

# Tariff order for Tata Steel for FY 2005-06

## Jharkhand State Electricity Regulatory Commission (JSERC)

### SECTION 2: SUMMARY OF PETITION

The revised petition filed by the petitioner for approval of its Annual Revenue Requirement (ARR) and determination of tariff for the FY 2005-06 has been summarized in this chapter.

#### 2.1 Demand Forecast for FY 2005-06

2.1.1 The petitioner projected 953 MU of energy sales for FY 2005-06, which represents an increase of 7.44% over FY 2004-05. However, the utility did not mention any specific reasons for this projected increase in the tariff petition.

2.1.2 The petitioner enjoys a favourable sales mix due to high consumption of electricity by the HT (domestic and industrial) consumers. As per the projected figures for FY 2005-06, the HT consumers are expected to contribute more than 80% of the total sales in the utility's system. The category-wise sales for FY 2004-05 and FY 2005-06 are given in Table 2.1.

**Table 2.1: Consumer category-wise sales (in MU)**

Category	2004-05 (Actual)	2005-06 (Proposed)
Domestic HT	50.60	55.00
Domestic LT	66.00	73.00
Commercial	31.50	33.00
HT Industry: HT1	12.00	14.00
HT Industry: HT2	45.00	50.00

HT Industry: HT3	637.00	680.00
Utilities	40.00	42.00
Street Lights	5.00	6.00
<b>Total Sales</b>	<b>887.10</b>	<b>953.00</b>

2.1.3 The existing and

projected category-wise sales mix of the petitioner for FY 2004-05 and FY 2005-06 are shown in Figure 2.1 and Figure 2.2 respectively.

**Figure 2.1: Existing Sales Mix (FY 2004-05)**

**Figure 2.2: Projected Sales Mix (FY 2005-06)**

## 2.2 Transmission and Distribution losses (T&D losses)

2.2.1 The petitioner has estimated an overall energy loss of 11.70% for FY 2004-05, which includes 1% transmission losses and 10 MU losses from pilferage. It attributes the pilferage loss mainly in areas where people have taken illegal tapping. Moreover, these losses are restricted to LT domestic and commercial categories, with the industrial segment being least affected.

2.2.2 The petitioner has submitted that it has introduced several initiatives towards reducing T&D losses including a drive to replace old electromechanical meters with modern electronic ones, which is expected to be complete within next 2-3 years. Simultaneously, the utility has implemented a project for installation of pre-paid meters for LT category consumers. The utility expects to reduce its losses to 11.41% in FY 2005-06 by undertaking constant vigil on pilferage, discouraging unauthorized connections and initiating technological up-gradations.

## 2.3 Power Purchase

2.3.1 There are two sources of power purchase for the petitioner: Tata Power Company Ltd. (TPCL) and Damodar Valley Corporation (DVC). Power Purchase Agreements (PPAs) have been entered into with both these sources i.e. TPCL and DVC in September 1997 and April 2001 respectively. The capacities available to the petitioner consist of 240 MW from TPCL and 85 MVA from DVC, the latter being in the form of contract demand.

2.3.2 The utility has projected a reduction in average cost of purchase from Rs. 2.66 per unit in FY 2004-05 to Rs. 2.55 per unit in FY 2005-06 i.e. a reduction of 4.50%. It has further submitted that the cost projections have been based on existing fuel cost and any increase in these during FY 2005-06 should be passed through, after netting it for losses, subject to approval from the Commission. It has further submitted that DVC has filed its tariff petition to the Central Electricity Regulatory Commission (CERC), and any corresponding increase/decrease would be passed through the consumers subject to approval from the JSERC.

2.2.3 The petitioner has submitted that it would continue to optimise the power purchase cost from different sources to meet the peak requirements and minimize the cost impact during off-peak period that varies up to 15-20% within 24 hours as well as during different seasons of the year.

2.3.4 The details of energy to be procured from DVC and TPCL in FY 2005-06 and the corresponding costs involved are summarized in Table 2.2.

**Table 2.2: Projected Cost of Power Purchase for FY 2005-06**

	Power	Average Cost of	Total Cost of
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Source	Purchase	Power Purchase	Power Purchase
	MU	Rs/kWh	Rs crores
TPCL	1383.00	2.38	329.15
DVC	400.00	3.00	120.18
Total power purchase	1783.00	2.52	449.33
Power purchase for the township of Jamshedpur	1075.00	2.52	270.90
Add: Transmission expenses		0.03	3.25
<b>Power purchase for the township of Jamshedpur including transmission expenses</b>		<b>2.55</b>	<b>274.15</b>

2.3.5 The total cost of power purchase for meeting the township demand of electricity has been proposed to be Rs 274.15 crores for FY 2005-06.

## 2.4 Employee Cost

2.4.1 The utility has proposed an increase of 10.05% in employee costs from Rs. 9.96 crores in FY 2004-05 to Rs. 10.96 crores in FY 2005-06. The break-up of actual and projected costs under this head is shown in Table 2.3.

**Table 2.3: Break-up of Employee Costs**

S.No.	Item	2004-05	2005-06	Change proposed
		Actual	Proposed	
		Rs crores	Rs crores	
<b>I</b>	<b>Salaries &amp; Allowances</b>			
	Salaries	4.30	4.73	10.00%
	Overtimes	0.04	0.04	10.00%
	Dearness Allowance	1.35	1.49	10.00%
	Other Allowance	0.60	0.66	10.00%
	Bonus Incentive	1.13	1.24	
	<i>Other Staff Costs:</i>			

	Medical Expenses Reimbursement	0.00	0.00	
	Leave Travel Assistance	0.30	0.33	10.00%
	Other costs	0.00	0.00	
	Staff Welfare Expenses	0.00	0.00	
	<b>Sub total - Salaries</b>	<b>7.72</b>	<b>8.49</b>	<b>10.00%</b>
<b>II</b>	<b>Terminal benefits</b>			
	Board PF contribution	0.68	0.75	10.00%
	Board FP contribution	0.11	0.12	10.00%
	Superannuation	0.15	0.17	10.00%
	Gratuity	0.85	0.93	10.00%
	Pensioner charges			
	Other terminal benefits			
	<b>Sub total - Terminal benefits</b>	<b>1.79</b>	<b>1.97</b>	<b>10.00%</b>
<b>III</b>	<b>Earned Leave encashment</b>	<b>0.45</b>	<b>0.50</b>	<b>11.11%</b>
	<b>Total Employee cost (I+II+III)</b>	<b>9.96</b>	<b>10.96</b>	<b>10.05%</b>

## 2.5 Repair and Maintenance (R&M) Expenses

2.5.1 The petitioner has projected a 7.70% increase in R&M Expenses for the FY 2005-06 over the FY 2004-05. The item-wise details of R&M Expenses, as proposed by the petitioner, are provided in Table 2.4.

**Table 2.4: Item wise details of R&M expenses**

S. No.	Item	2004-05	2005-06	Change proposed
		Actual	Proposed	
		Rs crores	Rs crores	
1	Plant & Machinery	5.05	7.15	41.58%
2	Building	0.30	0.33	10.00%
3	Hydraulic works & other civil works	0.65	0.70	7.69%

4	Line cable & Network	4.00	4.30	7.50%
5	Vehicles	0.05	0.06	20.00%
6	Furniture & Fixtures	0.10	0.10	0.00%
7	Office Equipments	0.05	0.06	20.00%
8	Operating Expenses	1.80	1.95	8.33%
	<b>Total expenses</b>	<b>12.00</b>	<b>14.65</b>	<b>22.08%</b>

## 2.6 Administration and General (A&G) Expenses

2.6.1 The A&G expenses have been estimated at Rs. 3.00 crores for FY 2005-06 as compared to Rs. 2.95 crores in FY 2004-05, representing an increase of 1.7%. The details of the actual and projected A&G Expenses are shown in Table 2.5.

**Table 2.5: Details of A&G Expenses**

S. No.	Item	2004-05	2005-06	Change proposed
		Actual	Proposed	
		Rs crores	Rs crores	%
1	Rent, Rate & Taxes	0.30	0.30	-
2	Insurance	0.25	0.25	-
3	Telephone postage & Telegrams	0.15	0.17	13.33%
4	Consultancy fees	0.25	0.25	-
5	Technical fees	0.25	0.25	-
6	Other Professional charges	0.50	0.50	-
7	Conveyance & traveling	0.20	0.22	10.00 %
8	Electricity & water charges	0.05	0.06	20.00 %
9	Other expenses	1.00	1.00	-
	<b>Total Expenses</b>	<b>2.95</b>	<b>3.00</b>	<b>1.69 %</b>
Less:	Anticipated Savings	-	-	-
	<b>Net expenses</b>	<b>2.95</b>	<b>3.00</b>	<b>1.69 %</b>
	<b>Net A&amp;G Expenses charged to Revenue Requirement</b>	<b>2.95</b>	<b>3.00</b>	<b>1.69 %</b>

## 2.7 Bad debts

2.7.1 The petitioner has proposed bad debts to the tune of Rs 0.25 crores for FY 2005-06. The policy of bad debt followed by the petitioner is to declare bad debt if payment is not received within 6 months of billing. The bad debts are written off after 3 years; however, this does not dilute the company's right to recover the same. These recoveries are shown as income in the year when they are received. The petitioner has considered a claim of less than 1% of turn over as bad debts for FY 2005-06.

## 2.8 Capital investment proposed by the Power Business Division

2.8.1 The utility has proposed a total capital expenditure of Rs. 80.10 crores with the objective of strengthening its transmission and distribution system over the next 3 years. Through this expenditure, the petitioner expects to cater to the present and additional demand till FY 2011-12. Table 2.6 shows the capital expenditure proposed to be incurred by the petitioner till FY 2007-08.

**Table 2.6: Capital Expenditure proposed by the PBD**

S.No	Title	Amount	2005-06	2006-07	2007-08
		Rs crores	Rs crores	Rs crores	Rs crores
1.	To augment power supply system in the eastern part of the town by installation of 15 MVA transformer at Tinline Area substation with 33 KV feeder and associated 6.6 KV feeder	10.00	3.00	4.00	3.00
2.	Strengthening of HT feeders and conversion of overhead HT feeders into underground feeders in the town	7.00	1.00	3.00	3.00
3.	Installation of 2 <sup>nd</sup> 15 MVA transformer at 'L' Town Yard	7.10	2.90	2.90	1.30
4.	Take-over of fringe areas at Uliyan from JSEB	7.00	2.00	3.00	2.00
5.	Take-over of fringe areas of Chota Govindpur from JSEB	6.00	2.00	1.00	3.00
6.	Take-over of fringe areas	15.00	1.50	4.00	9.50

	around Manifit from JSEB				
7.	Augmentation of power supply in company housing complexes	3.00	0.75	0.75	1.50
9.	132 KV transmission line from Jojobera to Sonari	25.00	2.00	8.00	15.00
	<b>Total</b>	<b>80.10</b>	<b>15.15</b>	<b>26.65</b>	<b>38.30</b>

## 2.9 Gross and Net Block

2.9.1 The petitioner has proposed a gross block of Rs. 129.99 crores, and net block of Rs. 87.98 crores considering accumulated depreciation to the tune of Rs. 42.61 crores, for computation of debt and equity components for FY 2005-06. The gross block figure proposed includes valuation of civil structure of Rs. 8.93 crores. The petitioner has considered 30% of the gross block as equity, and the normative loan component has been considered deducting the equity calculated from the net block. Accordingly, the equity and the loan component estimated by the petitioner for FY 2005-06 is Rs. 39 crores and Rs. 48.98 crores respectively.

The computation is shown in Table 2.7.



**Table 2.7: Equity and loan component considered by the petitioner for FY 2005-06**

Description	Amount (Rs crores)
Gross Block	129.99
Net Block	87.98
Equity (30% of Gross Block)	39.00
Loan (Net block-equity)	48.98

## 2.10 Annual Depreciation

2.10.1 The petitioner has proposed depreciation of Rs. 7.51 crores for FY 2005-06, which represents 3.2% increase over FY 2004-05 level of Rs 7.28 crores. The utility has submitted that the depreciation rates considered are based on the notification issued by the Ministry of Power in 1994. The statement of depreciation for FY 2005-06, as submitted by the petitioner is shown in Table 2.8.

**Table 2.8: Statement of Depreciation for FY 2005-06**

	Depreciation at the beginning of the year	Depreciation provided for the year	Depreciation at the end of the year

<b>Asset</b>	Rs crores	Rs crores	Rs crores
a) Land	-	-	-
b) Building	-	-	0.55
c) Major Civil Works	0.28	0.27	-
d) Plant & Machinery	42.33	7.24	49.57
e) Vehicles	-	-	-
f) Furniture and Fixtures	-	-	-
g) Office Equipment & Others	-	-	-
<b>Total</b>	<b>42.61</b>	<b>7.51</b>	<b>50.12</b>

## 2.11 Interest Charges

2.11.1 The petitioner has proposed Rs. 9.93 crores, as the total interest and finance charges for FY 2005-06 (including interest on loan calculated on normative basis, interest on security deposit, interest on working capital and interest during construction). The rate of interest considered on normative loan is 10.5%, which translates into an interest liability of Rs. 5.14 crores. The interest on security deposits has been estimated at Rs. 0.05 crores with security deposits amounting Rs. 0.81 crores. The petitioner has proposed interest on working capital as Rs 3.59 crores with total requirement for working capital estimated at Rs. 31.19 crores. This is shown in Table 2.9.

**Table 2.9: Proposed interest charges on working capital for FY 2005-06**

<b>Description</b>	<b>Amount (in Rs crores)</b>
Debtors 2 months sale (excluding HT 3 consumers)	10.00
Average Bank balance	22.00
Sub Total	32.00
Less: Security deposit	0.81
Total working capital requirement	31.19
<b>Interest on working capital (@11.5%)</b>	<b>3.59</b>

2.11.2 Besides, the petitioner has proposed an interest during construction of Rs. 1.15 crores, thereby proposing a total of Rs 9.93 crores on account of interest charges during FY 2005-06.

## 2.12 Return on Equity

2.12.1 The utility has proposed a return on equity of Rs. 9.01 crores, which is based on rate of return of 16% on equity amount of Rs. 39.00 crores, as mentioned before. The petitioner has submitted that 16% rate of return is owing to higher risk profile of the distribution segment and the mandatory universal service obligation.

## 2.13 Aggregate Revenue Expenditure

2.13.1 The details of the total revenue expenditure proposed by the petitioner are shown in Table 2.10.

**Table 2.10: Total Revenue Expenditure proposed for FY 2005-06**

S.No.	Item of Expenditure	Amount (Rs crores)
1.	Power Purchase – Variable Cost	274.15
2.	Employee Cost	10.96
3.	R&M Expenditure	14.65
4.	Administration & Others	3.00
5.	Bad Debts	0.25
6.	Interest Charges	9.93
7.	Depreciation for the year	7.51
8	Reasonable return	9.01
<b>Total Expenditure</b>		<b>329.82</b>

## 2.14 Non Tariff Income

2.14.1 The utility has proposed a non-tariff income of Rs. 1.60 crores for FY 2005-06, reflecting an increase of 4.56% over FY 2004-05. Table 2.11 shows the actual and proposed revenue from non-tariff income for the utility.

**Table 2.11: Revenue from Non-Tariff Income for FY 2004-05 and 2005-06**

Item	Actual Non Tariff Income	Proposed Non Tariff Income	% Change
	FY 2004-05	FY 2005-06	
	Rs crores	Rs crores	
<b>Miscellaneous Income from consumers:</b>			

Meter rent	0.40	0.42	5.00
Misc. Charges from Consumers	1.03	1.08	4.85
DPS	0.10	0.10	-
<b>Sub-total</b>	<b>1.53</b>	<b>1.61</b>	<b>5.23</b>
<b>Other Miscellaneous Charges:</b>			
Income from Investments	-	-	-
Income from Staff Welfare Activities	-	-	-
Income from Misc. Receipts	-	-	-
<b>Trading:</b>			
Inter-State Sale Handling Charge	-	-	-
<b>Total</b>	<b>1.53</b>	<b>1.61</b>	<b>5.23</b>

## 2.15 Proposed Clear Profit

2.15.1 The petitioner has proposed a deficit of Rs 1.54 crores for FY 2005-06 after accounting for all expenditure and revenue from sale of power at revised tariffs. The details of the same are shown in Table 2.12.

**Table 2.12: Clear profit calculation for FY 2005-06**

S.No.	Particulars	Amount (Rs crores)
1	Power Purchase cost	274.15
2	Employee Costs	10.96
3	R& M expenditure	14.65
4	A &G expenditure	3.00
5	Bad debts	0.25
6	Interest charges	9.93
7	Depreciation	7.51
	<b>Total expenditure</b>	<b>320.45</b>
8	Sale of Electricity	325.92
9	Non Tariff Income	1.60
	<b>Total expected revenue</b>	<b>327.52</b>
10	Profit before tax	7.08
11	Income tax	2.38
12	Profit after tax	4.69
13	Clear profit (CP)	4.69

14	Reasonable Return (RR)	6.24
15	<b>Gap (CP-RR)</b>	<b>1.54</b>

## 2.16 Existing and Proposed Tariff

2.16.1 A comparison of the existing and proposed tariff structure of the utility is presented in Table 2.13. The proposed tariffs would apply to all consumers availing power supply from the petitioner in its licensed area.

**Table 2.13: Category-wise existing & proposed tariffs**

Category	Sub-Category	Voltage of Supply	Particulars	Tariff Rate	
				Existing	Proposed
Domestic	Domestic LT	220/440 V	Fixed Charge	Rs. 15-220 V/ Rs. 35-440 V	Rs.10-220 V/ Rs. 20-440 V
			Energy Charge	Rs. 1.70/KwH up to 100 units Rs. 2.80/KWH above 100 units	Rs. 1.70/KWH up to 100 units Rs. 2.80/KWH up to 400 units Rs. 3.25/KWH above 400 units
			Fixed Charge	Rs. 275	Rs. 275
	Domestic HT	6.6 KV	Energy Charge	Rs. 2.80/KWH	Rs. 2.00/KWH first 20% Balance at Rs.3.00/KWH
Commercial	220/440 V		Fixed Charge	Rs. 25-220 V/ Rs. 75-440 V	Rs. 25-220 V/ Rs. 75-440 V
		Energy Charge	Rs. 4.50/KwH	Rs. 4.40/KWH	
HT-Industry	HT1	6.6 KV	Fixed Charge	Rs. 200/KVA /month	Rs. 200/KVA/month

			Energy Charge	Rs. 3.55/KWH	Rs. 3.30/KWH
	HT2	6.6 KV	Fixed Charge	Rs. 200/KVA /month	Rs. 200/KVA/month
			Energy Charge	Rs. 3.55/KWH	Rs. 3.30/KWH
	HT3	33 KV	Fixed Charge	Rs. 180/KVA /month	Rs. 180/KVA/month
			Energy Charge	Rs. 3.45/KWH	Rs. 3.25/KWH
Utilities		Upto 6.6 KV	Fixed Charge	-	-
			Energy	Rs. 2.80/KWH	Rs. 2.80/KWH
Street Light		415 V	Fixed Charge	-	-
			Energy Charge	Rs. 2.80/KWH	Rs. 2.80/KWH

2.16.2 The expected impact of the proposed tariffs on utility's revenue stream in FY 2005-06 is shown in Table 2.14.

**Table 2.14: Revenue from existing and proposed tariff for FY 2005-06 (Rs. crores)**

Category	Revenues from existing tariffs	Revenues from proposed tariffs	% Change
Domestic LT	20.06	22.48	12.07%
Domestic HT	15.30	15.30	0.00%
Commercial	14.91	14.58	-2.20%
HT Industry: HT1	6.37	6.03	-5.45%
HT Industry: HT2	19.48	18.24	-6.37%
HT Industry: HT3	255.30	241.80	-5.29%
Street Light	1.68	1.68	0.00%
Utilities	11.66	11.66	0.00%
Total	344.77	331.77	-3.77%

## 2.17 Prayers by the petitioner

2.17.1 The utility has made the following prayers to the Commission:

1. To approve the ARR for the FY 2005-06, as proposed,

2. To grant tariff changes commensurate with the ARR,
3. To allow pass-through of increase in fuel costs during the course of the year,
4. To permit continuation of existing tariffs until determination of the final tariff for FY 2005-06, and
5. To pass such order as the Commission may deem fit and proper in the facts and circumstances of the case.