

## **A8: TARIFF PETITION FY 2009-10: REV. ESTIMATE FOR FY 2008-09**

- 8.1 The Commission has scrutinized the petition filed by TPCL for FY 2009-10 for the revised estimates cost & operational parameter for FY 2008-09 as per the latest or actual data available for FY 2008-09.
- 8.2 The component-wise description of the petitioner's submission and the Commission's analysis on the same is given below.

### **Basis of Fuel Cost & Fixed Cost Determination**

#### *Petitioner's submission*

- 8.3 The petitioner has submitted its proposal of energy and fixed charges as per the terms and conditions of the PPA signed between the petitioner and TSL in 1997 and the latest available for FY 2008-09 for parameters not specified in the PPA.

#### *Commission's analysis*

- 8.4 Since the PPA is legally binding on the petitioner and the effective tariff period is already over, the Commission has decided to determine the tariff for FY 2008-09 in accordance with the provisions of the PPA. For parameters involved in tariff determination that have not been specified in the PPA, the Commission has adhered to the 'Generation Tariff Regulations, 2004'. For parameters where the actual figures have shown improvement in the efficiency of the generation company or are more cost-effective vis-à-vis the PPA terms and conditions, the Commission has accepted the actual or latest figures of FY 2008-09 for tariff determination.

### **Plant Load Factor (PLF)**

#### *Petitioner's submission*

- 8.5 For the revised estimate exercise for FY 2008-09, the petitioner has submitted that the latest figures of PLF for FY 2008-09 was 76% for both the Units of the Jojobera Plant.

#### *Commission's analysis*

- 8.6 The Commission has considered the actual PLF of the two Units on the basis of the actual data received from both TPCL and TSL, which is the purchaser of electricity from TPCL. As per the actual data, the PLF for the two Units is determined and approved at 80.85% for both the Units of Jojobera plant.

## **Gross Generation**

### *Petitioner's submission*

- 8.7 The petitioner has submitted the gross generation on the basis of proposed PLF of the two Units. The Gross generation has been calculated by the petitioner at 799 MUs each for both the Units.

### *Commission's analysis*

- 8.8 The Commission has considered the actual generation of the two Units on the basis of the actual data received from both TPCL and TSL, which is the purchaser of electricity from TPCL. As per the actual data, the Gross generation for the two Units is determined at 850 MUs each for both the Units of the Jojobera plants.

## **Auxiliary Consumption**

### *Petitioner's submission*

- 8.9 The petitioner has submitted that the auxiliary consumption for FY 2008-09 at 10.40% each for both the Units of Jojobera plant.

### *Commission's analysis*

- 8.10 The Commission observes that the revised estimate of auxiliary consumption for FY 2008-09 is the same as submitted by the petitioner with the petition of FY 2008-09. Moreover, the auxiliary consumption specified in the petition for both the Units is lower than the same specified in the PPA. Hence, the Commission approves the auxiliary consumption of 10.40% each for both the Units of Jojobera plant.

## **Net Generation**

### *Petitioner's submission*

- 8.11 The Net Generation has been submitted at 716 MUs each for both the Units of Jojobera Plant.

### *Commission's analysis*

- 8.12 The Commission approves the net generation at 761.5 MUs each for both the Units, on the basis of the gross generation and auxiliary consumption calculated and approved by the Commission.

## **Station Heat Rate (SHR)**

### *Petitioner's submission*

- 8.13 The petitioner has submitted 2669 kcal/kWh and 2662 kcal/kWh as the revised estimate of the SHR for Unit II and III respectively for FY 2008-09.

### *Commission's analysis*

- 8.14 The Commission observes that the revised estimate of SHR consumption for FY 2008-09 is the same as submitted by the petitioner with the petition of FY 2008-09 and approves the SHR figures submitted by the petitioner.

## **Specific oil consumption**

### *Petitioner's submission*

- 8.15 The petitioner has submitted 0.97 ml/kWh and 0.91 ml/kWh as the revised estimate of the specific oil consumption for Unit II and III respectively for FY 2008-09.

### *Commission's analysis*

- 8.16 The Commission observes that the revised estimate of specific oil consumption for FY 2008-09 is the same as submitted by the petitioner with the petition of FY 2008-09 and approves the specific oil consumption figures submitted by the petitioner.

## **Gross Calorific Value (GCV) of primary and secondary fuel**

### *Petitioner's submission*

- 8.17 For the purpose of conducting the revised estimate exercise for FY 2008-09, the petitioner has submitted the GCV of MCL coal as 2800 kcal/kg and that of West Bokaro coal as 4400 kcal/kg for FY 2008-09. It has submitted the GCV of secondary fuel at 9100 kcal/kl.

### *Commission's analysis*

- 8.18 The Commission considered the actual monthly information given with the additional data solicited from the petitioner for calculating the actual GCV of fuel. As per the actual figures of FY 2008-09, the GCV of MCL coal averaged over the entire year comes out to be 3055 kcal/kg while that of West Bokaro coal comes out to be 4562 kcal/kg. Hence, the Commission has approved these GCV figures. However, the Commission approves the GCV of secondary fuel at 9100 kcal/kl.

## Price of primary and secondary fuel

### *Petitioner's submission*

8.19 The petitioner has taken the price of MCL coal to be Rs. 1050 per MT and that of West Bokaro coal to be Rs.1778 per MT. The price of secondary fuel is taken to be Rs. 46000/kilolitre.

### *Commission's analysis*

8.20 To determine the actual rate and quantity consumed of the primary and secondary fuel, the Commission asked the petitioner to furnish monthly bills from its fuel suppliers for FY 2008-09. After averaging the rate of each fuel over the entire year, the Commission arrived at Rs. 1002/MT as the price of MCL coal, Rs. 1796/MT as the price of West Bokaro coal and Rs. 41755/kilolitre as the rate of secondary fuel for FY 2008-09. The Commission has made use of these actual figures for computing and approving the price of primary and secondary fuel for the truing up of FY 2008-09.

## Transit Loss

### *Petitioner's submission*

8.21 As per the petitioner, the PPA with TSL specifies that fuel costs shall mean the actual landed cost of primary and secondary fuel consumed by the power station, including all agreed transport losses.

### *Commission's analysis*

8.22 The Commission has not considered transit loss separately since the actual landed cost of fuel is inclusive of any transit losses that may have been incurred.

## Summary of Plant parameters & fuel cost determinants

8.23 The summary of Plant parameters and fuel cost determinants for the two Units of Jojobera plant of TPCL submitted by the petitioner and approved by the Commission for FY 2008-09 is given below

**Table 18 Plant parameters & Fuel cost determinants (Revised estimate for FY 2008-09)**

Parameters	Unit	Unit II		Unit III	
		Submitted by TPCL	Approved by JSERC	Submitted by TPCL	Approved by JSERC
Capacity	MW	120	120	120	120
Plant Load Factor	%	76%	80.85%	76%	80.85%
Auxiliary Consumption	%	10.40%	10.40%	10.40%	10.40%

<b>Station Heat Rate</b>	Kcal/Kwh	2669	2669	2662	2662
<b>GCV of Coal (IB Valley/West Bokaro)</b>	Kcal/Kg	2800/ 4400	3055/ 4562	2800/ 4400	3055/ 4562
<b>GCV of oil</b>	Kcal/Kg	9100	9100	9100	9100
<b>Specific oil consumption</b>	ml/Kwh	0.97	0.97	0.91	0.91
<b>Coal consumption</b>	Kwh	537764	552822	536460	544509
<b>Oil consumption</b>	Kwh	699	699	725	725
<b>Price of Coal (IB Valley/West Bokaro)</b>	Rs/MT	1050/ 1778	1002/ 1796	1050/ 1778	1002/ 1796
<b>Price of Oil</b>	Rs/KL	46000	41755	46000	41755
<b>Total Coal Cost</b>	Rs. Cr	84.7	85.5	84.4	85.7
<b>Total Oil cost</b>	Rs. Cr	3.6	3.4	3.3	3.2
<b>Net Fuel Cost</b>	Rs. Cr	88.2	89.0	87.8	89.0
<b>Energy Charges</b>	Rs/Unit	<b>1.23</b>	<b>1.17</b>	<b>1.23</b>	<b>1.17</b>

### Revised estimate exercise for fixed cost determinants

- 8.24 Apart from RoE and Interest on working capital, the Commission finds no need for any change in any other component of fixed cost since there have been no changes in the factors & norms that serve as the basis of computation for these components.
- 8.25 The Commission has recalculated the RoE component of fixed costs for FY 2008-09 since the rate of return on RoE is linked with the PLF of the Unit for which the actual figures are different from the FY 2008-09 submissions by the petitioner.
- 8.26 The interest on working capital has been computed on the basis of the latest figures for cost coal & oil and receivables.
- 8.27 The Income Tax payable has been computed on the basis of the RoE computed for FY 2008-09 for the two Units of the Jojobera Plant.

### Summary of Fixed Cost determinants and Generation Tariff

- 8.28 The table below shows the trued-up fixed cost determinants and Generation tariff for FY 2008-09, in terms of the petitioner's revised submission and the Commission's approved costs.

**Table 19 Fixed cost determinants and Generation Tariff (Rs. Cr) (Revised estimate for FY 2008-09)**

Parameters	Units	Unit II		Unit III	
		Submitted by TPCL	Approved by JSERC	Submitted by TPCL	Approved by JSERC
O&M charges	Rs. Cr	21.02	20.78	19.04	18.83
Depreciation	Rs. Cr	32.55	32.55	32.55	32.55
Interest on Loan	Rs. Cr	6.75	6.12	10.82	9.88
Return on Equity	Rs. Cr	25.94	30.17	25.15	29.25
Interest on Working Capital	Rs. Cr	4.89	5.23	4.89	5.37
Income Tax	Rs. Cr	3.32	3.86	3.21	3.74
<b>Total Fixed cost</b>	Rs. Cr	94.48	98.70	95.67	99.61
Energy Cost	Rs. Cr	88.20	88.97	87.80	88.97
<b>Total Cost</b>	Rs. Cr	182.70	187.67	183.46	188.57
Net generation (MUs)	MUs	716	761.5	716	761.5
<b>Generation Tariff</b>	<b>Rs./Unit</b>	<b>2.55</b>	<b>2.46</b>	<b>2.56</b>	<b>2.48</b>