

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.150/2004

Coram: 1. **Dr.Pramod Deo, Chairperson**
2. **Shri S.Jayaraman, Member**
3. **Shri V.S.Verma, Member**
4. **Shri M.Deena Dayalan, Member**

DATE OF ORDER: 5.10.2011

IN THE MATTER OF

Revision of order dated 9.5.2006 in the light of the judgment of the Appellate Tribunal for Electricity dated 13.6.2007 in Appeal Nos.139 to 142 etc., of 2006, 10, 11 and 23 of 2007 and judgment dated 16.3.2009 in Appeal Nos. 133, 135, 136 and 148/2008.

AND

IN THE MATTER OF

Approval of tariff in respect of Feroze Gandhi Unchahar Thermal Power Station, Stage-II (420 MW) for the period from 1.4.2004 to 31.3.2009.

AND

IN THE MATTER OF

NTPC Ltd, New Delhi
Vs

....Petitioner

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

.....Respondents

ORDER

The petitioner, NTPC had filed this petition for determination of tariff for Feroze Gandhi Unchahar Thermal Power Station, Stage-II (420 MW) (hereinafter referred to as “the generating station”) for the period 2004-09, in accordance with the provisions of



the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as “the 2004 regulations”). The Commission by its order dated 9.5.2006 determined the annual fixed charges of the generating station for 2004-09 considering the capital cost of ₹129855.10 lakh (inclusive of additional capital expenditure and FERV on actual basis amounting to ₹2313.10 lakh and ₹4060.00 lakh for 2001-04 respectively) as on 1.4.2004. The annual fixed charges approved by order dated 9.5.2006 is as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1633	1420	1232	1029	819
Interest on Working Capital	1469	1479	1490	1505	1514
Depreciation	4823	4823	4823	4823	4823
Advance Against Depreciation	0.00	0.00	0.00	0.00	65.84
Return on Equity	5454	5454	5454	5454	5454
O & M Expenses	4368	4544	4725	4914	5111
Total	17747	17720	17724	17725	17787

2. The Commission vide its order dated 3.1.2008 in Petition No.1/2000 revised the tariff of the generating station for the period from 1.3.2000 to 31.3.2004, after implementation of the normative repayment methodology in terms of the judgment dated 14.11.2006 of the Tribunal in Appeal No.96/2005 (pertaining to Kawas Gas Power Station of the petitioner). However, the tariff of the generating station for 2004-09 approved vide order dated 9.5.2006 was not revised on account of change in the cumulative repayment of loan position as on 1.4.2004 remained unchanged. This is sought to be rectified by this order.

3. Aggrieved by order dated 9.5.2006 in Petition No.150/2004, the petitioner filed Appeal No.152/2006 before the Tribunal. Similar appeals [Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007 (NTPC-v-CERC & ors)] were also filed by the petitioner challenging the various orders of the Commission determining tariff for other generating

stations of the petitioner during the period 2004-09. Appeal No.152/2006 was clubbed along with the other appeals and the Tribunal by its common judgment dated 13.6.2007 allowed the prayers of the petitioner and remanded the matters for re-determination of tariff by the Commission.

4. Against the judgment dated 13.6.2007, the Commission has filed Civil Appeals before the Hon'ble Supreme Court (C.A. Nos. 5434/2007 to 5452/2007 and 5622/2007) including Civil Appeal No. 5842/2007 pertaining to this generating station, on issues such as:

- (a) Consequences of refinancing of loan;
- (b) Treating of depreciation as deemed repayment of loan;
- (c) Cost of maintenance spares related to additional capitalization;
- (d) Depreciation availability up to 90% in the event of disincentive; and
- (e) Impact of de-capitalization of assets on cumulative repayment of loan.

5. The Hon'ble Supreme Court on 26.11.2007 granted interim order of stay of the operation of the order dated 13.6.2007 of the Tribunal. However, on 10.12.2007, the Hon'ble Supreme Court passed interim order as under:

“Learned Solicitor General appearing on behalf of the National Thermal Power Corporation stated that pursuant to the remand order, following five issues shall not be pressed for fresh determination:

- (a) Consequences of refinancing of loan;*
- (b) Treating of depreciation as deemed repayment of loan;*
- (c) Cost of maintenance spares related to additional capitalization;*
- (d) Depreciation availability up to 90% in the event of disincentive; and*
- (e) Impact of de-capitalization of assets on cumulative repayment of loan*

The Commission may, however, proceed to determine other issues.

It is clarified that this order shall apply to other cases also.

In view of this, the interim order passed by the Court on 26th November, 2007, is vacated. The interlocutory applications are, accordingly, disposed of.”

6. While so, the petitioner in its petitions filed before the Commission for revision of annual fixed charges for 2004-09 on account of additional capital expenditure incurred during 2004-09 in respect of its other generating stations, claimed annual fixed charges in terms of the judgment of the Tribunal dated 13.6.2007. However, the Commission,



keeping in view the spirit of the interim order of the Hon'ble Supreme Court dated 10.12.2007 and since tariff for 2004-09 was a composite package, deferred the claim of the petitioner for annual fixed charges in terms of the judgment of the Tribunal dated 13.6.2007, till the final disposal of the said Civil Appeals by the Hon'ble Supreme Court.

7. Thereafter, in an appeal [Appeal No.92/2010 (NTPC-v-CERC & ors)] filed by the petitioner before the Tribunal against the order of the Commission pertaining to one of its generating station namely, Talcher TPS, Stage-II, the Tribunal by its judgment dated 4.2.2011 observed that pendency of the Civil appeals filed by the Commission before the Hon'ble Supreme Court (against the judgment of the Tribunal dated 13.6.2007) was not a ground to ignore the orders of the Tribunal. Against this order the Commission has filed Civil Appeal before the Hon'ble Supreme Court. Keeping in view the observations of the Tribunal in Appeal No. 92/2010 and considering the fact that the tariff for 2004-09 was a composite package, the tariff of other generating stations of the petitioner for 2004-09 was revised by the Commission by its various orders, after considering the issues raised by the petitioner in terms of the judgment of the Tribunal dated 13.6.2007. Accordingly, we propose to revise the order dated 9.5.2006 in respect of this generating station also.

8. In the above background, we now proceed to revise the annual fixed charges of the generating station for 2004-09 through this order, after considering the issues claimed by the petitioner in terms of the judgment of the Tribunal dated 13.6.2007, subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court.



Normative FERV for 2001-04

9. The Commission vide its order dated 9.5.2006 had allowed Foreign Exchange Rate Variation (FERV) of ₹4060.00 lakh on actual basis. FERV on normative basis is worked out as under:

	(₹ in lakh)			
	2001-02	2002-03	2003-04	Total
Net opening loan (actual) – A	76838.66	74888.64	72738.72	-
Net opening loan (normative) as per order dated 3.1.2008- B	77756.83	75783.51	73607.90	
Actual FERV allowed vide order dated 9.05.2006- C	(-) 287.00	2984.00	1363.00	4060.00
FERV allowable on normative basis (E = C x B ÷ A)	(-) 290.43	3019.66	1379.29	4108.51

10. Thus, the additional FERV for the tariff period 2001-04, allowed as on 1.4.2004 works out to ₹48.51 lakh.

Capital Cost

11. Based on the above, after adjustment of FERV, the gross block as on 1.4.2004 is revised to ₹129903.96 lakh as per details given hereunder:

	(₹ in lakh)
Capital cost as on 31.3.2004 approved vide order dated 18.6.2004 in Petition No.1/2000	123482.35
Add: Additional Capital Expenditure for the period 2001-04, approved vide order dated 4.4.2005 in Petition No.143/2004	2313.10
Add: FERV (on actual basis) for the period 2001-04, approved vide order dated 9.5.2006 in Petition No.150/2004	4060.00
Add: Additional FERV on normative basis approved above	48.51
Capital cost as on 1.4.2004	129903.96

12. The opening capital cost, closing capital cost and average capital cost for the respective years of the period 2004-09 remain as ₹129903.96 lakh since no additional capital expenditure for 2004-09 had been claimed by the petitioner.

Debt-Equity ratio

13. Debt-equity ratio of 70:30 as considered in order dated 9.5.2006 has been considered for the purpose of tariff. Accordingly, the normative debt and normative equity as on 1.4.2004 works out to ₹90932.77 lakh and ₹38971.19 lakh, respectively

Return on Equity

14. Based on the above, the return on equity approved vide order dated 9.5.2006 is revised as stated under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Equity –Opening considered now	38971.19	38971.19	38971.19	38971.19	38971.19
Addition of Equity due to admitted additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Equity-Closing	38971.19	38971.19	38971.19	38971.19	38971.19
Average equity	38971.19	38971.19	38971.19	38971.19	38971.19
Return on Equity @ 14%	5455.97	5455.97	5455.97	5455.97	5455.97

Interest on loan

15. Interest on loan has been re-worked out as mentioned below:

- (a) Gross opening loan on normative basis considered is ₹90932.77 lakh as on 1.4.2004.
- (b) Cumulative repayment of normative loan amounting to ₹40359.75 lakh as on 1.4.2004 as considered in order dated 3.1.2008 in Petition No.1/2000 has been considered for the purpose of tariff.
- (c) Annual repayment of actual loan has been used to calculate normative repayment of loan. Normative repayment has been worked out as per formula below:

$$\text{Normative repayment} = \frac{\text{Actual Repayment} \times \text{Normative Loan}}{\text{Actual Loan}}$$

- (d) Weighted average rate of interest as considered in order dated 9.5.2006 in Petition No.150/2004 has been retained for the purpose of tariff.

16. Interest on loan has been re-computed as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Opening loan – considered now	90932.77	90932.77	90932.77	90932.77	90932.77
Cumulative Repayment of Loan upto previous year	40359.75	43943.30	47790.20	52181.66	57365.04
Net Loan Opening	50573.02	46989.47	43142.58	38751.11	33567.73
Addition of loan due to approved additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Repayment of loan	3583.55	3846.90	4391.46	5183.39	5289.67
Net Loan Closing	46989.47	43142.58	38751.11	33567.73	28278.06
Average Loan	48781.25	45066.02	40946.85	36159.42	30922.89
Weighted Average Rate of Interest on Loan	3.4280%	3.3158%	3.2439%	3.1030%	2.8945%
Interest on Loan	1672.20	1494.32	1328.28	1122.04	895.06



Depreciation

17. Weighted average rate of depreciation of 3.7138% as considered in order dated 9.5.2006 has been considered for the purpose of tariff. Cumulative depreciation and Advance Against Depreciation (AAD) recovered in tariff as on 31.3.2004, corresponding to order dated 3.1.2008 in Petition No. 1/2000 is ₹22241.48 lakh. After taking in to account depreciation of ₹166.36 lakh recovered/to be recovered on account of normative FERV for the period 1.4.2001 to 31.3.2004, the cumulative depreciation as on 31.3.2004 is revised to ₹22407.85 lakh. Applying the weighted average rate of depreciation of 3.7138% on the capital cost approved above, the petitioner is entitled to recover depreciation of ₹4824.38 lakh each year during the period 2004-09. The necessary calculations are as under.

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening capital cost	129903.96	129903.96	129903.96	129903.96	129903.96
Closing capital cost	129903.96	129903.96	129903.96	129903.96	129903.96
Average capital cost	129903.96	129903.96	129903.96	129903.96	129903.96
Depreciable value @ 90%	116518.73	116518.73	116518.73	116518.73	116518.73
Balance depreciable value (at the beginning)	94110.88	89286.50	84462.13	79637.75	74454.36
Depreciation	4824.38	4824.38	4824.38	4824.38	4824.38
Cumulative depreciation /AAD (at the end of the period)	27232.23	32056.60	36880.98	42064.37	47354.03

Advance Against Depreciation

18. Advance Against Depreciation has been computed as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	9093.28	9093.28	9093.28	9093.28	9093.28
Repayment of the Loan	3583.55	3846.90	4391.46	5183.39	5289.67
Minimum of the above	3583.55	3846.90	4391.46	5183.39	5289.67
Depreciation during the year	4824.38	4824.38	4824.38	4824.38	4824.38
(A) Difference	0.00	0.00	0.00	359.01	465.29
Cumulative Repayment of the Loan	43943.30	47790.20	52181.66	57365.04	62654.71
Cumulative Depreciation / AAD	27232.23	32056.60	36880.98	41705.36	46888.75
(B) Difference	16711.07	15733.59	15300.68	15659.68	15765.96
Advance Against Depreciation [Minimum of (A) and (B)]	0.00	0.00	0.00	359.01	465.29



19. The cumulative depreciation /AAD as on 31.3.2009 stands at ₹47354.03 lakh.

O&M expenses

20. O&M Expenses approved vide order dated 9.5.2006 has been considered.

Interest on Working capital

21. Interest on working capital has been calculated as under:

(a) **Fuel Cost:** Fuel cost as considered in order dated 9.5.2006 has been considered for purpose of tariff.

(b) **O&M expenses:** O&M expenses for one month as considered in order dated 9.5.2006 has been considered.

(c) **Spares:** The cost of maintenance spares for working capital has been worked out based on historical cost and the additional capital expenditure incurred during the period from the date of commercial operation upto the respective years of the period 2004-09 for computation of maintenance spares for the purpose of calculating interest on working capital.

(d) **Receivables:** Receivables have been worked out on basis of two months of fixed and variable charges. For this purpose, operational parameters as considered in order dated 9.5.2006 has been considered. Receivables have been worked out as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Variable Charges					
Coal (Rs/kWh)	1.0397	1.0397	1.0397	1.0397	1.0397
Oil (Rs/kWh)	0.0299	0.0299	0.0299	0.0299	0.0299
(Rs/kWh)	1.0696	1.0696	1.0696	1.0696	1.0696
Variable Charges per year	28647.96	28647.96	28647.96	28726.45	28647.96
Variable Charges - 2 months	4774.66	4774.66	4774.66	4787.74	4774.66
Fixed Charges - 2 months	2966.59	2968.21	2972.65	3033.15	3047.91
Receivables	7741.25	7742.87	7747.31	7820.89	7822.57

22. Interest on working capital is computed as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Coal stock- 1.1/2 months	4641.12	4641.12	4641.12	4653.84	4641.12
Oil stock -2 months	133.54	133.54	133.54	133.90	133.54
O & M expenses	364.00	378.70	393.75	409.50	425.95
Maintenance Spares	1549.26	1642.22	1740.75	1845.20	1955.91
Receivables	7741.25	7742.87	7747.31	7820.89	7822.57
Total Working Capital	14429.17	14538.45	14656.47	14863.33	14979.09
Rate of Interest	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%
Total Interest on Working capital	1478.99	1490.19	1502.29	1523.49	1535.36



23. The annual fixed charges for the period from 1.4.2004 to 31.3.2009 are summarized as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1672.20	1494.32	1328.28	1122.04	895.06
Interest on Working Capital	1478.99	1490.19	1502.29	1523.49	1535.36
Depreciation	4824.38	4824.38	4824.38	4824.38	4824.38
Advance Against Depreciation	0.00	0.00	0.00	359.01	465.29
Return on Equity	5455.97	5455.97	5455.97	5455.97	5455.97
O & M Expenses	4368.00	4544.40	4725.00	4914.00	5111.40
Total	17799.54	17809.26	17835.92	18198.89	18287.46

24. The target availability of 80% considered by the Commission in the order dated 9.5.2006 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc., considered in order dated 9.5.2006 have been retained for the purpose of calculation of the revised fixed charges.

25. The annual fixed charges determined by this order are subject to the outcome of Civil Appeals as stated above, pending before the Hon'ble Supreme Court.

26. The petitioner shall claim the difference in respect of the tariff determined by order dated 9.5.2006 and the tariff determined by this order, from the beneficiaries in three equal monthly installments.

Sd/-
(M.DEENA DAYALAN)
MEMBER

Sd/-
(V.S.VERMA)
MEMBER

Sd/-
(S.JAYARAMAN)
MEMBER

Sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

