CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Coram:

1. Shri. Ashok Basu, Chairperson
2. Shri Bhanu Bhushan, Member
3. Shri A.H. Jung, Member

Petition No. 26/2006

In the matter of

Revision of operational parameters and norms for the determination of tariff in respect of Tanda TPS for the period 2004-09.

And in the matter of

Uttar Pradesh Power Corporation Ltd, Lucknow .....**Petitioner**

vs

National Thermal Power Corporation Ltd .....**Respondent**

The following were present

1. Shri D.D. Chopra, Advocate, UPPCL
2. Shri T.K. Srivastava, UPPCL
3. Shri Manish Garg, UPPCL
4. Shri Manoj Saxena, NTPC
5. Shri V.B.K.Jain, NTPC
6. Shri I.J.Kapoor, NTPC
7. Shri Shankar Saran, NTPC
8. Shri S.D. Jha, NTPC
9. Shri Ratnesh, NTPC
10. Shri S.K. Khanna, NTPC
11. Shri Balaji Dubey, NTPC
12. Shri Ajay Garg, NTPC

ORDER
(DATE OF HEARING: 10.8.2006)

This petition has been filed by the petitioner for revision of operational parameters and norms for determination of tariff of Tanda Thermal Power Station

(hereinafter referred to as the generating station), a generating station owned by the respondent, for the period 2004-09.

2. Tanda Thermal Power Station was transferred by the Government of Uttar Pradesh to the respondent under the provisions of Uttar Pradesh Electricity Reforms (Transfer of Tanda Undertaking) Scheme, 2000, on 14.1.2000 for a total consideration of Rs.1000/- crore. The power generated from the generating station is supplied exclusively to the petitioner under an agreement dated 7.1.2000, valid for a period of 25 years.

3. The Commission approved the tariff of the generating station for the period from 14.1.2000 to 31.3.2004 by order dated 28.6.2002 in Petition No. 77/2001 and by order dated 9.4.2003 in Review Petition No.2/2003 in Petition No.77/2001. The fixed charges approved by the Commission based on the gross block of Rs.60700 lakh (as on 14.1.2000) are as under:

(Rs. in lakh)

YEAR	1999-2000	2000-01	2001-02	2002-03	2003-04
Fixed Charges	18120	17703	16149	15945	15723

4. The Commission approved additional capital expenditure of Rs.17747 lakh incurred by the petitioner during the period 2000-04 on R & M works of the generating station, after its takeover vide order dated 24.10.2005 in Petition No. 8/2005 and further revised the annual fixed charges of the generating station as under:

(Rs. in lakh)

YEAR	1999-2000	2000-01	2001-02	2002-03	2003-04
Fixed Charges	18124	18034	17163	17834	18464

5. Meanwhile, the Commission notified the Central Electricity Regulatory Commission (Determination of Tariff) Regulations, 2004 (hereinafter referred to as "the said regulations") on 26.3.2004. Regulation 16 the said regulations laid down the operational norms applicable to the different generating stations for the period 1.4.2004 to 31.3.2009. In case of the generating station which was under R & M, relaxed operational norms are laid down as under:

Name of Station	*Target Availability*	*Target PLF*	*Station Heat Rate (kcal/kWh)*	*Auxiliary Energy Consumption Norm (%)*	*Specific Fuel Oil Consumption (ml/kWh)*
Tanda TPS/440 MW	*60%*	*60%*	*3000*	*11.00*	*3.5*

6. The respondent was, however, directed to approach the Commission for revision of the operational norms of the generating station after completion of the R & M works. In this connection, the relevant part of the order of the Commission dated 29.3.2004 is extracted below:

> "28. With regard to operational norms for Tanda TPS and Talcher TPS, the Commission had missed the same in the draft regulations through oversight. However, this was covered in the order dated 16.1.2004 and it was observed as under:
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> *"There are two generating stations of NTPC, namely Tanda TPS and Talcher TPS which are having steam turbines of 60 MW and 110 MW. The Commission has finalized operational norms for these generating stations of NTPC recently while dealing with tariff petitions on case-to-case basis.* ***Further, these generating***

stations are undergoing lot of R & M works and the Commission would not like to review the operational norms till the R & M works are completed. NTPC is directed to come before the Commission with a proposal on the revised operational norms after the completion of R & M works in these generating stations. *As such, we hold that the operational norms of station heat rate, auxiliary energy consumption and specific fuel oil consumption prescribed by the Commission for the year 2003-04 in respect of above two generating stations of NTPC in the tariff orders for the previous tariff period up to 31.3.2004, shall continue to apply during the tariff period 2004-09 also, till R & M work in these stations is completed."*

7. Since the respondent did not make any application for revision of operational norms, the application has been made by the petitioner. The petitioner has submitted that due to extensive R & M carried out, the performance of the generating station has improved remarkably, necessitating revision of the operational norms to bring them at par with the other thermal power generating stations. The petitioner has further submitted that it apprised the respondent vide its letter dated 21.1.2006 about the improved performance of the generating station consequent to R&M. The petitioner has submitted the data regarding the actual operational parameters achieved by the generating station, during 2000-05 and based on the said parameters, has proposed the following norms for consideration and adoption by the Commission for the tariff period 2004-09, which are at par with the operational norms applicable to other generating stations:

Operational Parameters	2000-01	2001-02	2002-03	2003-04	2004-05	Existing norms	Proposed Norms
Target availability & target PLF(%)	28	51	64	84	96.6	60	80
Specific oil consumption Ml/kWh	38.8	11	2.12	0.92	-	3.5	2
Station heat rate	3764	3363	3137	2846	-	3000	2800
Aux. energy consumption	19.7	16.1	13.78	12.8	-	11	10.5

8. In addition, the petitioner has prayed to restrict recovery of profits, exceeding 14% ROE and recovery of income-tax on incentive and profits, exceeding 14% ROE.

9. The respondent in its reply has submitted that the intention of the Commission was to review the operational norms after the performance improvement was established and sustainable. The respondent has submitted that though the operational performance has improved during the ongoing R&M works, the performance is not sustainable till R&M works are completed in all respects. It has been further submitted that certain R&M works to overcome the generic problems of the generating station are currently under progress and it would be premature to revise the norms at this stage because of performance improvements just on completion of short and medium term works.

10. During the hearing held on 20.6.2006, the respondent was directed to furnish the actual operational parameters achieved by the generating station during the period 2000-05. Subsequently, the respondent was also asked to

furnish the actual operating parameters achieved during the year 2005-06 and also the reasons for high auxiliary energy consumption. The respondent has furnished the information under affidavits dated 1.8.2006 and 6.10.2006. The data submitted by the respondent is extracted as under:

Operational Norm	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Target Availability/ PLF (%)	30.87	54.52	57.58	75.32	86.07	86.4
Heat rate	3764	3365	3137	2846	2758	2746 to 2771
AEC (%)	19.73	16.1	13.84	12.81	12	11.88
Sp. Oil (ml/kWh)	38.87	11.26	2.12	0.92	0.74	0.62

11. As regards the reasons for high auxiliary energy consumption, the respondent has stated that as a result of continuous efforts made by it since the take-over of the generating station, the auxiliary energy consumption has come down from 23.79% in 2000 to 11.88% in 2005-06 and compares with the auxiliary energy consumption of similar 210 MW units at Bhatinda and Panipat of 11.24% and 10.34% respectively. It has been stated that the readings are based on the energy meter reading installed on UAT and Station Transformers and did not include the losses in generator transformer, unit auxiliary transformers, station transformers and excitation power, which were about 0.95%. There is higher auxiliary energy consumption of about 0.83% on account of the three-staged pumping and bearing cooling water system provided at the generating station not

applicable in case of Bhatinda and Panipat generating stations. The respondent has further submitted that when the additional power consumption of about 0.95% and 0.83% are added to the figures of Bhatinda and Panipat, their auxiliary energy consumptions work out to 13.02% and 12.12% respectively, which were higher than the auxiliary energy consumption of the generating station. It has been submitted that for the reasons explained, normative auxiliary energy consumption of the generating station should be fixed at 12.5%.

12. We have perused the material on record and considered the submissions of the parties.

13. The data submitted by the respondent shows that the initial R & M works of the generating station were complete by the end of the year 2003-04. As a result of R & M actual operational parameters have substantially improved in comparison to the norms notified, except for auxiliary energy consumption. We, therefore, feel that there is a pressing need to revise the operational norms. As may be noticed from para 4 above, there is considerable increase in capacity charges, consequent to completion of R & M, resulting in improvement in performance of the generating station.

14. It is observed that the generating station has achieved the target availability/plant load factor of 86.7% and 86.4% for the years 2004-05 and 2005-06 respectively, which is higher than the norm of 80% fixed for the other thermal power generating stations of the respondent. Similarly, secondary fuel oil

consumption has come down to 0.92 ml/kWh from the year 2003-04, which is favourable as compared to the norm of 2.0 ml/kWh laid down for all coal-based thermal power generating stations. Therefore, there exists a strong case that the norms for target availability, plant load factor and secondary fuel oil consumption applicable to the generating station should be revised to bring them at par with the other coal-based thermal power generating stations.

15. As regards the gross station heat rate, the generating station has achieved 2758 kCal/kWh during the year 2004-05 and 2746 kCal/kWh to 2771 kCal/kWh during the year 2005-06 at the plant load factor of 75% and 86% respectively. As such, corresponding to 80% of plant load factor, it would be possible for the generating station to achieve heat rate of 2800 kCal/kWh. The generating station having been recently renovated, it would be prudent to take a factor of 1.02% to take care of the degradation during the tariff period. After catering for the degradation factor, the station heat rate of 2850 KCal/kWh is considered reasonable and be applied.

16. As regards the auxiliary energy consumption, the petitioner has submitted that it should be revised to 10.5%, whereas the respondent has urged that for the reasons explained by it, the auxiliary energy consumption may be set at 12.5%. A perusal of the data furnished by the respondent reveals that the actual auxiliary energy consumption has come down from 19.73% in 2000-01 to 11.88% in 2005-06. Under the circumstances, it may be reasonable to prescribe auxiliary energy consumption norm of 12%.

17. Accordingly, we decide that the following revised norms should be applicable in respect of the Tanda TPS w.e.f. 1.4.2007:

Target Availability	Target PLF	Station Heat Rate Norm (kCal/kWh)	Auxiliary Energy Consumption Norm (%)	Specific Fuel Oil Consumption (ml/kWh)
80%	80%	2850	12%	2

18. The applicability of the revised norms requires amendment of Regulation 16 of the said regulations. It is directed that the office shall initiate appropriate action for this purpose. The tariff for the period ending 31.3.2009 in respect of the generating station has already been approved. The respondent shall file the revised calculations in support of the energy charge and working capital/interest on working capital for the years 2007-08 and 2008-09 based on the revised operational norms, finally notified, latest by 31.3.2007.

19. As regards the other prayers of the petitioner, regarding recovery of profits and income-tax, it is noticed that the petitioner has not made out that any recoveries by the respondent are *de hors* the terms and conditions of tariff applicable during the period 1.4.2004 to 31.3.2009 or the tariff approved by the Commission, except for making a statement that return on equity needs to be restricted to 14% only. Besides, the issues are generic in nature involving all the

stakeholders and require detailed deliberations and in-depth analysis. The issues may be taken up for consideration by the Commission at the appropriate time.

20. As we have noted above, the respondent was directed to make an application for revision of operational norms after completion of R & M works. The data furnished by the respondent shows considerable improvement in performance during 2004-05 itself. Certain parameters achieved are no way inferior to other generating stations. However, the respondent did not approach the Commission and this forced the petitioner to make the application. Under these peculiar circumstances, we direct that the filing fee of Rs. one lakh paid by the petitioner shall be paid by the respondent to the petitioner, latest by 28.2.2007.

21. This disposes Petition No. 26/2006.

Sd/-	**Sd/-**	**Sd/-**
(A.H. JUNG)	**(BHANU BHUSHAN)**	**(ASHOK BASU)**
MEMBER	**MEMBER**	**CHAIRPERSON**

Dated, New Delhi the 24th January, 2007