

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 301/GT/2014**

**Coram:**

Shri Gireesh B. Pradhan, Chairperson  
Shri A.K.Singhal, Member  
Shri A.S.Bakshi, Member  
Dr. M.K.Iyer, Member

**Date of Hearing: 08.10.2015**

**Date of Order: 07.12.2015**

**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 Commission's order dated 14.6.2012 in Petition No.224 /2009 and 16.7.2013 in Petition No.16/GT/2013

**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, Ashok Marg,  
Lucknow – 226001
2. Jaipur Vidyut Vitaran Nigam Ltd.,  
Vidyut Bhawan, Janpath,  
Jaipur – 302005
3. Jodhpur Vidyut Vitaran Nigam Ltd.  
New Power House, Industrial Area,  
Jodhpur-342003
4. Ajmer Vidyut Vitaran Nigam Ltd  
Old Power House,  
Hatthi Bhatta, Jaipur Road,  
Ajmer-305001(Rajasthan)
5. Tata Power Delhi Distribution Limited  
33 kV Sub Station Building,  
Hudson Lane, Kingsway Camp  
New Delhi
6. BSES Rajdhani Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi – 110019

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

8. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector, 6  
Panchkula – 134109

9. Punjab State Power Corporation Limited  
The Mall, Secretariat Complex,  
Patiala – 147001

10. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House,  
Shimla-171004

11. Power Development Department,  
New secretariat,  
Jammu-180001 (J&K)

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

13. Uttarakhand Power Corporation Ltd,  
Urja Bhawan, Kanwali Road,  
Dehradun-248001(Uttarakhand)

.....Respondents

**Parties present:**

**For Petitioner:**

Shri Ajay Dua, NTPC  
Shri S.K.Jain, NTPC  
Shri T. Vinodh Kumar, NTPC  
Shri Rajeev Choudhary, NTPC

**For Respondents:**

Shri Pradeep Misra, Advocate, Rajasthan Discoms  
Shri Manish Garg, UPPCL

**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 based on trueing up exercise in terms of Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).

2. The generating station with a capacity of 829.78 MW comprises of four Gas Turbine (GT) units of 130.19 MW each and two Steam Turbine (ST) unit of 154.51 MW. The dates of commercial operation of the different units of the generating station are as under:

	<b>Date of commercial operation (COD)</b>
GT-I	1.5.1992
GT-II	1.6.1992
ST-I	1.8.1996
GT-III	1.8.1992
GT-IV	1.12.1992
ST-II/ Generating station	1.4.1997

3. 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. Thereafter, by order dated 16.7.2013 in Petition No.16/GT/2013, the Commission had revised the annual fixed charges of the generating station for 2009-14 considering the capital cost of ` 87954.32 lakh as on 1.4.2009 after deduction of un-discharged liabilities of ` 19.74 lakh. Accordingly, the annual fixed charges allowed by the said order dated 16.7.2013 was as under:

	<i>( in lakh)</i>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
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
<b>Total</b>	<b>29384.71</b>	<b>30021.19</b>	<b>30683.11</b>	<b>31538.50</b>	<b>32457.23</b>

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

*"6. Truing up of Capital Expenditure and Tariff*

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

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

5. The petitioner vide affidavit dated on 8.8.2014 has filed this petition based on the admitted capital cost as on 31.3.2009 and the actual expenditure incurred during the tariff period 2009-14. It

has also revised Form-9 indicating the year-wise actual additional capital expenditure, the impact on fixed charges due to discharge of liabilities during 2009-14, out of the un-discharged liabilities excluded from the capital cost as on 1.4.2009 and the approved/claimed capital works for the period 2009-13 (year-wise). Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2009-14 in this petition are as under:

### Capital Cost

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	87954.32	87222.20	87171.54	86970.93	86995.53
Add: Additional Capital Expenditure	(-) 732.12	(-) 50.66	(-) 200.61	24.60	0.00
<b>Closing capital cost</b>	<b>87222.20</b>	<b>87171.54</b>	<b>86970.93</b>	<b>86995.53</b>	<b>86995.53</b>
<b>Average capital cost</b>	<b>87588.26</b>	<b>87196.87</b>	<b>87071.24</b>	<b>86983.23</b>	<b>86995.53</b>

### Annual Fixed charges

	(` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	12.53	46.87	36.39	51.01	60.97
Interest on Loan	140.29	137.04	132.64	131.07	128.32
Return on Equity	10300.49	10154.36	10029.34	10023.28	10258.74
Interest on Working Capital	6654.61	6700.72	6763.92	6802.96	6865.09
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63
<b>Total</b>	<b>29388.66</b>	<b>30025.04</b>	<b>30686.84</b>	<b>31521.17</b>	<b>32655.75</b>

6. The petitioner has filed the additional information in compliance with the directions of the Commission and has served copies of the same on the respondents. The respondents, UPPCL and BRPL have filed replies in the matter and the petitioner has filed its rejoinder to the same. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions of the parties and the documents available on records as stated in the subsequent paragraphs.

### CAPITAL COST

7. 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."*

8. The annual fixed charges claimed in the petition is based on opening capital cost of ₹ 87974.06 lakh (including un-discharged liability of ₹ 19.74 lakh) as determined vide Commission's order dated 16.7.2013 in Petition No.16/GT/2013. Further, the petitioner vide 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 revised Form-9A. The details of liabilities and capital cost have been reconciled with the information available on record of the Commission as under:

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

9. Further, out of the total liabilities amounting to ₹ 48.24 lakh included in gross block as on 1.4.2009, the approved capital cost of ₹ 87974.06 lakh as on 31.3.2009 is inclusive of un-discharged liabilities amounting to ₹ 19.74 lakh (all pertaining to tariff period 2004-09).

10. Accordingly, the capital cost as on 1.4.2009, after removal of un-discharged liabilities amounting to ₹ 19.74 lakh, works out to ₹ 87954.32 lakh, on cash basis. Further, out of un-discharged liabilities amounting to ₹ 19.74 lakh deducted as on 1.4.2009, the petitioner has considered reversal of liabilities for ₹ 17.54 lakh and the same is considered as additional capital expenditure during the respective year.

### **Additional Capital Expenditure**

11. Regulation 9 (2) of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012 provides as under:

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

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

*(ii) Change in law;*

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

*(iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house*

attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

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

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

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

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

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

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

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

12. The additional capital expenditure claimed by the petitioner for 2009-14 in Petition No. 16/GT/2013 and those allowed by Commission's order dated 16.7.2013 in the said petition are as under:

	( ` in lakh)				
	<b>2009-10 (Actual)</b>	<b>2010-11 (Actual)</b>	<b>2011-12 (Actual)</b>	<b>2012-13 (Projected)</b>	<b>2013-14 (Projected)</b>
Additional capital expenditure claimed	0.00	13.53	3.72	998.00	276.40
Additional capital expenditure allowed	0.00	0.00	0.00	181.13	0.00

13. The Commission in its order dated 16.7.2013 had allowed the projected additional capital expenditure of ` 181.13 lakh in 2012-13 for Halon Fire Fighting System under Regulation 9(2)(ii) of the 2009 Tariff Regulations, after adjustment of the de-capitalised value of ` 65.87 lakh (247.00-65.87) for the said system.

14. The actual additional capital expenditure claimed by the petitioner for the period 2009-14 in this petition are as under:

Description	(` in lakh)				
	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Actual)
Phasing out of Halon Fire Fighting system	0.00	0.00	0.00	0.00	0.00
<b>New claim</b>					
Replacement of Condensate Pre-Heater & LP Economiser Tube of WHRB -3	0.00	0.00	0.00	77.92	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>77.92</b>	<b>0.00</b>

15. It is noticed that against the projected additional capital expenditure of ` 181.13 lakh allowed vide order dated 16.7.2013, no actual additional capital expenditure has been claimed for 2009-14 in this petition. In other words, the petitioner has not claimed the actual additional capital expenditure towards Phasing out of Halon Fire Fighting system allowed in 2012-13. However, the petitioner has claimed actual additional capital expenditure of ` 77.92 lakh in 2012-13 towards Replacement of Condensate Pre-Heater & LP Economiser Tube of WHRB -3, thereby resulting in a decreased claim of ` 103.21 lakh as against those allowed in order dated 16.7.2013. We proceed to consider the claims of the petitioner as stated below;

#### **Phasing out of Halon Fire Fighting system**

16. As stated, the petitioner was allowed the projected additional capital expenditure of ` 181.13 lakh in 2012-13 towards this scheme under Regulation 9(2)(ii) of the 2009 Tariff Regulations. However, the petitioner has not claimed any actual additional capital expenditure for the period 2009-14 in this petition. In justification of the same, the petitioner has submitted that an expenditure of ` 183.48 lakh has already been incurred in 2013-14 and the said scheme will be completed and capitalised during 2014-15. The submission of the petitioner has been considered. Since revision of

tariff is based on true-up of the expenditure actually incurred till 31.3.2014, no expenditure is considered for this scheme for the period 2009-14. However, as the actual capitalisation of this scheme after completion of the work will occur only in the year 2014-15 i.e during the tariff period 2014-19, the same will be considered in terms of the provisions of the 2014 Tariff Regulations.

**Replacement of Condensate Pre-Heater & LP Economiser Tube of WHRB-3 [(Regulation 9(2)(vi))]**

17. The petitioner has claimed the actual additional capital expenditure of ₹ 77.92 lakh in 2012-13 towards the replacement of condensate pre-heater and LP Economiser tubes of WHRB-3 under Regulation 9(2)(vi) of the 2009 Tariff Regulations. The reasons for the said claim as submitted by the petitioner vide affidavit dated 8.8.2014 is extracted as under:

*"The expenditure of ₹ 51.00 lakh was initially projected in Petition No.224/2009 which was allowed by Hon'ble Commission vide order dated 14.6.2012. Subsequently, NTPC filed a mid-term true up petition no.16/GT/2013 wherein the projection against the work was revised to ₹ 82.00 lakh. Subsequently, on internal assessment on scope/progress of the work, the projection was again revised to ₹ 10.40 lakh. However, Hon'ble Commission vide order dated 16.7.2013 in petition no.16/GT/2013 disallowed NTPC claim of projected expenditure of ₹ 10.40 lakh stating that replacement of a small portion of tubes is O&M work rather than R&M work. However, finally based on scope of work the expenditure incurred is ₹ 77.92 lakh which has been capitalised in 2012-13. The work is not of O&M nature but of R&M nature and amount capitalised is ₹ 77.92 lakh in 2012-13. It is prayed that above add-cap may accordingly be reconsidered and allowed by the Commission as was already allowed vide CERC order dated 14.6.2012. The petitioner has filed appeals in ATE in respect of certain claims disallowed vide order dated 14.6.2012 and 16.7.2013. NTPC reserves the right to approach the Hon'ble Commission and/or file amended petition based on the outcome of such appeals."*

18. The respondents, UPPCL and BRPL in their replies have submitted that the said claim of the petitioner was disallowed by the Commission by order dated 16.7.2013 in Petition No.16/GT/2013 and hence the prayer of the petitioner in this petition may also be disallowed.

19. We have examined the matter. It is noticed that the claim of the petitioner for capitalisation of an actual expenditure ₹ 10.40 lakh (in place of projected expenditure of ₹ 82.00 lakh) in Petition No.16/GT/2013 was disallowed by the Commission in order dated 16.7.2013 on the ground that the replacement of a small portion of tubes was finally undertaken as a part of O&M work and that the said replacement cannot be said to be R&M work. The observations of the Commission in the said order are extracted as under:

*“42. ....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.”*

20. Against the said order, the petitioner had filed appeal (Appeal No.221/2013) before the Appellate Tribunal for Electricity (the Tribunal) challenging amongst others, the disallowance of capitalisation of the expenditure claimed towards replacement of this item. In the said appeal, the petitioner had contended that the tubes replaced are not of the nature which is done on a regular basis during the operation of the Gas Power Stations. It had also argued that the tubes were replaced to give enduring benefits during the operation of the power station and cannot be categorised an ongoing repair and maintenance to be considered as O&M expenditure. The petitioner had also stated that the Commission had erred in proceeding on the basis that the replacement of the Condensate pre heater and LP Economiser tubes involving an amount of `10.40 lakh is a part of the O&M expenses and not part of the renovation and modernisation expenditure. However, the Tribunal by its judgment dated 5.10.2015 had rejected the contention of the petitioner thereby confirming the order of the Commission dated 16.7.2013 in Petition 16/GT/2013. The portion of the judgment of the Tribunal is extracted as under:

*“14. Further, as seen from the submissions of the Appellant and contention of the Respondent Commission that the Petitioner originally estimated for a value of Rs.37.40 lakhs during the FY 2012-13 towards replacement of Condensate Pre Heater & LP Economizer Tubes but the actual expenditure submitted by the Petitioner is Rs.10.40 lakhs. As seen from the Impugned Order that the Appellant initially prepared scheme for total replacement of Condensate Pre Heater & LP Economizer tubes but the Appellant has replaced some finned tubes in the heat transfer surface of CPH and LP Economizer.*

*15. We also feel that the Appellant has replaced only few damaged finned tubes and we feel that the work has been undertaken as a part of O&M work and hence we affirm the decision of the Central Commission specified in the Impugned Order. Accordingly, the expenditure of Rs.10.40 lakhs disallowed by the Central Commission is justifiable. Accordingly, this issue is decided against the Appellant.”*

21. The petitioner in this petition has submitted that the said work is not of O&M nature but of R&M nature and has prayed that the expenditure of `77.92 lakh capitalised in 2012-13 may be allowed. Since the submissions of the petitioner had already been considered by the Commission and rejected by order dated 16.7.2013 which had been upheld by the Tribunal as stated above, the

prayer of the petitioner in this petition for capitalisation of the actual expenditure of ₹ 77.92 lakh is not acceptable. Accordingly, the additional capital expenditure claimed under this head is not allowed.

### **De-capitalization of replacement of Condensate Pre-heater & LP Economiser tube of WHRB-3**

22. The petitioner has de-capitalized an amount of ₹ 53.33 lakh as Gross block of the original value of Condensate Pre-heater & LP Economiser tube of WHRB-3 in 2012-13 as against the actual additional capital expenditure of ₹ 77.92 lakh claimed towards replacement of the same. Considering the fact that the capitalization of expenditure towards replacement of old tubes has not been allowed, the de-capitalization of the gross block of old tubes has been ignored.

### **Reconciliation of actual additional capital expenditure for the period 2012-14**

23. The petitioner vide affidavit dated 30.9.2014 has reconciled the actual additional capital expenditure for the period 2012-14 with the books of accounts as detailed under:

	( ₹ in lakh)	
	<b>2012-13 (actual)</b>	<b>2013-14 (actual)</b>
Opening Gross Block as per audited balance sheet as on 1st April of year <b>(A)</b>	108709.33	110378.34
Closing Gross Block as per audited balance sheet as on 31 <sup>st</sup> March of year <b>(B)</b>	110378.34	112475.45
Additions during the year C=(B-A) ( as per books of accounts)	1669.01	2097.11
<b>Exclusions (D)</b>	<b>1644.42</b>	<b>2097.11</b>
Additional capital expenditure including liabilities	24.59	0.00
less Un-discharged Liabilities <b>(E)</b>	0.00	0.00
<b>Net Additional capital expenditure claimed on cash basis (C-D-E)</b>	<b>24.59</b>	<b>0.00</b>

24. It is observed from the above table that the 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 and un-discharged liabilities in the additional capital expenditure considered for the purpose of tariff.

### **Exclusions**

25. The summary of exclusions claimed as per books of accounts as stated below are discussed as under:

	<i>( in lakh)</i>	
	<b>2012-13</b>	<b>2013-14</b>
Capitalization of spares	1745.46	2206.43
Capitalisation of MBOA items	1.10	1.81
Inter-unit transfer	1.57	0.42
De-capitalisation of spares (not part of capital cost )	(-) 82.45	0.00
De-capitalisation of spares (part of capital cost)	(-) 20.92	(-) 109.04
De-capitalisation of MBOA items( part of capital cost)	(-) 0.34	(-) 0.32
De-capitalisation of MBOA items (not part of capital cost)	0.00	(-) 2.20
<b>Total Exclusions claimed</b>	<b>1644.42</b>	<b>2097.10</b>

### **Capitalization of Capital Spares**

26. The petitioner has capitalized capital spares in books of accounts amounting to ` 1745.46 lakh (including liability of ` 96.05 lakh) in 2012-13 and ` 2206.43 lakh (including liability of ` 10.32 lakh) in 2013-14. As capitalization of capital spares over and above the initial spares, procured after cut-off date are not allowed for the purpose of tariff, as they form part of O&M expenses when consumed, the exclusion of the said amounts are allowed.

### **Capitalization of Miscellaneous Bought out Assets (MBOA) items**

27. The petitioner has capitalized MBOA items in books of accounts amounting to ` 1.10 lakh in 2012-13 and ` 1.81 lakh (including liabilities of ` 0.80 lakh) in 2013-14. Since the capitalization of MBOA items after the cut-off-date are not allowed for the purpose of tariff, the exclusion of the said amounts are in order and has been allowed.

### **Inter-Unit Transfers**

28. The petitioner has excluded amounts of ` 1.57 lakh in 2012-13 and ` 0.42 lakh in 2013-14 on account of inter-unit transfer of MBOA items such as Furniture & fixtures, Office Equipments, EDP, WP and SATCOM etc. The Commission in its various orders while dealing with the petitions for additional capitalization in respect of other generating stations of the petitioner had decided that both positive and negative entries arising out of inter unit-transfers of temporary nature shall be ignored for the purpose of tariff. In line with the said decisions, the exclusion of the said amounts on account of inter-unit transfer has been allowed.

**De-capitalization of capital spares part of capital cost**

29. The petitioner in books of account has de-capitalized capital spares amounting to (-) ₹ 20.92 lakh in 2012-13 and (-) ₹ 109.04 lakh in 2013-14 in books of accounts on these spares becoming unserviceable. It is observed from the submission of the petitioner that these spares were part of capital cost of the project which was allowed in tariff and these spares, on becoming un-serviceable, had been taken out of the capital cost. Since the expenditure on spares form part of the capital cost, the exclusion for de-capitalization of spares for the said amounts has not been allowed.

**De-capitalization of capital spares not part of capital cost**

30. The petitioner has de-capitalized capital spares amounting to (-) ₹ 82.45 lakh in 2012-13 in books of accounts on these spares becoming unserviceable. It is noticed that these spares were not allowed in tariff and do not form part of the capital cost of the project. Since, these expenses were not part of capital cost, the exclusion for de-capitalization of these spares for the said amounts has been allowed.

**De-capitalization of MBOA items part of capital cost**

31. The petitioner in books of account has de-capitalized MBOA items amounting to (-) ₹ 0.34 lakh in 2012-13 and (-) ₹ 0.32 lakh in 2013-14 on these MBOA items becoming unserviceable. It is observed that these MBOA items were part of capital cost which was allowed in tariff and these MBOA items have been taken out of the capital cost on becoming un-serviceable. Since these expenses were part of the capital cost, the exclusion for de-capitalization of these spares for the said amounts has not been allowed.

**De-capitalization of MBOA items not part of capital cost**

32. The petitioner has de-capitalized MBOA items amounting to (-) ₹ 2.20 lakh in 2013-14 in books of accounts on these spares becoming unserviceable. It is observed that these MBOA items were not allowed in tariff and do not form part of the capital cost. Since these expenses were not part of capital cost, the exclusion for de-capitalization of the MBOA items for the said amount has been allowed.

33. The details of the exclusions claimed *vis-à-vis* allowed on cash basis is as under:

	( ` in lakh)	
	2012-13	2013-14
Exclusions claimed (A)	1644.42	2097.10
Exclusions allowed (B)	1665.68	2206.46
Exclusions not allowed (B-A)	(-) 21.26	(-) 109.36

34. The Commission vide order 16.7.2013 in Petition No. 16/GT/2013 had revised the tariff of the generating station after truing-up exercise of additional capital expenditure for the period 2009-12 based on the actual additional capital expenditure incurred duly reconciled with the books of accounts. As stated, there is no variation in the claim for the actual additional capital expenditure as against those allowed in Commission's order dated 16.7.2013 for the period 2009-12.

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

( ` in lakh)						
Sl. No.	Descriptions	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Actual)
1	Phasing out of Halon Fire Fighting system	0.00	0.00	0.00	0.00	0.00
<b>New claim</b>						
2	Replacement of Condensate Pre-Heater & LP Economiser Tube of WHRB-3	0.00	0.00	0.00	0.00	0.00
<b>Net Additional capital expenditure allowed (A)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Exclusions not allowed (B)		732.13	50.66	200.61	21.26	109.36
<b>Total Additional capital expenditure allowed (A-B)</b>		<b>(-) 732.13</b>	<b>(-) 50.66</b>	<b>(-) 200.61</b>	<b>(-) 21.26</b>	<b>(-) 109.36</b>

36. There is no discharge of liabilities against the allowed assets/works. Hence, the additional capital expenditure as allowed above is considered. Accordingly, the capital cost allowed for the purpose of tariff is 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	86949.66
Add: Admitted additional capital expenditure	(-) 732.13	(-) 50.66	(-) 200.61	(-) 21.26	(-) 109.36
<b>Closing capital cost</b>	<b>87222.20</b>	<b>87171.54</b>	<b>86970.93</b>	<b>86949.66</b>	<b>86840.30</b>
<b>Average capital cost</b>	<b>87588.26</b>	<b>87196.87</b>	<b>87071.23</b>	<b>86960.29</b>	<b>86894.98</b>

### Debt–Equity Ratio

37. The gross loan and equity amounting to ₹ 43987.03 lakh each, as approved on 31.3.2009 vide order dated 21.7.2011 in Petition No. 155/2004 has been considered as gross loan and equity as on 1.4.2009. However, the un-discharged liabilities of ₹ 19.74 lakh deducted from the capital cost as on 1.4.2009 has been adjusted to debt and equity in the ratio of 50:50 for assets/works capitalized prior to 2004. As such, the gross normative loan and equity as on 1.4.2009 is revised to ₹ 43977.16 lakh each. Further, the additional capital expenditure approved above has been allocated in debt-equity ratio of 70:30.

### Return on Equity

38. In terms of Regulation 15 of the 2009 Tariff Regulations, Return on Equity has been computed as under:

	( ₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity -Opening	43977.16	43757.52	43742.33	43682.14	43675.76
Addition of equity on account of additional capital expenditure	(-) 219.64	(-) 15.20	(-) 60.18	(-) 6.38	(-) 32.81
Normative Equity - Closing	43757.52	43742.33	43682.14	43675.76	43642.96
Average normative Equity	43867.34	43749.92	43712.23	43678.95	43659.36
Return on Equity (Base Rate )	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate	33.990%	33.218%	32.445%	32.445%	33.990%
Rate of Return on Equity (Pre Tax )	23.481%	23.210%	22.944%	22.944%	23.481%
<b>Return on Equity (Pre Tax) - annualized</b>	<b>10300.49</b>	<b>10154.36</b>	<b>10029.33</b>	<b>10021.70</b>	<b>10251.65</b>

### Interest on loan

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

(a) The gross normative loan of ₹ 43977.16 lakh has been considered as on 1.4.2009.

(b) Cumulative repayment of loan of ₹ 42516.04 lakh as on 31.3.2009 as considered in order dated 21.7.2011 in Petition No.155/2004 has been considered as cumulative repayment as on 1.4.2009. However, after taking into account the proportionate adjustment (duly taking into account the liability and debt position as on 1.4.2004 along with additions during the period 2004-09, if any) 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) Depreciation allowed for the period has been considered as repayment of normative loan during the respective years of the period 2009-14. Further, proportionate adjustment has been made to the repayments corresponding to discharges/reversal of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.

(e) In terms of the judgment of the Tribunal dated 13.6.2007 in Appeal No.154/2006, interest on loan on the basis of weighted average rate of interest of original GOI loans instead on Bonds issued to refinance the original GOI loans for the tariff period 2004-09 was considered and allowed in order dated 21.7.2011 in Petition No 155/2004. The petitioner has claimed Interest on loan for the period 2009-14, on the basis of weighted average rate of interest of original GOI loan instead of rate of interest of Bonds issued for refinance GOI loan. However, in accordance with the 2009 Tariff Regulations applicable for the period 2009-14, the Interest of loan was worked out on the basis of actual loan portfolio i.e. the weighted average rate of interest of bonds existing (Bonds series XII A, XII B and XIV) as on 1.4.2009. It is noticed from the submissions of the petitioner and the details in Form -13, that the bond series XIV @ 8.05% was fully repaid during the year 2007-08. Also, on scrutiny of the balance sheet for the year 2007-08 it is found that bonds series XIV was fully repaid during the year 2007-08. Accordingly, interest on loan has been worked out on the basis of weighted average rate of interest on Bonds which existed as on 1.4.2009 till 31.3.2014.

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

	( ₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	43977.16	43464.67	43429.21	43288.78	43273.90
Cumulative repayment of loan upto previous year / period	42506.50	42006.54	42026.41	41922.35	41955.47
Net Loan Opening	1470.66	1458.13	1402.80	1366.43	1318.43
Addition due to Additional capitalisation	(-) 512.49	(-) 35.46	(-) 140.43	(-) 14.88	(-) 76.55
Repayment of loan during the year	12.53	46.85	36.37	48.00	41.32
Less: Repayment adjustment on account of de-capitalization	512.49	35.46	140.43	14.88	76.55
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	0.00	8.48	0.00	0.00	0.00
Net Repayment	(-) 499.96	19.87	(-) 104.06	33.12	(-) 35.23
Net Loan Closing	1458.13	1402.80	1366.43	1318.43	1277.11
Average Loan	1464.40	1430.47	1384.62	1342.43	1297.77
Weighted Average Rate of Interest on Loan	9.5800%	9.5800%	9.5800%	9.5800%	9.5800%
<b>Interest on Loan</b>	<b>140.29</b>	<b>137.04</b>	<b>132.65</b>	<b>128.60</b>	<b>124.33</b>

## Depreciation

41. The cumulative depreciation as on 31.3.2009 as per order dated 21.7.2011 in Petition No.155/2004 works out to ₹ 78660.75 lakh. Further, proportionate adjustment has been made to this cumulative depreciation on account of un-discharged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹ 78643.09 lakh. Further, the value of freehold land considered in the said order is ₹ 68.76 lakh as on 31.3.2009 and the same has been considered for the purpose of calculating the depreciable value. Since 1.4.2009, cumulative depreciation has been adjusted for de-capitalisation if any, considered during the period 2009-14. Necessary calculations in support of depreciation are as under:

	( ₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	87954.32	87222.20	87171.54	86970.93	86949.66
Add: Additional capital expenditure	(-) 732.13	(-) 50.66	(-) 200.61	(-) 21.26	(-) 109.36
Closing Capital Cost	87222.20	87171.54	86970.93	86949.66	86840.30
Average Capital Cost	87588.26	87196.87	87071.23	86960.29	86894.98
Balance Useful life of the asset	9.93	8.93	7.93	6.93	5.93
Depreciable value (ex. land) @ 90%	78767.55	78415.30	78302.22	78202.38	78143.60
Balance depreciable value	124.46	418.59	288.54	332.86	245.22
<b>Depreciation (annualized)</b>	<b>12.53</b>	<b>46.85</b>	<b>36.37</b>	<b>48.00</b>	<b>41.32</b>
Cumulative depreciation at the end	78655.62	78043.56	78050.05	77917.52	77939.71
Less: Cumulative Depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009	0.00	(-) 15.70	0.00	0.00	0.00
Less: Cumulative Depreciation reduction due to de-capitalization	658.91	45.57	180.53	19.14	98.42
Cumulative depreciation (at the end of the period)	77996.70	78013.68	77869.52	77898.38	77841.29

## Normative Annual Plant Availability Factor

42. The Normative Annual Plant Availability Factor of 85% as considered in order dated 16.7.2013 in Petition No.16/GT/2013 has been considered.

## O&M Expenses

43. O&M expenses as considered in order dated 16.7.2013 in Petition No.16/GT/2013 has been considered as under:

(` in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
12280.74	12986.06	13724.56	14512.85	15342.63

## Interest on Working Capital

44. 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*

45. 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*

46. The fuel components and energy charges (for two months) as worked out in order dated 16.7.2013 in Petition No. 16/GT/2013 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

47. Maintenance spares as allowed in order dated 16.7.2013 has been considered for the purpose of tariff as under:

( ` in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
3684.22	3895.82	4117.37	4353.86	4602.79

48. 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	4898.11	5004.17	5114.47	5252.33	5437.40
<b>Total</b>	<b>31817.16</b>	<b>31923.22</b>	<b>32107.27</b>	<b>32171.38</b>	<b>32356.44</b>

#### O&M Expenses

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

( ` in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
1023.40	1082.17	1143.71	1209.40	1278.55

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

( ` in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel stock (APM & RLNG ) – 1 month	13459.52	13459.52	13496.40	13459.52	13459.52
Liquid fuel stock (NAPHTHA) – 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	31817.16	31923.22	32107.27	32171.38	32356.44
<b>Total working capital</b>	<b>54323.31</b>	<b>54699.74</b>	<b>55215.64</b>	<b>55533.17</b>	<b>56036.32</b>
Rate of interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
<b>Interest on working capital</b>	<b>6654.60</b>	<b>6700.72</b>	<b>6763.92</b>	<b>6802.81</b>	<b>6864.45</b>

## Annual Fixed Charges

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

	( ` in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	12.53	46.85	36.37	48.00	41.32
Interest on Loan	140.29	137.04	132.65	128.60	124.33
Return on Equity	10300.49	10154.36	10029.33	10021.70	10251.65
Interest on Working Capital	6654.60	6700.72	6763.92	6802.81	6864.45
O&M Expenses	12280.74	12986.06	13724.56	14512.85	15342.63
<b>Total</b>	<b>29388.66</b>	<b>30025.02</b>	<b>30686.83</b>	<b>31513.97</b>	<b>32624.39</b>

**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.

52. The difference in the annual fixed charges determined by order dated 16.7.2013 and those determined by this order shall be adjusted in accordance with Regulation 6 (6) of the 2009 Tariff Regulations.

53. Petition No. 301/GT/2014 is disposed of in terms of the above.

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

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

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

**Sd/-**  
**(Gireesh B. Pradhan)**  
**Chairperson**