

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 16/GT/2013

Coram:

**Shri V.S.Verma, Chairperson
Shri M.Deena Dayalan, Member**

Date of Hearing: 18.6.2013

Date of Order: 16.7.2013

In the matter of

Revision of tariff of Dadri Gas Power Station (829.78 MW) for the period from 1.4.2009 to 31.3.2014-Truing up of tariff determined by order dated 14.6.2012 in Petition No. 224/2009.

And

In the matter of

NTPC Ltd, New Delhi

...Petitioner

Vs

1. Uttar Pradesh Power Corporation Limited, Lucknow
2. Jaipur Vidyut Vitran Nigam Limited, Jaipur
3. Ajmer Vidyut Vitran Nigam Limited, Ajmer
4. Jodhpur Vidyut Vitran Nigam Limited, Jodhpur
5. Tata Power Delhi Distribution Ltd., Delhi
6. BSES Rajdhani Power Ltd., New Delhi
7. BSES Yamuna Power Ltd., Delhi
8. Haryana Vidyut Prasaran Nigam Limited, Panchkula
9. Punjab State Power Corporation Ltd, Patiala
10. Himachal Pradesh State Electricity Board, Shimla
11. Power Development Department Government of Jammu & Kashmir, Jammu
12. Power Department, Union Territory of Chandigarh, Chandigarh
13. Uttarakhand Power Corporation Limited, Dehradun

.....Respondents

Parties present:

Shri Ajay Dua, NTPC
Shri S. Saran, NTPC
Shri Bhupinder Kumar, NTPC
Shri S.K.Jain, NTPC
Shri Guruyog Singh, NTPC
Shri Rohit Chhabra, NTPC
Shri Vivek Kumar, NTPC
Shri K.K.Narang, NTPC
Shri R.B.Sharma, Advocate, BRPL
Shri Manish Garg, UPPCL & BYPL



Shri Sharda Prasad, UPPCL
Shri Padamjit Singh, PSPCL
Shri T.P.S.Bawa, PSPCL

ORDER

This petition has been filed by the petitioner, NTPC, for revision of tariff of Dadri Gas Power Station (829.78 MW) (hereinafter referred to as “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 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. Petition No. 224/2009 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 14.6.2012 determined the annual fixed charges for the generating station. The capital cost considered by the Commission for the purpose of determination of annual fixed charges tariff for 2009-14 by order dated 14.6.2012 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	87954.32	87954.32	88195.58	97589.44	116483.46
Additional capital expenditure	0.00	241.26	9393.86	18894.02	9352.03
Closing Capital cost	87954.32	88195.58	97589.44	116483.46	125835.49
Average Capital cost	87954.32	88074.95	92892.51	107036.45	121159.48

3. Based on the above, the annual fixed charges for the generating station for 2009-14 determined by order dated 14.6.2012 in Petition No. 224/2009 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	26.28	32.96	322.07	1429.66	2853.72
Interest on Loan	135.78	143.75	555.67	1731.99	2788.52
Return on Equity	10326.28	10334.77	10674.14	11670.48	12665.35
Interest on Working Capital	6655.44	6704.43	6792.23	6899.49	7029.00
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63
Total	29424.52	30201.97	32068.67	36244.48	40679.22

4. Reply to the petition has been filed by the respondent no.1, UPPCL and the respondent Nos. 5, 6 and 7 namely, TDDPL, BRPL and BYPL respectively. The petitioner has filed its rejoinder to the said replies of the respondents.

5. The matter was heard on 5.3.2013 and orders were reserved by the Commission. However, as one of the Members of this Commission had demitted office before the passing of orders in the matter, the petition was again listed for hearing on 18.6.2013 and orders were reserved.

6. The Commission in its record of the proceedings held on 18.6.2013 directed the petitioner to revise the petition taking into consideration the actual capital expenditure for 2012-13. However, the petitioner by its letter dated 28.6.2013 addressed to the Commission has indicated that it does not intend to file revised petition and prayed that the record of the proceedings be amended to that extent. The prayer of the petitioner is accepted and the tariff of the generating station is determined by this order based on the submissions of the parties and the documents available on record.

7. The first proviso to 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."

8. The respondents, UPPCL and BYPL in their replies have raised preliminary objection and have submitted that since Regulation 6(1) of the 2009 Tariff Regulations provide for truing up of capital expenditure along with the tariff petition to be filed for the next tariff period, the request of the petitioner for carrying out truing up exercise during the current tariff period 2009-14 by this

petition is not maintainable. In response, the petitioner has submitted that it has approached the Commission with an application one time prior to 2013-14 to get the tariff revised consequent to truing-up upto 31.3.2012 actual expenditure as allowed under the Regulations. The matter has been examined. The proviso to Regulation 6(1) of the 2009 Tariff Regulations allow the generating company or the transmission licensee, as the case may be, in its discretion, to file an application before the Commission one more time prior to 2013-14 for revision of tariff. The petitioner, in terms of this proviso has approached the Commission with this petition for revision of tariff. Since the proviso to Regulation 6(1) permit the filing of the application for revision of tariff, the preliminary objection of the respondents are rejected and the petition is maintainable. The respondents, UPPCL, BRPL, BYPL and TDDPL in their replies have submitted that for the purpose of truing-up, the petitioner should be directed to file the complete details of additional capital expenditure for the period 2009-12 duly audited and certified by the auditors in terms of Regulation 6(3) of the 2009 Tariff Regulations. It is noticed that pursuant to the directions of the Commission in the record of the proceedings held on 5.3.2013, the petitioner by its affidavit dated 3.4.2013 has submitted the year-wise/item wise actual additional capital expenditure incurred for the years 2009-10, 2010-11 and 2011-12 duly certified by auditor. Accordingly, we proceed to examine this petition filed by the petitioner in terms of the proviso to Regulation 6(1) for revision of tariff of the generating station for 2009-14 after truing up, as discussed in the subsequent paragraphs.

9. The revised annual fixed charges claimed by the petitioner for the period 2009-14 in this petition are as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	45.76	46.44	47.42	112.56	209.43
Interest on Loan	134.88	131.02	127.21	152.42	178.98
Return on Equity	10326.28	10207.57	10091.18	10125.65	10169.51
Interest on Working Capital	6655.82	6701.80	6765.43	6806.92	6867.48
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63
Total	29443.48	30072.88	30755.80	31710.41	32768.04

Capital cost

10. Regulation 7 (1) (a) of the 2009 Tariff Regulations provides as under:

“7. Capital Cost. (1) Capital cost for a project shall include: (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;”

11. The annual fixed charges claimed in the petition are based on opening capital cost of ₹87974.06 lakh as on 1.4.2009. The petitioner vide its affidavit dated 13.7.2012 has furnished the value of capital cost and liabilities as on 1.4.2009 as per books of accounts in Form-9A. The details of liabilities and capital cost have been reconciled with the information available with the records of the Commission as under:

	<i>(₹ in lakh)</i>	
	As per Form-9A	As per records of Commission
Capital cost as on 1.4.2009, as per books	104562.88	104562.88
Liabilities included above	48.24	48.24

12. Out of the total liabilities of ₹48.24 lakh included in the gross block as on 1.4.2009, the approved capital cost of ₹87974.06 lakh is inclusive of un-discharged liabilities amounting to ₹19.74 lakh (all corresponding to capitalization allowed prior to 1.4.2004). The balance differential liabilities pertain to assets disallowed/exclusions/ not claimed for capitalization.

13. In terms of the last proviso to Regulation 7 of the 2009 Tariff Regulations, the capital cost as on 1.4.2009 works out to ₹87954.32 lakh, after removal of un-discharged liabilities of ₹19.74 lakh. Further, out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has considered reversal of liability of ₹17.54 lakh during the period 2010-11.

Actual/ Projected Additional Capital Expenditure

14. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011, 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) Undischarged liabilities;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in law:

Provided that the details of works included in the original scope of work along with estimates of expenditure, 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 on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

(ii) Change in law;

(iii) Deferred works relating to ash pond or ash handling system in the original scope of work;

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

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

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

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

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

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

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

15. The additional capital expenditure allowed for the generating station during the period 2009-14 by order dated 14.6.2012 is as under:

	Regulation	(₹ in lakh)				
		Actual/Projected Expenditure allowed				
		2009-10	2010-11	2011-12	2012-13	2013-14
Replacement of PGB coolers by plate type heat exchanger.	9(2)(vi)	0.00	0.00	0.00	200.93	0.00
Replacement of condensate pre-heater & LP economizer tubes of WHRB-3		0.00	0.00	0.00	37.40	0.00
Phasing out of Halon Fire Fighting System and replacement with Inergen system.	9(2)(ii)	0.00	241.26	0.00	0.00	0.00
Renovation of Generator Excitation system.	9(2)(vi)	0.00	0.00	0.00	42.5	42.5
Renovation of Generator & Transformer Protection Relays.		0.00	0.00	87.26	0.00	4.40
R&M of Control and Instrumentation System (C&I)		0.00	0.00	695.17	1390.34	693.70
Renovation & Moderation of Gas Turbines and its associated equipments including rotational spares.		0.00	0.00	8611.43	17222.85	8611.43
Total		0.00	241.26	9393.86	18894.02	9352.03

16. The petitioner in this petition has claimed the actual/projected additional capital expenditure for the period 2009-14 as under:

	(₹ in lakh)				
	2009-10 (actual)	2010-11 (actual)	2011-12 (actual)	2012-13 (Projected)	2013-14 (Projected)
Energy Management System	0.00	13.53	0.00	0.00	0.00
Moisture in Oil sensor	0.00	0.00	3.72	0.00	0.00
Replacement of PGB coolers	0.00	0.00	0.00	669.00	78.00
Replacement condensate pre-heater (CPH & LP Economizer tubes of WHRB # 3	0.00	0.00	0.00	82.00	0.00
Phasing out of Halon fire fighting system	0.00	0.00	0.00	247.00	0.00
Renovation of generator & transformer protection relays	0.00	0.00	0.00	0.00	118.00
Renovation of generator Excitation system	0.00	0.00	0.00	0.00	80.40
Total	0.00	13.53	3.72	998.00	276.40

17. 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 per audited balance sheet as on 1.4.2009 (A)	104562.88	106110.50	107773.64
2	Closing Gross Block as per audited balance sheet as on 31.3.2010 (B)	106110.50	107773.64	108709.33
3	Addition during the year 2009-10 C=(B-A) (as per books)	1547.62	1663.14	935.69
4	Liabilities included in (3) above	149.02	3.51	32.86
5	Additional Capital expenditure on cash basis (D)	1398.60	1659.63	902.83
6	Exclusions (E)	1398.60	1646.09	899.11
7	Net Additional capital expenditure claimed F=(D-E)	0.00	13.53	3.72

Exclusions

18. In the first instance, we consider the exclusions for the years 2009-10, 2010-11 and 2011-12 under different heads of claim as under:

2009-10

19. The summary of exclusions from the books of accounts claimed for the purpose of tariff is as under:

(₹ in lakh)			
Name of work	Capitalization / de-capitalization	Liabilities in additional capital expenditure	Net additional capital expenditure on cash basis
Capital spares	2366.17	149.02	2217.15
De-capitalization of spares	(-) 825.93	0.00	(-) 825.93
Miscellaneous Bought Out Assets (MBOA)	7.38	0.00	7.38
Total Exclusions	1547.62	149.02	1398.60

Capital spares

20. The petitioner has procured capital spares amounting to ₹2217.15 lakh excluding liabilities for ₹149.02 lakh during 2009-10 for maintaining stock of necessary spares. As capitalization of spares over and above the initial spares procured after the cut-off-date are not allowed for the

purpose of tariff, and since they form part of the O&M expenses when consumed, the exclusion of ₹2217.15 lakh under this head is in order and is allowed.

De-capitalization of spares

21. The petitioner has de-capitalized capital spares amounting to ₹825.93 lakh in books of account during 2009-10 on the ground that these spares have become unserviceable. The petitioner vide its affidavit dated 11.10.2012 has submitted the details of de-capitalization of spares. It is observed that out of ₹825.93 lakh spares de-capitalized, spares amounting to ₹732.12 lakh were allowed in tariff as part of the capital cost and ₹93.81 lakh have not been claimed and do not form part of tariff. Hence, de-capitalization of spares for ₹732.12 lakh which were allowed in tariff has not been allowed under exclusion. Also, the de-capitalization of spares for ₹93.81 lakh which were not claimed and which did not form part of the capital cost of the generating station for the purpose of tariff, has been allowed under exclusion.

Capitalization of Miscellaneous Bought Out Assets (MBOA)

22. The petitioner has capitalized ₹ 7.38 lakh towards MBOA items in books of accounts during 2009-10. Since capitalization of minor assets after the cut-off-date is not allowed, the exclusion of ₹7.38 lakh is in order and is allowed.

23. Based on the above, the details of exclusions claimed and allowed for 2009-10 are summarized as under:

	<i>(₹ in lakh)</i>
Exclusions claimed on cash basis (B)	1398.60
Exclusions allowed (A)	2130.72
Exclusions not allowed (A-B)	732.12

2010-11

24. The summary of exclusions from the books of accounts claimed for the purpose of tariff is as under:

<i>(₹ in lakh)</i>			
Name of work	Capitalization / De-capitalization	Liabilities in Additional capital expenditure and outstanding at the end of year	Net Additional capital expenditure on cash basis
Capital spares	1871.69	3.51	1868.18
De-capitalization of spares	(-) 200.70	0.00	(-) 200.70
Miscellaneous Bought Out Assets	2.27	0.00	2.27
De-capitalization of Miscellaneous Bought Out Assets	(-) 6.12	0.00	(-) 6.12
Reversal of liability	(-) 17.54	0.00	(-) 17.54
Total Exclusions	1649.60	3.51	1646.09

Capital spares

25. The petitioner has procured spares amounting to ₹1868.18 lakh excluding liability of ₹3.51 lakh during 2010-11 for maintaining stock of necessary spares. As capitalization of spares over and above the initial spares procured after the cut-off-date are not allowed for the purpose of tariff, and since they form part of the O&M expenses when consumed, the exclusion of ₹1868.18 is in order and is allowed under this head.

De-capitalization of spares

26. The petitioner has de-capitalized capital spares amounting to ₹200.70 lakh in books of account during 2010-11 on the ground that these spares have become unserviceable. The petitioner vide affidavit dated 11.10.2012 has submitted the details of de-capitalization of spares. It is observed from the details of de-capitalization of spares that out of ₹200.70 lakh de-capitalized, spares amounting to ₹44.87 lakh were allowed as part of the capital cost in tariff and spares amounting to ₹155.83 lakh were not claimed and hence do not form part of tariff. Hence, de-capitalization of spares for ₹44.87 lakh which were allowed in tariff has not been allowed under exclusion and the de-capitalization of spares for ₹155.83 lakh which were not claimed and which do not form part of the capital cost of the generating station for the purpose of tariff, has been allowed under exclusion.

Capitalization of Miscellaneous Bought Out Assets (MBOA)

27. The petitioner has capitalized ₹2.27 lakh towards MBOA items in books of accounts during 2010-11. Since capitalization of minor assets after the cut-off-date is not allowed, the exclusion of ₹2.27 lakh is in order and is allowed.

De-capitalization of Miscellaneous Bought out Assets (MBOA) items

28. The petitioner has excluded the de-capitalization of ₹6.12 lakh towards MBOA in books of accounts during 2010-11 as the same has been rendered unserviceable. The petitioner vide its affidavit dated 11.10.2012 has submitted the details of de-capitalization of MBOA items. It is observed from the details of de-capitalization of MBOA items that out of ₹6.12 lakh, MBOA items amounting to ₹5.78 lakh were allowed as part of the capital cost in tariff and the balance MBOA items for ₹0.33 lakh have not been claimed and do not form part of tariff. Hence, de-capitalization of spares for ₹5.78 lakh which were allowed in tariff has not been allowed under exclusion and the de-capitalization of spares for ₹0.33 lakh which were not claimed and which do not form part of the capital cost of the generating station for the purpose of tariff, has been allowed under exclusion.

Reversal of liability

29. The petitioner has also excluded ₹17.54 lakh during 2010-11 towards reversal of liability in respect of Siemens (OEM) prior to 1.4.2004 and the same has been allowed.

30. Based on the above, the details of exclusions claimed and allowed for 2010-11 are summarized as under:

<i>(₹ in lakh)</i>	
Exclusions claimed (B)	1646.09
Exclusions allowed (A)	1696.75
Exclusions not allowed (A-B)	50.66

2011-12

31. The summary of exclusions from the books of accounts claimed for the purpose of tariff is as under:

(₹ in lakh)

Name of work	Capitalization / De-capitalization	Liabilities in Additional capital expenditure and outstanding at the end of year	Net Additional capital expenditure on cash basis
Capital spares	2443.85	31.52	2412.33
De-capitalization of spares	(-) 1508.91	0.00	(-) 1508.91
Inter unit transfer	(-) 0.50	0.00	(-) 0.50
Miscellaneous Bought Out Assets	7.36	1.33	6.03
De-capitalization of Miscellaneous Bought Out Assets	(-) 9.84	0.00	(-) 9.84
Total Exclusions	931.96	32.85	899.11

Capital spares

32. The petitioner has procured capital spares amounting to ₹ 2412.33 lakh excluding liability of ₹31.52 lakh during 2011-12 for maintaining stock of necessary spares. As capitalization of spares over and above the initial spares procured after the cut-off-date are not allowed for the purpose of tariff, and since they form part of the O&M expenses when consumed, the exclusion of ₹2412.33 lakh is in order and is allowed as exclusion.

De-capitalization of spares

33. The petitioner has de-capitalized capital spares amounting to ₹1508.91 lakh in books of account during 2010-11 as the same has been rendered unserviceable. The petitioner vide affidavit dated 11.10.2012 has submitted the details of de-capitalization of spares. It is observed from the details of de-capitalization of spares that out of ₹1508.91 lakh spares de-capitalized, spares amounting to ₹190.77 lakh were allowed as part of the capital cost in tariff and spares amounting to ₹1318.14 lakh have not been claimed and do not form part of tariff. Hence, de-capitalization of spares for ₹190.77 lakh which were allowed in tariff has not been allowed under exclusion and the de-capitalization of spares for ₹1318.14 lakh which were not claimed and which do not form part of the capital cost of the generating station for the purpose of tariff, has been allowed under exclusion.

Capitalization of Miscellaneous Bought out Assets (MBOA)

34. The petitioner has capitalized ₹6.02 lakh towards MBOA items in books of accounts excluding liability of ₹1.33 lakh during 2011-12. Since the capitalization of minor assets is not allowed after cut-off-date, the exclusion of ₹7.36 lakh is in order and is allowed.

De-capitalization of Miscellaneous Bought out Assets (MBOA) items

35. The petitioner has excluded de-capitalization of ₹9.84 lakh towards MBOA in books of accounts during 2011-12 as the same has been rendered unserviceable. The prayer of the petitioner for exclusion of de-capitalized MBOA items is justified if the de-capitalized MBOA items are the ones which were disallowed for the purpose of tariff. However, as per affidavit dated 11.10.2012, these MBOA items were part of the capital cost of the generating station for the purpose of tariff. Hence, exclusion of negative entries on account of de-capitalization of these MBOA items rendered unserviceable is not justifiable and has accordingly not been allowed for the purpose of tariff.

Inter-Unit transfer

36. The petitioner has excluded an amount of ₹0.50 lakh towards inter-unit transfer of residential furniture pertaining to head "Project". Being inter-unit transfer of a temporary nature, the exclusion of ₹0.50 lakh is allowed.

37. Based on the above, the details of exclusions claimed and allowed for 2011-12 are summarized as under:

	<i>(₹ in lakh)</i>
Exclusions claimed (B)	899.11
Exclusions allowed (A)	1099.72
Exclusions not allowed (A-B)	200.61

Additional capital expenditure for 2009-10, 2010-11 and 2011-12

38. The petitioner's claim for actual additional capital expenditure for 2009-12 has been examined and the admissibility of additional capital expenditure is discussed below:

(a) Energy Management System (EMS): The petitioner has claimed actual expenditure of ₹13.53 lakh during 2010-11 towards Energy Management System under the Energy Conservation System in order to monitor the Auxiliary Power Consumption of the generating station. The petitioner in its affidavit dated 28.3.2013 has submitted that Energy Management System is a new scheme and has been inadvertently clubbed with approved schemes in Form-9. Considering the fact that the benefit of reduction in auxiliary power consumption is not passed on to the beneficiaries during the period 2009-14, we are of the view that said expenditure should be borne by the petitioner, Hence, the expenditure claimed is not allowed on this count.

(b) Moisture Oil sensor: The petitioner has claimed actual expenditure of ₹3.72 lakh during the year 2011-12 towards moisture in oil sensor to monitor the moisture in transformer as on line device. The petitioner in its affidavit dated 28.3.2013 has submitted that Moisture Oil Sensor is a new scheme and has been inadvertently clubbed with approved schemes in Form-9. Since the asset is minor in nature, the expenditure of ₹3.72 lakh has not been allowed.

39. Based on the above, the additional capital expenditure allowed for the period 2009-12 is as under:

	(₹ in lakh)		
	2009-10	2010-11	2011-12
Energy Management system	-	0.00	-
Moisture in oil sensor-Domino	-	-	0.00
Net additional capital expenditure allowed	0.00	0.00	0.00

Projected Additional Capital Expenditure during 2012-14

40. The petitioner vide its affidavit dated 3.4.2013 has submitted the item-wise/year-wise details of actual capital expenditure duly certified by the auditors. The projected additional capital expenditure claimed for the years 2012-13 and 2013-14 are discussed below:

Replacement of PGB coolers by plate type heat exchanger

41. In order dated 14.6.2012 in Petition No. 224/2009, the Commission had allowed an expenditure of ₹274.00 lakh towards the replacement of PGB coolers by plate type heat exchanger under Regulation 9(2)(ii) of the 2009 Tariff Regulations. The petitioner in this petition has claimed projected capital expenditure of ₹669.00 lakh during 2012-13 and ₹78.00 lakh during 2013-14 towards replacement of PGB coolers by plate type heat exchanger, as against the allowed expenditure of ₹274.00 lakh. The petitioner vide its affidavit dated 20.11.2012 has submitted that the estimate of PGB coolers was made based on the budgetary offer collected in 2004 and the same has been recommended by CEA. However, actual award value is ₹747.00 lakh based on open tendering during 2012. Accordingly, the projected expenditure has been claimed by the petitioner in this petition, based on the actual price discovered through open tendering process. It is noticed that the petitioner in its affidavit dated 20.11.2012 has clarified that the GT R&M package award has shifted and accordingly considering the execution time, the work of R&M of GTs is likely to be commissioned and capitalized beyond 31.3.2014. We also notice that the petitioner had made similar submissions in the review petition No. 21/2012 filed before the Commission against the order dated 14.6.2012 in Petition No. 224/2009, which has been considered and disposed of by the Commission on 1.5.2013. In view of the deferment of R&M activities for GTs & C&I beyond 31.3.2014 (during the next tariff period), the expenditure claimed for 2012-14 is not allowed to be capitalized. However, the same would be considered during the next tariff period in accordance with law.

Replacement of Condensate Pre Heater & LP Economizer tubes of WHRB- 3

42. In order dated 14.6.2012 in Petition No. 224/2009, the Commission had allowed the projected capitalization of ₹37.40 lakh, considering the de-capitalization value of ₹13.60 lakh during 2012-13 under Regulation 9(2)(vi) of the 2009 Tariff Regulations. The petitioner vide its affidavit dated 20.11.2012 has submitted that the scheme of Replacement Condenser Pre-heater & LP Economiser tubes of WHRB #3 is under execution and the actual expenditure based on

actual award is likely to be much lower than projected. Accordingly, the petitioner has submitted that an expenditure of ₹10.40 lakh may be considered in place of projected expenditure of ₹82.00 lakh. It appears that the petitioner has replaced some finned tubes in the heat transfer surface of CPH & LP Economiser considering the expenditure of ₹10.40 lakh actually incurred. Moreover, the replacement of a small portion of tubes cannot be said to be R&M work. It appears from the submission of the petitioner that the work was finally undertaken as a part of O&M work. In view of this, the expenditure claimed has not been allowed to be capitalized.

Phasing out of Halon system Fire Fighting System

43. The petitioner has submitted that out of the projected expenditure of ₹329.00 lakh claimed during 2010-11, the Commission by its order dated 14.6.2012 in Petition No. 224/2009 had allowed expenditure of ₹241.26 lakh towards the replacement of Halon system for protection of ozone layer considering the de-capitalization value of ₹87.74 lakh under Regulation 9(2)(ii) of the 2009 Tariff Regulations. The petitioner vide its affidavit 20.11.2012 has now submitted that the scheme of phasing out of Halon Fire Fighting has now been awarded for ₹247.00 lakh and based on actual wad, the projected expenditure has now been shifted to 2012.13 and accordingly projected capitalization has been revised. As the asset is required as statutory compliance under National Fire Protection Association Standard on Clean Agent Fire Extinguishing system (NFPA-2001), the claim of the petitioner for ₹247.00 is allowed along with the corresponding de-capitalization. It is noticed that the petitioner has not submitted the de-capitalization value of Halon system. However, from the de-capitalization value of GT components on which R & M has been carried out, it is found that the estimated value of original component is about 26.67% of the value of new assets. Accordingly, the de-capitalization value of Halon system works out to ₹65.87 lakh (247.00 x 0.2667). In view of this, the capitalization of ₹181.13 lakh (247.00-65.87) is allowed under Regulation 9(2)(ii) of the 2009 Tariff Regulations.

Renovation of Generator & Transformer Protection Relays

44. In order dated 14.6.2012 in Petition No.224/2009, the Commission had allowed the capitalization of ₹119 lakh during 2011-12 and ₹60 lakh during 2013-14 towards the renovation of generator & transformer protection relays. The petitioner in this petition has claimed the projected expenditure of ₹118.00 lakh during 2013-14 for Renovation of Generator & Transformer Protection Relays and has vide affidavit dated 20.11.2012 submitted that as per the revised schedule, this work would be taken up now beyond 2013-14 along with Main GT R&M package to minimize the unit outage period. In view of this, the expenditure of Rs 118.00 lakh has not been allowed during the tariff period.

Renovation of Generator Excitation system

45. In order dated 14.6.2012 in Petition No. 224/2009, the Commission had allowed capitalization of an expenditure of ₹58.00 lakh each during the years 2012-13 and 2013-14 respectively towards the renovation of generator excitation system. The petitioner in this petition has claimed expenditure of ₹80.40 lakh during 2013-14 for Renovation of Generator Excitation System. In view of the deferment of the R&M activities for GTs & C&I beyond 31.3.2014, this expenditure has not been considered during 2009-14.

46. Based on the above discussions, the additional capital expenditure allowed for the period 2009-10 to 2011-12 and the projected additional capital expenditure for the period 2012-13 and 2013-14 is as under:

							(₹ in lakh)
Sl. No.		2009-10 (actual)	2010-11 (actual)	2011-12 (actual)	2012-13 (Projected)	2013-14 (Projected)	Total
1	Energy Management System	0.00	0.00	0.00	0.00	0.00	0.00
2	Moisture in oil sensor-Domino	0.00	0.00	0.00	0.00	0.00	0.00
3	Replacement of PGB coolers by plate type heat exchanger	0.00	0.00	0.00	0.00	0.00	0.00

4	Replacement of Condensate Pre Heater & LP Economizer tubes of WHRB- 3	0.00	0.00	0.00	0.00	0.00	0.00
5	Phasing out of Halon Fire Fighting system	0.00	0.00	0.00	181.13	0.00	181.13
6	Renovation of Generator Excitation system	0.00	0.00	0.00	0.00	0.00	0.00
7	Renovation of Generator & Transformer Protection relays	0.00	0.00	0.00	0.00	0.00	0.00
11	Total	0.00	0.00	0.00	181.13	0.00	181.13
14	Exclusions not allowed	732.12	50.66	200.61	0.00	0.00	983.39
15	Net Additional capitalization allowed (13-14)	(-) 732.12	(-) 50.66	(-) 200.61	181.13	0.00	(-) 802.26

Balance useful life of the generating station

47. The Commission in paragraph 43 and 44 of the order dated 14.6.2012 in Petition No. 224/2009 had decided as under:

" Balance Useful life of the generating station after R&M of Gas Turbines

43. The details of the date of commercial operation of the different units of the generating station, the period of operation up to 1.4.2009 and 1.4.2014 (completion of major R&M works) and the extended life after R&M of GTs and their weighted average period of operation on above dates and weighted average life are as under:

(₹in lakh)

Units	Capacity (MW)	COD	Elapsed life up to 31.3.2009	Elapsed life up to 31.3.2014	Useful life after extension of life by 15 years for GTs	Balance life as on	
						1.4.2009	1.4.2014
GT-I	130.19	1.5.1992	16.92	21.92	36.92		
GT-II	130.19	1.6.1992	16.83	21.83	36.83		
GT-III	130.19	1.8.1992	16.67	21.67	36.67		
GT-IV	130.19	1.12.1992	16.33	21.33	36.33		
ST-I	154.51	1.8.1996	12.67	17.67	25.00		
ST-II	154.51	1.4.1997	12.00	17.00	25.00		
Total	829.78		15.07	20.07	32.33	17.27	12.27

44. The weighted average of the elapsed life (period of operation) of the generating station, as on 1.4.2009 works out to 15.07 years. The major expenditure on R&M of the GTs are allowed for enhancing the life of the generating station by 1,00,000 Equivalent Operating Hours (EOH) which translates into 15 years, considering the low PLF of the generating station. The major part of R&M works i.e. complete R&M work of all GTs would be completed by 31.3.2014. The weighted average of the period of operation of the generating station as on 1.4.2014 works out to 20.07 years. Considering the life extension of GTs by 15 years from 1.4.2014, the weighted average life of the generating station after R&M of GTs works out to 32.33 years in relation to the date of commercial operation of the respective units of the generating station, as stated above. Accordingly, the balance useful life of the generating station works out to 17.27 years as on 1.4.2009 and 12.27 years on 1.4.2014."

48. Thus, the weighted average life of the generating station after R&M from the date of commercial operation (COD) of the generating station was worked out as 32.33 years. The weighted average elapsed life of gas based station was 15.07 years as on 31.3.2009 and 20.07 years as on 31.3.2014. Accordingly, the balance useful life gas station after R&M was worked out as 17.27 years (32.33-15.07) as on 1.4.2009 and 12.27 years (32.33-20.07) as on 1.4.2014 respectively.

49. Against this, the petitioner had filed Review Petition No. 21/2012 before the Commission and had submitted as under:

"7. Without prejudice to its right to challenge the conversion of 1,00,000 - EOH to 15 years, the petitioner submits that taking extended life for calculation of balance life from 2009-10 itself and calculating depreciation based on extended balance life is not logical. It is submitted that Hon'ble Commission has calculated the extended life of GTs post R&M i.e. 31.3.2014. The period prior to R&M, therefore, is period before extension of life through R&M, ought to have been based on the normative life of 25 years as per Tariff Regulations 2009. The use of extended balance life post R&M is also contrary to the Hon'ble Commission's stipulation in the order which clearly specify that the life will be extended after completion of R&M i.e. on 31.3.2014. The petitioner will suffer as this result in lower recovery of depreciation during the tariff period 2009-14 than the petitioner is entitled to as Tariff Regulations 2009. It is submitted that this error may be corrected and the petitioner may be allowed depreciation during 2009-14 tariff period taking balance life based on normative life of 25 years."

50. During the pendency of this review petition, the petitioner vide its affidavit dated 9.4.2013 submitted that it has filed true up petition (Petition No.16/GT/2013) before the Commission and some of the schemes had been made part of the said true up petition. It was also submitted that other schemes namely, R&M of GTs and R&M of C&I equipments were presently not expected to be capitalized by March, 2014 and will be claimed as and when executed and the expenditure capitalized. It had further submitted that since R&M has now been postponed to the tariff period 2014-19, the issue of applying post R&M life to pre-R&M period for the purpose of depreciation calculation no longer survives in case of this generating station during the current tariff period. It had therefore prayed that the issue of pre-R&M life for calculation of depreciation may be allowed in the true-up petition. In consideration of this, the Commission by its order dated 1.5.2013 had disposed of the said review petition observing as under:

"10. The submissions of the petitioner in its affidavit dated 9.4.2013 are taken on record. In consideration of submissions of the petitioner and since the expenditure on R&M of GTs and R&M of C&I equipments have been revised by the petitioner and are likely to materialize during the next tariff period i.e 2014-19, the issue of revision of the balance useful life of the generating station for the purpose of depreciation as claimed by the petitioner in this review petition no longer survives. Accordingly, review of order dated 14.6.2012 on this ground is dismissed as infructuous. However, the question of calculation of the balance useful life of the generating station based on the revised phasing of expenditure would however be considered by the Commission at the time of disposal of the True-up Petition No. 16/GT/2013, based on the submissions of the parties there under."

51. The petitioner has submitted that the life of the generating station has been considered in line with the prayer made in the Review Petition No. 21/2012. In the above background and taking into consideration the additional submissions of the petitioner in its affidavit dated 20.11.2012 and rejoinder affidavit dated 28.3.2013 (to the reply of respondent, BRPL) that based on current estimates, the projection under R&M of GTs and R&M of C&I equipments are likely to be commissioned and capitalized beyond 31.3.2014 and that the projected expenditure has been revised accordingly, we are of the view that the full benefits due to R&M could only be passed on to the respondent/beneficiaries during the next tariff period. Consequent upon this, the issue of calculation of revised balance useful life of the gas station for the purpose of depreciation no longer survives. Considering the weighted average of elapsed life of 15.07 years as on 31.3.2009 and the life of the gas based generating station as 25 years as per provisions of the 2009 Tariff Regulations, the residual life of the gas station as on 31.3.2009 would be 9.93 years (25-15.07 years). Hence, the balance useful life of the generating station at the beginning of each year of the period 2009-14 is as under:

2009-10	2010-11	2011-12	1012-13	2013-14
9.93 years	8.93 years	7.93 years	6.93 years	5.93 years

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	87954.32	87222.20	87185.07	86984.46	87165.59
Projected additional capital expenditure	(-) 732.12	(-) 50.66	(-) 200.61	181.13	0.00
Closing Capital cost	87222.20	87171.54	86970.93	87152.06	87152.06
Average Capital cost	87588.26	87196.87	87071.24	87061.50	87152.06

Debt-Equity Ratio

53. 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.

54. Accordingly, gross loan and equity amounting to ₹43987.03 lakh each, as considered in order dated 14.6.2012 in Petition No. 224/2009 has been considered as gross loan and equity as on 1.4.2009. However, un-discharged liabilities amounting to ₹19.74 lakh included in the capital cost as on 1.4.2009 has been adjusted in the debt equity ratio of 50:50. As such, the gross normative loan and equity as on 1.4.2009 is revised to ₹43977.16 lakh each. Further, the admitted actual/ projected additional expenditure as above has been allocated in debt-equity ratio of 70:30. This is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

55. Regulation 15 of the 2009 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:

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

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.”

56. Accordingly, return on equity has been worked out @23.481% for 2009-10, 23.210% for 2010-11, and 22.944% from 2011-12 onwards on the normative equity after accounting for the admitted additional capital expenditure.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	43977.16	43757.53	43742.33	43682.14	43736.48
Addition of Equity due to additional capital expenditure	(-) 219.64	(-) 15.20	(-) 60.18	54.34	0.00
Normative Equity-Closing	43757.53	43742.33	43682.14	43736.48	43736.48
Average Normative Equity	43867.34	43749.93	43712.24	43709.31	43736.48
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year 2008-09	33.990%	33.218%	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)- (annualised)	10300.49	10154.36	10029.34	10028.66	10034.90

Interest on loan

57. 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.

58. Interest on loan has been worked out as under:

(a) The gross normative loan after adjusting un-discharged liabilities of ₹43977.16 lakh as on 1.4.2009 has been considered.

(b) Cumulative repayment as on 31.3.2009 amounting to ₹42516.04 lakh as considered in order dated 14.6.2012 in Petition No.224/2009 has been considered as cumulative repayment as on 1.4.2009. However, after taking into account the proportionate adjustment to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised to ₹42506.50 lakh.

(c) Accordingly, the net normative opening loan as on 1.4.2009 works out to ₹1470.66 lakh.

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

(e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2009-14. Further, proportionate adjustment has been made to the repayments on account of de-capitalization considered in the projected additional capital expenditure approved above.

(f) The petitioner has considered originally contracted GOI loans as actual loan portfolio for the purpose of calculating weighted average rate of interest. However, these GOI loans were refinanced with Bonds earlier. As such, these Bonds represent the actual loan portfolio as existing on 01.04.2009. Accordingly, in line with the provisions of the regulation 16 (5) stated above, weighted average rate of interest has been calculated considering the actual loan portfolio comprising of Bonds Series existing as on 1.4.2009.

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

		(₹ in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional loan in order dated 14.06.2012 in Petition No.224/2209	43987.03	-	-	-	-	-
Less: Adjustment of un-discharged liabilities deducted as on 1.4.2009	9.87	-	-	-	-	-
Gross Notional loan for the purpose of tariff in the instant petition	43977.16	43977.16	43464.68	43429.22	43288.79	43415.58
Cumulative Repayment of Loan upto previous year	42516.04	-	-	-	-	-
Less: Adjustment to cumulative repay on account of un-discharged liabilities deducted as on 1.4.2009	9.54	-	-	-	-	-
Cumulative Repayment of loan considered now	42506.50	42506.50	42006.55	42026.44	41922.40	41937.46
Net Opening loan	1470.66	1470.66	1458.13	1402.77	1366.39	1478.12
Addition due to additional Capitalization		(-) 512.48	(-) 35.46	(-) 140.43	126.79	0.00
Repayment of Loan during the period		12.53	46.87	36.38	61.17	84.91
Less: Repayment adjustment on account of de-capitalization		512.48	35.46	140.43	46.11	0.00
Add: Repayment adjustment on a/c of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009		0.00	8.47	0.00	0.00	0.00
Repayment of loan during the period (Net)		(-) 499.95	19.89	(-) 104.04	15.06	84.91
Net Closing loan		1458.13	1402.77	1366.39	1478.12	1393.21
Average loan		1464.39	1430.45	1384.58	1422.26	1435.66
Weighted Average Rate of Interest on loan		9.3160%	9.3160%	9.3160%	9.3160%	9.3160%
Interest on loan		136.42	133.26	128.99	132.50	133.75

Depreciation

60. 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.”

61. The cumulative depreciation amounting to ₹78660.75 lakh as on 31.3.2009 as considered in order dated 14.6.2012 in Petition No. 224/2009 has been considered as on 1.4.2009. However, proportionate adjustment has been made to the cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹78643.10 lakh. Further, the value of freehold land as considered in the said input as on 31.3.2009 is ₹68.76 lakh. As stated, the used life of the generating station as on 1.4.2009 has been worked out as 9.93 years and the balance depreciable value for each year has been spread over the remaining useful life of the generating station for the purpose of calculating depreciation for the respective years. Further, proportionate adjustment has

been made to the cumulative depreciation on account of de-capitalization of assets considered for the purpose of tariff. The necessary calculations in support of depreciation are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	87954.32	87222.20	87171.54	86970.93	87152.06
Closing capital cost	87222.20	87171.54	86970.93	87152.06	87152.06
Average capital cost	87588.26	87196.87	87071.24	87061.50	87152.06
Depreciable value @ 90%	78767.55	78415.30	78302.23	78293.46	78374.97
Remaining useful life at the beginning of the year	9.93	8.93	7.93	6.93	5.93
Balance depreciable value	124.45	418.58	288.51	423.92	503.54
Depreciation for the period	12.53	46.87	36.38	61.17	84.91
Cumulative depreciation at the end	78655.63	78043.60	78050.10	77930.72	77956.35
Less: Cumulative depreciation reduction due to de-capitalization	658.91	45.56	180.55	59.28	0.00
Add: Cumulative depreciation adjustment on account of discharges	0.00	(-) 15.68	0.00	0.00	0.00
Cumulative depreciation after adjustment due to de-capitalization (at the end of the period)	77996.72	78013.71	77869.55	77871.43	77956.35

O&M Expenses

62. The Operation & Maintenance expenses allowed by order dated 14.6.2012 in Petition No. 224/2009 has been considered.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63

Interest on Working Capital

63. Regulation 18 (1) (b) of the 2009 Tariff Regulations provides that the working capital for Open-cycle Gas Turbine/Combined Cycle thermal generating stations shall cover:

“(i) Fuel cost for one month corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(ii) Liquid fuel stock for ½ month corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel.

(iii) Maintenance spares @ 30% of operation and maintenance expenses specified in regulation 19.

(iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel, and

(v) Operation and maintenance expenses for one month

64. Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:

"Rate of interest on working capital shall be on normative basis and shall be considered as follows:

(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.

(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up

65. The fuel components and energy charges (for two months) as worked out in order dated 14.6.2012 in Petition No. 224/2009 as shown below has been considered.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Cost for one month	13459.52	13459.52	13496.40	13459.52	13459.52
Liquid fuel stock for 1/2 month	4339.01	4339.01	4350.89	4339.01	4339.01
Energy charges for 2 months	26919.05	26919.05	26992.80	26919.05	26919.05

66. Maintenance spares as allowed in order dated 14.6.2012 in Petition No. 224/2009 has been considered for the purpose of tariff as under:.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	3684.22	3895.82	4117.37	4353.86	4602.79

67. 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-2 months	26919.05	26919.05	26992.80	26919.05	26919.05
Fixed Charges- 2 months	4897.45	5003.53	5113.85	5256.42	5409.54
Total	31816.50	31922.58	32106.65	32175.46	32328.58

O&M Expenses

68. O&M expenses for 1 month for the purpose of working capital are allowed as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
O& M for 1 month	1023.40	1082.17	1143.71	1209.40	1278.55

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

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel stock (APM & RLNG) – 1 month	13459.52	13459.52	13496.40	13459.52	13459.52
Liquid fuel stock – 1/2 month	4339.01	4339.01	4350.89	4339.01	4339.01
Maintenance Spares	3684.22	3895.82	4117.37	4353.86	4602.79
O&M expenses – 1 month	1023.40	1082.17	1143.71	1209.40	1278.55
Receivables – 2 months	31816.50	31922.58	32106.65	32175.46	32328.58
Total working capital	54322.65	54699.10	55215.02	55537.25	56008.46
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Interest on working capital	6654.52	6700.64	6763.84	6803.31	6861.04

Annual Fixed charges for 2009-14

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

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	12.53	46.87	36.38	61.17	84.91
Interest on Loan	136.42	133.26	128.99	132.50	133.75
Return on Equity	10300.49	10154.36	10029.34	10028.66	10034.90
Interest on Working Capital	6654.52	6700.64	6763.84	6803.31	6861.04
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63
Total	29384.71	30021.19	30683.11	31538.50	32457.23

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

72. The Energy Charge Rate as worked out in order dated 14.6.2012 in Petition No. 224/2009 shall remain unchanged.

73. The difference in the annual fixed charges determined by order dated 14.6.2012 and those determined by this order shall be adjusted in accordance with the proviso to Regulation 5 (3) of the 2009 Tariff Regulations.

74. Petition No. 16/GT/2013 is disposed of in terms of the above.

Sd/-
[M.Deena Dayalan]
Member

Sd/-
[V. S. Verma]
Member