

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 125/2009**

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

**DATE OF ORDER: 29.11.2011**

**Petition No.125/2009**

**IN THE MATTER OF**

Revision of Commission's order dated 27.10.2010 in Petition No. 125/2009 in the light of the judgment dated 31.5.2011 of the Appellate Tribunal for Electricity in Appeal No.169/2010.

**IN THE MATTER OF**

Approval of final tariff for Unit-I (from 1.8.2008 to 29.12.2008) and Unit-I & II (combined) (from 30.12.2008 to 31.3.2009) in respect of Kahalgaon Super Thermal Power Station, Stage-II (2 x 500 MW).

**AND**

**IN THE MATTER OF**

NTPC Ltd, New Delhi

.... **Petitioner**

Vs

1. West Bengal State Electricity Board, Kolkata
2. Bihar State Electricity Board, Patna
3. Jharkhand State Electricity Board, Ranchi
4. Grid Corporation of Orissa Ltd., Bhubaneswar
5. Power Department, Govt. of Sikkim, Gangtok
6. Madhya Pradesh Power Trading Ltd., Jabalpur
7. Maharashtra State Electricity Distribution Company Ltd., Mumbai
8. Gujarat Urja Vikas Nigam Limited, Baroda
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Power Development Department, Govt. of J&K, Srinagar
11. Power Department, Union Territory of Chandigarh, Chandigarh
12. Punjab State Electricity Board, Patiala
13. Himachal Pradesh State Electricity Board, Shimla
14. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
15. Ajmer Vidyut Vitaran Nigam Ltd, Ajmer
16. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
17. Chattisgarh State Electricity Board, Raipur



18. Haryana Power Generation Company Ltd, Panchkula
19. BSES Rajdhani Power Limited, New Delhi
20. BSES Yamuna Power Limited, Delhi
21. North Delhi Power Ltd, New Delhi
22. Uttaranchal Power Corporation Ltd, Dehradun
23. Electricity Department, Administration of Dadra and Nagar Haveli, Silvassa
24. Electricity Department, Administration of Daman & Diu, Daman

....**Respondents**

### **ORDER**

This application was filed by the petitioner, NTPC for determination of tariff for Unit-I (from 1.8.2008 to 29.12.2008) and Unit-I & II (combined) (from 30.12.2008 to 31.3.2009) of Kahalgaon Super Thermal Power Station, Stage-II (2 x 500 MW) (hereinafter referred to as “the generating station”) for the period from 1.8.2008 to 31.3.2009, 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 5.7.2010 approved the annual fixed charges of the generating station. Subsequently, the annual fixed charges of the generating station were revised by Commission's order dated 27.10.2010 based on the capital cost of ₹173502.69 lakh as on 1.8.2008 and ₹304326.57 lakh as on 30.12.2008 as under:

	<i>(₹ in lakh)</i>	
	<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Depreciation	6258.50	11204.63
Interest on Loan	8426.63	15229.03
Return on Equity	7286.91	12991.67
Advance against Depreciation	-	10764.07
Interest on Working Capital	2370.87	4289.74
O&M Expenses	5475.00	10950.00
<b>Total</b>	<b>29817.91</b>	<b>65429.14</b>

### **BACKGROUND**

6. The Commission vide its order dated 18.12.2007 in Petition No. 101/2007 approved the provisional tariff of Unit-I (500 MW) of the generating station from date of commercial operation till 31.3.2009. Subsequently, the Commission vide order dated



30.12.2008 in Petition No. 107/2008 approved the provisional tariff of Unit-I & II (2 x 500 MW) of the generating station from date of commercial operation till 31.3.2009. Thereafter, the petitioner filed the instant petition (Petition No. 125/2009) for approval of final tariff for Unit-I, from 1.8.2008 to 29.12.2008 and for Unit-I & II (combined) from 30.12.2008 to 31.3.2009. In the said petition, the petitioner also filed Interlocutory Application (I.A No. 63/2009), for revision of tariff calculations in Appendix-I to the petition on account of change in the amount of capitalization of notional IDC from ₹523.00 lakh to ₹985.00 lakh as on the date of commercial operation of Unit-II. The Commission by its order dated 5.7.2010 approved the tariff of the generating station, which was subsequently revised by order dated 27.10.2010, as stated above.

7. Against the order dated 5.7.2010, the petitioner filed Appeal No.169/2010 before the Appellate Tribunal for Electricity (the Tribunal) on the following issues:

- (a) *Un-discharged liability;*
- (b) *Disallowance of interest during construction (IDC);*
- (c) *Equating depreciation to normative loan payment;*
- (d) *Recovery of Depreciation upto 90%; and*
- (e) *Exclusion of cost of initial spares for determination of maintenance spares for computing interest on working capital.*

8. The Tribunal by its judgment dated 31.5.2011 allowed the above prayers of the petitioner in terms of its earlier judgments dated 13.6.2007 in Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007 and the judgments dated 10.12.2008 and 16.3.2009 in Appeal Nos. 151 & 152/2007 and Appeal Nos. 133, 135, 136 and 148/2008 respectively.

**Judgment dated 13.6.2007**

9. The Commission by Appeal Nos.139 to 142 etc of 2006, 10, 11 and 23/2007 were 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 on various issues. 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. 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.

10. 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.”*

### **Judgment dated 10.12.2008 and 16.3.2009**

11. Appeal Nos.151 & 152/2007 filed by the petitioner before the Tribunal against the orders of the Commission revising the tariff of the generating stations of the



petitioner viz, Rihand STPS and Ramagundam STPS after deduction of un-discharged liabilities. The Tribunal by its judgment dated 10.12.2008 allowed the prayer of the petitioner 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."*

12. Similarly, Appeal Nos. 133, 135/2008, 136/2008 and 148/2008 were also filed by the petitioner before the Tribunal on the issue of un-discharged liabilities deducted by the Commission in respect of some of its other generating stations and the Tribunal by a common judgment dated 16.3.2009 allowed the prayer of the petitioner, in line with its decision dated 10.12.2008 (in Appeal Nos. 151 & 152/2007). 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 and the same are pending. There is no stay of the operation of the said judgments of the Tribunal.

13. 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 (Talcher TPS, Stage-II), the Tribunal by its judgment dated 4.2.2011 has observed that pendency of Civil appeals 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. 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 which needs to be determined on the same principle, the tariff of the

generating stations of the petitioner was revised after considering the issues raised by the petitioner in terms of the judgments of the Tribunal dated 13.6.2007 and 10.12.2008/16.3.2009, subject to the final decision of the Hon'ble Supreme Court in the said Civil Appeals.

14. Keeping in view the directions contained in the judgment of the Tribunal dated 31.5.2011 in Appeal No.169/2010 and considering the fact that the tariff for 2004-09 is a composite package, the tariff of the generating station of the petitioner is sought to be revised by this order subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court. We proceed accordingly.

**Un-discharged liabilities**

15. The un-discharged liabilities disallowed vide order dated 5.7.2010 / 27.10.2010 has been allowed as part of the capital cost.

**Interest During Construction (IDC) prior to the date of commercial operation**

16. Based on the directions of the Tribunal, the quarter wise IDC computations done on average basis were reworked based on equity deployment by NTPC and considering the rate of interest of actual individual loans applicable to notional loan where repayment as per average method had been considered. Since, average repayment considered earlier is now considered as notional loan at the rate at which original loan was available at the time of repayment, amounts of ₹299.25 lakh as on 1.8.2008 and ₹334.25 lakh as on 30.12.2008 deducted earlier has been allowed as part of the admitted capital cost as on the respective date of commercial operation.

17. As a consequence of the above, the capital cost allowed is as stated overleaf:



	(₹ in lakh)	
	<b>1.8.2008</b>	<b>30.12.2008</b>
Capital cost considered by petitioner for the purpose of Tariff	173502.69	304326.57
Add : Un-discharged liabilities	15591.00	26821.00
Add : IDC deducted earlier on account of considering average method of repayment instead of FIFO method	299.25	334.25
<b>Admissible Capital cost actually incurred up to date of commercial operation for the purpose of tariff (A)</b>	<b>189392.94</b>	<b>331481.82</b>

### Debt-Equity Ratio

18. For the purpose of allowing additional capital expenditure for the period 2004-09, the debt-equity ratio of 70:30 remains the same as considered in orders dated 5.7.2010 and 27.10.2010. Accordingly, notional debt and equity of the generating station as on the date of commercial operation of each unit on account of capitalization above, works out as under:

	(₹ in lakh)	
	<b>1.8.2008</b>	<b>30.12.2008</b>
Debt	132575.06	232037.27
Equity	56817.88	99444.55
<b>Total</b>	<b>189392.94</b>	<b>331481.82</b>

### Return on Equity

19. Based on above changes, the return on equity approved vide orders dated 5.7.2010 and 27.10.2010 is revised as under:

	(₹ in lakh)	
	<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Equity – Opening considered now	56817.88	99444.55
Addition to equity due to admitted additional capital expenditure	0.00	0.00
<b>Equity-Closing</b>	56817.88	99444.55
Average equity	56817.88	99444.55
<b>Return on Equity @ 14%</b>	<b>7954.50</b>	<b>13922.24</b>

### Interest on Loan

20. Interest on loan has been re-calculated as mentioned overleaf:

- (a) Gross normative loan corresponding to 70% of the admissible capital cost as on 1.8.2008 and 30.12.2008 works out to ₹132575.06 lakh and ₹232037.27 lakh, respectively.
- (b) Cumulative repayment of loan as on 1.8.2008 remains 'nil'. However, the cumulative repayment of loan as on 30.12.2008 is revised to ₹1202.89 lakh.
- (c) The petitioner has considered FIFO method of repayment in case of following loans viz. SBP, Canara, IDBI-I, SBI-III, J&K, Syndicate, Corporation-II, Allahabad-II, CBI-II, CBI-III, Karur Vysya-II, Citi-II and SBI-IV. As stated above, since application of FIFO method result in higher Advance Against Depreciation (AAD) in case of existing power stations and higher IDC in case of ongoing projects, all calculations of actual repayment have been done on average basis, taking into consideration the terms and conditions of the loan drawl as per Form-8 furnished by the petitioner and subsequent information and clarification called for and submitted by the petitioner.
- (d) The rate of interest considered in calculation in case of all loans is on annual rest basis.
- (e) Loans drawn up to the date of commercial operation of the generating station has been taken into consideration.
- (f) Rate of interest as prevailing on the date of commercial operation has been used for calculations. Any variation on account of change in rates may be mutually settled.
- (g) Actual repayment of actual loan based on above corrections is used to calculate normative repayment of Loan. Normative repayment is worked out as per formula below.

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

- (h) Financial charges incurred towards loans by the petitioner has been allowed and taken into consideration for calculation of interest on loan. The same is 20.91%/21.115% withholding tax for Euro Bond, for this generating station.
- (i) Some of loans carry floating rate of interest viz. SBI-III, SBP, SBI-IV, UBI-II, CBI-III, PFC-V and ADB. Interest rate prevailing on the date of commercial operation has been considered for interest computation.
- (j) Average net loan is calculated as average of opening and closing as was being done for all earlier tariff orders.





21. The interest on loan has been re-computed as under:

	(₹ in lakh)	
	<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Gross Opening Loan –Considered now	132575.06	232037.27
Cumulative Repayment of Loan upto previous year	0.00	1202.89
Net Loan Opening	132575.06	230834.38
Addition of loan due to approved additional capital expenditure	0.00	0.00
Repayment of loan (Normative)	1202.89	5877.54
Net Loan Closing	131372.17	224956.84
Average Loan	131973.61	227895.61
Weighted Average Rate of Interest on Loan	7.0132%	7.0940%
<b>Interest on Loan</b>	<b>9255.63</b>	<b>16167.01</b>

### Depreciation

22. In its judgment dated 13.6.2007, the Tribunal has observed as under:

*“In a regulatory cost plus regime all costs have to be reimbursed. Depreciation amount up to 90% being a cost has to be allowed over the life of the plant. If due to underperformance in a particular year the appellant is not able to recover full depreciation allowed in that year and if this denial is forever, it will tantamount to a penalty. In a contract between the appellant and the beneficiaries, only levy of liquidated damages can be permitted. It will, therefore, be enough deterrent for the appellant if the depreciation is not allowed during the year of underperformance. However, the same cannot be denied forever and, therefore, **it will be only fair to allow the unpaid portion of the depreciation after the plant has lived its designated useful life. In this view of the matter the CERC needs to examine this aspect as per the aforesaid.**”*

23. Based on above directions of the Tribunal, no adjustment has been made to the cumulative depreciation at this stage. The un-recovered depreciation would be allowed in tariff after the designated useful life of the generating station, as directed by the Tribunal.

24. Weighted average rate of depreciation of 3.6073% and 3.6223% as on 1.8.2008 and 30.12.2008, respectively as considered in order dated 27.10.2010 has been retained for the purpose of tariff.

25. The necessary calculations are as under:

		(₹ in lakh)	
		<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Gross block as on the date of commercial operation		189392.94	331481.82
Rate of depreciation – Unit-I Unit-I&II (combined)	3.6073% 3.6223%		
Depreciable value		170453.64	298333.64
Balance useful life of the asset	25.00		
Remaining depreciable value		170453.64	295507.30
Depreciation for the period		2826.34	3026.47
<b>Depreciation (annualized)</b>		<b>6831.88</b>	<b>12007.20</b>

### Advance Against Depreciation

26. The petitioner's entitlement to Advance Against Depreciation is worked out as under:

		(₹ in lakh)	
		<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
1/10th of Gross Loan(s)		13257.51	23203.73
Repayment of the Loan		1202.89	5877.54
Minimum of the above		1202.89	5877.54
Depreciation during the year		2826.34	3026.47
(A) Difference		0.00	2851.07
Cumulative Repayment of the Loan		1202.89	7080.43
Cumulative Depreciation / AAD		2826.34	5852.81
(B) Difference		0.00	1227.62
Advance Against Depreciation [Minimum of (A) and (B)]		0.00	1227.62
<b>Advance Against Depreciation (annualized)</b>		<b>0.00</b>	<b>4870.44</b>

### O&M expenses

27. O&M Expenses approved vide order dated 27.10.2010 remain unchanged.

### Interest on Working capital

28. For the purpose of calculation of working capital the operating parameters including the price of fuel components as considered in the order dated 27.10.2010 have been kept unchanged. 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)	
	<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Coal Stock- 1.1/2 months	4861.94	7971.32
Oil stock -2 months	436.90	791.56
O & M expenses	456.25	912.50
Maintenance Spares	1893.93	3314.82
Receivables	12245.16	21782.75
<b>Total Working Capital</b>	<b>19894.18</b>	<b>34772.96</b>
Rate of Interest	12.25%	12.25%
<b>Total Interest on Working capital</b>	<b>2437.04</b>	<b>4259.69</b>

29. The annual fixed charges for the period from 1.8.2008 to 31.3.2009 is summarized as under:

	(₹ in lakh)	
	<b>2008-09</b>	
	<b>1.8.2008 to 29.12.2008</b>	<b>30.12.2008 to 31.3.2009</b>
Depreciation	6831.88	12007.20
Interest on Loan	9255.63	16167.01
Return on Equity	7954.50	13922.24
Advance Against Depreciation	0.00	4870.44
Interest on Working Capital	2437.04	4259.69
O & M Expenses	5475.00	10950.00
<b>Total</b>	<b>31954.05</b>	<b>62176.57</b>

**Note:** (i) All figures are on annualized basis. (ii) All the figures under each head have been rounded.  
(iii) The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns

### Target Availability

30. The target availability of 80% considered by the Commission in the order dated 5.7.2010/27.10.2010 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc considered in the order dated 5.7.2010/27.10.2010 have been retained for the purpose of calculation of the revised fixed charges.

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

32. The petitioner shall claim the difference in respect of the tariff determined by order dated 27.10.2010 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/-**  
**(DR.PRAMOD DEO)**  
**CHAIRPERSON**

