

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.182/2009

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 20.1.2011 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 revised fixed charges for the period 2004-09, after considering the impact of additional capital expenditure incurred during 2006-09 for Rihand Super Thermal Power Station, Stage-I (1000 MW).

AND

IN THE MATTER OF

NTPC Ltd, New Delhi
Vs

...Petitioner

1. Uttar Pradesh Power Corporation Limited, Lucknow
2. Jaipur Vidyut Vitran Nigam Ltd, Jaipur
3. Ajmer Vidyut Vitran Nigam Ltd, Ajmer
4. Jodhpur Vidyut Vitran Nigam Ltd, Jodhpur
5. Delhi Transco Ltd, New Delhi
6. North Delhi Power Ltd, Delhi
7. BSES-Rajdhani Power Ltd, New Delhi
8. BSES-Yamuna Power Ltd, Delhi
9. Haryana Power Purchase Centre, Panchkula
10. Punjab State Electricity Board, Patiala
11. Himachal Pradesh State Electricity Board, Shimla
12. Power Development Department, Govt. of J&K, Jammu
13. Power Department, Union Territory of Chandigarh, Chandigarh
14. Uttarakhand Power Corporation Ltd, Dehradun

.....Respondents

ORDER

The petitioner, NTPC had filed this application for determination of revised fixed charges for 2004-09 on account of capital expenditure incurred during the years 2006-



07, 2007-08 and 2008-09 for Rihand STPS, Stage-I (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 20.1.2011 revised the tariff of the generating station based on the capital cost (inclusive of un-discharged liabilities) as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening Capital Cost	237256.52	238417.18	239072.94	238780.39	239503.76
Additional capital expenditure allowed	1160.66	655.76	(-) 292.54	723.37	3613.49
Closing Capital cost	238417.18	239072.94	238780.39	239503.76	243117.25
Average Capital cost	237836.85	238745.06	238926.66	239142.08	241310.50

2. The annual fixed charges approved by the Commission in order dated 20.1.2011 is as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2410.13	2444.08	2478.36	2518.92	2557.61
Depreciation	4098.54	4171.20	4185.40	4237.27	4418.95
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	16632.33	16670.47	16678.10	16687.15	16778.22
O & M Expenses	9360.00	9730.00	10120.00	10520.00	10950.00
Total	32501.00	33015.76	33461.86	33963.34	34704.78

Background

3. The petitioner filed Petition No.151/2004 for determination of tariff of the generating station for the period 2004-09 and the Commission by its order dated 19.6.2006 determined the tariff of the generating station for the said period. However, by order dated 21.7.2006 the annual fixed charges were revised on account of rectification of ministerial error in the order dated 19.6.2006. Against order dated 19.6.2006, the petitioner filed Appeal No.207/2006 before the Tribunal. Similar appeals (Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007) was also filed by the petitioner before the Tribunal challenging the various orders of the Commission determining tariff

for other generating stations during the period 2004-09. Appeal No.207/2006 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 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. 5446/2007 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. Subsequently, in Petition No.22/2007 filed by the petitioner for revision of annual fixed charges of the generating station for 2004-09 after considering the impact of additional capital expenditure incurred during the years 2004-05 and 2005-06 respectively, the Commission vide its order dated 10.7.2008 revised the annual fixed charges of the generating station for the period 2004-09. Against this order, the

petitioner filed Appeal No.136/2008 before the Tribunal on the question of deduction of un-discharged liabilities, IDC etc. Similar appeals (Appeal Nos.133, 135, and 148/2008) were also filed by the petitioner challenging the orders of the Commission revising tariff for some of its other generating stations for 2004-09 after deduction of un-discharged liabilities. Appeal No.136/2008 was clubbed with the said appeals and the Tribunal by a common judgment dated 16.3.2009 allowed the claim of the petitioner, following its earlier judgment dated 10.12.2008 in Appeal No. 151 & 152/2007 and directed the Commission to give effect to the directions contained in the said judgment.

7. Against the above said judgments of the Tribunal 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 respectively, and the same are pending.

8. Thereafter, Petition No.182/2009 was filed by the petitioner for approval of revised fixed charges for the generating station after considering the impact of additional capital expenditure incurred during the period 2006-09. In its petition, the petitioner claimed revision of tariff of the generating station in terms of the judgment of the Tribunal dated 13.6.2007 by considering those issues covered by the interim order dated 10.12.2007 of the Hon'ble Supreme Court and the judgments of the Tribunal dated 10.12.2008 and the judgment 16.3.2009 pertaining to un-discharged liabilities. The claims of the petitioner were disposed of by order dated 20.1.2011 as discussed in the subsequent paragraphs.

Judgment dated 13.6.2007

9. 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, the claim of the petitioner for implementation of the judgment of the Tribunal dated 13.6.2007 was

deferred till the final disposal of the Civil Appeals by the Hon'ble Supreme Court. The relevant portion of the order containing the observations of the Commission in order dated 20.1.2011 in Petition No.182/2009 is extracted hereunder:

“8. In our view, the petitioner has given an undertaking in the Civil Appeals pertaining to the tariff in the original petition before the Hon'ble Supreme Court that “the five issues shall not be pressed for fresh determination”. It is logical that original tariff as well as revision of tariff for the generating station on the basis of additional capital expenditure is to be decided on the basis of the same principles. Accepting the contention of the petitioner would mean that additional capitalization should be determined on the principles different from those which have fallen for consideration while determining the tariff for the generating station in the original petition. The tariff for the period 2004-09 is a composite package which needs to be determined on the same principle. From the point of view of regulatory uniformity and continuity and also in line with the spirit of the interim order of the Hon'ble Supreme Court, we are of the view that the extension of the impact of the judgment of the Tribunal on the five issues should be deferred till the final disposal of the said Civil Appeals by the Hon'ble Supreme Court”

Judgment dated 16.3.2009

10. On the issue of un-discharged liabilities, no stay of the operation of the judgment of the Tribunal dated 16.3.2009 in Appeal No.136/2008 was granted by the Hon'ble Supreme Court in the Civil Appeals (C.A Nos. 6286 to 6288/2009) filed by the Commission. Hence, the tariff of the generating station was revised by order dated 20.1.2011 in terms of the directions contained in the judgment dated 16.3.2009.

11. 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. 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 is a composite package, the tariff of some of the generating stations of the petitioner were revised after considering the issues raised by the petitioner in line with directions contained in the judgments of the Tribunal dated

13.6.2007 and 16.3.2009 respectively. Accordingly, we direct revision of tariff in respect of this generating station also.

12. 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 judgments of the Tribunal dated 13.6.2007 and 16.3.2009, subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court.

Un-discharged liabilities

13. The un-discharged liabilities disallowed earlier vide order dated 10.7.2008 had been allowed by order dated 20.1.2011 in Petition No. 182/2009.

Capital Cost

14. The capital cost approved vide order dated 20.1.2011 remain unchanged as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening Capital cost	237256.52	238417.18	239072.94	238780.40	239503.77
Additional capital expenditure approved	1160.66	655.76	(-) 292.54	723.37	3613.49
Closing Capital cost	238417.18	239072.94	238780.40	239503.77	243117.26
Average Capital cost	237836.85	238745.06	238926.67	239142.08	241310.51

Debt-Equity ratio

15. For the purpose of allowing additional capital expenditure for the period 2004-09, the debt-equity ratio of 70:30 would remain the same as considered in order dated 20.1.2011.

Return on Equity

16. The return on equity approved vide order dated 20.1.2011 remain unchanged as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Equity –Opening considered now	118628.26	118976.46	119173.18	119085.42	119302.43
Addition of Equity due to admitted additional	348.20	196.73	(-) 87.76	217.01	1084.05

capital expenditure					
Equity-Closing	118976.46	119173.18	119085.42	119302.43	120386.48
Average equity	118802.36	119074.82	119129.30	119193.93	119844.46
Return on Equity @ 14%	16632.33	16670.47	16678.10	16687.15	16778.22

Interest on loan

17. Adjustment of repayment corresponding to de-capitalization of assets: In the original petitions filed by the petitioner for determination of tariff for 2004-09 for its various generating stations, the petitioner 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 Tribunal by its judgment dated 13.6.2007 had 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”.

18. In the instant petition, the petitioner has claimed such adjustment applying the formula as under:

$$\text{Repayment to be adjusted} = \frac{\begin{array}{l} \text{Cumulative repayment at the beginning} \\ \times \\ \text{Gross value of de-capitalised asset} \\ \times \\ \text{Debt proportion corresponding to normative debt-} \\ \text{equity ratio for the respective period} \end{array}}{\text{Gross debt at the beginning of the year of de-} \\ \text{capitalisation}}$$

19. 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.

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

- (a) Gross opening loan on normative basis as on 1.4.2004 as considered in order dated 20.1.2011 was ₹118628.26 lakh.
- (b) Cumulative repayment of loan as on 1.4.2004 as considered in the earlier orders of the generating station was ₹163099.00 lakh. The gross loan and cumulative repayment of loan amounts as on 1.4.2004 have been arrived at from the earlier period orders of the Commission. Since, it results in negative net opening loan as on 1.4.2004, the same needs to be restricted to 'zero', to start with, as the net opening loan cannot be negative. This restriction has also been shown in orders dated 10.7.2008 and 20.1.2011 in Petition Nos.22/2007 and 182/2009. The cumulative repayment of loan of ₹163099.00 lakh as on 1.4.2004 as considered in earlier orders represent 'actual repayments' of actual loan portfolio. This amount was arrived at considering the 'normative or actual repayment whichever is higher' as repayment during the period prior to 1.4.2004. Subsequently, in terms of the judgment of the Tribunal, 'normative repayment' methodology was adopted by the Commission for calculating interest on loan for all other generating stations of the petitioner. As the previous orders of the Commission up to the period 31.3.2004 in respect of this generating station had attained finality, the amounts were not revised. However, in order to rectify the position from 1.4.2004, the cumulative repayment of loan as on 1.4.2004 has been considered equal to gross loan of ₹118628.26 lakh. This would result in the net opening normative loan as 'zero' as on 1.4.2004.
- (c) Accordingly, the net opening normative loan as on 1.4.2004 works out to 'nil'.
- (d) The addition of notional loan on account of additional capital expenditure approved for the period 2004-09 is ₹812.46 lakh, ₹459.03 lakh, (-)₹204.78 lakh, ₹506.36 lakh and ₹2529.44 lakh for the years 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09, respectively.
- (e) Weighted average rate of interest has been considered after taking into account the actual loan portfolio as furnished by the petitioner and after accounting for interest capitalized during 2008-09.
- (f) Normative repayment =
$$\frac{\text{Actual Repayment} \times \text{Normative Loan}}{\text{Actual Loan}}$$
- (g) Cumulative repayment during 2004-09, has been adjusted on account of de-capitalized assets in proportion to debt-equity ratio adopted for allowing additional capital expenditure during the respective years.

21. 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	118628.26	119440.72	119899.75	119694.97	120201.33
Cumulative Repayment of Loan upto previous year	118628.26	118623.07	118742.90	118719.55	117464.31
Net Loan Opening	0.00	817.65	1156.85	975.42	2737.03

Addition of loan due to approved additional capital expenditure	812.46	459.03	(-) 204.78	506.36	2529.44
Repayment of loan (Normative)	0.00	124.56	210.48	205.72	227.68
Less: Adjustment for de-cap during the period	5.19	4.73	233.82	1460.97	83.28
Repayment of loan during the year (net)	(-) 5.19	119.83	(-) 23.35	(-) 1255.25	144.40
Net Loan Closing	817.65	1156.85	975.42	2737.03	5122.07
Average Loan	408.83	987.25	1066.14	1856.22	3929.55
Weighted Average Rate of Interest on Loan	6.7806%	6.7659%	6.7475%	5.7074%	2.8710%
Interest on Loan	27.72	66.80	71.94	105.94	112.82

Depreciation

22. Cumulative depreciation/Advance against Depreciation of Rs.161106.41 lakh upto 31.3.2004 as considered in order dated 19.6.2006 in Petition No.151/2004 has been retained. In line with the Commission's earlier order dated 10.7.2008 in Petition No. 22/2007 and order dated 20.1.2011 in Petition No. 182/2009, the balance depreciation recoverable, after accounting for the admitted additional capital expenditure, has been spread over the balance useful life of 12.25 years of the generating station as on 1.4.2004. The spread over started in the previous period 2001-04 has been continued. The petitioner's claim for depreciation on weighted average rate of depreciation is not admissible in view of the fact that net loan opening is 'nil' and the continuity of spread over, as above. The necessary calculations are as under.

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening capital cost	237256.52	238417.18	239072.94	238780.40	239503.77
Closing capital cost	238417.18	239072.94	238780.40	239503.77	243117.26
Average capital cost	237836.85	238745.06	238926.67	239142.08	241310.51
Value of land	3044.00	3044.00	3063.86	3079.24	5669.37
Depreciable value @ 90%	211313.56	212130.95	212276.52	212456.55	212077.02
Cumulative depreciation at the beginning of the year	161106.41	165198.30	169364.01	173250.84	175610.91
Balance depreciable value (at the beginning)	50207.15	46932.65	42912.51	39205.71	36466.11
Balance Useful life	12.25	11.25	10.25	9.25	8.25
Depreciation	4098.54	4171.79	4186.59	4238.45	4420.14
Cumulative depreciation adjustment on account of de-capitalization	6.66	6.08	299.75	1878.39	107.07

Advance Against Depreciation

23. Advance Against Depreciation (AAD) allowed vide order dated 20.1.2011 remain unchanged. As such, the AAD during 2004-09 is 'nil'.

O&M expenses

24. O&M Expenses approved vide order dated 20.1.2011 remain unchanged.

Interest on Working capital

25. For the purpose of calculation of working capital the operating parameters including the price of fuel components as considered in the order dated 20.1.2011 have been kept unchanged. 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. The "receivables" component of the working capital has been revised due to revision of interest on loan, maintenance spares. The necessary details in support of calculation of interest on working capital are as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Coal stock- 1.1/2 months	5605.55	5605.55	5605.55	5620.91	5605.55
Oil stock -2 months	329.66	329.66	329.66	330.56	329.66
O & M expenses	780.00	810.83	843.33	876.67	912.50
Maintenance Spares	4413.50	4684.52	4962.47	5267.54	5619.51
Receivables	13239.79	13333.29	13409.49	13521.32	13626.36
Total Working Capital	24368.50	24763.85	25150.50	25617.00	26093.57
Rate of Interest	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%
Total Interest on Working capital	2497.77	2538.29	2577.93	2625.74	2674.59

26. The revised 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	27.72	66.80	71.94	105.94	112.82
Interest on Working Capital	2497.77	2538.29	2577.93	2625.74	2674.59
Depreciation	4098.54	4171.79	4186.59	4238.45	4420.14
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	16632.33	16670.47	16678.10	16687.15	16778.22
O & M Expenses	9360.00	9730.00	10120.00	10520.00	10950.00
Total	32616.37	33177.36	33634.55	34177.29	34935.77

27. The target availability of 80% considered by the Commission in the order dated 20.1.2011 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc., considered in order dated 20.1.2011 have been retained for the purpose of calculation of the revised fixed charges.

28. The revised 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.

29. The petitioner shall claim the difference in respect of the tariff determined by order dated 20.1.2011 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