CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 139/GT/2013

Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri M. Deena Dayalan, Member
Shri A.K.Singhal, Member
Smt. Neerja Mathur, Member (EO)

Date of Hearing: 15.4.2014
Date of Order: 15.5.2014

In the matter of

Revision of tariff of Anta Gas Power Station (419.33 MW) for the period from 1.4.2009 to 31.3.2014- Truing up of tariff determined by order dated 20.4.2012 in Petition No. 239/2009

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.
Shakti Bhawan,
14, Ashoka Road,
Lucknow – 226001

2. Ajmer Vidyut Vitran Nigam Ltd.
Old Power House, Hathi Bhsata,
Jaipur Road, Ajmer

3. Jaipur Vidyut Vitran Nigam Ltd.
Vidyut Bhawan, Janpath,
Jaipur – 302005

4. Jodhpur Vidyut Vitran Nigam Ltd.
New Power house, Industrial Area, Jodhpur

5. Tata Power Delhi Distribution Ltd.
33 kV Sub-station, Hudson Lines,
Kingsway Camp, Delhi – 110009

6. BSES Rajdhani Power Ltd.
2nd Floor, B Block, Nehru Place,
New Delhi 110019

7. BSES Yamuna Power Ltd.
Shakti Kiran Building, Karkardooma, Delhi – 110092

8. Punjab State Power Corporation Ltd.
The Mall, Patiala – 147001

9. Haryana Power Purchase Centre,
Shakti Bhawan, Sector VI,
Panchkula - 134019

10. Himachal Pradesh State Electricity Board Ltd,
Vidyut Bhawan,
Shimla – 171004

11. Power Development Department (J&K),
Government of J&K,
Mini Secretariat, Jammu

12. Power Department,
Union Territory of Chandigarh,
Additional Office Building, Sector 9D,
Chandigarh

13. Uttrakhand Power Corporation Ltd.
Urja Bhawan, Kanwali Road,
Dehradun- 248001 …**Respondents**

Parties present:

For Petitioner: Shri Vivek Kumar, NTPC
Shri A.S.Pandey, NTPC
Shri S.K.Jain, NTPC
Shri A.K.Srivastava, NTPC

For Respondents: Shri R.B.Sharma, Advocate, BRPL
Shri Manish Garg, Advocate, UPPCL
Shri Alok Shankar, Advocate, TPDDL

ORDER

This petition has been filed for revision of the annual fixed charges for Anta Gas Power Station (419.33 MW) ('the generating station') for the period from 1.4.2009 to 31.3.2014 in terms of the proviso to Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations').

2. The generating station with a capacity of 419.33 MW comprises of three Gas Turbine units of 88.71 MW each and one Steam Turbine unit of 153.20 MW. The dates of commercial operation of different units of the generating station are as under:

	Date of Commercial operation (COD)
Unit-I (GT)	1.4.1989
Unit-II (GT)	1.5.1989
Unit-III (GT)	1.7.1989
Unit-IV (ST) / Generating station	1.8.1990

3. Petition No. 239/2009 was filed by the petitioner for determination of tariff of the generating station for the period from 1.4.2009 to 31.3.2014 and the Commission by its order dated 20.4.2012 approved the tariff taking into account the opening capital cost of ₹70579.79 lakh, after adjusting un-discharged liabilities of ₹1078.14 lakh pertaining to the period prior to 1.4.2009.

4. Thereafter, the petitioner filed Review Petition No. 12/RP/2012 seeking review of the said order dated 20.4.2012 and the Commission by its order dated 2.4.2013 revised the annual fixed charges approved vide order dated 20.4.2012 due to revision of capital cost after considering the adjustment of cumulative repayment consequent to truing up of un-discharged liability as on 31.3.2009, Calculation of average loan for KFW (D7) in Form-13 and allowing additional capital expenditure in respect of GT-I and GT-III vanes. The revised capital cost considered in the order dated 2.4.2013 is given as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	70579.79	79998.64	81020.76	81768.59	81768.59
Actual/projected additional Capital Expenditure	9418.85	1022.12	747.82	0.00	0.00
Closing capital cost	**79998.64**	**81020.76**	**81768.59**	**81768.59**	**81768.59**

5. The annual fixed charges approved by order dated 2.4.2013 are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2126.27	2701.68	2784.06	2832.61	2832.61
Interest on Loan	513.75	400.56	369.93	331.47	289.08
Return on Equity	7471.39	7839.14	7901.48	7927.82	7927.82
Interest on Working Capital	2438.22	2480.04	2513.02	2536.24	2564.20
O&M Expenses	6206.08	6562.51	6935.72	7334.08	7753.41
Total	**18755.72**	**19983.94**	**20504.21**	**20962.22**	**21367.13**

6. The petitioner presently seeks revision of the annual fixed charges based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11 and 2011-12 and revised projected estimated expenditure for the years 2012-13 and 2013-14 in accordance with clause (1) of Regulation 6 of the Tariff Regulations. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

"6. Truing up of Capital Expenditure and Tariff

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

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

7. The Annual Fixed Charges claimed by the petitioner in this petition is as under:

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Depreciation	2133.42	2662.27	2748.98	2797.61	2859.09
Interest on Loan	510.93	418.12	453.69	415.69	370.12
Return on Equity	7478.21	7755.79	7701.33	7735.08	7772.69
Interest on Working Capital	2438.45	2477.84	2509.86	2533.25	2563.21
O&M Expenses	6206.08	6562.51	6935.72	7334.08	7753.41
Total	**18767.10**	**19876.54**	**20349.43**	**20815.71**	**21318.52**

8. Replies to the petition have been filed by Respondent No. 1, Uttar Pradesh Power Corporation Ltd (UPPCL), Respondent No 5, Tata Power Delhi Distribution Ltd (TPDDL) and Respondent No 6, BSES Rajdhani Power Ltd (BRPL). The petitioner has also filed additional information called for by the Commission. The petition was re-listed for directions on 15.4.2014 and the Commission heard the parties present and reserved its order in the matter.

9. UPPCL has raised the questions on maintainability of the present petition for revision of the Annual Fixed Charges based on the capital expenditure for the years 2009-10 to 2011-12 claimed in the petition. It has been stated that by virtue of clause (1) of Regulation 6 of the Tariff Regulations, truing up can be allowed during the next tariff period, that is, after 31.3.2014 the tariff petition is filed for the next tariff period. The objection by UPPCL overlooks the proviso which

carves out a limited exception to clause (1) and affords an additional opportunity to the generating company to file the petition for truing up before 2013-14. Therefore, the maintainability of the petition on this ground is not affected. UPPCL has further stated that no useful purpose is likely to be served by revising the Annual Fixed Charges since there is no substantial variation in the Annual Fixed Charges approved by the Commission in its order dated 2.4.2013 and those claimed in the present petition. The objection is without merit. The exercise of truing up has to be undertaken so that the tariff recovered or recoverable corresponds to actual entitlement. UPPCL has further pointed out that the application for truing up is to be accompanied by the auditor's certificate in support of the additional expenditure sought to be capitalized as mandated under clause (3) of Regulation 6. However, UPPCL has pointed out that the claim for truing up is not supported by the auditor's certificate and as such the claim is liable to be rejected on this ground as well. A similar objection has been raised by BRPL. The objection of UPPCL and BRPL is without force. The petitioner has made the application for truing up based on actual expenditure for the years 2009-10, 2010-11 and 2011-12 as per the audited financial statements/accounts (balance sheets) for these years. Therefore, the petition for truing up is in order.

10. BRPL in its reply has pointed out that the petitioner has not submitted the details of the assets forming part of the generating station but not in use but has furnished the details of fixed assets forming part of the balance sheets. According to BRPL, the assets not in use are to be de-capitalized. BRPL has not pointed to any asset not in use but not de-capitalized. The balance sheets submitted by the petitioner are duly audited and contain the details of the expenditure de-capitalized. As such, the objection of BRPL is over-ruled. BRPL has also pointed out that the petitioner has not furnished the details of works-in-progress and has sought these details from the petitioner. The objection lacks merit. The present petition is for revision of the Annual Fixed Charges after truing up on the basis of the capital expenditure actually incurred. Obviously, the details of works-in-progress are not relevant for the purpose of the present petition filed for truing up of capital expenditure.

Capital cost

11. 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."*

12. In accordance with the above, the capital cost of ₹70579.79 lakh, as on 31.3.2009 after removing un-discharged liabilities amounting to ₹1078.14 lakh (all pertaining to the period 2004-09) as on 1.4.2009, considered by the Commission in order dated 20.4.2012 has been considered as the basis for revision of the annual fixed charges. Out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged an amount of ₹572.40 lakh (all assets admitted during the period 2004-09), ₹400.77 lakh (₹396.02 lakh on assets admitted during the period 2004-09 and ₹4.74 lakh assets admitted during the period 2009-14) and ₹29.95 lakh (₹5.97 lakh for assets admitted during 2004-09 and ₹23.98 lakh for assets admitted during 2009-14) during the years 2009-10, 2010-11 and 2012-13 respectively. The discharge of liabilities made during the years would be included in the capital base as additional capital expenditure, in the year of discharge.

Actual/ Projected Additional Capital Expenditure

13. Regulation 9 of the Tariff Regulations, as amended, 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."

14. The details of the additional capital expenditure claimed under sub-clause (vi) of clause (2) of Regulation 9 are as follows:

(₹ in lakh)

Sl. No.	Head of work / Equipment	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Projected	2013-14 Projected
1.Additional Capital Expenditure already allowed						
1	Renovation of Gas Turbines	9838.89	455.70	0.00	0.00	0.00
	Renovation of Gas Turbines (de-cap)	(-) 1281.20	0.00	0.00	0.00	0.00
2	Up-gradation of GT & ST (C&I) System	385.70	298.98	24.31	144.35	0.00
	GT and ST C&I System (de-cap)	(-) 315.43	(-) 722.21	0.00	0.00	0.00
3	Rotor of GT 3	4.27	0.01	0.00	0.00	0.00
4	Fire Protection & Detection System	30.40	0.59	0.00	0.00	0.00
5	Additional Reservoir	364.40	0.00	1.47	90.00	0.00
6	Hot Water Pipe Line of Cooling Tower	0.00	146.86	0.00	0.00	0.00
	Hot Water Pipe Line of Cooling Tower (de-cap)	0.00	-6.73	0.00	0.00	0.00
7	Increase Stake Height of WHRB	0.00	117.07	0.00	0.00	0.00
8	Phasing out of Halon Fire Fighting System	0.00	0.00	0.00	179.00	0.00
9	Installation of On Line Gas measurement	0.00	0.00	0.00	82.47	41.23
10	Replacement of U/G Fire Fighting Pipelines	0.00	0.00	0.00	0.00	217.33
	Total (1)	**9027.03**	**290.27**	**25.78**	**495.82**	**258.56**
2. New Claims						
11	Lift at CCR Bldg	11.74	0.00	0.00	0.00	0.00
	Old Lift at CCR Bldg (de-cap)	(-) 17.80	0.00	0.00	0.00	0.00
12	GT Inlet Air Cooling System	0.00	0.00	75.96	55.22	0.00
13	Energy Management System	0.00	10.26	0.00	0.00	0.00
14	Portable Effluent Analyzer	0.00	5.59	0.00	0.00	0.00
15	Portable Flue Gas Analyzer	0.00	6.10	0.00	0.00	0.00
16	Construction of Two Additional Rooms at KV	0.00	0.00	7.20	0.00	0.00
17	Ultra Sonic Leak & Corana Detector UP9000KT	0.00	0.00	3.66	0.00	0.00
18	Oxygen Concentrator for health Centre	0.00	0.00	1.19	0.00	0.00
19	Binocular Microscope for health Centre	0.00	0.00	0.24	0.00	0.00
22	Automated External Defibrillator	0.00	0.00	1.00	0.00	0.00
	Total (2)	**(-) 6.06**	**21.95**	**89.25**	**55.22**	**0.00**
3. Re-claim of Disallowed Assets						
23	Welfare Centre Building	16.22	0.00	0.00	0.00	0.00
24	Online compressor Cleaning R&M GT-1	0.00	135.44	0.00	42.46	0.00
25	Installation of Additional CT Pump	0.00	0.00	0.00	240.83	0.00
	Total (3)	**16.22**	**135.44**	**0.00**	**283.29**	**0.00**
	Total additional capitalization claimed (1+2+3)	**9037.19**	**447.65**	**115.03**	**834.33**	**258.56**

15. The additional capital expenditure claimed by the petitioner is summarized as under:

(₹ in lakh)

	2009-10 (actual)	2010-11 (actual)	2011-12 (actual)	2012-13 (Projected)	2013-14 (Projected)	Total
Actual/Projected additional capital expenditure	9037.19	447.65	115.03	834.33	258.56	10692.76

16. The total claim of the petitioner raised for capitalization of additional expenditure in the present petition is ₹10692.76 lakh as against the additional capital expenditure of ₹10220.74 lakh allowed vide order dated 20.4.2013. Thus, there is increase of ₹472.02 lakh in the petitioner's claim. The petitioner has claimed expenditure of ₹160.36 lakh on new works/assets and ₹434.95 lakh on assets which was disallowed in order dated 20.4.2012. On the other hand, there is net reduction of ₹123.29 lakh against the previously approved claims.

Additional Capitalization Against Claims Already Approved

17. The petitioner's claim for capitalization of additional expenditure is discussed in the subsequent paragraphs:

R&M of Gas Turbines

18. The petitioner has claimed actual additional capital expenditure of ₹9839.89 lakh on renovation of GT-2 with de-capitalization value of ₹1281.20 lakh in the books of accounts during 2009-10. An amount of ₹9838.89 had been allowed for capitalization vide order 20.4.2012 with corresponding de-capitalization value of ₹1846.58 lakh. Accordingly, the expenditure allowed for R&M of GTs after de-capitalization of old assets was ₹7992.31 lakh (₹9838.89 lakh -₹1846.58 lakh). However, the Commission in the order dated 2.4.2013 had allowed actual capital expenditure of ₹8232.79 lakh for R&M of GT-2 in 2009-10, which includes ₹240.48 lakh towards balance payments for reconditioning of compressor vanes of GT-1. Thus, actual capital expenditure of ₹8232.79 lakh for R&M of GT-2 in 2009-10 is allowed.

19. The petitioner has further claimed actual additional capital expenditure of ₹455.70 lakh for renovation of GT-3 during 2010-11. The Commission in the order dated 20.4.2012 allowed ₹377.49 lakh for capitalization as balance payments towards GT-3 compressor vanes in 2010-11.

Subsequently, in order dated 2.4.2013, the Commission revised the amount to ₹222.34 lakh after considering de-capitalization of ₹155.85 lakh which was inadvertently not considered in order dated 20.4.2012. R&M of GT-3 was completed in 2008-09 and the expenditure was allowed by the Commission vide order dated 21.1.2011 in Petition No. 127/2009. There was no projected additional capital expenditure for R&M of GT-3. The balance amount of GT-3 was based on actual expenditure. Hence, the expenditure exceeding the amount already allowed by the Commission cannot be permitted through the present petition. Thus, actual capital expenditure of ₹222.34 lakh as already allowed is being considered in the present petition.

Up-gradation of GT & ST control system (C&I)

20. The petitioner has claimed actual capital expenditure of ₹385.70 lakh with de-capitalization value of ₹315.43 lakh in books of account during 2009-10, ₹298.98 lakh with de-capitalization value of ₹722.21 lakh in 2010-11 and ₹24.31 lakh in 2011-12 as against already allowed actual capital expenditure of ₹208.27 lakh (₹385.70 lakh with de-capitalized value of ₹177.43 lakh) in 2009-10; projected capital expenditure of ₹162.00 lakh (₹300.00 lakh with de-capitalized value of ₹138.00 lakh) in 2010-11. There is no variation in actual claim in 2009-10 on gross basis. However, on net basis, the actual capital expenditure of ₹70.27 lakh has been allowed, after deducting the actual de-capitalization of ₹315.43 lakh instead of ₹177.43 lakh, considered earlier for 2009-10. The net de-capitalization of ₹423.23 lakh (₹298.98 lakh-₹722.21 lakh) during 2010-11 and the actual expenditure of ₹24.31 lakh during 2011-12 have been allowed**.** Accordingly, the projected capital expenditure of ₹144.35 lakh during 2012-13 has also been allowed.

Rotor of GT-3

21. The petitioner has claimed capitalization of actual additional capital expenditure of ₹4.27 lakh during 2009-10 and ₹0.01 lakh during 2010-11 under re-conditioning work of Rotor and projected expenditure of ₹ 94.00 lakh during 2011-12. There is no change in actual capital expenditure claimed during 2009-10. The petitioner vide affidavit dated 1.3.2013 has submitted that projection in 2011-12 was based on custom duty claimed by the custom authorities. However, custom duty

paid by the petitioner was refunded by CESTAT order dated 31.1.2011. In view of this, the actual additional capital expenditure of ₹4.27 lakh during 2009-10 and ₹0.01 lakh during 2010-11 are allowed.

Fire Protection & Detection System for cable Galleries

22. The petitioner has claimed capitalization of expenditure of ₹30.99 lakh on cash basis (₹30.40 lakh during 2009-10 and ₹0.59 lakh during 2010-11) against capitalization of projected expenditure of ₹31.71 lakh allowed during 2009-10. As explained by the petitioner in affidavit dated 1.3.2013, there is minor change in actual execution. The actual capital expenditure of ₹30.40 lakh during 2009-10 and ₹0.59 lakh during 2010-11 is being allowed to be capitalized.

Additional Reservoir at Anta (Augmentation of Raw Water Reservoir capacity)

23. The petitioner has claimed ₹455.87 lakh (actual additional capital expenditure of ₹364.40 lakh during 2009-10, ₹1.47 lakh during 2011-12 and projected capital expenditure of ₹90.00 lakh during 2013-14) as against the allowed expenditure of ₹451.78 lakh (₹369.78 lakh during 2009-10 and ₹82.00 lakh during 2010-11). The petitioner vide is affidavit dated 1.3.2013 has submitted that major work approx. 75% was completed in 2009-10 and balance work has been re-awarded to various parties which has delayed the completion of the said work. The expenditure as claimed is proximate to the expenditure already approved by the Commission for capitalization and as such the additional capital expenditure is being allowed.

Replacement of Hot Water Pipeline of Cooling Tower

24. The petitioner has claimed actual additional capital expenditure of ₹146.86 lakh during 2010-11 as against allowed projected capital expenditure of ₹157.39 lakh. The petitioner has de-capitalized assets of value of ₹6.73 lakh from books of accounts which is about 4.58% only. The Commission while allowing the capitalization of expenditure earlier had considered 18% of the value of new asset as estimated de-capitalization value. Therefore, de-capitalization value of 18% has been considered. Accordingly, de-capitalized value works out to ₹26.43 lakh. Thus, on net basis actual capital expenditure of ₹120.43 lakh (₹146.86 lakh - ₹26.43 lakh) is being allowed.

Increase in WHRB stack height

25. The petitioner has claimed actual additional capital expenditure of ₹117.07 lakh during 2010-11 as against projected capital expenditure of ₹159.76 lakh already allowed. The petitioner in the affidavit dated 1.3.2013 has submitted that against the projected capitalization of ₹159.76 lakh, contract has been awarded for ₹129.90 lakh, excluding un-discharged liability of ₹12.83 lakh. In view of the explanation of the petitioner, the actual capital expenditure of ₹117.07 lakh during 2010-11, which is less than the approved projected capital expenditure, is allowed.

Phasing out of Halon Fire Fighting System

26. The petitioner has claimed projected additional capital expenditure of ₹179.00 lakh during 2012-13 as against the projected capital expenditure of ₹245.15 lakh during 2011-12 allowed. The petitioner in the affidavit dated 1.3.2013 has submitted that the contract has now been awarded for ₹200.00 lakh. The work is expected to be completed by March 2013 as projected. It has been stated that the balance expenditure will be capitalized after March 2014. Therefore, projected additional capital expenditure of ₹179.00 lakh with corresponding de-capitalization of ₹32.22 lakh (₹179.00 lakh x 0.18) is being allowed. Hence, on net basis the projected additional capital of ₹146.78 lakh (₹179.00 lakh - ₹32.22 lakh) during 2012-13 has been allowed.

Installation of on-line gas measurement

27. The petitioner has claimed projected additional capital expenditure of ₹123.70 lakh (₹82.47 lakh during 2012-13 and ₹41.23 lakh during 2013-14) as against capital expenditure of ₹145.53 lakh earlier allowed by the Commission during 2011-12. The petitioner in its affidavit dated 1.3.2013 has submitted that the contract has been awarded in September, 2011 for ₹135.76 lakh. Being a foreign supply, it has more lead time. Equipments have been supplied and installed in two units and installation in third unit will be completed by March, 2013. The commissioning and completion of package will be achieved by 2013-14. The awarded value is less than the projected capital expenditure allowed earlier. In view of this, the projected capital expenditure of ₹82.47 lakh in 2012-13 and ₹41.23 lakh in 2013-14 has been allowed.

Replacement of underground Fire Fighting System

28. The petitioner has claimed projected additional capital expenditure of ₹217.33 lakh during 2013-14 as against allowed projected capital expenditure of ₹178.21 lakh in 2011-12. In the absence of de-capitalization value of the asset, the Commission in its order dated 20.4.2012 had considered de-capitalization value of 18% which works out to ₹39.12 lakh. Accordingly, on net basis, the projected capital expenditure of ₹178.21 lakh (₹217.33 lakh - ₹39.12 lakh) has been allowed.

Capitalization Against New claims

29. The claims for capitalization of expenditure under the category of new claims are examined below:

Lift for CCR building

30. Actual capital expenditure of ₹11.74 lakh for lift at CCR building has been claimed during 2009-10. In justification of the expenditure it has been submitted that the lift had outlived its useful life. It is noticed that the old lift has been de-capitalized for ₹17.80 in books of accounts. TPDDL has objected to the capitalization of the expenditure urging that the expenditure is part of O&M expenses. Considering the aspect of the safety of the personnel, the capital expenditure of ₹11.74 lakh, with corresponding de-capitalization of ₹17.80 lakh has been allowed. Thus, on net basis there is de-capitalization of ₹6.06 lakh.

GT Inlet Air Cooling System

31. The petitioner has claimed expenditure of ₹131.18 lakh (₹75.96 lakh on actual basis during 2011-12 and ₹55.22 lakh on projected basis during 2012-13). The petitioner while justifying the expenditure has submitted that GTs are rated at 88.71 MW at 27^{0}C and 60% humidity. However, it has been stated that Gas Turbines are not able to generate upto rated capacity during summer due to increase in ambient temperature. The petitioner has clarified that when the Gas Turbines generate to their full rated capacity, the additional power will become available to the beneficiaries during summer. UPPCL has opposed capitalization of the expenditure and has pleaded that the

expenditure should be met by the petitioner through its internal resources. It needs to be noted that the generation capacity of the generating station is not being fully utilized because of shortage of APM gas. As such, the plea of additional generation by the petitioner is purely theoretical and without any gain in actual terms. It is further observed that the benefit of improvement in efficiency is to be retained by the petitioner. Hence, there is no justification to allow capitalization of the expenditure unless the benefit of improved efficiency is passed on to the beneficiaries. As such, there is no justification for installation of inlet air cooling system and the capitalization of the said expenditure is not allowed.

Energy Management System

32. The petitioner has claimed actual capital expenditure of ₹10.26 lakh during 2010-11. The petitioner has submitted that similar expenditure has been allowed in the order dated 23.5.2012 in Petition No. 270/2009 pertaining to Auraiya GPS. The petitioner's proposal has been opposed by TPDDL. It is true that in case of Auraiya GPS, the Commission had allowed the expenditure in order dated 23.5.2012. However, considering the fact that the benefit of reduction in auxiliary power consumption is not passed on to the beneficiaries during the period 2009-14, capitalization has been disallowed, in truing up Petition No. 28/GT/2013 (Auraiya GPS). On the same considerations, the expenditure of ₹10.26 lakh claimed has not been allowed.

Minor Assets

33. The petitioner has claimed actual capital expenditure of ₹35.23 lakh (₹7.20 lakh during 2011-12 for two additional rooms at Kendriya Vidyalaya, ₹5.59 lakh during 2010-11 for Portable Effluent Analyser, ₹6.10 lakh during 2010-11 for portable Flue Gas Analyser, ₹2.42 lakh during 2011-12 for hospital equipments and ₹3.66 lakh during 2011-12 for Ultra Sonic Leak & Detector. TRDDL has opposed capitalization of the expenditure on these items pleading that the expenditure is on minor items or is part of tools and tackles. In our considered view, these assets are either of minor nature or are those which are not allowable after the cut-off date under clause (2) of Regulation 9 of the Tariff Regulations. Hence, the expenditure has not been allowed to be capitalized.

Capitalization Against Assets Already Disallowed

34. The petitioner has again claimed actual /projected additional capital expenditure towards Welfare Centre Building, On-line Compressor Cleaning system and Installation of Additional CT pump. UPPCL has objected to capitalization of On-line Compressor Cleaning system stating that it should form part of O&M expenses. Similarly, UPPCL has objected to capitalization of Installation of Additional CT pump on the ground that the expenditure should form part of capital spares. TPDDL and BRPL have also objected to capitalization of such expenditure. We have considered the submissions of the parties. It is pointed out that the additional capital expenditure on these assets was considered earlier and disallowed with detailed reasoning through a speaking order. There is no justification to revisit the decision already taken since it would amount to review of the earlier order. In the circumstances, it is not necessary to deal with individual item in detail. Accordingly, capitalization of the expenditure on the assets has not been allowed.

Reconciliation of Additional Capital Expenditure with Books of Accounts

35. The petitioner has claimed additional capital expenditure as per books of accounts for the years 2009-10, 2010-11 and 2011-12 as given below:

(₹ in lakh)

Sl. No.		2009-10	2010-11	2011-12
1	Opening Gross Block as on 1.4.2009 (A)	82853.48	91385.69	91855.83
2	Closing Gross Block as on 31.3.2010 (B)	91385.69	91855.83	94918.73
3	Addition during the year 2009-10 C=(B-A)	8532.21	470.14	3062.90
4	**Exclusions**	**(-) 562.38**	**(-) 67.59**	**2852.89**
5	Liabilities	57.40	90.08	94.98
6	Additional capitalization claimed on cash basis (3-4-5)	**9037.19**	**447.65**	**115.03**

Exclusions

36. The petitioner has sought exclusions of certain expenses capitalized in its books of accounts. It is seen that actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts due to exclusions of certain expenditure for the purpose of tariff. The details of exclusions claimed by the petitioner during 2009-10 to 2011-12 are summarized below:

(₹in lakh)

Sl. No.	Head	2009-10	2010-11	2011-12
1	Renovation of Gas Turbines (Part not allowed by CERC)	1484.43	0.00	0.00
2	Additional Reservoir (Adjustment)	0.00	(-) 10.64	0.00
3	Diesel operated fork	0.00	0.00	6.87
4	Fork lift Godrej G 150 D	0.00	0.00	(-) 3.91
5	Capital spares	134.13	116.66	975.76
6	Capital spares 220 kV Switchyard GT-1 CT	0.00	0.00	6.42
7	Capital Spares (De-cap)	(-) 11.15	(-) 136.35	(-) 64.76
8	Capitalization of MBOA items	60.64	24.31	26.92
9	De-Capitalization MBOA items	(-) 47.73	(-) 9.05	(-) 2.33
10	FERV Capitalization	(-) 2182.70	(-) 70.36	1907.91
11	Current Transformer IU from Talchar	0.00	29.76	0.00
12	Current Transformer IU from JGGPP	0.00	12.73	0.00
13	Furniture IU transfer to Jhajjar/Dadri	0.00	(-) 2.02	0.00
14	Fire Tender Foam & water tender (De-Cap)	0.00	(-) 17.94	0.00
15	Road Roller De- cap	0.00	(-) 2.96	0.00
16	Sale of Tractor- Obsolete item	0.00	(-) 0.09	0.00
17	Semi-Auto Biochem Analyzer (De-cap)	0.00	(-) 1.63	0.00
18	**Total Exclusions**	**(-) 562.38**	**(-) 67.59**	**2852.88**

37. We consider the exclusions for the years 2009-10, 2010-11 and 2011-12 under different heads in the claim for the purpose of tariff as discussed in subsequent paragraphs:

Renovation of Gas Turbines

38. The petitioner has excluded an amount of ₹1484.43 lakh as part not allowed by the Commission. Exclusion on this count is in order and is allowed.

Capital Spares

39. The petitioner has procured spares amounting to ₹134.13 lakh during the year 2009-10, ₹116.66 lakh during the year 2010-11 (excluding liability of ₹1.10 lakh) and ₹975.76 lakh (excluding liability of ₹8.97 lakh) during the year 2011-12 for maintaining stock of necessary spares. Since capitalization of spares after the cut-off date is not allowed for tariff as they form part of O&M expenses, the petitioner has excluded the said amounts. The exclusion of the said amount under this head is in order and has been allowed.

De-capitalization of spares

40. The petitioner has de-capitalized capital spares amounting to ₹11.15 lakh during the year 2009-10, ₹136.35 lakh during the year 2010-11 and ₹64.76 lakh during the year 2011-12 in the books of accounts on these spares becoming unserviceable and has sought exclusion of these amounts for the purpose of tariff. After examining the exclusions sought on de-capitalization of capital spares it has been found that amounts of ₹10.14 lakh in 2009-10, ₹31.76 lakh in 2010-11 and ₹16.92 lakh in 2011-12 pertain to spares which were part of the capital cost of the generating station for the purpose of tariff. As such, exclusion on account of de-capitalization of these spares is not justified and is not allowed. The balance de-capitalized capital spares amounting to ₹1.01 lakh in 2009-10, ₹104.59 lakh in 2010-11 and ₹47.84 lakh in 2011-12 which were disallowed for capitalization by the Commission, do not form part of the capital cost. Hence exclusion of de-capitalization of these spares is in order and is allowed.

Capitalization of Minor Bought Out Assets (MBOA)

41. The petitioner capitalized MBOA items in books of accounts amounting to ₹60.64 lakh (excluding liability of ₹4.00 lakh) during 2009-10, ₹24.31 lakh (excluding liability of ₹0.98 lakh) during the year 2010-11 and ₹26.92 lakh (excluding liability of ₹4.64 lakh) during the year 2011-12 and has sought exclusion of these amounts for the purpose of tariff. Since the capitalization of minor assets is not allowed after cut-off date, the exclusions of MBOA items are in order and are allowed**.**

De-capitalization of Miscellaneous Bought Out Assets (MBOA)

42. The petitioner has excluded for the purpose of tariff de-capitalized MBOA items in books of accounts amounting to ₹47.73 lakh during the year 2009-10, ₹9.05 lakh during the year 2010-11 and ₹2.33 lakh during the year 2011-12 on their being rendered unserviceable. The petitioner vide affidavit dated 5.11.2012 has submitted the details of de-capitalization of MBOA items. It is observed from the details of de-capitalization of MBOA items that amounts of ₹22.15 lakh in 2009-10, ₹6.40 lakh in 2010-11 and ₹2.16 lakh in 2011-12 pertain to MBOA items which were part of the

capital cost of the generating station. Therefore, exclusions on account of de-capitalization of these MBOA items are not justified and not allowed. Accordingly, the exclusions allowed for tariff purposes are ₹25.58 lakh in 2009-10, ₹2.65 lakh in 2010-11 and ₹0.17 lakh which were not allowed in tariff, thereby do not form part of capital cost of the generating station.

Capitalization of FERV

43. The petitioner has excluded amounts of (-) ₹2182.70 lakh during 2009-10 and (-) ₹70.36 lakh during 2010-11 and ₹1907.91 lakh during 2011-12 towards capitalization of FERV. FERV is being claimed directly from the beneficiaries by the petitioner. Hence, exclusions on account of FERV capitalization is in order and allowed**.**

Inter Unit Transfers

44. The petitioner has excluded an amount of ₹29.76 lakh on account of transfer of current transformer from Talchar, an amount of ₹12.73 lakh on account of transfer of current transformer from JGGPP and (-) ₹2.03 lakh on account of transfer of furniture to Jhajjar/Dadri during 2010-11 under this head. The Commission while dealing with applications for additional capitalization in respect of other generating stations of the petitioner, has decided that both positive and negative entries arising out of inter unit-transfers of temporary nature shall be ignored for the purpose of tariff. In consideration of the same, the exclusions claimed on account of inter-unit transfer of equipment on temporary basis are in order and are allowed.

De-capitalization of Road Roller, Fire Tender Foam, Water Tender and Semi Automatic Bio Chemical Analyzer

45. The petitioner has_excluded amounts of ₹2.96 lakh, ₹17.94 lakh and ₹1.63 lakh towards de-capitalization of Road Roller, fire tender & water tender and Semi Automatic Bio chem. Analyzer in 2010-11 on their becoming un-serviceable. Since these assets were allowed in tariff and on becoming obsolete are not rendering any useful service to the generating station, the exclusions sought on de-capitalization of these items is not in order and hence **is** not allowed.

Sale of Tractor – Obsolete item

46. An amount of ₹0.09 lakh has been excluded on account of sale of Tractor on becoming obsolete during 2010-11. Since the asset is not rendering any useful service to the generating station, exclusion sought by the petitioner on account of sale of obsolete tractor is not in order and hence, is not allowed.

Diesel operated Fork Lift Truck

47. The petitioner has excluded an amount of ₹6.87 lakh (excluding liability of ₹0.65 lakh) during 2011-12 on account of diesel operated Fork Lift Truck as the capitalization of minor assets is not allowed in tariff under the Tariff Regulations. As such, exclusion on this count is in order and is allowed.

De-capitalization of Fork Lift

48. The petitioner has de-capitalized Fork Lift in books of accounts amounting to ₹3.91 lakh during 2011-12 on it is being rendered unserviceable. However, it is observed from the details of de-capitalization that it was allowed in tariff as part of the capital cost. Since the asset is not rendering any useful service to the generating station, the exclusion for ₹3.91 lakh on account de-capitalization of fork lift which was allowed in tariff as part of the capital cost, is not allowed.

Capital spares 220 kV switchyard GT-I (Current Transformer)

49. The petitioner has procured spares amounting to ₹6.42 lakh on cash basis during 2011-12 for maintaining stock of necessary spares. Since capitalization of spares over and above initial spares is not allowed as they form part of O&M expenses, the petitioner has excluded the said amount. The exclusion of the amount under this head is in order and is allowed.

Additional Reservoir (Adjustment)

50. The petitioner has excluded an amount of (-) ₹10.64 lakh during 2010-11, on account of adjustment against the work awarded vide order dated 5.2.2008. The exclusion sought by the petitioner on this count is not clear. It appears that the adjustment for additional reservoir is included in the capitalization of ₹455.87 lakh allowed on this count. Further, allowing exclusion of

(-) ₹10.64 lakh will add to the capital expenditure of ₹455.87 lakh allowed and thus will become ₹465.87 lakh which is more than ₹455.87 lakh. Hence, the exclusion of (-) ₹10.64 is not allowed.

51. Accordingly, the summary of exclusions allowed and disallowed is tabulated below:

(₹ in lakh)

Head	2009-10	2010-11	2011-12
(A) Exclusions allowed			
Renovation of Gas Turbines	1484.43	0.00	0.00
Additional Reservoir (Adjustment)	0.00	0.00	0.00
Diesel operated fork	0.00	0.00	6.87
Capital spares	134.13	116.66	975.76
Capital spares 220 kV Switchyard GT-1 CT	0.00	0.00	6.42
Capital Spares (De-cap)	(-) 1.01	(-) 104.59	(-) 47.84
Capitalization of MBOA items	60.64	24.31	26.92
De-Capitalization MBOA items	(-) 25.58	(-) 2.65	(-) 0.17
FERV De-capitalization/Capitalization	(-) 2182.70	(-) 70.36	1907.91
Current Transformer IU from Talchar	0.00	29.76	0.00
Current Transformer IU from JGGPP	0.00	12.73	0.00
Furniture IU transfer to Jhajjar/Dadri	0.00	(-) 2.02	0.00
Total Exclusions Allowed (A)	**(-) 530.09**	**3.84**	**2875.87**
(B) Exclusions Not Allowed			
Fire Tender Foam & water tender (De-Cap)	0.00	(-) 17.94	0.00
Road Roller De- cap	0.00	(-) 2.96	0.00
Sale of Tractor- Obsolete item	0.00	(-) 0.09	0.00
Semi-Auto Bio Chemical Analyser (De-cap)	0.00	(-) 1.63	0.00
De-Capitalization of spares	(-) 10.14	(-) 31.76	(-) 16.92
De-Capitalization of MBOA items	(-) 22.15	(-) 6.40	(-) 2.16
Fork lift Godrej G 150 D	0.00	0.00	(-) 3.91
Additional Reservoir (Adjustment)	0.00	(-) 10.64	0.00
Total Exclusions Not Allowed (B)	**(-) 32.29**	**(-) 71.42**	**(-) 22.99**
Net Exclusions =A+B	**(-) 562.38**	**(-) 67.58**	**2852.88**

52. The actual additional capital expenditure allowed for the years 2009-10, 2010-11 and 2011-12 and projected additional capital expenditure allowed for the years 2012-13 and 2013-14 before adjustment of liabilities are as follows:

(₹ in lakh)

Sl. No.	Head	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Projected	2013-14 Projected
1	Renovation of Gas Turbines	8232.79	222.34	0.00	0.00	0.00
2	Up-gradation of GT & ST (C&I)System	70.27	(-) 423.23	24.31	144.35	0.00
3	Rotor of GT 3	4.27	0.01	0.00	0.00	0.00
4	Fire Protection & Detection System	30.40	0.59	0.00	0.00	0.00
5	Augmentation of Raw Water Capacity Reservoir	364.40	0.00	1.47	90.00	0.00
6	Replacement of Hot Water Pipe Line of Cooling Tower	0.00	120.43	0.00	0.00	0.00
7	Increase Stake Height of WHRB	0.00	117.07	0.00	0.00	0.00
8	Phasing out of Halon Fire Fighting System	0.00	0.00	0.00	146.78	0.00

9	Installation of On Line Gas measurement	0.00	0.00	0.00	82.47	41.23
10	Replacement of U/G Fire Fighting Pipelines	0.00	0.00	0.00	0.00	**178.21**
11	**Total (1)**	**8702.13**	**37.21**	**25.78**	**463.60**	**219.44**
2. New Claims						
12	Lift at CCR Bldg	(-) 6.06	0.00	0.00	0.00	0.00
13	GT Inlet Air Cooling System	0.00	0.00	0.00	0.00	0.00
14	Energy Management System	0.00	0.00	0.00	0.00	0.00
15	Portable Effluent Analyzer	0.00	0.00	0.00	0.00	0.00
16	Portable Flue Gas Analyzer	0.00	0.00	0.00	0.00	0.00
17	Construction of Two Additional Rooms at KV	0.00	0.00	0.00	0.00	0.00
18	Ultra Sonic Leak & Corana Detector UP9000KT	0.00	0.00	0.00	0.00	0.00
19	Oxygen Concentrator for health Centre	0.00	0.00	0.00	0.00	0.00
20	Binocular Microscope for health Centre	0.00	0.00	0.00	0.00	0.00
21	Automated External Defibrillator	0.00	0.00	0.00	0.00	0.00
22	**Total (2)**	**(-) 6.06**	**0.00**	**0.00**	**0.00**	**0.00**
3. Reclaim of disallowed assets						
23	Welfare Centre Building	0.00	0.00	0.00	0.00	0.00
24	Online compressor Cleaning R&M GT-1	0.00	0.00	0.00	0.00	0.00
25	Installation of Additional CT Pump	0.00	0.00	0.00	0.00	0.00
26	**Total (3)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
27	**Total Additional Capitalization allowed (1+2+3)**	**8696.07**	**37.21**	**25.78**	**463.60**	**219.44**
28	**Exclusions not Allowed**	(-) 32.29	(-) 71.42	(-) 22.99	0.00	0.00
29	**Net Additional Capitalization Allowed (27+28)**	**8663.78**	**(-) 34.21**	**2.79**	**463.60**	**219.44**

53. The actual/projected additional capital expenditure allowed after adjustment of liabilities is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Net additional capital expenditure allowed prior to adjustment of discharges of liabilities	8663.78	(-) 34.21	2.79	463.60	219.44
Discharges of liabilities	572.40	400.77	29.95	0.00	0.00
Actual/ Projected additional capital expenditure allowed	**9236.18**	**366.56**	**32.74**	**463.60**	**219.44**

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

(₹in lakh)

	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Projected	2019-14 Projected
Opening Capital cost	70579.79	79815.97	80182.53	80215.27	80678.87
Additional capital expenditure Allowed	9236.18	366.56	32.74	463.60	219.44
Closing capital cost	**79815.97**	**80182.53**	**80215.27**	**80678.87**	**80898.31**
Average Capital Cost	**75197.88**	**79999.25**	**80198.90**	**80447.07**	**80788.59**

Debt-Equity Ratio

55. Regulation 12 of the 2009 Tariff Regulations provides that*:*

(a) *For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

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

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

56. Accordingly, gross loan and equity of ₹40173.72 lakh and ₹30406.07 lakh respectively as allowed in order dated 2.4.2013 in R.P. No. 12/2012 have been considered as on 1.4.2009. Further, the admitted actual/ projected additional expenditure has been allocated between debt and equity in the ratio of 70:30.

Return on Equity

57. Regulation 15 of the Tariff Regulations, as amended on 21.6.2011, provides that:

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

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

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

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the 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 charges 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 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."

58. In its claim for the revised fixed charges, the petitioner has considered the Base Rate of 15.5%. For the purpose of grossing up, the petitioner has considered the actual tax rate of 33.99% for the years 2009-10, 2010-11 and 2011-12 and tax rate of 32.445% for the years 2012-13 and 2013-14, applicable for 2011-12.

59. UPPCL and BRPL have objected to the petitioner's claim for grossing up at the rate of 33.99%. The petitioner has clarified that tax rate of 33.99% has been considered as tax was actually paid at this rate during the relevant years. The petitioner has clarified that it deposited Corporate Tax along with other statutory taxes. In our view, the claim of the petitioner is in order. In accordance with Regulation 15 *ibid*, grossing up of RoE is permitted as per applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961. Therefore, grossing up claimed by the petitioner for the years 2009-10, 2010-11 and 2011-12 based on tax paid is in order. BRPL has further pointed out that the petitioner be asked to clarify whether it received benefit of tax holiday under Section 80 IA. We do not find any substance in the submission of BRPL. In accordance with clause (3) of Regulation 15 *ibid*, grossing up is permitted based on tax rate applicable to "the concerned generating company". Therefore, the submission of BRPL for calling for details of tax holiday under Section 80 IA of the Income Tax Act in respect of the generating station is irrelevant.

60. The base rate of 15.5% of RoE is to be trued up based on actual tax rate applicable for the year. RoE has been worked out by grossing up the base rate with respect to actual tax rate

applicable to the petitioner as a generating company for the years 2009-10, 2010-11 and 2011-12 and for the years 2012-13 and 2013-14. The rate of tax of 32.445% as applicable for the year 2011-12 has been considered on the normative equity after accounting for actual/projected additional capital expenditure. The tax rate for 2012-2013-14 is subject to truing up on the basis of actual tax rate for the respective year. Accordingly, return on equity worked out is as under:

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Notional Equity- Opening	30406.07	33176.92	33286.89	33296.71	33435.79
Addition of Equity due to additional capital expenditure	2770.85	109.97	9.82	139.08	65.83
Normative Equity-Closing	33176.92	33286.89	33296.71	33435.79	33501.63
Average Normative Equity	31791.50	33231.91	33291.80	33366.25	33468.71
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year	33.990%	33.218%	32.445%	32.445%	32.445%
Rate of Return on Equity (Pre-Tax)	23.481%	23.210%	22.944%	22.944%	22.944%
Return on Equity (Pre Tax)	**7464.96**	**7713.13**	**7638.47**	**7655.55**	**7679.06**

Interest on loan

61**.** Regulation 16 of the 2009 Tariff Regulations provides that:

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) Gross normative loan amounting to ₹40173.72 lakh has been considered as on 1.4.2009.

(b) Cumulative repayment considered as on 1.4.2009 amounting to ₹19493.65 lakh.

(c) Net normative opening loan as on 1.4.2009 works out to ₹20680.07 lakh.

(d) Addition to normative loan to the tune of 70% of additional capital expenditure approved has been considered on year to year basis.

(e) In line with Regulation 16 ibid, weighted average rate of interest has been calculated applying the actual loan portfolio existing as on 1.4.2009 for the instant station. 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.

(f) The cumulative repayment has been adjusted @70% corresponding to de-capitalization of assets/works considered for the purpose of tariff.

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

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Gross opening loan	40173.72	46639.05	46895.64	46918.56	47243.08
Cumulative repayment of loan upto previous year	19493.65	20050.39	22027.04	24746.73	27495.34
Net Loan Opening	20680.07	26588.66	24868.59	22171.83	19747.74
Addition due to Additional capitalisation	6465.33	256.59	22.92	324.52	153.61
Repayment of loan during the year	2119.42	2662.18	2743.38	2771.16	2813.20
Less: Repayment adjustment on account of de-capitalization	1548.47	675.69	23.54	22.55	27.38
Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	(-) 14.21	-9.83	(-) 0.15	0.00	0.00
Net Repayment	556.74	1976.66	2719.69	2748.61	2785.82
Net Loan Closing	26588.66	24868.59	22171.83	19747.74	17115.53
Average Loan	23634.36	25728.63	23520.21	20959.79	18431.64
Weighted Average Rate of Interest on Loan	2.1724%	1.6307%	1.9272%	1.9706%	1.9847%
Interest on Loan	**513.43**	**419.55**	**453.29**	**413.03**	**365.81**

Depreciation

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

"(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

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

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

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

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

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

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

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

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

65. The cumulative depreciation as on 1.4.2009 works out to ₹42143.20 lakh after accounting for adjustment of un-discharged liabilities. Further, the value of freehold land as considered in the order dated 2.4.2013 as on 1.4.2009 is ₹113.17 lakh. After considering the additional capital expenditure approved for the year 2009-10 above, the balance depreciable value before providing depreciation for the year 2009-10 works out to ₹25433.04 lakh. The depreciation has been calculated by spreading over the balance depreciable value. Further, proportionate adjustment has been made to the cumulative depreciation on account of de-capitalization of assets as also on account of discharges/reversal of liabilities out of un-discharged liabilities deducted from capital cost as on 1.4.2009.

66. The 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	70579.79	79815.97	80182.53	80215.27	80678.87
Closing capital cost	79815.97	80182.53	80215.27	80678.87	80898.31
Average capital cost	75197.88	79999.25	80198.90	80447.07	80788.59
Depreciable value @ 90%	67576.24	71897.47	72077.16	72300.51	72607.88

Remaining useful life at the beginning of the year	12.00	11.00	10.00	9.00	8.00
Balance depreciable value	25433.04	29283.97	27433.75	24940.43	22505.64
Depreciation	**2119.42**	**2662.18**	**2743.38**	**2771.16**	**2813.20**
Cumulative depreciation at the end	44262.62	45275.69	47386.78	50131.24	52915.45
Less: Cumulative Depreciation Reduction due to de-capitalization	1990.89	868.74	30.27	29.00	35.21
Add: Cumulative depreciation adjustment on account of discharges / reversal of liabilities out of liabilities deducted as on 1.4.2009	341.78	236.47	3.57	-	-
Net Cumulative Depreciation	42613.51	44643.41	47360.08	50102.24	52880.24

O&M Expenses

67. O&M expenses as considered in order dated 20.4.2012 in Petition No. 239/2009 has been considered as stated under:

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
O&M expenses	6206.08	6562.51	6935.72	7334.08	7753.41

Interest on Working Capital

68. The components of working capital as given hereunder have been considered:

(a) **Fuel cost**: Fuel cost for 1 month and liquid fuel stock for 1/2 month has been considered as under:

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
(b) Cost of Main Fuel – one month	4491.37	4491.37	4503.68	4491.37	4491.37
(c) Cost of Liquid Fuel oil – 1/2 month	924.79	924.79	927.32	924.79	924.79

(b) **Maintenance spares**: Maintenance spares have been considered @ 30% of operation and maintenance expenses as considered in order dated 20.4.2012 as stated below, have been considered.

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Maintenance Spares	1861.83	1968.75	2080.72	2200.22	2326.02

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

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	8982.74	8982.74	9007.35	8982.74	8982.74
Fixed Charges - 2 months	3123.64	3305.72	3379.88	3450.80	3528.62
Total	**12106.38**	**12288.47**	**12387.23**	**12433.54**	**12511.36**

(d) **O&M Expenses**: O&M expenses for 1 month as allowed in order dated 20.4.2012 have been considered.

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O & M Expenses for 1 month	517.17	546.88	577.98	611.17	646.12

(e) **Rate of Interest**: SBI PLR of 12.25% as on 1.4.2009 has been considered for computation of the interest on working capital.

69. Necessary computations in support of interest on working capital are given as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost 1 month	4491.37	4491.37	4503.68	4491.37	4491.37
Liquid Fuel Cost of –1/2 month	924.79	924.79	927.32	924.79	924.79
Maintenance Spares	1861.83	1968.75	2080.72	2200.22	2326.02
O&M expenses – 1 month	517.17	546.88	577.98	611.17	646.12
Receivables – 2 months	12106.38	12288.47	12387.23	12433.54	12511.36
Total working capital	**19901.54**	**20220.25**	**20476.92**	**20661.10**	**20899.66**
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	**2437.94**	**2476.98**	**2508.42**	**2530.98**	**2560.21**

Annual Fixed Charges

70. The Annual Fixed Charges approved for the period 2009-14 are summarized as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2119.42	2662.18	2743.38	2771.16	2813.20
Interest on Loan	513.43	419.55	453.29	413.03	365.81
Return on Equity	7464.96	7713.13	7638.47	7655.55	7679.06
Interest on Working Capital	2437.94	2476.98	2508.42	2530.98	2560.21
O&M Expenses	6206.08	6562.51	6935.72	7334.08	7753.41
Total	**18741.83**	**19834.35**	**20279.28**	**20704.81**	**21171.69**

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.*

71. The Annual Fixed Charges allowed as above are subject to truing up in accordance with Regulation 6 of the Tariff Regulations.

72. The difference in the annual fixed charges determined by order dated 20.4.2012/2.4.2013 and those determined by this order shall be adjusted in accordance with the proviso to Regulation 6 (6) of the 2009 Tariff Regulations.

73. The petition stands disposed of in terms of the above.

Sd/-	*Sd/-*	*Sd/-*	*Sd/-*
(Neerja Mathur)	**(A.K.Singhal)**	**(M. Deena Dayalan)**	**(Gireesh B. Pradhan)**
Member (EO)	**Member**	**Member**	**Chairperson**