

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 284/GT/2013**

**Coram:**

**Shri Gireesh B Pradhan, Chairperson**

**Shri A.K. Singhal, Member**

**Date of Hearing: 29.5.2014**

**Date of Order: 16.4.2015**

**In the matter of**

Revision of tariff of Feroze Gandhi Unchahar Thermal Power Station Stage-I (420 MW) for the period from 1.4.2009 to 31.3.2014 after truing-up exercise

**And in the matter of**

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

**...Petitioner**

Vs

1. Uttar Pradesh Power Corporation Ltd.  
Shakti Bhawan,  
14, Ashoka Road,  
Lucknow – 226001
2. Jaipur Vidyut Vitran Nigam Ltd.  
Vidyut Bhawan, Janpath,  
Jaipur – 302005
3. Ajmer Vidyut Vitran Nigam Ltd.  
Old Power House, Hathi Bhsata,  
Jaipur Road, Ajmer
4. Jodhpur Vidyut Vitran Nigam Ltd.  
New Power house, Industrial Area, Jodhpur
5. Tata Power Delhi Distribution Ltd.  
33 kV Sub-station, Hudson Lines,  
Kingsway Camp, Delhi – 110009
6. BSES Rajdhani Power Ltd.  
2<sup>nd</sup> Floor, B Block, Nehru Place,  
New Delhi 110019

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

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

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

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

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

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

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

...Respondents

**Parties present:**

Shri Ajay Dua, NTPC  
Shri A. S. Pandey, NTPC  
Shri Neeraj Kumar, NTPC  
Shri Shankar Saran, NTPC  
Shri R. B. Sharma, Advocate, BRPL  
Shri Padamjit Singh, PSPCL

**ORDER**

This petition has been filed by NTPC Ltd for revision of the annual fixed charges for Feroze Gandhi Unchahar Thermal Power Station (2 x 210 MW) (the generating station) for the period from 1.4.2009 to 31.3.2014 in terms of the proviso to clause (1) of Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations). The first unit of the generating station was

commissioned on 21.11.1988 and the second unit on 22.3.1989. Therefore, the date of commissioning of the generating station is 22.3.1989.

2. The Commission vide order dated 29.5.2012 in Petition No. 221/2009 had approved the tariff of the generating station for the period 1.4.2009 to 31.3.2014 taking into account the opening capital cost of ₹97412.91 lakh as on 1.4.2009, after adjusting the un-discharged liabilities of ₹59.60 lakh pertaining to the period prior to 1.4.2009, as shown hereunder:

| (₹ In lakh)                           |          |
|---------------------------------------|----------|
| Capital cost                          | 97472.51 |
| Less: Un-discharged liabilities       | 59.60    |
| Admitted capital cost as on 31.3.2009 | 97412.91 |

3. The Annual Fixed Charges approved by the said order dated 29.5.2012 are as under:

| (₹ in lakh)                 |                 |                 |                 |                 |                 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                             | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
| Depreciation                | 440.47          | 439.17          | 481.50          | 552.46          | 552.46          |
| Interest on Loan            | 68.20           | 40.74           | 38.44           | 35.10           | 25.19           |
| Return on Equity            | 11302.90        | 11304.86        | 11331.97        | 11358.64        | 11358.64        |
| Interest on Working Capital | 2750.27         | 2774.29         | 2807.35         | 2831.31         | 2860.17         |
| O&M Expenses                | 7644.00         | 8080.80         | 8542.80         | 9034.20         | 9550.80         |
| Cost of Secondary Fuel Oil  | 646.44          | 646.44          | 648.21          | 646.44          | 646.44          |
| Compensation Allowance      | 273.00          | 273.00          | 273.00          | 273.00          | 273.00          |
| <b>Total</b>                | <b>23125.28</b> | <b>23559.30</b> | <b>24123.32</b> | <b>24731.15</b> | <b>25266.70</b> |

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

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

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

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

5. Replies to the petition have been filed by Respondent No. 1, Uttar Pradesh Power Corporation Ltd (UPPCL), Respondent No 2, Jaipur Vidyut Vitran Nigam Ltd (JVVNL) and Respondent No 6, BSES Rajdhani Power Ltd. The petitioner has also filed additional information called for by the Commission.

### **Capital cost**

6. In accordance with ninth proviso to clause (2) of Regulation 7 of the 2009 Tariff Regulations, in case of the existing projects, that is, the projects commercially operative prior to 1.4.2009 when these regulations came into force, the capital cost admitted by the Commission prior to 1.4.2009 duly tried 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, forms the basis for determination of the Annual Fixed Charges. Accordingly, the capital cost of ₹97412.92 lakh, as on 31.3.2009, as considered by the Commission in the said order dated 29.5.2012 has been considered as the basis for revision of the annual fixed charges.

### **Actual/ Projected Additional Capital Expenditure**

7. Clause (2) of Regulation 9 of the 2009 Tariff Regulations provides as under:

#### ***"9. Additional Capitalisation***

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

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (ii) Change in law;*
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred*

due to any additional work which has become necessary for successful and efficient plant operation; and

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

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

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

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

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

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

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

8. Details of the additional capital expenditure presently claimed are as under:

(₹ in lakh)

| Sl. No | Head of work/ Equipment   | 2009-10<br>(Actual) | 2010-11<br>(Actual) | 2011-12<br>(Actual) | 2012-13<br>(Actual) | 2013-14<br>(Projected) |
|--------|---|---------------------|---------------------|---------------------|---------------------|------------------------|
| A      | Locomotive 1350/1120 HP   | 0.00                | 0.00                | 894.88              | 0.00                | 0.00                   |
|        | <b>New Items / Works Claimed</b>                                    |                     |                     |                     |                     |                        |
| B      | <b>Ash Related Works</b>  |                     |                     |                     |                     |                        |
|        | R&M of Control System for Stage-1 Ash Handling Plant Control System | 0.00                | 0.00                | 0.00                | 0.00                | 81.00                  |
| C      | <b>Environmental System</b>   |                     |                     |                     |                     |                        |
|        | Room for Flue GAS Analyzer  | 0.00                | 0.32                | 0.00                | 0.00                | 0.00                   |
| D      | <b>CHP Related Works</b>  |                     |                     |                     |                     |                        |
| I      | Renovation & Modernization  | 0.00                | 0.00                | 0.00                | 0.00                | 174.00                 |

|      |   |               |              |               |             |                |
|------|---|---------------|--------------|---------------|-------------|----------------|
|      | of MCC at CHP Stage – I   |               |              |               |             |                |
| li   | CHP Stage-I CBMS and suspended Magnet   | 0.00          | 0.00         | 0.00          | 0.00        | 29.00          |
| lii  | R&M of Wagon Tippler of CHP Stage-I   | 0.00          | 0.00         | 0.00          | 0.00        | 422.00         |
| Iv   | Rack & Pinion Elevator in CHP   | 3.46          | 0.00         | 0.00          | 0.00        | 0.00           |
|      | Sub Total   | 3.46          | 0.00         | 0.00          | 0.00        | 625.00         |
| E    | <b>Other Works</b>  |               |              |               |             |                |
| I    | Replacement of Generator Protection Panel of unit -1 & 2  | 0.00          | 0.00         | 0.00          | 0.00        | 30.00          |
| li   | Hot Air Damper (HAD), Cold Air Damper (CAD) & RCF (Raw Coal Feeder) Pneumatic Control Actuators Stage – I | 0.00          | 0.00         | 0.00          | 0.00        | 32.00          |
| III  | Replacement of HP Heater No. 6 for Stage-I  | 0.00          | 0.00         | 0.00          | 0.00        | 256.00         |
| IV   | DELTA-PI Transmitter  | 9.94          | 0.00         | 0.00          | 0.00        | 0.00           |
| V    | Renovation of turbovisory instruments   | 69.52         | 0.00         | 0.00          | 0.00        | 0.00           |
| VI   | Renovation of ID/FD/PA Blade IGV Actuators  | 25.68         | 0.00         | 0.00          | 0.00        | 0.00           |
| VII  | Renovation of Generator purity meter  | 5.63          | 0.00         | 0.00          | 0.00        | 0.00           |
| VIII | Boiler Tube Leakage Detection System  | 24.72         | 0.00         | 0.00          | 0.00        | 0.00           |
| IX   | Protection Coupler PLCC - 220 KV Switch Yard  | 0.00          | 2.86         | 0.00          | 0.00        | 0.00           |
|      | <b>Sub Total- (E)</b>   | 135.49        | 2.86         | 0.00          | 0.00        | 318.00         |
| F    | Total Add-Cap (A+B+C+D+E)   | 138.95        | 3.18         | 894.88        | 0.00        | 1024.00        |
| G    | De-capitalization   | 14.83         | 0.00         | 167.84        | 0.00        | 0.00           |
| H    | <b>Net Add Cap (F-G)</b>  | 124.13        | 3.18         | 727.04        | 0.00        | 1024.00        |
| I    | <b>Liabilities Discharged</b>   | 42.92         | 12.59        | 4.09          | 0.00        | 0.00           |
|      | <b>Total (H + I)</b>  | <b>167.04</b> | <b>15.78</b> | <b>898.96</b> | <b>0.00</b> | <b>1024.00</b> |

9. The total claim for additional capitalization in the present petition is ₹2061.02 lakh against the additional capital expenditure ₹925.00 lakh approved under the said order dated 29.5.2012 in Petition No.221/2009. Thus, there is an increase of ₹1136.02 lakh in the petitioner's claim for additional capitalization. The increase is mainly on account of new claims of ₹1166.14 lakh, Ash related works (₹81.00 lakh), CHP related works (₹628.46 lakh) and other works (₹456.35 lakh) and the decrease in claim of ₹30.12 lakh for Loco.

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

### **Loco 1350/1120 HP**

11. The petitioner has claimed actual additional capital expenditure of ₹894.88 lakh for Loco 1350/1120 HP during 2011-12 under sub-clause (vii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations. The Commission vide the said order dated 29.5.2012 had allowed the projected additional capital expenditure of ₹925.00 lakh with corresponding de-capitalization of ₹167.84 lakh (net additional capital expenditure of ₹757.16 lakh), considering the requirement for replacement of old Loco as a functional necessity since WDS-4D Loco was unable to haul even 12 wagons at a time and there was no support from Railway Workshop to repair/reenergize such old/obsolete Locos as spares of old Locos were not available. The petitioner by affidavit dated 11.4.2014 has submitted that it has capitalized ₹894.88 lakh in the year 2011-12 and the balance cost is being capitalized in 2013-14 against balance supplies. It has also been stated that de-capitalization of old Loco is in process. In the petition, the petitioner has not raised the claim for capitalization of any amount during 2013-14 and as such the claim cannot be considered. Accordingly, we allow net additional capital expenditure of ₹727.04 lakh against actual additional capital expenditure of ₹894.88 lakh with corresponding de-capitalization of ₹167.84 lakh considered in the said order dated 29.5.2012 during 2011-12.

### **Ash Related works**

12. The petitioner has claimed projected additional capital expenditure of ₹81.00 lakh for R&M of control system for Stage-I Ash Handling Plant during 2013-14 under sub-clause (iii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations. The petitioner has submitted that the control panel and other auxiliaries have become obsolete which gives rise to frequent problems. The respondents, UPPCL and JVVNL have submitted that sub-clause

(iii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations allows capitalization of additional expenditure on account of deferred works relating to ash pond or ash handling system and not for replacement of the components which have become obsolete. The respondent, BSES Rajdhani Power Limited has made a similar submission stating that the justification given by the petitioner clearly shows that the work was completed long back and the amount now claimed is for renovation and is not for deferred works. It has been submitted that the petitioner is already availing Compensation Allowance under clause (e) of Regulation 19 of the 2009 Tariff Regulations to meet the expenses of new assets of capital nature. Thus, according to these respondents the claim of the petitioner is not admissible.

13. We have considered the submission of the parties. We agree that sub-clause (iii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations allows capitalization of additional expenditure on account of deferred works on ash pond and ash handling system within the original scope of work. The generating station has completed 25 years of useful life as on 21.3.2014 and thus the claim for capitalization of expenditure cannot be said to be on account of deferred works within the original scope. Therefore, the projected additional expenditure of ₹81.00 lakh for R&M of control system for Stage-I Ash Handling Plant claimed by the petitioner is not covered under sub-clause (iii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations. As such, capitalization of the expenditure claimed is not allowed.

### **Environmental System**

14. The petitioner has claimed actual additional capital expenditure of ₹0.32 lakh during 2010-11 for room for Flue Gas Analyser under sub-clause (ii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations. The petitioner has submitted that the room has been constructed for Flue Gas Analyser that monitors Sox & NOx gases, was allowed by the Commission in its order 11.1.2010. The respondent, BSES Rajdhani Power Limited has

submitted that capitalization of the expenditure of this nature is not permitted under clause (2) of Regulation 9 of the 2009 Tariff Regulations, as the expenditure is of minor nature and is to be met out of the Compensation Allowance being already being availed by the petitioner.

15. The claim for capitalization of actual additional expenditure of ₹0.32 lakh is on account of balance payments for the expenditure approved by the Commission for Flue Gas Analyser in the Commission's order dated 11.1.2010. As such, capitalization of the expenditure claimed, is allowed.

### **Coal Handling Plant (CHP) related works**

16. The petitioner has claimed actual additional capital expenditure of ₹3.46 lakh for Rack & Pinion Elevator during 2009-10 and projected additional capital expenditure of ₹625.00 lakh during 2013-14 (₹174.00 lakh for R&M of MCC, ₹29.00 lakh for CBMS suspended magnet, ₹422.00 lakh for R&M of Wagon Tippler) at Coal Handling Plant. The claim for capitalization is stated to be based on sub-clause (vii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations. The petitioner has stated that the projected additional capital expenditure of ₹422.00 lakh for R&M of Wagon Tippler during 2013-14 has been raised since the existing stop girder with compensating mechanism has become obsolete as OEM (M/S Elecon) have stopped manufacturing assemblies of top stop girder. In respect of other items claimed under this head also the petitioner's claim is generally on the ground that the existing equipment has become obsolete and the spares are unavailable.

17. The respondents UPPCL and BSES Rajdhani Power Limited have submitted that the expenditure incurred is not on account of non-materialization of full coal linkage as provided under sub-clause (vii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations but is on account of obsolescence and non-availability of spares of existing equipment, Therefore, according to these respondents, the claim does not qualify for capitalization. UPPCL has

further submitted that the petitioner has not given any evidence that the capital expenditure is necessitated in order to meet modification on account of non-materialization of full coal linkage and for this reason the claim deserves to be rejected.

18. We have very carefully considered the petitioner's claim in the light of the objections raised by the respondents. The generating station has completed its useful life of 25 years by the end of the year 2013-14 and has become entitled to undertake R&M for life extension. Therefore, the petitioner is granted liberty to include R&M of wagon tippler in the R&M scheme that may be undertaken by the petitioner in the year 2014-15 i.e. (during the tariff period 2014-19). On this consideration, capitalization of the projected capital expenditure of ₹422.00 lakh is not being allowed. The actual additional capital expenditure of ₹3.46 lakh on Rack & Pinion Elevator during 2009-10, and the projected additional capital expenditure of ₹29.00.00 lakh for CBMS suspended magnet and ₹174.00 lakh for R&M of MCC in CHP during 2013-14 is not allowed, as the claim is not within the scope of clause (vii) of clause (2) of Regulation 9 of the 2009 Tariff Regulations.

### **Other Works**

19. The petitioner has claimed actual additional capital expenditure of ₹135.49 lakh during 2009-10, ₹2.86 lakh in 2010-11 and projected additional capital expenditure of ₹318.00 lakh during 2013-14 on new assets by invoking Regulations 5, 6 & 7 of the 2009 Tariff Regulations. The actual claim of ₹135.49 lakh includes ₹9.94 lakh for Delta P1 Transmitter, ₹69.52 lakh for renovation of turbovisory instruments ₹25.68 lakh for renovation of ID/FD/PA fan blade ICV actuators, ₹5.63 lakh for renovation of generator purity meter, ₹24.72 lakh for boiler tube leak detection system during 2009-10 and ₹2.86 lakh for protection coupler PLCC-220kV switchyard in 2010-11. The projected claim of ₹318.00 lakh includes ₹30.00 lakh for generator protection panel, ₹32.00 lakh for pneumatic control actuators and ₹256.00 lakh for replacement of HP heater 6. The respondent UPPCL has submitted that

the Commission in the said order dated 29.5.2012 had directed that “additional capital expenditure for successful and efficient operation of the generating station for reasons other than those provided for under Regulation 9 (2) of the 2009 Tariff Regulations is not permissible”. In view of this, UPPCL has urged that the claim of petitioner under Regulation 5, 6 and 7 of the 2009 Tariff Regulations is not admissible.

20. We have considered the respective submissions. Admittedly, the capitalization of the expenditure is not covered under clause (2) of Regulation 9 of the 2009 Tariff Regulations. As already held in the order dated 29.5.2012 in Petition No.221/2009, capitalization of the expenditure *de hors* Regulation 9 of the 2009 Tariff Regulations in respect of the existing generating stations after the cut-off date is not permitted. Accordingly, capitalization of the expenditure of ₹135.49 lakh in 2009-10, ₹2.86 lakh in 2010-11 and ₹318.00 lakh which is beyond the scope of clause (2) of Regulation 9 of the 2009 Tariff Regulations is disallowed for the purpose of tariff.

### **De-capitalization of Assets**

21. The petitioner has de-capitalized an amount of ₹14.83 lakh (₹3.30 lakh for Delta PI Transmitter, ₹8.08 lakh for Renovation of Turbovisory instruments, ₹2.78 lakh for Renovation of ID/FD/PA Blade IGV actuator and ₹0.67 lakh for Renovation of gen purity meter) during 2009-10 since these assets have been rendered unserviceable.

22. In a cost-plus tariff regime, any asset included in the capital cost is to be taken out from the capital base as and when the asset ceases to render useful service to the generating station. Hence, de-capitalization amounting to ₹14.83 lakh during 2009-10 is being allowed.

23. The petitioner has claimed actual additional capital expenditure as per books of accounts for the years 2009-10, 2010-11, 2011-12 and 2012-13 as per details given below:

| (₹ In lakh) |  |                     |                     |                     |                     |
|-------------|--|---------------------|---------------------|---------------------|---------------------|
| Sl. No.     |  | 2009-10<br>(actual) | 2010-11<br>(actual) | 2011-12<br>(actual) | 2012-13<br>(actual) |
| 1           | Opening Gross Block as on 1st April of year (A)                        | 97803.34            | 99373.45            | 100193.31           | 102575.23*          |
| 2           | Closing Gross Block as on 31 <sup>st</sup> March of year (B) = (1-2)   | 99373.45            | 100193.31           | 102611.97           | 102575.23           |
| 3           | <b>Addition during the year<br/>C=(B-A) ( as per books)</b>            | <b>1570.11</b>      | <b>819.86</b>       | <b>2418.66</b>      | <b>785.17</b>       |
| 4           | Exclusions (D)   | 1445.98             | 816.68              | 1523.78             | 785.17              |
| 5           | Un-discharged Liabilities (E)  | 0.00                | 0.00                | 0.00                | 0.00                |
| 6           | <b>Additional Capitalization<br/>claimed on cash basis<br/>(C-D-E)</b> | <b>124.13</b>       | <b>3.18</b>         | <b>894.88</b>       | <b>0.00</b>         |

\* Net of assets held for disposal amounting to ₹36.74 lakh

24. The actual additional capital expenditure claimed has been reconciled with gross block as per the balance sheet of respective year. It is seen that actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts. This is due to exclusions of certain expenditure for the purpose of tariff. Therefore, these issues are being considered hereafter.

### **Exclusions**

#### **FERV**

25. The petitioner has excluded an amount of ₹261.96 lakh in the year 2009-10, ₹26.61 lakh in the year 2010-11, ₹333.45 lakh in the year 2011-12 and ₹232.03 lakh in the year 2012-13 on account of impact of FERV. As the petitioner has billed the said amounts directly to the beneficiaries, the exclusions on account of FERV as claimed are in order and are allowed.

#### **Capitalization of Capital Spares**

26. The petitioner capitalized spares amounting to ₹91.88 lakh in the 2009-10, ₹814.58 lakh in the year 2010-11, ₹610.81 lakh in the year 2011-12 and ₹294.70 lakh in the year 2012-13 in the books of accounts. Since capitalization of capital spares over and above the initial spares procured after the cut-off date are not allowed for the purpose of tariff as they form part of O&M expenses, the aforesaid claim for exclusions is in order and is allowed.

### **Capital Spares De-Capitalized**

27. The petitioner has de-capitalized in books of accounts capital spares amounting to ₹41.76 lakh during 2009-10, ₹38.01 lakh during 2010-11, ₹94.67 lakh during 2011-12 and ₹46.40 lakh during 2012-13 on these spares becoming unserviceable. In the affidavit dated 14.10.2013 the petitioner has submitted the details of the spares de-capitalized. It is observed from the details that spares amounting to ₹38.96 lakh during 2009-10, ₹7.99 lakh during 2010-11, ₹6.81 lakh during 2011-12 and ₹4.04 lakh during 2012-13 were allowed in tariff as part of the capital cost and the balance of the spares amounting to ₹2.80 lakh during 2009-10, ₹30.02 lakh during 2010-11, ₹87.86 lakh during 2011-12 and ₹42.36 lakh during 2012-13 were not allowed in tariff as part of capital cost. Hence, de-capitalization of spares which were allowed in tariff is not allowed under exclusions. De-capitalization of spares which were not forming part of capital cost of the generating station for the purpose of tariff is allowed under exclusions.

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

28. The petitioner has capitalized MBOA items in books of accounts amounting to ₹0.24 lakh during 2010-11. The capitalization of MBOA items after cut-off date is not allowed for the purpose of tariff. Thus, the exclusions of ₹0.24 lakh during 2010-11 are in order and are hereby allowed.

### **De-capitalization of MBOA items**

29. The petitioner has de-capitalized MBOA items in books of account amounting to ₹141.60 lakh during 2009-10, ₹57.79 lakh during 2010-11, ₹15.27 lakh during 2011-12 and ₹4.27 lakh during 2012-13 on these items becoming unserviceable. In the affidavit dated 14.10.2013 the petitioner has submitted the details of de-capitalization of MBOA items. It is observed from these details that MBOA items worth ₹127.11 lakh during 2009-10, ₹55.07 lakh during 2010-11, ₹12.03 lakh during 2011-12 and ₹4.27 lakh during 2012-13 were

allowed in tariff as part of the capital cost and rest of the MBOA items amounting to ₹14.49 lakh during 2009-10, ₹2.72 lakh during 2010-11, ₹3.24 lakh during 2011-12 were not allowed in tariff as not part of capital cost. As such, de-capitalization of MBOA items which were allowed in tariff is not allowed under exclusions and de-capitalization of spares which were not forming part of capital cost of the generating station for the purpose of tariff, are allowed under exclusions, at this stage, subject to truing up.

30. It is however observed that the petitioner has stated that out of MBOA's de-capitalized during 2010-11 and 2011-12, MBOA's amounting to ₹2.72 lakh and ₹3.19 lakh were procured during 2009-10 and 2010-11 respectively. However, on scrutiny of the petitioner's claim for these years, it is observed that actual procurement of MBOA during 2009-10 and 2010-11 is "nil" and ₹0.24 lakh, respectively i.e. the de-capitalization has exceeded the actual capitalization. Hence, the petitioner is directed to submit clarification in this regard in the final truing-up petition filed in terms of Regulation 6 of the 2009 Tariff Regulations for this generating station.

### **Liability Reversals**

31. The petitioner has excluded liability reversals amounting to ₹17.99 lakh during 2011-12 and ₹56.70 lakh during 2011-12. The claim of the petitioner is allowed.

### **Items disallowed**

32. The petitioner has excluded ₹1952.04 lakh (excluding liability of ₹228.02 lakh) during 2009-10, ₹120.27 lakh (excluding liability of ₹3.99 lakh) during 2010-11, ₹781.30 lakh (excluding liability of ₹3.24 lakh) during 2011-12 and ₹614.60 lakh (excluding liability of ₹70.99 lakh) during 2012-13 on account of items disallowed for capitalization by the Commission. Since the items not allowed to be capitalized are not forming part of capital cost, exclusions sought are in order and hence allowed.

## De-capitalization of Items disallowed

33. The petitioner has de-capitalized in books of account items disallowed by the Commission amounting to ₹380.64 lakh during 2009-10, ₹77.09 lakh during 2011-12 and ₹323.73 lakh during 2012-13 on their becoming unserviceable. It is noticed from the details of exclusions filed vide affidavit dated 14.10.2013 that these items were part of capital cost. De-capitalization of items which were allowed in tariff as part of capital cost is not allowed under exclusions.

34. The summary of exclusions claimed for the years 2009-10, 2010-11, 2011-12 and 2012-13 under different heads and allowed / not allowed for the purpose of tariff is as given in the table below:

| (₹ In lakh) |  |                   |                  |                  |                   |
|-------------|--|-------------------|------------------|------------------|-------------------|
| Sl. No.     | Year/ Description  | 2009-10           | 2010-11          | 2011-12          | 2012-13           |
| 1           | FERV   | (-) 261.96        | (-) 26.61        | 333.45           | 232.03            |
| 2           | Capital Spares – capitalized                                 | 91.88             | 814.58           | 610.81           | 294.70            |
| 3           | De-capitalization of spares part of capital cost             | (-) 38.96         | -7.99            | (-) 6.81         | (-) 4.04          |
| 4           | De-capitalization of spares not part of capital cost         | (-) 2.80          | (-) 30.02        | (-) 87.86        | (-) 42.37         |
| 5           | Capitalization of MBOA items                                 | 0.00              | 0.24             | 0.00             | 0.00              |
| 6           | De-capitalization of MBOA items part of capital cost         | (-) 127.11        | (-) 55.07        | (-) 12.03        | (-) 4.27          |
| 7           | De-cap of MBOA not part of capital cost                      | (-) 14.49         | (-) 2.72         | (-) 3.24         | 0.00              |
| 8           | Liability reversal   | 0.00              | 0.00             | (-) 17.99        | (-) 56.70         |
| 9           | Items disallowed   | 1952.04           | 120.27           | 781.30           | 614.60            |
| 10          | De-capitalization of items disallowed - part of capital cost | (-) 380.64        | 0.00             | (-) 77.09        | (-) 323.73        |
| 11          | <b>Total Exclusions allowed (1+2+4+5+7+8+9)</b>              | <b>1764.67</b>    | <b>875.74</b>    | <b>1616.47</b>   | <b>1042.26</b>    |
| 12          | <b>Total Exclusions not allowed (3+6+10)</b>                 | <b>(-) 546.71</b> | <b>(-) 63.06</b> | <b>(-) 95.93</b> | <b>(-) 332.04</b> |

## Assets held for disposal

35. An amount of ₹36.74 lakh in the year 2012-13 is shown as Asset held for disposal in the reconciliation statement of additional capitalization claim with the books of accounts for the year 2012-13. However, the petitioner has not shown this item in the additional

capitalization claim for the year 2012-13 as de-capitalization or under exclusions and has shown this asset as a transfer from gross block to current assets in the year 2013-14. As such, it is not clear from the submissions of the petitioner, whether this asset was forming part of tariff block in previous years. In the absence of specific details, it is presumed that this asset was forming part of allowed capital cost in the previous year also and accordingly has been considered as de-capitalization for the purpose of tariff. Further, as details like the actual year of capitalization, the depreciation recovered so far, etc in respect of this asset are not available, the corresponding adjustment in repayment of loan and cumulative depreciation cannot be made. The admissibility of these de-capitalizations will however be considered based on the petitioner furnishing appropriate details at the time of final truing-up for the year 2013-14.

### Liabilities discharged

36. The petitioner as per Annexure-V of the petition has furnished the flow of capital liabilities from 1.4.2009. As per the liability statement, out of the un-discharged liabilities deducted as on 1.4.2009, the petitioner has discharged amounts of ₹42.92 lakh in 2009-10, ₹12.59 lakh in 2010-11 and ₹4.09 lakh in 2011-12. The discharges corresponding to allowed assets/works are allowed during the respective years in addition to the additional capital expenditure approved.

37. Based on the above, actual additional capital expenditure for the period 2009-10 to 2012-13 and projected additional capital expenditure during 2013-14, is allowed as per the details given below:

| <i>(₹ in lakh)</i> |  |                  |                  |                  |                  |                     |
|--------------------|--|------------------|------------------|------------------|------------------|---------------------|
| Sl. No             | Head of work/ Equipment                              | 2009-10 (Actual) | 2010-11 (Actual) | 2011-12 (Actual) | 2012-13 (Actual) | 2013-14 (Projected) |
| A                  | LOCOMOTIVE 1350/1120 HP                              | 0.00             | 0.00             | 894.88           | 0.00             | 0.00                |
|                    | <b>New Items / Works claimed</b>                     |                  |                  |                  |                  |                     |
| B                  | <b>Ash Related Works</b>                             |                  |                  |                  |                  |                     |
|                    | R&M of Control System for Stage-1 Ash Handling Plant | 0.00             | 0.00             | 0.00             | 0.00             | 0.00                |

|          |   |                   |                  |               |                  |             |
|----------|---|-------------------|------------------|---------------|------------------|-------------|
|          | Control System  |                   |                  |               |                  |             |
| <b>C</b> | <b>Environmental System</b>   |                   |                  |               |                  |             |
|          | Room for Flue GAS Analyzer  | 0.00              | 0.32             | 0.00          | 0.00             | 0.00        |
| <b>D</b> | <b>CHP Related Works</b>  |                   |                  |               |                  |             |
| I        | Renovation & Modernization of MCC at CHP Stage – I  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| ii       | CHP Stage-I CBMS and suspended Magnet   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| iii      | R&M of Wagon Tippler of CHP Stage-I   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| iv       | Rack & Pinion Elevator in CHP   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
|          | Sub Total   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| <b>E</b> | <b>Other Works</b>  |                   |                  |               |                  |             |
| I        | Replacement of Generator Protection Panel of unit -1 & 2  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| II       | Hot Air Damper (HAD), Cold Air Damper (CAD) & RCF (Raw Coal Feeder) Pneumatic Control Actuators Stage – I | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| III      | Replacement of HP Heater No. 6 for Stage-I  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| II       | DELTA-PI Transmitter  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| V        | Renovation Of Turbovisory Instruments   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| VI       | Renovation of ID/FD/PA Blade IGV Actuators  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| VII      | Renovation of Generator purity meter  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| VIII     | Boiler Tube Leakage Detection System  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| IX       | Protection Coupler PLCC - 220 kV Switch yard  | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
|          | <b>Sub Total- (E)</b>   | 0.00              | 0.00             | 0.00          | 0.00             | 0.00        |
| F        | Total Additional Capitalization (A+B+C+D+E)   | 0.00              | 0.32             | 894.88        | 0.00             | 0.00        |
| G        | De-capitalization allowed   | 14.83             | 0.00             | 167.84        | 0.00             | 0.00        |
| H        | <b>Additional Capitalization allowed (F-G)</b>  | <b>(-) 14.83</b>  | <b>0.32</b>      | <b>727.04</b> | <b>0.00</b>      | <b>0.00</b> |
| I        | Exclusions not allowed  | (-) 546.71        | (-) 63.06        | (-) 95.93     | (-) 332.04       | 0.00        |
| J        | <b>Less: Asset held for Disposal</b>  | 0.00              | 0.00             | 0.00          | 36.74            | 0.00        |
| K        | Liabilities discharged  | 42.92             | 12.59            | 4.09          | 0.00             | 0.00        |
|          | <b>Net Additional Capitalization allowed (H-I-J+K)</b>  | <b>(-) 518.63</b> | <b>(-) 50.15</b> | <b>635.20</b> | <b>(-)368.77</b> | <b>0.00</b> |

38. Based on the additional capital expenditure allowed excluding liabilities as above, the capital cost considered for the purpose of revised tariff for 2009-14 is as under:

|                                | (₹ in lakh)         |                     |                     |                     |                        |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|
|                                | 2009-10<br>(Actual) | 2010-11<br>(Actual) | 2011-12<br>(Actual) | 2012-13<br>(Actual) | 2013-14<br>(Projected) |
| Opening Capital Cost           | 97412.91            | 96894.29            | 96844.14            | 97479.34            | 97110.56               |
| Additional Capital Expenditure | (-) 518.63          | (-) 50.15           | 635.20              | (-) 368.77          | 0.00                   |
| <b>Closing Capital Cost</b>    | <b>96894.29</b>     | <b>96844.14</b>     | <b>97479.34</b>     | <b>97110.56</b>     | <b>97110.56</b>        |

## Debt-Equity Ratio

39. 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.

40. Accordingly, gross loan and equity of ₹49282.98 lakh and ₹48129.94 lakh respectively as allowed in order dated 29.5.2012 have been considered as on 1.4.2009. Further, the admitted actual/ projected additional expenditure has been allocated between debt and equity in the ratio of 70:30.

## Return on Equity

41. 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."*

42. The base rate of 15.5% of RoE is to be trued up based on actual tax rate applicable for the year. RoE has been worked out by grossing up the base rate with respect to actual tax rate applicable to the petitioner as a generating company for the years 2009-10, 2010-11 and 2011-12 and for the years 2012-13 and 2013-14, the rate of tax of 32.445% as applicable for the year 2011-12 has been considered on the normative equity after accounting for actual/projected additional capital expenditure. Tax rate for the years 2012-13 and 2013-14 is subject to truing up on the basis of actual tax rate. Accordingly, return on equity worked out is as under:

(₹ in lakh)

|  | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Notional Equity- Opening   | 48129.94        | 47974.35        | 47959.31        | 48149.87        | 48039.23        |
| Addition/Reduction of Equity due to additional capital expenditure | (-) 155.59      | (-) 15.04       | 190.56          | (-) 110.63      | 0.00            |
| Normative Equity-Closing   | 47974.35        | 47959.31        | 48149.87        | <b>48039.23</b> | <b>48039.23</b> |
| Average Normative Equity   | <b>48052.14</b> | <b>47966.83</b> | <b>48054.59</b> | <b>48094.55</b> | <b>48039.23</b> |
| Return on Equity (Base Rate)                                       | 15.500%         | 15.500%         | 15.500%         | 15.500%         | 15.500%         |
| Tax Rate for the year  | 33.990%         | 33.218%         | 32.445%         | 32.445%         | 32.445%         |
| Rate of Return on Equity (Pre Tax)                                 | 23.481%         | 23.210%         | 22.944%         | 22.944%         | 22.944%         |
| <b>Return on Equity(Pre Tax</b>                                    | <b>11283.12</b> | <b>11133.10</b> | <b>11025.64</b> | <b>11034.81</b> | <b>11022.12</b> |

### Interest on loan

43. Regulation 16 of the 2009 Tariff Regulations provides as under:

*“(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.*

44. The interest on loan has been worked out in accordance with the methodology given below:

- (a) Gross normative loan amounting to ₹49282.98 lakh has been considered as on 1.4.2009.
- (b) Cumulative repayment considered as on 1.4.2009 amounting to ₹46409.32 lakh.
- (c) Net normative opening loan as on 1.4.2009 works out to ₹2873.66 lakh.
- (d) Addition to normative loan to the tune of 70% of additional capital expenditure approved has been considered on year to year basis.
- (e) Weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2009 along with subsequent additions during 2009-14 for the generating station. In case of loans carrying floating rate of interest the rate of interest as provided by the petitioner has been considered for the purpose of tariff.
- (f) Depreciation allowed has been considered as repayment of normative loan during the respective year of the tariff period 2009-14. Further, proportionate adjustment has been made to the repayments corresponding to discharges of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009 and on account of de-capitalizations considered in the additional capital expenditure approved above.
- (g) The cumulative repayment has been adjusted @70% corresponding to de-capitalization of assets/works considered for the purpose of tariff.

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

|   | (₹ in lakh)  |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|
|   | 2009-10      | 2010-11      | 2011-12      | 2012-13      | 2013-14      |
| Gross opening loan  | 49282.98     | 48919.95     | 48884.84     | 49329.48     | 49071.34     |
| Cumulative repayment of loan upto previous year   | 46409.32     | 46429.74     | 46827.92     | 47119.88     | 47415.45     |
| Net Loan Opening  | 2873.66      | 2490.20      | 2056.92      | 2209.60      | 1655.89      |
| Addition/Reduction due to Additional capitalisation/De-capitalization   | (-) 363.04   | (-) 35.10    | 444.64       | (-) 258.14   | 0.00         |
| Repayment of loan during the year   | 414.97       | 438.01       | 476.95       | 528.00       | 550.40       |
| Less: Repayment adjustment on account of de-capitalization  | 393.08       | 44.14        | 184.64       | 232.43       | 0.00         |
| Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009 | (-) 1.47     | 4.31         | (-) 0.36     | 0.00         | 0.00         |
| Net Repayment   | 20.42        | 398.18       | 291.96       | 295.57       | 550.40       |
| Net Loan Closing  | 2490.20      | 2056.92      | 2209.60      | 1655.89      | 1105.49      |
| Average Loan  | 2681.93      | 2273.56      | 2133.26      | 1932.75      | 1380.69      |
| Weighted Average Rate of Interest on Loan   | 2.5563%      | 1.8440%      | 2.4721%      | 3.2751%      | 3.3801%      |
| <b>Interest on Loan</b>   | <b>68.56</b> | <b>41.92</b> | <b>52.74</b> | <b>63.30</b> | <b>46.67</b> |

## Depreciation

46. Regulation 17 of the 2009 Tariff Regulations contains the following provisions relating to computation of depreciation:

*“(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.”*

47. The cumulative depreciation as on 31.3.2009 as per order dated 30.9.2011 in Petition No. 121/2009 works out to ₹83047.42 lakh. 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 ₹82996.24 lakh. The value of freehold land earlier considered as on 31.03.2009 is ₹356.49 lakh. However, the petitioner vide affidavits dated 11.4.2014 and 2.6.2014 has submitted that the Commission had allowed an additional capitalization of ₹0.60 lakh on account of freehold land but not shown separately under the head freehold land vide order dated 27.10.2009 in Petition No. 30/2009 and hence the value of freehold land as on 1.4.2009 is ₹357.08 lakh. The petitioner has submitted reconciliation of value of land with the books of account and the value of freehold land as on 31.3.2009 is shown as ₹357.08 lakh. As such, ₹357.08 lakh has been considered as value of freehold land as on 1.4.2009 for the purpose of calculating depreciable value. Since, the generating station is more than 12 years old, depreciation has been calculated by spreading the balance depreciable value over the remaining useful life. The balance useful life as on 1.4.2009 as per Commission's order dated 30.9.2011 in Petition No.129/2009 is 9.93 years and the same has been considered for calculation of depreciation. Further, proportionate adjustment has been made to the cumulative depreciation corresponding to discharges of liabilities considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009.

48. The necessary calculations in support of depreciation are as shown below:

|   | (₹ in lakh)     |                 |                 |                 |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
|   | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
| Opening capital cost  | 97412.91        | 96894.29        | 96844.14        | 97479.34        | 97110.56        |
| Closing capital cost  | 96894.29        | 96844.14        | 97479.34        | 97110.56        | 97110.56        |
| Average capital cost  | <b>97153.60</b> | <b>96869.21</b> | <b>97161.74</b> | <b>97294.95</b> | <b>97110.56</b> |
| Depreciable value @ 90%   | 87116.87        | 86860.92        | 87124.19        | 87244.08        | 87078.13        |
| Remaining useful life at the beginning of the year  | 9.93            | 8.93            | 7.93            | 6.93            | 5.93            |
| Balance depreciable value   | 4120.62         | 3911.44         | 3782.20         | 3659.01         | 3263.86         |
| <b>Depreciation</b>   | <b>414.97</b>   | <b>438.01</b>   | <b>476.95</b>   | <b>528.00</b>   | <b>550.40</b>   |
| Cumulative depreciation at the end  | 83411.21        | 83387.49        | 83818.94        | 84113.06        | 84364.67        |
| Less: Cumulative Depreciation Reduction due to de-capitalization  | 36.57           | 10.73           | 3.48            | 0.00            | 0.00            |
| Add: Cumulative depreciation adjustment on account of discharges / reversal of liabilities out of liabilities deducted as on 1.4.2009 | 498.30          | 56.23           | 237.35          | 298.80          | 0.00            |
| Net Cumulative Depreciation   | 82949.48        | 83341.99        | 83585.07        | 83814.27        | 84364.67        |

### O&M Expenses

49. O&M expenses as considered in the order dated 29.5.2012 in Petition No.221/2009 as given below have been considered:

|                         | (₹ in lakh) |         |         |         |         |
|-------------------------|-------------|---------|---------|---------|---------|
|                         | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| <b>O&amp;M expenses</b> | 7644.00     | 8080.80 | 8542.80 | 9034.20 | 9550.80 |

### Interest on Working Capital

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

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

|                                      | (₹ in lakh) |         |         |         |         |
|--------------------------------------|-------------|---------|---------|---------|---------|
|                                      | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cost of Main Fuel – two months       | 8161.71     | 8161.71 | 8184.07 | 8161.71 | 8161.71 |
| Cost of Liquid Fuel oil – two months | 107.74      | 107.74  | 108.04  | 107.74  | 107.74  |

(b) **Maintenance spares:** Maintenance spares have been considered @ 20% of operation and maintenance expenses as considered in the said order dated 29.5.2012 as stated below, have been considered.

|                    | (₹ in lakh) |         |         |         |         |
|--------------------|-------------|---------|---------|---------|---------|
|                    | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Maintenance Spares | 1528.80     | 1616.16 | 1708.56 | 1806.84 | 1910.16 |

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

|                          | (₹ in lakh) |          |          |          |          |
|--------------------------|-------------|----------|----------|----------|----------|
|                          | 2009-10     | 2010-11  | 2011-12  | 2012-13  | 2013-14  |
| <b>Total Receivables</b> | 12008.29    | 12059.05 | 12154.17 | 12229.12 | 12318.89 |

(d) **O&M Expenses:** O&M expenses for 1 month as allowed in order dated 29.5.2012 have been considered.

|                            | (₹ in lakh) |         |         |         |         |
|----------------------------|-------------|---------|---------|---------|---------|
|                            | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| O & M Expenses for 1 month | 637.00      | 673.40  | 711.90  | 752.85  | 795.90  |

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

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

|                                    | (₹ in lakh)     |                 |                 |                 |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                    | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
| Fuel Cost 2 months                 | 8161.72         | 8161.72         | 8184.08         | 8161.72         | 8161.72         |
| Liquid Fuel Cost of 2 months       | 107.74          | 107.74          | 108.04          | 107.74          | 107.74          |
| Maintenance Spares                 | 637.00          | 673.40          | 711.90          | 752.85          | 795.90          |
| O&M expenses – 1 month             | 1528.80         | 1616.16         | 1708.56         | 1806.84         | 1910.16         |
| Receivables – 2 months             | 12008.29        | 12059.05        | 12154.17        | 12229.12        | 12318.89        |
| <b>Total working capital</b>       | <b>22443.56</b> | <b>22618.08</b> | <b>22866.75</b> | <b>23058.27</b> | <b>23294.41</b> |
| Rate of interest                   | 12.2500%        | 12.2500%        | 12.2500%        | 12.2500%        | 12.2500%        |
| <b>Interest on working capital</b> | <b>2749.34</b>  | <b>2770.71</b>  | <b>2801.18</b>  | <b>2824.64</b>  | <b>2853.57</b>  |

### Compensation Allowance

52. Compensation Allowance allowed vide order dated 29.5.2012 has been considered as shown below.

|                        | (₹ in lakh) |         |         |         |         |
|------------------------|-------------|---------|---------|---------|---------|
|                        | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Compensation Allowance | 273.00      | 273.00  | 273.00  | 273.00  | 273.00  |

## Annual Fixed Charges

53. The revised annual fixed charges for the period 2009-14 are summarized as under:

|                             | (₹ in lakh)     |                 |                 |                 |                 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                             | 2009-10         | 2010-11         | 2011-12         | 2012-13         | 2013-14         |
| Depreciation                | 414.97          | 438.01          | 476.95          | 528.00          | 550.40          |
| Interest on Loan            | 68.56           | 41.92           | 52.74           | 63.30           | 46.67           |
| Return on Equity            | 11283.12        | 11133.10        | 11025.64        | 11034.81        | 11022.12        |
| Interest on Working Capital | 2749.34         | 2770.71         | 2801.18         | 2824.64         | 2853.57         |
| O&M Expenses                | 7644.00         | 8080.80         | 8542.80         | 9034.20         | 9550.80         |
| Cost of Secondary fuel oil  | 646.44          | 646.44          | 648.21          | 646.44          | 646.44          |
| Compensation Allowance      | 273.00          | 273.00          | 273.00          | 273.00          | 273.00          |
| <b>Total</b>                | <b>23079.43</b> | <b>23383.99</b> | <b>23820.52</b> | <b>24404.39</b> | <b>24943.00</b> |

54. The annual fixed charges allowed for the year 2013-14 are subject to truing up in accordance with Regulation 6 of the 2009 Tariff Regulations.

55. The petitioner has recovered annual fixed charges on the basis of Commission's order dated 29.5.2012 in Petition No. 221/2009. Accordingly, the annual fixed charges recovered by the petitioner shall be adjusted in accordance with clause (6) of Regulation 6 of the 2009 Tariff Regulations.

56. The petition stands disposed of on above terms.

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

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