

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 253/GT/2013
with
Petition No. 333/GT/2014

Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri A.S. Bakshi, Member

Date of Hearing: 28.10.2014
Date of Order: 18.09.2015

In the matter of

Petition No. 253/GT/2013

Revision of tariff of Faridabad Gas Power Station (431.586 MW) from 1.4.2009 to 31.3.2014 after the truing up exercise, based on actual capital expenditure incurred for the period 2009-13 and projected capital expenditure for 2013-14.

And in the matter of

Petition No. 333/GT/2014

Revision of tariff of Faridabad Gas Power Station (431.586 MW) from 1.04.2009 to 31.03.2014 after the truing up exercise, based on the actual capital expenditure incurred for the period 2009-14.

And

In the matter of

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

...Petitioner

Vs

Haryana Power Purchase Centre
Shakti Bhawan, Sector-IV,
Panchkula, Haryana-134109

...Respondent

Parties present:

For Petitioner: Shri Ajay Dua, NTPC
Shri Abhay Srivastava, NTPC
Shri Shyam Kumar, NTPC
Shri Bhupinder Kumar, NTPC
Shri S.K Jain, NTPC



ORDER

Petition No. 253/GT/2013 has been filed by the petitioner for revision of the tariff determined by Commission's order dated 14.9.2012 in Petition No. 280/2009 in respect of Faridabad Gas Power Station (431.586 MW (the generating station) for the period 2009-14, after truing-up exercise based on the actual additional capital expenditure incurred for the period 2009-13 and the projected additional capital expenditure for 2013-14 in accordance with the proviso to Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations').

2. During the pendency of the above petition, the petitioner has filed Petition No. 333/GT/2014 for revision of tariff in respect of the generating station for the period 2009-14 after truing-up exercise in accordance with Regulation 6(1) of the 2009 Tariff Regulations, based on the actual additional capital expenditure incurred for the period 2009-14.

3. The generating station with a capacity of 431.586 MW comprises of two Gas Turbine (GT) units of 140.827 MW each and one Steam Turbine (ST) unit of 149.932 MW. The dates of commercial operation of the different units of the generating station are as under:

	Date of commercial operation (COD)
Unit-I (GT)	1.9.1999
Unit-II (GT)	1.1.2000
Unit-III (ST)	1.1.2001

4. The annual fixed charges of the generating station determined by order dated 14.9.2012 in Petition No. 280/2009 for the period 2009-14, considering the opening



capital cost of ₹94234.09 lakh (after removing un-discharged liabilities of Rs 5154.31 lakh as on 1.4.2009) as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4655.46	4759.24	4760.64	2403.88	2403.88
Interest on Loan	2133.67	1794.42	1352.91	1009.04	778.01
Return on Equity	10924.84	11076.16	11078.20	11078.80	11078.80
Interest on Working Capital	2507.37	2530.85	2552.79	2520.06	2544.93
O&M Expenses	6387.47	6754.32	7138.43	7548.44	7980.03
Total	26608.81	26915.00	26882.99	24560.23	24785.65

5. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

"6. Truing up of Capital Expenditure and Tariff

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

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

6. The petitioner has filed these petitions in accordance with Regulation 6(1) of the 2009 Tariff Regulations for revision of tariff of the generating station for the period 2009-14 after truing-up exercise. The petitioner has considered the capital cost based on the admitted capital cost as on 31.3.2009, after removing de-capitalized value of land amounting of ₹452.66 during the year 2008-09 and Un-discharged liabilities of ₹5154.31 lakh and the actual capital expenditure incurred (on cash basis) during the years 2009-10 to 2013-14. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner in the petitions are as under:

Capital Cost

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	93781.43	98036.92	98064.41	98475.07	98497.98
Additional capital expenditure	4255.49	27.49	410.66	22.91	87.31
Closing Capital Cost	98036.92	98064.41	98475.07	98497.98	98585.30
Average Capital Cost	95909.17	98050.66	98269.74	98486.53	98541.64



Annual Fixed Charges

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4633.59	4761.67	4790.26	2422.19	2426.33
Interest on Loan	2129.30	1792.33	1374.73	1030.73	796.65
Return on Equity	10924.84	10947.86	10837.47	10852.39	11110.28
Interest on Working Capital	2506.83	2528.19	2548.85	2516.18	2546.45
O&M Expenses	6387.47	6754.32	7138.43	7548.44	7980.03
Total	26582.03	26784.37	26689.75	24369.95	24859.73

7. The respondent has not filed any reply in the said petitions. In compliance with the directions of the Commission, the petitioner has filed additional information with copy to the respondents. Accordingly, these petitions were clubbed and heard on 28.10.2014 and the Commission reserved its orders. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions and the documents available on records, as stated in the subsequent paragraphs.

Capital Cost as on 1.4.2009

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 annual fixed charges claimed in the petition is based on opening capital cost of ₹93781.43 lakh, after adjusting the de-capitalization of freehold land of ₹452.66 lakh (during 2008-09) and after removing the un-discharged liabilities of ₹5154.31 lakh as on 1.4.2009. In consideration of the submissions made by the petitioner, the capital cost of ₹93781.43 lakh as on 1.4.2009 considered by the petitioner is in order and has been considered for revision of tariff for the period 2009-14.

10. The petitioner vide affidavit dated 5.9.2013 in Petition No.253/GT/2013 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books of accounts



at Form-9A, wherein the liabilities have been revised. The details of liabilities and capital cost have been reconciled with the information available with the records of 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	102267.94	102267.94
Liabilities included above	5185.54	5185.54

11. It is evident from the above that there is no variation in the capital cost and liabilities position as on 1.4.2009. Further, the liability of ₹5154.31 lakh (pertaining to assets/works allowed during the period 1.4.2004 to 31.3.2009) included in the gross block, form part of the approved capital cost of ₹93781.43 lakh, as on 1.4.2009.

12. Accordingly, the capital cost as on 1.4.2009, after removal of un-discharged liabilities amounting to ₹5154.31 lakh, works out to ₹93781.42 lakh, on cash basis. Further, out of un-discharged liabilities amounting to ₹5154.31 lakh deducted as on 1.4.2009, the petitioner has discharged amounts of ₹4255.49 lakh, ₹14.70 lakh, ₹360.66 lakh, ₹ 9.89 lakh and ₹14.20 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively and has also reversed amounts of ₹402.77 lakh, ₹1.05 lakh and ₹112.87 lakh during the years 2009-10, 2012-13 and 2013-14. These discharges along with the discharges corresponding to assets admitted on cash basis, during the tariff period 2009-14, has been allowed as additional capital expenditure during the respective years.

Actual/ Projected Additional Capital Expenditure

13. 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 kilometres of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

14. The break-up of the additional capital expenditure allowed by the Commission in its order dated 14.9.2012 in Petition No. 280/2009 is as under:

Work/ equipments	(₹ in lakh)				
	Actual/Projected additional expenditure				
	2009-10	2010-11	2011-12	2012-13	2013-14
CISF Armory	0.00	16.00	14.00	0.00	0.00
Inert Gas Fire Extinguishing System	0.00	0.00	0.00	0.00	0.00
Construction of Boundary Wall for NGO Complex as per IB recommendation	0.00	10.00	3.00	0.00	0.00
Dumping yard & Vermi Composting Shed	0.00	0.00	0.00	0.00	0.00
10 No. Community Car Parking garage	0.00	0.00	0.00	0.00	0.00
Land De-capitalized	(-) 402.77	0.00	0.00	0.00	0.00
Communication Equipment	0.00	0.00	0.00	0.00	0.00
OS/ Tag Licensees	0.00	0.00	0.00	0.00	0.00
Total additional capital expenditure allowed	(-) 402.77	26.00	17.00	0.00	0.00

15. The details of the actual additional capital expenditure claimed in the petitions for the period 2009-14 are as under:

Sl. No		(₹ in lakh)					Total
		2009-10	2010-11	2011-12	2012-13	2013-14	
1	Construction of boundary wall for NGO complex as per IB recommendation.	0.00	12.79	0.29	1.07	0.00	14.15
2	CISF Armory	0.00	0.00	13.95	0.00	0.00	13.95
	Sub-total (A)	0.00	12.79	14.24	1.07	0.00	28.10
	New Claims						
3	LY pipe line ASAOTI, IOCL to Plant	0.00	0.00	25.83	0.00	0.00	25.83
	Regulation 9(2)(ii)						
4	Construction of room for AAQMS Stations	0.00	0.00	1.14	1.37	0.00	2.51
5	CT Fan modification	0.00	0.00	0.00	9.37	0.00	9.37
6	AAQMS	0.00	0.00	0.00	0	11.79	11.79
	Regulation 9(2)(vi)						
7	Borewell in CISF	0.00	0.00	3.18	0.00	0.00	3.18
8	Supply, installation & commissioning of fire detection system	0.00	0.00	5.61	0.00	0.00	5.61



9	Gas Turbine Lube oil Heat Exchanger	0.00	0.00	0.00	0.00	43.26	43.26
10	GT Generators Heat Exchanger	0.00	0.00	0.00	0.00	16.57	16.57
11	Carbon filter shaft for stage-I cooling tower	0.00	0.00	0.00	0.00	1.49	1.49
	Sub-total	0.00	0.00	35.76	10.74	73.11	118.12
	Total Actual additional capital expenditure	0.00	12.79	50.00	11.81	73.11	147.71

16. It is observed from the above that the actual additional capital expenditure claimed by the petitioner for 2009-14 is ₹147.71 lakh (excluding un-discharged liabilities) as against the additional capital expenditure of ₹43.00 lakh allowed vide order dated 14.9.2012 in Petition No. 280/2009. The increase of ₹104.71 lakh in the additional capital expenditure claimed is mainly due to 'new claims' amounting to ₹119.61 lakh towards assets like Ambient Air Quality Monitoring System (AAQMS) & room for AAQMS, Borewell in CISF Colony, Arbitration payments, CT fan modification, fire detection system, GT Generator Heat Exchanger, Gas Turbine Lube oil Heat Exchanger etc. Also, there is a less claim of ₹14.90 lakh in respect of the assets allowed for capitalization vide order dated 14.9.2012 in Petition No. 280/2009. We now examine the claim of the petitioner for additional capital expenditure as under:

Construction of Boundary Wall for NGO Complex

17. As against the additional capital expenditure of ₹13.00 lakh (₹10.00 lakh in 2010-11 and ₹3.00 lakh in 2011-12) allowed vide order dated 14.9.2012 in Petition No. 280/2009, the petitioner has claimed actual additional capital expenditure of ₹14.15 lakh (₹12.79 lakh in 2010-11, 0.29 lakh in 2011-12 and 1.07 lakh in 2012-13) excluding un-discharged liabilities of ₹0.76 lakh in 2011-12 and 2012-13, towards the Construction of boundary wall for NGO complex. The petitioner vide affidavit dated 14.8.2014 in Petition No. 333/GT/2014 has submitted that since the variation in the actual additional expenditure is minor in nature, the Commission may allow the same. Keeping in view the



recommendations of IB as regards safety and security of the generating station and its personnel and since the expenditure incurred by the petitioner is in compliance with the said directions, we are inclined to allow the expenditure of ₹14.15 lakh on cash basis for capitalization under Regulation 9(2) (ii) of the 2009 Tariff Regulations.

CISF Armory

18. As against the additional capital expenditure of ₹30.00 lakh (₹16.00 lakh in 2010-11 and ₹14.00 lakh in 2011-12) allowed vide order dated 14.9.2012 in Petition No. 280/2009, the petitioner has claimed the actual additional capital expenditure of ₹13.95 lakh on cash basis (excluding un-discharged liabilities of ₹9.31 lakh) during 2011-12 towards CISF Armory. The petitioner vide affidavit dated 14.8.2014 has submitted that against the estimated expenditure of ₹30.00 lakh, the actual expenditure is ₹23.26 lakh and since the variation is minor, the same may be allowed to be capitalized. For the reasons stated in order dated 14.9.2012 in Petition No. 280/2009 and since the actual claim of the petitioner is less than the estimated capital expenditure, the claim of the petitioner for ₹13.95 lakh, excluding un-discharged liability of ₹9.31 lakh is allowed under Regulation 9(2) (ii) of the 2009 Tariff Regulations.

New Claims

(a) Regulation 9(2)(i)

Laying of pipeline between ASAOTI, IOCL and Faridabad Gas Power Station (FGPS)

19. The petitioner has claimed actual additional capital expenditure of ₹25.83 lakh in 2011-12 towards payment for laying of pipeline between IOC terminal at ASAOTI and FGPS for supply of Naphtha. In justification of the said claim, the petitioner vide affidavit dated 14. 8.2014 has submitted as under:

“Award of Arbitration for final payment of work was carried out in 2004-05 and was admitted by the Commission. This is as per decision of Arbitration order dated 16.11.2011. The Hon’ble Commission may please allow the same.”



20. The Commission vide ROP dated 28.10.2014 directed the petitioner to furnish additional information as under:

“Detailed justification for the claim of Arbitral award for ₹25.83 lakh for the period 2011-12 considering the fact that the said amount was to be paid by Indian Oil Corporation”

21. In response, the petitioner vide affidavit dated 10.11.2014 has submitted information as under:

“...it is submitted that a pipeline was required to be laid by NTPC between IOC terminal at Asaoti and Faridabad Gas Power Station for supply of Naphtha. Since the laying of petroleum pipelines is the core strength of IOC, based on the request of NTPC, IOC accepted the job to act as an agent of IOC to execute the job of supply, laying and commissioning of the pipeline and allied facilities as deposit work on actual cost to be borne by NTPC. The Contract Agreement was executed on 15.1.2002 between NTPC and IOC further provides for the following:

“For the entire work to be performed by IOC, as specified under the scope of work, NTPC shall pay the entire cost actually incurred by IOC.

The final price payable by NTPC to IOC shall include....expenditure on legal issues, arbitration, stamp duties.”

Work was completed in 2005 but contract closing could not take place as sub-contractor of IOC viz. M/s Laltech Engineers went into Arbitration. Finally, the case was settled by the Arbitrator vide order dated 16.11.2011 wherein IOC was directed to pay the party ₹2583406/-. This Arbitration award has been accepted by both IOC and M/s Laltech Engineers. Thereafter, vide letter dated 6.1.2012, IOC raised a demand on NTPC to pay this amount for onward payment to M/S Laltech Engineers. NTPC released the payment to IOC vide Cheque No 318136 dated 10.1.2012 for ₹2583406/- and the same has been claimed by the petitioner as additional capitalization for the year 2011-12.”

22. In consideration the submissions of the petitioner, the actual additional capital expenditure of ₹25.83 lakh is found justified and the same is allowed to be capitalized under Regulation 9(2)(i) of the 2009 Tariff Regulations.

(b) Regulation 9(2)(ii)

Ambient Air Quality Monitoring System and Construction of rooms for AAQMS

23. The petitioner has claimed actual capital expenditure of ₹2.51 lakh (₹1.14 lakh in 2011-12 and ₹1.37 lakh in 2012-13) towards the Construction of room for AAQMS and ₹11.79 lakh for Ambient Air Quality Monitoring System (AAQMS) during 2013-14. As regards the claim for Construction of room for AAQMS, the petitioner vide affidavit dated



14.8.2014 has submitted that the work was allowed in 2004-09 and capitalized, however a small work related to the permanent construction of room for existing AAQMS stations has been carried out. As regards the claim for AAQMS, the petitioner vide affidavit dated 14.8.2014 has submitted that there are three AAQMS at Faridabad Gas Power station allowed by the Commission, for monitoring of Environment parameters. It has also submitted that as per National Ambient Air Quality Rule (NAAQR-2009) Ozone measurement in ambient air is mandatory. The petitioner has stated that earlier there was no provision in the existing system for Ozone measurement and hence Ozone analyzer has been installed at existing three AAQMS stations in Faridabad. The petitioner has also enclosed a copy of the Notification dated 18.11.2009 and the Central Pollution Control Board (CPCB) letter dated 18.6.2010 (*instead of 18.6.2014 as submitted by petitioner*) and has prayed for allowing the said claim.

24. We have examined the matter. Since the expenditure has been incurred by the petitioner in compliance with the statutory requirement of NAAQR-2009 and the directions of the CPCB, we are inclined to allow the actual additional capital expenditure of ₹2.51 lakh (₹1.14 lakh in 2011-12 & ₹1.37 lakh in 2012-13) towards the Construction of room for AAQMS and the actual capital expenditure of ₹11.79 lakh in 2013-14 for Ozone analyzer in AAQMS under the Regulation 9(2)(ii) of the 2009 Tariff Regulations.

CT Fan Modification

25. The petitioner has claimed actual additional capital expenditure of ₹9.37 lakh in 2012-13 towards CT fan modification. In justification of the said claim, the petitioner vide affidavit dated 14.8.2014 has submitted that the said work is as per PAT program and the work is under progress starting from 2012-13 onwards. The petitioner has not given the benefit of improved efficiency of plant on account of modification in CT fan. Since, the said work of CT Fan Modification is as per PAT scheme, the petitioner will earn energy



savings credits in the form of incentive as a result of the benefits of energy efficiency gain. Since the said benefits of energy efficiency gains are not passed on to the beneficiaries, we are of the view that the petitioner should meet such expenses from the sale of energy saving credits. Accordingly, the claim for additional capital expenditure of ₹9.37 lakh in 2012-13 is not allowed

(c) Regulation 9(2)(vi)

26. The petitioner has claimed actual additional capital expenditure in respect of the following items / works under Regulation 9(2)(vi) of the 2009 Tariff Regulations:

	<i>(Rs in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Borewell in CISF	0.00	0.00	3.18	0.00	0.00
Supply, installation & commissioning of fire detection system	0.00	0.00	5.61	0.00	0.00
Gas Turbine Lube oil Heat Exchanger	0.00	0.00	0.00	0.00	43.26
GT Generators Heat Exchanger	0.00	0.00	0.00	0.00	16.57
Carbon filter shaft for stage-I Cooling Tower	0.00	0.00	0.00	0.00	1.49

27. As regards the claim of ₹3.18 lakh in 2011-12 for Bore well in CISF colony, the petitioner vide affidavit dated 14.8.2014 has submitted that the work has been carried out for availability of continuous drinking water supply in CISF colony and plant area. As regards the claim of ₹5.61 lakh in 2011-12 for Supply, Installation & Commissioning of Fire detection system the petitioner has submitted that the Fire detection and alarm system is essential for comprehensive fire protection for protecting people and property and therefore installed in Central Store, Server Rooms & Telephone Exchange. As regards the claim of ₹43.26 lakh in 2013-14 for Gas Turbine Lube Oil Heat Exchanger, the petitioner has submitted that Lub oil going to all bearings of Gas Turbine & generator is being cooled with lube oil. It has also submitted that the existing Lube oil cooler bank of both Gas Turbines was in service since last 14 years and cooling effectiveness of



generator coolers deteriorated resulting high bearing temperature. It has also stated that further continuous running of machine at high temperature may cause failure of bearings and it is necessary to change the Lube Oil heat exchanger /cooler bank for efficient and successful operation of the machines. As regards the claim of ₹16.57 lakh in 2013-14 for GT Generator Heat Exchanger, the petitioner has submitted that the Generators of Gas Turbines are air cooled and the air in turn is cooled by the DM water in closed cycle and therefore the same DM water has to be cooled with 12 no of fans. It has also submitted that the cooling effectiveness of the generator coolers deteriorated with time resulting in high temperature upto 110 deg C. The petitioner has also submitted that running in high temperature may result in damage of stator winding insulation and therefore it is essential to replace the generator heat exchangers for efficient and successful operation of the machines. As regards the claim of ₹1.49 lakh in 2013-14 for Carbon Fiber Shaft for Cooling Tower, the petitioner has submitted that in line with the Energy Conservation and efficiency policies of the Bureau of Energy efficiency (BEE) under the MOP, GOI, the Perform, Achieve, Trade (PAT) scheme launched under the National Mission for Enhanced Energy Efficiency (NMEEE) is in place and the Govt. has notified the targets under the Energy Conservation Act, 2001 for 478 Industrial Units in India on 30.3.2012. The petitioner has submitted that to comply with the PAT scheme, the generating station has undertaken the replacement of existing metallic shaft with carbon fiber shaft to increase the efficiency of CT. Accordingly, the petitioner has prayed that the Commission may allow the said amounts claimed under Regulation 9(2)(vi) of the 2009 Tariff Regulations.

28. The matter has been examined. Regulation 9(2)(vi) of the 2009 Tariff Regulations, provides 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.”

29. It is evident from the submissions of the petitioner that the additional capital expenditure incurred on the said items / works is neither on account of Renovation of Gas Turbines after 15 years of operation from COD nor has the expenditure become necessary due to obsolescence or non-availability of spares for successful and efficient operation of the generating station. In this backdrop, the actual additional capital expenditure claimed by the petitioner in respect of the above items / works is not allowed.

30. The petitioner has reconciled the actual additional capital expenditure for the period 2009-10, 2010-11 and 2011-12 with the books of accounts as under:

(₹ in lakh)						
Sl. No.		2009-10 (actual)	2010-11 (actual)	2011-12 (actual)	2012-13	2013-14
1	Opening Gross Block as on 1 st April of year (A)	102267.94	102818.18	108005.30	107183.70	107906.32
2	Closing Gross Block as on 31 st March of year (B)	102818.18	108005.30	107183.70	107906.32	110839.98*
3	Addition during the year C=(B-A)	550.24	5187.12	(-) 821.60	722.62	2933.66
4	Exclusions (D)	550.24	5173.57	(-) 883.62	696.83	2856.37
6	Less: Un-discharged liability (E)	0.00	0.76	12.01	13.98	4.18
7	Additional Capital Expenditure claimed on cash basis (C-D-E)	0.00	12.79	50.00	11.81	73.12

*excluding solar expenditure

Exclusions

31. The summary of exclusions claimed for 2009-14 as per books of accounts is as under:

(₹ in lakh)						
Sl. No.		2009-10	2010-11	2011-12	2012-13	2013-14
1	Items disallowed					
i.	Communication Equipment	49.85	0.00	0.00	0.00	0.00
ii.	OSI Tag License	7.47	0.00	0.00	0.00	0.00
iii.	Energy Meter	0.67	0.00	0.00	0.00	0.00



iv.	Sox, Nox Analyser	2.89	0.00	0.00	0.00	0.00
v.	Car Parking shed	0.00	5.69	0.00	2.48	0.00
vi.	Dumping Yard	0.00	0.00	11.49	1.95	0.00
vii.	Inert gas fire extinguisher	0.00	0.00	0.00	0.00	157.36
2	Capitalization of spares	886.76	5457.62	533.04	790.15	2795.92
3	Capitalisation of MBOA items	11.18	55.25	54.86	121.42	69.72
4	Inter-unit transfer	0.00	1.37	(-)1.37	0.00	0.50
5	De-capitalisation of spares not part of capital cost	(-) 0.17	(-)243.95	(-)1468.61	(-)163.32	(-) 35.31
6	De-capitalisation of spares part of capital cost	0.00	(-)7.51	(-)11.65	(-)11.11	(-)3.79
7	De-capitalisation of MBOA items part of capital cost	(-)3.68	(-)90.05	(-)1.38	(-)24.08	(-)7.83
8	De-capitalisation of MBOA items not part of capital cost	(-)1.96	(-)4.85	0.00	(-)19.61	(-)5.76
9	Liability reversal	(-) 402.77	0.00	0.00	(-)1.05	(-)114.44
	Total Exclusions	550.24	5173.57	(-)883.62	696.83	2856.37

32. We now consider the exclusions for the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 under different heads in the claim for the purpose of tariff as discussed in subsequent paragraphs.

Items disallowed

33. The petitioner has excluded amounts of ₹49.85 lakh, including liability of ₹12.29 lakh for Communication equipment in 2009-10, ₹7.47 lakh for Osi tag license in 2009-10, ₹0.67 lakh for Energy meter and ₹2.89 lakh for Sox Nox analyzer in 2009-10, ₹9.17 lakh (₹5.69 lakh including liability of ₹0.61 lakh in 2010-11 and ₹2.48 lakh including liability of ₹0.64 lakh in 2012-13) for Car Parking shed, ₹13.44 lakh (₹11.49 lakh during 2011-12 and ₹1.95 lakh during 2012-13) for Dumping yard and ₹157.36 lakh including liability of ₹35.36 lakh for Inert gas fire extinguisher in 2013-14 respectively for the purpose of tariff. Since the said items which were not allowed by the Commission in its order dated 14.9.2012 and hence do not form part of the capital cost, the exclusion of the same is in order and has been allowed.



Capitalization of Capital Spares

34. The petitioner has capitalized capital spares in books of accounts amounting to ₹886.76 lakh (including liability of ₹12.16 lakh) in 2009-10, ₹5457.62 lakh (including liability of ₹14.41 lakh) in 2010-11, ₹533.04 lakh (including liability of ₹58.63 lakh) in 2011-12, ₹790.15 lakh (including liability of ₹33.78 lakh) in 2012-13 and ₹2795.92 lakh (including liability of ₹0.54 lakh) in 2013-14 respectively. Since the capitalization of capital spares over and above the initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff, the exclusion sought is in order and has been allowed.

De-capitalization of Capital Spares

35. The petitioner has de-capitalized in books of accounts capital spares amounting to (-) ₹0.17 lakh in 2009-10, (-) ₹251.46 lakh in 2010-11, (-) ₹1480.25 lakh in 2011-12 and (-) ₹174.43 lakh in 2012-13 and ₹39.10 lakh in 2013-14 on these spares becoming unserviceable. The petitioner vide affidavits dated 5.9.2013 and 30.9.2014 has submitted the details of de-capitalization of spares for the period 2009-13 and 2013-14 respectively. It is observed from the details of de-capitalization of spares that Spares amounting to (-) ₹7.51 lakh [out of (-) ₹251.46 lakh] in 2010-11, (-) ₹11.65 lakh [out of (-) ₹1480.25 lakh] in 2011-12, (-) ₹11.11 lakh [out of (-) ₹174.43 lakh] in 2012-13 and (-) ₹3.79 lakh [out of ₹39.10 lakh] in 2013-14 were allowed as part of the capital cost and the balance spares amounting to (-) ₹0.17 lakh in 2009-10, (-) ₹243.95 lakh in 2010-11, (-) ₹1468.61 lakh in 2011-12, (-) ₹163.32 lakh in 2012-13 and (-) ₹35.31 lakh in 2013-14 were not allowed in tariff as part of the capital cost. Hence, (a) the de-capitalization of spares amounting to (-) ₹7.51 lakh in 2010-11, (-) ₹11.65 lakh in 2011-12 and (-) ₹11.11 lakh in 2012-13 and (-) ₹3.79 lakh in 2013-14 which were allowed in tariff and form part of the capital cost is not allowed as exclusion and (b) the de-capitalization of spares for (-) ₹ 0.17 lakh in 2009-10,



(-) ₹243.95 lakh in 2010-11, (-)₹1468.61 lakh in 2011-12, (-)₹163.32 lakh in 2012-13 and (-) ₹35.31 lakh in 2013-14 which were not allowed in tariff and which does not form part of the capital cost of the generating station for the purpose of tariff, is allowed as exclusion.

Capitalization of Miscellaneous Bought Out Assets (MBOA)

36. The petitioner has capitalized MBOA items amounting to ₹11.18 lakh (including liability of ₹0.81 lakh) in 2009-10, ₹55.25 lakh (including liability of ₹2.55 lakh) in 2010-11, ₹54.86 lakh (including liability of ₹4.02 lakh) in 2011-12, ₹121.42 lakh (including liability of ₹8.78 lakh) in 2012-13 and ₹69.72 lakh (including liability of ₹1.06 lakh) in 2013-14. The capitalization of MBOA items after the cut-off date is not allowed for the purpose of tariff. Thus, the exclusions sought for ₹11.18 lakh (including liability of ₹0.81 lakh) in 2009-10, ₹55.25 lakh (including liability of ₹2.55 lakh) in 2010-11, ₹54.86 lakh (including liability of ₹4.02 lakh) in 2011-12, ₹121.42 lakh (including liability of ₹8.78 lakh) in 2012-13 and ₹69.72 lakh (including liability of ₹1.06 lakh) in 2013-14 is in order and has been allowed.

De-capitalization of Miscellaneous Bought Out Assets

37. The petitioner has de-capitalized MBOA items amounting to (-)₹5.64 lakh in 2009-10, (-) ₹94.90 lakh in 2010-11, (-)₹1.38 lakh in 2011-12, (-)₹43.69 lakh in 2012-13 and (-) ₹13.59 lakh in 2013-14 on these MBOA items becoming unserviceable. The petitioner vide affidavits dated 5.9.2013 and 30.9.2014 has submitted the details of de-capitalization of MBOA items for 2009-13 and 2013-14 respectively. It is observed from the details of the de-capitalization of MBOA items, MBOA items amounting to (-)₹3.68 lakh [out of (-)₹5.64 lakh] in 2009-10, (-)₹90.05 lakh [out of (-)₹94.90 lakh] in 2010-11, (-)₹1.38 lakh [out of ₹1.38 lakh] in 2011-12, ₹24.08 lakh [out of (-)₹43.69 lakh] in 2012-13 and ₹7.83 lakh [out of ₹13.59 lakh] in 2013-14 were allowed as part of the capital cost of the generating station and the balance MBOA items amounting to (-)₹1.96 lakh in 2009-10, (-)₹4.85 lakh in 2010-11, (-)₹19.61 lakh in 2012-13 and (-)₹5.76 in 2013-14 were not



allowed as part of capital cost. Hence, (a) the de-capitalization of MBOA items for (-) ₹3.68 lakh in 2009-10, (-)₹90.05 lakh in 2010-11, (-)₹1.38 lakh in 2011-12, (-)₹24.08 lakh in 2012-13 and (-)₹7.83 lakh in 2013-14 which were allowed as part of the capital cost has not been allowed as exclusion and (b) the de-capitalization of spares for (-)₹1.96 lakh in 2009-10, (-)₹4.85 lakh in 2010-11, (-)₹19.61 lakh in 2012-13 and (-)₹5.76 lakh in 2013-14 which were not allowed in tariff and hence not forming part of the capital cost of the generating station has been allowed.

Reversal of Liabilities

38. The petitioner has excluded liability reversal of (-)₹402.77 lakh in 2009-10 pertaining to de-capitalization of land as per order of the Hon'ble Supreme Court, (-)₹1.05 lakh on account of CISF Armory in 2012-13 and (-) ₹114.44 lakh on account of numerical distance protection relay, GT Compressor, Temporary office shed, switchyard etc. in 2013-14.

Inter-Unit transfer

39. An amount of ₹1.37 lakh in 2010-11 on account of Inter-unit transfer of MBOA items, (-)₹1.37 lakh in 2011-12 on account of Inter-unit transfer of MBOA items and ₹0.50 lakh in 2013-14 on account of Inter-unit transfer of Office equipment, EDP & SATCOM equipments. The Commission while dealing with applications for additional capitalization in respect of other generating stations of the petitioner had decided that both positive and negative entries arising out of inter-unit transfers of temporary nature shall be ignored for the purposes of tariff. In consideration of the said decisions, the exclusion of ₹1.37 lakh in 2010-11, (-)₹1.37 lakh in 2011-12 and ₹ 0.50 lakh in 2013-14 on account of inter-unit transfer is found to be in order and is allowed.

40. Accordingly, the summary of exclusions allowed and disallowed are as under:



	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Exclusions claimed (A)	550.24	5173.57	(-)883.62	696.83	2856.37
Exclusion allowed (B)	553.92	5271.13	(-)870.59	732.02	2867.99
Exclusions not allowed (A-B)	(-) 3.68	(-) 97.56	(-) 13.03	(-)35.19	(-)11.62

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

		(₹ in lakh)				
Sl.No		2009-10	2010-11	2011-12	2012-13	2013-14
1	Construction of boundary wall for NGO complex as per IB recommendation.	0.00	12.79	0.29	1.07	0.00
2	CISF Armoury	0.00	0.00	13.95	0.00	0.00
	Total (A)	0.00	12.79	14.24	1.07	0.00
New Claim under Regulation 9(2)(i)						
3	LY Pipe line ASAOTI, IOCL to Plant	0.00	0.00	25.83	0.00	0.00
Claim under Regulation 9(2)(ii)						
4	Construction of room for AAQMS Stations	0.00	0.00	1.14	1.37	0.00
5	CT Fan modification	0.00	0.00	0.00	0.00	0.00
6	AAQMS	0.00	0.00	0.00	0.00	11.79
Claim under Regulation 9(2)(vi)						
7	Borewell in CISF	0.00	0.00	0.00	0.00	0.00
8	Supply, installation & commissioning of fire detection system	0.00	0.00	0.00	0.00	0.00
9	Gas Turbine Lub oil Heat Exchanger	0.00	0.00	0.00	0.00	0.00
10	GT Generators Heat Exchanger	0.00	0.00	0.00	0.00	0.00
11	Carbon filter shaft for Stage-I Cooling tower	0.00	0.00	0.00	0.00	0.00
	Total (B)	0.00	0.00	26.97	1.37	11.79
	Grand Total (A+B) = C	0.00	12.79	41.21	2.44	11.79
	Exclusion not allowed (D)	3.68	97.56	13.03	35.19	11.62
	Net additional capitalization allowed (C-D)	(-) 3.68	(-) 84.77	28.18	(-) 32.75	0.17

42. The actual additional capital expenditure allowed after considering the discharges of liabilities is as under:

		(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14	
Additional Capital Expenditure allowed (excluding discharge of liabilities)	(-) 3.68	(-) 84.77	28.18	(-) 32.75	0.17	
Add: Discharges of liabilities (against allowed assets / works)	4255.49	14.70	360.66	9.89	14.20	
Net Additional Capital Expenditure allowed	4251.80	(-)70.07	388.85	(-) 22.86	14.38	



43. Based on the above, the capital cost allowed for 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	93781.42	98033.23	97963.15	98352.00	98329.14
Add: Additional Capital Expenditure	4251.80	(-)70.07	388.85	(-)22.86	14.38
Closing Capital Cost	98033.23	97963.15	98352.00	98329.14	98343.52
Average Capital Cost	95907.33	97998.19	98157.58	98340.57	98336.33

Debt–Equity

44. The gross loan and equity amounting to ₹50973.03 lakh and ₹48415.37 lakh respectively as on 31.3.2009 considered vide order dated 14.9.2012 in Petition No. 280/2009 has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities amounting ₹5154.31 lakh and Land de-capitalized for ₹452.66 lakh in 2008-09 and deducted from the capital cost as on 1.4.2009 has been adjusted in the debt-equity ratio of 70:30. As such the gross normative loan and equity as on 1.4.2009 is revised to ₹48029.26 lakh and ₹45752.16 lakh respectively. Further the additional expenditure approved above has been allocated in debt-equity ratio of 70:30.

Return on Equity

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

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

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

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

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.



(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.

46. Accordingly, return on equity has been worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	45752.16	47027.70	47006.68	47123.33	47116.48
Addition of equity due to additional capital expenditure	1275.54	(-) 21.02	116.65	(-) 6.86	4.31
Normative Equity - Closing	47027.70	47006.68	47123.33	47116.48	47120.79
Average Normative Equity	46389.93	47017.19	47065.01	47119.91	47118.63
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for respective years	33.990%	33.218%	32.445%	32.445%	33.990%
Rate of Return on Equity (Pre Tax)	23.481%	23.210%	22.944%	22.944%	23.481%
Return on Equity (Pre Tax)- (annualized)	10892.82	10912.69	10798.60	10811.19	11063.93

Interest on loan

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

- (a) The gross normative loan of ₹48029.26 lakh as on 1.4.2009 has been considered.
- (b) Cumulative repayment amounting to ₹25614.15 lakh as on 31.3.2009 as considered in order dated 14.9.2012 in Petition No.280/2009 has been considered as Cumulative repayment as on 1.4.2009. However, after taking in to account proportionate adjustment (duly taking into account the liability and debt position as on 1.4.2004 along with 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 ₹24293.74 lakh.
- (c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹23735.52 lakh.
- (d) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- (e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2009-14. Further proportionate adjustment has been made to the repayments corresponding to discharges and reversals of liabilities



considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(f) In line with the provisions of the above regulations, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2009 along with subsequent additions during the period 2009-14, if any. In case of loans carrying floating rate of interest, the rate of interest as provided by the petitioner has been considered for the purpose of tariff. However, in case of SBI Indore (T1,D1&D2), it is observed that petitioner has claimed additional interest of 0.05% towards upfront fees. This loan has been also allocated to Ramagundum-III and the petitioner has not claimed any upfront fee of 0.5% for the same. Thus, there is no consistency on the part of the petitioner in claiming such upfront fees in respect of other stations where the same loan has been allocated. Keeping in view, the inconsistency in the claim of the petitioner and in line with the decision of the Commission in other cases on this issue, the claim for upfront fee has not been considered for the purpose of computation of weighted average rate of interest.

48. Necessary calculations for interest on loan are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	48029.26	51005.52	50956.47	51228.66	51212.66
Cumulative repayment of loan upto previous year / period	24293.74	30106.02	34801.24	39667.96	42058.68
Net Loan Opening	23735.52	20899.50	16155.23	11560.71	9153.99
Addition due to Additional capitalisation	2976.26	(49.05)	272.19	(16.00)	10.06
Repayment of loan during the year	4633.50	4759.13	4784.79	2415.35	2416.42
Less: Repayment adjustment on account of de-capitalization	2.58	68.30	9.12	24.63	8.13
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	1181.36	4.39	91.04	0.00	41.60
Net Repayment	5812.28	4695.22	4866.72	2390.72	2449.88
Net Loan Closing	20899.50	16155.23	11560.71	9153.99	6714.17
Average Loan	22317.51	18527.37	13857.97	10357.35	7934.08
Weighted Average Rate of Interest on Loan	9.4064%	9.5116%	9.7000%	9.6579%	9.6377%
Interest on Loan	2099.28	1762.25	1344.23	1000.30	764.66

Depreciation

49. In terms of Regulation 17 of the 2009 Tariff Regulations, the Cumulative depreciation as on 31.3.2009, as considered in order dated 14.9.2012 in Petition No. 280/2009 is ₹35741.63 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 ₹33714.03 lakh. Further, the value of freehold land as considered as on 31.3.2009 is ₹8530.56 (after adjusting de-capitalized land of ₹452.66 lakh in 2008-09). Further, the cost of land amounting to ₹402.77 lakh has been de-capitalized during 2009-10. Therefore, the value of freehold land of ₹8127.79 lakh has been considered for calculating the depreciable value. The balance depreciable value, before providing depreciation for 2009-10 works out to ₹45106.31 lakh. The effective date of COD of the generating station is 28.3.2000. Depreciation has been calculated by applying the rate of 4.8312%, 4.8563% and 4.8746% for the years 2009-10, 2010-11 and 2011-12 respectively and the balance depreciable value has been spread over from 2012-13 onwards. The balance useful life as on 1.4.2009, vide order dated 14.9.2012 in Petition No. 280/2009 is 15.99 years and the same has been considered for the calculation of depreciation. Further, proportionate adjustment has been made in the cumulative depreciation corresponding to the discharge of liabilities considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009. Also, cumulative depreciation has been adjusted for de-capitalisation considered during the period 2009-14. Necessary calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	93781.42	98033.23	97963.15	98352.00	98329.14
Add: Additional Capital Expenditure	4251.80	(-)70.07	388.85	(-)22.86	14.38
Closing Capital Cost	98033.23	97963.15	98,352.00	98329.14	98343.52
Average Capital Cost	95907.33	97998.19	98,157.58	98340.57	98336.33
Rate of Depreciation	4.8312%	4.8563%	4.8746%	4.8746%	4.8746%
Depreciable value @ 90%	78820.34	80883.37	81,026.81	81191.51	81187.69
Balance depreciable value (ex-land) @90%	45106.31	40705.34	36132.91	31375.38	28972.83
Depreciation (annualized)	4633.50	4759.13	4784.79	2,415.35	2416.42
Cumulative depreciation at the end	38347.53	44937.15	49678.70	52,231.48	54631.28
Less: Cumulative depreciation adjustment on	(-)1832.47	(-)5.78	(-)141.63	0.00	(-)44.56



account of undischarged liabilities					
Less: Cumulative Depreciation reduction due to de-capitalization	1.97	49.02	4.20	16.61	5.39
Cumulative depreciation (at the end of the period)	40178.02	44893.91	49816.13	52214.87	54670.45

Normative Annual Plant Availability Factor

50. The Normative Annual Plant Availability Factor of 85% as considered in order dated 14.9.2012 has been considered for the purpose of tariff.

O&M Expenses

51. O&M expenses as considered in order dated 14.9.2012 in Petition No.280/2009 as stated below has been considered.

<i>(₹ in lakh)</i>					
2009-10	2010-11	2011-12	2012-13	2013-14	
6387.47	6754.32	7138.43	7548.44	7980.03	

Interest on Working Capital

Fuel Component

52. The fuel component in the working capital as considered in order dated 14.9.2012 is considered as under:

<i>(₹ in lakh)</i>					
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost for one month	4207.46	4207.46	4218.98	4207.46	4207.46
Liquid fuel stock (Naphtha) for 1/2 month	962.64	962.64	965.28	962.64	962.64

Maintenance Spares

53. The maintenance spares has been worked out and is allowed as under:

<i>(₹ in lakh)</i>					
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	1916.24	2026.30	2141.53	2264.53	2394.01

Receivables

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



	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges- 2 months	8414.91	8414.91	8437.97	8414.91	8414.91
Fixed Charges- 2 months	4419.77	4452.53	4435.56	4048.30	4128.27
Total	12834.68	12867.44	12873.52	12463.22	12543.19

O&M Expenses (1 month)

55. O & M expenses for 1 month as considered in order dated 14.9.2012 is considered as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	532.29	562.86	594.87	629.04	665.00

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost (APM & RLNG) – One month	4207.46	4207.46	4218.98	4207.46	4207.46
Liquid Fuel (Naphtha) – 1/2 month	962.64	962.64	965.28	962.64	962.64
Maintenance Spares	1916.24	2026.30	2141.53	2264.53	2394.01
O&M expenses – One month	532.29	562.86	594.87	629.04	665.00
Receivables – Two months	12834.68	12867.44	12873.52	12463.22	12543.19
Total Working Capital	20453.31	20626.70	20794.19	20526.89	20772.30
Rate of Interest	12.250%	12.250%	12.250%	12.250%	12.250%
Interest on Working Capital	2505.53	2526.77	2547.29	2514.54	2544.61

Annual Fixed Charges for 2009-14

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4633.50	4,759.13	4784.79	2415.35	2416.42
Interest on Loan	2099.28	1762.25	1344.23	1000.30	764.66
Return on Equity	10892.82	10912.69	10798.60	10811.19	11063.93
Interest on Working Capital	2505.53	2526.77	2547.29	2514.54	2544.61
O&M Expenses	6387.47	6754.32	7138.43	7548.44	7980.03
Total	26518.60	26715.16	26613.34	24289.82	24769.64

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



58. The Energy Charge Rate of 161.972 paisa/kWh as determined by order dated 14.9.2012 shall remain unchanged.

59. The difference in the annual fixed charges determined by order dated 14.9.2012 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

60. Petition Nos. 253/GT/2013 and 333/GT/2014 are disposed of in terms of the above.

-Sd/-
(A.S.Bakshi)
Member

-Sd/-
(Gireesh B. Pradhan)
Chairperson

