

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 207/GT/2013

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri V.S.Verma, Member

Shri M.Deena Dayalan, Member

Shri A.K.Singhal, Member

Date of Hearing: 7.11.2013

Date of Order: 21.2.2014

In the matter of

Grant of provisional tariff of Muzzafarpur Thermal Power Station, Stage-I (2 x 110 MW) for the period from date of commercial operation of Unit-I (1.11.2013) to 31.3.2014.

And

In the matter of

Approval of generation tariff of Muzzafarpur TPS, Stage-I (2 x 110 MW) for the period from the date of commercial operation of Unit-I to 31.3.2014.

And

In the matter of

Kanti Bijlee Utpadan Nigam Ltd,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

.....**Petitioner**

Vs

Bihar State Power (Holding) Company Ltd
(formerly Bihar State Electricity Board)
Vidyut Bhawan, Bailey Road
Patna -800021

.....**Respondent**

Parties present:

For Petitioner:

1. Shri Manoj Kumar Sinha, KBUNL
2. Shri Shri Ajay Dua, NTPC
3. Shri Rohit Chhabra, NTPC
4. Shri B.S.Rajput, NTPC
5. Shri Naresh Anand, NTPC
6. Shri A.K.Choudhury, NTPC

For Respondent:

None



ORDER

The petitioner, Kanti Bijlee Utpadan Nigam Ltd (KBUNL) has filed this petition for determination of generation tariff of Muzzafarpur TPS, Stage-I, (2 x 110 MW) ('the generating station') for the period from the anticipated date of commercial operation of Unit-I to 31.3.2014, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. KBUNL, a Government company, is a subsidiary of NTPC Ltd and was set up as a joint venture company with the respondent, BSEB to take over the assets and business of the generating station with effect from 8.9.2006, which consists of two units of 110 MW capacity commissioned during 1985-86 and which was under shut down since October, 2003. The entire power generated from the generating station, is supplied to the respondent in terms of the Power Purchase Agreement dated 22.8.2006.

3. The project was in depleted condition at the time of transfer and the generating station was in a position to generate power only at 10% to 15% of its capacity. As there was acute shortage of power being faced by the respondent, BSEB, only selective refurbishment works for restoration of generation from Unit-II was taken up and the commercial operation of the Unit-II was declared on 15.10.2010, without doing any major R&M work. Unit-I was taken under Renovation & Modernization (R&M) during 2010.

4. Petition No. 271/2010 was filed by the petitioner for approval of tariff for Unit II (1 x 110 MW) of the generating station for the period from 15.10.2010 to 31.3.2014 with relaxed operational norms and O&M expenses. The petitioner had also prayed that it may be allowed to file separate petitions for determination of tariff after completion of R&M activities of Unit-I and II of the generating station. Thereafter, the Commission, after hearing the parties, by its order dated 23.2.2012 granted provisional tariff for Unit II of the generating station for the period from the date of commercial operation 15.10.2010 till 31.3.2014, based on relaxed

norms, pending determination of final tariff. Subsequently, during the hearing of the said petition on 29.10.2013, the petitioner submitted that Unit II was presently under shut down due to R&M activities and the expected time for completion of R&M for Unit II is April, 2014. The Commission has however reserved its order in the said petition.

5. The present petition has been filed by the petitioner for determination of tariff of the generating station considering the gross block based on the audited accounts as of 31.3.2012 and estimated capitalisation upto anticipated date of commercial operation (COD) of Unit I (30.9.2012) and anticipated COD of Unit II (1.4.2013).

6. During the hearing, the petitioner submitted that Unit I of the generating station had been declared under commercial operation on 1.11.2013 and prayed that provisional tariff may be granted accordingly. None appeared on behalf of the respondents.

7. Regulation 5 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2011 provides as under:

“(4) Where application for determination of tariff of an existing or a new project has been filed before the Commission in accordance with clauses (1) and (2) of this regulation, the Commission may consider in its discretion to grant provisional tariff upto 95% of the annual fixed cost of the project claimed in the application subject to adjustment as per proviso to clause (3) of this regulation after the final tariff order has been issued:

Provided that recovery of capacity charge and energy charge or transmission charge, as the case may be, in respect of the existing or new project for which provisional tariff has been granted shall be made in accordance with the relevant provisions of these regulations.”

8. The petitioner has filed this petition in compliance with Clauses (1) and (2) of Regulation 5 of the 2009 Tariff Regulations. No reply has been received from the respondent.

9. Keeping in view the interest of the sole beneficiary and the cash flow problems faced by the petitioner, we grant provisional tariff for Unit I of the generating station for the period from 1.11.2013 to 31.3.2014 as stated in the subsequent paragraphs, pending determination of final tariff.

Capital Cost

10. The capital expenditure as on the anticipated COD (30.9.2012) of Unit-I as furnished in Form- 5B of the petition is ₹30631.24 lakh, as per details hereunder:

	<i>(₹ in lakh)</i>
Gross block of Unit-I as on 31.3.2012 as per audited accounts	3348.67
Anticipated capital expenditure of Unit-I from 1.4.2012 to the expected COD of Unit-I	27282.57
Total anticipated capital expenditure as on the expected COD of Unit-I (30.9.2012) including un-discharged liabilities of ₹ 187.48 lakh	30631.24

11. The petitioner vide its affidavit dated 31.10.2011 while furnishing the status of R&M activities has stated that the expected date for completion of R&M of Unit I was 15.4.2012. Thus, there is a delay of 18^{1/2} months (approx) in the completion of R&M and/or the declaration of COD of Unit I. The petitioner vide affidavit dated 23.3.2013 has submitted that the capital expenditure incurred on the restoration /refurbishment of Unit II has not been included in the capital cost as on anticipated COD of Unit I.

12. The capital cost for installed capacity as on COD of the generating station (1.11.2013) as claimed by the petitioner is ₹30631.24 lakh, which is inclusive of the apportioned amount of ₹29232.00 lakh as grant in the form of Special Central Assistance under Rashtriya Sam Vikas Yojna to the generating station. The petitioner by affidavit dated 30.1.2014 has furnished the actual capital expenditure of ₹29963.91 lakh duly certified by Chartered Accountant, as on the actual COD of the generating station (1.11.2013). Accordingly, for working out the provisional tariff, the apportioned grant amount of ₹22718.00 lakh for Unit-I (vide Form 6), has been reduced from the capital cost of ₹29963.91 lakh (on cash basis) to arrive at the opening capital cost as on 1.11.2013. This works out to ₹7245.91 lakh and the same is considered for provisional tariff.

Projected Additional Capital Expenditure for 2013-14

13. The additional capital expenditure for ₹4029.00 lakh claimed by the petitioner for 2013-14, has not been considered for the purpose of provisional tariff.

14. The calculations for Return on Equity and Depreciation have been considered as per the provisions of the 2009 Tariff Regulations. The weighted average rate of interest on loan of 15.8300% for 2013-14 has been considered in calculation of Interest on loan.

O&M expenses

15. The petitioner has submitted that no norms have been specified for O&M expenses in the 2009 Tariff Regulations, for generating station of 110 MW unit. It has therefore prayed that the Commission may consider the O&M cost of ₹38.70 lakh/MW during 2012-13 as approved for Talcher Thermal Power Station of NTPC which is of a similar size. Accordingly, the petitioner has claimed the following O&M expenses:

O&M Cost	30.9.2012 to 31.3.2013 (1x110 MW)	1.4.2013 to 31.3.2014 (2x110 MW)
O&M cost (₹ in lakh/MW/Year)	38.70	40.91
O&M expenses (annualized)	4257.00	9000.00

16. The Commission in its order dated 23.2.2012 while granting provisional tariff for Unit II of the generating station has allowed the following O&M norms for the years 2012-13 and 2013-14 and the same is allowed for provisional tariff for Unit I of the generating station.

O&M Cost	(₹ in lakh/MW/Year)
	2013-14 1.11.2013 to 31.3.2014
For 110 MW Unit	35.98
O&M Expenses (<i>Pro rata</i>)	1637.34
O&M Expenses (annualised)	3957.80

17. O&M expense norms allowed would be reviewed after the completion of R&M schemes of the generating station.

18. O&M expenses for 1 month claimed by the petitioner for the purpose of working capital are as under:

	(₹ in lakh)	
	2012-13 (30.9.2012 to 31.3.2013)	2013-14
O & M expenses	355.00	750.00

19. O&M expenses for one month as worked out below has been considered in the working capital:

	(₹ in lakh)
	2013-14 (1.11.2013 to 31.3.2014)
O&M cost for 1 month (Pro rata)	136.44
O&M cost for 1 month (annualised)	329.82

Maintenance Spares in working capital

20. The petitioner has claimed the following maintenance spares in the working capital:

	(₹ in lakh)	
	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Maintenance Spares	851.00	1800.00

21. The 2009 Tariff Regulations provide for maintenance spares @ 20% of the Operation & Maintenance expenses as specified under Regulation 19. Accordingly, the maintenance spares @ 20% considered for the purpose of provisional tariff is worked out and allowed as under:

	(₹ in lakh)
	2013-14 (1.11.2013 to 31.3.2014)
Spares (20% of O&M cost) (<i>Pro rata</i>)	327.47
Spares (20% of O&M cost) (<i>annualised</i>)	791.56

22. The Energy Charges for two months (primary fuel as coal) considered in the Receivable component of working capital is ₹3910.65 lakh for 2013-14.

Operational norms

23. The petitioner in its submissions has considered the following operational norms for consideration of the Commission.

Parameter/Year	2012-13	2013-14	2014-15
Normative Annual Plant Availability Factor (%)	80	80	80
Specific fuel Oil Consumption (ml/kWh)	5.0	4.5	3.5
Auxiliary Power Consumption (%)	13.0	12.5	12.0
Gross Station Heat Rate (Kcal /kWh)	3150	3100	3000

24. The operational parameters furnished by the petitioner, even after R&M activities, are much inferior to the operational norms specified for generating station of similar 110 MW

units such as Tanda TPS of NTPC. The norms specified for Tanda TPS for the period 2009-14 are as follows:

Parameter/Year	2009-14
Normative Annual Plant Availability Factor (%)	85
Sp. Oil Consumption (ml/kWh)	1.0
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	2825

25. The petitioner was directed to furnish the particulars on the improvement in operating parameters as per R&M contract with M/s BHEL and those achieved in Performance Guaranteed Test (PG Test) after R&M.

26. The petitioner vide its affidavit dated 23.3.2013 has stated that only two parameters viz. Boiler Output at super heater outlet and availability are guaranteed in the contract. The petitioner has also furnished that after R&M works, the availability as guaranteed by M/s BHEL would be 80%. However, the petitioner has not furnished the guaranteed improvement in the Station Heat Rate, Auxiliary Power Consumption and Specific Fuel Oil Consumption. We are of the considered view that since R&M of Unit I has just been completed, it would take some time for Unit I to achieve stability in performance. In view of this, it would not be prudent to specify the norms of operation of Tanda TPS at this stage, considering the fact that the same cannot be achieved by the generating station.

27. It is observed from the Detailed Project Report (DPR) for R&M of the generating station, that the Station Heat Rate (SHR), post R&M, is expected to be 3000 kcal/kWh. Accordingly, SHR of 3000 kcal/kWh has been considered for provisional tariff.

28. The petitioner vide its affidavit dated 26.12.2013 has furnished the actual operational data for Unit-1 for the month of November, 2013 i.e. one month data after declaration of COD of Unit-1 on 1.11.2013, after completion of R&M. It is noticed from the operational data that the Secondary fuel oil consumption was 7.04 ml/kWh and Auxiliary Power Consumption was 12.64%. The actual secondary fuel oil consumption of 7.04 ml/kWh during the month of

November, 2013 is higher which appear to be on account of partial loading and forced outage in the initial stage of operation of the unit. We are of the view that with R&M of Boiler Turbine and Generator (BTG) and Auxiliary system, the forced outage is likely to reduce as a result of which the requirement for oil support for combustion & flame stabilization would be less. Accordingly, the Specific Oil Consumption of 3.5 ml/kWh is found reasonable and has been allowed. Similarly, after R&M of the auxiliary equipments, there would be improvement in the Auxiliary Power Consumption and hence, the Auxiliary Power Consumption of 12% is reasonable and has been allowed in this order.

29. Based on the above discussions, the following relaxed operational norms have been considered for Unit-I of the generating station for the purpose of provisional tariff.

Parameter/Year	2013-14
Normative Annual Plant Availability Factor (%)	80
Specific Fuel Oil Consumption (ml/kWh)	3.5
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	3000

30. However, post R&M, the petitioner is directed to conduct performance test of the units of the generating station and furnish the results of the same to the Commission on affidavit, in order to take a comprehensive view on the operational norms of the generating station.

Expenses on Secondary Fuel Oil Consumption

31. The petitioner has claimed cost for Secondary Fuel Oil as under:

	(₹ in lakh)	
	2012-13 (30.9.2012 to 31.3.2013)	2013-14
Cost of secondary oil (<i>annualised</i>)	2370.00	4266.00

32. The cost of Secondary Fuel Oil is based on use of LDO for the month of August, 2011, September' 2011 and October'2011 and the Operational norms considered by the petitioner for the year 2013-14 as per affidavit dated 22.8.2012. It is observed that the petitioner in Petition No. 271/2010 has stated that after R&M, HFO will be used as main secondary fuel oil. As stated, the R&M of Unit I is completed and declared COD on 1.11.2013. Hence, in the

absence of GCV & Price of main secondary fuel oil (HFO), the cost of LDO used as secondary fuel oil for the month of August' 2011, September' 2011 and October' 2011 and the operational norms allowed by the Commission in the table under para 29 above for the year 2013-14 has been considered. Based on above, the cost of Secondary Fuel Oil allowed for the purpose of provisional tariff has been computed and allowed as under.

<i>(₹ in lakh)</i>	
	2013-14 1.11.2013 to 31.3.2014
Cost of secondary fuel oil (<i>Pro rata</i>)	686.39
Cost of secondary fuel oil (<i>annualised</i>)	1659.16

33. However, the cost of LDO will be adjusted with the cost of main secondary fuel oil (HFO) for the preceding three (3) months from the COD of Unit I (1.11.2013) at the time of determination of final tariff.

34. Any savings made by the petitioner towards Secondary Fuel Oil Consumption between 3.5 ml/kWh and 1.0 ml/kWh, shall be passed on to the beneficiaries in full, and in case there is saving in the Fuel Oil consumption below 1.0 ml/kWh, the same should be equally shared between the petitioner and the respondents in the ratio of 50:50.

Fuel Component and Energy charges in working capital

35. Based on the Weighted Average GCV and Price of fuels for three months i.e. August' 2011, September' 2011 and October' 2011 for primary fuel and for secondary fuel, the fuel component in working capital has been worked out and allowed for 2013-14 for provisional tariff as under:

<i>(₹ in lakh)</i>	
	2013-14
Cost of coal for 2 months	3910.65
Cost of secondary fuel oil for two months	276.53

Energy Charge Rate (ECR)

36. The petitioner has claimed Energy Charge Rate (ECR) of 358.461 paisa/kWh during 2013-14 based on the Weighted Average Price and GCV of coal procured and burnt for

three months i.e. August' 2011, September' 2011 and October' 2011 and the operational norms considered by the petitioner. The ECR based on the weighted average price and GCV of Coal procured and burnt for three months i.e. August' 2011, September' 2011 and October' 2011 and Operational norms considered by the Commission are worked out as under:

Description	Unit	2013-14
Capacity	MW	110
Gross Station Heat Rate	kCal/kWh	3000
Aux. Energy Consumption	%	12.00
Weighted Average GCV of Oil	kCal/l	9609.67
Weighted Average GCV of Coal	kCal/Kg	3447.54
Weighted Average Price of Oil	Rs./KL	61494.23
Weighted Average Price of Coal	Rs./MT	3537.51
Rate of Energy Charge from Coal	Paise/kWh	304.38
Rate of Energy Charge ex-bus per kWh Sent	Paise/kWh	345.884

37. ECR from coal as computed above has been allowed on the generation corresponding to the relaxed NAPAF of 80%.

38. Energy Charge Rate, on month to month basis, shall be calculated in terms of Clause 6 (a) of Regulation 21 of the 2009 Tariff Regulations.

39. Based on the above discussions, the provisional annual fixed charges (*on annualised basis*) has been allowed as under:

	(₹ in lakh)
	2013-14
Return on Equity	380.00
Interest on Loan	737.19
Depreciation	830.45
Interest on Working Capital	1451.80
O & M Expenses	3957.80
Cost of Secondary Fuel Oil	1659.16
Total	9016.39

40. The provisional annual fixed charges determined on annualized basis as above, is applicable *pro rata* from the actual date of commercial operation of Unit I of the generating station.

41. The provisional fixed charges allowed as above is subject to adjustment as per proviso to Clause (3) of Regulation 5 of the 2009 Tariff Regulations, after determination of final tariff for the generating station.

42. The provisional tariff determined by this order shall remain in force until further orders or till the final tariff is determined by the Commission, whichever is earlier.

Sd/-
[A.K.SINGHAL]
MEMBER

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[V.S.VERMA]
MEMBER

Sd/-
[GIREESH B.PRADHAN]
CHAIRPERSON