

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 335/GT/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K. Singhal, Member

Dr. M.K. Iyer, Member

Date of Hearing: 19.4.2016

Date of Order: 28.6.2016

In the matter of

Revision of tariff of Auraiya Gas Power Station (663.36 MW) for the period from 1.4.2009 to 31.3.2014 – Truing up of tariff determined by order dated 6.8.2013 in Petition No.28/GT2013

And

In the matter of

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

...Petitioner

Vs

1. Uttar Pradesh Power Corporation Ltd., Lucknow
2. Jaipur VidyutVitran Nigam Ltd., Jaipur
3. Ajmer VidyutVitran Nigam Ltd., Ajmer
4. Jodhpur VidyutVitran Nigam Ltd., Jodhpur
5. Tata Power Delhi Distribution Ltd., Delhi
6. BSES Rajdhani Power Ltd., New Delhi
7. BSES Yamuna Power Ltd., Delhi
8. Haryana Power Purchase Centre, Haryana
9. Punjab State Power Corporation Ltd, Patiala
10. Himachal Pradesh State Electricity Board, Shimla
11. Power Development Department (J&K), Government of J&K, Srinagar
12. Power Department, Union Territory of Chandigarh, Chandigarh
13. Uttaranchal Power Corporation Ltd., Dehradun

...Respondents

Parties present:

Shri Ajay Dua, NTPC
Shri Nishant Gupta, NTPC
Shri E. P. Rao, NTPC
Shri S.K. Jain, NTPC
Shri Bhupinder Kumar, NTPC
Shri Rajeev Choudhary, NTPC
Shri R.B. Sharma, Advocate, BRPL
Shri Rishabh Singh, Advocate, MPPMCL
Shri Manish Garg, UPPCL



ORDER

This petition has been filed by the petitioner, NTPC for revision of tariff of Auraiya Gas Power Station (663.36 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014 after truing up exercise in terms of 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 a capacity of 663.36 MW comprises of four Gas Turbine (GT) units of 111.19 MW each and two Steam Turbine (ST) units of 109.30 MW each. The date of Commercial operation of different units of the generating station is as under:

Unit-I (GT)	1.10.1990
Unit-II (GT)	1.10.1990
Unit-III (GT)	1.11.1990
Unit-IV (GT)	1.11.1990
Unit-V (ST)	1.11.1990
Unit-VI (ST) /Generating Station	1.12.1990

3. Petition No. 270/2009 was filed by the petitioner for determination of tariff in respect of the generating station for the period from 1.4.2009 to 31.3.2014 and the Commission by its order dated 23.5.2012 had determined the annual fixed charges for the generating station. Aggrieved by the said order, the petitioner filed Review Petition No.15/2012 on the issue of 'wrong consideration of balance life of 15.59 years as on 1.4.2009 instead of 6.57 years' and the Commission by its order dated 29.4.2013 disposed of the said review petition with the observation that the calculation of the balance useful life of the generating station based on the revised phasing of expenditure would be considered by the Commission at the time of disposal of the true-up Petition No.28/GT/2013.

4. Against the order dated 29.4.2013, the petitioner filed Appeal No. 146/2013 before the Appellate Tribunal for Electricity ('the Tribunal') on various issues such as:

(a) *Disallowance of capital expenditure towards renovation of GT Cooling towers amounting to Rs.24.00 Lakh during the year 2009-10;*

(b) *Disallowance of Capital Expenditure on installation of evaporative type of inlet air cooling system amounting to Rs.576.00 lakh during 2012-13;*

(c) *Disallowance of capital expenditure towards laying of rails in transformer yards amounting to Rs.60.00 lakh during 2011-12.*



(d) Disallowance of capital expenditure towards procurement of additional Excitation Transformer amounting to Rs.29.00 lakh during 2011-12;

(e) Disallowance of capital expenditure on procurement of one generator rotor each for Gas Turbine and Steam Turbine amounting to Rs.3241.00 lakh during 2013-14;

(f) Disallowance of capital expenditure on installation of on line wet washing system and on line compressor efficiency monitoring system for Rs.186 lakh in 09-10 & 10-11;

(g) Extension of the useful life of gas turbines of the Auraiya Station by 15 years after R&M instead of 10 years as provided under the Tariff Regulations, 2009

5. While so, by order dated 6.8.2013 in Petition No. 28/GT/2013, the Commission revised the tariff of the generating station based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11 and 2011-12 and the projected additional capital expenditure for the years 2012-13 and 2013-14, after truing-up exercise in terms of provisions of Regulations 6(1) of the 2009 Tariff Regulations. The capital cost and the annual fixed charges allowed for the said years by order dated 6.8.2013 is as under:

Capital Cost

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	74427.23	74292.38	74202.23	74095.09	74323.49
Additional Capital Expenditure Allowed	(-) 134.85	(-) 90.15	(-)107.15	228.40	0.00
Closing Capital cost	74292.38	74202.23	74095.09	74323.49	74323.49
Average Capital cost	74359.81	74247.31	74148.66	74209.29	74323.49

Annual Fixed Charges

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.33	23.36	37.87	76.45	130.32
Interest on Loan	86.79	88.11	89.25	92.94	92.16
Return on Equity	8712.85	8604.46	8499.05	8503.23	8511.09
Interest on Working Capital	4152.16	4188.80	4236.56	4271.85	4318.74
O&M Expenses	9817.73	10381.58	10971.97	11602.17	12265.53
Total	22788.86	23286.31	23834.70	24546.63	25317.85

6. Against the order dated 6.8.2013, the petitioner filed Appeal No. 250/2013 before the Tribunal on various aspect where the value of the capital assets duly commissioned and put to use have not been considered for tariff namely, (i) Energy Management System (₹10.84 lakh) (ii)Hydra Mobile Crane of 12T capacity (₹10.87 lakh) (iii)Refurbishment of Gas Turbine rotors (₹377.89 lakh) (iv)Up-gradation of Fire Fighting Communication System (₹48.91 lakh). However, the Tribunal vide



judgment dated 10.9.2015 dismissed the said appeal filed by the petitioner thereby confirming the order of the Commission dated 6.8.2013.

7. Thereafter, the Tribunal by judgment dated 7.12.2015 disposed of the said appeal (Appeal No. 146/2013) rejecting the grounds raised by the petitioner (as in para 4(a) to (f) above). However, the issue raised by the petitioner (as in para 4(g) above) was allowed by the Tribunal as under:

"23.8 Accordingly, as per the findings given in this Tribunal judgment in Appeal No.70 and 71 of 2012, this issue is decided in favour of the Appellant and the Impugned Order of the Central Commission is set aside to this extent. We decide to remand this matter back to the Central Commission with the direction to re-determine the useful life of the gas turbine plants as 25 years after extension of life by 10 years after completion of renovation and modernization works"

8. 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."

9. The petitioner presently seeks revision of the annual fixed charges based on the actual additional capital expenditure incurred on truing-up of the actual additional capital expenditure incurred for the years 2009-14 in accordance with Regulation 6 (1) of the 2009 Tariff Regulations.

10. In terms of the above, the petitioner vide its affidavit dated 26.2.2013 had filed this petition for revision of tariff of the generating station for the period 2009-14. Subsequently the revised claim for annual fixed charges as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.33	23.36	37.86	66.68	150.12
Interest on Loan	86.79	88.11	89.25	55.69	46.26
Return on Equity	8712.85	8604.46	8499.05	8500.56	8717.11
Interest on Working Capital	4152.17	4188.80	4236.56	4270.81	4322.49
O&M Expenses	9817.73	10381.58	10971.97	11602.17	12265.53
Total	22788.86	23286.31	23834.70	24495.92	25501.51

11. In compliance with the directions of the Commission, the petitioner has filed additional information with copy to the respondents. Reply has been filed by the respondents, UPPCL,



discoms of the State of Rajasthan (AVVNL, JVVNL & JoVVNL) and BRPL. The petitioner has filed its rejoinder to the said replies. Taking into consideration the submissions of the parties and the documents available on record, we proceed to revise the tariff of the generating station, on prudence check, as stated in the subsequent paragraphs.

Capital cost

12. 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."

13. The petitioner has claimed opening capital cost of ₹74427.24 lakh as on 1.4.2009 (after removal of un-discharged liabilities of ₹53.39 lakh). The Commission vide order dated 23.5.2012 in Petition No. 270/2009 and order dated 6.8.2013 in Petition No. 28/GT/2013 had considered the opening capital cost of ₹74427.23 lakh as on 1.4.2009. The difference of ₹0.01 lakh appears to be on account of rounding of errors. Accordingly, the admitted opening capital cost of ₹74427.23 lakh as on 1.4.2009 has been considered for revision of tariff in this petition.

Actual Additional Capital Expenditure

14. 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.”

15. The details of the actual/ projected additional capital expenditure allowed by the Commission in order dated 6.8.2013 in Petition No. 28/GT/2013 for the period 2009-14 are as under:



(₹ in lakh)

Sl. No.		2009-10	2010-11	2011-12	2012-13	2013-14
		(Actual)	(Actual)	(Actual)	(Projected)	(Projected)
1	Ambient Air Quality Monitoring System	2.17	0.00	0.00	0.00	0.00
2	Boring of tube well	0.00	71.84	11.82	0.00	0.00
3	Procurement of remaining DCP fire tender	0.00	0.00	0.00	23.55	0.00
4	DCP fire tender	0.00	27.24	10.39	0.00	0.00
5	Phasing out of Halon Fire Fighting system	0.00	0.00	0.00	204.85	0.00
6	Total additional capital expenditure	2.17	99.08	22.21	228.40	0.00
7	Total De-capitalization	(-) 7.48	(-)9.19	(-) 9.32	0.00	0.00
8	Additional capital expenditure allowed	(-) 5.31	89.89	12.89	228.40	0.00

16. The actual additional capital expenditure claimed by the petitioner for this generating station is detailed as under:

(₹ in lakh)

Sl. No.		2009-10	2010-11	2011-12	2012-13	2013-14
		(Actual)	(Actual)	(Actual)	(Actual)	(Actual)
1	Ambient Air Quality Monitoring System	2.17	0.00	0.00	0.00	11.84
2	boring of tube well	0.00	71.84	11.82	0.00	0.00
3	Procurement of remaining DCP fire tender	0.00	0.00	0.00	32.21	0.00
4	DCP fire tender	0.00	27.24	10.39	0.00	0.00
5	De-capitalization of fire tender	0.00	0.00	(-) 9.32	0.00	0.00
6	passing out of Halon Fire Fighting system	0.00	0.00	0.00	0.00	193.31
7	De-capitalization of Halon Fire Fighting system	0.00	0.00	0.00	0.00	(-) 74.16
8	De-capitalization of crane	(-) 7.48	0.00	0.00	0.00	0.00
9	De-capitalization of vehicles	0.00	(-) 9.19	0.00	0.00	0.00
10	Total additional capital expenditure claimed	2.17	99.08	22.21	32.21	205.16
11	Total de-capitalization	(-) 7.48	-9.19	(-) 9.32	0.00	(-) 74.16
	Net additional capital expenditure claimed (A)	(-) 5.31	89.89	12.89	32.21	130.99
	New Items Claimed					
12	Disturbance recorder for switch yard control room	0.00	0.00	0.00	21.16	0.00
13	Land compensation for High Court	0.00	0.00	0.00	0.00	0.00
14	Connection of effluent water pipe	0.00	0.00	0.00	24.08	(-) 0.10
15	SAP License (De-capitalization)	0.00	0.00	0.00	(-) 1.35	0.00
16	Gas Turbine Lube oil cooler	0.00	0.00	0.00	0.00	43.51
17	Supply & erection of 220 Volt and 50 V battery sets	0.00	0.00	0.00	0.00	22.50
18	De-capitalization of 220 Volt & 50 Volt battery sets	0.00	0.00	0.00	0.00	(-) 1.28
19	Boundary wall for Railway-siding	0.00	0.00	0.00	0.00	64.27



20	Chlorine leak detection system	0.00	0.00	0.00	0.00	40.36
21	CCTV system integration with existing system	0.00	0.00	0.00	0.00	39.08
22	DM water treatment plant - portable effluent analyser	0.00	0.00	0.00	2.04	0.00
23	Elevator	0.00	0.00	0.00	12.63	0.20
24	Civil work for passenger lift	0.00	0.00	0.00	47.33	0.00
	Total New items (B)				105.89	208.54

17. The Commission vide its order dated 6.8.2013 in Petition No. 28/GT/2013 had revised the tariff of the generating station for the years 2009-10, 2010-11 and 2011-12 after truing up of the additional capital expenditure based on actuals. Hence, the same has not been reopened. Accordingly in this order, only the additional capital expenditure for the period 2012-13 and 2013-14 has been considered for truing-up based on actuals.

18. The actual additional capital expenditure claimed for the period 2012-13 and 2013-14 as against the projected additional capital expenditure allowed vide order dated 6.8.2013 in Petition No 28/GT/2013 is detailed as under:

Sl. No		(₹ in lakh)			
		As allowed in order dated 6.8.2013		As claimed in the petition	
		2012-13 (Projected)	2013-14 (Projected)	2012-13 (Actual)	2013-14 (Actual)
1	Ambient Air Quality Monitoring System	0.00	0.00	0.00	11.84
2	Procurement of remaining DCP fire tender	23.55	0.00	32.21	0.00
3	Phasing out of Halon Fire Fighting system	241.00	0.00	0.00	193.31
4	De-capitalization of Halon Fire Fighting system	(-) 36.15	0.00	0.00	(-) 74.16
5	Phasing out of Halon Fire Fighting system (net basis) (3-4)	204.85	0.00	0.00	119.15
6	Net additional capital expenditure (A)	228.40	0.00	32.21	130.99
	New Items				
7	Disturbance recorder for switch yard control room	0.00	0.00	21.16	0.00
8	Land compensation as per High Court order	0.00	0.00	0.00	0.00
9	Connection of effluent water pipe	0.00	0.00	24.08	(-) 0.10
10	SAP License (De-capitalization)	0.00	0.00	(-) 1.35	0.00
11	Gas Turbine Lube oil cooler	0.00	0.00	0.00	43.51
12	Supply & erection of 220 Volt and 50 V battery sets	0.00	0.00	0.00	22.50
13	De-capitalization of 220 Volt & 50 Volt battery sets	0.00	0.00	0.00	(-) 1.28
14	Boundary wall for Railway-siding	0.00	0.00	0.00	64.27
15	Chlorine leak detection system	0.00	0.00	0.00	40.36
16	CCTV system integration with existing system	0.00	0.00	0.00	39.08



17	DM water treatment plant - portable effluent analyser	0.00	0.00	2.04	0.00
18	Elevator	0.00	0.00	12.63	0.20
19	Civil work for passenger lift	0.00	0.00	47.33	0.00
	Total New items (B)	0.00	0.00	105.89	208.54
	Total Additional Capital expenditure claimed (A+B)	228.40	0.00	138.10	339.53

Ambient Air Quality Monitoring System (AAQMS)

19. The petitioner has claimed actual additional capital expenditure of ₹11.84 lakh in 2013-14 and has submitted that this item is due to annual maintenance contract for maintaining the existing AAQMS system. The respondents, UPPCL and BRPL have submitted that the expenditure is in the nature of O&M expenses and may be disallowed. The respondents, discoms of the State of Rajasthan have submitted that the additional capital expenditure claimed shall be scrutinized and only justified expenses may be allowed in terms of the provisions of Regulation 9(2) of the 2009 Tariff Regulations.

20. In response, the petitioner in its rejoinder has clarified that the expenditure for ₹11.84 lakh in 2013-14 under AAQMS is for procurement of Ozone Analyser and not for annual maintenance contract as inadvertently mentioned in the petition. Accordingly, the petitioner has prayed that the error may be ignored and correction may be allowed. It has further submitted that since the expenditure is of capital nature and is part of scheme of AAQMS allowed already, the same may be allowed.

21. The Commission had directed the petitioner to furnish the asset-wise / year-wise variation in the actual additional capital expenditure claimed as against the expenditure allowed vide order dated 6.8.2013 in Petition No. 28/GT/2013. In response, the petitioner vide affidavit dated 6.1.2016 has clarified that the variation is on account of procurement and commissioning of Ozone Analyser in the existing AAQMS is in compliance of statutory requirement and not for Annual Maintenance Contract as inadvertently mentioned in the petition. In support of this, the petitioner has also enclosed the copy of the Notification dated 18.11.2009 issued by the Uttar Pradesh Pollution Control Board. The matter has been examined. It is noticed that the expenditure on account of AAQMS had been allowed for ₹2.17 lakh in 2009-10 on the ground that the same is in compliance



with the directions of the Pollution Control Board. Since this expenditure is for installation of Ozone Analyser in the existing AAQMS, as a statutory requirement, the actual additional capital expenditure for ₹11.84 lakh in 2013-14 on this item is allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

Procurement of remaining DCP fire tender

22. The petitioner has claimed actual additional capital expenditure of ₹32.21 lakh on cash basis (excluding un-discharged liability of ₹2.30 lakh) in 2012-13 as against the projected additional capital expenditure of ₹23.55 lakh (on net basis) allowed vide order dated 6.8.2013 in first truing up Petition No. 28/GT/2013 for procurement of remaining DCP fire tender in 2012-13. The respondent, BRPL has submitted that the claim of the petitioner may be restricted to the additional capital expenditure of ₹23.55 lakh already admitted by the Commission.

23. In response to the directions of the Commission, the petitioner vide affidavit dated 6.1.2016 has submitted that the expenditure for ₹23.55 lakh admitted by the Commission was on estimated basis and the actual capitalization of ₹32.21 lakh is based on price derived through competitive bidding. It has further stated the estimation was lower than the cost finally incurred following the award process. Accordingly, it has submitted that the expenditure is of capital nature and being part of the already allowed items, the claim may be allowed.

24. We have examined the matter. It is observed that the petitioner vide affidavit dated 8.6.2010 had furnished the estimated de-capitalization of 12.79% towards replacement cost. However, the Commission in the order dated 23.5.2012 in Petition No. 270/2009 while had observed that estimated value of the original component is about 15% of the value of new component based on de-capitalization value of GT components on which R&M has been carried out. As considered in order dated 6.8.2013 Petition No. 28/GT/2013, the net actual additional capital expenditure of ₹27.38 lakh (₹32.21 lakh with the corresponding estimated de-capitalization of ₹4.83 lakh) i.e. on net basis ₹27.38 (32.21- 4.83) is allowed under Regulation 9(2)(vi) of the 2009 Tariff Regulations.



Phasing out of Halon firefighting system

25. The petitioner has claimed actual additional capital expenditure of ₹193.31 lakh on cash basis in 2013-14 as against the projected additional capital expenditure of ₹204.85 lakh (₹241.00 lakh with corresponding de-capitalization of ₹36.15 lakh) allowed by order dated 6.8.2013 in Petition No. 28/GT/2013 in 2012-13 for Phasing out of Halon firefighting system.

26. In response to the directions of the Commission, the petitioner vide affidavit dated 6.1.2016, has submitted that against the actual additional capital expenditure of ₹241.00 lakh allowed vide order dated 6.8.2013, the actual additional capital expenditure of ₹237.00 lakh has been incurred. It has submitted that the present claim of ₹193.31 lakh is on cash basis and the balance is on account of un-discharged liability, which will be claimed as and when discharged as per applicable tariff regulations. Accordingly, it has submitted that the expenditure is of capital nature and being part of the already allowed items, the claim may be allowed. It is observed that the gross value of the old asset as furnished by the petitioner is ₹74.16 lakh. Accordingly, on net basis, the actual additional capital expenditure of ₹119.15 lakh (₹193.31 lakh with corresponding de-capitalization of ₹74.16 lakh) in 2013-14 has been allowed under the Regulation 9(2)(ii) of the 2009 Tariff Regulations.

New Items

Disturbance Recorders

27. The petitioner has claimed actual additional capital expenditure of ₹21.16 lakh in 2012-13 towards Disturbance Recorders (DRs) for Switchyard control room. In justification of the same, the petitioner has furnished that old DRs were more than 20 years old and became obsolete. It has also stated that they were defective and not available due to ageing and obsolescence. It has further submitted that new DRs were required for quick fault diagnosis and finding of root cause of line & system fault. The petitioner has further submitted that as the lines availability is utmost required for grid and plant electrical system healthiness & enhances system reliability. It has stated that healthy DRs are required for quick restoration of line after any fault.

28. The respondent, BRPL in its reply dated 12.4.2016 has submitted that the expenditure incurred is not related to renovation of Gas Turbines. It has also stated that the said asset which



could not be conceived by the petitioner under the projected capital expenditure during 2012-13 in Petition No. 28/GT/2013, is an afterthought and the said item is not allowable after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations.

29. In response to the directions of the Commission vide ROP of the hearing dated 19.4.2016 to furnish the gross block of old DRs for switchyard control room along with the year of put to use and the depreciation recovered, the petitioner vide affidavit dated 20.5.2016 has furnished that the old DRs were commissioned in switchyard control room in the year 1991 and the technical estimated cost of ₹4.00 lakh instead of gross block of old Disturbance Recorders and the depreciation recovered upto the year 2012-13 is ₹3.60 lakh. We have examined the matter. Considering the fact that the item had become obsolete and defective and not available due to ageing, the actual additional capital expenditure of ₹17.16 lakh (₹21.16 lakh with corresponding estimated de-capitalization of ₹4.00 lakh) for successful and efficient operation of the generating station is allowed under Regulation 9(2)(vi) of the 2009 Tariff Regulations.

Land Compensation

30. The petitioner has claimed actual additional capital expenditure of ₹22.52 lakh in 2012-13 for compliance with the judgment of the High Court of Allahabad. In justification of the same, the petitioner has submitted that it has kept provision in the form of un-discharged liability in 2012-13 and has prayed that the same may be allowed. In view of this, the said amount is treated as un-discharged liability and the same will be considered as and when discharged by way of payment, in terms of the prevalent regulations.

Connection of Effluent water pipe

31. The petitioner has claimed expenditure of ₹24.08 lakh (excluding un-discharged liability of ₹4.92 lakh) in 2012-13 and (-)₹0.10 lakh in 2013-14 on the ground that the said work is required for discharge effluent and waste water from plant to main drain to meet environment statutory requirements.



32. The respondent, UPPCL has submitted that safe discharge of water and effluent is not a new phenomenon and has requested that the petitioner may justify as to what has been the change in environmental laws for which the asset is required to be constructed. The respondent, BRPL as submitted that the petitioner has not submitted any document indicating the claim falls within the definition of Change in Law and therefore the said claim is an afterthought. The petitioner in its rejoinder has submitted that the amount claimed is in compliance with the direction of the State Pollution Control Board under Section 33 A of the Water (Prevention and Control of Pollution) Act, 1974 for prevention, control or abatement of pollution of streams and wells and Air pollution in the State. The petitioner has submitted that the expenditure incurred and claimed is to fulfill the statutory requirement and hence the submission of the respondent may be rejected.

33. The matter has been examined. It is observed that the petitioner has incurred the said expenditure towards connection of effluent water pipe with the main drain in compliance with the direction of State Pollution Control Board under Section 33 A of the Water (Prevention and Control of Pollution) Act, 1974 vide letter dated 14.3.2012. Since the expenditure incurred by the petitioner is in compliance with the statutory requirement, we are inclined to allow the said expenditure under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

SAP License (De-capitalization)

34. The petitioner has de-capitalized an amount of (-)₹1.35 lakh in 2013-14 towards final bill settlement for SAP license in 2012-13. This has been allowed.

Gas Turbine Lube oil cooler

35. The petitioner has claimed actual capital expenditure of ₹43.51 lakh for Gas Turbine lube oil cooler in 2013-14 and has submitted that the existing Lube oil coolers were in service since last 15 years and cooling effectiveness of coolers deteriorated and leakages were also observed, resulting in high bearing temperature. It has also submitted that continuous running of machine at high temperature may cause failure of bearing and it is necessary to change the coolers for efficient and successful operation of the machine. Accordingly, the petitioner has prayed that the amount claimed may be allowed under Regulation 9(2)(vi) of the 2009 Tariff Regulations. The respondent,



BRPL has submitted that this item is not allowable after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations.

36. The matter has been examined. It is evident from the submissions of the petitioner that the additional capital expenditure incurred on the said item / work 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. It is noticed that the petitioner had claimed additional capital expenditure in respect of the same item in Petition No. 253/GT/2013 & 333/GT/2014 (revision of tariff of Faridabad GPS for 2009-14 after true-up exercise) and the Commission vide its order dated 18.9.2015 had disallowed the capitalization of this item observing as under:

“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”

In line with the above said decision, the claim of the petitioner for actual additional capital expenditure in respect of the above item is not allowed.

Supply & Erection of 220 V & 50 V battery sets

37. The petitioner has claimed actual additional capital expenditure of ₹22.50 lakh for this item in 2013-14 under Regulation 9(2)(vi) of the 2009 Tariff Regulations and has submitted that old batteries were more than 15 years and their capacity has gone down below 80% and hence as per OS guidelines these batteries were replaced with new one. It has further submitted that these are essential to maintain emergency DC system for safety & security of the plant. The respondent, BRPL has submitted that this item is not allowable after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations.

38. The matter has been considered. Considering the fact that the 220 V & 50 V battery sets, which have outlived their useful life of more than 15 years were required to be replaced as per OS guidelines, the additional capitalization of ₹21.22 (₹22.50 lakh with the corresponding de-



capitalization value of (-) ₹1.28 lakh) in 2012-13 is allowed under Regulation 9(2)(vi) of the 2009 Tariff Regulations, 2014.

Boundary Wall Railway siding

39. The petitioner has claimed actual additional capital expenditure of ₹64.27 lakh for boundary wall Railway siding in 2013-14 under Regulation 9(2)(vi) of the 2009 Tariff Regulations. In justification of the same, the petitioner has submitted that to safeguard the public property from illegal encroachment and security & safety of the plant, boundary wall for Railway siding was necessary. It has further submitted that the expenditure is necessary in view of the safety & security of the plant.

40. The respondents, UPPCL and BRPL have submitted that this expenditure is not on account of renovation of GT or necessary due to obsolescence or non-availability of spares and may not be allowed. The respondent, BRPL has further submitted that this item is not allowable after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations. In response, the petitioner in its rejoinder has clarified that the expenditure incurred is due to recommendations of statutory security agency in regard to safeguarding the property of the generating station from illegal encroachment and safety and security of the plant. It has further submitted that in view of the threat perception as indicated by the various agencies and to ensure efficient & successful operation of the generating station, the expenditure was necessary and the same may be allowed under Regulation 9(2)(vi) read with Regulation 9(2)(ii) [Change in law] of the 2009 Tariff Regulations.

41. The Commission vide ROP of the hearing dated 19.4.2016 had directed the petitioner to furnish documentary evidence in support of its claim for the said expenditure on this count under Regulation 9(2)(ii). In response, the petitioner vide affidavit dated 20.5.2016 has submitted that actual capital expenditure has been incurred to fulfill the requirement of statutory recommendation of Ministry of Home Affairs, Govt. of India vide letter dated 26.4.2013 and has also submitted the confidential report separately in sealed envelope.



42. The matter has been considered. Taking into consideration the safety & security of the generating station and since the expenditure has been incurred based on the recommendations of the security agency, we allow the actual additional capital expenditure of ₹64.27 lakh under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

Chlorine Leak absorption system

43. The petitioner has claimed actual additional capital expenditure of ₹40.36 lakh in 2013-14 for Chlorine leak absorption system under Regulation 9(2)(vi) of the 2009 Tariff Regulations. In justification of the same, the petitioner has submitted that in case of chlorine leakage during process at circulating water chlorination & pre-treatment chlorination area in the plant, it may affect the life of person and nearby residential area of generating station. It has further submitted that in view of the safety of person and nearby residential area of plant, chlorine leak absorption system is essential for efficient and successful operation of the generating station. The respondent, UPPCL has submitted that this expenditure is not on account of renovation of GT or necessary due to obsolescence or non-availability of spares and hence may not be allowed. In response, the petitioner in its rejoinder has reiterated the submissions made in the petition.

44. The matter has been considered. It is evident from the submissions of the petitioner that the additional capital expenditure incurred on the said item / work 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 item / work is not allowed.

CCTV system integration with existing system

45. The petitioner has claimed actual additional capital expenditure of ₹39.08 lakh in 2013-14 for CCTV system integration with existing system. In justification of the same, the petitioner has submitted that CCTV has been put to enhance on-line surveillance and for monitoring the safety & security and hence necessary for efficient & successful of the plant.



46. The respondents, UPPCL and BRPL have submitted that this expenditure is not on account of renovation of GT or necessary due to obsolescence of or non-availability of spares and hence may not be allowed. The respondent, BRPL has further submitted that this item is not allowable after the cut-off date under Regulation 9(2) of the 2009 Tariff Regulations. In response, the petitioner in its rejoinder has clarified that the expenditure incurred is due to recommendations of statutory security agency in regard to safeguarding the property of the generating station from illegal encroachment and safety and security of the plant. It has further submitted that in view of the threat perception as indicated by the various agencies and to ensure efficient & successful operation of the generating station, the expenditure was necessary and the same may be allowed under Regulation 9(2)(vi) read with Regulation 9(2)(ii) [Change in law] of the 2009 Tariff Regulations.

47. The Commission vide ROP of the hearing dated 19.4.2016 had directed the petitioner to furnish documentary evidence in support of its claim for the said expenditure on this count under Regulation 9(2)(ii). In response, the petitioner vide affidavit dated 20.5.2016 has submitted that actual capital expenditure has been incurred to fulfill the requirement of statutory recommendation of Ministry of Home Affairs, Govt. of India vide letter dated 26.4.2013 and has also submitted the confidential report separately in sealed envelope.

48. The matter has been considered. Taking into consideration the safety & security of the generating station and since the expenditure has been incurred based on the recommendations of the security agency, we allow the actual additional capital expenditure of Rs. 39.08 lakh under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

Portable effluent analyzer - DM water treatment plant

49. The petitioner has claimed actual additional capital expenditure of ₹2.04 lakh in 2012-13 under Regulation 9(2)(vi) of the 2009 Tariff Regulations. In justification of the same, the petitioner has submitted that the said item is required to measure the pollutant level in waste water before discharge under permitted level of pollutant. The respondent, UPPCL has submitted that this expenditure is not on account of renovation of GT or necessary due to obsolescence or non-



availability of spares and hence may not be allowed. In response, the petitioner has clarified that Portable Effluent Analyzer is essential to measure the pollutant level in waste water before discharge under permitted level of pollutant and is in compliance with the State Pollution Control Board under section 33A of the Water (Prevention and Control of Pollution) Act, 1974. Accordingly, it has prayed that the expenditure may be allowed under Regulation 9(2)(vi) read with Regulation 9(2)(ii) [Change in law] of the 2009 Tariff Regulations.

50. The matter has been considered. Considering the fact that there is no provision under Regulation 9(2) of the 2009 Tariff Regulations for capitalization of such expenditure after the cut-off date of the generating station and since the expenditure is minor in nature, the capitalization of the same is not allowed.

Elevator (lift), Civil work for passenger elevator

51. The petitioner has claimed total additional capital expenditure of ₹12.84 lakh during the period 2012-14 (₹12.63 lakh in 2012-13 and ₹0.20 lakh in 2013-14) towards Elevator (Lift) and actual additional capital expenditure of ₹47.33 lakh in 2012.13 for Civil work for passenger elevator under Regulation 9(2)(vi) of the 2009 Tariff Regulations. In justification of the same, the petitioner has submitted that initially there was no lift for control room and to meet the exigencies of operation of the generating station, it is necessary for efficient & successful operation of the plant. The respondent, UPPCL has submitted that this expenditure is not on account of renovation of GT or necessary due to obsolescence or non-availability of spares and hence may not be allowed. The petitioner in its rejoinder has clarified that there was no lift in the control room and it was a cause of immense inconvenience and hardship to physically challenged employees as well as pregnant female employees. Accordingly it has submitted that to meet the exigencies of operation of the generating station, it is necessary for efficient & successful operation of the plant.

52. The matter has been considered. Considering the fact that the need for elevator (lift) was felt by the petitioner after more than 15 years of operation of the plant and since there is no provision under Regulation 9(2) of the 2009 Tariff Regulations for capitalization of such expenditure after the cut-off date of the generating station, the capitalization of the same is not allowed.



Reconciliation of the actual capital expenditure for the years 2012-13 and 2013-14

53. The reconciliation statement of the actual additional capital expenditure for the period 2012-13 to 2013-14 with the books of accounts submitted by the petitioner vide affidavit dated 30.9.2014 is detailed as under:

Sl. No.		(₹ in lakh)	
		2012-13 (actual)	2013-14 (actual)
1	Opening gross block as per audited balance sheet as on 1 st April of the year	91817.96	92544.04
2	Less: Asset held for disposal	1.78	0.00
3	Opening gross block as per audited balance sheet as on 1 st April of the year (A)	91816.18	92544.04
4	Closing Gross Block as per audited balance sheet as on 31 st March of year (B)	92544.04	93793.18
5	Addition during the year as per books of accounts C=(B-A)	727.86	1249.14
6	Exclusions (D)	553.83	842.09
7	Additional capital expenditure including liabilities	174.03	407.05
8	Less: Un-discharged liabilities (E)	35.92	67.51
9	Net additional capital expenditure claimed on cash basis (C-D-E)	138.11	339.54

54. It is noticed from the above that the actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts. This is on account of exclusion of certain expenditure and un-discharged liabilities considered for the purpose of tariff. We now examine the exclusions as under:

Exclusions

55. The summary of exclusions from the books of accounts claimed for the years 2012-13 and 2013-14 under different heads for the purpose of tariff are examined as detailed under:

Sl. No	Year / Description	Gross Block		Liability		Net additional capital expenditure	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
A	Items disallowed by Commission						
1	Additional Generator Excitation Transformer	28.59	1.25	3.63	-	24.96	1.25
2	Refurbishment of rotor	0.28	0.00	-	-	0.28	0.00
3	Renovation of GT cooling tower	5.88	0.00	-	0.00	5.88	0.00
4	Laying of rails in Transformer yard	144.81	0.00	7.09	-	137.72	0.00
5	Infrared thermograph camera	(-)0.04	4.33	-	--	(-)0.04	4.33
	Total (A)	179.52	5.58	10.72	-	168.80	5.58



B	Miscellaneous						
6	Capitalization of spares	2525.55	879.96	1.28	28.61	2524.27	851.35
7	Capitalisation of MBOA items	107.79	72.56	9.13	15.60	98.66	56.96
8	Inter-Unit transfer	0.01	0.58	-	-	0.01	0.58
9	De-capitalisation of spares not part of capital cost	(-)2198.33	(-)68.91	-	-	(-)2198.33	(-)68.91
10	De-capitalisation of spares part of capital cost	(-)24.50	0.00	-	-	(-)24.50	0.00
11	De-capitalisation of MBOA items part of capital cost	(-)6.64	(-)8.75	-	-	(-)6.64	(-)8.75
12	De-capitalisation of MBOA items not part of capital cost	(-) 29.56	(-)38.94	-	-	(-)29.56	(-)38.94
13	Total (B)	374.32	836.50	10.41	44.21	363.91	792.29
	Total Exclusion claimed (A+B)	553.84	842.08	21.13	44.21	532.71	797.87

Items disallowed by Commission

56. The petitioner has excluded of ₹29.84 lakh [₹28.59 lakh (including liability of ₹3.63 lakh)] in 2012-13 and ₹1.25 lakh in 2013-14] for Additional Generator Excitation Transformer, ₹0.28 lakh for Refurbishment of rotor in 2012-13, ₹5.88 lakh for Renovation of GT Cooling tower in 2012-13, ₹144.81 lakh (including liability of ₹7.09 lakh) for Laying of rails in Transformer yard in 2012-13 and (de-capitalization of ₹0.04 lakh in 2012-13 and exclusion of ₹4.33 lakh in 2013-14) for Infrared thermograph camera respectively. Since these items were not allowed in tariff and thus do not form part of the capital cost of the generating station, the exclusion is in order and has been allowed.

Capitalization of Capital Spares

57. The petitioner has capitalized capital spares in books of accounts amounting to ₹2525.55 lakh (including liability of ₹1.28 lakh) in 2012-13 and ₹879.96 lakh (including liability of ₹28.61 lakh) in 2013-14. Since capitalization of capital spares over and above the initial spares procured after cut-off date of the generating station is not allowed for the purpose of tariff, the exclusion sought is in order and has been allowed.

Capitalization of MBOA items

58. The petitioner has capitalized MBOA items in books of accounts amounting to ₹101.79 lakh (including liabilities of ₹9.13 lakh) in 2012-13 and ₹72.56 lakh (including liabilities of ₹15.60 lakh) in



2013-14. Since capitalization of MBOA items after the cut-off date of the generating station is not allowed for the purpose of tariff, the exclusion sought is in order and has been allowed.

Inter-Unit Transfers

59. The petitioner has excluded amounts of ₹0.01 lakh in 2012-13 and ₹0.58 lakh in 2013-14 on account of Inter-unit transfer of MBOA items such as Furniture & fixtures, Office Equipment, EDP, WP machine and SATCOM etc. The Commission while dealing with the applications for additional capitalization in respect of other generating stations of the petitioner for 2009-14 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 line with the said decision, the exclusion of ₹0.01 lakh in 2012-13 and ₹0.58 lakh in 2013-14 on account of inter-unit transfer is in order and has been allowed.

De-Capitalization of Capital Spares - Part of capital cost

60. The petitioner has de-capitalized capital spares in books of accounts amounting to (-) ₹24.50 lakh in 2012-13 on these spares becoming unserviceable. Since these spares were allowed in tariff and hence form part of the capital cost of the generating station, their de-capitalization has not been allowed under exclusion.

De-Capitalization of Capital spares - Not part of capital cost

61. The petitioner has de-capitalized capital spares in books of accounts amounting to (-) ₹2198.33 lakh in 2012-13 and ₹68.91 lakh in 2013-14 on these spares becoming unserviceable. Since these spares were not allowed in tariff and do not form part of the capital cost of the generating station, their de-capitalization is allowed under exclusions.

De-Capitalization of MBOA Items - Part of capital cost

62. The petitioner has de-capitalized in books of accounts MBOA items amounting to (-) ₹6.64 lakh in 2012-13 and (-) ₹8.75 lakh in 2013-14 on account of these MBOA items becoming unserviceable. As de-capitalization of MBOA items amounting to (-) ₹6.64 lakh in 2012-13 and (-) ₹8.75 lakh in 2013-14 were allowed in tariff and thereby form part of the capital cost, their exclusion has not been allowed.



De-Capitalization of MBOA Items - Not part of capital cost

63. The petitioner has de-capitalized in books of accounts MBOA amounting to (-) ₹29.56 lakh in 2012-13 and (-) ₹38.94 lakh in 2013-14 on these MBOA items becoming unserviceable. As de-capitalization of MBOA items amounting to (-) ₹29.56 lakh in 2012-13 and (-) ₹38.94 lakh 2013-14 which were not allowed in tariff and thereby do not form part of the capital cost their exclusion has been allowed under exclusion.

64. The details of exclusions claimed vis-à-vis allowed on cash basis is as per table given below:

	(₹ in lakh)	
	2012-13	2013-14
Exclusions Claimed (A)	553.84	842.08
Exclusions Allowed (B)	584.98	850.83
Exclusions not allowed (A-B)	(-)31.14	(-)8.75

65. Based on the above discussions, the actual additional capital expenditure for the year 2012-13 and 2013-14 allowed is detailed as under:

Sl. No.		(₹ in lakh)	
		2012-13 (Actual)	2013-14 (Actual)
1	Ambient Air Quality Monitoring System	0.00	11.84
2	Procurement of remaining DCP fire tender	32.21	0.00
3	De-capitalisation on 2 above	(-)4.83	0.00
4	Net additional capital expenditure allowed for DCP fire tender	27.38	0.00
5	Phasing out of Halon Fire Fighting system	0.00	193.31
6	De-capitalisation on 5 above	0.00	(-)74.16
7	Net Additional capital expenditure allowed for Halon fire fighting system	0.00	119.15
8	Total additional capital expenditure allowed A=(1+4+7)	27.38	130.99
New Items Claimed			
9	Disturbance recorder for switch yard control room	21.16	0.00
10	De-capitalization on 9 above	(-)4.00	0.00
11	Net Additional capital expenditure allowed (9-10)	17.16	0.00
12	Connection of effluent water pipe	24.08	(-)0.10
13	SAP License (De-capitalization)	(-)1.35	0.00
14	Gas Turbine Lube oil cooler	0.00	0.00
15	Supply & erection of 220 Volt and 50 V battery sets	0.00	22.50
16	De-capitalisation of 220 Volt & 50 Volt battery sets	0.00	(-)1.28
17	Boundary wall for Railway-siding	0.00	64.27
18	Chlorine leak detection system	0.00	0.00
19	CCTV system integration with existing system	0.00	39.08
20	DM water treatment plant - Portable effluent analyzer	0.00	0.00
21	Elevator	0.00	0.00
22	Civil work for passenger lift	0.00	0.00
	Total New Items (B) = (11 to 22)	39.89	124.47



Total Additional capital expenditure allowed A+B)	67.27	255.46
Exclusions not allowed (c)	(-)31.14	(-)8.75
Net Additional capital expenditure allowed (A+B+C)	36.13	246.71

66. Based on the above, the actual additional capital expenditure allowed (excluding liabilities) for the period 2009-14 is summarized as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure (excluding discharges)	(-)162.43	(-)101.90	(-)111.49	36.12	246.72

67. Considering the discharge of liabilities during the period 2009-14, the net additional capital expenditure allowed for the generating station is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure (excluding discharges)	(-)162.43	(-)101.90	(-)111.49	36.12	246.72
Add: Discharges of liabilities (against allowed assets/ works)	27.58	11.75	4.34	12.94	4.92
Net Additional capital expenditure	(-)134.85	(-)90.15	(-)107.15	49.06	251.64

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	74427.23	74,292.38	74202.23	74095.09	74144.15
Add: Additional capital expenditure	(-) 134.85	(-) 90.15	(-) 107.15	49.06	251.64
Closing Capital Cost	74292.38	74202.23	74095.09	74144.15	74395.79
Average Capital Cost	74359.81	74247.31	74148.66	74119.62	74269.97

Debt-Equity Ratio

69. In terms of the provisions of Regulation 12 of the 2009 Tariff Regulations, gross loan and equity amounting to ₹37337.13 lakh and ₹37143.49 lakh respectively, as approved on 31.3.2009 vide order dated 23.5.2012 in Petition No. 270/2009 has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities amounting ₹53.39 lakh deducted from the capital cost as on 1.4.2009 has been adjusted to debt and equity 50:50 for assets/works capitalized prior to 2004. As such the gross normative loan and equity as on 1.4.2009 is revised to ₹37301.06 lakh and



₹37126.17 lakh respectively, each. Further, the admitted additional capital expenditure has been allocated in debt-equity ratio of 70:30..

Return on Equity

70. 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 as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	37126.17	37085.72	37058.67	37026.53	37041.25
Addition of Equity due to additional capital expenditure	(-) 40.45	(-) 27.04	(-) 32.14	14.72	75.49
Normative Equity - Closing	37085.72	37058.67	37026.53	37041.25	37116.74
Average Normative Equity	37105.94	37072.19	37042.60	37033.89	37078.99
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)	8712.85	8604.46	8499.05	8497.05	8706.52

Interest on loan

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

- i) The gross normative loan amounting to ₹37301.06 lakh has been considered as on 1.4.2009.
- ii) Cumulative repayment amounting to ₹36219.42 lakh as on 31.3.2009 as considered in order dated 23.5.2012 in Petition No. 270/2009 has been considered as cumulative repayment as on 1.4.2009.
- iii) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹1081.64 lakh.
- iv) 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.

72. The necessary calculations for interest on loan are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	37301.06	3,206.67	37143.56	37068.56	37102.90
Cumulative repayment of loan upto previous year / period	36219.42	36140.07	36029.18	35973.90	36006.57
Net Loan Opening	1081.64	1066.59	1114.38	1094.66	1096.34
Addition due to additional capital expenditure	(-) 94.39	(-) 63.10	(-) 75.00	34.34	176.15
Repayment of loan during the year	19.33	23.36	37.87	53.84	116.01



Less: Repayment adjustment on account of de-capitalization	115.21	140.68	93.59	28.93	59.01
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	16.53	6.43	0.45	7.76	0.00
Net Repayment	(-) 79.35	(-) 110.89	(-) 55.28	32.67	57.01
Net Loan closing	1066.59	1114.38	1094.66	1096.34	1215.48
Average Loan	1074.12	1090.49	1104.52	1095.50	1155.91
Weighted Average Rate of Interest on Loan	8.0800%	8.0800%	8.0800%	5.0134%	3.8548%
Interest on Loan	86.79	88.11	89.25	54.92	44.56

Depreciation

73. In terms of Regulation 17 of the 2009 Tariff Regulations, cumulative depreciation as on 1.4.2009 as per order dated 23.5.2012 in Petition No. 270/2009 works out to ₹65957.35 lakh. Further, the value of freehold land considered in said order as on 31.3.2009 is ₹932.76 lakh and the same has been considered for the purpose of calculating depreciable value. As stated, the petitioner has claimed ₹22.52 lakh towards Land compensation in terms of the directions of the Hon'ble High Court of Allahabad and submitted that it has kept provision in the form of un-discharged liability of ₹22.52 lakh in 2012-13. In view of this, the amount has been treated as un-discharged liability and shall be considered as and when the same is discharged by way of payment.

74. The balance useful life of generating station as considered in said order as on 1.4.2009 is 6.57 years and the same has been considered for calculation of depreciation. Also, cumulative depreciation has been adjusted for de-capitalisations, if any, considered during the period 2009-14.

Necessary calculations in support of depreciation are as shown below:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	74,427.23	74,292.38	74,202.23	74,095.09	74,144.15
Add: Additional capital expenditure	(134.85)	(90.15)	(107.15)	49.06	251.64
Closing Capital Cost	74,292.38	74,202.23	74,095.09	74,144.15	74,395.79
Average Capital Cost	74,359.81	74,247.31	74,148.66	74,119.62	74,269.97
Depreciable value (ex.-land) @ 90%	66,084.34	65,983.10	65,894.31	65,868.18	66,003.49
Balance Useful life of the asset	6.57	5.57	4.57	3.57	2.57
Balance depreciable value	126.99	130.10	173.02	192.14	298.05
Depreciation (annualized)	19.33	23.36	37.87	53.84	116.01
Cumulative depreciation at the end	65,976.68	65,876.35	65,759.16	65,729.87	65,821.45
Cumulative depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009	(-) 24.44	(-) 10.41	(-) 0.81	(-) 11.47	0.00
Less: Cumulative depreciation	148.13	165.48	83.94	35.89	75.12



reduction due to decapitalization					
Cumulative depreciation (at the end of the period)	65852.99	65721.29	65676.03	65705.44	65746.33

O & M Expenses

75. O&M expenses as considered in the order dated 6.8.2013 in Petition No. 28/GT/2013 as given below have been considered

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
9817.73	10381.58	10971.97	11602.17	12265.53

Normative Annual Plant Availability Factor (NAPAF)

76. The NAPAF of the generating station as considered as 85% for the period 2009-2014 in order dated 6.8.2013 in Petition No.28/GT/2013 has been considered.

Interest on Working Capital

77. The fuel cost for one month and liquid fuel stock for 1/2 months as worked out in order dated 6.8.213 have been considered, as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost - 1 month	8253.15	8253.15	8275.77	8253.15	8253.15
Liquid Fuel Cost- 1/2 month	1574.15	1574.15	1578.47	1574.15	1574.15

78. Maintenance spares as allowed in order dated 6.8.2013 have been considered for the purpose of tariff, as under:

(₹ in lakh)					
2009-10	2010-11	2011-12	2012-13	2013-14	
2945.32	3114.48	3291.59	3480.65	3679.66	

79. Receivables have been worked out on the basis of two months of fixed and energy charges as shown below:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable charges for 2 months	16506.31	16506.31	16551.53	16506.31	16506.31
Fixed Charges – for 2 months	3798.14	3,881.05	3972.45	4079.74	4242.36
Total	20304.45	20387.36	20523.98	20586.05	20748.67



O&M expenses (1 month)

80. O&M expenses for 1 month for the purpose of working capital as allowed in order dated 6.8.2013 in Petition No. 28/GT/2013 has been considered as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
818.14	865.13	914.33	966.85	1022.13

81. SBI PLR of 12.25% as on 1.4.2009 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 - 1 months	8253.15	8253.15	8275.77	8253.15	8253.15
Liquid Fuel Cost - 1/2 months	1574.15	1574.15	1578.47	1574.15	1574.15
Maintenance Spares	2945.32	3114.48	3291.59	3480.65	3679.66
O & M expenses - 1 month	818.14	865.13	914.33	966.85	1022.13
Receivables - 2 months	20304.45	20387.36	20523.98	20586.05	20748.67
Total Working Capital	33895.22	34194.28	34584.14	34860.85	35277.76
Rate of Interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Total Interest on Working capital	4152.16	4188.80	4236.56	4270.45	4321.53

Annual Fixed Charges for 2009-14

82. 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	19.33	23.36	37.87	53.84	116.01
Interest on Loan	86.79	88.11	89.25	54.92	44.56
Return on Equity	8712.85	8604.46	8499.05	8497.05	8706.52
Interest on Working Capital	4152.16	4188.80	4236.56	4270.45	4321.53
O&M Expenses	9817.73	10381.58	10971.97	11602.17	12265.53
Total	22788.86	23286.31	23834.70	24478.43	25454.14

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

83. The petitioner has recovered the annual fixed charges on the basis of the Commission's order dated 6.8.2013 in Petition No. 28/GT/2013. The difference between the tariff determined by order dated 6.8.2013 and this order shall be adjusted in terms of the proviso to Regulation 6 (6) of the 2009 Tariff Regulations, amended on 21.6.2011.



84. Petition No. 335/GT/2014 is disposed of in terms of the above.

-Sd/-
(Dr. M.K.Iyer)
Member

-Sd/-
(A.K.Singhal)
Member

-Sd/-
(Gireesh B. Pradhan)
Chairperson

