

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.146/2004

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: 3.8.2011

IN THE MATTER OF

Revision of order dated 21.8.2006 in the light of the judgment of the Appellate Tribunal for Electricity dated 13.6.2007 in Appeal No.239/2006-Approval of tariff in respect of Vindhyachal STPS, Stage-II (1000 MW).

AND

IN THE MATTER OF

NTPC Ltd, New Delhi
Vs

.....Petitioner

- (1) Madhya Pradesh Power Trading Company Ltd, Jabalpur
- (2) Maharashtra State Electricity Distribution Co. Ltd, Mumbai
- (3) Gujarat Urja Vikas Nigam Ltd, Vadodara
- (4) Chhattisgarh State Power Distribution Co. Ltd, Raipur
- (5) Electricity Department, Govt. of Goa, Goa
- (6) Electricity Department, Administration of Daman & Diu, Daman
- (7) Electricity Department, Administration of Dadra and Nagar Haveli, Silvassa

...Respondents

ORDER

This petition was filed by NTPC Ltd, the petitioner herein, for approval of tariff of Vindhyachal STPS, Stage-II (1000 MW), (hereinafter referred to as “the generating station”) based on 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 21.8.2006 determined the annual fixed charges of the generating station for 2004-09 based on the capital cost of ₹255124.25 lakh as under:



	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	7602.27	6577.80	5511.08	4385.80	3351.91
Interest on Working Capital	2576.35	2596.21	2619.70	2650.56	2588.88
Depreciation	9263.65	9263.65	9263.65	9263.65	9263.65
Advance Against Depreciation	5281.46	5818.97	6510.80	7372.52	3170.52
Return on Equity	10715.22	10715.22	10715.22	10715.22	10715.22
O & M Expenses	9360.00	9730.00	10120.00	10520.00	10950.00
Total	44798.95	44701.84	44740.46	44907.75	40040.19

2. Aggrieved by the said order, the petitioner filed Appeal No.239/2006 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.239/2006 was clubbed along with the said 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.

3. 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. 5436/2007 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.

4. 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.”

5. During the pendency of the above Civil Appeals, the petitioner filed various petitions before the Commission for revision of tariff in respect of its other generating stations for 2004-09 after considering the additional capital expenditure incurred, based on the directions contained in the judgment of the Tribunal dated 13.6.2007 including those issues covered by the interim order dated 10.12.2007 of the Hon'ble Supreme Court. However, the claims of the petitioner were rejected and the Commission by its orders deferred the implementation of the judgment of the Tribunal dated 13.6.2007 in respect of those five issues till the final outcome of the said Civil Appeals, keeping in view the spirit of the interim order of the Hon'ble Supreme Court dated 10.12.2007 and considering the fact that tariff for the period 2004-09 was a composite package which needs to be determined on the same principle. Against these orders, the petitioner has filed appeals before the Tribunal.

6. 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 had 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. The Commission is in the process of filing Civil Appeal against this judgment. Keeping in view the

observations of the Tribunal in Appeal No. 92/2010 and considering the fact that the tariff for 2004-09 is a composite package, the tariff of some of the generating stations of the petitioner have been revised after considering the issues raised by the petitioner in terms of the judgment of the Tribunal dated 13.6.2007. In line with this, we proceed to revise the annual fixed charges of the generating station 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.

7. In the above background, we now proceed to revise the annual fixed charges of the generating station through this order, as under:

Capital cost

8. The Commission vide its order dated 21.8.2006 had allowed tariff considering the capital cost of ₹255124.25 lakh as on 1.4.2004. The same has been considered for revision of tariff throughout the tariff period as the same includes liabilities and no additional capital expenditure has been claimed during the tariff period.

Debt-Equity Ratio

9. The debt-equity ratio of 70:30 as considered in order dated 21.8.2006 has been considered for the purpose of tariff.

Return on Equity:

10. There is no change in the return on equity allowed vide order dated 21.8.2006.

Interest on Loan

11. Adjustment of repayment corresponding to de-capitalization of assets: The petitioner in its original petition for 2004-09 had sought adjustment in cumulative repayment on account of de-capitalization of assets in such a manner that the net loan

opening prior to de-cap does not undergo a change. The Appellate Tribunal by its judgment dated 13.6.2007 has decided as under:

“When asset is not in use it is only logical that the capital base for the purpose of tariff is also proportionately reduced. It follows therefore that the appellant will not earn any depreciation, return on equity and O&M charges. However, despite the de-capitalization, the appellant is required to pay interest on loan. Whereas 10% salvage value of the de-capitalized asset should be non-tariff revenue, the interest on loan has to be borne by the beneficiaries. If the salvage value is more than 10%, amount realized above 10% should be counted as additional revenue. If salvage value is less than 10%, it will be counted as loss in the revenue.

Therefore, in this view of the matter, the cumulative repayment of the loan proportionate to those assets de-capitalized required to be reduced. The CERC shall act accordingly”.

12. In terms of the above decision of the Tribunal, the cumulative repayment adjustment has been worked out proportionate to assets de-capitalized such that the net opening loan prior to de-capitalisation and after de-capitalisation do not change.

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

(a) Gross normative loan as considered in order dated 21.8.2006 has been considered for purpose of tariff as there is no change in the capital cost.

(b) Cumulative repayment of loan up to 31.3.2004 amounting to ₹57507.25 lakh has been considered, as per order dated 1.8.2003 in Petition No. 77/2002. However, in terms of the directions of the Tribunal, considering the cumulative repayment adjustment of ₹25.55 lakh as on 1.4.2004 corresponding to the de-capitalization of assets (amounting to ₹36.50 lakh) for the period up to 31.3.2004, the cumulative repayment as on 1.4.2004 is revised to ₹57481.70 lakh.

(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) The weighted average rate of interest calculated on actual loan and actual repayment have been applied on normative loan for computation of interest on loan component of tariff.

14. The interest on loan has been computed as stated overleaf:



(₹ in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Opening Loan – considered now	178586.98	178586.98	178586.98	178586.98	178586.98
Cumulative Repayment of Loan upto previous year	57481.70	71873.99	86823.05	102486.92	119095.21
Net Loan Opening	121105.28	106712.99	91763.92	76100.05	59491.77
Addition of loan due to Additional capital expenditure allowed for 2004-09	0.00	0.00	0.00	0.00	0.00
Repayment of loan	14392.29	14949.07	15663.87	16608.29	12413.32
Net Loan Closing	106712.99	91763.92	76100.05	59491.77	47078.45
Average Loan	113909.13	99238.46	83931.99	67795.91	53285.11
Weighted Average Rate of Interest on Loan	6.6799%	6.6447%	6.5950%	6.5110%	6.3454%
Interest on Loan	7609.07	6594.07	5535.29	4414.20	3381.14

Depreciation

15. The cost of land in the present case is ₹2187.61 lakh. The gross depreciable value of the generating station, excluding land cost is $0.9 \times (\text{Rs.}255124.25 \text{ lakh less } ₹2187.61 \text{ lakh}) = ₹227642.98 \text{ lakh}$. Cumulative depreciation and Advance Against Depreciation (AAD) recovered in tariff up to 31.3.2004 after adjusting the depreciation of ₹6.00 lakh recovered on assets de-capitalized and adding depreciation of ₹662.00 lakh recovered /to be recovered on account of FERV for the period 1.4.2001 to 31.3.2004 is ₹32214.32 lakh. Remaining depreciable value as on 1.4.2004 is thus ₹195428.66 lakh. The petitioner is entitled to recover depreciation of Rs.9263.65 lakh each year during 2004-09 on capital cost of ₹255124.25 lakh.

Advance Against Depreciation:

16. The 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)	17858.70	17858.70	17858.70	17858.70	17858.70
Repayment of the Loan	14392.29	14949.07	15663.87	16608.29	12413.32
Minimum of the above	14392.29	14949.07	15663.87	16608.29	12413.32
Depreciation during the year	9263.65	9263.65	9263.65	9263.65	9263.65
(A) Difference	5128.64	5685.42	6400.22	7344.63	3149.67
Cumulative Repayment	71873.99	86823.05	102486.92	119095.21	131508.53



of the Loan					
Cumulative Depreciation / AAD	41477.97	55870.25	70819.32	86483.19	103091.48
(B) Difference	30396.02	30952.80	31667.60	32612.02	28417.05
Advance Against Depreciation [Minimum of (A) and (B)]	5128.64	5685.42	6400.22	7344.63	3149.67

O&M Expenses

17. O&M expenses as considered in order dated 21.8.2006, has been considered for the purpose of revision of tariff.

Interest on working capital

18. Interest on Working capital has been worked out considering the following:

- (a) **Fuel Cost:** Fuel cost as considered in order dated 21.8.2006 has been considered for revision of tariff.
- (b) **O&M expenses:** O&M expenses for one month as considered in order dated 21.8.2006 has been considered for revision of tariff.
- (c) **Spares:** The cost of maintenance spares for working capital has been worked out based on historical cost amounting to ₹238206.67 lakh, and escalated at 6% per annum. However, initial spares amounting to ₹1984.00 lakh has been deducted to arrive at the applicable historical cost as on date of commercial operation, for the purpose of calculation of cost of maintenance spares. Further, in terms of the directions contained in order of the Tribunal dated 13.6.2007, the additional capitalisation incurred during the period from date of commercial operation has been considered for computation of maintenance spares.
- (d) **Receivables:** Receivables have been worked out as under on basis of two months of fixed and variable charges. For this purpose, operational parameters as considered in order dated 21.8.2006 has been considered.

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Variable Charges					
Coal (Rs/kWh)	0.7000	0.7000	0.7000	0.7000	0.7000
Oil (Rs/kWh)	0.0311	0.0311	0.0311	0.0311	0.0311
(Rs/kWh)	0.7311	0.7311	0.7311	0.7311	0.7311
Variable Charges per year	47393.27	47393.27	47393.27	47523.12	47393.27
Variable Charges – 2 months	7898.88	7898.88	7898.88	7920.52	7898.88
Fixed Charges – 2 months	7443.60	7432.39	7444.18	7486.91	6677.13
Receivables	15342.48	15331.27	15343.06	15407.42	14576.01

19. Based on the above, interest on working capital has been revised as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Coal Stock- 1.5 months	5672.10	5672.10	5672.10	5687.64	5672.10
Oil stock -2 months	336.08	336.08	336.08	337.00	336.08
O & M expenses	780.00	810.83	843.33	876.67	912.50
Maintenance Spares	3088.82	3274.15	3470.60	3678.84	3899.57
Receivables	15342.48	15331.27	15343.06	15407.42	14576.01
Total Working Capital	25219.48	25424.43	25665.17	25987.57	25396.26
Rate of Interest	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%
Total Interest on Working capital	2585.00	2606.00	2630.68	2663.73	2603.12

20. Accordingly, the revised annual fixed charges in respect of the generating station for the period from 1.4.2004 to 31.3.2009 is as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	7609.07	6594.07	5535.29	4414.20	3381.14
Interest on Working Capital	2585.00	2606.00	2630.68	2663.73	2603.12
Depreciation	9263.65	9263.65	9263.65	9263.65	9263.65
Advance Against Depreciation	5128.64	5685.42	6400.22	7344.63	3149.67
Return on Equity	10715.22	10715.22	10715.22	10715.22	10715.22
O & M Expenses	9360.00	9730.00	10120.00	10520.00	10950.00
Total	44661.58	44594.36	44665.06	44921.43	40062.80

21. The target availability considered by the Commission in the order dated 21.8.2006 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc considered in the order dated 21.8.2006 have been retained for the purpose of calculation of the revised fixed charges.

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

23. The difference in amounts in respect of the tariff determined by order dated 21.8.2006 and the tariff determined by this order, shall be adjusted by the parties in three monthly installments.

Sd/-
(M.DEENA DAYALAN)
MEMBER

Sd/-
(V.S.VERMA)
MEMBER

Sd/-
(S.JAYARAMAN)
MEMBER

Sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

