

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R.Krishnamoorthy, Member**

Petition No. 163/2004

In the matter of

Approval of Tariff of Tanda TPS (440MW) for the period from 1.4.2004 to 31.3.2009 on account of revision of operational parameters and norms.

And in the matter of

NTPC Ltd., New Delhi

... Petitioner

vs

Uttar Pradesh Power Corporation Ltd, Lucknow

--- Respondent

ORDER

This petition was filed by the petitioner, NTPC Limited, a generating company owned or controlled by the Central Government for approval of tariff in respect of Tanda Thermal Power Station (440 MW), (hereinafter referred to as "the generating station") for the period from 1.4.2004 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. The tariff for the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 30.11.2006.

2. The details of the annual fixed charges for the period 1.4.2004 to 31.3.2009 allowed are as under:

(Rs. in lakh)

	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1	Interest on Loan	2718	2215	1712	1209	708
2	Interest on Working Capital	1440	1443	1447	1455	1458
3	Depreciation	2780	2780	2780	2780	2780
4	Advance against Depreciation	0	0	0	0	0
5	Return on Equity	3295	3295	3295	3295	3295
6	O & M Expenses	7348	7642	7947	8265	8596
	TOTAL	17580	17374	17181	17004	16836

3. The petitioner was also allowed energy charge of 142.24 paise/kWh based on fuel prices and GCVs for the period January to March 2004, and normative operating parameters as per the 2004 regulations.

4. The Commission in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Amendment) Regulations, 2007, revised the operational norms of target availability, target PLF, station heat rate, auxiliary energy consumption and specific oil consumption for the generating station with effect from 1.4.2007, as follows:

Target Availability	80%
Target PLF	80%
Station Heat Rate	2850 kCal/kWh
Auxiliary Energy Consumption	12.0%
Specific Fuel Oil Consumption	2.0ml/kWh

5. The petitioner filed revised calculations in support of the energy charges and interest on working capital vide its affidavits dated 9.4.2007 and 25.5.2007 based on the revised operational norms for the period 1.4.2007 to 31.3.2009. The petitioner claimed the energy charge @ 161.33 by affidavit dated 9.4.2007 and @ 163.57 paise/kWh by affidavit dated 25.5.2007 during 2007-08 and 2008-09. The detailed

calculations in support of the petitioner's claim for interest on working capital for these two years are given hereunder, as per affidavit dated 25.5.2007:

	(Rs. in lakh)	
	2007-08	2008-09
Coal Stock- 2 months @	7106.24	7086.83
Oil stock -2 months	311.53	310.68
O & M expenses	689	716
Spares	887	940
Receivables	10405	10357
Total Working Capital	19399	19411
Rate of Interest	12.25%	12.25%
Interest on Working capital	2376	2378

@ Fuel prices as on Jan'07, Feb '07 and March '07.

6. The Commission by its order dated 3.10.2007 determined the base rate of energy charge to Rs.163.57 paise/kWh (ex-bus) as on 1.4.2007, based on the fuel prices and GCVs applicable during preceding three months from the date of applicability of the revised norms, that is, January to march 2007. However, in the said order the Commission observed as follows:

"12. The petitioner has filed an application for review of order dated 30.11.2006. The said application is under consideration of the Commission separately. Also, revision of capital cost for the period prior to 1.4.2004 is being considered by the Commission consequent to remand of the matter by the Appellate Tribunal. The revision of interest on working capital, which is one of the components of annual fixed cost, will be considered after a final view on these matters is taken."

7. The application for review and the revision of capital cost for the period prior to 1.4.2004 was being considered by the Commission based on the Appellate Tribunal's judgment dated 6.6.2007 in Appeal Nos. 205/2005 and 9/2007. Meanwhile, the Hon'ble Supreme Court by its order dated 21.11.2007 in Civil Appeal Nos 5361-5362/2007 has stayed operation of the Appellate Tribunal's judgment dated 6.6.2007. Hence, it has been decided to de-link the question of revision of component of interest on working capital from other issues. Therefore, the interest on working capital component of tariff is being revised, based on the revised energy charges as a

component of “receivables” with effect from 1.4.2007 and other elements of the working capital.

INTEREST ON WORKING CAPITAL

8. In accordance with clause (v) of Regulation 21 of the 2004 regulations, working capital in case of Coal based/Lignite-fired generating stations shall cover:

- (i) Cost of coal or lignite for 1½ months for pit-head generating stations and two months for non-pit-head generating stations, corresponding to the target availability;
- (ii) Cost of secondary fuel oil for two months corresponding to the target availability;
- (iii) Operation and Maintenance expenses for one month;
- (iv) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and
- (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on the target availability.

9. The respondent in its reply-affidavit sworn and verified on 27.7.2007 has submitted that the values of GCV of oil, coal, etc as applicable during January to March 2004 are to be considered. It has further submitted that the rate of interest as per SBI PLR on 1.4.2004 should apply.

10. Working capital has been calculated considering the following elements:

(a) **Fuel cost:** The cost of coal has been worked out for two months on the basis of operational parameters and weighted average price of Rs.1800.61/MT and GCV of 3696 kcal/kg for coal procured during January to March 2007. It is pointed out that the 2004 regulations do not contain any stipulation as regards the period for which price of fuels is to be considered for computing working capital. Therefore, it is logical to take the fuel price at the beginning or just prior to the period for which tariff is to be calculated. Therefore while revising interest on working capital component of tariff for the period 1.4.2007 to 31.3.2009 fuel price prior to 1.4.2007 has been considered.

(b) **Secondary Fuel Oil:** Weighted average GCV (9600 kCal/l for LDO) and price of LDO at Rs.30226.09 /KL, for the month of December 2006, has been considered.

11. Accordingly, the fuel component in working capital corresponding to target availability of 80% works out as follows:

(Rs in lakh)

Particulars	2007-08 (leap year)	2008-09
Cost of coal for two months	7105.98	7086.57
Cost of secondary fuel oil for two months	311.53	310.68
Energy charges for two months	7417.51	7397.24

(c) **O&M Expenses:** O&M expenses for working capital has been worked out for 1 month of O&M expenses approved above and are considered in tariff of the respective year.

(d) Spares: The value of maintenance spares for the purpose of working capital has been worked out based on the historical cost of Rs.60700 lakh as on date of transfer of the generating station to the respondent and by escalating the previous years cost by 6% per annum. The value of the maintenance spares for 2007-08 works out to Rs.887 lakh and 2008-09 works out to Rs.940 lakh.

(e) Receivables: The receivables have been worked out on the basis of two months of fixed and variable charges, calculated on normative target availability. The supporting calculations in respect of receivables are tabulated hereunder:

(Rs.in lakh)

Variable Charges	2007-08	2008-09
Coal (Rs/kwh)	1.5670	1.5670
Oil (Rs/kwh)	0.0687	0.0687
Rs./kwh	1.6357	1.6357
Variable Charges per year	44505.07	44383.47
Receivables		
Variable Charges -2 months	7417.51	7397.24
Fixed Charges - 2 months	2922	2894
Receivables	10339	10291

12. The average SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the years 2007-08 and 2008-09. This is in accordance with sub-clause (b) of clause (v) of Regulation 21 (1) of the 2004 regulations, though the petitioner has claimed interest @ 12.25% based on SBI PLR of 1.4.2007.

13. Accordingly, in supersession of the computation arrived at in para 68 of the order dated 30.11.2006, interest on working capital has been reworked as follows:

(Rs. in lakh)		
	2007-08	2008-09
Coal Stock- 2 months	7105.98	7086.57
Oil stock -2 months	311.53	310.68
O & M expenses	689	716
Spares	887	940
Receivables	10339	10291
Total Working Capital	19332	19344
Rate of Interest	10.25%	10.25%
Interest on Working capital	1982	1983

ANNUAL FIXED CHARGES

14. The revised Annual Fixed Charges computed on the basis of the above interest on working capital shall be as under, for the period 1.4.2007 to 31.3.2009, in supersession of the charges worked out in para 69 of the order dated 30.11.2006:

(Rs. in lakh)			
	Particulars	2007-08	2008-09
1	Interest on Loan	1209	708
2	Interest on Working Capital	1982	1983
3	Depreciation	2780	2780
4	Advance against Depreciation	0	0
5	Return on Equity	3295	3295
6	O & M Expenses	8265	8596
	TOTAL	17531	17361

15. The petitioner is already billing the respondent in accordance with the Commission's order dated 30.11.2006. The tariff shall be adjusted in the light of the modifications approved by us in this order. The energy charge shall be recovered by the petitioner based on our order dated 3.10.2007.

Sd/-
(R.KRISHNAMOORTHY)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

New Delhi, dated the 14th December, 2007