

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 225/2009

**Coram: Shri S. Jayaraman, Member
Shri M. Deena Dayalan, Member**

DATE OF HEARING: 25.8.2011

DATE OF ORDER: 7.8.2012

IN THE MATTER OF

Approval of tariff of Singrauli Super Thermal Power Station (2000 MW) for the period from 1.4.2009 to 31.3.2014

AND IN THE MATTER OF

NTPC Ltd, New Delhi
Vs

...Petitioner

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

...Respondents

Parties present:

1. Ms. Alka Saigal, NTPC
2. Shri V.K. Padha, NTPC
3. Shri Manish Garg, UPPCL

ORDER

The petitioner, NTPC Ltd. has filed this petition for approval of tariff of Singrauli Super Thermal Power Station (2000 MW) (hereinafter referred to as “the generating station”) 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 total capacity of 2000 MW comprises of five units of 200 MW and two Units of 500 MW each. The dates of commissioning of various units of the generating station are as under:

Unit-I	1.6.1982
Unit-II	1.2.1983
Unit-III	1.7.1983
Unit-IV	1.1.1984
Unit-V	1.6.1984
Unit-VI	1.7.1987
Unit-VII/Generating station	1.5.1988

3. The tariff of the generating station for the period from 1.4.2004 to 31.3.2009 was determined by the Commission by order dated 9.5.2006 in Petition No.157/2004. Subsequently, in Petition No.46/2007 the tariff of the generating station was revised by order dated 20.11.2008 after taking into account the additional capital expenditure incurred during the years 2004-05 and 2005-06. Subsequently, by order dated 21.1.2011 in Petition No. 189/2009, the tariff of the generating station was revised after taking into consideration the impact of additional capital expenditure incurred during the period 2006-09 and the judgment of the Tribunal dated 21.8.2009 in Appeal No. 74/2009, subject to the final outcome of the Civil Appeals filed by the Commission against the judgments of the Tribunal and pending before the Hon'ble Supreme Court. Thereafter, the tariff of the generating station was revised by order dated 15.6.2011 in Review Petition No. 2/2011 (in Petition No. 189/2009) considering the capital cost of `127861.82 lakh as on 31.3.2009. The annual fixed charges approved by order dated 15.6.2011 is as under:

	(` in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	901.04	701.51	569.94	612.06	631.54
Interest on Working Capital	3959.84	3998.50	4038.51	4098.16	4135.81
Depreciation	4349.34	4427.09	4472.11	4358.67	4166.15
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	8038.49	8125.10	8175.27	8357.16	8541.48
O & M Expenses	19760.00	20550.00	21370.00	22220.00	23120.00

Total	37008.70	37802.19	38625.83	39646.06	40594.98
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4. In terms of the directions contained in the order of the Commission dated 29.6.2010 in Petition No.245/2009, the petitioner has filed amended petition vide affidavit dated 23.3.2011 taking into consideration the revised figures as per order of the Commission dated 21.1.2011 in Petition No.189/2009. Accordingly, the annual fixed charges claimed by the petitioner for the period 2009-14 are as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	590	1785	7635	12731	9181
Interest on Loan	507	389	391	353	219
Return on Equity	14425	14544	15103	16099	16818
Interest on Working Capital	7090	7235	7494	7726	7837
O&M Expenses	31200	32980	34870	36870	38980
Cost of secondary fuel oil	3176	3176	3184	3176	3176
Compensation Allowance	780	650	650	650	325
Special Allowance	4000	5286	5588	5908	9369
Total	61768	66045	74916	83513	85904

5. Reply to the petition has been filed by the respondent No.1 (UPPCL), the respondent Nos. 5,6,7 and 8 namely, NDPL, BRPL, BYPL and HPPC. The petitioner has filed its rejoinder to the said replies.

Capital Cost as on 1.4.2009

6. Regulation 7 (1) (a) of the 2009 Tariff Regulations provides as under:

“7. Capital cost. (1) Capital cost for a project shall include: (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan- (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;”

7. The annual fixed charges claimed in the petition are based on the opening capital cost of `127861.82 lakh as on 1.4.2009. The annual fixed charges approved in order dated 15.6.2011 is based on the capital cost of `127861.82 lakh as on 31.3.2009. As such, the opening capital cost of `127861.82 lakh as on 1.4.2009 has been considered.

8. The petitioner vide its affidavit dated 16.9.2011 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books of accounts in Form-9A. The details of liabilities and capital cost have been reconciled with the records of the Commission are as under:

	(` in lakh)		
	As per Form-9A	As per records of Commission	Difference
Capital cost as on 1.4.2009, as per books	139952.94	139952.94	0.00
Liabilities included in the above	416.72	416.72	0.00

9. Out of the total liabilities for `416.72 lakh, liability of `382.35 lakh included in the gross block as on 1.4.2009, form part of the approved capital cost of `127861.82 lakh which correspond to allowed assets (`89.96 lakh pertain to the period prior to 1.4.2004 and `292.39 lakh pertain to the period 2004-09).

10. The last proviso of 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.”

11. Accordingly, in terms of the last proviso to Regulation 7 of the 2009 Tariff Regulations, the capital cost, after removal of un-discharged liabilities of `382.35 lakh works out to `127479.47 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.

12. The petitioner vide its affidavit dated 16.9.2011 has furnished the details of the liabilities discharged during 2009-11. Out of the un-discharged liabilities deducted as on

1.4.2009, the petitioner has discharged `3.29 lakh during 2009-10 (pertaining to assets capitalized during 2004-09) and `53.14 lakh during 2010-11 (`10.29 lakh pertaining to assets capitalized prior to 1.4.2004 and `42.85 lakh pertains to 2004-09 period). The discharge of said 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.

Additional Capital Expenditure for the period 2009-14

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

"9. Additional Capitalization. (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;*
- (iv) 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.

(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.”.

14. The actual/ projected additional capital expenditure claimed by the petitioner for 2009-14 is as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capital Expenditure claimed	1780.45*	1598.12	14258.29	14033.46	6368.94

*actuals

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

of the petitioner on the admissibility of the additional capital expenditure for 2009-14, in the subsequent paragraphs.

Submissions of the petitioner

16. 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.

17. 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.

18. The respondents have submitted that the claim of the petitioner for additional capital expenditure which is beyond the scope of Regulation 9(2) of the 2009 Tariff Regulations may not be allowed.

19. 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 in Petition No. 239/2009, 256/2009, 332/2009 and 279/2009 respectively, pertaining to the determination of tariff of generating stations of the petitioner for 2009-14 as under:

"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 cutoff 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 shall be considered while determining the tariff of the existing generating stations subject to truing-up at the end of the period. In the light of the above discussions, the prayer of the petitioner for consideration of projected capital expenditure under Regulation 9(2) is allowed subject to prudence check.

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.

20. In accordance with the above decisions, 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.

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

22. We now examine the claims of the petitioner for additional capitalization as under:

Environment and Ash utilization- Regulation 9(2)(ii)

(a) Ash Brick Plant

23. The petitioner has claimed expenditure for ₹29.00 lakh (₹25.00 lakh during 2010-11 and ₹4.00 lakh during 2011-12) towards procurement of ash brick manufacturing machine for the generating station. From the submissions of the petitioner, it is apparent that the ash brick making machine is for achieving 100% ash utilization targets as per notifications of the Ministry of Environment & Forests, Government of India. We have examined the matter 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. Thus the fly ash utilization in the MOEF notification dated 3.11.2009 is a self sustaining activity as 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. Therefore, the petitioner should utilize the money earned from sale of fly ash or fly ash based product

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 `29.00 lakh towards brick making machine has not been allowed.

(b) Bio-Methanation plant

24. The petitioner has claimed expenditure for `14.22 lakh during 2011-12 towards procurement of bio-methanation plant for the generating station in compliance with the environmental guidelines. The petitioner by affidavit dated 15.6.2011 has submitted that as per Schedule-II, Clause 5(i) of the Municipal Solid Wastes (Management and Handling) Rules, 2000 notified by the MOE&F on 25.9.2000, the bio-degradable waste has to be processed by different methods for stabilization of waste. It has also submitted that in order to comply with the said notification and also to adopt latest environment friendly technology for bio-degradable solid waste disposal, a similar bio-methanation plant has been successfully set up at the generation station, which has many advantages over other waste disposal methods. Though the petitioner has claimed the expenditure for procurement of bio-methanation plant to adopt latest environment friendly technology for bio-degradable solid waste disposal, we are not inclined to agree to the capitalization of the expenditure, since these are assets of minor nature, and the expenditure can be met from the compensation allowance admissible to the generating station. Accordingly, the expenditure claimed is not allowed to be capitalized.

Dry Ash Extraction & Transportation system

25. The petitioner has claimed expenditure for `4570.00 lakh (`3200.00 lakh during 2011-12 and `1370.00 lakh during 2012-13) towards Dry Ash Extraction & Transportation (DAETP) system for Stage-II of the generating station on the ground that CEA has approved the proposal for capital addition. By affidavit dated 15.6.2011, the petitioner has clarified that the projected expenditure submitted earlier was based on estimates in 2008 and the revised expenditure claimed is based on the award value of `4572.61 lakh. It appears that the expenditure is for achieving 100% ash utilization targets as per notifications of the Ministry of Environment & Forests, Government of India. In view of this, the expenditure claimed is allowed for capitalization under this head.

Ash Water Recirculation System for S1 dyke

26. The expenditure of `4200.00 lakh (`2400.00 lakh during 2011-12 and `1800.00 lakh during 2012-13) has been claimed by the petitioner towards Ash Water Recirculation System (AWRS) for S1 dyke. The petitioner has submitted that the ash of Stage-II of the generating station was being disposed of in S1 dyke and there was no other dyke available in the generating station for discharging ash of Stage-II units. It has further submitted that the MP Pollution Control Board had put a condition for installation of AWRS while giving clearance for charging the dyke. Since the expenditure to be incurred for the said asset is for complete re-circulation of new ash pond overflow in order to achieve zero discharge of effluents, in compliance with the requirement of the directions of the Uttar Pradesh Pollution Control Board, the same is allowed for capitalization under this head.

Ash pond or Ash handling system -Regulation 9(2) (iii)

27. The petitioner has claimed total expenditure towards ash pond and ash handling system for 2009-13, under this head as detailed under:

	(` in lakh)			
	2009-10 (actuals)	2010-11	2011-12	2012-13
Ash dyke Lagoon-1, 4 th raising	0.00	12.00	0.00	0.00
Ash dyke Lagoon-2, 4 th raising	301.17	11.00	0.00	0.00
Pipe and Pedestal- Civil	11.14	20.00	0.00	0.00
Pipe and Pedestal- Mechanical	0.00	10.00	20.00	0.00
I st raising- S1 dyke	0.00	0.00	685.00	150.00
S2 dyke-Starter	0.00	0.00	2700.00	0.00
Pipe and pedestal for diversion of St. I ash to S1 & S2 dyke	0.00	0.00	4000.00	4235.00
Total	312.31	53.00	7405.00	4385.00

28. It is observed that 4 (four) units of 200 MW of Stage-I of this generating station has completed useful life of 25 years prior to 1.4.2009 and Unit-V (200 MW) of Stage-I has completed useful life of 25 years as on 31.5.2009. Units VI and VII of the generating station shall complete its useful life of 25 years on 31.6.2012 and 31.4.2013 respectively. In short, the generating station shall complete its useful life of 25 years during the period 2009-14. Accordingly, the petitioner has opted for Special Allowance under the provisions of Regulation 10(4) of the 2009 Tariff Regulation for R&M and life extension of the Units, except for Unit VII which shall become eligible during 2014-15 i.e in the next tariff period. Since the units and the generating station as a whole would complete useful life of 25 years during the tariff period, there would be no remaining deferred work for Ash Pond or Ash Handling system within the original scope of work. Accordingly, the expenditure incurred / projected to be incurred for the works related to Ash Pond and Ash handling system is required to be met from the Special allowance admissible to the generating station towards R&M and life extension of the units/generating station. Hence, the total expenditure claimed during the period 2009-13 towards for Ash Pond & Ash handling system has not been allowed under the head.

R&M and life extension and CEA approved R&M schemes

29. The petitioner has claimed a total expenditure for `3769.90 lakh (`1332.31 lakh during 2009-10, `1505.90 lakh during 2010-11, and `931.69 lakh during 2011-12) towards R&M

and life extension which includes the renovation of reheat spray valves, replacement of economizer coils in Units VI and VII, renovation of girdling loops of platen re-heater & super heater coils of 500 MW boiler, renovation of diaphragm of HP & IP turbine of 200 MW units, renovation of HP, IP & LP Turbines of 200 MW units, renovation of PA fan, renovation of existing MOCBs with SF-6 vacuum breaker, renovation of boiler lift, renovation of obsolete DAS, provision of sodium chloride analyzer, provision of boiler tube leakage detection system, replacement of SWAS instrumentation, replacement of DM plant instruments, installation of belt weighers, renovation of idlers in CHP of Stage-I, installation of coal samplers, renovation of underground fire water lines & valves, renovation of bottom ash hopper isolation gates, renovation of existing ash slurry pipes and generator winding vibration monitoring etc. The petitioner has claimed the expenditure in respect of these assets which are required for successful and efficient operation of the generating station.

30. The petitioner has also claimed a total expenditure of `13300.82 lakh during the period 2011-14 towards R&M schemes approved by CEA vide letter dated 17.4.2007 which includes schemes like DDC MIS Stage-II, Renovation & Retrofitting of ESP, Energy Management System, AAQMAS Package and Opacity Monitoring Equipment. The petitioner has claimed the expenditure in respect of these assets which are required for successful and efficient operation of the generating station. The petitioner vide its affidavit dated 15.6.2011 has also submitted that Renovation and Retrofitting of ESPs are required in compliance with the pollution control norms and hence may be considered for additional capitalization under Regulation 9(2)(ii) of the 2009 Tariff Regulations (Change in law). Similarly, the expenditure towards Opacity Monitoring Equipment is for monitoring the stack emissions in compliance with the Central Pollution Control Board and the order issued by the UPPCB in terms of the Air Consent Order, the same may be allowed.

31. The respondent, UPPCL in its reply dated 25.7.2011 has submitted that the petitioner had already been granted an expenditure for `5700.18 lakh towards R&M for the period 2006-09 vide order dated 21.1.2011 in Petition No. 189/2009, and is claiming expenditure on R&M for respective units, the Special allowance cannot be allowed to the petitioner in terms of the second proviso to Regulation 10(4) of the 2009 Tariff Regulations. In response, the petitioner by its rejoinder dated 9.8.2011 has clarified that the projected additional capital expenditure is towards sustenance of performance and to meet targets specified by the Commission during 2009-14 and the projected expenditure is not towards life extension. It has also submitted that the capital expenditure allowed in tariff to the generating station earlier was not for life extension works and therefore Special allowance in lieu of R&M as contained in Regulation 10 of the 2009 Tariff Regulations are being claimed separately. The respondent, BRPL has submitted that the claim under R&M shall be considered only after corresponding de-capitalization of the assets and deduction from capital cost. It has also submitted that the claims under Regulation 9(2) shall be considered at the discretion of the Commission after the said expenditure has been incurred. In response, the petitioner has submitted that the assets which have become unserviceable are taken out of gross block and not considered for the purpose of tariff. It has also stated that the details of such assets can only be furnished during the truing up exercise. As regards projected additional capital expenditure claimed under Regulation 9(2), we have in paragraph 17 of this order decided for reasons stated there under, that the additional capital expenditure projected to be incurred shall be considered while determining the tariff of the existing generating stations subject to truing-up at the end of the period. In its reply dated 30.5.2011, the respondent NDPL has submitted that the option for special allowance shall not be available for the stations or units which have undertaken R&M schemes, during the period 2009-14. It has also submitted that the projected expenditure for R&M schemes

claimed by the petitioner and the special allowance claimed for Units I to VI during the period 2009-14 was against the provisions of the 2009 Tariff Regulations.

32. We have considered the submission of the parties and the documents available on record. In Petition No.189/2009, the petitioner had claimed expenditure on CEA approved R&M schemes to overcome the problems due to obsolescence, non availability of spares etc as the equipments installed had outlived their useful life. It was also submitted by the petitioner that the R&M schemes were approved by CEA during the year 2000 and the work was carried out in phased manner in order to avoid the shutdown of the units of the generating station. Accordingly, on prudence check, the Commission by its order dated 21.1.2011 had allowed the expenditure for R&M on CEA approved schemes including works other than CEA approved R&M schemes. Since capital expenditure allowed in our order dated 21.1.2011 in Petition No.189/2009 was not towards life extension of this generating station, Special allowance in lieu of R&M for life extension as contained in Regulation 10 of the 2009 Tariff Regulations is admissible for this generating station. Since Special allowance is admissible for the units of the generating station which have completed/to be completed its useful life of 25 years during the tariff period, we are of the view that the actual / projected capital expenditure incurred / to be incurred for R&M for life extension of Stage-I Units of the generating station, can be met from the Special allowance allowed for Stage-I units. Similarly, the expenditure on R&M for Unit-VI of Stage-II can also be met from the Special allowance allowed for the year 2013-14. Since, Unit-VII of Stage-II shall complete its useful life of 25 years during 2013-14 only, the capital expenditure for R&M of Unit-VII cannot be allowed as in terms of the provisions of the 2009 Tariff Regulations, the expenditure on R&M for life extension can be allowed from the next financial year (2014-15) from the date of completion of useful life of 25 years. We order accordingly. In view of this, the total capital expenditure of `17070.72 lakh (`3769.90 lakh +

`13300.82 lakh) claimed towards R&M and life extension and CEA approved R&M schemes has not been allowed.

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

(` in lakh)

Head of work/ Equipment	Actual/Projected capital expenditure				
	2009-10 (actual)	2010-11	2011-12	2012-13	2013-14
Environmental & Ash Utilization	0.00	0.00	5600.00	3170.00	0.00
Ash Pond and Ash Handling	0.00	0.00	0.00	0.00	0.00
R&M and Life Extension	0.00	0.00	0.00	0.00	0.00
R&M (CEA letter dated 17.4.2007)					
DDC MIS Stage-II	0.00	0.00	0.00	0.00	0.00
Renovation & Retrofitting of ESP	0.00	0.00	0.00	0.00	0.00
Energy Management System	0.00	0.00	0.00	0.00	0.00
AAQMAS Package	0.00	0.00	0.00	0.00	0.00
Opacity Monitoring Equipment	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	5600.00	3170.00	0.00

34. The additional capital expenditure allowed for the purpose of tariff for 2009-14, including liabilities discharged, is as under:

(` in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure allowed	0.00	0.00	5600.00	3170.00	0.00
Liabilities discharged –Existing assets	3.29	53.14	0.00	0.00	0.00
Net Additional capital expenditure allowed	3.29	53.14	5600.00	3170.00	0.00

Capital cost for 2009-14

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

(` in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	127479.47	127482.76	127535.89	133135.89	136305.89
Additional capital expenditure	3.29	53.14	5600.00	3170.00	0.00
Closing Capital cost	127482.76	127535.89	133135.89	136305.89	136305.89
Average Capital cost	127481.11	127509.32	130335.89	134720.89	136305.89

36. The capital cost allowed above is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 Tariff Regulations.

Debt-Equity Ratio

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

“(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 utilised for meeting the capital expenditure of the generating station or the transmission system.

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

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

38. The gross loan and equity amounting to `66695.63 lakh and `61166.18 lakh respectively, as on 31.3.2009 approved *vide* order dated 15.6.2011 in Review Petition No.2/2011 (in Petition No. 189/2009), has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities of `382.35 lakh deducted from the capital cost as on 1.4.2004 has been adjusted to debt and equity ratio of 50:50 for liabilities pertaining to period prior to 1.4.2004 and 70:30 for liabilities pertaining to period 2004-09. As such, the gross normative loan and equity as on 1.4.2009 is revised to `66445.98 lakh and `61033.49 lakh, respectively. Further, the additional expenditure allowed as above has been allocated

in the debt-equity ratio of 70:30. The same is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

39. Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011 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.”

40. Return on equity has been worked out @23.481% per annum on the normative equity after accounting for additional capital expenditure:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	61033.49	61034.47	61050.41	62730.41	63681.41
Addition of Equity due to Additional capital expenditure	0.99	15.94	1,680.00	951.00	-
Normative Equity-Closing	61034.47	61050.41	62730.41	63681.41	63681.41
Average Normative Equity	61033.98	61042.44	61890.41	63205.91	63681.41
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)	14331.39	14333.38	14532.49	14841.38	14953.03

Interest on loan

41. Regulation 16 of 2009 Tariff Regulations provides that:

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

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

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

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

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

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

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

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

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

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

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

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

42. The interest on loan has been worked out as mentioned below:

(a) The gross normative loan of `66645.98 lakh as on 1.4.2009 has been considered.

(b) Cumulative repayment as on 31.3.2009 works out to `56293.63 lakh as per order dated 15.6.2011 in Review Petition No.2/2011 in Petition No.189/2009. The same has been considered as cumulative repayment as on 1.4.2009. However, after taking in to account the proportionate adjustment (duly taking into account the liability and debt position as on 1.4.2004 along with additions during the tariff period 2004-09) to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised to `56150.64 lakh.

(c) Accordingly, the net normative opening loan as on 1.4.2009 works out to `10295.34 lakh.

(d) Addition to normative loan on account of admitted additional capital expenditure 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 the discharges of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(f) In line with the first proviso to Regulation 16(5) of the 2009 Tariff Regulations, the weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2009, for the generating station, as shown at Annexure-I to this order.

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

	(in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	66445.98	66448.28	66485.48	70405.48	72624.48
Cumulative repayment of loan upto previous year	56150.64	56389.04	56663.49	56859.41	57238.78
Net Loan Opening	10295.34	10059.24	9821.98	13546.07	15385.70
Addition due to Additional capitalisation	2.30	37.20	3920.00	2219.00	-
Repayment of loan during the year	237.25	254.81	195.91	379.37	463.06
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	1.15	19.65	-	-	-
Net Repayment	238.40	274.45	195.91	379.37	463.06
Net Loan Closing	10059.24	9821.98	13546.07	15385.70	14922.65
Average Loan	10177.29	9940.61	11684.03	14465.89	15154.17
Weighted Average Rate of Interest on Loan	4.7402%	3.6406%	3.3898%	3.1362%	2.9407%
Interest on Loan	482.43	361.90	396.07	453.67	445.64

Depreciation

44. 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 long-term power purchase agreement at regulated tariff.

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

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

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

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

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

45. The cumulative depreciation as on 31.3.2009 as per order dated 15.6.2011 in review Petition No. 2/2011 in Petition No.189/2009 is `113538.92 lakh. Further, proportionate adjustment has been made to the cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to `113199.40 lakh. The value of freehold land amounting to `1102.97 lakh as considered in order dated 15.6.2011 has been retained for the purpose of calculating depreciable value. Accordingly the balance depreciable value of existing assets (before providing depreciation) for the year 2009-10 works out to `540.93 lakh. Since, as on

1.4.2009 the station is more than 12 years old from the effective date of commercial operation i.e., 12.9.1985, depreciation of existing assets has been calculated by spreading over of the balance depreciable value. The balance useful life as on 1.4.2009 as per order dated 15.6.2011 in Review Petition No. 2/2011 works out to 2.28 years. Further, proportionate adjustment has been made to the cumulative depreciation corresponding to discharges of liabilities of existing assets considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009.

46. The weighted average life of the generating station is 2.28 years as on 1.4.2009. As stated in paras 25 and 26 of this order, capitalization of expenditure in respect of Dry Ash Evacuation and Transportation (DAETP) for Stage-II and Ash water Recirculation system for S1 Dyke has been allowed for the years 2011-12 and 2012-13.

47. The petitioner, in its petition, while calculating depreciation of additions made during the fag end of life of the generating station (on spread over basis) has claimed depreciation to the tune of 90% of the average additional capital expenditure added during the year, after the useful life. Pursuant to the hearing of the petition on 25.8.2011, the petitioner *vides* its affidavit dated 21.10.2011 has submitted as under:

"(c) It is submitted that the ESP modification is being undertaken at the station to meet the required statutory norms of emission and accordingly falls under Regulation 9(2)(ii). The life extension of the station depends on extension of life of all the equipments of the plant (including those parts of ESPs which are not being renovated /replaced under this scheme) simultaneously.

(d) However, the Hon'ble Commission may consider life of ESP after commission as 8 years, commensurate with loan repayment period of the loan currently being offered to NTPC"

48. In reply to the above, the respondent, UPPCL vide its affidavit dated 25.11.2011 has submitted as under:

"We submit that the system proposed by the petitioner is arbitrary and without basis. This issue for assets capitalized during terminal stages of the stations is common to number of other stations. Thus any decision by the Hon'ble Commission would be of a precedent which would find the application in other stations also."

49. In its rejoinder vide affidavit dated 16.12.2011, the petitioner has clarified as under:

"2. It is submitted that the additional capital expenditure is being claimed under regulation 9 (2) (ii). As submitted earlier in the additional information (para 8) vide affidavit dated 15.06.2011, the ACE claimed by NTPC in respect of Renovation & Retrofitting of ESP is proposed due to direction of State Pollution Control Board for compliance of the revised emission norms by the station and is therefore allowable as additional capitalization as per tariff regulations under change in law. Hence, the contention of the respondent that petitioner's proposal is arbitrary and without any basis is not correct and is liable to be rejected."

50. The additional capitalization of Dry Ash Evacuation and Transportation Plant (DAETP) for Stage-II and Ash water Recirculation system for S1 Dyke has been allowed for the years 2011-12 and 2012-13 under Regulation 9(2)(ii) of the 2009 Tariff Regulations i.e. Change in law, on the ground that these assets are a statutory requirement in compliance with environmental norms/notification of MOE&F, Govt. of India. As on 1.4.2009, the weighted average life of the generating station is 22.8 years. In other words, the generating station has completed its useful life in the year 2011-12. The petitioner had initially claimed depreciation of 90% of average additional capital expenditure. Subsequently vide its affidavit it has requested to consider the life of the asset after commissioning as 8 years commensurate with the loan repayment period currently offered to the petitioner. However, the actual funding details corresponding to the projected additional capital expenditure have not been made available to the Commission. Hence as per calculation, the depreciation rate would work out to 11.25% on straight line method.

51. We have given a serious thought on this issue. Since these assets are being capitalized during the terminal year of the generating station, we are of the view that allowing 90% of the depreciation would not be in the interest of the beneficiaries and therefore these assets should be depreciated at the rates specified in Appendix-III of the 2009 Tariff Regulations. The petitioner has not indicated the period for which the life of the generating station would be extended beyond its useful life. In the absence of the said information, the Commission cannot decide as to how the expenditure incurred on DAETP and Ash water recirculation system during the terminal year of the life of the generating station would be serviced in tariff. Therefore, the Commission considers it appropriate to

allow the depreciation of the assets capitalized during the terminal year as per the rate specified in Appendix-III of the 2009 Tariff Regulations. The petitioner would be required to run the generating station for sufficiently longer period to recover the full depreciation of the said assets. This will be in the interest of the beneficiaries as they will not be overburdened with payment of admissible depreciation during the terminal year of the generating station.

52. Based on the above discussions, 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	127479.47	127482.76	127535.89	133135.89	136305.89
Closing capital cost	127482.76	127535.89	133135.89	136305.89	136305.89
Average capital cost	127481.11	127509.32	130335.89	134720.89	136305.89
Depreciable value @ 90% (existing)	113740.33	113765.72	113789.63	113789.63	113789.63
Depreciable value of additions @ 90%	-	-	2520.00	6466.50	7893.00
Remaining useful life at the beginning of the year (for existing assets)	2.28	1.28	0.28	-	-
Balance depreciable value (existing assets)	540.93	326.15	48.07	0.00	0.00
Remaining depreciable value of additions	-	-	2520.00	6318.66	7365.79
Depreciation for the period (existing assets)	237.25	254.81	48.07	0.00	0.00
Depreciation for the period (new assets @ 5.28%)	-	-	147.84	379.37	463.06
Depreciation (annualized) (existing + additions)	237.25	254.81	195.91	379.37	463.06
Cumulative depreciation at the end (existing assets)	113436.65	113694.38	113789.63	113789.63	113789.63
Cumulative depreciation at the end (additions)	-	-	147.84	527.21	990.26
Cumulative depreciation at the end (Total)	113436.65	113694.38	113937.47	114316.84	114779.90
Add: Cumulative depreciation reduction on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	2.92	47.18	0.00	0.00	0.00
Cumulative depreciation (at the end of the period)	113439.57	113741.56	113937.47	114316.84	114779.90

O&M Expenses

53. Clause (a) of Regulation 19 of Regulation of the 2009 Tariff Regulations provide the following O&M expense norms for 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 for 200 MW	18.20	19.24	20.34	21.51	22.74
O & M expenses for 500 MW	13.00	13.74	14.53	15.36	16.24
Weighted Average	15.600	16.490	17.435	18.435	19.490
Total for 2000 MW	31200.00	32980.00	34870.00	36870.00	38980.00

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

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	31200	32980	34870	36870	38980

55. Based on the above norms, the O&M expenses for the generating station is allowed as claimed by the petitioner.

Normative Annual Plant Availability Factor (NAPAF)

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

Interest on Working Capital

57. In accordance with sub-clause (a) of clause (1) of Regulation 18 of the 2009 Tariff Regulations, working capital in case of Coal based/Lignite fired generating stations shall cover:

(i) Cost of coal or lignite and limestone, if applicable for one and half months for pit-head generating stations and two months for non pit-head 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 secondary 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 charges and energy charges for sale of electricity calculated on the normative annual plant availability factor, and

(v) Operation and maintenance expenses for one month.

58. 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."

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

(a) **Fuel Component in working capital:** The petitioner has claimed the following cost for fuel component in working capital in its petition based on price and GCV of coal & secondary fuel oil (HFO/LDO) procured and burnt for the preceding three months of January, 2009 to March, 2009 as under:

	(' in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal for 1.5 months	16282.95	16282.95	16327.56	16282.95	16282.95
Cost of secondary fuel oil 2 months	529.30	529.30	530.75	529.30	529.30

Accordingly, the fuel components in working capital based on the norms specified by the Commission are in order for the purpose of tariff.

(b) **Maintenance Spares:** The petitioner has claimed the following maintenance spares in the working capital.

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance spares	6396	6726	7104	7504	7861

The 2009 Tariff Regulations provides for maintenance spares @ 20% of the operation & maintenance expenses as specified in regulation 19. Accordingly, the maintenance spare @ 20% is worked out and allowed as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance spares	6240.00	6596.00	6974.00	7374.00	7796.00

(c) **Receivables:** Receivables have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	21710.60	21710.60	21770.09	21710.60	21710.60
Fixed Charges - 2 months	10209.92	10702.78	11120.30	11616.67	12553.54
Total	31920.52	32413.38	32890.39	33327.27	34264.14

(d) **O&M Expenses:** The petitioner has claimed O&M expenses for one month, as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses (1month)	2665	2803	2960	3127	3275

The petitioner has claimed O & M expenses for working capital by including one month expenditure of compensatory allowance. Regulation 19 (e) 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”. Therefore the above claim of petitioner is not admissible. However, based on the O&M norms specified by the Commission, 1 month O&M expenses works out as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses (1 month)	2600.00	2748.33	2905.83	3072.50	3248.33

60. SBI PLR of 12.25% has been considered in the computation of the interest on working capital. Necessary computations in support of calculation of interest on working capital are as under:

	(in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of Coal – 1.1/2 months	16282.95	16282.95	16327.56	16282.95	16282.95
Cost of Secondary Fuel Oil-2 months	529.30	529.30	530.75	529.30	529.30
O & M expenses – 1 month	2600.00	2748.33	2905.83	3072.50	3248.33
Maintenance Spares	6240.00	6596.00	6974.00	7374.00	7796.00
Receivables – 2 months	31920.52	32413.38	32890.39	33327.27	34264.14
Total Working Capital	57572.77	58569.97	59628.53	60586.02	62120.72
Rate of Interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on Working capital	7052.66	7174.82	7304.49	7421.79	7609.79

Cost of secondary fuel oil

61. 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:

SFC – Normative Specific Fuel Oil consumption in ml/kWh

= SFC x LPSFi x NAPAF x 24 x NDY x IC x 10

Where,

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

NAPAF – Normative Annual Plant Availability Factor in percentage

NDY – Number of days in a year

IC - Installed Capacity in MW.

62. In terms of the above, the cost of secondary fuel oil has been calculated on the normative specific fuel oil consumption, the weighted average landed price of secondary fuel price adopted and NAPF of 85%. Accordingly, the cost of secondary fuel is as under:

	(in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of secondary fuel oil	3175.77	3175.77	3184.47	3175.77	3175.77

63. The cost of secondary fuel oil arrived at as above shall be subject to fuel price adjustment at the end of each year of tariff period in terms of the proviso to Regulation 20(2) as per the following formula:

$$SFC \times NAPAF \times 24 \times NDY \times IC \times 10 \times (LPSF_y - LPSF_i)$$

Where,

$LPSF_y$ = The weighted average landed price of secondary fuel oil for the year in ₹/ml

Compensation Allowance

64. Regulation 19 (e) of the 2009 Tariff 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

65. The petitioner has claimed following compensation allowance during the tariff period, as under:

		(` in lakh)						
SL, No		Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI	Unit VII
1	Unit capacity in MW	200	200	200	200	200	500	500
5	Compensation allowance	2009-10	2010-11	2011-12	2012-13	2013-14		
		780	650	650	650	325		

66. The claim of the petitioner as per the unit wise/age wise stipulation of the regulation 19(e) is in order. Hence, the same is allowed.

Special Allowance

67. The petitioner has claimed Special Allowance under Regulation 10 (4) to meet requirement of expenses including R & M beyond the useful life of generating station or unit thereof, as follows:

Rate of special allowance: 5 lakh/MW/year
Rate of escalation: 5.72% per year

Unit No	Capacity (MW)	COD	Year of completion of Useful life	Special allowance				
				2009-10	2010-11	2011-12	2012-13	2013-14
I	200	1.6.1982	2007-08	1000	1057	1118	1182	1249
II	200	1.2.1983	2007-08	1000	1057	1118	1182	1249
III	200	1.7.1983	2008-09	1000	1057	1118	1182	1249
IV	200	1.1.1984	2008-09	1000	1057	1118	1182	1249
V	200	1.6.1984	2009-10	0	1057	1118	1182	1249
VI	500	1.7.1987	2012-13	0	0	0	0	3123
VII	500	1.5.1988	2013-14	0	0	0	0	0
Year wise total for the generating station				4000.00	5286.00	5588.36	5908.31	9368.93

68. The above mentioned special allowance is found to be in order and have been considered for tariff.

ANNUAL FIXED CHARGES

69. The annual fixed charges approved in respect of the generating station for the period 2009-14, is as under:

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	237.25	254.81	195.91	379.37	463.06
Interest on Loan	482.43	361.90	396.07	453.67	445.64
Return on Equity	14331.39	14333.38	14532.49	14841.38	14953.03
Interest on Working Capital	7052.66	7174.82	7304.49	7421.79	7609.79
O&M Expenses	31200.00	32980.00	34870.00	36870.00	38980.00
Cost of Secondary fuel oil	3175.77	3175.77	3184.47	3175.77	3175.77
Compensation Allowance	780.00	650.00	650.00	650.00	325.00
Special Allowance	4000.00	5286.00	5588.36	5908.01	9368.93
Total	61259.50	64216.67	66721.80	69700.00	75321.22

Note: (1) All figures are on annualized basis.

(2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

70. The annual fixed charges as calculated above shall be trued up at the end of the tariff period as per the provisions of Regulation 6 of the 2009 Tariff Regulations.

Energy /Variable Charge

71. Sub-clause (a) of clause (6) of Regulation 21 of the 2009 Tariff Regulations provides that the Energy Charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the formulae as under:

(a) For coal based and lignite fired stations

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + LC \times LPL\} \times 100 / (100 - AUX)$$

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.

CVSF = Calorific value of secondary fuel, in kCal per ml.

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

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

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

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

SFC = Specific fuel oil consumption, in ml per kWh.

72. The petitioner has claimed an Energy Charge Rate (ECR) of 94.31 paisa/kWh considering the normative transit and handling losses of 0.2% supplied through MGR system and 0.8% for coal supplied through Railway system. Accordingly the weighted average price of coal works out to be `1234.29/MT.

(` in lakh)			
	Unit	2009-10,2010-11,2012-13 & 2013-14	For leap year 2011-12
Capacity	MW	2000 MW (5x210+2x500)	
Weighted average Gross Station Heat Rate	Kcal/kWh	2462.50	2462.50
Weighted average Auxiliary Energy Consumption	%	7.25	7.25
Weighted average price of oil	`/KI	21325.37	21325.37
Weighted average price of coal	`/MT	1234.29	1234.29
Rate of energy charge-(Ex-bus)	paise/kWh	94.310	94.310

73. The Energy Charge Rate claimed by the petitioner, based on the operational norms specified by the Commission, is in order and hence allowed.

74. However, energy charge on month to month basis will be billed by the petitioner as per Regulation 21 of the 2009 Tariff Regulations.

75. The respondent, BRPL in its reply dated 10.2.2012 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 after the notification of the amendment to the 2009 Tariff Regulations. The respondent, BRPL has also 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 benefits derived by the petitioner at the cost of the beneficiaries on this count is unreasonable and without any legal 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.

Application fee and the publication expenses

76. The petitioner has sought approval for the reimbursement of fees of `40,00,000/- each paid by it for the years 2009-10, 2010-11 and 2011-12 towards filing the tariff petition and for the expenses incurred for publication of notices in connection with the petition. The petitioner by its affidavit dated 29.4.2010 has submitted that an expenditure of `804,236/- has been incurred by it for publication of notice in the newspapers.

77. In terms of Regulation 42 of the 2009 Tariff Regulations and based 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 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.

Expenditure incurred for implementation of scheme for provision of supply of electricity in 5 km area around Central Power plants.

78. The petitioner has submitted that in terms of the notification dated 27.4.2010 of the Government of India of a scheme for provision of supply of electricity in 5 km area around Central Power plants, the petitioner is required to create infrastructure for supply of reliable power to the rural households of the villages within a radius of 5 km of existing and new power stations and as per the scheme, the Appropriate Commission shall consider the expenditure incurred for implementation of such scheme for the purpose of determining tariff of the generating station. The petitioner has submitted that DPR for implementation of the scheme is under preparation and it was not possible to estimate the projected expenditure at this stage. The petitioner has further submitted that it would approach the Commission for consideration of the cost incurred in implementation of this scheme for tariff purpose thereafter. The petitioner is at liberty to approach the Commission through an appropriate application, which would be considered in accordance with law.

Water Charges

79. In this petition, the petitioner has claimed additional water charges due to increase in water charges by the State Government and has proposed recovery of the same directly from the beneficiaries. It is noticed that the petitioner has filed separate application (Petition No.121/2011) under Regulation 44 of the 2009 regulations read with Regulation 111 and other related regulations of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for recovery of additional cost incurred due to abnormal

increase in water charges for its various generating stations. This petition is pending for consideration of the Commission and the decision taken in the said petition would be applicable to this generating station.

Recovery of RLDC Fees and Charges

80. The claim for recovery 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).

81. 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.

82. 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 accordance with the proviso to Regulation 5 (3) of the 2009 Tariff Regulations.

83. This disposes of Petition No. 225/2009.

Sd/-
(M. DEENA DAYALAN)
MEMBER

Sd/-
(S.JAYARAMAN)
MEMBER

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	IBRD	Net opening loan	668.14	548.58	419.97	281.62	132.80
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	119.56	128.61	138.35	148.82	132.80
		Net Closing Loan	548.58	419.97	281.62	132.80	-
		Average Loan	608.36	484.27	350.79	207.21	66.40
		Rate of Interest	3.2600%	2.6900%	2.6900%	2.6900%	2.6900%
		Interest	19.83	13.03	9.44	5.57	1.79
2	PFC-III	Net opening loan	1,325.35	1,008.62	691.89	375.16	58.43
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	316.73	316.73	316.73	316.73	58.43
		Net Closing Loan	1,008.62	691.89	375.16	58.43	-
		Average Loan	1,166.99	850.26	533.53	216.80	29.21
		Rate of Interest	9.0000%	9.0000%	9.0000%	9.0000%	9.0000%
		Interest	105.03	76.52	48.02	19.51	2.63
3	UCO Bank	Net opening loan	392.86	235.71	78.57	-	-
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	157.14	157.14	78.57	-	-
		Net Closing Loan	235.71	78.57	-	-	-
		Average Loan	314.29	157.14	39.29	-	-
		Rate of Interest	7.3060%	7.3060%	7.3060%	7.3060%	7.3060%
		Interest	22.96	11.48	2.87	-	-
4	SBI-I	Net opening loan	32.14	10.71	-	-	-
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	21.43	10.71	-	-	-
		Net Closing Loan	10.71	-	-	-	-
		Average Loan	21.43	5.35	-	-	-
		Rate of Interest	11.2500 %	11.1300 %	11.1300 %	11.1300 %	11.1300 %
		Interest	2.41	0.60	-	-	-
5	UBI (T1, D1)	Net opening loan	100.00	80.00	60.00	40.00	20.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	20.00	20.00	20.00	20.00	20.00
		Net Closing Loan	80.00	60.00	40.00	20.00	-
		Average Loan	90.00	70.00	50.00	30.00	10.00
		Rate of Interest	7.3060%	7.3060%	7.3060%	7.3060%	7.3060%
		Interest	6.58	5.11	3.65	2.19	0.73
6	UBI (T1,	Net opening loan	436.36	218.18	-	-	-

	D10)	Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	218.18	218.18	-	-	-
		Net Closing Loan	218.18	-	-	-	-
		Average Loan	327.27	109.09	-	-	-
		Rate of Interest	7.2500%	7.2500%	7.2500%	7.2500%	7.2500%
		Interest	23.73	7.91	-	-	-
7	LIC III (T4, D1)	Net opening loan	1,020.00	900.00	780.00	660.00	540.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	120.00	120.00	120.00	120.00	120.00
		Net Closing Loan	900.00	780.00	660.00	540.00	420.00
		Average Loan	960.00	840.00	720.00	600.00	480.00
		Rate of Interest	8.5400%	8.5400%	8.5400%	8.5400%	8.5400%
		Interest	81.98	71.74	61.49	51.24	40.99
8	LIC III (T4, D4)	Net opening loan	765.00	675.00	585.00	495.00	405.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	90.00	90.00	90.00	90.00	90.00
		Net Closing Loan	675.00	585.00	495.00	405.00	315.00
		Average Loan	720.00	630.00	540.00	450.00	360.00
		Rate of Interest	8.7481%	8.7481%	8.7481%	8.7481%	8.7481%
		Interest	62.99	55.11	47.24	39.37	31.49
9	KFW (D1) (\$859000 @ `39.8/\$)	Net opening loan	341.88	341.88	293.04	244.20	195.36
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	48.84	48.84	48.84	48.84
		Net Closing Loan	341.88	293.04	244.20	195.36	146.52
		Average Loan	341.88	317.46	268.62	219.78	170.94
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	6.39	3.37	2.85	2.33	1.81
10	KFW (D2) (\$1219000 @ `39.296/\$)	Net opening loan	479.02	479.02	410.59	342.16	273.72
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	68.43	68.43	68.43	68.43
		Net Closing Loan	479.02	410.59	342.16	273.72	205.29
		Average Loan	479.02	444.80	376.37	307.94	239.51
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	8.96	4.71	3.99	3.26	2.54
11	KFW (D4) (\$2199600 @ `42.528/\$)	Net opening loan	935.45	935.45	801.81	668.18	534.54
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	133.63	133.63	133.63	133.63
		Net Closing Loan	935.45	801.81	668.18	534.54	400.91
		Average Loan	935.45	868.63	734.99	601.36	467.72
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	17.49	9.21	7.79	6.37	4.96
12	KFW (D5) (\$1239300 @ `45.0345/\$)	Net opening loan	558.11	558.11	478.38	398.65	318.92
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	79.73	79.73	79.73	79.73
		Net Closing Loan	558.11	478.38	398.65	318.92	239.19
		Average Loan	558.11	518.25	438.52	358.79	279.06
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	10.44	5.49	4.65	3.80	2.96
13	KFW (D6)	Net opening loan	553.09	553.09	474.08	395.06	316.05

	(\$1068000 @ `51.7875/\$)	Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	79.01	79.01	79.01	79.01
		Net Closing Loan	553.09	474.08	395.06	316.05	237.04
		Average Loan	553.09	513.58	434.57	355.56	276.55
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	10.34	5.44	4.61	3.77	2.93
14	KFW (D7) (\$2948400 @ `47.531/\$)	Net opening loan	-	1,401.40	1,201.20	1,001.00	800.80
		Add: Addition during the period	1,401.40	-	-	-	-
		Less: Repayment during the period	-	200.20	200.20	200.20	200.20
		Net Closing Loan	1,401.40	1,201.20	1,001.00	800.80	600.60
		Average Loan	700.70	1,301.30	1,101.10	900.90	700.70
		Rate of Interest	1.2300%	1.0600%	1.0600%	1.0600%	1.0600%
15	KFW (D8) (\$561000 @ `45.81/\$)	Interest	8.62	13.79	11.67	9.55	7.43
		Net opening loan	-	256.99	220.28	183.57	146.85
		Add: Addition during the period	256.99	-	-	-	-
		Less: Repayment during the period		36.71	36.71	36.71	36.71
		Net Closing Loan	256.99	220.28	183.57	146.85	110.14
		Average Loan	128.50	238.64	201.92	165.21	128.50
16	KFW (D9) (\$1713000 @ `45.09/\$)	Rate of Interest	0.9200%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	1.18	2.53	2.14	1.75	1.36
		Net opening loan	-	772.39	662.05	551.71	441.37
		Add: Addition during the period	772.39	-	-	-	-
		Less: Repayment during the period	-	110.34	110.34	110.34	110.34
		Net Closing Loan	772.39	662.05	551.71	441.37	331.03
17	Gross Total	Average Loan	386.20	717.22	606.88	496.54	386.20
		Rate of Interest	1.0600%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	4.09	7.60	6.43	5.26	4.09
		Net opening loan	7,607.40	8,975.14	7,156.86	5,636.31	4,183.85
		Add: Addition during the period	2,430.79	-	-	-	-
		Less: Repayment during the period	1,063.04	1,818.28	1,520.56	1,452.45	1,178.13
		Net Closing Loan	8,975.14	7,156.86	5,636.31	4,183.85	3,005.72
		Average Loan	8,291.27	8,066.00	6,396.59	4,910.08	3,594.79
		Rate of Interest	4.7402%	3.6406%	3.3898%	3.1362%	2.9407%
		Interest	393.02	293.65	216.83	153.99	105.71