

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 226/GT/2013

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K.Singhal, Member

Date of Hearing: 06.03.2014

Date of Order: 19.03.2015

In the matter of

Revision of tariff of Simhadri Super Thermal Power Station, Stage-II (1000 MW) for the period from 16.9.2011 (COD) to 31.3.2014 – Truing up of tariff determined by order dated 26.9.2012 in Petition No. 55/2011.

And

In the matter of

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

...Petitioner

Vs

1. Andhra Pradesh Power Coordination Committee,
Vidyut Soudha,
Khairatabad, Hyderabad-500 082

2. Andhra Pradesh Eastern Power Distribution Company Ltd
Corporate Office P&T Colony,
Seethammadhara,
Visakhapatnam-530013-(AP)

3. Andhra Pradesh Southern Power Distribution Company Ltd,
Corporate Office, Back side Srinivasa Kalyana Mandapam
Tiruchhanur Road, Kesavayana Gunta, Tirupati-517503-(AP)

4. Andhra Pradesh Northern Power Distribution Company Ltd,
H. No. 2-5-31/2 Vidyut Bhavan,
Naralacutta, Hanamkonda
Varangal-506001 (AP)

5. Andhra Pradesh Central Power Distribution Company Ltd,
Mint Compound, Corporate Office,
Hyderabad, (AP)-500063



6. Tamil Nadu Generation & Distribution Corporation Ltd (TANGEDCO)
144, Anna Salai
Chennai-600002

7. Power Company of Karnataka Limited
KPTCL Complex, K.G Road
Kaveri Bhawan, Bangalore-560009

8. Bangalore Electricity Supply Company Ltd (BESCOM),
Krishna Rajendra Circle
Bangalore-560009

9. Mangalore Electricity Supply Company Ltd (MESCOM)
Paradigm Plaza, A.B Shetty Circle
Mangalore-575001

10. Chamundeshwari Electricity Supply Corp Ltd
Corporate Office, 927 L.J Avenue, New Kantharajurs Road
Saraswathipuram, Mysore-570009

11. Gulbarga Electricity Supply Company Ltd
Main Road, Gulbarga
Gulbarga-585102, Karnataka

12. Hubli Electricity Supply Company Ltd
Corporate Office, P.B Road Navannagar
Hubli-580025

13. Kerala State Electricity Board
Vaidyuthi Bhavanam, Pattom
Thiruvananthapuram-695004

14. Electricity Department
Govt Of Puducherry
137, NSC Bose Salai
Puducherry-605001

....Respondents

Parties present:

For Petitioner: Shri Ajay Dua, NTPC
Shri Rohit Chhabra, NTPC
Shri A.S. Pandey, NTPC
Shri Sameer Agarwal, NTPC
Shri V.K Garg, NTPC
Shri Rajesh Jain, NTPC

For Respondents: None

ORDER

This petition has been filed by the petitioner, NTPC for revision of tariff of Simhadri Super Thermal Power Station, Stage- II (1000 MW) (hereinafter referred to as “the generating station”) for the period from 16.9.2011 to 31.3.2014 in terms of the proviso to Regulation 6 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. The generating station with an installed capacity of 1000 MW comprises of two units of 500 MW capacity each and is an expansion project to the existing Simhadri Super Thermal Power Station, Stage-I. The dates of commercial operation of the units of the generating station are as under:

Unit-I	16.9.2011
Unit-II	30.9.2012

3. Petition No. 55/2011 was filed by the petitioner for approval of tariff of the generating station for the period 2009-14 and the Commission by its order dated 26.9.2012 approved the annual fixed charges by considering the capital cost as on COD of Unit-I (16.9.2011) and combined capital cost as on the anticipated COD of Unit-II (31.7.2012).

4. Unit-II of the generating station achieved commercial operation on 30.9.2012 and accordingly the petitioner has filed this petition for revision of tariff for the period from actual date of commercial operation of the generating station till 31.3.2014 based on the actual additional capital expenditure incurred for the years 2011-12 and revised projected estimated expenditure for the years 2012-13 and 2013-14 in accordance with the proviso to clause (1) of Regulation 6 of the 2009 Tariff Regulations. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

"6. Truing up of Capital Expenditure and Tariff

(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.

Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff."

5. Accordingly, the annual fixed charges claimed vide affidavit dated 26.2.2013 was revised by the petitioner vide affidavit dated 30.8.2013. The capital cost claimed by the petitioner vide affidavit dated 30.8.2013 is as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Capital cost	238754.66	254635.73	264300.80	484285.87
Capitalization on account of Unit-II	-	-	195038.00	-
Notional IDC	525.27	-	510.42	-
Short Term FERV	(-) 205.11	-	172.65	-
Opening Capital Cost	239074.82	254635.73	460021.87	484285.87
Addition during the period	6646.12	5788.60	24264.00	30205.98
Discharge of Liability	8914.79	3876.47		
Total Add Cap	15560.91	9665.07	24264.00	30206.00
Closing Capital Cost	254635.73	264300.80	484285.87	514491.87
Effective Capital Cost	246855.27	259468.26	472153.87	499388.87

6. Based on the above, the annual fixed charges claimed vide affidavit dated 30.8.2013 is as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Depreciation	12641.00	13300.00	24210.00	25606.00
Interest on Loan	16087.00	16211.00	29239.00	29111.00
Return on Equity	16992.00	17860.00	32499.00	34374.00
Interest on Working Capital	4389.00	4436.00	8452.00	8579.00
O&M Expenses	7265.00	7680.00	15360.00	16240.00
Cost of Secondary fuel oil	1562.00	1557.00	3606.00	3606.00
Total	58934.00	61043.00	113366.00	117516.00

7. The petitioner has filed additional information as sought for by the Commission after serving copies on the respondents. None of the respondents have filed reply in the matter. We now proceed to determine the tariff of the generating station as stated in the subsequent paragraphs.

Capital cost

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

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

9. The Commission vide order dated 26.9.2012 in Petition No.55/2011 had approved the capital cost of ₹238549.55 lakh including IDC, Financing Charges and FERV adjustments as on COD of Unit-I (16.9.2011) and combined capital expenditure of ₹449948.55 lakh as on the anticipated COD of Unit-II (31.7.2012). The break-up of the capital cost as on 16.9.2011 allowed vide order dated 26.9.2012 is as under:

(₹ in lakh)	
Gross block corresponding to Stage-I (inclusive of IDC & FC of ₹33088.13 lakh and FERV of ₹252.90 lakh)	265072.38
Less: Un discharged liabilities	26317.71
Gross Block as on COD of Unit-I (16.9.2011)	238754.66

NB: The amount of ₹ 238754.66 lakh had been further adjusted by a Short-term FERV gain of ₹ 205.11 lakh to make the allowed capital cost as on COD of Unit-1 as Rs.238549.55 lakh (i.e., 238754.66-205.11)

10. The petitioner in this petition has claimed capital cost based on the admitted capital cost as on 16.9.2011 and the actual capital expenditure (on cash basis) for the years 2011-12 and 2012-13 (1.4.2012 to 30.9.2012) and projected additional capital expenditure for the period from 30.9.2012 to 31.3.2013 and for the year 2013-14. The projected additional capital expenditure claimed for the years 2012-13 and 2013-14 are based on the latest estimates and status of work. The capital cost claimed is as summarized as under:

(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)
Capital cost as per Form-5B	205413.63	254593.46	264258.53
IDC	33088.13	-	-
FERV	252.90	-	-
Capital cost (before Notional IDC & Short Term FERV)	238754.66	-	264258.53
Capitalization as on 30.9.2012 on account of COD of Unit-II	-	-	195038.00
Notional IDC	483.00	-	331.00
Short Term FERV	(-) 205.11	-	172.65
Opening Capital cost	239032.55	254593.46	459800.18
Add: Additional Capital Expenditure (actuals)	15560.91	9665.07	0.00
Closing Capital cost	254593.46	264258.53	459800.18

11. The opening Capital cost of ₹239032.55 lakh as on 16.9.2011 as per affidavit dated 26.2.2013 includes an amount of ₹483.00 lakh as Notional IDC and (-)₹205.11 lakh as Short-term FERV. Further, the opening Capital cost of ₹459800.18 lakh as on 30.9.2012 includes amounts of ₹814.00 lakh (483.00+331.00) as Notional IDC and (-) ₹32.46 lakh [(-)205.11+172.65] as Short-term FERV. However, the petitioner vide affidavit dated 30.8.2013 has revised the claim for notional IDC as ₹525.27 lakh in addition to the total Capital Cost as on COD of Unit-I approved to arrive at the capital cost of ₹239074.82 lakh (238549.55 + 525.27) as on COD of Unit-I.

IDC, FC and FERV

12. The petitioner's claim for IDC & FC, FERV and Notional IDC vide affidavit dated 30.8.2013 is examined as under:

(₹ in lakh)

	2011-12		2012-13	
	As on COD of Unit-I (16.9.2011)	(16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 As on COD of Unit-II (30.9.2012)
IDC & FC	33088.13	1169.63	0.00	34581.36
FERV	252.90	870.15	633.66	1405.35
Notional IDC	525.27	0.00	0.00	510.42
Short Term FERV	(-) 205.11	0.00	0.00	172.65

13. Regulation 7(1)(a) of 2009 Tariff regulations provides as under;

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

14. It emerges from the above that if the actual equity deployed is less than 30% of funds deployed (i.e. actual debt is more than 70%), the interest on the actual amount of loan has to be included in capital cost. If the actual equity deployed is more than 30% of the funds deployed (i.e. actual debt is less than 70%), interest on 70% of the funds deployed has to be included in capital cost as Interest during Construction (IDC) by treating equity infusion above 30% as normative loan by the company to itself. Accordingly, IDC

has been worked out based on the actual amount of loan deployed as per details submitted by the petitioner in Form-8 and Form-14 of the petition using the average re-payment method. This average repayment of loan method has been consistently applied by the Commission in various tariff orders of the generating stations petitioner and the same has been upheld by the Appellate Tribunal for Electricity in its judgments. However, the following deviations have been observed in the IDC claim of the petitioner:

- *Deviations in the loan repayments schedule of SBI V & VI loans with Form-8.*
- *Deviation in drawl dates in respect of Bond series XLVII from Form-8.*
- *Deviations in loan starting dates from Form-8 in some cases.*

15. Interest on normative loan has been worked out as per regulations considering the following:

(i) The fund deployment done by the petitioner periodically till the COD of respective units (i.e. during construction period) has been sourced partly by Equity and partly by Debt (debt-equity ratio) which was not uniform during the entire construction period. Therefore, quarter-wise debt -equity ratio has been computed as per the quarter-wise cash expenditure submitted by the petitioner in Form-14A and the infusion of debt has been computed as per the drawl and repayment schedule (Average method in place of FIFO) claimed by the petitioner in Form-8.

(ii) In case the cumulative equity deployed in any quarter is more than 30% of the cumulative fund deployed, the excess of equity over and above 30% of cumulative fund deployed has been treated as normative loan.

(iii) The interest on normative loan has been allowed based on the quarter-wise rate arrived as per the actual interest and the actual loan balance applicable to the relevant quarter.

FERV and Short-Term FERV

16. FERV and Short-term FERV claims of the petitioner have been examined. From the year-wise FERV details submitted in Annexure-III of the petition, certain deviations have been noticed in FERV considered in Form-14 A. Despite this, FERV considered in Form-14A and the Short-term FERV as claimed by the petitioner has been allowed at this stage. However, the actual position in respect of the FERV claimed along with explanation on 'Short-term FERV' with detailed calculations shall be submitted

by the petitioner at the time of final truing-up of tariff of the generating station in terms of Regulation 6(1) of the 2009 Tariff Regulations.

Time Over run

17. The Commission while determining tariff of the generating station for the period from 1.4.2011 to 31.3.2014 in Petition No. 55/2011 had examined the issue of Time overrun in respect of Unit-I and by order dated 26.9.2012 held that the petitioner is not responsible for the time and cost overrun involved in the commissioning of the project. The relevant portion of the order is extracted as under:

11. We have examined the submissions and the documents on record. It is observed that PERT chart indicating the position of critical activities prior to rainfall with reference to the schedule and the delay attributable to rain/cyclone indicating the specific task/activities affected, as directed by the Commission during the proceedings held on 6.3.2012 has not been submitted by the petitioner. However, petitioner has submitted the bar chart (scheduled vs actual) indicating the major activities for the commissioning of Unit-III of the generating station. From the details submitted, it is observed that the time overrun was mainly on account of heavy rainfall of 60% more than the normal rainfall and the situation had been further aggravated by the two cyclones namely "Laila" during May 2010 and "Jal" during November 2010. Based on these, we notice that the delay in the commissioning of the project was mainly due to delay in the construction of 'Ash dyke'. Taking into account the natural calamities like heavy rain and cyclones as narrated above, which have caused the delay in the commissioning of the project, we are of the view that the delay in the commissioning of the project is not attributable to the petitioner as the same was beyond its control. Accordingly, we hold that the petitioner is not responsible for the time and cost overrun involved in the commissioning of the project."

18. Unit-II of the generating station has been declared under commercial operation on 30.9.2012 and there is further delay of two months in achieving the COD of Unit-II. In view of the fact that time overrun had been allowed earlier by order dated 29.6.2012, IDC has been computed for the period up to 30.9.2012 by treating the period as construction period subject to final true up of IDC and FERV. However, the petitioner is directed to submit reasons justifying the delay of further 2 months from anticipated COD of 31.7.2012 to actual COD on 30.9.2012 at the time of final truing-up of tariff of the generating station in terms of Regulation 6(1) of the 2009 Tariff Regulations. Based on this, time overrun of 2 months would be reviewed and any consequential impact in the capital cost shall be factored thereafter for the purpose of tariff. Accordingly, the amount allowed towards IDC, FC, and FERV is worked out as under:

(₹ in lakh)

	2011-12 As on COD of Unit-I (16.9.2011)	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 As on COD of Unit-II (30.9.2012)
IDC & FC (actual)	32879.76	1169.63	0.00	34687.67
Interest on normative loan*	289.86	-	-	458.59
FERV	252.90	870.15	633.66	1405.35
Short Term FERV	(-) 205.11	0.00	0.00	172.65

* Interest on normative loan is to be treated as income in the Financial Statement i.e Profit & Loss A/c and Balance Sheet by the petitioner as it form part of capital cost for the purpose of allowing tariff.

Capital Cost as on COD of Unit-I

19. As stated, the Commission by its order dated 26.9.2012 in Petition No. 55/2011 had approved the capital cost of ₹238549.55 lakh as on COD of Unit-I, including IDC & FC of ₹33088.13 lakh, FERV of ₹252.90 lakh and Short-term FERV gain of ₹205.11 lakh. After adjustment of the above amounts and including liabilities, the capital cost is worked out as under:

	(₹ in lakh)
Capital Cost	238549.55
Less: IDC & FC	33088.13
Less: FERV	252.90
Add: Adjustment of Short term FERV	205.11
Add: Un-discharged liabilities	26317.71
Capital Cost excluding IDC, FC & FERV	231731.35

20. The capital cost after considering the admitted IDC & FC, FERV and deduction of liabilities un-discharged is worked out and allowed as under:

	(₹ in lakh)
	Amount
Capital Cost excluding IDC & FC	231731.35
Add: IDC & FC (actual)	32879.76
Add: Interest on normative loan	289.86
Add: FERV	252.90
Adjustment of Short Term FERV	(-) 205.11
Total	264948.75
Less: Un-discharged Liabilities	26317.71
Total Capital Cost (on cash basis) as on COD of Unit-I	238631.04

Actual/ Projected Additional Capital Expenditure

21. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012 provides as under:

“9. Additional Capitalisation. (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) *Un-discharged liabilities;*
- (ii) *Works deferred for execution;*
- (iii) *Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;*
- (iii) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) *Change in law:*

Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

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

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

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

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

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

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

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

(vii) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receipt system arising due to non-materialisation of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station.

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

Additional Capital Expenditure for the period from COD of Unit-I (16.9.2011) to COD of Unit- II (30.9.2012)

22. The petitioner vide affidavit dated 20.3.2014 has submitted the reconciliation statement of the actual additional capital expenditure from COD of Unit-I (16.9.2011) to 31.3.2012 and from 1.4.2012 to 29.9.2012 (COD of Unit-II/ station). The reconciliation of the actual capital cost of ₹459018.65 lakh as on the actual date of commercial operation of Unit-II (30.9.2012) as furnished by the petitioner is as under:

	(₹ in lakh)	
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)
Opening Capital Cost	238754.66	254315.59
Liability Discharge	8914.80	3876.47
Add: Additional capital Expenditure for Unit-I	6646.13	5788.59
Add: Capitalization on account of Unit-II	0.00	195038.00
Closing Capital Cost	254315.59	459018.65

23. The petitioner has claimed additional capital expenditure of ₹15560.90 lakh for Unit-I from COD (16.9.2011) to 31.3.2012 which includes discharge of liability of ₹ 8914.80 lakh and additional capital expenditure of ₹6646.13 lakh (on cash basis). Further, the petitioner has claimed amount of ₹5788.59 lakh (on cash basis) from 1.4.2012 to 29.9.2012 and discharge of liability for ₹3876.47 lakh which includes deferred/balance works on Main plant & Equipments, Initial spares, Civil works for Ash Handling System & MGR system and Overhead expenditure i.e. IEDC, MBOA etc. The additional capital expenditure of ₹6646.13 lakh includes IDC & FERV of ₹2039.79 lakh and additional capital expenditure of ₹5788.59 lakh includes FERV of ₹633.65 lakh. It is observed that the additional capital expenditure claimed in respect of

Unit-I are with regard to Main plant, Initial spares, MGR system and Ash Handling system which are mainly deferred liabilities / balance work under the original scope of work and incurred with in the cut-off date. As the expenditure claimed are for deferred work/ deferred liabilities under original scope of work and is within the cut-off date, the same is allowed in terms of the provisions of Regulation 9(1) of the 2009 Tariff Regulations. Accordingly, the additional capitalization allowed for the period from 16.9.2011 to 29.9.2012 is as under:

	(₹ in lakh)	
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)
Additional Capital Expenditure	6646.13	5788.59

24. After considering the liabilities, IDC & FC and FERV claims of the petitioner, the additional capital expenditure is worked out as under:

	(₹ in lakh)	
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)
Additional Capital Expenditure	6646.13	5788.59
Less: IDC & FC Claim	1169.63	0.00
Less: FERV Claim	870.15	633.66
Add: Un-discharged liabilities	559.54	706.30
Additional Capital Expenditure allowed	5165.88	5861.24

25. The additional capital expenditure allowed after adjustment of IDC & FC, FERV and discharge of liabilities during the period 16.9.2011 to 29.9.2012 is as under:

	(₹ in lakh)	
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)
Additional Capital Expenditure allowed	5165.88	5861.24
Add: IDC & FC	1169.63	0.00
Add: FERV	870.15	633.66
Less : Un-discharged Liabilities	559.54	706.30
Add: Discharge of Liabilities	8914.80	3876.47
Total	15560.92	9665.07

Capital Cost as on COD of Unit-II

26. The petitioner has capitalized an amount of ₹195038.00 lakh as on COD of Unit-II (30.9.2012), in respect of works which are within the original scope of work. These have been allowed on prudence check. This amount is inclusive of the liabilities, IDC & FC and FERV. Accordingly, after considering the liabilities, IDC & FC and FERV claims of the petitioner, the additional capital expenditure is worked out as under:

(₹ in lakh)	
	Amount
Capital Cost as on 30.9.2012	195038.00
Less: IDC,FC and FERV	35986.71
Add: Un-discharged liabilities	18771.83
Capital Cost excluding IDC,FC & FERV	177823.12

27. The total capital expenditure allowed after adjustment of IDC & FC, FERV and discharge of liabilities as on COD of Unit-II (30.9.2012) is worked out as under:

(₹ in lakh)	
	As on 30.9.2012
Capital Cost as on COD of Unit-I (I)	238631.04
Additional Capital Expenditure of Unit-I for the period from 16.9.2011 to 29.9.2012 (II)	25225.99
Additional capitalization on account of Unit-II excluding IDC, FC and FERV	177823.12
Add: IDC & FC (actual)	34687.67
Add: Interest on Normative loan	458.59
Add: FERV	1405.35
Adjustment of Short Term FERV	172.65
Less: Un-discharged liabilities	18771.83
Total Capital cost as on account of Unit-II, on cash basis (III)	195775.55
Total Capital Cost as on COD of Unit-II (I+II+III)	459632.58

Liabilities

28. The capital cost allowed as on 16.9.2011 and 30.9.2012 respectively has been worked out on cash basis, after deduction of un-discharged liabilities. The liabilities discharged have been considered along with the admitted additional capital expenditure, during the year of discharge.

Projected Additional Capital expenditure after COD of generating station

29. The projected additional capital expenditure claimed by the petitioner from the actual date of commercial operation of the generating station (30.9.2012) till 31.3.2014 is as under:

(₹ in lakh)		
2012-13 (30.9.2012 to 31.3.2013)	2013-14	Total
24264.00	30206.00	66904.73

30. The details of the projected additional capital expenditure claimed after 30.9.2012 (post COD) in this petition *vis-a-vis* the additional capital expenditure allowed vide order dated 26.9.2012 in Petition No.55/2011 is as under:

(₹ in lakh)							
Sl. No.	Package	Additional capital expenditure allowed vide order dated 26.9.2012			Additional capital expenditure claimed		
		Projected Capital Expenditure		Total	Projected Capital Expenditure		Total
		30.9.2012 to 31.3.2013	2013-14		30.9.2012 to 31.3.2013	2013-14	
1	Road, Bridges, culverts etc.	0.00	0.00	0.00	0.00	0.00	0.00
2	Buildings	2071.00	1000.00	3071.00	1030.00	0.00	2330.00
3	Plant off-site	0.00	2357.00	2357.00	150.00	1300.00	1400.00
4	Quarters	0.00	0.00	0.00	0.00	1250.00	0.00
5	Misc. Township Civil & Electrical works	0.00	896.00	896.00	150.00	620.00	770.00
6	Training Centre	0.00	37.00	37.00	0.00	300.00	300.00
	Sub-Total	2071.00	4290.00	6361.00	1330.00	3470.00	4800.00
7	Plant & Machinery	0.00	0.00	0.00	0.00	0.00	0.00
8	Steam Generator	9798.00	5172.00	14970.00	8763.00	4795.00	13558.00
9	Turbine Generator work	3750.00	1805.00	5555.00	3560.00	8767.00	12327.00
10	Miscellaneous Work	2448.00	1132.00	3580.00	1410.00	2506.00	3916.00
11	Coal & Ash related work	6681.00	3398.00	10079.00	4000.00	4268.00	8268.00
12	Off-Site Work	3822.00	2336.00	6158.00	1626.00	3127.00	4753.00
13	Electric Works	3640.00	630.00	4270.00	1308.00	646.00	1954.00
14	Initial Capital Spares	2000.00	4281.00	6281.00	2000.00	2000.00	4000.00
	Sub- Total	32139.00	18752.95	50891.95	22667.00	26109.00	48776.00
15	MGR track & signaling system	250.00	0.00	250.00	0.00	0.00	0.00
16	Railway Siding	269.00	0.00	269.00	100.00	400.00	500.00

17	Office Furniture & Furnishing	150.00	150.00	300.00	20.00	50.00	70.00
18	Office Equipment	100.00	100.00	200.00	22.00	52.00	74.00
19	IT Equipment	200.00	200.00	400.00	125.00	125.00	250.00
	Total	35179.00	23392.95	58571.95	24264.00	30206.00	54470

31. It is evident from the above that the projected additional capital expenditure claimed by the petitioner for the period from 30.9.2012 to 31.3.2014 is ₹54470.00 lakh as against the admitted additional capital expenditure of ₹58571.95 lakh allowed vide order dated 26.9.2012 in Petition No. 55/2011. It is noticed that the above additional expenditure claimed by the petitioner, is within the cut-off date of generating station and is within the original scope of work. As stated by the petitioner, these works are under different stages of execution and the projected additional capital expenditure claimed is likely to be capitalized during the respective years of the tariff period. The petitioner has also claimed expenditure of ₹9748 lakh up to 31.3.2014 towards initial spares, which works out to 2.12% of the Capital cost as on 30.9.2012 and is 1.85 % of the capital cost as on 31.3.2014. The expenditure on initial spares is within the ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations. In this background, the expenditure of ₹9748 lakh claimed by the petitioner has been considered for the purpose of tariff. Taking into consideration the submissions of the parties and the documents available on record, the claim of the petitioner for total additional capital expenditure of ₹54470.00 lakh for 2012-14 has been allowed on prudence check, in terms of the provisions of Regulation 9(1) of the 2009 Tariff Regulations. However, the additional capital expenditure allowed as above, is subject to subject to truing up in terms of Regulation 6(1) of the 2009 Tariff Regulations. Accordingly, the additional capital expenditure allowed for the purpose of tariff is summarized as under:

	<i>(Rs. in lakh)</i>	
	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Additional Capital expenditure	24264.00	30206.00

Capital Cost for 2011-14

32. Based on the above discussions, the capital cost considered for the purpose of tariff is as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Opening Capital cost	238631.04	254191.96	459632.58	483896.58
Additional capital expenditure	15560.92	9665.07	24264.00	30206.00
Closing Capital cost	254191.96	263857.03	483896.58	514102.58
Average Capital cost	246411.50	259024.50	471764.58	498999.58

33. The interest on normative loan of ₹289.86 lakh as on COD of Unit-I and ₹ 458.59 lakh allowed as on COD of the generating station is to be treated as income in the Financial Statements i.e. Profit and Loss A/c and Balance Sheet of the petitioner as the same forms part of capital cost for the purpose of tariff determination.

Debt-Equity Ratio

34. In terms of the provisions of Regulation 12 of the 2009 Tariff Regulations, the normative Debt equity ratio of 70:30 has been considered for capital cost as on COD of the generating station and the admitted additional capital expenditure. This is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

35. In terms of the provisions of Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011, Return on equity has been worked out after accounting for actual/projected additional capital expenditure as given under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013.14
Notional Equity- Opening	71589.31	76257.59	137889.77	145168.97
Addition of Equity due to ACE	4668.28	2899.52	7279.20	9061.80
Normative Equity-Closing	76257.59	79157.11	145168.97	154230.77
Average Normative Equity	73923.45	77707.35	141529.37	149699.87
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%
Tax Rate for respective years	32.445%	32.445%	32.445%	32.445%
Rate of Return on Equity (Pre Tax)	22.944%	22.944%	22.944%	22.944%
Return on Equity (Pre Tax)- Annualised	16961.00	17829.17	32472.50	34347.14

Interest on loan

36. In terms of Regulation 16 of the 2009 Tariff Regulations, Interest on loan has been worked out as under:

- (a) The gross normative loan corresponding to 70% of admissible capital cost is ₹167041.73 lakh as on 16.9.2011 (COD of Unit-I) and ₹321742.80 lakh as on 30.9.2012 (COD of Unit-II).
- (b) Net loan opening as on 16.9.2011 i.e. as on COD of Unit-I is same as gross loan. Accordingly, the Cumulative repayment of loan up to previous year/period is 'nil'.
- (c) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- (d) Depreciation allowed for the period under consideration has been considered as repayment.
- (e) Average net loan is calculated as average of opening and closing.
- (f) Weighted average rate of interest has been calculated as shown below:
 - i) The rate of interest considered in calculation in case of all loans is on annual rest basis.
 - ii) Actual draws up to station COD, as furnished by the petitioner has been considered.
 - iii) Actual rate of interest corresponding to each loan as furnished by the petitioner has been considered.
- (g) In line with the provisions of the above regulations, the weighted average rate of interest has been calculated considering the actual loan portfolio during respective periods. Further, average method of repayment followed by the Commission in other cases of the petitioner and confirmed by the Appellate Tribunal has been considered for the calculation of weighted average rate.

37. The necessary calculation for interest on loan is as under:

	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013.14
Gross opening loan	167041.73	177934.37	321742.80	338727.60
Cumulative repayment of loan up to previous year	0.00	6826.16	13446.52	25574.52
Net Loan Opening	167041.73	171108.22	308296.29	313153.08
Addition due to Additional capitalisation	10892.65	6765.55	16984.80	21144.20
Repayment of loan during the year	6826.16	6620.36	12128.01	25586.22
Net Loan Closing	171108.22	171253.41	313153.08	308711.06
Average Loan	169074.97	171180.81	310724.68	310932.07
Weighted Average Rate of Interest on Loan	9.4974%	9.4633%	9.4095%	9.3555%
Interest on Loan	16057.78	16199.30	29237.70	29089.25

Depreciation

38. In terms of Regulation 17 of the 2009 Tariff Regulations, depreciation has been calculated considering weighted average rate of depreciation for the respective periods. The necessary calculations in support of depreciation are as shown below:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Opening capital cost	238631.04	254191.96	459632.58	483896.58
Closing capital cost	254191.96	263857.03	483896.58	514102.58
Average capital cost	246411.50	259024.50	471764.58	498999.58
Depreciable value @ 90%	221770.35	233122.05	424588.12	449099.62
Balance depreciable value	221770.35	226295.89	411141.60	423525.10
Depreciation	6826.16	6620.36	12128.01	25586.22
Depreciation (annualized)	12618.05	13277.09	24189.74	25586.22
Cumulative depreciation at the end	6826.16	13446.52	25574.52	51160.74

O & M Expenses

39. The Commission in order dated 26.9.2012 had allowed the following expenditure under clause (a) of Regulation 19 of the 2009 Tariff Regulations. The O & M expenses norms for coal based generating station are as under:

	(₹ in lakh/ MW/ Year)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
O & M Expenses for 500 MW Units	14.53	15.36	15.36	16.24

40. Based on above norms, the year wise O & M expenses claimed by the petitioner for the purpose of tariff are as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
O & M Expenses	7265	7680	15360	16240

41. The O & M expenses claimed by the petitioner based on the above norms are in order and allowed.

Interest on Working Capital

Maintenance Spares

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

	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Cost of Maintenance spares	1453	1536	3072	3248

(₹ in lakh)

43. The 2009 Tariff Regulations provide for Maintenance spares @ 20% of the operation and maintenance expenses as specified in Regulation 19. Accordingly, the maintenance spares claimed by the petitioner as above are allowed for the purpose of tariff.

Fuel Components in Working Capital

44. The cost for fuel component in working capital based on price and GCV of coal & Secondary fuel oil procured and burnt for the preceding three months from COD of Unit-I and Unit-II (generating station) as claimed by the petitioner is as under:

	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Cost of coal for 2 months	12605	12570	19378	19378
Cost of secondary fuel oil for 2 months	260	260	601	601
Cost of Secondary oil for 1 year in the Fixed Charge	1562	1557	3606	3606

(₹ in lakh)

45. Accordingly, the fuel components in the working capital for the preceding three months from COD of Unit-I and Unit-II (generating station) worked out based on the operational norms, is allowed as under:

	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Cost of coal for 2 months	12604.61	12570.17	19378.41	19378.41
Cost of Secondary fuel oil for 2 months	260.27	259.56	601.04	601.04
Cost of Secondary oil for 1 year in the Fixed Charge	1561.63	1557.37	3606.22	3606.22

(₹ in lakh)

Receivables

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

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Variable Charges - 2 months	12604.61	12570.17	19378.41	19378.41
Fixed Charges - 2 months	9808.41	10162.87	18886.10	19574.31
Total	22413.02	22733.04	38264.52	38952.72

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

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
O & M Expenses for 1 month	605	640	1280	1353

48. Based on O & M expense norms, the year wise O & M expenses for the generating station of allowed for calculation of working capital is as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
O & M Expenses for 1 month	605.417	640.00	1280.00	1353.33

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

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Cost of coal – 2 months	12604.61	12570.17	19378.41	19378.41
Cost of secondary fuel oil – 2 months	260.27	259.56	601.04	601.04
O&M expenses – 1 month	605.42	640.00	1280.00	1353.33
Maintenance Spares	1453.00	1536.00	3072.00	3248.00
Receivables – 2 months	22413.02	22733.04	38264.52	38952.72

Total working capital	37336.31	37738.77	62595.96	63533.50
Rate of interest	11.7500%	11.7500%	13.5000%	13.5000%
Interest on working capital	4387.02	4434.31	8450.46	8577.02

Annual Fixed Charges for 2009-14

50. The annual fixed charges for the period 2009-14 in respect of the generating station are summarized as under:

	(₹ in lakh)			
	2011-12 (16.9.2011 to 31.3.2012)	2012-13 (1.4.2012 to 29.9.2012)	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Depreciation	12618.05	13277.09	24189.74	25586.22
Interest on Loan	16057.78	16199.30	29237.70	29089.25
Return on Equity	16961.00	17829.17	32472.50	34347.14
Interest on Working Capital	4387.02	4434.31	8450.46	8577.02
O&M Expenses	7265.00	7680.00	15360.00	16240.00
Cost of Secondary fuel oil	1561.63	1557.37	3606.22	3606.22
Total	58850.48	60977.24	113316.61	117445.86

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.

Energy Charge Rate (ECR)

51. The petitioner has claimed an Energy Charge Rate of 215.51 paisa/kWh for Unit-I and 166.12 paisa/kWh for Unit-II based on the Weighted Average Price, GCV of fuel procured and burnt for the preceding three months from COD of Unit-I and Unit-II of the generating station. The calculations for ECR of 215.512 paisa/kWh for Unit-I and 166.119 paisa/kWh for Unit-II have been worked out and allowed on the basis of price & GCV of coal and oil for the preceding three months from COD of Unit-I and Unit-II. Energy charge on month to month basis is calculated as per formula given under Regulation 21(6) (a) of 2009 Tariff Regulations.

52. The annual fixed charges allowed as above are subject to truing up as per Regulation 6 (1) of the 2009 Tariff Regulations.

53. The difference in the annual fixed charges determined by order dated 26.9.2012 and those determined by this order shall be adjusted in accordance with Regulation 6(6) of the 2009 Tariff Regulations.

54. Petition No. 226/GT/2013 is disposed of in terms of the above.

Sd/-
(A.K.Singhal)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson