the above direction has deposited the said amount to the Forest department of Chattisgarh and has claimed the said expenditure now.

37. The respondent MPPMCL has submitted that the claim of petitioner is not covered under Regulation 9(2)(ii) of the 2009 Tariff Regulations and hence may not be allowed. In response, the



petitioner has clarified that the expenditure pertains to payments made to the Forest department, Chattisgarh in lieu of the fresh demand notice issued by them in terms of the notification issued by Ministry of Environment & Forest, Gol. The petitioner has further clarified that the payment to the Forest department, Chhattisgarh is in the nature of a statutory payment made in terms of the directions by MoEF, Gol and accordingly the same may be allowed under Regulation 9(2)(ii) of 2009 Tariff Regulations.

38. The matter has been examined. It is noticed that based on the notification of MoEF, Gol dated 3.10.2008, the Divisional Forest Officer, Katghora in his letter dated 25.3.2014 addressed to the Chief Conservator of Forests, Bilaspur, had sought the compliances made by the petitioner in regard to S.No. 10 of the said notification. S.No. 10 of the said notification provides as under:

*“10. The user agency shall provide fuel wood preferably alternate fuel to the labourers working at the site to avoid damage/felling of the trees.”*

39. In terms of the above, the petitioner vide letter dated 12.7.2013 has submitted that it has made payment of ₹5.00 lakh to the Divisional Forest Officer, Katghora, towards “depot infrastructure development and for providing alternate fuel to the labourers working at the site to avoid damage/felling of trees”. Considering the fact that the said payment is in terms of the MoEF notification and compliance has been made by the petitioner, we are inclined to allow the expenditure for ₹5.00 lakh in 2013-14.

40. The reconciliation of the actual additional capital expenditure for the period 2013-14 with books of accounts as submitted by the petitioner is as under:

		<i>(₹ in lakh)</i>
		<b>2013-14</b>
a	Opening Gross Block as per Balance sheet as on 1.4.2013	200296.35
b	Closing Gross Block as per Balance sheet as on 31.03.2014	208793.30
<b>c</b>	<b>Net Additional capitalization in 2013-14</b>	<b>8496.95</b>
d	Additional capital expenditure claimed as per Form-9	3679.11



e	Less: Discharge of liability	142.06
f	Additional capital expenditure claimed on cash basis	3537.05
g	Add: Undischarged liabilities in additional capital expenditure claimed	137.04
<b>h</b>	<b>Total Additional cap expenditure claimed on Gross Basis (f+g)</b>	<b>3674.09</b>
	Exclusions	4822.86
	<b>Additional capital expenditure</b>	<b>8496.95</b>

### **Exclusions**

41. It is noticed from the above that the actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts. This is on account of exclusion of certain expenditure and un-discharged liabilities for the purpose of tariff. The summary of exclusions claimed as per books of accounts is examined as under:

		(₹ in lakh)
		<b>2013-14</b>
a	Inter Unit Transfers	84.90
b	Capitalisation of Capital spares	5308.09
c	Renovation & Mordernization works disallowed by the Commission	780.60
d	MBOA capitalisation	72.65
e	Decapitalisation part of capital cost	-225.55
f	Decapitalisation not part of capital cost	-1112.57
g	Liability Reversal	-95.65
h	FERV	10.40
	<b>Total Exclusions (a to h)</b>	<b>4822.86</b>

### **Inter-unit transfer**

42. An amount of ₹84.90 lakh in 2013-14 has been excluded under this head on account of transfer of certain assets. These inter-unit transfers are stated to be of temporary nature. The Commission while dealing with applications for additional capitalization in respect of other generating stations of the petitioner, had decided that both positive and negative entries arising out of inter unit-transfers of temporary nature shall be ignored for the purpose of tariff. In consideration of the same, the exclusions of the amount of ₹84.90 lakh in the year 2013-14 on account of inter-unit transfers of on temporary basis is in order and has been allowed.



### **Capitalization of spares**

43. The petitioner has procured spares amounting to ₹5308.09 lakh in 2013-14 for maintaining stock of necessary spares. Since capitalization of capital spares over and above the initial spares procured after cut-off date are not allowed for the purpose of tariff as they form part of O&M expenses as and when consumed, the exclusion of the said amount during the period 2013-14 is in order .

### **Renovation & Modernization works disallowed by the Commission**

44. The petitioner has excluded an amount of ₹780.60 lakh in 2013-14 on account of the Renovation & Modernization works which had been disallowed by the Commission in order dated 12.10.2012 in Petition No. 264/2009. As such, the exclusion of the said amount for the purpose of tariff is in order as these items do not form part of the capital cost.

### **Capitalization of Miscellaneous Bought Out Assets (MBOA)**

45. The petitioner has capitalized MBOA items in books of accounts amounting to ₹72.65 lakh in 2013-14. Since the capitalization of minor assets is not allowed after cut-off date, the exclusions of the said amounts during 2013-14 is in order and has been allowed.

### **FERV**

46. The petitioner has excluded an amount of ₹10.40 lakh in 2013-14, on account of impact of FERV. As the petitioner has billed FERV directly on the beneficiaries, the exclusion of FERV is in order and has been allowed.

### **Reversal of Liability**

47. The petitioner has excluded an amount of (-) ₹95.65 lakh during 2013-14 on account of reversal of liability. In view of the submission of the petitioner that capital cost for the purpose of tariff is to be worked out by considering expenditure on cash basis, the reversal of liability is allowed under exclusion.



## De-Capitalization of Capital spares and Miscellaneous Bought Out Assets (MBOA)

48. The petitioner has excluded de-capitalized capital spares, MBOA and plant and machinery items etc. in books of accounts amounting to (-) ₹1338.12 lakh in 2013-14 on these assets becoming unserviceable. After examining the exclusion on account of de-capitalization of capital spares, MBOA and plant and machinery, it is noticed that an amount of (-) ₹225.55 lakh in 2013-14 pertains to assets which were part of the capital cost of the generating station for the purpose of tariff. Hence, exclusion on account of de-capitalization of these spares, MBOA, and plant and machinery etc. is not justified and has not been allowed for the purpose of tariff. Other de-capitalized items amounting to (-) ₹1112.57 lakh in 2013-14 do not form part of the capital cost and had been earlier disallowed by the Commission. Hence, exclusion of de-capitalization of these assets is in order and has been allowed.

## Rectification of Computational errors towards the allowable exclusions admitted vide order dated 18.3.2015 in 3/RP/2015

49. As stated, the Commission vide order dated 5.11.2014 in Petition No. 230/GT/2013, has disallowed exclusions of ₹543.68 lakh, ₹558.52 lakh, ₹738.57 lakh and ₹1628.02 lakh, claimed by the petitioner towards de-capitalisation of spares and MBOA during 2009-10 to 2012-13, as under:

(₹ in lakh)

Exclusions not allowed in order dated 5.11.2014 in Petition No. 230/GT/2013					
	2009-10	2010-11	2011-12	2012-13	Total
De-Capitalization of spares	(-)541.19	(-)533.46	(-)738.57	(-)1503.92	(-)3317.14
De-Capitalization of MBOA	(-)2.49	(-)25.06	0.00	(-)124.10	(-)151.65
<b>Exclusions not allowed</b>	<b>(-)543.68</b>	<b>(-)558.52</b>	<b>(-)738.57</b>	<b>(-)1628.02</b>	<b>(-)3468.79</b>

50. In terms of the directions of the Commission in the said order dated 18.3.2015 in 3/RP/2015, the clerical/computational errors have been rectified and exclusions allowed/disallowed are revised as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13
De-Capitalization of spares	(-)334.38	(-)139.41	(-)415.98	(-)48.36
De-Capitalization of MBOA	(-)2.49	(-)24.65	0.00	(-)119.00
<b>Exclusions not allowed</b>	<b>(-)336.87</b>	<b>(-)164.07</b>	<b>(-)415.98</b>	<b>(-)167.36</b>



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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Exclusion allowed	2351.49	2061.85	2545.31	2642.47	5048.41
Exclusion claimed	2014.65	1897.79	2129.33	2475.10	4822.87
<b>Exclusions not allowed</b>	<b>(-336.87)</b>	<b>(-164.07)</b>	<b>(-415.98)</b>	<b>(-167.36)</b>	<b>(-225.55)</b>

52. Further, the actual additional capital expenditure allowed for the period 2013-14 is summarised as under:

(₹ in lakh)		
Sr. No.	Head of Work/Equipment	2013-14
1	Ash Evacuation from Dhanras Ash Dyke	159.71
2	Existing Dhanras Ash dyke raising works	1382.65
3	High Mast Lighting System (Network & cable laying)- Dhanras Ash dyke	0.00
	<b>Total ash handling system</b>	<b>1542.36</b>
4	Environment Action Plan - Fugitive ash control system	259.55
5	Energy meters procurement, installation.	0.00
6	Afforestation cost of the diverted land	5.00
	<b>Total (1 to 6)</b>	<b>1806.91</b>
	Exclusions not allowed	(-225.55)
	<b>Additional capital expenditure allowed</b>	<b>1581.37</b>

### Un-discharged liabilities

53. As stated in para 8 of this order, the petitioner has furnished the reconciliation of the undischarged liabilities as on 1.4.2009 from ₹553.44 lakh to ₹1472.51 lakh (inclusive of ₹919.07 lakh corresponding to expenditure in Ash handling system). Accordingly, the undischarged liability considered for the purpose of tariff is ₹1472.51 lakh (₹919.07 lakh for period prior to 1.4.2009 and ₹553.44 lakh pertaining to 2004-09 period) as on 1.4.2009.

54. As regards discharge of liabilities claimed during the period 2009-14, the respondent MPPMCL has submitted that Regulation 9(2)(viii) is applicable for liabilities in respect of works



executed within cut-off date, which is over long back in case of the generating station. Similar submissions have been made by CSPDCL. In response, the petitioner has clarified that as per accrual principal of accounting, the total value of the work gets capitalised in the gross block as soon as the asset is put to use, notwithstanding the fact that part of the payment of capital asset has been retained as commitment or liabilities for future discharge. Additionally, it has been submitted that the liability or commitment is identified at the time of asset having been put to use and is legitimately claimed as additional capital expenditure under the head discharge of liability for the works which have been admitted by the Commission during the period 2004-09 and 2009-14.

55. We have examined the matter. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged amounts of ₹151.01 lakh, ₹57.76 lakh, ₹1.74 lakh, ₹14.65 lakh, and ₹34.13 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13, and 2013-14 respectively and has also reversed amounts of ₹69.95 lakh, ₹33.25 lakh, ₹13.44 lakh, and ₹32.26 lakh during the year 2009-10, 2010-11, 2012-13, and 2013-14 respectively. In addition to the above discharges and reversals, the petitioner has also discharged amounts of ₹10.55 lakh, ₹5.53 lakh, ₹373.12 lakh, and ₹107.93 lakh during the years 2010-11, 2011-12, 2012-13, and 2013-14 respectively (all pertaining to works allowed during the period 2009-14) and has reversed amount of ₹2.75 lakh and ₹63.39 lakh during the years 2012-13 and 2013-14 respectively. The above discharges of liabilities have been allowed during the respective years, in addition to the admitted additional capital expenditure for the said years. Accordingly, the liabilities for the period 2009-14 is approved as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Un-discharged liabilities as on 1.4.2009 (corresponding to allowed assets)- A</b>	<b>1472.51</b>				
Discharges during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- B	151.01	57.76	1.74	14.65	34.13
Reversals during the period out of liabilities as on 1.4.2009 (corresponding to allowed assets)- C	69.95	33.25	0.00	13.44	32.26
Addition during the period 2009-14 (corresponding to allowed assets)- D	18.53	12.10	665.88	123.18	69.24
Discharges during the period out of liabilities added during 2009-14 (corresponding to allowed assets)- E	0.00	10.55	5.18	373.12	107.93



Reversal of liabilities out of liabilities added during 2009-14 (corresponding to allowed assets)- F	0.00	0.00	0.00	2.75	63.39
<b>Discharges of liabilities for the period (B+E)</b>	<b>151.01</b>	<b>68.31</b>	<b>6.92</b>	<b>387.76</b>	<b>142.06</b>

#### Actual Additional Capital Expenditure:

56. Considering the discharges of liabilities during the period 2009-14, the net additional capital expenditure allowed is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Approved Additional capital expenditure</b>	509.95	194.90	1191.22	188.70	1806.91
Add : Exclusions not allowed	(-)336.87	(-)164.07	(-)415.98	(-)167.36	(-)225.55
<b>Net Additional Capital Expenditure</b>	<b>173.08</b>	<b>30.83</b>	<b>775.24</b>	<b>21.34</b>	<b>1581.37</b>
Discharge of liabilities	151.01	68.31	6.92	387.76	142.06
<b>Total Additional Capital Expenditure</b>	<b>324.09</b>	<b>99.14</b>	<b>782.16</b>	<b>409.10</b>	<b>1723.43</b>

57. Accordingly, the capital cost considered for the purpose of tariff for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	174734.05	175058.14	175157.28	175939.44	176348.54
Add: Additional capital expenditure	324.09	99.14	782.16	409.10	1723.43
<b>Closing Capital Cost</b>	<b>175058.14</b>	<b>175157.28</b>	<b>175939.44</b>	<b>176348.54</b>	<b>178071.97</b>
Average Capital Cost	174896.09	175107.71	175548.36	176143.99	177210.25

#### Debt-Equity Ratio

58. In terms of the provisions of Regulation 12 of the 2009 Tariff Regulations gross loan and equity amounting to ₹88653.72 lakh and ₹86080.32 lakh respectively has been considered after taking into account the position of un-discharged liabilities as on 1.4.2009. Further, the actual/projected additional expenditure approved above has been allocated in debt-equity ratio of 70:30.



## Return on Equity

59. The petitioner has considered pre tax ROE of 23.481% for 2013-14. The respondent MPPMCL has submitted that the petitioner may be directed to submit the information regarding applicable income tax rate as per the Income Tax Act 1961 of the respective financial year & refund of excess Annual Fixed Charges recovered from the beneficiaries. In response, the petitioner submitted that RoE claim of petitioner is strictly as per Regulation 15(3) of the 2009 Tariff Regulations. In view of the fact that pre-tax ROE works out to 23.481% considering the actual tax rate for 2013-14, the same has been considered. Accordingly, return on equity is worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	86080.32	86177.55	86207.29	86441.94	86564.67
Addition of Equity due to additional capital expenditure	97.23	29.74	234.65	122.73	517.03
Normative Equity-Closing	86177.55	86207.29	86441.94	86564.67	87081.70
Average Normative Equity	86128.94	86192.42	86324.62	86503.30	86823.18
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	33.990
Rate of Return on Equity (Pre Tax) (%)	23.481	23.210	22.944	22.944	23.481
<b>Return on Equity(Pre Tax) annualised</b>	20223.94	20005.26	19806.32	19847.32	20386.95

## Interest on loan

60. Interest on loan has been worked out as under:

- (a) Gross normative loan amounting to ₹88653.72 lakh has been considered as on 1.4.2009.
- (b) Cumulative repayment amounting to ₹79759.88 lakh as on 1.4.2009 has been considered after taking into account the revised position of liabilities as on 1.4.2009.
- (c) The net normative opening loan as on 1.4.2009 works out to ₹8893.84 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
- (a) In line with the provisions of Regulation 16(5), the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2009 along with subsequent additions during the period 2009-14, if any. 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. However, in case of LIC-III, it is observed that petitioner has claimed additional interest of 0.0158% towards upfront fees. It is observed that the claim of the petitioner towards upfront fees had been disallowed in various orders by the Commission while working out the weighted average rate of interest on loan in respect of Badarpur TPS vide tariff order dated 15.5.2014 in Petition No. 304/2009. In line with this decision and for the purpose of consistency, the claim of the petitioner towards upfront fees for this generating station has not been allowed.

- (b) The cumulative repayment has been adjusted @70% due to de-capitalization of assets/works considered for the purpose of tariff.

61. The necessary calculations for interest on loan are given as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	88653.72	88880.58	88949.98	89497.49	89783.86
Cumulative repayment of loan up to previous year	79759.88	81745.11	83895.94	86055.64	89226.69
Net Loan Opening	8893.84	7135.47	5054.04	3441.86	557.17
Addition due to additional capital expenditure	226.86	69.40	547.51	286.37	1206.40
Repayment of loan during the year	2128.80	2227.69	2450.16	3276.50	1400.14
Less: Repayment adjustment on account of de-capitalization	235.81	114.86	291.19	117.18	157.88
Add: Repayment adjustment on account of discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	92.24	37.99	0.72	11.72	27.72
Net Repayment	1985.23	2150.83	2159.70	3171.05	1269.98
Net Loan Closing	7135.47	5054.04	3441.86	557.17	493.59
Average Loan	8014.65	6094.75	4247.95	1999.51	525.38
Weighted Average Rate of Interest of loan	7.3197	7.6679	8.4514	7.1732	6.3436
<b>Interest on Loan</b>	<b>586.65</b>	<b>467.34</b>	<b>359.01</b>	<b>143.43</b>	<b>33.33</b>

## Depreciation

62. In terms of Regulation 17 of the 2009 Tariff Regulations the cumulative depreciation works out to ₹147940.37 lakh as on 1.4.2009 after accounting for adjustment of un-discharged liabilities. The cumulative depreciation has been adjusted for de-capitalization, if any, considered during the period 2009-14. Necessary calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	174734.05	175058.14	175157.28	175939.44	176348.54
Add: Additional Capital Expenditure	324.09	99.14	782.16	409.10	1723.43
Closing Capital Cost	175058.14	175157.28	175939.44	176348.54	178071.97
Average Capital Cost	174896.09	175107.71	175548.36	176143.99	177210.25



	2009-10	2010-11	2011-12	2012-13	2013-14
Balance useful life	4.10	3.10	2.10	1.10	0.10
Depreciable value (excluding land) @ 90%	156664.79	156855.25	157251.84	157787.90	158747.54
Balance depreciable Value	8724.42	6903.08	5143.47	3603.17	1400.05
Depreciation (annualized)	<b>2127.91</b>	<b>2226.80</b>	<b>2449.27</b>	<b>3275.61</b>	<b>1400.05</b>
Cumulative depreciation at the end	150068.28	152178.97	154557.64	157460.34	158747.54
Less: Cumulative Depreciation adjustment on account of un-discharged liabilities	187.08	77.05	1.47	23.78	56.22
Less: Cumulative Depreciation reduction due to de-capitalization	303.19	147.66	374.38	136.64	202.99
Cumulative depreciation (at the end of the period)	149952.17	152108.37	154184.73	157347.48	158600.76

## O&M Expenses

63. O&M expenses as considered in order dated 5.11.2014 in Petition No. 230/GT/2013 has been allowed as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
30420.00	32154.00	33999.00	35946.00	38004.00

## Interest on Working Capital

64. Regulation 18(1)(a) of the 2009 Tariff Regulations provides that the working capital for coal based generating stations shall cover:

- (i) Cost of coal for 1.5 months for pit-head generating stations and two months for non-pithead generating stations, for generation corresponding to the normative annual plant availability factor;
- (ii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel oil, cost of fuel oil stock for the main secondary fuel oil;
- (iii) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.
- (iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor; and
- (v) O&M expenses for one month.



65. Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:

*"Rate of interest on working capital shall be on normative basis and shall be considered as follows:*

*(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.*

*(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.*

*Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up.*

### **Fuel Component in working capital**

66. Fuel component in the working capital as considered in order dated 5.11.2014 has been considered as under:

	<i>(₹ in lakh)</i>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Cost of coal – 1-1/2 months	9864.41	9864.41	9891.44	9864.41	9864.41
Cost of secondary fuel oil – two months	1014.22	1014.22	1017.00	1014.22	1014.22

### **Maintenance spares**

67. Maintenance spares as allowed in order dated 5.11.2014, has been considered as under:

<i>(₹ in lakh)</i>				
<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
6084.00	6430.80	6799.80	7189.20	7600.80

### **Receivables**

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

<i>(₹ in lakh)</i>					
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Variable Charges (two months)	13152.55	13152.55	13188.58	13152.55	13152.55
Fixed Charges (two months)	11297.07	11738.88	12084.35	12591.95	13218.77
<b>Total</b>	<b>24449.62</b>	<b>24891.43</b>	<b>25272.93</b>	<b>25744.50</b>	<b>26371.32</b>



## O&M Expenses

69. O&M expenses for 1 month as allowed in order dated 5.11.2014 is allowed as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
2535.00	2679.50	2833.25	2995.50	3167.00

70. 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 as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Coal Stock- 1-1/2 months	9864.41	9864.41	9891.44	9864.41	9864.41
Oil stock-2 months	1014.22	1014.22	1017.00	1014.22	1014.22
O&M expenses - 1 month	2535.00	2679.50	2833.25	2995.50	3167.00
Spares	6084.00	6430.80	6799.80	7189.20	7600.80
Receivables- 2 months	24449.62	24891.43	25272.93	25744.50	26371.32
<b>Total Working Capital</b>	<b>43947.25</b>	<b>44880.36</b>	<b>45814.42</b>	<b>46807.83</b>	<b>48017.75</b>
Rate of Interest (%)	12.25	12.25	12.25	12.25	12.25
<b>Total Interest on working capital</b>	<b>5383.54</b>	<b>5497.84</b>	<b>5612.27</b>	<b>5733.96</b>	<b>5882.17</b>

## Compensation Allowance

71. The Compensation allowance as allowed vide order dated 5.11.2014 remain unchanged.

## Special Allowance

72. The Special allowance as allowed vide order dated 5.11.2014 of ₹ 18939.98 lakh during 2009-14 remain unchanged. The petitioner is directed to maintain separately the details of expenditure incurred or proposed to be utilized from special allowance for 2009-14 and onwards and shall make the details available in tariff Petition for the period 2014-19 alongwith plan of action for utilization of balance amount of special allowance recovered/ proposed to be recovered.

## Annual Fixed Charges

73. Accordingly, the annual fixed charges allowed for the period 2009-14 are summarized as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2127.91	2226.80	2449.27	3275.61	1400.05



	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Interest on Loan	586.68	467.44	359.20	143.65	33.56
Return on Equity	20223.94	20005.26	19806.32	19847.32	20386.95
Interest on Working Capital	5383.54	5497.84	5612.27	5733.96	5882.17
O&M Expenses	30420.00	32154.00	33999.00	35946.00	38004.00
Secondary fuel oil cost	6085.34	6085.34	6102.01	6085.34	6085.34
Compensation Allowance	955.00	825.00	825.00	975.00	650.00
Special Allowance	2000.00	3171.60	3353.02	3544.81	6870.55
<b>Total</b>	<b>67782.40</b>	<b>70433.29</b>	<b>72506.09</b>	<b>75551.69</b>	<b>79312.63</b>

74. The difference in the annual fixed charges determined by order dated 5.11.2014 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

75. Petition No. 345/GT/2014 is disposed of in terms of the above.

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

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

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



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)**

(₹ in lakh)

Particulars	Interest Rate					Loan deployed as on 1.4.2009	Additions during the tariff period	Total
	2009-10	2010-11	2011-12	2012-13	2013-14			
IBRD Main	3.2594	2.7080	2.8440	2.6055	2.3400	0.00	0.00	0.00
Euro Bond	6.9722	6.9722	6.9722	6.9722	6.9722	0.00	0.00	0.00
United Bank of India	7.3560	7.3560	7.3560	7.3560	7.3560	250.00	0.00	250.00
UCO Bank T1 D1	7.3600	7.3600	7.3600	7.3600	7.3600	1000.00	0.00	1000.00
UCO Bank T1 D5	7.4000	7.4000	7.4000	7.4000	7.4000	2700.00	0.00	2700.00
SBI (SBS) T1 D3 & D4	7.3553	7.3553	7.3553	7.3553	7.3553	1000.00	0.00	1000.00
Central Bank of India	7.0000	7.0000	7.0000	7.0000	7.0000	1600.00	0.00	1600.00
LIC - III - T4 D4	8.7281	8.7281	8.7281	8.7281	8.7281	600.00	0.00	600.00
SBI D-9	11.2719	11.3245	13.2444	13.6500	13.6500	2000.00	0.00	2000.00
State Bank of Patiala	7.3053	7.3053	7.3053	7.3053	7.3053	150.00	0.00	150.00
PFC V D-29	9.8600	9.8600	9.8600	9.8600	9.8600	0.00	0.00	0.00
4.75% Fixed Rate Notes Due 2022	0.0000	0.0000	0.0000	5.0134	5.0215	0.00	2952.38	2952.38
SBI-VII D-12	0.0000	0.0000	0.0000	0.0000	10.1413	0.00	1700.00	1700.00
SBI-VII D-16	0.0000	0.0000	0.0000	0.0000	10.2500	0.00	2000.00	2000.00
KFW-ESP D-1	0.0000	0.0000	0.0000	0.0000	3.1900	0.00	3191.08	3191.08
KFW-ESP D-2	0.0000	0.0000	0.0000	0.0000	3.1900	0.00	2222.54	2222.54
<b>Total</b>						<b>9300.00</b>	<b>12066.00</b>	<b>21366.00</b>

**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD**

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan - Opening	9300.00	9300.00	10800.00	10800.00	13752.38
Cumulative repayments of Loans up to previous year	5515.71	6910.00	8304.29	8970.00	9030.00
Net loan - Opening	4683.87	3132.33	3061.96	2214.27	4910.91
Repayments of Loans during the year	1551.54	1570.36	847.69	255.74	342.28
Net loan - Closing	3132.33	3061.96	2214.27	4910.91	13682.25
Average Net Loan	3908.10	3097.14	2638.12	3562.59	9296.58
<b>Rate of Interest on Loan</b>	<b>7.3197%</b>	<b>7.6679%</b>	<b>8.4514%</b>	<b>7.1732%</b>	<b>6.3436%</b>
Interest on loan	286.06	237.49	222.96	255.55	589.73

