

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 323/2009

**Coram: Dr. Pramod Deo, Chairperson
Shri S. Jayaraman, Member
Shri V.S Verma, Member
Shri M. Deena Dayalan, Member**

Date of Hearing: 14.2.2012

Date of Order: 13.7.2012

IN THE MATTER OF

Approval of tariff of Feroze Gandhi Unchahar Thermal Power Station, Stage-II (420 MW) for the period from 1.4.2009 to 31.3.2014.

AND

IN THE MATTER OF

NTPC Ltd, New Delhi

...Petitioner

Vs

1. Uttar Pradesh Power Corporation Limited, Lucknow
2. Jaipur Vidyut Vitran Nigam Limited, Jaipur
3. Ajmer Vidyut Vitran Nigam Limited, Ajmer
4. Jodhpur Vidyut Vitran Nigam Limited, Jodhpur
5. North Delhi Power Limited, New Delhi
6. BSES Rajdhani Power Ltd., New Delhi
7. BSES Yamuna Power Ltd., New Delhi
8. Haryana Power Purchase Centre, Panchkula
9. Punjab State Electricity Board, Patiala
10. Himachal Pradesh State Electricity Board, Shimla
11. Power Development Department Government of Jammu & Kashmir, Srinagar
12. Power Department, Union Territory of Chandigarh, Chandigarh
13. Uttarakhand Power Corporation Limited, Dehradun.

...Respondents

Parties Present:

1. Shri V.K.Padha, NTPC
2. Shri Rohit Chhabra, NTPC
3. Shri Ajay Dua, NTPC
4. Shri R.B.Sharma, Advocate, BRPL
5. Shri Sunil Barnwal, BRPL
6. Shri Manish Garg, UPPCL

ORDER

The present petition has been filed by the petitioner, NTPC, for approval of tariff for Feroze Gandhi Unchahar Thermal Power Station, Stage-II (420 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014, based on 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 420 MW comprises of two units of 210 MW each. and the date of commercial operation of Unit-I is 1.1.2001 and Unit-II is 1.3.2000. The annual fixed charges of the generating station for the period 2004-09 was determined by the Commission vide its order dated 9.5.2006 in Petition No. 150/2004 considering the capital cost of ₹129855.10 lakh (inclusive of additional capital expenditure and FERV on actual basis amounting to ₹2313.10 lakh and ₹4060.00 lakh for 2001-04 respectively) as on 1.4.2004. Subsequently, the Commission vide its order dated 5.10.2011 in Petition No.150/2004, revised the annual fixed charges of the generating station for 2004-09, in the light of the judgment of the Appellate Tribunal for Electricity dated 13.6.2007 in Appeal Nos.139 to 142 etc. of 2006, 10, 11 and 23 of 2007 and the judgment dated 16.3.2009 in Appeal Nos. 133, 135, 136 and 148/2008, based on the capital cost of ₹129903.96 lakh as on 31.3.2009, subject to the outcome of Civil Appeals [C.A. Nos. 5434/2007 to 5452/2007 and 5622/2007, 4112-4113/2009 and 6286 to 6288/2009] filed by Commission against the said judgments and pending before the Hon’ble Supreme Court. The annual fixed charges determined by order dated 5.10.2011 are as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1672.20	1494.32	1328.28	1122.04	895.06
Interest on working capital	1478.99	1490.19	1502.29	1523.49	1535.36
Depreciation	4824.38	4824.38	4824.38	4824.38	4824.38
Advance Against Depreciation	0.00	0.00	0.00	359.01	465.29
Return on equity	5455.97	5455.97	5455.97	5455.97	5455.97
O&M expenses	4368.00	4544.40	4725.00	4914.00	5111.40
Total	17799.54	17809.26	17835.92	18198.89	18287.46

3. The annual fixed charges for 2009-14 claimed by the petitioner are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	6984	7069	7144	7144	3542
Interest on Loan	631	430	271	113	21
Return on Equity	9163	9275	9374	9374	9374
Interest on Working Capital	2916	2942	2976	2995	2947
O&M Expenses	7644	8081	8543	9034	9551
Cost of Secondary fuel oil	646	646	648	646	646
Compensation Allowance	0	32	63	63	63
Special Allowance	0	0	0	0	0
Total	27985	28475	29020	29370	26144

4. Reply to the petition has been filed by UPPCL (respondent no.1), NDPL (respondent no. 5), BRPL (respondent no. 6) and HPPC (respondent no.8) and the petitioner has also filed its rejoinder to the said replies.

Capital cost

5. As stated, the capital cost of ₹129903.96 lakh as on 31.3.2009 was approved by the Commission by order dated 5.10.2011 in Petition No.150/2004. As no additional capital expenditure was claimed during 2004-09, the petitioner was directed to furnish the reconciliation of gross block as on 1.4.2004 and 31.3.2009, in order to examine if any de-capitalisation had been made during the said period. In response, the petitioner vide its affidavit dated **12.10.2011** has furnished the gross block of ₹129875.07 lakh as on 1.4.2004 and ₹126462.49 lakh as on 1.4.2009. On scrutiny, it is noticed that there has been de-capitalisation of ₹3412.58 lakh during the period 2004-09 and the petitioner has submitted that the said de-capitalisation lakh is due to capitalisation of FERV of (-) ₹4291.00 lakh and capitalisation of ₹879.00 lakh towards items like spares, MBOA etc. In view of the fact that additional capitalisation on account of FERV, spares and MBOA have been ignored for the purpose of tariff during 2004-09, there is no impact on the approved capital cost on account of de-capitalisation of ₹3412.58 lakh during the period 2004-09. Hence, the approved capital cost of ₹129903.96 lakh as on 31.3.2009, has been considered.

6. The annual fixed charges claimed in the petition are based on the opening capital cost of ₹129904 lakh as on 1.4.2009. The petitioner vide its affidavit dated 24.6.2011 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books in Form-9A. The details of liabilities and capital cost have been reconciled with the information available with the Commission as under:

	As per Form-9A	As per records of Commission	Difference
Capital cost as on 1.4.2009, as per books	126462.50	126462.50	0.00
Liabilities included above	95.64	95.64	0.00

7. The approved capital cost of ₹129903.96 lakh as on 1.4.2009, is inclusive of un-discharged liabilities amounting to ₹62.99 lakh (pertaining to the period prior to 1.4.2004), out of the total liabilities of ₹95.64 lakh. The balance liabilities pertain to assets disallowed/not claimed for capitalization.

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. Accordingly, in terms of the last proviso of Regulation 7 of the 2009 Tariff Regulations, the capital cost, after removal of un-discharged liabilities of ₹62.99 lakh, works out to ₹129840.97 lakh on cash basis, as on 1.4.2009. The liabilities discharged, if any, by the petitioner would be included in the capital base as additional capital expenditure, in the year of discharge.

10. The petitioner vide its affidavit dated 14.9.2011 has furnished the details of un-discharged liabilities and liabilities reversed during the years 2009-10 and 2010-11. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged ₹8.46 lakh and ₹21.49 lakh during the years 2009-10 and 2010-11, respectively and reversed an amount of ₹32.52 lakh

during 2010-11 (both discharges and reversals pertain to liabilities corresponding to assets capitalized prior to 1.4.2004). Accordingly, the discharge of the liabilities during 2009-10 and 2010-11 has been allowed during the respective years, as part of the additional capital expenditure allowed for the generating station.

Actual / Projected Additional Capital Expenditure during 2009-14

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

“9.(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 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.

12. The actual/projected additional expenditure claimed by the petitioner is as under:

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Additional capital expenditure	358.43	2804.00	0.00	0.00	0.00	3162.43

13. The cut-off date for the generating station has expired. Hence, the petitioner's claim for additional capital expenditure is required to be considered in terms of Regulation 9 (2) of the 2009 Tariff Regulations. Accordingly, we examine the submissions of the petitioner on the admissibility of additional capital expenditure for 2009-14 in the subsequent paragraphs.

Submissions of the petitioner

14. In its petition, the petitioner has submitted that the estimated capital expenditure claims are of the following nature:

- (i) The additional capital expenditure (as per Regulation 9 (1) and 9 (2) of the Tariff Regulations, 2009) as per the original scope of work of the generating station;
- (ii) The other additional capital expenditure in respect of the existing generating stations which have to be done on on-going basis.

15. The petitioner has also submitted the following in support of its claim in the petition and in its affidavit dated 26.3.2010.

(a) In addition to the capital expenditure covered by Regulation 9 (1) and 9 (2) and 19 (e) of the 2009 Tariff Regulations, there will be capital expenditure of different nature which would be necessary for the efficient operation of the generating station within its life time. No generating station can operate on a sustainable basis to achieve the level of performance parameters specified by the Commission without incurring capital expenditure from time to time. The expenditure on such capital assets to be incurred by generating stations are therefore necessary for proper and effective working and therefore beneficial to the respondents. Over a long period of 25 years of the life of the stations, many a times the Original Equipment Manufacturer (OEM) stop providing spares & service and this necessitates the replacement of obsolete equipment's with new items, to ensure support from OEMs. Additional capital expenditure for this purpose had

constantly been allowed by the Commission under the 2001 and 2004 tariff regulations. However, additional capital expenditure for successful and efficient operation of the generating station has not been included in Regulation 9 of 2009 Tariff Regulations. Accordingly, the petitioner has claimed additional capital expenditure on 'works considered necessary for the efficient operation of the generating stations' in addition to those specified under Regulation 9 (1) and (2) and 19 (e) of the 2009 Tariff Regulations.

(b) Regulations 7(1), 8 and 9 of 2009 Tariff Regulations pertain to the capital cost of new generating station commissioned after 1.4.2009 and do not cover the existing projects commissioned prior to 1.4.2009. Moreover, the term 'additional capital expenditure' defined in Regulation 3 (3) refers to the additional capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to Regulation 9. The scope and meaning of additional capitalization is not confined to Regulation 9 but subject to Regulation 9, which would mean that if additional capitalization is of the nature as referred to in Regulation 9, it would be read subject to the provisions of Regulation 9 and if the additional capitalization is not of the nature as referred to in Regulation 9, the provisions of Regulation 9 could not be applied. Regulation 9 has no application whatsoever to the existing projects and it does not limit the additional capitalisation in the case of existing projects.

(c) The last proviso to Regulation 7 is an independent provision dealing with the existing projects and additional capitalization for the existing projects is comprehensively covered by the said provision. In respect of the existing projects, the additional capital expenditure projected to be incurred from 1.4.2009 till 31.3.2014 and admitted by the Commission after prudence check would qualify to be capitalized, notwithstanding the fact that this expenditure is not covered under Regulation 9 (1) and (2).

(d) Regulation 19 (e) provides for a compensation allowance to meet the expenses of new assets of capital nature, including in the nature of minor assets and normative compensation allowance under Regulation 19 (e) has no relevance to the additional capitalization of a substantive nature incurred by the generating company from time to time. As the Regulations 9 (1) and (2) and 19 (e) do not exclude the additional capital expenditure of substantial nature in respect of the existing generating stations, the additional capital expenditure as projected by the petitioner, to be incurred during the tariff period 2009-14 for the existing generating stations, may be considered and allowed by the Commission.

(e) The additional capital expenditure claimed is necessary and expedient for efficient operation of the generating station and is not incurred on account of any failure or default or any other act of omission or commission on the part of the petitioner. This expenditure is such which has to be necessarily incurred in the ordinary course of running of a generating station and for operating machines for the life span of 25 years.

17. Similar submissions of the petitioner in its petitions for determination of tariff for 2009-14 have been considered and disposed of by the Commission by its orders dated 20.4.2012, 7.5.2012, 23.5.2012, 25.5.2012, 14.6.2012 in Petition Nos. 239/2009, 256/2009, 332/2009, 279/2009 and 222/2009 respectively, pertaining to the determination of tariff of some of the generating stations of the petitioner for 2009-14 as under:

"16. We have considered the submissions of the petitioner. The following two issues arise for our consideration:

(a) Whether additional capitalization projected to be incurred after the cut-off date during period 2009-14 is admissible under Regulation 9(2) of the 2009 Tariff Regulations.

(b) Whether additional capital expenditure for successful and efficient operation of the thermal generating station including the gas power stations could be admissible under Regulation 9(2) of the 2009 Tariff Regulations.

17. As regards the first issue, it is noticed that the last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that in case of existing projects, capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding the un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year and the tariff period 2009-14, as may be admitted by the Commission, shall form the basis of determination of tariff. Thus, as per the last proviso projected additional capital expenditure to be incurred for the respective years of the tariff period 2009-14

shall be considered by the Commission while determining the tariff in respect of the existing project. The said proviso does not make any distinction between the additional capital expenditure projected to be incurred before the cut-off date and additional capital expenditure projected to be incurred after the cut-off date. It therefore follows that in case of existing projects, additional capital expenditure projected to be incurred after the cut-off date can be considered by the Commission for determination of tariff. Regulation 9 of the 2009 Tariff Regulations provides for the additional capital expenditure to be admissible during the year 2009-14. While Clause (1) of Regulation 9 deals with the expenditure incurred before the cut-off date, Clause (2) of the said regulation deals with the expenditure incurred after the cut-off date. However, Clause (2) of Regulation 9 provides that only expenditure incurred after the cut-off date shall be admissible. It thus emerges that while the additional capital expenditure can be claimed under last proviso to Regulation 7(2) on projection basis, the same is not admissible under Regulation 9(2), since the expenditure has not been incurred. It is a settled principle of law that the provisions of the Act or Regulations should be read harmoniously keeping in view the objective of the legislation. During the period 2004-09, the additional expenditure was being admitted after the same was incurred. However, the Commission decided to allow additional capital expenditure on projection basis during the period 2009-14. In this connection, reference is drawn to paragraphs 10.1.3 and 10.1.4 of the Statement of Reasons to the 2009 Tariff Regulations, wherein the concept of claiming additional capitalization on projection basis has been explained in the following terms:

"10.1.3 The Commission has carefully examined the issue again and is of the view that the generating companies/transmission licensees as well as the beneficiaries should appreciate the regulation in its proper perspective. Apart from meeting the intended objective of certainty of tariff and minimal retrospective adjustments, the procedure would have following additional advantages:

(a) From beneficiaries' perspective, they would be aware of the intended additional capitalization in advance and be able to voice their concern before the Commission about the reasonableness and necessity of additional capitalization before the actual expenditure is made by the generating companies/transmission licensees. As regards their concern about the expected expenditure being considered in capital base without putting assets to use, the Commission would like to clarify that anticipated expenditure would be considered only after it is found justified and reasonable with the expectation that asset would be put to use. In the absence of expenditure actually made, the same would be taken out from the capital cost at the time of truing up exercise with appropriate refund/adjustment with interest. Further, if the expenditure indeed materializes, the actual retrospective adjustment is expected to be bare minimum as a result of truing up exercise.

(b) From the prospective of the generating companies/transmission licensees, they would be assured of the expenditure to be admitted once accepted by the Commission in the capital cost before making the expenditure. Moreover, they would be more careful about the expenditure to be made as it would require to be justified before the Commission.

10.1.4 The Commission is of the view that the approach adopted with regard to consideration of the expenditure including additional capital expenditure projected to be incurred for the purpose of determination of capital cost is a win-win situation for all. The Commission has decided to retain the said provisions with regard to capital cost including projected additional capital expenditure in Regulations 7 and 9 of these regulations."

18. It thus emerges from the scheme of the 2009 Tariff Regulations that the additional capital expenditure projected to be incurred after the cut-off date can be admitted by the Commission after prudence check. Keeping in view the scheme of the 2009 Tariff Regulations and in order to remove the inconsistency between last proviso to Regulation 7(2) and Regulation 9(2), we have relaxed in our order dated 13.4.2012 in Petition No. 282 of 2009 the provisions of Regulation 9(2) of the 2009 Tariff Regulations in exercise of our power under Regulation 44 to allow additional capital expenditure projected to be incurred after the cut-off date. The said decision is applicable in the present case.

19. As regards the second issue, it is noticed that as per the scheme of the 2009 Tariff Regulations, additional capital expenditure incurred or projected to be incurred prior to the cut-off date and the additional capital expenditure incurred after the cut-off date is admissible under Regulation 9(1) and 9(2) of the 2009 Tariff Regulations. We have relaxed the provisions of the Regulation 9(2) to allow the expenditure on projected basis to be incurred after the cut-off date. Regulation 9(2) provides for the different provisions for admissibility of the additional capital expenditure. In respect of the hydro generating stations, Regulation 9(iv) provides for expenditure which has become necessary for successful and efficient operation of the hydro generating stations and similar provisions have been made under Regulation 9(v) in respect of the

transmission systems. In case of the thermal generating stations, Regulation 19(e) provides for compensation allowance. Regulation 19(e) of 2009 Tariff Regulations is extracted as under:-

“(e) In case of coal-based or lignite-fired thermal generating station a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:

Years of operation	Compensation Allowance (₹ in lakh/MW/year)
0-10	Nil
11-15	0.15
16-20	0.35
21-25	0.65

20. It is evident from the provisions of Regulation 19(e) that the expenditure in case of coal based or lignite fired thermal generating stations is admissible to meet the expenses on new assets of capital nature including in the nature of minor assets. Correspondingly, no provision has been made to admit additional capital expenditure of capital nature for successful operation of the thermal generating station under Regulation 9(2) of the 2009 Tariff Regulations. On the other hand, clear provisions have been made for admitting the expenditure for efficient and successful operation of the hydro generating stations and transmission systems under certain conditions. The provisions of the Regulation 9(2) are clear and unambiguous in that the expenditure for successful and efficient operation of the thermal generating stations have not been provided since a normative compensation allowance has been provided under Regulation 19(e) of 2009 Tariff Regulations to meet the expenses on new assets of capital nature. In our view, last proviso to Regulation 7(2) cannot be considered as independent of Regulation 9 of 2009 Tariff Regulations. The "additional expenditure projected to be incurred for the respective year of the tariff period 2009-14 as may be admitted by the Commission" occurring in last proviso to Regulation 7(2) have to be considered and allowed in terms of provisions of Regulation 9(2) of 2009 Tariff Regulations. The Commission after taking into account the requirements of the gas based generating stations and coal based thermal generating stations has made specific provisions under Regulation 9(2)(vi) and (viii) through second amendment to the 2009 Tariff Regulations as under:

“(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-materialization of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station."

21. Thus, the Commission has consciously provided for the expenditure of specific nature under Regulation 9(2)(vi) and (vii) which are considered necessary for the successful and efficient operation of the coal based thermal generating station and gas based stations. In other words, additional capital expenditure for successful and efficient operation of the generating stations for reasons other than those provided for under Regulation 9(2) of 2009 Tariff Regulations is not permissible.

17. In line with the decision of the Commission in the above said orders, we consider the additional capital expenditure claimed by the petitioner for 2009-14 in this petition, under the provisions of Regulation 9(2) of the 2009 Tariff Regulations.

18. The category-wise break-up details of the additional capital expenditure claimed during 2009-14 is as under:

Sl. No		Regulations	Actual/Projected Capital Expenditure (₹ in lakh)				
			2009-10 (actual)	2010-11	2011-12	2012-13	2013-14
i.	Room for Ambient Air Quality monitoring system	9(2)(ii)	2.40	0.00	0.00	0.00	0.00
ii.	Ambient Air Quality monitoring system	9(2)(ii)	97.69	0.00	0.00	0.00	0.00
iii.	Liquid waste treatment plant	9(2)(ii)	0.00	2233.00	0.00	0.00	0.00
iv.	Atomic absorption Spectrophotometer	9(2)(ii)	0.00	60.00	0.00	0.00	0.00
v.	Energy audit instrument	9(2)(ii)	0.00	15.00	0.00	0.00	0.00
vi.	Solar water heater (200/100 litre capacity)	-	0.00	14.00	0.00	0.00	0.00
vii.	Brick making machine	9(2)(ii)	30.00	0.00	0.00	0.00	0.00
viii.	Upstream slope protection of Ash dyke	9(2)(iii)	203.98	0.00	0.00	0.00	0.00
ix.	Ash dyke modification	9(2)(iii)	20.00	50.00	0.00	0.00	0.00
x.	Construction of peripheral drains for Ash dyke-2	9(2)(iii)	0.00	47.00	0.00	0.00	0.00
xi.	Construction for Ash corridor road	9(2)(iii)	0.00	62.00	0.00	0.00	0.00
xii.	Sewerage system	-	0.00	143.00	0.00	0.00	0.00
xiii.	Erection , testing & commissioning of 11 kV circuit line	-	1.76	0.00	0.00	0.00	0.00
xiv.	Filling of area for erection of 11 kV circuit line	-	2.60	0.00	0.00	0.00	0.00
xv.	Cuplock for boiler (scaffolding)	-	0.00	130.00	0.00	0.00	0.00
xvi.	Modern tools for boiler	-	0.00	50.00	0.00	0.00	0.00
	Total		358.43	2804.00	0.00	0.00	0.00

19. After examining the asset-wise details and justification for additional capitalization claimed by the petitioner under various categories, the submissions of the respondents and by applying prudence check, the admissibility of the additional capital expenditure is discussed in the subsequent paragraphs:

Change in law- Regulation 9(2)(ii)

(a) Ambient air Quality management System (AAQMS)

20. The petitioner has claimed an expenditure of ₹100.09 lakh (₹2.40 lakh for room for AAQMS and ₹97.69 lakh for AAQMS Package) during 2009-10 under Regulation 9(2)(ii), on the ground

that proper monitoring of ambient air quality around the power plant is a legal requirement of the station. The respondent, UPPCL has submitted that the capitalization of the said item cannot be permitted since the petitioner has not indicated any change-in-law. The petitioner vide its affidavit dated 11.5.2010 has clarified that the said expenditure is required in compliance to the terms and conditions of the Environmental Clearance/NOC issued by the Uttar Pradesh Pradushan Nigam Board vide letter dated 15.7.1996. On perusal of the terms contained in the letter dated 15.7.1996, it is noticed that apart from other activities, continuous monitoring systems for measuring stack emission and ambient air quality is also required to be arranged. It has also been submitted that AAQMS package is required to be provided appropriate housing, since these are sophisticated instruments to be located outside the generating station office/plant premises. The petitioner has also certified that no expenditure has been made in respect of AAQMS earlier. In view of the above, the expenditure for ₹100.09 lakh is allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

(b) Liquid Waste Treatment Plant

21. The petitioner has claimed expenditure of ₹2233.00 lakh during 2010-11 towards for Liquid waste treatment plant in compliance with the terms and conditions of the Environmental Clearance/NOC issued by the Uttar Pradesh Pradushan Nigam Board vide letter dated 15.7.1996. It is noticed from the terms contained in the said letter that the effluents from the plant should be properly treated to conform to Pollution Board's standards, prior to discharge from the plant. In view of this, the expenditure is found justified and the same is allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

(c) Brick Making Machine

22. The petitioner has claimed expenditure of ₹30.00 lakh during 2009-10 under Regulation 9(2)(ii) of the 2009 Tariff Regulations, towards brick making machine on the ground that the said asset is required for achieving 100% ash utilization targets as per notifications of the Ministry of

Environment & Forests, Government of India and hence it is proposed to procure and install the said asset. The respondent, UPPCL in its reply has objected to the capitalization of this expenditure on the ground that the petitioner has not indicated the 'change-in-law' that has necessitated the said expenditure. UPPCL has also submitted that the said expenditure is not covered under Regulation 9(1) or 9(2) of the 2009 Tariff Regulations and hence the expenditure may not be allowed. In response, the petitioner has submitted that the change in law is with respect to environment. However, in the additional submissions made vide affidavit dated 11.5.2010, the petitioner has clarified that the expenditure under 'change –in-law' is required for compliance with the terms and conditions of Environmental clearance/NOC issued by Uttar Pradesh Pradushan Nigam Ltd. We have examined the submissions of the parties and the provisions of the Notification dated 3.11.2009 of the Ministry of Environment & Forests, Government of India, applicable in the instant case. While the MOE&F notification dated 3.11.2009 encourages the need for increased use of fly ash for manufacture of bricks, the proviso to clause 8(i) and (ii) provides that the thermal power stations shall facilitate the availability of required quantity and quality of fly ash for this purpose. On scrutiny, it is noticed that the notification dated 3.11.2009, does not mandate the coal or lignite based thermal power stations to manufacture bricks. It is also observed that the said notification provides that all coal/lignite based thermal stations would be free to sell the fly ash to user agencies subject to certain conditions as mentioned therein. Moreover, the amount collected from sale of fly ash or fly ash based products by coal and/or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities, promotion and facilitation activities for use of fly ash until 100% fly ash utilization level is achieved. Since the said notification provides that the money collected from the sale of fly ash or fly ash based products should be utilized for development of infrastructure for use of fly ash, the petitioner is not prevented from utilizing the money for procurement/installation of brick making machines. Moreover, the income generated

from sale of fly ash or fly ash based products like bricks are not passed on to the beneficiaries. Hence, we are of the view that it would not be prudent to load the said expenditure on brick making machine as additional capital expenditure, when such expenditure is neither covered under change in law nor the income from fly ash utilization is shared with the beneficiaries. Based on the above, the expenditure of ₹30.00 lakh towards brick making machine has not been allowed.

23. The petitioner has also claimed expenditure for ₹60.00 lakh towards atomic absorption spectrophotometer and ₹15.00 lakh towards energy audit instrument during 2010-11 under Regulation 9(2)(ii) of the 2009 Tariff Regulations. These are minor assets in the nature of tools and tackles. Since, the generating station is entitled for compensation allowance under Regulation 19(e) of the 2009 Tariff Regulations to meet the expenses for minor assets, the claim of the petitioner under this head is not allowed.

Deferred works relating to ash pond or ash handling system in the original scope of work- Regulation 9(2) (iii)

24. The petitioner has claimed an expenditure of ₹223.98 lakh (₹203.98 lakh for Upstream slope protection of ash dyke, ₹20.00 lakh for ash dyke modification) during 2009-10 and ₹159.00 lakh (₹50.00 lakh for ash dyke modification, ₹47.00 lakh for construction of peripheral drains for ash dyke and ₹62.00 lakh for construction of ash corridor road) during 2010-11. The petitioner has submitted that these works are required for proper storage of ash and maintaining the integrity of the ash pond. The works relating to ash dykes/ash handling system are normal practice and the said works form part of the original scope of work and are normally taken up in stages as and when required. Since, these are normal activities done in phases depending upon the requirement with the passage of time, during the useful life of the plant and is covered under the original scope of work, the expenditure claimed is allowed to be capitalized under this head.

Expenditure on balance works**(a) Sewerage system**

25. The petitioner has claimed expenditure for ₹143.00 lakh during 2010-11 towards sewerage system on the ground that these balance works within the original scope of work are required to be completed to ensure hygiene condition. Since deferred works after the cut-off date of the generating station is not permitted to be capitalized in terms of Regulation 9(2) of the 2009 Tariff Regulations, the expenditure claimed by the petitioner is not allowed.

(b) Erection, Testing & Commissioning of 11 kV circuit line

26. The petitioner has claimed expenditure of ₹1.76 lakh towards erection testing & commissioning of 11 kV circuit line and ₹2.60 lakh towards filling of area for 11 kV circuit line during 2009-10 on the ground that these are balance works under original scope of work. Since deferred works after the cut-off date of the generating station is not permitted to be capitalized in terms of Regulation 9(2) of the 2009 Tariff Regulations, the expenditure claimed by the petitioner cannot be allowed. Moreover, the petitioner has not provided the justification for the said work after 9 to 10 years of the commercial operation of the generating station and has also not indicated as to how the generating station had been managed without undertaking the said work. In view of these, the capitalization of the expenditure claimed is not allowed under Regulation 9 (2) of the 2009 Tariff Regulations.

27. The petitioner has also claimed expenditure of ₹130.00 lakh towards cup lock for boiler (scaffolding) and ₹50.00 lakh towards modern tools for boiler during 2010-11 as 'Special tools' for successful and efficient operation of the generating station. The petitioner has also submitted that these T&P equipments are required to reduce equipment downtime through improved practices, speed and quality of repair and maintenance functions. The petitioner has also claimed expenditure of ₹14.00 lakh during 2010-11 towards Solar Water heater on the ground that the

same is required for conserving energy. The respondent, NDPL has submitted that the petitioner's claim for expenditure may not be allowed in terms of the last proviso to Regulation 9(2) of the 2009 Tariff Regulations as these assets do not contribute to the successful and efficient operation of the generating station and are of regular nature occurring every year. The expenditure on acquiring minor items/assets in nature of tools and tackles after the cut-off date is not permissible in terms of Regulation 9(2) of the 2009 Tariff Regulations, the claim of the petitioner under this head is not allowed.

28. Based on the above discussions, the additional capital expenditure allowed for 2009-14 is as under:

Sl. No.		Actual/Projected Capital Expenditure (₹ in lakh)				
		2009-10 (actual)	2010-11	2011-12	2012-13	2013-14
i.	Room for Ambient air Quality monitoring system	2.40	0.00	0.00	0.00	0.00
ii.	Ambient Air Quality Monitoring System	97.69	0.00	0.00	0.00	0.00
iii.	Liquid waste treatment plant	0.00	2233.00	0.00	0.00	0.00
iv.	Atomic absorption Spectrophotometer	0.00	0.00	0.00	0.00	0.00
v.	Energy audit instrument	0.00	0.00	0.00	0.00	0.00
vi.	Solar water heater 200/100 litre capacity	0.00	0.00	0.00	0.00	0.00
vii.	Brick making machine	0.00	0.00	0.00	0.00	0.00
viii.	Upstream slope protection of Ash dyke	203.98	0.00	0.00	0.00	0.00
ix.	Ash dyke modification	20.00	50.00	0.00	0.00	0.00
x.	Construction of peripheral drains for Ash dyke-2	0.00	47.00	0.00	0.00	0.00
xi.	Construction for Ash corridor road	0.00	62.00	0.00	0.00	0.00
xii.	Sewerage system	0.00	0.00	0.00	0.00	0.00
xiii.	Erection testing & commissioning of 11 kV circuit line	0.00	0.00	0.00	0.00	0.00
xiv.	Filling of area for erection of 11 kV circuit line	0.00	0.00	0.00	0.00	0.00
xv.	Cuplock for boiler (Scaffolding)	0.00	0.00	0.00	0.00	0.00
xvi.	Modern tools for boiler	0.00	0.00	0.00	0.00	0.00
	Total	324.07	2392.00	0.00	0.00	0.00

29. Taking into account the liabilities discharged during the years 2009-10 and 2010-11 the additional capital expenditure allowed for the purpose of tariff is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure	324.07	2392.00	0.00	0.00	0.00
Liabilities discharged	8.46	21.49	0.00	0.00	0.00
Additional capital expenditure allowed	332.53	2413.49	0.00	0.00	0.00

30. 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	2013-14
Opening Capital cost	129840.97	130173.51	132587.00	132587.00	132587.00
Additional capital expenditure	332.53	2413.49	0.00	0.00	0.00
Closing Capital cost	130173.51	132587.00	132587.00	132587.00	132587.00
Average Capital cost	130007.24	131380.25	132587.00	132587.00	132587.00

Debt- Equity Ratio

31. Regulation 12 of the 2009 Tariff Regulations provides as under:

“(1) 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 utilized 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

32. The gross loan and equity of ₹90932.77 lakh and ₹38971.19 lakh respectively, as on 31.3.2009 approved *vide* order dated 5.10.2011 in Petition No.150/2004 has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities amounting to ₹62.99

lakh deducted from the capital cost, as on 1.4.2009, has been adjusted to debt and equity in the ratio of 70:30. As such, the gross normative loan and equity as on 1.4.2009 is revised to ₹90888.68 lakh and ₹38952.29 lakh respectively. Further, the additional expenditure has been allocated in the debt-equity ratio of 70:30. The same is subject to truing-up in the terms of the provisions contained in Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

33. Regulation 15 of the 2009 Tariff Regulations provides as under:

“(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:

Rate of pre-tax return on equity = 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 Charge 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 the 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.”

34. Return on equity has been worked out @23.481% per annum on the normative equity after accounting for additional capitalization as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	38952.29	39052.05	39776.10	39776.10	39776.10
Addition of Equity due Additional Capitalization	99.76	724.05	0.00	0.00	0.00
Normative Equity-Closing	39052.05	39776.10	39776.10	39776.10	39776.10

Average Normative equity	39002.17	39414.08	39776.10	39776.10	39776.10
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year 2008-09	33.990%	33.990%	33.990%	33.990%	33.990%
Rate of Return on Equity (Pre Tax)	23.481%	23.481%	23.481%	23.481%	23.481%
Return on Equity (Pre-Tax) (annualised)	9158.10	9254.82	9339.83	9339.83	9339.83

Interest on loan

35. Regulation 16 of the 2009 Tariff Regulations provides as under:

(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."

36. Interest on loan has been worked out as mentioned below:

- (a) As stated above gross normative loan amounting to ₹90888.68 lakh has been considered as on 1.4.2009.

- (b) Cumulative repayment of ₹62654.71 lakh as on 31.3.2009 as considered in order dated 5.10.2011 in Petition No.150/2004 has been considered as on 1.4.2009. However, after taking into account proportionate adjustment (taking into account the liability and debt position as on 1.4.2004 along with additions during the period 2004-09, if any) to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised to ₹62624.33 lakh.
- (c) Accordingly, the net normative opening loan works out to ₹28264.35 lakh, as on 1.4.2009.
- (d) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- (e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2009-14. Further, proportionate adjustment has been made to the repayments corresponding to discharges and reversals of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.
- (f) In line with the provisions of the above regulation, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2009 for the generating station. 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.

37. The calculations for Interest on loan are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	90888.68	91121.45	92810.90	92810.90	92810.90
Cumulative repayment of loan upto previous year	62624.33	69608.13	76687.61	83805.83	90924.04
Net loan opening	28264.35	21513.32	16123.29	9005.07	1886.85
Additions due to Additional capital expenditure	232.77	1689.44	0.00	0.00	0.00
Repayment of loan during the year	6979.72	7053.43	7118.22	7118.22	1886.85
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 01.04.2009	4.08	26.05	0.00	0.00	0.00
Net Repayment	6983.80	7079.48	7118.22	7118.22	1886.85
Net Loan Closing	21513.52	16123.29	9005.07	1886.85	0.00
Average Loan	24888.84	18818.31	12564.18	5445.96	943.43
Weighted Average Rate of Interest on Loan	2.5335%	2.2634%	2.1089%	1.9800%	1.9800%
Interest on Loan	630.55	425.93	264.97	107.83	18.68

Depreciation

38. Regulation 17 of the 2009 Tariff Regulations provides as under:

“(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 longterm 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 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.”

39. The cumulative depreciation as on 31.3.2009 as considered in order dated 5.10.2011 in Petition No.150/2004 is ₹47354.03 lakh. Further, proportionate adjustment has been made to this cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation works out to ₹47331.07 lakh as on 1.4.2009. Further, the value of freehold land considered in the said order is ₹436.51 lakh as on 31.3.2009 and the same has been considered for the purpose of calculating depreciable value. Accordingly, the balance depreciable value (before providing depreciation) for the year 2009-10 works out to ₹69296.08 lakh. Since, the useful life of the generating station (i.e. 8.67 years) is less than 12 years, as on 1.4.2009, from the effective date of commercial operation of the generating station (i.e 1.8.2000), depreciation has been calculated by applying the weighted average rate of depreciation of 5.3687% for the years 2009-10, 2010-11, 2011-12 and 2012-13. However, as the used life of the station as on 1.4.2013 (i.e.12.67 years) is more than 12 years from the effective date of commercial operation of the generating station (1.8.2000), for the year 2013-14,

depreciation has been calculated by spreading over of the balance depreciable value. The balance useful life as on 1.4.2013 works out to 12.33 years. Further, proportionate adjustment has been made to the cumulative depreciation corresponding to discharges and/or reversal of liabilities considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009. The necessary calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	129840.97	130203.51	132617.00	132617.00	132617.00
Closing capital cost	130173.51	132587.00	132587.00	132587.00	132587.00
Average capital cost	130007.24	131380.25	132587.00	132587.00	132587.00
Depreciable value @ 90%	116613.66	117849.37	118935.44	118935.44	118935.44
Remaining useful life at the beginning of the year	16.33	15.33	14.33	13.33	12.33
Balance depreciable value	69282.58	63535.49	57548.44	50430.23	43312.01
Depreciation (annualized)	6979.72	7053.43	7118.22	7118.22	3511.78
Cumulative depreciation at the end of the year	54310.79	61367.31	68505.21	75623.43	79135.21
Add: Cumulative depreciation adjusted on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	3.09	19.69	0.00	0.00	0.00
Cumulative depreciation (at the end of the period)	54313.88	61386.99	68505.21	75623.43	79135.21

O & M Expenses

40. Clause (a) of Regulation 19 of the 2009 Tariff Regulations provides the following O&M expenses for 210 MW coal based and lignite fired generating stations as under:

	(₹ in lakh/MW)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	18.20	19.24	20.34	21.51	22.74

41. The O&M expenses claimed by the petitioner are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12 (leap year)	2012-13	2013-14
O&M expenses	7644	8081	8543	9034	9551

42. Based on the above norms, the operation & maintenance expenses allowed are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12 (leap year)	2012-13	2013-14
O&M expenses	7644.00	8080.80	8542.80	9034.20	9550.80

Normative Annual Plant Availability Factor (NAPAF)

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

Interest on Working Capital

44. 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.

(c) 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.

45. 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.

46. Working capital has been calculated considering the following elements:

Fuel Component in working capital

47. The petitioner has claimed the cost for fuel component in working capital, based on price and GCV of coal procured and burnt for the preceding three months of January, 2009 to March, 2009 and Secondary fuel oil (HFO) for the month of January, 2009 as under:

	2009-10	2010-11	2011-12 (leap year)	2012-13	2013-14
Cost of coal for 2 months	8434	8434	8457	8434	8434
Cost of secondary fuel oil 2 months	108	108	108	108	108

48. Based on the above, the fuel component in the working capital considered for the purpose of tariff is as under:

	2009-10	2010-11	2011-12 (leap year)	2012-13	2013-14
Cost of coal for 2 months	8434.07	8434.07	8457.18	8434.07	8434.07
Cost of secondary fuel oil 2 months	107.74	107.74	108.04	107.74	107.74

Maintenance Spares

49. The petitioner has claimed the following maintenance spares in the working capital, as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	1529	1622	1721	1819	1923

50. The 2009 Tariff Regulations provides for maintenance spares @ 20% of the operation and maintenance expenses as specified in Regulation 19. Accordingly, the maintenance spares allowed for the purpose of tariff is as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	1528.80	1616.16	1708.56	1806.84	1910.16

Receivables

51. Receivables have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) on normative plant availability factor as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	8434.07	8434.07	8457.18	8434.07	8434.07
Fixed Charges - 2 months	4662.47	4738.91	4824.97	4883.47	4345.65
Total	13096.54	13172.98	13282.15	13317.55	12779.72

O&M Expenses

52. O & M expenses for 1 month claimed by the petitioner for the purpose of working capital are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	637	676	717	758	801

53. The petitioner has claimed O & M expenses for working capital by including one month expenditure of compensatory allowance. Clause (e) of Regulation 19 of the 2009 Tariff Regulations states that “a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets”. Hence, the claim of the petitioner is not permissible. However, based on the O&M expenses norms, the O&M expenses (1 month) considered for working capital is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	637.00	673.40	711.90	752.85	795.90

54. 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 as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal for 2 months	8434.07	8434.07	8457.18	8434.07	8434.07
Cost of secondary fuel oil for 2 months	107.74	107.74	108.04	107.74	107.74
O&M Expenses- 1 month	637.00	673.40	711.90	752.85	795.90
Maintenance spares	1528.80	1616.16	1708.56	1806.84	1910.16
Receivables-2 months	13096.54	13172.98	13282.15	13317.55	12779.72
Total working capital	23804.16	24004.36	24267.83	24419.05	24027.60
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	2916.01	2940.53	2972.81	2991.33	2943.38

Cost of secondary fuel oil

55. Clause (1) of Regulation 20 of the 2009 Tariff Regulations provides as under:

“20. Expenses on secondary fuel oil consumption for coal-based and lignite-fired generating station. (1) Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause (iii) of regulation 26, in accordance with the following formula:

$$\text{SFC} - \text{Normative Specific Fuel Oil consumption in ml/kWh} \\ = \text{SFC} \times \text{LPSFi} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10$$

Where,

LPSFi – Weighted Average Landed Price of Secondary Fuel in `/ml considered initially.

NAPAF – Normative Annual Plant Availability Factor in percentage

NDY – Number of days in a year

IC - Installed Capacity in MW.

56. In terms of the above norms, the secondary fuel oil consumption cost works out to ₹646.44 lakh for 2009-10, 2010-11, 2012-13 and 2013-14 and ₹ 648.21 lakh for 2011-12.

Compensation Allowance

57. Regulation 19 (e) of the 2009 regulations provides for payment of compensation allowance as under:

“19 (e) In case of coal-based or lignite-fired thermal generating station a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:

Years of operation	Compensation Allowance (₹ in lakh/MW/year)
0-10	Nil
11-15	0.15
16-20	0.35
21-25	0.65

58. The petitioner has claimed compensation allowance, unit-wise, to meet the expenses on new assets of capital nature including in the nature of minor assets as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Compensation allowance	0.00	32.00	63.00	63.00	63.00

59. The compensation allowed in terms of the above regulations is as under:

(₹ in lakh)

SI No.		Unit-I	Unit-II	
	Date of commercial operation	1.1.2001	1.3.2000	
	Useful life as on 1.4.2009	8.25	9.08	
3	Actual useful life			
	10 years	1.1.2011	1.3.2010	
	15 years	1.1.2016	1.3.2015	
	20 years	1.1.2021	1.3.2020	
	25 years	1.1.2026	1.3.2025	
	Compensation allowance			Total
	2009-10	0.00	0.00	0.00
	2010-11	0.00	31.50	31.50
	2011-12	31.50	31.50	63.00
	2012-13	31.50	31.50	63.00
	2013-14	31.50	31.50	63.00
	Total	94.50	126.00	220.50

Annual Fixed charges for 2009-14

60. The annual fixed charges allowed for the generating station for 2009-14 are summarized as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	6979.72	7053.43	7118.22	7118.22	3511.78
Interest on Loan	630.55	425.93	264.97	107.83	18.68
Return on Equity	9158.10	9254.82	9339.83	9339.83	9339.83
Interest on Working Capital	2916.01	2940.53	2972.81	2991.33	2943.38
O&M Expenses	7644.00	8080.80	8542.80	9034.20	9550.80
Cost of Secondary fuel oil	646.44	646.44	648.21	646.44	646.44
Compensation Allowance	0.00	31.50	63.00	63.00	63.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
Total	27974.82	28433.46	28949.84	29300.85	26073.91

Note: (i) All figures are on annualized basis

(ii) All the figures under each head have been rounded. (ii) 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.

61. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 Tariff Regulations.

Energy Charge Rate (ECR)

62. Sub-clause (b) of clause (6) of Regulation 21 of the 2009 Tariff Regulations provides as under:

“Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

63. The petitioner has claimed an Energy Charge Rate (ECR) of 177.818 paisa/kWh considering the normative transit and handling losses of 0.2% for import coal and 0.8% for coal supplied through Railway system. Accordingly, the weighted average price, of coal works out to ₹2492.62/MT. The ECR of 177.818 paisa/kWh is based on the weighted average price, GCV of fuel procured and burnt for three months i.e. January, 2009, February, 2009 and March, 2009. The ECR of 177.818 paisa/kWh, as claimed by the petitioner is found to be in order and allowed as under:

	Unit	2009-10,2010-11,2012-13 and 2013-14	For 2011-12 (leap year)
Capacity	MW	420 MW (2x210 MW)	
Weighted average Gross Station Heat Rate	Kcal/kWh	2500	2500
Weighted avg. Aux. Energy Consumption	%	9	9
Weighted average price of oil	₹/kl	20670.81	20670.81
Weighted average price of coal	₹/MT	2492.62	2492.62
Rate of energy charge ex-bus	Paise/kWh	177.818	177.818

64. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 21 of the 2009 Tariff Regulations.

65. The learned counsel for the respondent, BRPL has submitted that information related to the calculation of ECR has not been provided to the beneficiaries and the same is required for payment of monthly bills expeditiously and for the purpose of satisfying its auditors and /or State Regulatory Commission for approval of tariff. Thus, it has prayed that the petitioner may be directed to provide the relevant information, and directions may accordingly be issued to the

petitioner to furnish the actual data used in calculation of ECR duly certified by statutory auditor. In response, the petitioner has submitted that tariff including energy charges /variable charges claimed by the petitioner from the beneficiaries are based on the 2009 Tariff Regulations and the tariff orders issued by the Commission. It has also submitted that the details for computation of ECR are given along with the bills as required under Regulation 21 of the 2009 Tariff Regulations and the same does not envisage any auditor certificate on this account. The submissions have been examined. It is noticed that the respondent, NDPL by a separate petition (Petition No.212/2011) had raised similar issues and had sought appropriate directions from the Commission on some of the central generating stations including the petitioner herein, to provide the audited documents in support of variable cost/charges billed by them on monthly basis and the Commission had disposed of the same by order dated 22.3.2012. The relevant portion of the order is extracted as under:

"9. The tariff of the generating station of the respondents are determined by the Central Commission in exercise of its power under Section 79 (1)(a) of the Act read with Section 62(1)(a) of the Act for supply of power to the distribution licensees, based on the 2009 Tariff Regulations notified by it. Regulation 21 of the 2009 Regulations allows a generating company, the energy charges as pass through, with Fuel Price Adjustment (FPA) in the monthly bills raised on the distribution licensees like the petitioner. There exists no provision/clause which mandates the submission of auditor's certificate by a generating company in support of its claim for energy charges computed by it. It is noticed that the respondent No.1, in support of its claim for monthly FPA has submitted documents to the petitioner certifying that the FPA figures are as per quarterly audited accounts. This, according to us, constitutes sufficient compliance with the above regulations. We are of the view that the petitioner can comply with the directions of DERC by submitting certificate from its auditor, based on the authenticated quarterly bills provided by the respondent. Therefore, there is no requirement to issue any directions to the respondents to provide monthly bills duly certified by auditor as prayed for in the petition. Accordingly, the prayers of the petitioner stands rejected and the petition is dismissed as not maintainable."

In terms of Regulation 21(5) of the 2009 Tariff Regulations, the Energy Charges covering the primary fuel cost and limestone consumption cost (where applicable) shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiaries during the calendar month on ex-power plant basis, at the energy charge of the month (with fuel and limestone price adjustment). It is noticed that the petitioner, in support of its claim for monthly FPA has been submitting documents to the respondents certifying that the FPA figures are as per quarterly audited accounts. As regards the submission of the details of coal, including

imported coal, the petitioner has submitted that the said details are being submitted to the respondents, in terms of the format agreed to in the ERPC forum. Taking note of the requirement to provide requisite details regarding use of fuel, the Commission by public notice dated 13.6.2012 has proposed amendments to Regulation 21 of the 2009 Tariff Regulations wherein, the generators have been enjoined to provide details of parameters of GCV and price of fuel (i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG or liquid fuel) and blending ratio of imported and domestic coal, proportion of e-auction coal etc. with details of the variation in energy charges billed to the beneficiaries along with each bill/ supplementary bills. This, according to us, would adequately address the grievances of the respondents / beneficiaries. The learned counsel for the respondent, BRPL has submitted that the power supply made by petitioner to its housing colonies is to be accounted for and accordingly adjusted, as the entire power belongs to the beneficiaries to the extent of their respective shares. He also submitted that the undue benefit derived by the petitioner on this count is unreasonable and without any basis. In response, the petitioner has submitted that in terms of the definition of 'generating station' under Section 2(30) of the Act, colony consumption constitutes part of Auxiliary consumption and no undue benefit is derived out of this by the petitioner. It has also submitted that all costs for generation of electricity including costs associated with housing colony of the operating staff are recovered through tariff determined by the Commission and no benefit is derived by the petitioner as alleged by the respondents. The matter has been examined. It is noticed from the Electricity (Removal of Difficulty) Fourth order, dated 8.6.2005 issued by the Central Government that the supply of electricity by a generating company to the housing colonies or township housing the operating staff of the generating station will be deemed to be an integral part of its activity of generating electricity and the generating company shall not be required to obtain license under the Act for supply of electricity. Thus, the supply of electricity to the housing colony or township housing the operating staff of the generating station being an integral part of generation of electricity, shall form part of the auxiliary consumption of the

generating station. Since auxiliary consumption of electricity is allowed on normative basis as per the 2009 Tariff Regulations, the consumption of electricity by the housing colony within the said norms cannot be termed as undue benefits derived by the generating company.

66. The claim for recovery of RLDC Fees and Charges, is disposed of in terms of our order dated 6.2.2012 in Petition No.140/MP/2011 (NTPC-v-POSOCO Ltd & ors).

Application fee and the publication expenses

67. The petitioner has sought approval for the reimbursement of fees of ₹8,40,000/- each for the years 2009-10, 2010-11 and 2011-12 towards filing of the tariff petition and expenses incurred towards publication of notices in connection with the petition. The petitioner by its affidavit dated 21.4.2010 has submitted that an expenditure of ₹3,54,366/- has been incurred by it for publication of notices in the newspapers.

68. In terms of Regulation 42 of the 2009 Tariff Regulations and based on our decision contained in order dated 11.1.2010 in Petition No.109/2009, the expenses towards filing of tariff application and the expenses incurred on publication of notices are to be reimbursed. Accordingly, the expenses incurred by the petitioner for petition filing fees for the years 2009-10, 2010-11 and 2011-12 and expenses for publication of notices in connection with the present petition shall be directly recovered from the beneficiaries, on *pro rata* basis. The filing fees in respect of the balance years would be recoverable as and when paid by the petitioner in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012.

69. In addition to the above, the petitioner is entitled to recover other taxes etc., levied by statutory authorities in accordance with the 2009 Tariff Regulations, as applicable.

70. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 6.7.2011. The provisional billing of tariff shall be adjusted in terms of the proviso to Regulation 5(3) of the 2009 Tariff Regulations as amended on 21.6.2011.

71. This order disposes of Petition No. 323/2009.

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[V.S.VERMA]
MEMBER

Sd/-
[S.JAYARAMAN]
MEMBER

Sd/-
[DR.PRAMOD DEO]
CHAIRPERSON

Annexure-I

Calculation of Weighted Average Rate of Interest on Loan

(₹ in lakh)

Sl. no.	Name of loan		2009-10	2010-11	2011-12	2012-13	2013-14
1	HDFC-II (T1,D1&D2)	Net opening loan	285.71	-	-	-	-
		Add: Addition during the period					
		Less: Repayment during the period	285.71				
		Net Closing Loan	-	-	-	-	-
		Average Loan	142.86	-	-	-	-
		Rate of Interest	10.3500%	10.3500%	10.3500%	10.3500%	10.3500%
		Interest	14.79	-	-	-	-
2	SBI-I (T1,D3&D5)	Net opening loan	771.43	-	-	-	-
		Add: Addition during the period					
		Less: Repayment during the period	771.43				
		Net Closing Loan	-	-	-	-	-
		Average Loan	385.71	-	-	-	-
		Rate of Interest	11.6000%	11.6000%	11.6000%	11.6000%	11.6000%
		Interest	44.74	-	-	-	-
3	Bond XII Series	Net opening loan	1,500.00	1,000.00	500.00	-	-
		Add: Addition during the period					
		Less: Repayment during the period	500.00	500.00	500.00	-	-
		Net Closing Loan	1,000.00	500.00	-	-	-
		Average Loan	1,250.00	750.00	250.00	-	-
		Rate of Interest	10.0300%	10.0300%	10.0300%	10.0300%	10.0300%
		Interest	125.38	75.23	25.08	-	-
4	ADB-I (64913 JYP @ .4238)	Net opening loan	27,509.00	23,025.00	18,083.00	12,631.00	6,624.00
		Add: Addition during the period					
		Less: Repayment during the period	4,484.00	4,942.00	5,452.00	6,007.00	6,624.00
		Net Closing Loan	23,025.00	18,083.00	12,631.00	6,624.00	-
		Average Loan	25,267.00	20,554.00	15,357.00	9,627.50	3,312.00
		Rate of Interest	1.9800%	1.9800%	1.9800%	1.9800%	1.9800%
		Interest	500.29	406.97	304.07	190.62	65.58
5	Gross Total	Net opening loan	30,066.14	24,025.00	18,583.00	12,631.00	6,624.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	6,041.14	5,442.00	5,952.00	6,007.00	6,624.00
		Net Closing Loan	24,025.00	18,583.00	12,631.00	6,624.00	-
		Average Loan	27,045.57	21,304.00	15,607.00	9,627.50	3,312.00
		Rate of Interest	2.5335%	2.2634%	2.1089%	1.9800%	1.9800%
		Interest	685.19	482.19	329.14	190.62	65.58