

CHAPTER 4

SUMMARY OF TARIFF PETITION SUBMITTED BY TVNL

Tariff proposal submitted by TVNL for FY 2007-08 has been summarized in this section.

4.1 Total Generation and Station Plant Load Factor (PLF)

4.1.1 The petitioner has proposed a total generation of 1679 MU and PLF of 45.60% in FY 2007-08. The Petitioner has submitted that historically the generating units have operated at level much below their potential. This is primarily due to the transmission constraints, like frequent tripping of transmission lines. In addition, JSEB has not been in a position to consume the total power generated from both the units of the Plant, due to which the plant is asked to back down. Apart from this due to tube leakages there has been unit outages leading to low station PLF.

4.1.2 The petitioner has stated that efforts have been made to remove the constraints and improve the performance of the plant and to sell the surplus power to other consumers, instead of backing down the plant, especially when both the units are being dispatched simultaneously. Owing to these efforts the PLF has increased to 73.80% in FY 2006-07 from an average of around 35% during the period FY 2000-05.

4.1.3 The petitioner has stated that on 31st May, 2007 the Unit I of the Plant suffered a major breakdown due to the sudden load throw-off to 34 MW. This resulted in a severe damage to all the moving and guiding blades of the LP turbines. The petitioner has submitted document on the observations of BHEL on blade failure of the LP turbine. BHEL has recommended that maintenance and replacement operation need to be conducted. TVNL has submitted that Unit I will not be available during FY 2007- 08 and the electricity generation would be available only from Unit II. The table below summarizes the total generation and station PLF of the Plant from FY 2000-01 to 2007-08 (Proposed).

Table: 3 Generation and Station PLF

Year	Generation (MU)			Station PLF (%)
	Unit -I	Unit-II	Total	
FY 2000-01	741	589	1330	36.11
FY 2001-02	305	851	1156	31.39
FY 2002-03	185	1183	1368	37.18
FY 2003-04	616	731	1248	36.62
FY 2004-05	1326	-	1326	36.04
FY 2005-06	1240	289	1529	41.56
FY 2006-07	1412	1303	2715	73.80
FY 2007-08 (Proposed)	226	1453	1679	45.60

4.2 Auxiliary consumption

4.2.1 The petitioner has submitted that auxiliary power is required for different equipment like feed pumps, cooling water pumps, air fans, coal grinding mills, ash handling equipment, common auxiliaries etc. of the generating station and is specific to a particular power station depending upon its configuration, age and related technical parameters. Historically, the auxiliary consumption of the station has been high due to:

- 1) measuring of auxiliary consumption by defective meters
- 2) colony consumption
- 3) other loads in the vicinity of the power station.
- 4) transmission losses of 220/6.6 kV Transformers, and
- 5) working of only one generating unit most of the time.

4.2.2 The petitioner submitted that following measures have been taken to minimize the auxiliary consumption

- 1) testing and calibrating defective meters measuring auxiliary consumption
- 2) installing digital energy meter at the substation of the TVNL's township.
- 3) feeding station loads from the unit transformers (2x16 MVA) instead of station transformers (4x40 MVA).
- 4) metering the colony consumption and other loads fed from the station, and
- 5) second generating unit coming to operation.

4.2.3 As a result of these measures the auxiliary consumption has gone down to 12.04% in FY 2006-07 from 14.23% in FY 2005-06 and an average of 15%-16% in the period FY 2000-06. The petitioner has proposed an auxiliary consumption of 12% for FY 2007-08. The table below summarizes the auxiliary consumption of the Plant from FY 2000-01 to FY 2007-08 (Proposed).

Table: 4 Auxiliary consumption

Year	Auxiliary Consumption (%)
FY 2000-01	16.09
FY 2001-02	15.79
FY 2002-03	15.58
FY 2003-04	16.00
FY 2004-05	17.60
FY 2005-06	14.23
FY 2006-07	12.04
FY 2007-08 (Proposed)	12.00

4.3 Station Heat Rate

4.3.1 The petitioner has submitted that actual station heat rate for the Plant has been 2946 kCal/kWh and 2958 for FY 2004-05 and FY 2005-06 respectively. The petitioner has submitted that the all-India weighted average heat rate for the generation plants, as per the Central Electricity Authority's (CEA) Review of Performance of Thermal Power Stations (2005-06), has been 2788 kCal/kWh and 2747 kCal/kWh for FY 2004-05 and FY 2005-06 respectively. For the Eastern region, the average has been 3148 kCal/kWh and 2887 kCal/kWh for FY 2004-05 and FY 2005-06 respectively.

4.3.2 The Petitioner further submitted that the actual heat rate observed in FY 2006-07 is 2821 kCal/kWh. This is below the average for Eastern region coal based thermal power plants as observed by CEA. The Petitioner therefore has proposed a station heat rate of 2821 kCal/kWh for FY 2007-08. The table below summarizes the station heat rate of the Plant for FY 2004-05, FY 2005-06, FY 2006-07 and FY 2007-08 (Proposed).

Table: 5 Station Heat Rate

Year	Station Heat Rate (kCal/kWh)
FY 2004-05	2946
FY 2005-06	2958
FY 2006-07	2821
FY 2007-08 (Proposed)	2821

4.4 Specific coal consumption

4.4.1 The petitioner has submitted that it sources D grade coal from the collieries of Central Coal Fields Limited with calorific value of about 4300 kCal/kg. The petitioner has stated that the all-India average specific consumption of coal as per CEA's Review of Performance of Thermal Power Stations for FY 2005-06 was 0.7 kg/kWh and for Eastern region as a whole it was 0.72 kg/kWh. The Petitioner stated that since the unit outage has reduced over the past two years and the Plant is achieving a higher PLF, the specific consumption of coal for FY 2006-07 has reduced to 0.656 kg/kWh from 0.686 kg/kWh in FY 2005-06. This is much below the National and Eastern region averages as observed by the CEA. The Petitioner has proposed a specific coal consumption of 0.656 kg/kWh for FY 2007-08. The table below summarizes the specific coal consumption of the Plant from FY 2000-01 to FY 2007-08 (Proposed).

Table: 6 Specific coal consumption

Year	Specific Coal Consumption (kg/kWh)
FY 2000-01	0.705
FY 2001-02	0.706
FY 2002-03	0.695
FY 2003-04	0.680
FY 2004-05	0.685
FY 2005-06	0.688
FY 2006-07	0.656
FY 2007-08 (Proposed)	0.656

4.5 Secondary fuel consumption

4.5.1 The petitioner has submitted that due to the large number of outages experienced by the station (due to transmission line tripping, etc); it has not been able to achieve the norm of 2 ml/kWh as per the JSERC (Terms and Conditions for Determination of Thermal Generation Tariff) Regulations, 2004.

4.5.2 The Petitioner has stated that it has endeavored to reduce the specific oil consumption and has brought it down to 2.31 ml/kWh for FY 2006-07. It further endeavors to achieve stability in retaining this level and has proposed a specific oil consumption of 2.31ml/kWh for the FY 2007-08. The table below summarizes the secondary fuel consumption of the Plant for FY 2000-01, FY 2001-02, FY 2002-03, FY 2003-04, FY 2004-05, FY 2005-06, FY 2006-07 and FY 2007-08 (Proposed).

Table: 7 Secondary fuel consumption

Year	Specific Oil Consumption (ml/kWh)
FY 2000-01	10.04
FY 2001-02	11.25
FY 2002-03	5.55
FY 2003-04	8.17
FY 2004-05	2.33
FY 2005-06	3.39
FY 2006-07	2.31
FY 2007-08 (Proposed)	2.31

4.6 Fixed Charges

The following components have been considered for arriving at the fixed charges:

- a) return on equity, b) interest on loan, c) depreciation, d) operation and maintenance expenses, e) cost of working capital and.

4.7 Capital cost

The petitioner has submitted that the Plant comprises of 2 Units of 210 MW each. The first Unit was commissioned in September 1996 and the second Unit in September 1997. The actual expenditure incurred for completion of the project was Rs. 1355.58 Crore. The table below summarizes the detail of the project funding cost.

Table: 8 Detail of project funding cost (Rs. Crore)

Funding Source (Phase 1: 2x210 MW)	Amount (Rs/cr)
Equity Contribution by the erstwhile Government of Bihar	100.00
Bihar State Government Loan	608.90
Investment by BSEB	168.39
Loan from PFC	158.00
Interest during Construction.	320.29
Total	1355.58

The petitioner stated that the majority of the phase I of the project was financed by the State Government while about Rs. 158 Crore (11.67% of the total project cost) was financed by PFC. The entire loan obtained from PFC has been repaid completely along with the interest. The outstanding loan is from State Government only. The Petitioner has requested the State Government to reduce the interest rate in view of the lower interest rates being provided by banks. Response from the State Government is still awaited.

The Petitioner has submitted that it is planning to extend the existing generation project, by adding three new units of 210 MW each in phase-II. The capital cost of this for FY 2007-08 has been estimated to be Rs. 354 Crore. Phase 2 will be financed by a mix of debt in the form of funds from PFC and equity in the form of share capital contribution from Government of Jharkhand. While PFC is expected to provide for Rs 284 Crore, the remaining will be availed from the Government of Jharkhand.

4.7.1 Interest on loan

4.7.1 The petitioner has submitted that as on 31st March, 2007 the total loan outstanding was Rs. 665.9 Crore which included Rs. 8 Crore received from the Government of Jharkhand towards the construction of MGR system in FY 2006-07. As per the terms and conditions the State Government loan is repayable in 15 equal installments. The total interest payable on loan for FY 2007-08 is Rs. 86.71 Crore.

4.7.2 The Petitioner stated that it was not able to meet the repayment obligation due to insufficient funds on account of non-payment of electricity charges by the Jharkhand State Electricity Board. The table below summarizes the interest on loan for FY 2003-04, FY 2004-05, FY 2005-06, FY 2006-07 and FY 2007-08 (Proposed).

Table: 9 Interest charges (Rs. Crore)

Name of the Institution	Balance at the beginning of the year	Loan received during the year	Repayment During the year	Balance O/S at the end of the year	Rate of Interest %	Interest for the year
FY 2003-04						
Bihar Govt. Loan	608.90	-	-	608.90	13	79.16
Jharkhand Govt. Loan	30.00	-	-	30.00	13.25	3.98
Total FY 2003-04	638.90	-	-	638.90		83.14
FY 2004-05						
Bihar Govt. Loan	608.90	-	-	608.90	13	79.16
Jharkhand Govt. Loan	30.00	-	-	30.00	13.25	3.98
Total FY 2004-05	638.90	-	-	638.90		83.14
FY 2005-06						
Bihar Govt. Loan	608.90	-	-	608.90	13	79.16
Jharkhand Govt. Loan	30.00	19.00	-	49.00	13.25	6.49
Total FY 2005-06	638.90	19.00	-	657.90		85.65
FY 2006-07						
Bihar Govt. Loan	608.90	-	-	608.90	13	79.16
Jharkhand Govt. Loan	49.00	8.00	-	57.00	13.25	7.55
Total FY 2006-07	657.90	8.00	-	665.90		86.71
FY 2007-08 (Proposed)						
Bihar Govt. Loan	608.90	-	-	608.90	13	79.16
Jharkhand Govt. Loan	57.00	-	-	57.00	13.25	7.55
Total FY 2007-08 (Proposed)	657.90	-	-	665.90		86.71

4.8 Depreciation

4.8.1 The petitioner has stated that the depreciation has been calculated on the historical capital cost of the fixed assets of the plant. For depreciation straight line method has been used with rates as prescribed in the schedule attached in appendix-II of the JSERC (Terms and Conditions for Determination of Thermal Generation Tariff) regulation, 2004. The residual life of an asset is considered as 10% and depreciation is allowed up-to maximum of 90% of the historical capital cost of the asset. Where the depreciation has reached 90% of the historic cost of an asset the depreciation has not been calculated. The Petitioner has proposed a total depreciation of Rs. 43.98 Crore for the FY 2007-08 in the petition. In a later submission, the petitioner has asked for depreciation on three other items which it missed out in the initial petition. These amount to a total of Rs 10.72 lakh and include depreciation at the Head Office at Patna, new EPABX and air compressor. With these additional items, the total depreciation amount proposed by TVNL is around 43.99 Crore.

4.8.2 The table below summarizes the proposed depreciation cost for FY 2007-08.

Table: 10 Proposed Depreciation cost (Rs. Crore)

Sl. No	Asset Classification	Asset value at the beginning of FY 2006-07	Rate of depreciation (%)	Depreciation Amount (Rs. Crore)
1	Land	3864.76		
Buildings				
1	Factory Buildings	4210.34	3.6	151.57
2	Residential Buildings	2262.59	1.8	40.73
3	Non Residential Buildings	1709.31	1.8	30.77
Roads				
1	Pucca Roads	1728.20	1.8	31.11
2	Boundary Wall & Others	267.78	1.8	4.82
Plant and Machinery				
1	Plant & Machinery	104244.61	3.6	3752.81
2	D.G. Set	216.16	6.0	12.97
3	Refrigeration	2.41	6.0	0.14
4	Internal Wiring	0.11	6.0	-
5	Overhead line	4295.14	3.6	154.62
6	Hydraulic works	7956.24	1.8	143.21
7	Tools and Tackles	26.42	3.6	0.95
8	Miscellaneous Equipment	61.54	6.0	3.69
9	Air Conditioners	31.57	18.0	5.68
10	Dozers	282.25	18.0	50.81
11	Computers	53.40	6.0	3.20
12	Furniture and Fixtures*	35.77	6.0	0.18
13	Office equipment*	22.27	6.0	0.77
14	Vehicles *	16.60	18.0	-
15	New EPABX**	8	6%	0.48
16	Air compressor for CHP**	3	6%	0.18
H O Patna				
	Total for H O Patna**	110.37		10.06
Total		131038.8		4398.77

* Depreciation applied only to newly purchased assets

** depreciation on these items were asked for in a later submission by the petitioner

4.9 Operation and Maintenance (O&M) Expenses

4.9.1 The petitioner has submitted that O&M expenses includes expenditure incurred in the operation and maintenance of the generating station, including employee cost, repairs and maintenance, consumption of stores and spares, water charges, ash disposal, pollution

control cess, insurance and other administrative and general expenses incurred at the Corporate office, Ranchi.

4.9.2 The estimated actual O&M expenditure for FY 2006-07 stands at Rs.95.46 Crore.

The Petitioner has stated that by using the normative approach, the O&M expenditure for the year FY 2007-08 come to Rs.65.36 Crore. However, due to major breakdown maintenance and replacement expenditure in Unit I (due to tripping of its turbine resulting in severe damage to blades), the Petitioner has projected an O&M expenditure of Rs.142.40 Crore. The petitioner has attributed this steep increase in the maintenance expenditure to the vintage of the Plant and numerous outages experienced. The petitioner stated that out of the total proposed O&M expense, approximately Rs.25-30 Crore would be utilized in overhauling, repair and maintenance of Unit I during FY 2007-08 as major work is required to be undertaken.

The following table shows the detailed breakup of the actual O&M expenses from 2003-04 to 2007-08 (proposed) as given in Form-16 of the tariff petition. It is to be noted that the proposed O&M expenses for FY 2007-08 is given as Rs 108.75 Crores

Table: 11 Breakup of O&M expenses from 2003-04 to 2007-08

Breakup of O & M expenses (Rs Lakh)	2003-04	2004-05	2005-06	2006-07	2007-08
Employee cost (a)	1069.66	930.55	1004.99	1280.46	1414.3
--do-(b) Pension & Gratuity	189.71	67.03	72.39	79.63	87.59
-do-© Labour for O & M	549	559.61	604.38	1036.54	1288.65
Repair and Maintenance	148.26	88.65	200	490.75	365
Stores consumed	548.31	535.65	578.02	1393.02	1130
Power Charges	155.59	1.44	1.56	228	228
Water Charges	6115.2	2018	2000	2000	2000
Communication expenses		4.76	5.14	6	7.5
Traveling expenses		6.11	6.6	5	6
Insurance		147.13	148	148.07	150
Others		178.43	192.7	81.65	93
Pollution Control cess		288	288	25	30
Ash Disposal		53.86	58.17	559	800
Rent, Rates and Taxes.		4.28	4.62	2	3
Security expenses		205.71	222.17	300	350
Professional expenses (Admn. Exp.)	239.32	7.65	8.26	4.25	5
Printing and Stationery		9.55	10.31	4	5

Corporate office expenses allocation	223.27	197.55	230.1	250.26	332.96
Other Expenses (Deferred Revenue Expenses)		428.28	1081.68	1652.94	2579.49
Total (1 to 17)	9238.32	5732.24	6717.09	9546.57	10875.49
LESS: RECOVERED (IF ANY)					
NET Expenses	9238.32	5732.24	6717.09	9546.57	10875.49

4.9.3 The petitioner has provided details of the following O&M components: a) employee cost, b) repairs and maintenance, c) administrative and general expenses, d) capital maintenance and e) ash disposal.

4.9.3.1 Employee Cost:

The petitioner stated that the actual employee cost for FY 2005-06 and FY 2006-07 was Rs 16.82 Crore and Rs 23.96 Crore respectively. It proposed employee cost of Rs 27.9 Crore for FY 2007-08.

4.9.3.2 Repair & Maintenance (R&M)

The petitioner stated that it projected its R&M expenditure each year based on past trends and anticipated repairs and maintenance. It stated that while it proposed an R&M expenses of Rs 2 Crore in FY 2005-06, its actual R&M expenses was more than Rs 7.7 Crore. It has estimated the actual R&M expenses for FY 2006-07 at approx Rs 3.11 Crore. The budget estimate for FY 2007-08 has been estimated at Rs 1.73 Crore. It has however proposed another Rs 22.8 Crore as expenses for preventive and general maintenance and stores incidental. The petitioner has therefore proposed an aggregate R&M expenditure of Rs 24.54 Crore including both the budgeted estimated and the additional expenditure for preventive maintenance and stores incidental.

Table: 12 R&M Cost (Rs Crore)

R&M	2007-08 (Proposed)
Budgeted Expenditure	1.73
Expenditure towards preventive maintenance & stores incidental	22.8
Total R&M Cost	24.54

4.9.3.3 Administrative & General (A&G) (Expenses)

The petitioner stated that the estimated A&G expenses in FY 2006-07 were Rs 7.31 Crore. It proposed A&G expenses of Rs 8.57 Crore for FY 2007-08. The petitioner did not provide the explanation on the basis of which it arrived at this figure for FY 2007-08.

4.9.3.4 Capital Maintenance

The Petitioner stated that had incurred Rs. 86.82 crores towards capital maintenance during the five-year period between 2002-03 and 2006-07. This capital maintenance includes expenditure towards spares. These charges are being treated as deferred revenue expenses and are proposed to be charged to revenue account in 5 annual installments. The year wise details of capital maintenance expenses and the amounts proposed to be charged to revenue account are detailed in the table below:

Table: 13 Year-wise Capital Maintenance Expenditure (Rs Lakh)

Year	Amount	Proposed to be charged to Revenue in 5 annual installments					
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
2002-03	886.45	177.29	177.29	177.29	177.29	177.29	-
2003-04	45.46	-	9.09	9.09	9.09	9.09	9.09
2004-05	1209.48	-	-	241.90	241.90	241.90	241.90
2005-06	3267.00	-	-	-	653.40	653.40	653.40
2006-07	2856.29	-	-	-	-	571.26	571.26
2007-08	5519.20	-	-	-	-	-	1103.84
Total		177.29	186.39	428.28	1081.68	1652.94	2579.49

The proposed capital maintenance expenditure to be charged during FY 2007-08 is Rs 25.79 Crore.

4.9.3.5 Ash Disposal

Petitioner stated that it incurred an expenditure of Rs 5.59 Crore towards ash disposal during FY 2006-07. It has proposed expenditure of Rs 8 Crore for disposal of ash from ash pounds for FY 2007-08.

Subsequently, on the commission's directions, the petitioner provided a breakup of the O&M Cost for FY 2006-07 (actual) and FY 2007-08 (proposed) as follows:

Table: 14 O&M Cost for FY 2006-07 and FY 2007-08

O&M Expenss (Rs/lakh)	2006-07	2007-08
Running Maintenance	499.17	590.15
Breakdown maintenance	340.15	422.00
Preventive maintenance	197.22	276.50
Repairs & Maintenance	311.00	173.00
General Maintenance	691.75	926.00
Electrical Maintenance	24.00	29.00
Stores incidental	23.00	37.00
Capital Maintenance	3274.16	5519.20
Establishment expenses (employees)	1370.17	1529.76
A&G Expenses	920.33	1107.79
O&M Spares	1393.02	1130.00
Major overhauling of Unit 1		2500.00
Total	9043.97	14240.40

It should be noted that there is a discrepancy noted in the figures of actual O&M cost for FY 2006-07. While the tariff petition stated the actual O&M expense for FY 2006-07 as Rs 95.46 Crore, the revised submission given above shows the O&M expenses as approx Rs 90.44 Crore

4.10 Interest on working Capital

The petitioner stated that its interest on working capital in FY 2006-07 was Rs.16.87 crores. It has proposed interest on working capital at Rs 15.19 Crore for FY 2007-08 at an interest rate of 12.5% per annum. The break-up of the working capital expenses is given in detail in the Table below:

Table: 15 Interest on Working Capital (Rs. Lakhs)

	Particulars	2006-07	2007-08
		Actual	Proposed
1	Cost of Coal for 1½ months	28.31	18.20
2	Secondary Fuel Oil for 1 month	1.45	0.99
3	Operation & Maintenance Expenses for 1 month	7.19	11.87

4	Maintenance Spares @ 1% of Plant and Equipment	11.88	11.92
5	Receivables Equivalent to 2 Months of Fixed and Variable Charges	86.16	78.53
	Total Working Capital	134.99	121.50
	Interest on Working Capital @ 12.5%	16.87	15.19

4.11 Return on Equity

The petitioner stated that at present the equity amount is Rs.100 crores out of a total project cost of Rs 1355.58 Crore. The petitioner stated that it has submitted a proposal to the State Government to raise the present equity of Rs.100 crores to Rs.1100 crores by converting the outstanding loan of Rs.608.90 crores and part of the accumulated interest of Rs.949.52 crores into equity. However, the petitioner is still awaiting the government's response and would inform the Commission as and when a decision is taken.

For now the Petitioner has asked for return on equity of Rs.14 crores at a rate of return of 14% on equity for FY 2007-08.

Table: 16 Return on Equity (Rs.Crores)

Particular	Proposed for 2007-08 (Rs.Crores)
Equity	100.00
Return on Equity	14.00

4.12 Summary of Fixed Cost for FY 2007-08

The fixed costs for the year 2007-08 are summarized below:

Table: 17 Summary of Fixed Costs (Rs.Crores)

Particular	Proposed for 2007-08
Interest on Loan	86.71
Depreciation	43.99
O&M Expenses	142.40
Interest on Working Capital	15.19
Return on Equity	14.00
Income Tax	-
Total	302.18

The petitioner has proposed per unit fixed charge of Rs 1.8 per unit based on aggregate fixed charges of Rs 302.18 Crore and a generation of 1679 MUs. It should be noted that the petitioner has calculated its per unit fixed charges based on gross generation and not sales. If the per unit fixed charges are calculated based on sales, the charges would be Rs 1.9 per unit.

4.13 Variable Charges:-

4.13.1 Coal Consumption

The petitioner stated that the generating units receive coal from the collieries of Central Coalfields Ltd (CCL). The coal is transported by road over a distance of about 34 to 49 kms. TVNL has proposed transporting the coal by rail through the Merry-GO-Round (MGR) System. The construction of the MGR is underway but has been delayed.

The petitioner submitted that the TTPS is incurring heavy loss due to low specific coal consumption allowed by the Commission in the previous years. Further it stated that due to the tripping of transmission lines and lack of load the generating units are backed down. This results in frequent shutting down and start ups which adversely impacts the fuel and plant efficiency. The petitioner stated that the actual specific consumption of coal and heat rate were 0.656 kg/kWh and 2821 kCal/kWh respectively in FY 2006-07. In FY 2007-08, due to breakdown maintenance of one unit the plant PLF will be much lower and the petitioner expects that at best it will be able to maintain the previous years level. It therefore has proposed specific coal consumption of 0.656 kg/kWh and station heat rate of 2821 kCal/kWh for FY 2007-08. This is given in table below

Table: 18 Projected Specific Coal Consumption & Heat Rate for FY'07

Year	Specific Coal Consumption (%)	Heat Rate (kCal/kWh)
2007-08	0.656	2821

4.13.1.2 Transit loss of Coal

The petitioner stated that certain amount of coal is lost during the transportation process. While some amount of coal gets spilled over from the trunk, some is lost due to wind, evaporation and moisture, etc. The petitioner has requested the Commission to allow for 1% of total coal transported towards transit loss in FY 2007-08.

4.14 Specific Consumption of Oil

The petitioner stated that it brought down the specific consumption of oil to 3.9 ml/kWh in 2005-06 as against a consumption ranging from 6 to 14 ml/kWh during FY 2000-01 to FY 2003-04. It has further brought down the consumption to 2.31 ml/kWh in FY 2006-07. The petitioner submitted that it may be difficult to limit the consumption to 2 ml/kWh as stipulated in the norms as the TPPS faces frequent outages. The petition proposed to maintain the specific oil consumption in FY 2007-08 at the previous years level of 2.31 ml/kWh. The actual specific oil consumption in FY 2005-06 and FY 2006-07, and the proposed specific oil consumption in FY 2007-08 is given below in Table.

Table: 19 Specific Oil Consumption

Year	Specific Consumption (ml/kWh)
2005-06	3.90
2006-07	2.31
2007-08 (proposed)	2.31

4.15 Fuel Prices:-

4.15.1 Cost of Coal

The petitioner stated that the cost of coal billed by CCL in FY 2006-07 was Rs.1097.89/MT and the transport cost by road was Rs.160.85/MT resulting in a delivered cost of coal at the thermal station at Rs.1258.73/MT. The petitioner has assumed a 5% increase in the cost of coal and transport in FY 2007-08 over the previous year and has proposed Rs.1321.67/MT as the cost of coal for FY 2007-08.

4.15.2 Cost of Secondary Fuel (Oil)

The petitioner stated that the delivered cost of oil at the thermal station was Rs.27835/KL in FY 2006-07. The petitioner has assumed a 10% increase in price of oil and proposed oil price at Rs.30619/KL for the year 2007-08. The table given below states the specific consumption and price of coal and secondary fuel.

Table: 20 Consumption and price of fuel:

Item	Unit	2006-07 (Actual)	2007-08 (Proposed)
Specific Coal Consumption (kg/kWh)	kg/kWh	0.656	0.656
Delivered Coal Price (Rs/MT)	Rs./MT	1258.73	1321.67
Specific Oil Consumption	ml/kWh	2.31	2.31
Delivered Oil Price	Rs./kl	27835	30618.5

Based on the consumption and prices of fuel given in Table, the petitioner has estimated the total cost of coal as Rs 147.03 Crore and total cost of fuel as Rs 11.87 Crore. It has proposed variable charge of Rs 1.075/kWh based a total fuel cost of Rs 158.90 crores for FY 2007-08 and assuming net generation of 1476 MUs.

4.16 Revenue Requirement & Proposed Tariff

The petitioner has proposed fixed charges of Rs 302.18 Crore and variable charges of Rs 158.9 Crore aggregating to Rs 461.08 for FY 2007-08. It expects to earn non-tariff income of Rs 1.17 Crore. It has proposed to raise revenue of Rs 459.91 Crore through an increase in tariff in FY 2007-08.

Table: 21 Proposed revenue in FY 2007-08

Particular	(Rs. crores)
Fixed Charges	302.18
Energy Charges	158.90
Revenue Requirement	461.08
Other Income	1.17
Revenue to be raised through Tariff in FY 2007	459.91

It has proposed a tariff of Rs 2.875 for FY 2007-08 comprising a fixed charge of Rs 1.8 per unit and energy charge of Rs 1.075 for FY 2007-08. It has asked for an increase of Rs 0.975 per unit in tariff over the tariff approved by the Commission in FY 2005-06.