

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.128/2009

**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: 29.9.2011

IN THE MATTER OF

Revision of order dated 11.1.2010 in the light of the judgment of the Appellate Tribunal for Electricity dated 13.6.2007 in Appeal No.218/2006 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 2006-07, 2007-08 and 2008-09 for Korba STPS (2100 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 Company Ltd, Mumbai
3. Gujarat Urja Vikas Nigam Ltd, Vadodara
4. Chhattisgarh State Electricity Board, Raipur
5. Electricity Department, Govt. of Goa, Panaji
6. Electricity Department, Administration of Daman & Diu, Daman
7. Electricity Department, Administration of Dadra & 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 Korba STPS (2100 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 11.1.2010, revised the tariff of the generating station based on the capital cost as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening Capital Cost as on 1.4.2006	169219.61	170023.68	171523.58	172374.26	173287.30
Additional Capital Expenditure	804.07	1499.90	850.68	913.04	2170.33
Closing Capital Cost	170023.68	171523.58	172374.26	173287.30	175457.63
Average Capital Cost	169621.64	170773.63	171948.92	172830.78	174372.46

2. The additional capital expenditure approved above for the period 2004-09 was based on exclusion of un-discharged liabilities amounting to ₹206.07 lakh, ₹22.64 lakh, ₹107.17 lakh, ₹19.59 lakh and ₹323.82 lakh for the years 2004-05, 2005-06, 2006-07, 2007-08 & 2008-09, respectively, but inclusive of discharged liabilities amounting to ₹118.05 lakh for the year 2005-06. In addition to these, additional capital expenditure of (-)₹43.64 lakh and ₹153.64 lakh for the years 2007-08 and 2008-09 respectively on account of non-payment of ERV on retention money for ash handling system, were also disallowed in the above order dated 11.1.2010.

3. The revised annual fixed charges approved by the Commission is as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1150.41	673.29	236.73	7.28	0.00
Interest on Working Capital	3104.67	3135.37	3168.74	3212.43	3186.76
Depreciation	6280.48	6323.14	6366.65	6399.31	2662.31
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	11862.26	11910.64	11960.00	11997.04	12061.79
O & M Expenses	20280.00	21087.00	21930.00	22800.00	23727.00
Total	42677.82	43129.44	43662.12	44416.06	41637.86

Background

4. The tariff of the generating station for the period 1.4.2004 to 31.3.2009, was determined by the Commission by its order dated 19.7.2006 in Petition No.159/2004 based on the capital cost of ₹169219.61 lakh as on 1.4.2004. Subsequently, vide order

dated 15.6.2007 in Review Petition No.96/2006 (in Petition No. 159/2004), the annual fixed charges was revised on account of ministerial error in the computation of Interest on Working Capital (IWC) for the period 2004-09. Aggrieved by the said order, the petitioner filed Appeal No.218/2006 before the Appellate Tribunal for Electricity ("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 the tariff for other generating stations of the petitioner during the period 2004-09. Appeal No.218/2006 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.

5. Against the judgment dated 13.6.2007 of the Tribunal, 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. 5449/2007 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.

6. 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.”

7. During the pendency of the above Civil Appeals, the petitioner filed Petition No. 48/2007 for revision of tariff of the generating station after considering the impact of additional capital expenditure for the years 2004-05 and 2005-06 and the Commission by its order dated 20.11.2008 revised the tariff of the generating station. Against this order, the petitioner filed Appeal No.61/2009 before the Tribunal challenging the decision of the Commission on the following issues:

- (a) Un-discharged liability;*
- (b) Equating depreciation to normative loan payment;*
- (c) Cost of Maintenance Spares;*
- (d) Disallowance of Cost of Electrolyser Rectifier; and*
- (e) Disallowance of expenditure incurred towards RLA studies.*

8. During the pendency of the said appeal, the petitioner filed Petition No. 128/2009 for revision of tariff after considering the impact of the additional capital expenditure incurred during the years 2006-07, 2007-08 and 2008-09 in respect of the generating station. The petitioner also filed Interlocutory Application (I.A. No.53/2009) in the said petition taking into account the revised calculations for fixed charges based on the principles laid down in the tariff orders of the Commission and the judgment dated 13.6.2007 in Appeal Nos.139 to 142 etc of 2006 and judgment dated 16.3.2009 (pertaining to un-discharged liabilities) in Appeal Nos.133,135 etc of 2008 of the Tribunal.

9. The Commission by its order dated 11.1.2010 revised the tariff of the generating station. However, on the prayer of the petitioner to revise tariff based on the principles laid down by the Tribunal in its judgment dated 13.6.2007, the Commission deferred the implementation of the judgment of the Tribunal on the five issues. The relevant portion of the order is extracted as under:

“10....In our view, the undertaking given by the petitioner before the Hon’ble Supreme Court that “the five issues shall not be pressed for fresh determination” is binding on the petitioner and the petitioner is estopped from seeking fresh determination of these issues. Moreover, the petitioner seems to create a distinction between the main tariff petition and the petition for additional capitalization by stating that while the undertaking is confined to the remand order pertaining to the main petition, the additional capitalization can be considered as per the principles laid down by the Appellate Tribunal. Such an approach will lead to dichotomous situations wherein tariff for the main petition and petition for additional capitalization are determined on the basis of the different principles. The tariff for the period 2004-09 is a complete 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 implementation of the judgment of the Appellate Tribunal on the five issues should be deferred till the final disposal of the Civil Appeals by the Hon’ble Supreme Court. Accordingly, tariff for additional capitalization is determined on the basis of the existing principles, subject to the final outcome of the Civil Appeals pending before the Supreme Court.”

10. As regards the claim for un-discharged liabilities, the Commission in its order dated 11.1.2010 implemented the same in terms of the directions of the Tribunal as under:

“15. The Appellate Tribunal in its judgment dated 10.12.2008 had directed that the capital cost incurred in respect of the generating station including the portion of such cost which has been retained or has not been paid for shall be recovered in tariff. In other words, un-discharged liability in respect of works which have been executed but payments deferred for future date has to be capitalized. As regards IDC, if the loan amount has been repaid out of the internal resources before the date of commercial operation, such repayments would earn interest. The Commission has been directed by the Appellate Tribunal to give effect to the directions contained in the judgment in the truing up exercise and subsequent tariff orders.

16. The directions of the Appellate Tribunal pertain to additional capitalization for the tariff period 2004-09 which has come to an end on 31.3.2009 and the exercise for implementation of the directions have been undertaken after the expiry of the said tariff period. Accordingly, tariff of the generating station is revised after considering the additional capital expenditure, capitalization of un-discharged liabilities and IDC after truing up of the expenditure as on 31.3.2009. While truing up, the liabilities discharged, liabilities reversed on account of de-capitalization of assets during the tariff period have been accounted for.”

11. Aggrieved by the said order, the petitioner filed Appeal No. 73/2010 before the Tribunal raising the following issues:

- (a) Exclusion of part of the capital expenditure validly incurred but pending actual disbursement/payment from the capital cost for the purposes of tariff.*
- (b) Equating depreciation with normative loan repayment.*
- (c) Disallowance of cost of maintenance spares;*
- (d) Impact of de-capitalisation of assets on cumulative repayment of loan.*

12. The above appeal (Appeal No. 73/2010) was allowed by the Tribunal by its judgment dated 19.4.2011 in the light of its earlier judgment dated 13.6.2007 in Appeal Nos.139

to 142 etc of 2006 and judgment dated 16.3.2009 in Appeal Nos.133,135 etc of 2008 of the Tribunal.

13. Thereafter, the Tribunal by its judgment dated 31.5.2011 in Appeal No. 61/2009 at (as stated at paragraph 7 above) while rejecting the claim of the petitioner on the issue (e) therein, allowed the claims (a) to (c) in the light of its earlier judgment dated 13.6.2007 in Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007 judgment dated 16.3.2009 in Appeal Nos. Appeal Nos.133, 135/2008, 136/2008 and 148/2008. However, in the said judgment, the cost the Electrolyser Rectifier (issue (d)) was allowed by the Tribunal as under:

“13. According to the Learned Counsel for the Commission, the Electrolyser Rectifier is not a replacement for the existing Rectifier but is an additional or standby one and as such this claim cannot be allowed

14. We are unable to accept this reasons especially in the light of the fact that the existing Rectifier is old and there is a non-availability of the spares due to the closure of the original equipment manufacturer and as such there are chances of failure and in case of such failure, the immediate replacement is difficult to arrange which would cause threat to entire generation capacity.

15. Therefore, the Central Commission is directed to allow the said claim. Accordingly, the finding on this issue is set aside and the matter is remanded back to the Central commission to pass consequential orders on this issue.”

14. Keeping in view the observations of the Tribunal in its judgments dated 19.4.2011 and 31.5.2011 as stated above, and considering the fact that the tariff for 2004-09 is a composite package, it has been decided to revise the tariff of the generating station for the period 2004-09, after considering the issues raised by the petitioner. Accordingly, we proceed to revise the annual fixed charges of the generating station for 2004-09, subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court.

Additional capital expenditure

15. Accordingly, the additional capital expenditure approved vide order dated 11.1.2010 is revised by adopting accrual method of accounting in line with the judgments of Tribunal, on the following counts.

- (a) Inclusion of un-discharged liabilities disallowed;
- (b) Removal of discharges of the un-discharged liabilities allowed;
- (c) Amounts of (-) ₹43.64 lakh and ₹153.64 lakh for the years 2007-08 and 2008-09 respectively, allowed on accrual basis, pertaining to additional capital expenditure on account of non-payment of ERV on retention money for ash handling system; and
- (d) Expenditure of ₹77.62 lakh towards procurement of Electrolyser rectifier.

15. Accordingly, the revised additional capital expenditure allowed for the period 2004-09 is as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Additional capital expenditure allowed in order dated 11.1.2010	804.07	1499.90	850.68	913.04	2170.33
Add: Un-discharged liabilities deducted earlier	206.07	22.64	107.17	19.59	323.82
Less: Discharge of liabilities allowed earlier	0.00	118.05	0.00	0.00	0.00
Add: Additional capital expenditure earlier disallowed on account of non-payment of ERV on retention money pertaining to ash handling system – now allowed on accrual basis	0.00	0.00	0.00	(-) 43.64	153.64
Add: Expenditure on procurement of Electrolyser rectifier	77.62	0.00	0.00	0.00	0.00
Additional capital expenditure considered now	1087.77	1404.49	957.85	888.99	2647.85

16. The capital cost for 2004-09 approved vide order dated 11.1.2010 is thus revised after considering the additional capital expenditure approved as above, for the period 2004-09 as stated overleaf:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening Capital cost	169219.61	170229.75	171634.24	172592.09	173481.09
Additional capital expenditure allowed	1087.77	1404.49	957.85	888.99	2647.85
Closing Capital cost	170307.37	171711.86	172669.71	173558.71	176206.55
Average Capital cost	169763.49	171009.62	172190.79	173114.21	174882.63

Debt-Equity ratio

17. For the purpose of allowing additional capital expenditure for the period 2004-09, the debt-equity ratio would remain the same as considered in order dated 11.1.2010. However, the normative FERV for the period 2001-04 has already been allowed in the capital base as on 1.4.2004 by order dated 19.7.2006 in Petition No.159/2004 and hence the same has not been revised.

Return on Equity

18. Based on the above, the return on equity approved vide order dated 11.1.2010 is revised as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Equity-Opening considered now	84609.80	84936.13	85357.48	85644.83	85911.53
Addition of Equity due to admitted additional capital expenditure	326.33	421.35	287.36	266.70	794.35
Equity-Closing	84936.13	85357.48	85644.83	85911.53	86705.89
Average equity	84772.97	85146.81	85501.16	85778.18	86308.71
Return on Equity @ 14%	11868.22	11920.55	11970.16	12008.95	12083.22

Interest on loan

19. Adjustment of repayment corresponding to de-capitalization of assets: In Petition No.159/2004, the petitioner has 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 in 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”.

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

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

21. 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.

22. 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 11.1.2010 was ₹84609.80 lakh.
- (b) Cumulative repayment of normative loan as on 1.4.2004 as considered in order dated 11.1.2010 was ₹67645.93 lakh. However, on account of cumulative repayment adjustment of ₹662.90 lakh corresponding to asset de-capitalized (amounting to ₹1325.80 lakh) up to 31.3.2004 the cumulative repayment of normative loan as on 1.4.2004 is revised to ₹66983.03 lakh.
- (c) Accordingly, the net opening normative loan as on 1.4.2004 is revised to ₹17626.77 lakh.
- (d) The addition of notional loan on account of additional capital expenditure approved for the period 2004-09 will be revised to ₹761.44 lakh, ₹983.14 lakh, ₹670.50 lakh, ₹622.30 lakh and ₹1853.49 lakh for the years 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09, respectively.
- (e) Weighted average rate of interest as considered in order dated 11.1.2010 has been considered.

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

(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.

23. Interest on loan has been computed as under:

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Opening loan – considered now	84609.80	85371.24	86354.38	87024.88	87647.17
Cumulative Repayment of Loan upto previous year	66983.03	69299.56	72353.44	75260.64	78060.62
Net Loan Opening	17626.77	16071.68	14000.94	11764.24	9586.56
Addition of loan due to approved additional capital expenditure	761.44	983.14	670.50	622.30	1853.49
Repayment of loan (Normative)	2580.86	3229.32	2946.26	2803.90	2372.92
Less: Adjustment for de-cap during the period	264.33	175.44	39.06	3.92	21.72
Repayment of loan during the year (net)	2316.52	3053.88	2907.20	2799.98	2351.19
Net Loan Closing	16071.68	14000.94	11764.24	9586.56	9088.86
Average Loan	16849.23	15036.31	12882.59	10675.40	9337.71
Weighted Average Rate of Interest on Loan	8.1560%	7.8201%	7.6676%	7.2138%	6.7682%
Interest on Loan	1374.23	1175.86	987.78	770.10	632.00

Depreciation

24. Cumulative depreciation/Advance Against Depreciation of ₹117829.80 lakh upto 31.3.2004 after accounting for the depreciation recovered as an impact of FERV for the period 2001-04 and the adjustment of cumulative depreciation due to the de-capitalization upto 31.3.2004 as considered in order dated 19.7.2006 in Petition No.159/2004 has been retained. Depreciation has been re-calculated by applying the weighted average rate of depreciation of 3.7026% as mentioned in order dated 11.1.2010. The necessary calculations are as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Opening capital cost	169219.61	170307.37	171711.86	172669.71	173558.71
Closing capital cost	170307.37	171711.86	172669.71	173558.71	176206.55
Average capital cost	169763.49	171009.62	172190.79	173114.21	174882.63
Depreciable value @ 90%	152061.41	153182.93	154242.81	155069.12	156735.30
Cumulative depreciation at the beginning of the year	117829.80	124115.54	130130.75	136385.19	142744.77
Balance depreciable value (at the beginning)	34231.61	29384.05	24233.23	18734.15	13995.57
Balance useful life	9.10	8.10	7.10	6.10	5.10
Depreciation	6285.74	6331.88	6375.61	6409.80	6475.28
Cumulative depreciation adjustment on account of de-capitalization	316.66	121.17	50.22	5.04	27.93

Advance Against Depreciation

25. There is no change in the Advance Against Depreciation (AAD) from that allowed vide order dated 11.1.2010. As such, allowable AAD during 2004-09 is “Nil”.

O&M expenses

26. O&M Expenses approved vide order dated 11.1.2010 remain unchanged.

Interest on Working capital

27. For the purpose of calculation of working capital, the operating parameters including the price of fuel components as considered in the order dated 11.1.2010 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 for the reason of revision of return on equity, 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	7497.20	7497.20	7497.20	7517.74	7497.20
Oil stock -2 months	688.01	688.01	688.01	689.90	688.01
O & M expenses	1690.00	1757.25	1827.50	1900.00	1977.25
Maintenance Spares	3218.05	3424.85	3639.50	3866.47	4124.67
Receivables	17847.55	17972.21	18104.04	18262.40	18395.52
Total Working Capital	30940.81	31339.52	31756.25	32236.50	32682.65
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Total Interest on Working capital	3171.43	3212.30	3255.02	3304.24	3349.97

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

	<i>(₹ in lakh)</i>				
	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan	1374.23	1175.86	987.78	770.10	632.00
Interest on Working Capital	3171.43	3212.30	3255.02	3304.24	3349.97
Depreciation	6285.74	6331.88	6375.61	6409.80	6475.28
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	11868.22	11920.55	11970.16	12008.95	12083.22
O & M Expenses	20280.00	21087.00	21930.00	22800.00	23727.00
Total	42979.62	43727.59	44518.57	45293.09	46267.47

29. The target availability of 80% considered by the Commission in the order dated 11.1.2010 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc considered in the order dated 11.1.2010 have been retained for the purpose of calculation of the revised fixed charges.

30. 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.

31. The petitioner shall claim the difference in respect of the tariff determined by order dated 11.1.2010 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