

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram :

- 1. Shri. Ashok Basu, Chairperson**
- 2. Shri Bhanu Bhushan, Member**
- 3. Shri A.H. Jung, Member**

Petition No. 33/2003

In the matter of

Approval of generation tariff of Assam Gas Based Power Station for the tariff period from 1.4.2003 to 31.3.2004.

And in the matter of

North Eastern Electric Power Corporation Ltd.**Petitioner**

Vs

1. Assam State Electricity Board, Guwahati
2. Meghalaya State Electricity Board, Shillong
3. Department of Power, Govt of Tripura, Agartala
4. Power & Electricity Department, Govt of Mizoram, Aizawl
5. Electricity Department, Govt of Manipur, Imphal
6. Department of Power, Govt of Arunachal Pradesh, Itanagar
7. Department of Power, Govt of Nagaland, Kohima
8. North-Eastern Regional Electricity Board, Shillong
9. North –Eastern Regional Load Despatch Centre, Shillong.

.....**Respondents**

The following were present

1. Shri P.K.Bora, NEEPCO
2. Shri D.Dey, NEEPCO
3. Ms. C.Ranee, NEEPCO
4. Shri R.Kapoor, ASEB
5. Shri H.M.Sharma, ASEB

**ORDER
(DATE OF HEARING : 19.9.2006)**

The petitioner had filed this petition for approval of tariff in respect of Assam Gas Based Power Station (hereinafter referred to as “the generating station”) for the period from 1.4.2003 to 31.3.2004, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 (hereinafter referred to as “ the 2001 regulations”) and claimed fixed charges as under:

(Rs in lakh)

Sl No	Particulars	2003-04
1	Interest on Loan	6817
2	Interest on Working Capital	671
3	Depreciation	7113
4	Return on Equity	12404
5	O&M Expenses	4837
	TOTAL	31843

2. The details of Working Capital furnished by the petitioner and its claim for interest thereon were as follows:

(Rs in lakh)

Fuel Cost	1356
O & M expenses(1 Month)	403
Spares	288
Receivables	5020
Total Working Capital	7066
Rate of Interest	9.50%
Total Interest on Working capital	671

3. In addition, the petitioner claimed the variable charges @ 40.64 paise/kWh.

4. The Commission by its order dated 22.8.2005 approved the following annual fixed charges for the year 2003-04 by considering Rs 145163 lakh as the capital cost as on 1.4.2003 :

(Rs. in lakh)

Particulars	2003-04
Interest on loan	5659
Interest on Working Capital	673
Depreciation	6990
Advance against Depreciation	0
Return on Equity	11613
O&M expenses	2520
TOTAL	27454

5. The Commission by its order dated 22.8.2005 also allowed the energy charges @ 40.53 paise/kWh with Fuel Price Adjustment formula.

6. The petitioner filed a Review Petition (No. 115/2005), seeking review of the Commission's order dated 22.8.2005 on the following grounds :

(a) Calculation of capital cost and deduction of net revenue earned from sale of infirm power from the capital cost,

(b) Computation of interest on loan,

(c) Calculation of interest on working capital, and

(d) Calculation of O&M expenses.

7. The Commission by its order dated 2.8.2006 allowed review on two counts, namely, consideration of the capital cost and computation of O&M expenses. Accordingly, through this order, the capital cost and O & M expenses for the year 2003-04 are being determined afresh. As a consequence, any change in the capital cost and O & M expenses will also necessitate review of the fixed charges as the capital cost and O & M expenses are inputs for their determination. In all other respects, namely, the methodology adopted for computation of the fixed charges in the order dated 22.8.2005 has been applied and is not being repeated in this order.

CAPITAL COST

8. While determining the tariff of the generating station for the year 2003-04, the Commission arrived at a capital cost of Rs.145163 lakh in the following manner:

Cost component	Amount (Rs in lakh)
Approved project cost including IDC as per RCE-I	101407
Approved project cost including IDC as per RCE-II	133216
Approved project cost including IDC as per RCE-III	151557
Increase between RCE-I and RCE-III	50150
Less cost overrun	132
Allowable increase in prices up to actual date of commercial operation	50018
Capital cost on completion	151425
Capital cost as on 31.3.2003 reconciled from books of accounts	145450
Less net revenue from sale of infirm power up to COD	287
Capital cost after deducting net revenue from infirm power	145163
Capital cost as on 1.4.2003	145163

9. The Commission had considered the actual capital cost as on 31.3.2003, after adjusting revenue of Rs.287 lakh earned by the petitioner by sale of infirm power. The petitioner has now submitted that it had already deducted an amount of Rs.173 lakh, on account of sale of infirm power, from the capital cost as on date of commercial operation and any further reduction should have been restricted to Rs.114 lakh only. That the petitioner had already adjusted Rs.173 lakh was not brought to the notice of the Commission in the original proceedings, perhaps by oversight. The Commission has decided to consider the capital cost on this count since it would not be justified to deny the petitioner return on the investment made. The revised capital cost arrived at after adjustment of Rs.114 lakh on account of additional revenue earned by sale of infirm power from the capital expenditure as on 31.3.2003, is as under :

(Rs in lakh)

Capital expenditure as on 31.3.2003 as per books of accounts	145450
Less net revenue from sale of infirm power up to date of commercial operation	114
Capital expenditure less net revenue from sale of infirm power	145336
Capital cost as on 1.4.2003	145336

10. Consequent upon the revision of the capital cost as on 1.4.2003 as Rs 145336 lakh, other components of fixed charges are also revised as mentioned in the succeeding paragraphs, since the fixed charges are the direct function of the capital cost.

DEBT-EQUITY RATIO

11. The Commission in its order dated 22.8.2005, had considered debt-equity ratio of 50: 50. By applying the same debt-equity ratio, the revised capital cost of Rs.145336 lakh is apportioned between debt and equity. Accordingly, the amount of equity works out to Rs.72668 lakh

RETURN ON EQUITY

12. As per notification dated 26.3.2001, return on equity has been computed on the paid up and subscribed capital @ 16% of such capital. The return on equity on equity of Rs 72668 lakh works out to Rs.11627 lakh for the year 2003-04.

INTEREST ON LOAN

13. The petitioner's entitlement to interest on loan by applying the methodology indicated in order dated 22.8.2005 and based on revised debt component is as follows :

(Rs in lakh)

Particulars	2003-04
Gross loan-Opening	72668
Cumulative repayments of loan up to the previous year	18623
Net loan-opening	54045
Increase /decrease due to FERV	0
Increase /decrease due to Addl. Capitalisation	0
Total	54045
Repayments of loan during the year	2173
Net-Loan closing	51872
Average Net-Loan	52959
Rate of Interest on Loan	10.70%
Interest on Loan	5668

DEPRECIATION

14. Depreciation has been calculated in the same manner as in the order dated 22.8.2005 on the revised capital cost of Rs 145336 lakh. The petitioner is entitled to an amount of Rs.6998 lakh during 2003-04 on account of depreciation as shown below :

(Rs in lakh)

Particulars	2003-04
Capital cost as on 31.3.2003	145336
Opening balance	145336
Increase /decrease due to FERV	0
Increase /decrease due to Addl. Capitalisation	0
Closing balance	145336
Rate of depreciation	4.82%
Depreciation	6998

O&M EXPENSES

15. The petitioner has claimed O&M expenses in accordance with Clause 2.7 (d) (ii) of the 2001 regulations since the generating station was declared under commercial operation on 1.4.1999. The relevant provision is reproduced below :

“... In case of new thermal stations of NTPC and NLC which have not been in existence for a period of five years, the Base O&M expenses shall be fixed at 2.5% of the actual capital cost as approved by the Authority or an appropriate Independent agency, as the case may be, in the year of commissioning and shall be escalated at the rate of 10% per annum for subsequent years to arrive at O&M expenses for the base year 1999-2000 level. Thereafter the Base O&M expenses shall be further escalated at the rate of 6% per annum to arrive at permissible O&M expenses for the relevant year..”

16. Respondent No.1, ASEB has objected to the claim of O&M expenses on the grounds that there is no provision in the 2001 regulations for computation of O&M expenses, which can be applied to the generating station and that the additional liability worked out as per clause 2.7 (d) (ii) of the 2001 regulations would be a burden on the consumer.

17. Clause 1.12 of the 2001 regulations, as originally notified provided that these regulations were not applicable to the generating stations owned by the petitioner. However, the Commission by its order dated 25.9.2002, in suo-moto Petition No. 56/2002 finalized norms for small gas turbine stations, the category within which Assam Gas Based Power Station falls, and directed as follows :

“ As such, on above considerations, we direct that O&M cost norms as prescribed in notification dated 26.3.2001 shall also be applicable for thermal stations with small gas turbines of 50 MW and below.”

18. Consequently, the Commission by notification dated 1.5.2003 amended the 2001 regulations, as a result of which clause 1.12 was omitted. Through this amendment, certain operational norms for small gas turbines generating stations with capacity of 50 MW and below, were also added. However, clause 2.7 (d) (ii) could not be amended in keeping with the other amendments perhaps due to oversight. We are of the view that with the deletion of clause 1.12 of the 2001

regulations, the norms laid down in these regulations were applicable to the generating stations of the petitioner in the absence of any norms for determination of O&M expenses exclusively for the generating stations under the control of the petitioner.

19. In the above circumstances, O&M expenses @ 2.5 % of the approved capital cost and escalated at 6% per annum, as per the 2001 regulations are allowed. Based on the capital cost of Rs.144743 lakh as on 1.4.1999, that is, the date of commercial operation, as admitted in order date 22.8.2005, O&M expenses for 2003-04 have been worked out as Rs. 4568 lakh.

INTEREST ON WORKING CAPITAL

20. For the purpose of computing the revised working capital, the fuel cost and cost of spares considered in order dated 22.8.2005 shall be applicable. However, working capital has been revised considering revision of O&M expenses and receivables, consequent to revision of other components of the fixed charges, as follows :

(a) **O&M expenses** : One month of O&M expenses as revised works out to Rs 381 lakh.

(b) **Receivables**: The fixed charges have changed due to revision of capital cost and O & M expenses. The receivables have been revised on the basis of two months of fixed and variable charges as under :

(Rs in lakh)	
Variable charges	2003-04
Gas(Rs /kWh)	0.4053
Variable charges per year	8038.51
Variable charges-2 months	1339.75
Fixed charges -2 months	4931
Receivables	6270

21. The interest on working capital @ 9.50% works out to Rs 723 lakh as detailed below:

Calculation of Interest on Working Capital

(Rs in lakh)	
	2003-04
Fuel Cost	670
O&M expenses(1 month)	381
Spares	288
Receivables	6270
Total Working Capital	7609
Rate of Interest	9.50%
Interest on Working Capital	723

22. Based on the above calculations, the annual fixed charges for the period 1.4.2003 to 31.3.2004 shall be recovered as follows :

(Rs in lakh)	
Particulars	2003-04
Interest on Loan	5668
Interest on Working Capital	723
Depreciation	6998
Advance against Depreciation	0
Return on Equity	11627
O&M expenses	4568
Total	29584

23. The energy charge @ 40.53 paise /kWh, with Fuel Price Adjustment formula as per order dated 22.8.2005 shall be applicable for the year 2003-04.

Sd/-
(A.H. JUNG)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(ASHOK BASU)
CHAIRPERSON

New Delhi, dated the 14th December, 2006