

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 229/2009

Coram:

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

Date of hearing: 9.2.2012

Date of order: 17.10.2012

In the matter of

Approval of tariff of Tanda Thermal Power Station, (440 MW) for the period from 1.4.2009 to 31.3.2014.

And

In the matter of

NTPC Ltd, New Delhi

...Petitioner

Vs

Uttar Pradesh Power Corporation Ltd, Lucknow

...Respondent

Parties present

1. Shri Ajay Dua, NTPC
2. Shri Naresh Anand, NTPC
3. Shri Rohit Chabra, NTPC
4. Shri Shankar Saran, NTPC
5. Shri S.Majumdar, NTPC
6. Shri Manish Garg, UPPCL

ORDER

This petition has been filed by the petitioner, NTPC Ltd, for approval of tariff for Tanda TPS, (440 MW) (hereinafter referred to as the “generating station”) for the period from 1.4.2009 to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred as “the 2009 Tariff Regulations”).

2. The generating station with a capacity of 440 MW comprises of four units of 110 MW each. The dates of commercial operation of the different units of the generating station are under:

Unit-I	21.3.1988
Unit-II	11.3.1989
Unit-III	28.3.1990
Unit-IV/ Generating station	20.2.1998

3. The Commission by its order dated 30.11.2006 in Petition No.163/2004 approved the tariff for the generating station for the period from 1.4.2004 to 31.3.2009, based on admitted cost of ₹78447 lakh. Subsequently, after revision of the interest on working capital component of tariff (based on the revised energy charges as a component of “receivables” with effect from 1.4.2007) the annual fixed charges of the generating station for the period 2007-09 was revised by order of the Commission dated 14.12.2007 in Petition No. 163/2004. The Commission by its order dated 9.4.2008 further revised the tariff for the period 14.1.2000 to 31.3.2004 in Petition No.8/2005 based on the Appellate Tribunal’s judgment dated 6.6.2007 in Appeal Nos.205/2005 and 9/2007 (filed by the respondent) and recalculated the capital cost of the generating station after taking into account the adjusted gross block and the admitted additional capital expenditure. The petitioner filed Review Petition No.9/2007 against the Commission’s order dated 30.11.2006 in Petition No.163/2004 and the Commission by its order dated 15.12.2008 decided the revision of interest on loan, exclusion of payment of *ex gratia* from O&M expenses, consideration of LDO as secondary fuel and computation of maintenance spares for the purpose of interest on working capital and revised the annual fixed charges for the generating station. Thereafter, the Commission by its order dated 23.1.2009 in Petition No.47/2007 approved the revised fixed charges for the period 2004-09, after allowing additional capital expenditure of ₹2261.89 lakh (exclusive of un-discharged

liabilities amounting to ₹5.32 lakh) and ₹2426.82 lakh (exclusive of un-discharged liabilities amounting to ₹1.15 lakh and inclusive of discharge of liabilities amounting to ₹5.32 lakh) for the years 2004-05 and 2005-06 respectively. Subsequently, based on the judgment of the Tribunal dated 26.3.2009 in Appeal No.103 of 2008, the Commission by its order dated 1.7.2009 in Petition No.8/2005 revised the tariff of the generating station (approved vide order dated 9.4.2008) for the period from 14.1.2000 to 31.3.2004 considering the capital cost of ₹60707 lakh (as on 14.1.2000) and the additional capital expenditure of ₹17382.59 lakh for the period from 14.1.2000 to 31.3.2004. Thereafter, vide Commission's order dated 29.4.2011 in Petition No.186/2009, the tariff of the generating station for 2006-09 was revised on account of additional capital expenditure incurred during the years 2006-07, 2007-08 and 2008-09 and after taking into consideration the directions contained in the judgment dated 13.6.2007 of the Appellate Tribunal for Electricity in Appeal No. 23/2007 (NTPC-v-CERC & ors) and the judgment dated 16.3.2009 in Appeal Nos.133,135,136 and 148/2008 (NTPC-v-CERC & ors) respectively, subject to the final outcome of the Civil Appeals (C.A. Nos. 5434/2007 to 5452/2007, 5622/2007 etc and C.A Nos. 6286 to 6288/2009 and other connected appeals) pending before the Hon'ble Supreme Court. Accordingly, the annual fixed charges for 2004-09 approved by order dated 29.4.2011 in Petition No.186/2009, considering the capital cost of ₹95282.55 lakh as on 31.3.2009 is as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1941.87	1564.51	1673.18	1373.37	1008.53
Interest on Working Capital	1454.21	1466.79	1486.71	2022.81	2045.46
Depreciation	2807.60	2890.71	2956.07	3011.93	3211.05
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	3327.37	3425.86	3503.33	3569.53	3805.50
O & M Expenses	7325.00	7618.00	7922.00	8239.00	8569.00
Total	16856.07	16965.86	17541.29	18216.64	18639.54

4. The petitioner, in terms of the directions contained in Commission's order dated 29.6.2010 in Petition No. 245/2009, filed amended petition *vide* affidavit dated 10.8.2011, taking into consideration the revised figures as per Commission's order dated 23.1.2009 in Petition No. 47/2007 and order dated 29.4.2011 in Petition No.186/2009. Accordingly, the revised 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	4908	5746	7142	8306	8945
Interest on Loan	802	635	608	429	145
Return on Equity	6792	7208	7794	8190	8358
Interest on Working Capital	4243	4306	4395	4457	4523
O&M Expenses	11550	12210	12910	13649	14428
Cost of secondary fuel oil	1695	1695	1700	1695	1695
Compensation Allowance	165	231	231	231	182
Special Allowance	0	0	0	0	687
Total	30155	32031	34780	36956	38962

5. Reply to the petition has been filed by the respondent and the petitioner has filed its rejoinder to the same.

Capital Cost as on 1.4.2009

6. The last proviso to Regulation 7 of the 2009 Tariff Regulations, 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.”

7. The approved capital cost as on 31.3.2009 as per order dated 29.4.2011 in Petition No.186/2009 is ₹95282.55 lakh. The annual fixed charges claimed in the petition are based on the opening capital cost of ₹94506.05 lakh as on 1.4.2009. However, the approved capital cost as on 31.3.2009 is considered as ₹95282.55 lakh (inclusive of

liabilities). The petitioner *vide* its affidavit dated 24.6.2011 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books in the Form-9A. The details of liabilities and capital cost have been reconciled with the information available with the Commission as under:

	(₹ in lakh)	
	As per Form-9A	As per records of Commission
Capital cost as on 1.4.2009, as per books	95505.09	95505.09
Liabilities included in the above	776.95	776.95

8. Further, out of the total liabilities of ₹776.95 lakh included in the gross block as on 1.4.2009, the approved capital cost of ₹95282.55 lakh is inclusive of un-discharged liabilities amounting to ₹776.50 lakh (all pertaining to the period during 2004-09). The examining liabilities for ₹0.45 lakh corresponds to disallowed assets/works.

9. Accordingly, in terms of the last proviso of Regulation 7 of the 2009 Tariff Regulations, the capital cost as on 1.4.2009, after removal of un-discharged liabilities of ₹776.50 lakh, works out to ₹94506.05 lakh on cash basis. The liabilities discharged, if any, would form part of additional capital expenditure during the year of discharge.

10. The petitioner *vide* its affidavit dated 5.9.2011, has furnished the details of un-discharged liabilities (asset-wise) and the liabilities discharged during the period 2009-11. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged ₹0.48 lakh during the years 2009-10 and ₹22.46 lakh during the year 2010-11 (all pertaining to liabilities corresponding to assets capitalized during the period 2004-09). Accordingly, the liabilities discharged during 2009-10 and 2010-11 have been allowed during the respective years, as part of the additional capital expenditure allowed for the generating station.

Actual/Projected Additional Capital Expenditure for 2009-14

11. 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, undischarged 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-materialization 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.”

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

12. The actual/projected additional capital expenditure claimed by the petitioner (inclusive of liabilities discharged) by affidavit dated 9.8.2011 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure	3827	7995	8625	2623	2135

13. The cut-off date for the generating station had expired. Hence, the petitioner's claim for additional capital expenditure needs to be considered in terms of Regulation 9(2) of the 2009 Tariff Regulations. Accordingly, we examine the submissions of the

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

Submissions of the petitioner

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

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

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

(a) In addition to the capital expenditure covered by Regulation 9 (1) and 9 (2) and 19 (e) of the 2009 Tariff Regulations, there will be capital expenditure of different nature incurred which would be necessary for the efficient operation of the generating station during 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.

16. 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, 7.8.2012 and 31.8.2012 in Petition Nos. 239/2009, 256/2009, 332/2009, 279/2009, 225/2009 and 278/2009 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.

As regards the first issue, it is noticed that the last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that in case of existing projects, capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding the un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year and the tariff period 2009-14, as may be admitted by the Commission, shall form the basis of determination of tariff. Thus, as per the last proviso projected additional capital expenditure to be incurred for the respective years of the tariff period 2009-14 shall be considered by the Commission while determining the tariff in respect of the existing project. The said proviso does not make any distinction between the additional capital expenditure projected to be incurred before the cut-off date and additional capital expenditure projected to be incurred after the cut-off date. It therefore follows that in case of existing projects, additional capital expenditure projected to be incurred after the cut-off date can be considered by the Commission for determination of tariff. Regulation 9 of the 2009 Tariff Regulations provides for the additional capital expenditure to be admissible during the year 2009-14. While Clause (1) of Regulation 9 deals with the expenditure incurred before the cut-off date, Clause (2) of the said regulation deals with the expenditure incurred after the cut-off date. However, Clause (2) of Regulation 9 provides that only expenditure incurred after the cut-off date shall be admissible. It thus emerges that while the additional capital expenditure can be claimed under last proviso to Regulation 7(2) on projection basis, the same is not admissible under Regulation 9(2), since the expenditure has not been incurred. It is a settled principle of law that the provisions of the Act or Regulations should be read harmoniously keeping in view the objective of the legislation. During the period 2004-09, the additional expenditure was being admitted after the same was incurred. However, the Commission decided to allow additional capital expenditure on projection basis during the period 2009-14. In this connection, reference is drawn to paragraphs 10.1.3 and 10.1.4 of the Statement of Reasons to the 2009 Tariff Regulations, wherein the concept of claiming additional capitalization on projection basis has been explained in the following terms:

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

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

materializes, the actual retrospective adjustment is expected to be bare minimum as a result of truing up exercise.

(b) From the perspective 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."

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

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.”

16. In line with the above decision of the Commission, the additional expenditure for the generating station for the period 2009-14 has been considered under Regulation 9(2) of the 2009 Tariff Regulations, as discussed in the succeeding paragraphs.

17. The break-up of the actual additional capital expenditure incurred during the years 2009-10, 2010-11 and the projected additional capital expenditure claimed for the years 2011-12 , 2012-13 and 2013-14 vide affidavit dated 9.8.2011, is as under:

(₹ in lakh)							
Sl. No.	Head of work/ Equipment	Regulation	Actual/Projected Capital Expenditure				
			2009-10 (actual)	2010-11 (actual)	2011-12	2012-13	2013-14
A	R&M Schemes						
1 to 63	Assets under R & M schemes (list of assets enclosed at Annex.-I of affidavit dt 9.8.2011)		2924.60	6685.50	4753.77	706.43	0.00
B	Ash Handling						
64	First Raising of Ash Dyke –A	9(2)(iii)	797.68	-	600	-	-
65	First Raising of Ash Dyke –B		--	563.87		-	-
66	Contingency raising of Ash Dyke-A		-	-	89.90	-	-
67	2 nd raising of Ash Dyke-A		-	-	-	1281.00	
68	2 nd raising of Ash Dyke –B		-	-	-	-	1500
69	Dry Ash Evacuation System		-	-	2694.36	-	-
70	Ash Brick making Machine		-	26.71	-	-	-
	Total (B)		797.68	590.58	3384.26	1281.00	1500.00
C	Change in Law						
71	Procurement, Installation & commissioning of automatic continuous Air quality Monitoring system (AAQMS)	9(2)(ii)	-	96.53	-	-	-
72	Renovation of ESP Unit#3		104.12	0.48	-	-	-
73	Renovation of ESP Unit#4		-	582.55	-	-	-
74	Renovation of ESP Unit#2		-	-	379.34	-	-
75	Sox & Nox Analyzer ESP side – 4 nos. for four units		-	-	57.75	-	-
76	Supply of electricity 5 km. around plant		-	-	50.00	635.33	635.32
77	Chlorine leak absorption system		-	29.91	-	-	-
	Total (C)		104.12	709.47	487.09	635.33	635.32
	Others		-	1.50	-	-	-
	Total Additional Capital Expenditure		3826.40	7987.05	8625.12	2622.76	2135.32
	De-capitalization		-	(-) 14.78	-	-	-
	Net Additional Capital Expenditure		3826.40	7972.27	8625.12	2622.76	2135.32
	Discharge of liabilities		0.48	22.46	-	-	-
	Total Additional Capital Expenditure claimed (including liabilities)		3826.88	7994.73	8625.12	2622.76	2135.32

18. The respondent, UPPCL in its reply dated 19.1.2012 has submitted that the total claim for additional capitalization during 2009-14 amounting to ₹25196 lakh for R&M schemes/ Renovation of ESPs may be treated as life extension and provision of Regulation 10(3) of the 2009 Tariff Regulation may be extended to meet cost of such life extension for plant as a whole and in the absence thereof, the beneficiaries would be burdened with

high fixed charges. In response, the petitioner vide its affidavit dated 2.2.2012 has submitted that the Commission has given special treatment to the generating station, being a taken over station and had allowed expenditure to improve performance, the benefits of which have been passed on to the respondents. It has also submitted that long term schemes undertaken during 2004-09 period are continuing in 2009-14 which are essential for sustenance of performance and meet the stiff targets set by the Commission. The petitioner has further submitted that the operation of the plant will not cease after completion of 25 years and will continue to provide services and hence the expenditure claimed may be allowed. During the hearing, the respondent submitted that the additional capitalization claimed by the petitioner is primarily on account of life extension and if the generating station is operated beyond its useful life, then the benefits of such capitalization beyond the useful life may be made available to the respondents/beneficiaries. It has also submitted that accumulated depreciation may be reduced from the original project cost in terms of Regulation 10 (3) of the 2009 Tariff Regulations. In response, the petitioner has submitted that the additional capitalization claimed under Regulations 9(1) and (2) of the 2009 Tariff Regulations are in respect of works/assets within the original scope of work of the generating station and no generating station can operate on a sustainable basis to achieve the level of performance parameters specified by the Commission without incurring capital expenditure on various items from time to time. It has also submitted that the provisions of Regulation 10 pertaining to R&M for extension of life are not applicable in this case upto 2012-13 and compensation allowance has been claimed for 2013-14. Moreover, the projected additional capital expenditure is towards sustenance of performance and not towards life extension and most of the replacement/refurbishment works being done are those being continued from the previous tariff period and the same have been done for the successful

operation of the generating station. It has further submitted that the benefits of improved performance and parameters of the generating station like Heat Rate etc are passed on to the beneficiaries.

19. We have examined the matter. The generating station was taken over by the petitioner on 14.1.2000 in a very depleted condition. Therefore, the Commission while determining tariff of the generating station by its orders for the previous tariff periods considering the additional capital expenditure, has considered the useful life of the generating station as 25 years from the date of takeover (14.1.2000). The proposed additional capitalization on R&M of the generating station is in continuation of R&M of Phase-II. In view of this, the submission of the respondent that the additional capital expenditure is to be treated as life extension of the generating station under Regulation 10 (3), is not acceptable. The projected expenditure claimed are mainly for the replacement of old assets, which are for sustenance of efficient performance of the generating station. Accordingly, we consider the claims of the petitioner towards R&M schemes and Renovation of ESPs in terms of the **provisions of Regulation 9(2) of the 2009 Tariff Regulations by invoking the power of relaxation, as stated below.**

(a) R&M Schemes

20. The petitioner vide affidavit dated 9.8.2011 has claimed additional capital expenditure for ₹15070.30 lakh (₹2924.60 lakh during 2009-10, ₹6685.50 lakh during 2010-11, ₹4753.77 lakh during 2011-12, and ₹706.43 lakh during 2012-13) towards R&M of Steam Generator of all the four units, HP heater of Units -I,II and III, R&M of HP rotor, MP rotor, LP rotor TG and Auxiliary, Supply erection testing and commissioning of PLC in coal handling plant, DDCMS and Renovation of ESPs etc., under Serial Nos.1 to 63 (of the list of assets in Annex.-I) of the said affidavit. It has also submitted detailed

justification for claim of the said expenditure under this head for the assets under Serial Nos. 1 to 63. The petitioner has further submitted that these works which were approved by the Board of the Petitioner Company had been granted in-principle approval by the Commission by its order dated 24.10.2005 in Petition No. 8/2005. It has also been submitted that these works are being continued from the tariff period 2004-09 and have been allowed by the Commission in its order dated 29.4.2011 in Petition No.186/2009. The petitioner has further submitted that these involve expenditure on short term and long term R&M for ₹19300 lakh (including IDC & Contingency) which was subsequently revised to ₹19950 lakh. The cost estimate of R&M phase-II for ₹31600 lakh (including IDC & Contingency) consists of 44 schemes in order to resolve the generic problem of the generating station like inadequate availability of cooling water, poor water quality, environmental norms, system deficiency and sustenance of performance. The R&M works capitalized / proposed to be capitalized are for sustenance of availability and efficiency of the generating station. By affidavit dated 23.11.2011, the petitioner has also submitted that the additional capital expenditure claimed under R&M is primarily based on Revised Cost Estimates approved by the Board of the petitioner Company during 2010 and minor changes subsequent to the said approval. It has also submitted that the estimates were based on awarded/executed cost for majority of packages and hence included variation in prices which had taken place during implementation.

21. The submission of the petitioner has been examined. As stated, the generating station was transferred to the petitioner from the erstwhile UPSEB in a depleted condition on 14.1.2000. The parties had entered into Power Purchase Agreement (PPA) on 7.1.2000 which is valid for 25 years from the date of takeover of the generating station by the petitioner on 14.1.2000. At the time of takeover of the generating station, the PLF of the generating station was below 30% and the Operating parameters such as Heat Rate,

Auxiliary Energy consumption and Specific oil consumption was much higher. It was also acknowledged by the Commission that to improve the PLF / Availability and other operational parameters of the generating station, exhaustive R&M of the generating station was required. Further, for supply of power for a period of 25 years as per PPA with gradually improved operational parameters, it was necessary to undertake short term and long term R&M activities for sustenance and improvement of plant performance. Consequent upon the revision of norms by the Commission vide order dated 14.12.2007, the benefits of R&M by improvement in Target Availability and efficiency has already been passed on to the beneficiaries. Under the 2009 Tariff Regulations, improved norms with regard to Plant Availability as 85% and Heat Rate as 2825 kcal/kWh as against the Target Availability of 80% and Heat Rate of 2850 kcal/kWh during 2004-09 based on R&M activity has been specified by the Commission. Based on the above discussions, and after prudence check, the expenditure for ₹13808.88 lakh along with corresponding estimated de-capitalization of ₹1041.26 lakh (@11.5% as furnished by the petitioner) has been allowed. Accordingly, a net expenditure of ₹12767.62 lakh has been allowed **under Regulation 9 (2) in exercise of “Power to relax” under Regulation 44 of the 2009 Tariff Regulations.**

(b) Renovation of ESP

22. The petitioner has claimed expenditure of ₹104.12 lakh during 2009-10, and ₹0.48 lakh during 2010-11 towards Renovation of ESP of Unit-III, ₹582.55 lakh during 2010-11 towards the Renovation of ESP of Unit-IV and ₹379.34 lakh during 2011-12 for Renovation of ESP of Unit-II, under this head. The petitioner has submitted that this is continuation of the work as allowed by the Commission by order dated 29.4.2011 in Petition No. 186/2009 during the period 2004-09. It has also submitted that existing old and obsolete ESP was not able to handle the same efficiently and ESP internal condition

was not healthy and in order to overcome the constraints, the R&M of ESP has been taken up. Since, the work of renovation of ESPs claimed is in continuation of the R&M work allowed during the period 2004-09, based on the 2004 Tariff Regulations, we allow the expenditure on this count along with corresponding de-capitalization of Rs 122.64 lakh (@ 11.5% as furnished by the petitioner). Accordingly, the net expenditure of ₹943.85 lakh (1066.49-122.64) is allowed under this head.

23. As stated in paragraph above, a net expenditure of ₹943.85 lakh has been allowed on Renovation of ESPs under R&M scheme. After considering the expenditure allowed in paragraph 21 above, the net expenditure allowed under R&M scheme of the generating station works out to ₹13711.47 lakh (12767.62+943.85). It is pertinent to mention that considering the opening capital cost of ₹94506.05 lakh as on 31.3.2009, the cost per MW works out to ₹2.15 crore. After considering the additional capitalization of ₹21362 lakh for R&M during the period 2009-14, the cost works out to ₹2.63 crore/MW, which is much lower in comparison to the present cost ₹6 crore/MW (approx) for a 100 MW generating unit .

Regulation 9 (2) (iii)

Ash Handling System

24. The petitioner has claimed expenditure of ₹797.68 lakh and ₹600.00 lakh during the years 2009-10 and 2011-12 respectively, for the 1st raising of Ash dyke 'A' and ₹89.90 lakh during the year 2011-12 for contingency raising of Ash dyke 'A', and ₹563.87 lakh for Ash dyke 'B' during the year 2010-11. The petitioner has also claimed expenditure of ₹1281 lakh during the year 2012-13 for the proposed 2nd raising of Ash dyke 'A' and ₹1500 lakh during the year 2013-14 for the proposed 2nd raising Ash dyke 'B'. The petitioner has submitted that Pond-A is already full above dyke level and Pond-B will last

for 16 months. After Pond-B becomes full no dyke would be available for discharging ash slurry which would create environmental hazards. It has also submitted that once Pond-B becomes exhausted sustained generation shall not be possible and will lead to environmental pollution. The petitioner vide its affidavit dated 29.12.2009 has submitted that the generating station (Tanda TPS) being taken over station, the original scope of work is not available. It has also submitted that since ash handling works within the original scope of work are usually deferred till they are required, the ash handling works may be considered as deferred works in original scope. In addition to this, the petitioner vide its affidavit dated 23.11.2011 has submitted that two numbers of Ash pond .i.e. Ash pond 'A' and Ash pond 'B' are in service and the area of existing ash ponds is 96 hectare and 58 hectare respectively. It has also submitted that the four units of the generating station produce around 10 lakh MT ash annually. Moreover, Ash pond A & B have been raised once and Pond -A (with 1st raising) is completely full and Pond -B (with 1st raising) is likely to exhaust during October, 2011. It has further submitted that the tendering process for 2nd raising of Ash dyke 'A' was initiated, but due to some technical reasons, the same had to be re-tendered. The petitioner has submitted that the scheduled date of completion of 2nd raising of Ash dyke "A" is one year from the award placed during October, 2011 and hence in order to meet the ash disposal demand during the intervening period, contingency ash dyke is being made. The work of Ash handling system within the original scope is generally done in phases, depending upon the requirement during the useful life of the generating station. Accordingly, we are inclined to consider the justification submitted by the petitioner and allow the capitalization of the expenditure claimed under this head.

25. The petitioner has claimed projected capital expenditure of ₹2694.36 lakh during 2011-12 towards Dry Ash Evacuation system, under this head to improve ash handling &

disposal and in order to meet the requirements of Ministry of Environment & Forests (MOE&F) notification regarding ash utilization and to reduce the additional land for ash disposal. It is observed that the proposed expenditure is to be incurred for Dry Ash Evacuation system for handling and disposal of ash in such a manner so that ash can be utilized in an environmentally benign way as per the notification of MOE&F. Since, the proposed expenditure has been claimed to fulfill the statutory requirement under environmental laws, we allow the claim of the petitioner under Regulation 9(2)(ii) (change-in-law) instead of Regulation 9(2)(iii).

26. The petitioner has claimed expenditure of ₹26.71 lakh during 2010-11 towards Ash brick making machine to improve ash handling & disposal system under this head. We have examined the submissions and the provisions of the Notification dated 3.11.2009 of the MOE&F, Government of India, applicable in the instant case. While the MOE&F notification dated 3.11.2009 encourages the need for increased use of fly ash for manufacture of bricks, the proviso to clause 8(i) and (ii) provides that the thermal power stations shall facilitate the availability of required quantity and quality of fly ash for this purpose. On scrutiny, it is noticed that the notification dated 3.11.2009, does not mandate the coal or lignite based thermal power stations to manufacture bricks. It is also observed that the said notification provides that all coal/lignite based thermal stations would be free to sell the fly ash to user agencies subject to certain conditions as mentioned therein. Moreover, the amount collected from sale of fly ash or fly ash based products by coal and/or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities, promotion and facilitation activities for use of fly ash until 100% fly ash utilization level is achieved. Since the said notification provides that the money collected from the sale of fly ash or fly ash based products should be

utilized for development of infrastructure for use of fly ash, the petitioner is not prevented from utilizing the money for procurement/installation of brick making machines. Moreover, the income generated from sale of fly ash or fly ash based products like bricks are not passed on to the beneficiaries. Hence, we are of the view that it would not be prudent to load the said expenditure on brick making machine as additional capital expenditure, when such expenditure is neither covered under change in law nor the income from fly ash utilization is shared with the beneficiaries. In this connection, it is pointed out that the claim of the petitioner for Ash brick making machine in respect of FGUTPS, Stage-II in Petition No. 323/2009 has also been rejected by the Commission, on similar grounds. Based on the above, the expenditure of ₹26.71 lakh towards Ash brick making machine has not been allowed.

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

27. The claim of the petitioner towards environmental systems, under Regulation 9(2)(ii) of the 2009 Tariff Regulations, during the period 2009-14 is examined as under:

Ambient Air Quality Monitoring System (AAQMS)

28. The petitioner has claimed expenditure of ₹96.53 lakh during 2010-11 towards the procurement, installation and commissioning of automatic continuous AAQMS to monitor the level of SO_x , NO_x and SPM in the ambient air at the power generating station, as per guidelines of the Central Pollution Control Board. In view of the submissions of the petitioner and being a statutory requirement, we allow the capitalization of ₹96.53 lakh under this head.

SO_x and NO_x analyzer-ESP side

29. The petitioner has claimed expenditure of ₹57.75 during 2011-12 for four nos of SO_x and NO_x analyzer on ESP side in respect of the four units. The petitioner has submitted that at present monitoring is not available in all four units and therefore feedback of proper

combustion is into furnace is not available. It has also submitted that further emission of CO, No_x and So_x causes environmental pollution and in the absence of system boiler combustion process, optimization is not possible. It is observed that this asset is required for monitoring of combustion in boiler and is not meant for compliance with any pollution control norms. Since, AAQMS has already been allowed during 2010-11 to monitor the level of So_x, No_x level in ambient air as per guidelines of the Central Pollution Control Board, the expenditure claimed on this count has not been allowed.

Chlorine leak absorption system

30. The petitioner has claimed expenditure for ₹29.91 lakh during 2010-11 towards installation of chlorine leak absorption system to arrest the possibility of chlorine leak. As the asset is in the nature of minor assets, the expenditure claimed has not been allowed.

Others

31. The petitioner has claimed expenditure of ₹1.50 lakh during 2010-11 under the head 'others' for which no details and justification has been submitted. In the absence of any details of the assets and proper justification thereof, the expenditure claimed has not been allowed.

Supply of Electricity under 5 Km Scheme

32. The petitioner has claimed an expenditure of ₹50.00 lakh during 2011-12, ₹635.33 lakh during 2012-13 and ₹635.32 lakh during 2013-14 for provision of supply of electricity in 5 km area around Central Power plants in terms of the notification dated 27.4.2010 of the Government of India. As per the scheme, 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 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 is at liberty to approach the

Commission through an appropriate application, as and when the expenditure is actually incurred and the same would be considered in accordance with law. In view of this, the expenditure on this count is not allowed in the present petition.

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

(₹ in lakh)							
Sl. No.	Head of work/ Equipment	Actual/Projected Capital Expenditure					Total
		2009-10 (actual)	2010-11 (actual)	2011-12	2012-13	2013-14	
A	R&M Schemes						
1 to 63	Assets under R & M schemes (<i>list of assets enclosed at Annex.-I</i>)	2626.75	6179.44	4296.26	706.43	0.00	13808.88
	De capitalization	140.47	449.03	370.52	81.24	0.00	1041.26
(a)	Net Amount allowed	2486.28	5730.41	3925.74	625.19	0.00	12767.62
72	Renovation of ESP Unit#3	104.12	0.48	0.00	0.00	0.00	104.60
73	Renovation of ESP Unit#4	0.00	582.55	0.00	0.00	0.00	582.55
74	Renovation of ESP Unit#2			379.34	0.00	0.00	379.34
	De-cap of ESPs	11.97	67.05	43.62	0.00	0.00	122.64
b)	Net amount allowed on ESPs	92.15	515.98	335.72	0.00	0.00	943.85
(a)+(b)	Total amount allowed on R&M (Net basis) - (A)	2578.43	6246.39	4261.46	625.19	0.00	13711.47
(B)	Ash Handling						
64	First Raising of Ash Dyke –A	797.68	0.00	600.00	0.00	0.00	1397.68
65	First Raising of Ash Dyke –B	0.00	563.87	0.00	0.00	0.00	563.87
66	Contingency raising of Ash Dyke-A	0.00	0.00	89.90	0.00	0.00	89.90
67	2 nd raising of Ash Dyke-A	0.00	0.00	0.00	1281.00	0.00	1281.00
68	2 nd raising of Ash Dyke –B	0.00	0.00	0.00	0.00	1500	1500.00
	Total (B)	797.68	563.87	689.90	1281.00	1500.00	4832.45
(C)	Change in Law						
71	Procurement, Installation & commissioning of automatic continuous Air quality Monitoring system (AAQMS)	0.00	96.53	0.00	0.00	0.00	96.53
75	So _x & No _x Analyzer-ESP side – 4 nos. for four units	0.00	0.00	0.00	0.00	0.00	0.00
77	Chlorine leak absorption system	0.00	0.00	0.00	0.00	0.00	0.00
69	Dry Ash Evacuation System	0.00	0.00	2694.36	0.00	0.00	2694.36
70	Ash Brick Making machine	0.00	0.00	0.00	0.00	0.00	0.00
	Total (C)	0.00	96.53	2694.36	0.00	0.00	2790.89
	Others	0.00	0.00	0.00	0.00	0.00	0.00
76	Supply of electricity under 5 Km scheme	0.00	0.00	0.00	0.00	0.00	0.00
	Net Additional Capitalization allowed (A+B+C)	3376.11	6906.85	7645.72	1906.19	1500.00	21334.81

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

	(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Actual/projected additional capital expenditure allowed as above	3376.11	6906.85	7645.72	1906.19	1500.00	21334.87
Liabilities discharged	0.48	22.46	0.00	0.00	0.00	22.94
Actual/projected additional capital expenditure allowed	3376.59	6929.31	7645.72	1906.19	1500.00	21357.81

Capital Cost for 2009-14

35. Based on the above, the capital cost considered for the purpose of tariff for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	94506.05	97882.64	104811.95	112457.67	114363.86
Additional capital expenditure	3376.59	6929.31	7645.72	1906.19	1500.00
Closing Capital cost	97882.64	104811.95	112457.67	114363.86	115863.86
Average Capital cost	96194.34	101347.29	108634.80	113410.76	115113.85

Debt-Equity Ratio

36. 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.

37. The gross loan and equity amounting to ₹66697.78 lakh and ₹28584.76 lakh respectively, as on 31.3.2009, approved *vide* order dated 29.4.2011 in Petition No.186/2009 has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities of ₹776.50 lakh deducted from the capital cost as on 1.4.2009 has been adjusted to debt-equity ratio of 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 ₹66154.23 lakh and ₹28351.81 lakh, respectively. Further, the projected additional capital expenditure admitted has been allocated in the debt-equity ratio of 70:30, and the same is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

38. Regulation 15 of the 2009 Tariff Regulations provides that:

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

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

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

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be.

Provided that return on equity with respect to the actual 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 separately for each year of the tariff period along with the

tariff petition filed for the next tariff period.

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

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

39. Accordingly, 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	28351.81	29364.79	31443.58	33737.30	34309.16
Addition of Equity due to additional capital expenditure	1012.98	2078.79	2293.72	571.86	450.00
Normative Equity-Closing	29364.79	31443.58	33737.30	34309.16	34759.16
Average Normative Equity	28858.30	30404.19	32590.44	34023.23	34534.16
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)	6776.22	7139.21	7652.56	7988.99	8108.97

Interest on loan

40. 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.

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

(a) The gross normative loan amounting to ₹66154.23 lakh as on 1.4.2009 has been considered.

(b) Cumulative repayment as on 31.3.2009 works out to ₹49371.50 lakh as per order dated 29.4.2011 in Petition No.186/2009 and the same has been considered as cumulative repayment as on 1.4.2009. However, after taking into account the proportionate adjustment (additions during the 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 ₹49041.09 lakh.

(c) Accordingly, the net normative opening loan works out to ₹17113.14 lakh as on 1.4.2009.

(d) Addition to normative loan on account of admitted additional capital expenditure has been considered.

(e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2009-14. Further, proportionate adjustment has been made to the repayments corresponding to discharges of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(f) Weighted average rate of interest has been calculated by applying the actual rate of interest as applying the actual loan portfolio existing as on 1.4.2009. For this purpose the rate of interest corresponding to individual loans as provided by petitioner has been considered except to the extent stated below in LIC-III (T4, D4) for reasons recorded:

LIC-III (T4, D4) – The petitioner has calculated WAROI considering rate of 8.75% on this loan. However, as per submitted Form-8, this rate of interest is 8.7281%, which was also considered during the previous tariff period. In absence of any reasons / documentary evidence the rate of interest has been considered as 8.7281%.

(g) Cumulative repayment has been adjusted @70% on account of de-capitalized assets.

42. Interest on loan has been computed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	66154.23	68517.85	73368.36	78720.36	80054.70
Cumulative repayment of loan upto previous year	49041.09	52343.64	55583.60	59143.63	62307.28
Net Loan Opening	17113.14	16174.21	17784.76	19576.74	17747.42
Addition due to Additional capitalisation	2363.61	4850.51	5352.00	1334.33	1050.00
Repayment of loan during the year	3409.05	3591.66	3849.93	3220.52	3356.77
Less: Repayment adjustment on account of de-capitalisation	106.71	361.26	289.90	56.87	0.00
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	0.20	9.56	0.00	0.00	0.00
Net Repayment	3302.54	3239.96	3560.03	3163.65	3356.77
Net Loan Closing	16174.21	17784.76	19576.74	17747.42	15440.64
Average Loan	16643.68	16979.49	18680.75	18662.08	16594.03
Weighted Average Rate of Interest on Loan	4.9403%	4.2233%	4.2212%	4.0423%	3.9379%
Interest on Loan	822.24	717.10	788.55	754.38	653.46

Depreciation

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

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

admitted by the Commission.

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

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

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

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

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

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting [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.

44. One aspect for consideration in the instant case is the consideration of the balance useful life of generating station for the purpose of spread over of depreciation. The petitioner has indicated the elapsed life of the generating station as 17.65 years as on 1.4.2009, thereby implying that the balance useful life of the generating station for the purpose of spread over of depreciation is 7.35 years. It is observed that the elapsed life of the generating station as worked out by petitioner is on weighted average basis considering the date of commercial operation of the individual units of the generating station. As stated, the generating station has been taken over from the respondent on 14.1.2000 and Renovation and Modernization of the generating station, in phases, has

also been envisaged, for turnaround purposes. In terms of the PPA signed by the parties, the life of the generating station is to be considered as 25 years from the date of takeover, i.e 14.1.2000. As stated earlier, the useful life of the generating station is to be considered from the date of takeover of the generating station by the petitioner (14.1.2000) and this methodology has been adopted by the Commission while determining tariff of the generating station for the previous tariff periods. In view of the above discussions, it would not be prudent to consider the balance useful life of the generating station as 7.35 years as claimed by the petitioner. As such, the elapsed life of the generating station as on 1.4.2009 has been considered as 9.21 years from the date of takeover of the generating station by the petitioner i.e on 14.1.2000. Accordingly, the spread over of depreciation on completion of 12 years is considered from 2012-13, in line with the provisions of the 2009 Tariff Regulations.

45. The cumulative depreciation as on 31.3.2009 as per order dated 29.4.2011 in Petition No.186/2009 works out to ₹49902.93 lakh. Further, proportionate adjustment has been made to this cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹49496.25 lakh. Further, the value of freehold land considered is ₹1674.71 lakh as on 31.3.2009 and the same has been considered for the purpose of calculating the depreciable value. Accordingly, the balance depreciable value (before providing depreciation) for the year 2009-10 works out to ₹35571.42 lakh. Weighted average rate of depreciation of 3.5439% as considered in order dated 29.4.2011 has been considered till the completion of 12 years from the date of taken over of the generating station by the petitioner. Further, proportionate de-capitalization adjustment has been done taking into account the de-capitalized assets during the period. The

necessary calculations for depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	94506.05	97882.64	104811.94	112457.66	114363.85
Closing capital cost	97882.64	104811.94	112457.66	114363.85	115863.85
Average capital cost	96194.34	101347.29	108634.80	113410.76	115113.85
Depreciable value @ 90%	85067.67	89705.32	96264.09	100562.45	102095.23
Remaining useful life at the beginning of the year	15.79	14.79	13.79	12.79	11.79
Balance depreciable value	35571.42	36936.97	40356.78	41177.94	39563.32
Depreciation (annualized)	3409.05	3591.66	3849.93	3220.52	3356.77
Cumulative depreciation at the end of the year	52905.30	56360.02	59757.24	62605.03	65888.69
Add: Cumulative depreciation adjustment on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	0.25	11.76	0.00	0.00	0.00
Less: Cumulative depreciation reduction due to de-capitalization	137.20	464.47	372.73	73.12	0.00
Cumulative depreciation (at the end of the year)	52768.35	55907.31	59384.51	62531.91	65888.69

O&M Expenses

46. The 2009 Tariff Regulations specify the following O&M expense norms for 110 MW units:

	(₹ in lakh/ MW)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	26.25	27.75	29.34	31.02	32.79

47. Accordingly, O & M expenses claimed by the petitioner based on the above norms are generally in order and allowed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	11550.00	12210.00	12909.60	13648.80	14427.60

Normative Plant Availability Factor

48. The Normative Plant Availability Factor (NAPAF) of the generating station considered is 85% for the period 1.4.2009 to 31.3.2014.

Interest on Working Capital

49. 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.

50. Clauses (3) and (4) of Regulation 18 of the 2009 Tariff Regulations, the rate of interest on working capital shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

51. 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) for the preceding three months of January, 2009 to March, 2009, as given overleaf:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal for 2 months	13003	13003	13039	13003	13003
Cost of secondary fuel oil 2 months	282	282	283	282	282

However, the fuel component in working capital based on the norms specified by the Commission is worked out and allowed for the purpose of tariff as under.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal for 2 months	13003.29	13003.29	13038.91	13003.29	13003.29
Cost of secondary fuel oil 2 months	282.50	282.50	283.27	282.50	282.50

(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	2343	2488	2628	2776	2922

It is noticed that the petitioner has claimed the maintenance spares @ 20 % on the sum of the O&M cost and compensation allowance. Regulation 19 (e) provides for compensation allowance, which does not form part of the O&M expenses. Hence, maintenance spares @ 20% have been worked out on the admitted O&M expenses. Accordingly, the maintenance spare allowed is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance spares	2310.00	2442.00	2581.92	2729.76	2885.52

(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	13003.29	13003.29	13038.91	13003.29	13003.29
Fixed Charges - 2 months	4742.46	4933.59	5202.48	5274.66	5438.91
Total	17745.74	17936.88	18241.39	18277.95	18441.48

(d) O&M Expenses: The petitioner has claimed the O&M expenses for one month

by including expenditure of compensation allowance, as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses (1 month)	976	1037	1095	1157	1217

Since, compensation allowance do not form part of the O&M expense, the O&M expenses for one month, based on the admitted O&M expenses at Paragraph 49 of the order, has been worked out as under and has been considered for the IWC calculations:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses (1 month)	962.50	1017.50	1075.80	1137.40	1202.30

52. SBI PLR of 12.25% has been considered in the computation of the interest on working capital.

53. Necessary computations in support of calculation of interest on working capital is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 2 months	13003.29	13003.29	13038.91	13003.29	13003.29
Cost of secondary fuel oil – 2 months	282.50	282.50	283.27	282.50	282.50
O&M expenses – 1 month	962.50	1017.50	1075.80	1137.40	1202.30
Maintenance Spares	2310.00	2442.00	2581.92	2729.76	2885.52
Receivables – 2 months	17745.74	17936.88	18241.39	18277.95	18441.48
Total working capital	34304.03	34682.16	35221.30	35430.90	35815.08
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on working capital	4202.24	4248.56	4314.61	4340.28	4387.35

Cost of secondary fuel oil

54. 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

$$= \text{SFC} \times \text{LPSFi} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10$$

Where,

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

NAPAF – Normative Annual Plant Availability Factor in percentage

NDY – Number of days in a year

IC - Installed Capacity in MW.

55. 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	1694.99	1694.99	1699.64	1694.99	1694.99

56. 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:

$$\text{SFC} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10 \times (\text{LPSFy} - \text{LPSFi})$$

Where, LPSFy = The weighted average landed price of secondary fuel oil for the year in Rs. /ml

Compensation Allowance

57. Regulation 19 (e) of the 2009 Tariff Regulations, provides as under:

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

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

58. In terms of the above regulations, the petitioner has claimed the year-wise compensation allowance, as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Compensation allowance	165	231	231	231	182

59. We have in this order allowed R&M schemes which were undertaken from the date of taking over the generating station and those works are in continuation from the previous tariff period, for completion during the period 2009-14. This is in addition to the additional capital expenditure allowed under Regulation 9(2) of the 2009 Tariff Regulations. In our view, the expenditure allowed by us would necessarily contribute to the successful and efficient operation of the generating station. In view of this, we are not inclined to grant compensation allowance as claimed by the petitioner. Hence, not allowed.

Special Allowance

60. The petitioner has claimed Special Allowance under Regulation 10(4) of the 2009 Tariff Regulations, in order to meet the requirement of expenses including R & M beyond the useful life of generating station or unit thereof. As stated earlier, R&M schemes for the generating station have been allowed to be continued by this order, and hence the claim for special allowance has not been allowed.

Annual Fixed Charges

61. The annual fixed charges approved in respect of the generating station for the period 2009-14, is mentioned overleaf:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3409.05	3591.66	3849.93	3220.52	3356.77
Interest on Loan	822.24	717.10	788.55	754.38	653.46
Return on Equity	6776.22	7139.21	7652.56	7988.99	8108.97
Interest on Working Capital	4202.24	4248.56	4314.61	4340.28	4387.35
O&M Expenses	11550.00	12210.00	12909.60	13648.80	14427.60
Cost of Secondary fuel oil	1694.99	1694.99	1699.64	1694.99	1694.99
Compensation Allowance	0.00	0.00	0.00	0.00	0.00
Special Allowance	0.00	0.00	0.00	0.00	0.00
Total	28454.75	29601.53	31214.88	31647.97	32629.14

Note: (1) All figures are on annualized basis.(2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

62. The annual fixed charges approved above are subject to truing-up in terms of the provisions of Regulation 6 of the 2009 Tariff Regulations.

Energy Charge Rate

63. 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 formula 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.

64. The petitioner has claimed an Energy Charge Rate (ECR) of 270.61 paisa/kWh based on the weighted average rate price, GCV of fuel procured and burnt for the preceding three months of January, 2009 to March, 2009. The calculation of ECR based on price and GCV of coal and oil for the preceding three months of January, 2009, February, 2009 and March, 2009. The ECR works out to 270.611 paisa/kWh and the same is allowed. The relevant calculations are as under:

	Unit	2009-14
Capacity	MW	440 (4x110)
Gross Station Heat Rate	Kcal/kWh	2825
Aux. Energy Consumption	%	12
Weighted average GCV of oil	Kcal/l	9360
Weighted average GCV of coal	Kcal/kg	3786.33
Weighted average price of oil	₹/kl	51735.88
Weighted average price of coal	₹/MT	3202.36
Rate of energy charge (ex-bus)	paice/kWh	270.611

65. The Energy charge on month to month basis shall be billed by the petitioner in terms of Regulation 21 (6) (a) of the 2009 Tariff Regulations.

Recovery of RLDC Fees and Charges

66. The claim of the petitioner towards recovery of RLDC fees & charges is disposed of in terms of the Commission's order dated 6.2.2012 in Petition No.140/MP/2011.

Recovery of additional cost due to increase in water charges over and above the O&M expenses

67. The petitioner has submitted that there has been manifold increase in the water charges levied by the State Governments /State Government agencies and the O&M expense norms for 2009-14 notified by the Commission cannot cover any abnormal/unnatural increase in any cost component which is beyond the control of the utility. The petitioner has further submitted that the additional cost incurred in respect of

the increase in water charges over and above the O&M expenses be permitted to be billed and recovered additionally from the beneficiaries. We notice that the petitioner has filed Petition No.121/2011 claiming the same relief and the matter has been heard on 13.10.2011. Accordingly, the relief prayed for in this petition would be governed by the final decision to be taken by the Commission in Petition No. 121/2011.

Application fee and the publication expenses

68. The petitioner has sought approval for the reimbursement of fee paid by it for filing of the petition and the expenses incurred for publication of notices in connection with the petition. The petitioner has deposited fees of ₹2640000/- for the period 2009-12 in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2008 and the fees for the balance years i.e 2012-13 and 2013-14 has been paid / is payable in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner by its affidavit dated 27.3.2010 has submitted that an expenditure of ₹73438/- has been incurred by it for publication of notice in the newspapers.

69. In terms of Regulation 42 of the 2009 Tariff Regulations and based on the decision of the Commission in its order dated 11.1.2010 in Petition No.109/2009, the filing fees in respect of main petitions for determination of tariff and the expenses on publication of notices are to be reimbursed. Accordingly, the expenses incurred by the petitioner on petition filing fees for the years 2009-10, 2010-11, 2011-12 and 2012-13 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 year 2013-14 shall be recovered by the petitioner based on the payments made in term of the provisions of the Central Electricity Regulatory Commission (Payment of fees) Regulations, 2012.

70. 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.

71. The petitioner is already billing the respondent 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.

72. This order disposes of Petition No. 229/2009.

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(V. S. Verma)
Member

Sd/-
(S. Jayaraman)
Member

Sd/-
(Dr. Pramod Deo)
Chairperson

ANNEXURE-I**CALCULATION OF WEIGHTED AVERAGE RATE OF INTERET ON LOAN***(₹ in lakh)*

Sl. no.	Name of loan		2009-10	2010-11	2011-12	2012-13	2013-14
1	PFC-IV (T1,D1)	Net opening loan	1,710.00	1,330.00	950.00	570.00	190.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	380.00	380.00	380.00	380.00	190.00
		Net Closing Loan	1,330.00	950.00	570.00	190.00	-
		Average Loan	1,520.00	1,140.00	760.00	380.00	95.00
		Rate of Interest	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%
		Interest	144.40	108.30	72.20	36.10	9.03
2	PFC-IV (T1,D2)	Net opening loan	315.00	245.00	175.00	105.00	35.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	70.00	70.00	70.00	70.00	35.00
		Net Closing Loan	245.00	175.00	105.00	35.00	-
		Average Loan	280.00	210.00	140.00	70.00	17.50
		Rate of Interest	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%
		Interest	26.60	19.95	13.30	6.65	1.66
3	PFC-IV (T1,D3)	Net opening loan	506.25	393.75	281.25	168.75	56.25
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	112.50	112.50	112.50	112.50	56.25
		Net Closing Loan	393.75	281.25	168.75	56.25	-
		Average Loan	450.00	337.50	225.00	112.50	28.13
		Rate of Interest	9.0000%	9.0000%	9.0000%	9.0000%	9.0000%
		Interest	40.50	30.38	20.25	10.13	2.53
4	PFC-IV (T1,D4)	Net opening loan	909.89	707.69	505.49	303.29	101.09
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	202.20	202.20	202.20	202.20	101.09
		Net Closing Loan	707.69	505.49	303.29	101.09	0.00
		Average Loan	808.79	606.59	404.39	202.19	50.55
		Rate of Interest	9.0000%	9.0000%	9.0000%	9.0000%	9.0000%
		Interest	72.79	54.59	36.40	18.20	4.55
5	PFC-V (T3,D11)	Net opening loan	-	-	1,500.00	1,500.00	1,500.00
		Add: Addition during the period	-	1,500.00	-	-	-
		Less: Repayment during the period	-	-	-	-	93.75
		Net Closing Loan	-	1,500.00	1,500.00	1,500.00	1,406.25
		Average Loan	-	750.00	1,500.00	1,500.00	1,453.13
		Rate of Interest	0.0000%	9.8600%	9.8600%	9.8600%	9.8600%
		Interest	-	73.95	147.90	147.90	143.28
6	UCO Bank Drawal 5	Net opening loan	657.14	328.57	-	-	-
		Add: Addition during the period	-	-	-	-	-

		Less: Repayment during the period	328.57	328.57	-	-	-
		Net Closing Loan	328.57	-	-	-	-
		Average Loan	492.86	164.29	-	-	-
		Rate of Interest	7.3500%	7.3500%	7.3500%	7.3500%	7.3500%
		Interest	36.23	12.08	-	-	-
7	Bonds XVIII Series	Net opening loan	2,000.00	1,600.00	1,200.00	800.00	400.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	400.00	400.00	400.00	400.00	400.00
		Net Closing Loan	1,600.00	1,200.00	800.00	400.00	-
		Average Loan	1,800.00	1,400.00	1,000.00	600.00	200.00
		Rate of Interest	5.9800%	5.9800%	5.9800%	5.9800%	5.9800%
		Interest	107.64	83.72	59.80	35.88	11.96
8	Central Bank of India	Net opening loan	2,820.00	1,880.00	940.00	-	-
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	940.00	940.00	940.00	-	-
		Net Closing Loan	1,880.00	940.00	-	-	-
		Average Loan	2,350.00	1,410.00	470.00	-	-
		Rate of Interest	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%
		Interest	164.50	98.70	32.90	-	-
9	LIC III (T4, D4)	Net opening loan	2,975.00	2,625.00	2,275.00	1,925.00	1,575.00
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	350.00	350.00	350.00	350.00	350.00
		Net Closing Loan	2,625.00	2,275.00	1,925.00	1,575.00	1,225.00
		Average Loan	2,800.00	2,450.00	2,100.00	1,750.00	1,400.00
		Rate of Interest	8.7281%	8.7281%	8.7281%	8.7281%	8.7281%
		Interest	244.39	213.84	183.29	152.74	122.19
10	Allahabad Bank(T1,D2)	Net opening loan	1,857.14	1,571.43	1,285.71	1,000.00	714.29
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	285.71	285.71	285.71	285.71	285.71
		Net Closing Loan	1,571.43	1,285.71	1,000.00	714.29	428.57
		Average Loan	1,714.29	1,428.57	1,142.86	857.14	571.43
		Rate of Interest	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%
		Interest	120.00	100.00	80.00	60.00	40.00
11	KFW (D1)	Net opening loan	1,263.65	1,263.65	1,083.13	902.61	722.09
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	180.52	180.52	180.52	180.52
		Net Closing Loan	1,263.65	1,083.13	902.61	722.09	541.57
		Average Loan	1,263.65	1,173.39	992.87	812.35	631.83
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	23.63	12.44	10.52	8.61	6.70
12	KFW (D2)	Net opening loan	1,333.71	1,333.71	1,143.16	952.62	762.07
		Add: Addition during the period	-	-	-	-	-

		Less: Repayment during the period	-	190.53	190.53	190.53	190.53
		Net Closing Loan	1,333.71	1,143.16	952.65	762.12	571.59
		Average Loan	1,333.71	1,238.44	1,047.91	857.38	666.85
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	24.94	13.13	11.11	9.09	7.07
13	KFW (D3)	Net opening loan	1,999.84	1,999.84	1,714.15	1,428.46	1,142.77
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	285.69	285.69	285.69	285.69
		Net Closing Loan	1,999.84	1,714.15	1,428.46	1,142.77	857.08
		Average Loan	1,999.84	1,857.00	1,571.31	1,285.61	999.92
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	37.40	19.68	16.66	13.63	10.60
14	KFW (D4)	Net opening loan	1,069.79	1,069.79	916.96	764.14	611.31
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	152.83	152.83	152.83	152.83
		Net Closing Loan	1,069.79	916.96	764.14	611.31	458.48
		Average Loan	1,069.79	993.38	840.55	687.72	534.90
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	20.01	10.53	8.91	7.29	5.67
15	KFW (D5)	Net opening loan	1,758.24	1,758.24	1,507.06	1,255.88	1,004.71
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	251.18	251.18	251.18	251.18
		Net Closing Loan	1,758.24	1,507.06	1,255.88	1,004.71	753.53
		Average Loan	1,758.24	1,632.65	1,381.47	1,130.30	879.12
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	32.88	17.31	14.64	11.98	9.32
16	KFW (D6)	Net opening loan	1,802.72	1,802.72	1,545.19	1,287.66	1,030.13
		Add: Addition during the period	-	-	-	-	-
		Less: Repayment during the period	-	257.53	257.53	257.53	257.53
		Net Closing Loan	1,802.72	1,545.19	1,287.66	1,030.13	772.60
		Average Loan	1,802.72	1,673.96	1,416.43	1,158.89	901.36
		Rate of Interest	1.8700%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	33.71	17.74	15.01	12.28	9.55
17	KFW (D7)	Net opening loan	-	635.20	544.46	453.72	362.97
		Add: Addition during the period	635.20	-	-	-	-
		Less: Repayment during the period	-	90.74	90.74	90.74	90.74
		Net Closing Loan	635.20	544.46	453.72	362.97	272.23
		Average Loan	317.60	589.83	499.09	408.35	317.60
		Rate of Interest	1.2300%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	3.91	6.25	5.29	4.33	3.37
18	KFW (D8)	Net opening loan	-	632.64	542.26	451.88	361.51
		Add: Addition during the period	632.64	-	-	-	-
		Less: Repayment during the period	-	90.38	90.38	90.38	90.38
		Net Closing Loan	632.64	542.26	451.88	361.51	271.13
		Average Loan	316.32	587.45	497.07	406.69	316.32

		Rate of Interest	0.9200%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	2.91	6.23	5.27	4.31	3.35
19	KFW (D9)	Net opening loan	-	2,356.40	2,019.77	1,683.15	1,346.52
		Add: Addition during the period	2,356.40	-	-	-	-
		Less: Repayment during the period	-	336.63	336.63	336.63	336.63
		Net Closing Loan	2,356.40	2,019.77	1,683.15	1,346.52	1,009.89
		Average Loan	1,178.20	2,188.09	1,851.46	1,514.83	1,178.20
		Rate of Interest	1.0600%	1.0600%	1.0600%	1.0600%	1.0600%
		Interest	12.49	23.19	19.63	16.06	12.49
20	Gross Total	Net opening loan	22,978.38	23,533.63	20,128.62	15,552.18	11,915.74
		Add: Addition during the period	3,624.24	1,500.00	-	-	-
		Less: Repayment during the period	3,068.99	4,905.01	4,576.44	3,636.44	3,347.83
		Net Closing Loan	23,533.63	20,128.62	15,552.18	11,915.74	8,567.91
		Average Loan	23,256.01	21,831.13	17,840.40	13,733.96	10,241.83
		Rate of Interest	4.9403%	4.2233%	4.2212%	4.0423%	3.9379%
		Interest	1,148.91	922.00	753.08	555.17	403.32