

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.80/2005

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: 21.7.2011

IN THE MATTER OF

Revision of order dated 22.10.2007 in the light of the judgments of the Appellate Tribunal for Electricity -Approval of annual fixed charges in respect of Jhanor Gandhar Gas Power Station (657.39 MW) for the period 2004-09.

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 revised fixed charges for the period 2004-09, after considering the impact of additional capital expenditure incurred during 2006-07, 2007-08 and 2008-09 for Jhanor Gandhar Gas Power Station (657.39 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 15.12.2006, determined the tariff of the generating station.

2. Meanwhile, in Petition No.46/2005 filed by the petitioner seeking relaxation of target availability norms for the generating station, the Commission by its order dated 16.2.2006 rejected the prayer of the petitioner. Against this order, the petitioner filed Appeal No. 89/2006 before the Appellate Tribunal for Electricity (‘the Tribunal’) and the Tribunal by its judgment dated 22.1.2007 allowed the prayer of the petitioner. On a review application (Review Petition No. 27/2007) filed by the Commission against the order dated 22.1.2007 in Appeal No. 89/2006, the Tribunal issued clarification by its order dated 2.8.2007. Based on the judgment of the Tribunal as above, the annual fixed charges of the generating station were revised by Commission’s order dated 22.10.2007 as under:

<i>(₹ in lakh)</i>					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	3934	2826	1717	609	28
Interest on Working Capital	2162	2170	2180	2194	2335
Depreciation	11567	11567	11567	11567	11567
Advance Against Depreciation	0	0	0	0	0
Return on Equity	16775	16775	16775	16775	16775
O & M Expenses	5128	5331	5548	5765	5995
Total	39566	38669	37788	36911	36700

3. Aggrieved by the said order, the petitioner filed appeal before the Appellate Tribunal for Electricity (the Tribunal) in Appeal No.35/2007. 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. Subsequently, the Tribunal by its common judgment dated 13.6.2007 in Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007 allowed the prayers of the petitioner and remanded the matters for re-determination of tariff by the Commission. In the light of the judgment dated 13.6.2007, Appeal No. 35/2007 filed by the petitioner was also disposed of by the Tribunal.

4. Against the judgment dated 13.6.2007, the Commission filed Civil Appeals before the Hon'ble Supreme Court (C.A. Nos. 5434/2007 to 5452/2007) including Civil Appeal No. 5622/2007 against the judgment dated 31.8.2007 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 an 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. During the pendency of the above Civil Appeals, the petitioner had filed separate 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.

7. While so, 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.

Judgments of Tribunal dated 10.12.2008 and 16.3.2009

8. Appeal Nos.151 & 152/2007 were filed by the petitioner before the Tribunal challenging the orders of the Commission revising the tariff of some of the generating stations of the petitioner after deduction of un-discharged liabilities. The Tribunal by its judgment dated 10.12.2008 allowed the prayer of the petitioner and observed as under:

"25. Accordingly, we allow both the appeals in part. We direct that the appellant be allowed to recover capital cost incurred including the portion of such cost which has been retained or has

not yet been paid for. We also direct that in case the Commission attributes any loan taken at the corporate level to a particular project under construction and considers any repayment out of it before the date of commercial operation the sum deployed for such repayment would earn interest as pass through in tariff.

26. The Commission is directed to give effect to the directions given herein in the truing up exercise and consequent subsequent tariff orders.”

9. In line with the above decision, similar other appeals (Appeal Nos.133/2008, 135/2008, 136/2008 and 148/2008) filed by the petitioner on this issue in respect of various other generating stations were also allowed by the Tribunal by a common judgment dated 16.3.2009. Against the above said judgments dated 10.12.2008 and 16.3.2009, the Commission has filed Civil Appeals before the Hon'ble Supreme Court in C.A Nos.4112-4113/2009 and C.A Nos.6286 to 6288/2009 and the same are pending. Since no stay was granted by the Hon'ble Supreme Court, the Commission has implemented the directions contained in the said judgments of the Tribunal in respect of the various other generating stations of the petitioner. Accordingly, the directions contained in the judgments of the Tribunal dated 10.12.2008 and 16.3.2009 are taken into account for revision of the annual fixed charges for the generating station also for the period 2004-09, subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court.

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

Un-discharged liabilities

11. The un-discharged liabilities amounting to ₹813.00 lakh disallowed from capital cost as on 1.4.2004, vide Commission's order dated 15.12.2006 is allowed for the purpose of tariff.

Capital cost

12. The Commission vide its orders dated 15.12.2006 and 22.10.2007 had allowed tariff of the generating station after considering the capital cost of ₹239648.03 lakh (exclusive of un-discharged liabilities amounting to ₹813.00 lakh) as on 1.4.2004. However, after considering the un-discharged liability of ₹813.00 lakh as stated above, the capital cost of the generating station as on 1.4.2004 approved by order dated 15.12.2006 is revised to ₹240461.03 lakh.

Debt-Equity ratio

13. Debt-equity ratio of 50:50 was considered by the Commission as on 1.4.2004, in its orders dated 15.12.2006 and 22.10.2007 and the same has been considered for the purpose of revision of tariff. Accordingly, the normative equity and gross normative loan as on 1.4.2004, works out to ₹120230.51 lakh respectively.

Return on Equity

14. Based on the above, the return on equity approved vide order dated 15.12.2006 is revised as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Equity –Opening considered now	120230.51	120230.51	120230.51	120230.51	120230.51
Addition of Equity due to admitted additional capital expenditure	-	-	-	-	-
Equity-Closing	120230.51	120230.51	120230.51	120230.51	120230.51
Average equity	120230.51	120230.51	120230.51	120230.51	120230.51
Return on Equity @ 14%	16832.27	16832.27	16832.27	16832.27	16832.27

Interest on loan

15. 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”.

16. 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.

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

- (a) The gross normative loan as on 1.4.2004 works out to ₹120230.51 lakh (₹119824.01 lakh considered in the calculations corresponding to order dated 15.12.2006/22.10.2007 plus ₹406.50 lakh corresponding to undischarged liabilities allowed as part of capital cost).
- (b) Cumulative repayment of loan up to 31.3.2004, amounting to ₹72979.55 lakh has been considered corresponding to order dated 15.12.2006/22.10.2007. However, considering cumulative repayment adjustment (in terms of the directions of the Tribunal) amounting to ₹0.24 lakh as on 1.4.2004 corresponding to de-capitalization of assets (amounting to ₹0.48 lakh) for the period up to 31.3.2004, the cumulative repayment as on 1.4.2004 is revised to ₹72979.31 lakh.
- (c) Accordingly, net opening loan as on 1.4.2004 works out to ₹47251.20 lakh.
- (d) Annual repayment of actual loan i.e. GOI loans originally contracted has been used to calculate normative repayment of loan. Normative repayment has been worked out as per formula below:
Normative repayment =
$$\frac{\text{Actual Repayment} \times \text{Normative Loan}}{\text{Actual Loan}}$$
- (e) The weighted average rate of interest has been calculated applying original GOI loans (carried forwarded from order dated 1.4.2005 in Petition No.33/2001) instead of refinanced bonds (as considered in orders dated 15.12.2006/22.10.2007).

18. The interest on loan computations are as shown below:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Opening Loan – Considered now	120230.51	120230.51	120230.51	120230.51	120230.51
Cumulative Repayment of Loan upto previous year	72979.31	81347.50	89715.69	98083.88	106452.06
Net Loan Opening	47251.20	38883.01	30514.83	22146.64	13778.45
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	8368.19	8368.19	8368.19	8368.19	8368.19
Net Loan Closing	38883.01	30514.83	22146.64	13778.45	5410.26
Average Loan	43067.11	34698.92	26330.73	17962.54	9594.35
Weighted Average Rate of Interest on Loan	16.5831%	16.5579%	16.5166%	16.4368%	16.2179%
Interest on Loan	7141.88	5745.41	4348.94	2952.47	1556.00

Depreciation

19. The cost of land in respect of the generating station is ₹255.00 lakh. The gross depreciable value of the asset, excluding land is $0.9 \times (\text{₹}240461.03 \text{ lakh} \text{ minus } \text{₹}255.00 \text{ lakh}) = \text{₹}216185.42 \text{ lakh}$. Cumulative depreciation and Advance Against Depreciation (AAD) recovered in tariff up to 31.3.2004 is ₹143322.86 lakh, including depreciation on de-capitalised amount for the period 01.04.2001 to 31.03.2004. After adjustment of cumulative depreciation due to de-capitalization amounting to ₹0.03 lakh, the cumulative depreciation and AAD recovered in tariff up to 31.3.2004 works out to ₹143322.83 lakh. Weighted average rate of depreciation of 4.8265% as considered in calculations corresponding to orders dated 15.12.2006/22.10.2007 has been retained for the purpose of tariff revision. Accordingly, the petitioner is entitled to recover yearly depreciation of ₹11605.87 lakh per annum during the tariff period 2004-09. The necessary calculations are as stated overleaf:

(₹ in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Opening capital cost	240461.03	240461.03	240461.03	240461.03	240461.03
Closing capital cost	240461.03	240461.03	240461.03	240461.03	240461.03
Average capital cost	240461.03	240461.03	240461.03	240461.03	240461.03
Weighted average rate of depreciation	4.8265%	4.8265%	4.8265%	4.8265%	4.8265%
Depreciable value @ 90%	216185.42	216185.42	216185.42	216185.42	216185.42
Balance depreciable value	72862.60	61256.73	49650.85	38044.98	26439.11
Depreciation	11605.87	11605.87	11605.87	11605.87	11605.87

Advance Against Depreciation

20. The petitioner's entitlement to Advance Against Depreciation works out to "nil" as under:

(₹ in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	12023.05	12023.05	12023.05	12023.05	12023.05
Repayment of the Loan	8368.19	8368.19	8368.19	8368.19	8368.19
Minimum of the above	8368.19	8368.19	8368.19	8368.19	8368.19
Depreciation during the year	11605.87	11605.87	11605.87	11605.87	11605.87
(A) Difference	-	-	-	-	-
Cumulative Repayment of the Loan	81347.50	89715.69	98083.88	106452.06	114820.25
Cumulative Depreciation / AAD	154928.70	166534.57	178140.44	189746.31	201352.18
(B) Difference	-	-	-	-	-
Advance Against Depreciation [Minimum of (A) and (B)]	-	-	-	-	-

O&M Expenses

21. O&M expenses as considered in orders dated 15.12.2006/22.10.2007 has been considered.

Interest on working capital

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

- Fuel Cost:** Fuel cost as considered in orders dated 15.12.2006/22.10.2007 has been considered.
- O&M expenses:** O&M expenses for one month as considered in orders dated 15.12.2006/22.10.2007 has been considered.
- Maintenance Spares:** The cost of maintenance spares for working capital has been worked out based on historical cost amounting to ₹232921.00 lakh, and escalated at 6% per annum. However, initial spares amounting to

₹10622.00 lakh has been deducted to arrive at the applicable historical cost as on date of commercial operation, for the purpose of maintenance spares. The additional capital expenditure allowed after the date of commercial operation has been considered while arriving at the maintenance spares for the purpose of calculating interest on working capital.

- (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 22.10.2007 has been considered:

(₹ in lakh)					
	2004-05	2005-06	2006-07	2007-08	2008-09
Variable Charges					
(Rs/kWh)	1.0467	1.0467	1.0467	1.0467	1.0467
Variable charges per year	42097.05	42097.05	42097.05	42212.39	46774.51
Variable charges-2 months	7016.18	7016.18	7016.18	7035.40	7795.75
Fixed charges -2 months	7156.12	6957.98	6762.31	6567.38	6394.28
Receivables	14172.30	13974.15	13778.48	13602.78	14190.03

23. 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
Fuel Cost - 1 month	3508.09	3508.09	3508.09	3517.70	3897.88
O & M expenses	427.30	444.29	462.36	480.44	499.62
Maintenance Spares	3639.22	3857.57	4089.03	4334.37	4594.43
Receivables	14172.30	13974.15	13778.48	13602.78	14190.03
Total Working Capital	21746.91	21784.10	21837.96	21935.29	23181.96
Rate of Interest	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%
Total Interest on Working capital	2229.06	2232.87	2238.39	2248.37	2376.15

24. 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	7141.88	5745.41	4348.94	2952.47	1556.00
Interest on Working Capital	2229.06	2232.87	2238.39	2248.37	2376.15
Depreciation	11605.87	11605.87	11605.87	11605.87	11605.87
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	16832.27	16832.27	16832.27	16832.27	16832.27
O & M Expenses	5127.64	5331.43	5548.37	5765.31	5995.40
Total	42936.72	41747.86	40573.85	39404.29	38365.69

25. The target availability considered by the Commission in the order dated 22.10.2007 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc considered in the order dated 22.10.2007 have been retained for the purpose of calculation of the revised fixed charges.

26. 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.

27. The petitioner shall claim the difference in respect of the tariff determined by order dated 22.10.2007 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