

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

**Shri A.H. Jung, Member**

**Petition No. 40/2004**

**In the matter of**

Approval of tariff of Badarpur Thermal Power Station (705 MW) for the period from 1.4.2004 to 31.3.2009.

**And in the matter of**

Badarpur Thermal Power Station, New Delhi

.....**Petitioner**

Vs

Delhi Transco Limited, New Delhi

.....

**Respondent**

**The following were present:**

1. Shri V.B. K. Jain, NTPC
2. Shri N. Ahmad, NTPC
3. Shri S.D. Jha, NTPC
4. Shri P. Kapoor, NTPC
5. Shri N.K. Sharma, NTPC
6. Shri C.S. Gupta, NTPC
7. Shri R.N. Sen, NTPC
8. Shri S.K. Johar, NTPC
9. Shri A.K. Kaul, DTL
10. Shri Prem Prakash, DTL
11. Shri V.K. Gupta, DTL
12. Shri Naveen Goel, DTL
13. Shri V. Venugopal, DTL
14. Shri V.K. Garg, DTL

**ORDER**

**(DATE OF HEARING: 16.5.2005)**

The Commission vide its order dated 29.4.2005 felt that certain preliminary issues, as given below, need to be examined in detail and for this purpose I am required to make recommendations to the Commission:

- (a) Whether to follow the "net fixed assets" concept or "gross fixed assets" concept;

- (b) Debt-equity ratio to be considered;
- (c) Gross block to be considered as on 1.4.2004;
- (d) R&M expenditure and the expenditure to meet environmental norms to be considered;
- (e) O&M expenses to be considered in tariff; and
- (f) Operational norms of gross station heat rate, auxiliary energy consumption, specific fuel oil consumption and target availability/PLF to be applicable.

2. The Commission by the said order dated 29.4.2005 had directed the petitioner to file certain additional information. An affidavit has been filed on 13.5.2005. A copy of the affidavit is stated to have been supplied to the respondent who may file its comments thereon before the next date, with a copy to the petitioner.

3. The submissions made on the issues referred to me are discussed in the succeeding paragraphs.

#### **Net Fixed Assets Vs Gross Fixed Assets approach**

4. It has been submitted by the petitioner that tariff for sale of electricity from Badarpur Thermal Power Station (BTPS) fixed by the Central Government in March 1987, effective from 1.4.1987 was based on NFA approach, without regard to strict commercial principles. It was stressed that the Electricity Act 2003, emphasizes that power sector should work on self-sustaining basis. Accordingly, it was urged on behalf of the petitioner to follow GFA approach for the purpose of fixation of tariff. According to the petitioner, the Commission in its

orders while laying down the terms and conditions for determination of tariff has all along opted for GFA method. The representative of the respondent, however, submitted that in the interest of continuity, NFA approach needs to be followed.

5. The representatives of the petitioner pointed out that huge amount is outstanding against the respondent as a consequence of which it has not been possible to settle dues on account of supply of coal, transportation of coal by the railways, and other dues. I direct the petitioner to furnish a detailed note on the dues outstanding against the respondent, as also the outstanding dues of the generating station to various agencies and its proposal for liquidation of the outstanding amount.

#### **Debt-equity Ratio**

6. It was submitted by the petitioner that the Central Government in 1979 had specified debt-equity ratio of 50:50 for all projects. It was submitted that for the purpose of tariff, the Commission should adopt the same financing pattern for tariff purpose. I direct the petitioner to furnish a copy of the Central Government's letter reportedly issued in 1979 prescribing debt-equity ratio of 50:50.

#### **Capital cost**

7. The petitioner has filed the audited accounts for the year 2003-2004, based on which it can be inferred that the grossblock as on 31.3.2004 was Rs.430.76 crore. It was urged that this grossblock may be adopted for the purpose of determination of tariff. It is noticed that the Central Government in

March 1987 had determined tariff by considering grossblock of Rs.255 crore. Therefore, there is additional capitalization of Rs.185.76 crore up to 31.3.2004. The petitioner has furnished details of additional capitalization to the extent of Rs.81.53 Crore, involving an expenditure of Rs.36.97 crore on R&M Phase-I and expenditure of Rs.14.70 crore, Rs.14.91 crore and Rs.14.95 crore respectively under SFC-I, II and III. Still an amount of Rs.104.23 crore towards additional capitalization remains unexplained. The petitioner is directed to furnish the asset-wise break-up for additional capital expenditure of Rs.104.23 crore, along with proper justification.

### **R&M**

8. The petitioner has clarified that R&M estimate of Rs.452.90 crore corresponds to the price level of 2000 and not 1996 indicated in the petition. It was explained that an amount of Rs.37.64 crore relates to expenditure on dry ash extraction system to meet the environmental norm for reduction of SPM level from 150 MG/NM<sup>3</sup> to 50 MG/NM<sup>3</sup>. The petitioner further submitted that Ministry of Environment and Forests was insisting for a switch over to scrubber to avoid Mercury and Sulphur emission because of the proximity of the generating station to the National capital. The expenditure likely to be incurred on this has not been included in the R&M proposal. It was further submitted that it was not possible to firm up R&M requirement for 100 MW units, they being very old and BHEL was not comfortable with their R&M. However, R&M could be firmed up for 210 MW units. It was informed that some R&M work had already been started because of the urgency pending formal approval of CEA. It is directed that the petitioner

shall firm up requirement of funds for undertaking R&M works and submit the up-to-date R&M cost details along with schedule of implementation with cost-benefit analysis. The details of the expenditure incurred so far shall also be furnished. The petitioner has clarified that R&M proposal has not been discussed with beneficiary respondent. The representative of the respondent submitted that the respondent favours replacement of 100 MW units rather than incurring any additional expenditure on their R&M. The respondent shall examine the details to be submitted by the petitioner in response to the direction as aforesaid and submit its views on affidavit.

9. Meanwhile, the petitioner shall also explore the possibility of replacing old 100 MW units with single 250 MW or 300 MW unit with better efficiency.

### **O&M**

10. The petitioner submitted that O&M expenses are high because of excessive manpower deployed at the generating station. It was submitted that at the time of take over of the operation and maintenance by the petitioner, about 3000 non-executives were deployed though the manpower has been gradually reduced to 1700 and there is a scope for further reduction. The petitioner is directed to give its own action plan to bring gradual reduction in O&M expenses. The petitioner is further directed to furnish break-up of executive and non-executive employed at the generating station and the number of employees due to retire up to 31.3.2009.

### **Operational norms**

11. It was submitted by the petitioner that the availability/PLF of 80% could not be achieved. The representative of the petitioner clarified that the station has achieved PLF of 77% with one 210 MW machine down and there was 2% backing down during the month of April 2005. The petitioner submitted that it was not possible to ensure 80% availability of 100 MW machines. The petitioner shall furnish availability/PLF of 100 MW machines achieved during the period 1.4.2004 to 31.3.2005.

12. The petitioner submitted that 100 MW machines did not have HP heaters and reheat cycle because of which heat rate should be higher by about 150 Kcal/kWh as compared to station heat rate of Tanda TPS for 110 MW units. Accordingly, the petitioner prayed that heat rate of 2805 Kcal/kWh as claimed in the petition should be approved. On the issue of specific oil consumption, the petitioner submitted that norm of 3.5 mll/kWh may be provided. In view of the fact that 100 MW machines are very old. I reserve my opinion on this. On the issue of auxiliary energy consumption, the petitioner submitted that the data already filed is not authentic and cannot be relied upon because the meters were not properly calibrated. The actual power consumption after installation of special energy meters is of the order of 10.29% and therefore, higher auxiliary energy consumption norm needs to be provided. The petitioner is directed to segregate auxiliary energy consumption, from the total power house consumption by deducting the residential consumption of the power house colony.

13. In addition, the petitioner shall furnish the following details which were called earlier by order dated 28.4.2005 but have not been filed:

- (a) Legible copies of balance sheets and revenue expenditure account for the years 1986-87 to 2002-03
- (b) Schedules attached to the balance sheets for the years 1986-87 to 1995-96
- (c) Terms and Conditions including rate of interest, moratorium period, if any, and repayment period, etc of Government of India loans applicable from the date of commercial operation to 2003-04
- (d) Asset-wise depreciation rate calculation based on CERC's notification dated 26.3.2004 as on Gross Block on 31.3.2004.

14. The information called for shall be filed by the petitioner on affidavit latest by 6<sup>th</sup> June 2005.

15. List this petition on 15<sup>th</sup> June 2005.

Sd/-  
**(A.H. JUNG)**  
**MEMBER**

New Delhi, dated 25<sup>th</sup> May, 2005