JOINT ELECTRICITY REGULATORY COMMISSION
FOR THE STATE OF GOA AND UNION TERRITORIES

Petition No. 18/2010

Tariff Order

In the matter of ARR and Tariff determination for Puducherry Power Corporation Limited (PPCL) Gas Power Station (32.5 MW) FY 2011-12

Date of Order 6th August, 2011

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Joint Electricity Regulatory Commission for the State of Goa and Union Territories Gurgaon – 122 016

CORAM

Dr. V. K. Garg (Chairperson)
Shri R. K. Sharma FIE (Member)

Petition No.18/2010

In the matter of

ARR and Tariff order for PPCL Gas Power Station (32.5 MW) for the period FY 2011-12

And in the matter of

Puducherry Power Corporation Ltd. (PPCL) **Petitioner**

ORDER

Date: 06.08.2011

1. Background and Brief History

1.1 Introduction

In exercise of the powers conferred by the Electricity Act, 2003 the Central Government constituted a Joint Electricity Regulatory Commission for all Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories "as notified on 2nd May 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" as notified on 30th May 2008.

The Commission is a two member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Goa and Union Territories of Andaman & Nicobar Islands, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry. The powers and the functions of the Commission are as prescribed in the Electricity Act, 2003. The head office of the Commission is presently located in the district town of Gurgaon, Haryana and falls in the National Capital Region.

The Joint Electricity Regulatory Commission for the State of Goa and the Union Territories started to function with effect from August 2008 with the objectives and purposes for which the Commission has been established.

1.2 Background

Puducherry Power Corporation Limited (herein after referred to as PPCL or Petitioner), an undertaking of Government of Puducherry, is a company within the meaning of Companies Act, 1956. Further, it is a "Generating Company", as defined under section 2 (28) of Electricity Act, 2003.

PPCL was incorporated on 30/03/1993, with the objective of generating electricity. It owns and operates a 32.5 MW combined cycle gas based power plant at Karaikal, in the Union Territory of Puducherry.

The commercial operation of the station has been declared w.e.f. 03/01/2000 and is supplying power to Electricity Department, Puducherry under the Power Purchase Agreement (PPA) signed with them on 25/02/2002.

1.3 Present petition

PPCL has filed its petition under section 62 of Electricity Act 2003 read with "Joint Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2009", for determination of tariff for PPCL Gas Power Station (32.5 MW) for FY 2011-12 on 29th November 2010.

On preliminary analysis of the petition, a hearing of PPCL was held on 24/01/2011 to seek certain clarifications and obtain missing information and the petition was taken on record on 2 4/01/2011. In the hearing on 24.01.2011 while admitting the petition, it was directed to make EDP as a Respondent. EDP filed their objections on 03.03.2011. PPCL filed their reply to the objections of EDP on 24.04.2011. The Commission in its hearing on 25.04.2011 issued directions for a public notification of abridged ARR Petition.

1.4 Public hearing process

The public notice was published in the following newspapers on 05/05/2011 and 06/05/2011 as confirmed by PPCL vide their letter dated 17.05.2011 inviting 9objections / suggestions from its stakeholders on the tariff petition filed by it.

Sl. No.	Date of Publication	Name of Newspapers	Place
1.	05/05/2011	Dinakaran	Puducherry

2	06/05/2011	The Hindu	Puducherry
3.	06/05/2011	Local daily	Yanam and Mahe

The petitioner also placed the public notice and the petitions on its website (www.ppcl.nic.in) for submission of objections and suggestions on its petition.

Interested parties / stakeholders were asked to file their objections / suggestions on the petition on or before 27/05/2011.

The Commission fixed the date for public hearing for PPCL to be held at Karaikal on 10th June, 2011. Subsequently, 10th June, 2011 being declared as a Local Holiday in Karaikal the hearing was rescheduled for 17.06.2011 through a press notification.

2. Summary of PPCL ARR and Tariff Petition for FY 2011-12

2.1 Summary of PPCL Tariff Petition

PPCL, in its petition, has submitted the projected operational parameters and costs for the generating station. The operational parameters pertain to plant availability, plant load factor, station heat rate (SHR), auxiliary consumption. The costs cover both variable and capacity (fixed) charges.

2.2 Summary of fixed and variable costs projected by PPCL

The gross and net generation, the fixed costs and the variable costs projected by PPCL for FY 2011-12 are given in Table 2.1 below:

Table 2.1: The capacity and variable charges projected by PPCL for FY 2011-12

(Rs. in million)

Sl. No.	Particulars	FY 2009-10	FY 2010-11	FY 2011-12 (Projected year)
1.	Gross generation (MU)	241.995	241.995	242.658
2.	Auxiliary consumption (%)	6.41	6.70	6.70
3.	Net generation (MU)	226.483	225.781	226.400
4.	Capacity charges (Fixed costs)	301.64	311.85	307.71
	(a) Interest on loan capital	26.67	20.38	11.63
	(b) Depreciation	76.36	77.84	77.84
	(c) Advance against depreciation			
	(d) O&M expenses	74.43	78.68	83.17
	(e) Interest on working capital	18.05	26.68	26.80
	(f) Foreign exchange rate variation			
	(g) Return on equity	106.13	108.25	108.26
	(h) Taxes			
5.	Energy / variable charges (Rs. Million)	274.25	542.60	544.08
6.	Total expenses in Rs. Million (4+5)	575.89	854.45	851.79
7.	Cost per unit (6/3)	2.54	3.78	3.76

Source – Format 12 G of Tariff petition dated 29/11/2010

2.3. Prayer

PPCL has prayed the Commission:

(i) To approve the tariff for FY 2011-12 as brought out in the petition.

(ii) To allow the tariff, as approved against the petition based on detailed terms and conditions as per applicable JERC Regulations in force for the relevant period w.e.f. 01/04/2011, after allowing adjustment for charges recovered earlier based on GOP order dated 24/06/2003.

(iii) To revise the "Normative Annual Plant Availability Factors' for PPCL power station for FY 2011-12 for full fixed cost recovery at the actually achieved NAPAF level.

(iv) To allow the recovery of filing fees as and when paid to the Hon'ble Joint Commission and publication expenses from the beneficiary.

(v) To pass any other order in this regard as the Hon'ble Commission may find appropriate in the circumstances pleaded above.

3. Brief summary of objections raised, response from PPCL and Commission's comments

Public response to the Petition

3.1 In response to the Public notice inviting objections / suggestions from stake holders on the petition filed by PPCL for determination and approval of tariff of PPCL Gas Power Station for FY 2011-12, the Electricity Department, Puducherry and Karaikal Industries Forum, Karaikal filed their objections / suggestions in writing.

Public hearing was held at Karaikal on 17th June 2011 where the respondents were given an opportunity to put forth their objections and suggestions on the ARR and Tariff Petition to the Commission.

All the written objections were forwarded to the PPCL by the Commission as and when they were received and PPCL was asked to offer its response to the consumers / Commission in respect of the objections raised.

3.2 During public hearing total 21 objectors had participated but most of them had verbal objections pertaining to grievances against Electricity Department, Puducherry (Distribution Licensee) and only two objectors had filed return objections. The details of the objectors who filed their objections / suggestions are given below.

1) Electricity Department, Puducherry
2) Karaikal Industries Forum, Karaikal

The grievances of the objectors pertaining to Electricity Department, Puducherry, have been sent to Consumer Grievances Redressal Forum (CGRF), Puducherry for Redressal and the Commission also suggested to these objectors to approach CGRF, Puducherry.

3.3 The objections & response of the PPCL thereto are briefly given in the Annexure-I

3.4 The Commission view on the objections raised by the objectors on the objections and response of PPCL are as under:

3.4.1 The capacity charges and energy charges as determined above are on the basis of projected information / data as supplied by PPCL unless it has been modified by the Commission exercising due prudence, subject to truing up subsequently on the basis of actual & complete data made available. Being the first tariff petition of PPCL, a pragmatic view has been taken.

3.4.2. The issue regarding cost of Naptha & HSD System, their spares as capitalized could not be considered for want of data from PPCL. The reply of PPCL to EDP on their objection on this issue is not satisfactory. This cost effect arising out of the issue shall be considered at the time of true up.

3.4.3. The issue of infirm power as brought by EDP pertains to the year 1999, and cannot be considered at present through this petition which is for FY 2011-12.

3.4.4. The industries of Karaikal having surplus captive power may make a separate petition to the Commission regarding utilization of their surplus (if any) captive power.

3.4.5 The issue for consideration of capital cost as projected by PPCL will be finalized when the said cost is regularized / approved by competent authority.

3.4.6 The other objections and the replies of PPCL have been dealt with as and where considered appropriate in the Commission order.

4.PPCL Gas Power Station, its performance and variable and fixed costs

4.1. PPCL Gas Power Station

PPCL owns and operates one combined cycle gas power station. The details of its capacity, commercial operation data etc., are given in table below:

Table 4.1 : Details of the PPCL Gas Power Stations

Sl. No.	Details	
1	Capacity	
	a) Gas turbine	22.9 MW
	b) Steam turbine	9.6 MW
	Total	**32.5 MW**
2	Date of commercial operation	3rd January, 2000
3	Type of fuel	Natural Gas
4	Type of cooling system	Induced draft cooling tower
5	Gas supplier	GAIL

Source – Format 2 G of Tariff petition dated 29/11/2010

4.2. Performance of the Station: PPCL's Projections and Commission's Analysis and Decisions

As per provisions of clause 19 of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, the Commission is guided as far as feasible by the principles and methodologies of CERC, as amended from time to time, while fixing annual fixed cost and energy charge rate for FY 2011-12.

4.3 The performance parameters and the cost parameters are discussed below:

4.3.1 Normative Annual Plant Availability Factor (NAPAF)

The Normative Annual Plant Availability Factor (NAPAF), for recovery of full fixed charges as per CERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 is 85% for the thermal and gas based stations for the period 2009-14.

PPCL requested for relaxation of the NAPAF for recovery of full fixed charges based on actual availability of fuel in the FY 2010-11 & FY 2011-12.

The actuals of Plant Availability Factor for the station for the previous years is given in the table below:

Table 4.2 : Actual PAF for earlier years

Year	Plant Availability Factor (%)
2000-01 (Actuals)	91.20
2001-02 (Actuals)	94.47
2002-03 (Actuals)	96.23
2003-04 (Actuals)	97.19
2004-05 (Actuals)	97.43
2005-06 (Actuals)	93.39
2006-07 (Actuals)	97.49
2007-08 (Actuals)	98.84
2008-09 (Actuals)	95.17
2009-10 (Actuals)	91.01

Source – Annexure A of additional information dated 07/02/2011

Commission's Analysis

In view of the prayer made by PPCL regarding relaxation in NAPAF, FY 2011-12 has been considered for analysis. The Commission observes that as the gas supply has since been restored, there is no ground for any relaxation on NAPAF. From the actual achieved from 2000-01 to 2009-10 it is observed that NAPAF is varying from 91% to 98.84% during the period 2010-1 when fuel supply was restricted they achieved a NAPAF of 78.64% only. For fixing of NAPAF, the FY 2010-11 being abnormal has not been considered. The average NAPAF for the period 2000-01 to 2009-10 comes to 95.24%. The normative NAPAF as adopted by CERC is 85%. The average PLF achieved during this period is 89.2%. The annual generation of 257MU fixed by CEA for the year 2011-12 corresponds to 90% PAF. This is the first tariff petition filed by PPCL to the Commission. Keeping the above facts in view, the Commission has fixed NAPAF between 85 to 90%, that i.e. at 87% and gross generation of 257MU as already approved by CEA for FY 2011-12.

The Commission, therefore, approves the Normative Annual Plant Availability Factor (NAPAF) at 87% for FY-2011-12 against projection of 85% by PPCL

4.3.2 Auxiliary Power Consumption (APC)

PPCL submitted the actuals of auxiliary consumption for FY 2000-01 to FY 2009-10 and projection for FY 2010-11 and FY 2011-12 as given in the table below:

Table 4.3 :Auxiliary consumption actuals for earlier years and projection for FY 2010-11 and FY 2011-12

Year	Auxiliary consumption (%)
2000-01 (Actuals)	5.45

2001-02 (Actuals)	5.30
2002-03 (Actuals)	5.43
2003-04 (Actuals)	5.47
2004-05 (Actuals)	5.65
2005-06 (Actuals)	6.00
2006-07 (Actuals)	5.90
2007-08 (Actuals)	5.98
2008-09 (Actuals)	5.94
2009-10 (Actuals)	6.41
2010-11(Estimated)	6.70
2011-12 (Projected)	6.70

Source – Annexure A of additional information dated 07/02/2011 and Format 12 G of the petition.

PPCL submitted that the auxiliary consumption is considered as per actuals because the station has electric gas booster compressor pumps due to which APC is higher. CEA has also recommended higher APC for plants having electric driven gas booster compressors. Since natural gas is supplied at a lower pressure (i.e) 3 to 5Kg/Sq CM, electric driven gas booster compressors are required to boost up the gas pressure to 17Kg/Sq CM resulting in increase in APC. Four electric driven gas booster compressors of 300kW each have to run to achieve full load.

Commission's Analysis

According to CERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 the norm of auxiliary consumption for gas turbine generating stations is as follows:

(i) Combined cycle 3.0%

(ii) Open cycle 1%

According to CEA guidelines, in cases where electric driven gas booster compressors are part of the auxiliary plant, 2.5% extra auxiliary consumption can be allowed. In view of the above, as the PPCL gas plant is having electric driven gas booster compressors, the auxiliary consumption of 5.5% is approved for FY 2011-12.

The Commission, therefore, approves Auxiliary Power Consumption at 5.5% of gross power generation for FY-2011-12.

4.3.3 Gross Station Heat Rate (SHR)

PPCL submitted the actuals of the Station Heat Rate for the earlier years and projection for the FY 2011-12 as given in the table below:

Table 4.4 : Station Heat Rate (Actuals upto 2009-10) and projected for 2010-11&2011-12

Year	Station Heat Rate (Kcal/kWh)
2000-01 (Actuals)	2405.39
2001-02 (Actuals)	2383.21

2002-03 (Actuals)	2269.41
2003-04 (Actuals)	2255.33
2004-05 (Actuals)	2249.04
2005-06 (Actuals)	2283.62
2006-07 (Actuals)	2284.96
2007-08 (Actuals)	2270.11
2008-09 (Actuals)	2296.67
2009-10 (Actuals)	2410.25
2010-11(Estimated)	2400.00
2011-12 (Projected)	2400.00

Source – Annexure A of additional information dated 07/02/2011 and Annexure-1, page 30 of the tariff petition.

PPCL submitted that the Heat Rate of 2400 Kcal/kWh is considered, based on combined cycle small gas turbine, as specified for Assam GPS in CERC Regulations, 2009. Assam GPS has a capacity of 29.1MW, which is of similar range as instant station. Since the age of the PPCL station is already ten years old, the degradation factor of the machine is also taken into account for the computation of Heat Rate.

Commission's Analysis

The Commission observes that there are other combined cycle power stations existing in Gujrat where Station Heat Rate (SHR) of 2165K.cal/Kwh has been allowed. Therefore, deciding SHR based on data of other power stations in not desirable. Further, that as the gas supply has been restored to its original level / demand of PPCL; therefore it should not be the basis for fixing SHR. PPCL has not given any technical constraint for their proposing a SHR of 2400 K.cal/Kwh.

The Commission has considered past performance of this power station from 2001-02 to 2008-09. The SHR as 2250K.cal/Kwh is considered reasonable for the year 2011-12 which is the best achieved during said period. The SHR is gross station heat rate

The Commission, therefore, approves the Heat Rate for the PPCL gas station at 2250 k.cal. / kWh for FY 2011-12.

4.3.4 Performance Parameters Approved for FY 2011-12

Based on the above analysis the performance parameters, approved for the PPCL gas power station for FY 2011-12 are listed in the table below:

Table 4.5 : Performance Parameters approved for FY 2011-12

S.N	Parameter	Projected by PPCL	Approved by the Commission
1	Plant Availability Factor (%)	As per actuals	87

2	Auxiliary consumption (%)	6.7	5.5
3	Station Heat Rate (Kcal/kWh) (Gross)	2400	2250

Source - Format 12 G of Tariff petition dated 29/11/2010, Annexure I (Page 30 of petition)

4.4 Cost parameters

The cost parameters include Gross Calorific Value (GCV) of gas consumed, and the price of gas.

PPCL submitted the details of Wt. Av. GCV of gas and price of gas, actuals and the projections which are discussed in the following paragraphs.

4.4.1 Wt. Av. Gross Calorific Value (GCV) of Gas

PPCL furnished the details of Wt. Av. GCV of gas supplied by GAIL for (i) FY 2009-10 (actuals), (ii) 1st July to 30th September, 2010 (actuals) and (iii) for FY 2010-11 (actual) and FY 2011-12 for 3 months (iv) for FY 2011-12 (Projection) as given in table below:

Table 4.6 : Wt. Av. GCV of Gas – Projection by PPCL

Sl. No.	Period	Wt Av GCV of Gas (K.cal./SCM)
1	FY 2009-10 (Actuals)	9130.00
2	1st July to 30th September 2010 (actuals)	9030.56
3.	FY 2011-12 (Projections) by PPCL	9030.56
4	FY 2010-11 (Actuals)	9065.98
5	FY 2011-12 (April, 2011 to June, 2011) (Actuals)	10730.00
6	FY-2010-11 (Actuals) and FY 2011-12 (3 month)	9369.18

Source - Annexure I (Page 30 of petition) and additional information

Commission's Analysis

Though PPCL, mentioned the above figures as Wt. Av. GCV of gas, it is evident from the gas bills of GAIL, produced in the petition, the values are Wt. Av. NCV of gas, instead.

Wt. Av. GCV of gas has to be taken into consideration while arriving at the fuel cost, as the SHR approved is the Gross Station Heat Rate. To arrive at the GCV, from NCV a multiplying factor of 1.1 is adopted as mentioned in the gas bills of GAIL, the Wt. Av. GCV has been calculated on the actual corresponding data for the period FY 2010-11 and April, 2011 to June, 2012 i.e., 15 months, which works out to 10306 k.cal. /scm. (Corresponding to weighted average NCV=9369.18 k.cal/scm.

Accordingly, the Commission approves the Gross Calorific Value of Gas as 10306 K CAL/Scm for FY2011-12.

4.4.2 Wt. Av. Price of Gas

PPCL furnished the details of Wt. Av. price of gas for (i) FY 2009-10 (actuals), (ii) 1st July to 30th September, 2010 (actuals) and (iii) for FY 2010-11 (actuals) (iv) for FY 2011-12 (Projection) as given in the table below:

Table 4.7 : Wt. Av. Price of Gas – Projection by PPCL

Sl. No.	Period	Wt Av price of Gas (Rs./1000SCM)
1	FY 2009-10 (Actuals)	4311.14
2	1st July to 30th September 2010 (actuals)	8436.77
3	FY 2010-11 (Actuals)	7856.73
4	FY 2011-12 (Projection)	8436.77

Source - Annexure II (Page 33 of petition)

Commission's Analysis

The weighted average price of gas / 1000 SCM works out to Rs. 7856.73 for 2010-11 on the basis of actuals. The Commission has not considered expenditure on account of under/over drawl of gas, which is at a higher rate than normal. However an escalation of 5% is allowed over the weighted average price for FY 2010-11 to cover the risk of escalation of gas prices. The same works out to Rs. 8249.56/1000scm for FY 2011-12.

Accordingly the Commission approves the weighted average price of gas as Rs. 8249.56 per 1000 SCM for FY 2011-12.

4.5 Fuel Cost

Based on the performance and cost parameters approved, the fuel cost of PPCL gas station for FY 2011-12, is worked out as given in the table below:

Table 4.8 : Working details of fuel costs for FY 2011-12

Sl.No.	Item	Derivatioin	Unit	FY 2011-12 (Projected	FY 2011-12 (approved by the

				by PPCL)	Commission)
1	Gross Generation	A	MU	242.66	257.00
2	Auxiliary Consumption %	B	%	6.7	5.50
3	Auxiliary Consumption	C	MU	16.26	14.14
4	Net Generation	D=A-C	MU	226.40	242.87
5	Station Heat Rate	E	K.Cal/kWh.	2400	2250.00
6	Calorific value of Gas	F	K.Cal/scm	9030.56	10306.00
7	Overall Heat from Gas	G=E*A	G.Cal	582384.00	578250.00
8	Actual Gas Consumption	H=(G*1000)/F	M.scm	64490.35	56108.09
9	Price of Gas	I	Rs/scm	8.44	8.25
10	Cost of Gas	N5=(I *H/100	Rs/lakh	5442.99	4628.92
11	Total Fuel Cost	N5	Rs/lakh	5442.99	4628.92
12	Fuel Cost.Unit Gross	L=N5/(A*10)	Rs./kWh	2.24	1.80
13	Fuel Cost.Unit Net	J=N5/(D*10)	Rs./kWh	2.40	1.91
14	Cost of fuel/G.Cal	K=(N5/G)*10^5	Rs./G.cal	934.6	800.50

Source: projection of PPCL as per Format 2 G of Tariff Petition Page -19

Thus, the total fuel cost for a gross generation of 257 MU and net generation of 242.87 MU for FY 2011-12, works out to Rs. 4628.92 lakhs and the fuel cost per unit net works out to Rs. 1.91 / kWh.

The fuel cost for FY 2011-12 as approved by the Commission is under below:

Sl.No.	Item	Unit	Approved by Commission
1	**Gross Generatioin**	**MU**	**257.00**
2	**Net Generation**	**MU**	**242.87**
3	**Total Gas (Fuel) Cost**	**Rs./Lakh**	**4628.92**
4	**Fuel Cost Net**	**Rs./kwh**	**1.91**

4.6 Capacity charges / fixed costs for FY 2011-12

The PPCL has submitted the projections of the capacity charges (fixed) comprising the following components for FY 2011-12

- Depreciation
- Interest charges
- Return on equity
- O&M expenses
- Interest on working capital
- Tax on income

The capacity charges for the year FY 2011-12 as projected by PPCL are given as under:

Sl. No.	Particulars	FY 2011-12 (Projected year)
1.	Gross generation (MU)	242.658
2.	Auxiliary consumption (%)	6.70
3.	Net generation (MU)	226.400
4.	Capacity charges (Fixed costs) Rs. in million	307.71
	(a) Interest on loan capital Rs. in million	11.63
	(b) Depreciation Rs. in million	77.84
	(c) Advance against depreciation Rs. in million	
	(d) O&M expenses Rs. in million	83.17
	(e) Interest on working capital Rs. in million	26.80
	(f) Foreign exchange rate variation Rs. in million	
	(g) Return on equity Rs. in million	108.26

The components of fixed charges mentioned above are discussed in detail in the following paragraphs.

4.6.1 Capital Cost.

For the calculation of various capital cost based components of AFC, the gross fixed assets as of 31.03.2011 has been taken as Rs. 146.45 Cr by PPCL.

As per clause 22(1) Capital Cost and Capital Structure, the approved investment plan of the generating company shall be the basis for determining the relevant components for each financial year.

While replying to the objection raised by EDP regarding Capital Cost, PPCL has not been able to substantiate through any documentary evidence the capital cost of Rs. 146.45 Cr, as of 31.03.2011 bears approval of a Competent Authority.

Therefore, for the present purpose the Gross fixed Asset/Capital Cost as of 31.03.2011 has been limited to Rs. 137.77 Cr, the cost based on which the tariff initially was determined and approved by the then Competent Authority.

4.6.2 Depreciation

PPCL has projected the depreciation charges for the years 2009-10, 2010-11 and 2011-12 at Rs. 7.01 crore and Rs. 7.02 crore respectively as detailed in the table below:

Table 4.9 : Depreciation projected for the years 2009-10, 2010-11 and 2011-12

Sl. No.	Name of the Assets	Depreciation rates as per CERC's Depreciation Rate Schedule (Appendix-III)	Previous Year		Current Year		Ensuing Year	
			Assets Value for the FY 2009-10	Deprecia-tion Charges	Assets Value for the FY 2010-11	Deprecia-tion Charges	Assets Value for the FY 2011-12	Deprecia-tion Charges
1	2	3	4	5	6	7	8	9
1	Land	0.00	7.93	0.00	7.93	0.00	7.93	0.00
2	Land Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Building	3.34	1.87	0.06	2.17	0.07	2.17	0.07
4	Furniture	6.33	0.30	0.02	0.31	0.02	0.31	0.02
5	Office Equipment	6.33	0.34	0.02	0.34	0.02	0.34	0.02
6	Vehicle	15.00	0.49	0.07	0.49	0.07	0.49	0.07
7	Bore well	5.28	0.14	0.01	0.14	0.01	0.14	0.01
8	Computer	15.00	0.16	0.02	0.17	0.03	0.17	0.03
9	P&M	5.28	0.04	0.00	0.04	0.00	0.04	0.00
10	Factory Build	3.34	0.57	0.02	0.57	0.02	0.57	0.02
11	P&M-Bhel	5.28	109.56	5.78	109.56	5.78	109.56	5.78
12	P&M-ABB	5.28	6.49	0.34	6.49	0.34	6.49	0.34
13	Building-IV	3.34	13.14	0.44	13.14	0.44	13.14	0.44
14	Sub-Stations ABB	5.28	1.16	0.06	1.16	0.06	1.16	0.06
15	Building Sub	3.34	0.00	0.00	0.00	0.00	0.00	0.00
16	Qtr	3.34	1.47	0.05	1.47	0.05	1.47	0.05
17	Pipeline PWD	3.34	1.61	0.05	1.61	0.05	1.61	0.05
18	Pipeline Hor	3.34	0.01	0.00	0.01	0.00	0.01	0.00
19	Pipe water	3.34	0.02	0.00	0.02	0.00	0.02	0.00
20	Tools	5.28	0.01	0.00	0.01	0.00	0.01	0.00
21	High Mast lighting	5.28	0.83	0.04	0.83	0.04	0.83	0.04
	Total		**146.12**	**7.00**	**146.45**	**7.02**	**146.45**	**7.02**

Source – Format 7 G page 23 of Tariff petition

It is submitted by PPCL that it has claimed the depreciation as per JERC Regulation 26 and also applicable CERC Regulations, 2009.

Commission's Analysis

It is observed that the PPCL has claimed depreciation for vehicles at 15% against 9.5% (as per CERC Regulation), though the rate of depreciation for other item have been taken as per CERC Regulation itself. Therefore the depreciation rate for vehicle is limited to 9.5%. The depreciation for the year 2011-12 is recalculated based on correct rate of depreciation for each item as per CERC Regulation.

Table 4.10 : Depreciation for the years 2009-10, 2010-11 and 2011-12 as per Commission analysis

Sl. No.	Name of the Assets	Depreciation rates as per CERC's Depreciation Rate Schedule (Appendix-III)	Previous Year		Current Year		Ensuing Year	
			Assets Value for the FY 2009-10	Deprecia-tion Charges	Assets Value for the FY 2010-11	Deprecia-tion Charges	Assets Value for the FY 2011-12	Deprecia-tion Charges
1	2	3	4	5	6	7	8	9
1	Land	0.00	7.93	0.00	7.93	0.00	7.93	0.00
2	Land Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Building	3.34	1.87	0.06	2.17	0.07	2.17	0.07
4	Furniture	6.33	0.30	0.02	0.31	0.02	0.31	0.02
5	Office Equipment	6.33	0.34	0.02	0.34	0.02	0.34	0.02
6	Vehicle	9.50	0.49	0.05	0.49	0.05	0.49	0.05
7	Bore well	5.28	0.14	0.01	0.14	0.01	0.14	0.01
8	Computer	15.00	0.16	0.02	0.17	0.03	0.17	0.03
9	P&M	5.28	0.04	0.00	0.04	0.00	0.04	0.00
10	Factory Build	3.34	0.57	0.02	0.57	0.02	0.57	0.02
11	P&M-Bhel	5.28	109.56	5.78	109.56	5.78	109.56	5.78
12	P&M-ABB	5.28	6.49	0.34	6.49	0.34	6.49	0.34
13	Building-IV	3.34	13.14	0.44	13.14	0.44	13.14	0.44
14	Sub-Stations ABB	5.28	1.16	0.06	1.16	0.06	1.16	0.06
15	Building Sub	3.34	0.00	0.00	0.00	0.00	0.00	0.00
16	Qtr	3.34	1.47	0.05	1.47	0.05	1.47	0.05
17	Pipeline PWD	3.34	1.61	0.05	1.61	0.05	1.61	0.05
18	Pipeline Hor	3.34	0.01	0.00	0.01	0.00	0.01	0.00
19	Pipe water	3.34	0.02	0.00	0.02	0.00	0.02	0.00
20	Tools	5.28	0.01	0.00	0.01	0.00	0.01	0.00
21	High Mast lighting	5.28	0.83	0.04	0.83	0.04	0.83	0.04
	Total		**146.12**	**6.96**	**146.45**	**6.98**	**146.45**	**6.98**

As the capital cost has been limited to Rs.137.77 Cr, as discussed in para 4.6.1, the depreciation as claimed has been reduced on prorata basis.

Accordingly the amount of Rs. 6.37 Cr, works out as depreciation for FY 2011-12.

The Commission, therefore approves the depreciation at Rs. 6.37 Cr, for FY 2011-12 against Rs. 7.02 crore claimed by PPCL.

4.6.3 Interest Charges

PPCL has claimed the interest charges at Rs. 1.16 crore for FY 2011-12. It is submitted by PPCL that the entire capital cost of the project has been funded from its own resources and capital investment has been considered at 70% normative loan and 30% normative equity as per JERC Regulation, 23. PPCL has considered the capital cost at Rs. 153.69 crore for FY 2011-12 and claimed interest of Rs.1.16 crore on normative loan (70%) of Rs. 107.58 crore at an interest rate of 11.25% on the outstanding loan as detailed below:

Table 4.11 : Interest charges projected by PPCL

Sl. No.	Details	(Rs. crore)
1	Opening capital cost	153.69
2	Loan at 70% of capital cost	107.58
3	Cumulative repayment upto 2009-10	93.36
4	Net loan opening	14.22
5	Repayment during the year	7.78
6	Net loan	6.44
7	Average loan	10.33
8	Interest @ 11.25%	1.16

Commission's Analysis

As stated above, PPCL has claimed interest on Normative loan of Rs. 107.58 crore based on capital cost of Rs. 153.69 crores. However, based on the capital cost of Rs. 137.77 crores arrived at Para 4.6.1 and with normative loan of 70%, the interest charges are computed as in the table below:

Table 4.12 : Interest charges approved for FY 2011-12

Sl.No.	Details	Rs. crore)
1	Capital cost	137.77
2	Loan at 70% of capital cost	96.44
3	Cumulative repayment upto 2009-10	93.36
4	Net loan opening	3.08
5	Repayment for the year (7.78 limited to 3.08)	3.08
6	Net loan closing	0
7	Average net loan	1.54
8	Interest @ 11.25%	0.173

The Commission approves the interest charges at Rs. 0.173 crore for FY 2011-12 against Rs. 1.16 crore claimed by PPCL.

4.6.4 Return on Equity

PPCL has claimed return on equity at Rs. 10.83 crore for FY 2011-12. The return is claimed on the equity of Rs. 46.11 crore (30% of capital cost of Rs. 153.69 crore) at a rate of 23.481% (The rate of return of 15.5% is grossed up by tax at 33.99%) as per Regulation 15(4) of CERC Regulations, 2009 and JERC Regulation 24 is given as:
Rs. 46.11 x 23.481/100 = Rs. 10.83 crore.

Commission's Analysis

It is seen from the annual accounts that the company is availing "tax holiday" under Chapter 80 IA of Income Tax Act. As such the company need not pay income tax for generation business. However, the company has to pay MAT at 19.93%. Hence the return on equity is grossed up to the extent and allowed at 19.36% as per CERC Regulations (15.2) which reads as under:

Return on equity shall be computed on pre tax at the base rate of 15.5% to be grossed up as per Clause 3 of this regulation.

The capital cost as discussed earlier in para 4.6.1 is limited to Rs. 137.77 crore, the equity @ 30% comes to Rs. 41.33 crores.

Hence, the rate of return on equity =15.50/(1-0.1993) = 19.36% (where MAT is considered at 19.93%).

So, the return on equity at 19.36% on Rs. 41.33 crores (30% of capital cost of Rs. 137.77 crores) works out to Rs. 8.00 crores.

Therefore, the Commission approves the return on equity at Rs. 8.00 crore for FY 2011-12 against Rs. 10.83 crore claimed by PPCL.

4.6.5 Operation & Maintenance (O&M) Expenses

The PPCL has claimed the O&M expenses at Rs. 8.32 crore for FY 2011-12. The O&M expenses include employee cost, R&M expenses and A&G expenses.

It is submitted by PPCL that the O&M expenses are considered at Rs. 22.90 lakh/ MW as specified in CERC Regulations for small gas turbine for the FY 2009-10 and thereafter the O&M expenses for the relevant year have been escalated at 5.72% per annum.

This is in line with CERC Regulation 19 (C) and JERC Regulations 27.

The O&M expenses for FY 2011-12 for 32.5MW plant are computed as per CERC Regulation and is under below:

(Rs. crore)

Year	O&M expenses
2009-10	22.90X32.50 = 7.44 crore
2010-11	7.87
2011-12	8.32

Source – Format 12 G of Tariff petition Page 28

Commission's Analysis

The Commission has examined the O&M expenses claimed by the company. The expenses claimed are in line with CERC Regulation 19 (C), 2009 and JERC Regulations 27 for the 32.5MW gas turbine plant.

The Commission approves the O&M charges at Rs. 8.32 crore for FY 2011-12.

4.6.6 Interest on Working Capital

PPCL has claimed the interest on capital at Rs. 2.68 crore for FY 2011-12 as per CERC Regulations 18 (b) and JERC Regulations 29 and interest is considered as per CERC Regulations 18 (3).

The working capital and interest thereon as arrived by PPCL are as below:

Table 4.13 : Interest on working capital

Sl. No.	Particulars	Working capital (Rs. crore)
1.	Cost of gas (one month)	4.52
2.	Maintenance spares at 30% of O&M expenses	2.50
3.	Receivables (two months)	14.17
4.	O&M expenses (one month)	0.69
5.	Total working capital	21.88
6.	Interest on working capital @ 12.25%	2.68

Source – Format 9 G of Tariff petition Page 25

Commission's Analysis

As per CERC Regulation 18 (6), the working capital to the Gas Turbine Generating Station shall be considered as under:

(i) Fuel cost of one month (Gas)

(ii) Maintenance spares at 30% of O&M expenses specified in Regulation 19

(iii) Receivables equivalent to two months of capacity and energy charges

(iv) O&M expenses for one month

The interest on working capital shall be arrived at a rate of interest on normative basis on short term PLR of SBI as on 1st April, 2009.

The Commission considers the working capital and interest thereon as per the Regulations mentioned above at an interest rate of 12.25% as below:

Table 4.14: Working capital & Interest on working capital

Sl. No.	Particulars	Working capital (Rs. crore)
1.	Fuel cost (Gas) (one month) (limited to generation corresponding to NAPAF as per CERC Regulation	3.73
2.	Maintenance spares 30% of O&M expenses	2.50
3.	Receivables for two months equivalent amount	11.91
4.	O&M expenses for one month	0.69
	Total working capital	**18.83**
5.	Rate of interest (%)	12.25
6.	Interest	2.31

The Commission approves the interest on working capital at Rs. 2.31 crores for FY 2011-12 against Rs. 2.68 crore claimed by PPCL.

5. Summary of Capacity charges (Fixed costs) and Energy charges as approved by the Commission

Table 4.15: Summary of Capacity charges / Fixed costs and Energy charges

Sl. No.	Particulars	Approved by the Commission
1.	Gross Generation (MU)	257.00
2.	Net Energy Generation (MU)	242.87
	Capacity Charges	**Amount** (Rs. crore)
3.	Depreciation	6.37
4.	Interest on loan	0.17
5.	Return on equity	8.00
6.	O&M expenses	8.32
7.	Interest on working capital	2.31
	Total capacity charges	**25.17**
8.	Fuel cost	46.29
9.	Energy charges (Gross) Rs./kWh	1.80
10.	Energy charges (Net) Rs./kWh	1.91

The Commission approves the capacity charges at Rs. 25.17 crore and variable charges at Rs. 1.91/kWh for FY 2011-12.

Note: The capacity charges (fixed cost) per month to be billed shall be calculated as per CERC (Terms and Conditions of Tariff) Regulations, 2009 Clause 21 (2) (b).

6. Directives

6.1 Metering of the power consumption of electric gas booster compressor

Directive -1:

A separate meter for recording the power consumption of electric gas booster compressor, may needs to be installed. In future, the auxiliary consumption will be allowed at 3% plus the actual power consumption limited to 2.5% of the electric gas booster.

6.2 Capital Cost:

Directive -2:

Approval of competent authority needs to be obtained to regularize the capital expenditure already incurred over and above the Techno Economic Clearance (TEC) cost of the project.

COMMISSION'S ORDER

The Commission approves the capacity (fixed) charges and energy charges for FY 2011-12 for PPCL Gas Power Station at Karaikal as given below.

1. **Capacity (fixed) Charges for FY 2011-12……………….. Rs. 25.17 crore**
2. **Energy Charges (Net) for FY 2011-12…………... Rs. 1.91 per kWh**

The order shall come into force from **1st June, 2011** and shall remain effective till **31st March, 2012.**

sd/	**sd/**
(R K Sharma)	**(Dr. V K Garg)**
Member	**Chairman**

Place: Gurgaon

Date: 6th August, 2011

Annexure-1

PPCL Gas Power Station (32.5 MW)

Electricity Department, Puducherry

S.No	Objections Raised	Response of PPCL
1	The Government had approved Tariff Proposal with a max ceiling of capital expenditure at Rs. 137.77 Crs and corpn has not completed all works envisaged in (TEC) issued by CEA. As per ministry of power notification dt. 30/3/92, the actual capital expenditure after completion of project is criterion for fixation of tariff. The actual capital expenditure incurred after deduction of infirm power sold has to be considered towards tariff calculations.	The PPCL at the time of commercial production (COD) has sent proposals for fixation of Tariff to Government of Puducherry and was approved by Lt. Governor, Puducherry for Rs. 137.77 Crores. In case the capital cost increases more than the TEC the developer can approach for approval of revised "Capital Cost" PPCL has adjusted sale of infirm power i.e., Rs. 14.38 crores against gas bill Rs. 15.09 Crores incurred upto (COD). However as per the Hon'ble Commission's Regulation 22 (2) the approved Capital Cost before 31.3.09 shall be basis to determine Tariff.
2	a) As procurement of spares is an integral process and is included in Capital Cost of Rs. 137.77 crores and any additional purchase of spares beyond the Techno Eco. Clearance shall not be considered under capital cost. b) Land purchased for construction of corporate office cannot be considered in Tariff Calculations as land provision made in Revised Cost estimates	The corporation has initiated process of procurement of critical spares for Gas turbines during 2002-03 & 2004-05 & the same capitalized during 2005-06 for Rs. 6.45 crores, out of which 1.06 crores is procured during 2002-03 There is no cut off date on procurement of initial spares & project cost shall include capitalized initial spares. As per Hon'ble Commission Regulation 22(2), investments made till 31st March 2009 shall form basis for capital cost.
3	The auxiliary consumption i.e., 5.5% as approved by CEA irrespective of auxiliary consumption in Tariff approved by Government has to be considered for tariff calculations.	M/s PPCL has engaged NTPC Ltd for conducting Energy audit in May 2008 and they opined that the APC has increased due to the aging effect of gas booster pump, boiler feed pump and cooling water pump, considering AC compressor, Instrument air compressor, CEP, Raw water pump, besides lighting power. Hence as per the actual operating conditions, Auxiliary power consumption is higher.
4	Petitioner considered depreciation rates as per CERC norms even for 2009-10 & 2010-11. As Tariff petition is for 2011-12, depreciation rate as per Government of India norms of 1994 adopted in Tariff approved by Government shall be considered for 2009-10 & 2010-11 also.	The depreciation for FY 2011-12 is as per JERC regulation 26 considering historical cost inclusive of additional capitalization. So there is no excess depreciation.

5	Petitioner claimed heat rate 2400 k.Cal / kWH as per CERC regulation for period 2009-14. PLF is only 85% for 2011-12, so heat rate of 2277 kCal/kWh is achievable. So heat rate of 2277 kCal/kWh is reasonable. Further the cost of liquid fuel system is considered in capital cost & as it is nor put to use during gas storage, so the cost of entire liquid fuel system including turbine cost is to be deleted from Capital cost as per cl 7(1) of CERC Regulations 2009. As petitioner is proposing to expand existing power plant, the land cost earmarked for expansion of power plant have to be deducted form capital cost.	The PPCL has already submitted year wise actual heat rate since COD of station upto 2009-10. The guaranteed heat rate of station as per manufacturer is higher. Further during FY 2009-10, the outages of GTG & STG are higher due to non availability of fuel viz it is actually 2410.25 kCal/kWH. Hence claimed heat rate is 2400 k CAL/kWH. Further as per Hon'ble regulatory Commission's regulation 22(2), that for the existing station the approved capital cost beyond 31.3.2009 shall be the basis for determination of Tariff. No claim is made for expansion of the existing power plant.
6	Petitioner has considered interest on loan capital at Rs. 1.163 Crores in format 12 G of petition. the entire funding is made by EDP though state plan funds & as PPCL has not availed any loan and so claim of interest on loan capital cannot be admitted	As per Hon'ble Commission's regulation 23, where equity employed is more than 30% the amount of equity for purpose of tariff shall be limited to 30% & balance treated as loan. Accordingly PPCL treated balance amount in excess of 30% as loan after adjusting the necessary adjustment to arrive loan amount for interest charges. Hence PPCL raised interest charges on normative loan.
7	The claim of full capacity charges for 2010-11 by petitioner cannot be admitted as Tariff Petition was filed for year 2011-12 only.	

Rejoinders filed by Electricity Department, Puducherry

Sr. No.	Objections raised	Response of PPCL
1.	**Capital cost** PPCL replied that as per section 22 (2) of JERC (Terms and Conditions for Determination of Tariff), in respect of existing power plants, the investments made and approved capital cost upto 31st March 2009 shall be basis for determination of tariff. EDP states that maintaining accounts as per accounting standard is one thing and treating any capital expenditure to be eligible as per provision in tariff notification is another. So the capital cost considered by the petitioner based on books of accounts is not correct and year wise capital expenditure has to be furnished with detailed justification. The EDP submits that the techno economic clearance was accorded by CEA for revised cost of Rs. 131.29 crore in July 1999 and was submitted to CEA in November 1977 and again modified to Rs. 131.29 crore. Hence the additional expenditure inrespect of land for construction of Corporate office, non plant buildings and quarters over and above provisions available in TEC may not be considered to determine tariff. The EDP submits that inrespect of vehicles, computers, office equipment etc, the expenditure incurred inrespect of corporate office should not be considered for tariff determination. Further interest income is not considered in arriving at the ARR. As order for erection of 32.5 MW power plant was placed on M/S BHEL, the expenditure incurred for works other than the 32.5 MW plant may not be considered. Additional spares cannot be accounted for.	It is submitted that the PPCL at the time of commercial Production (COD) of the station has sent its proposal to the Government of Puducherry for fixation of tariff for PPCL Karaikal station along with necessary supporting papers including the capital expenditure on the project since the tariff of the PPCL station is to be fixed by the respective Government under Sec. 43(A) of the supply of Electricity Act, 1948. The Government of Puducherry after scrutinizing the proposal and collecting the necessary data, as required, the proposal was approved by the Hon'b;e Lt. Governor by considering capital cost of **Rs.** 137.77 Cr which includes procurement of compressor which has not been exhibited by the respondent and unit cost @ 161 paise per unit plus Fuel Cost adjustment after getting clearance from the Finance Department, Government of Puducherry vide G.O. Rt. No. 50, dated 22.02.2000 (copy enclosed). The above said cost was incurred wholly and exclusively for the project. The corporation being a company within the purview of the Companies Act, 1956 is bound to maintain accounts in accordance with the Act and various Accounting standards as laid down by the ICAI. The Commission would appreciate that the corporation is statutorily required to maintain its books of account in accordance with the Act and if any deviation in the capital expenditure, this would invite adverse criticism from both the Statutory auditors and the AG Audit. As already intimated to the Commission, it may be important to reiterate that the Government of Puducherry had taken the capital cost as shown by the audited books of Accounts of the Company and it is on this basis that the tariff had been fixed by the Government of Puducherry and subsequent revisions in the tariff. It is also relevant to point out here that the capital cost of the Project had been approved by His Excellency the Lt. Governor of Puducherry. The Corporation has purchased MBOAs, Work stations etc. wholly and exclusively in connection with to achieve the better performance & efficiency of employees particularly in generation. The year wise details of addition of assets have been in the petition for the financial year 2008-09, 2009-10 & 2010-11. It is relevant to mention that, the Corporation has provided most of the street lights in the various areas of the Plant premises in order to have a proper illumination in the Sub-station area, Compressor area, Fire Production System, Cooling tower area, etc., in

		the night period in view of safety & security and to meet out any eventuality as the Plant is being operated round the clock. This expenditure was done as per Tariff Regulations. The contentions of the Respondent may be rejected.
2.	The EDP submits that expenditure incurred provided in plant and quarters area in 2009 can be met from the own profit and Rs. 82.75 lakhs may not be considered under capital cost. As per CERC Regulations 7 (1) in Tariff Regulations 2009-14, the assets forming part of the project but not in use shall be taken out of capital cost for tariff determination. So the petitioner is required to furnish the cost of Naptha and HSD system, its spares capitalized along with main plan and may be deducted under capital cost for tariff determination.	Electricity Department, Puducherry has raised the issue of additional capitalization of spares after the approved capital cost of Rs. 137.77 Cr. It is submitted to Hon'ble Commission that., the Corporation has initiated the process of procurement of critical spares i.e. Capital spares for the Gas Turbine during the financial year 2002-03 & 2004-05 and the same has been capitalized during the financial year 2005-06 as there had been no major capital spares/critical spares procured at the time of execution of the project due to inadequacy of funds and other administrative reasons. The total amount capitalized during the financial year 2005-06 was Rs 6.45 crores out of which Rs. 1.06 crores spares was procured during the financial year 2002-03. It is also relevant to mention that, the concept of cut off date on procurement of spares/ceiling on procurement has only been incorporated in the CERC regulation from the block period 2004-09. It is imperative to mention that, there is no cut off date on procurement of initial spares or ceiling on procurement of capital spares in the G.O. referred by the Electricity Department and it has also been stated at para-I.2 of the said Gazette notification that the project cost shall include the capitalized initial spares. It is also submitted that, as per Hon'ble Commission Regulation 22(2) investments up to 31* March, 2009 shall be the basis of the capital cost. Thus, the contentions raised by Respondent may be rejected.
3.	**Infirm power** The petitioner finalized liquidated damages for Rs. 5.00 crore in 2004-05 and adjustments were made in Annual accounts for 2004-05. By considering expenditure for supply of gas as Rs. 10.09 crore, as against sale of power as Rs. 14.38 crore, total energy supplied to Electricity Department from March 1999 to December 1999 as 76.55 MU, the average cost of gas / unit works out to Rs. 1.32/Unit, where as cost of fuel / unit in tariff is Rs. 1.61/unit and approved by the Government of Puducherry was only 82P/unit. So EDP submits that excess cost of Rs. 3.83 crore	It is submitted that, any revenue earned by the generating company from the sale of infirm power after accounting for the fuel expenses shall be applied for reduction in capital cost as per the Ministry of Power notification dt.30.03.1992. So, in this regard it is submitted to the Hon'ble Commission that, PPCL adjusted sale of power (infirm power) amount of Rs. 14.38 crores against the gas bill of Rs. 15.09 crores incurred up to the date of declaration of commercial production and the same has been done in line with guidance note issued by the Institute of Chartered Accountants of India and the said Accounts after audit by the AG. Authorities have already been laid before the Annual General Meeting and adopted. Therefore,

	incurred due to increased 50P/unit fuel cost over 82P has to be considered for reduction in capital for determination of tariff. EDP submits that fixing up rate of infirm power at 76P/Unit was taken up with petitioner vide letter dated 1st November 2000. EDP submits that the O&M expenses incurred to the extent of Rs. 1.86 crore during trail operation and capitalized may be deducted from capital cost.	the respondent's objection in connection with non reduction on account of infirm power sold does not appear to be correct. It is also imperative to submit that the power was sold to Electricity Department, Puducherry at a cost of 161 paise per unit plus Fuel Cost Adjustment, while the Corporation charged 187 paise per unit plus Fuel Cost Adjustment to TNEB and it is a well known fact that the cost of generation was not constant during the trial run period as the Plant was operated both in Open cycle and Combined cycle as a result of which the average cost of fuel per unit was fluctuating. It is also to be submitted that the Hon'ble Commission's Regulation 22(2) on "Capital Cost and Capital Structure" and CERC Regulation 7 (2) has categorically mentioned that for the existing station the approved capital before 31.3.09, shall be the basis for determination of tariff. Thus, the contentions raised by Respondent may be rejected.
4.	**Auxiliary consumption** EDP submits that the auxiliary consumption was 5.5% till 2003-04 and within 6% till 2008-09, but it was 6.42% during the year 2009-10, because of less generation through steam turbine due to reduction in gas. As CEA has recommended auxiliary consumption at 5.5% was achieved in 2003-04 by petitioner, the claim of petitioner for higher auxiliary consumption 6.70%is not reasonable. So EDP submit that average of annual auxiliary consumption from years 2000-01 to 2008-09 may be considered for fixing auxiliary consumption for tariff for 2011-12.	Electricity Department, Puducherry has mentioned that the APC should be considered 5.3@ as per CEA recommendation it is submitted that the Petitioner in its additional submission of affidavit dt. 07.02.11 has already submitted year wise actual APC since COD of the station. The Petitioner had engaged M/s.NTPC Ltd., for conducting Energy Audit in May, 2008 and they were of the opinion that APC has increased due aging effect of Gas Booster pump, Boiler Feed Pump & Cooling water pump etc and consideration of AC compressor, Instrument Air Compressor, CEP, Raw water pump and lighting power consumption (earlier not considered in PG test). Hence, as per actual operating condition the APC of the station has already higher, contentions raised by Respondent may be rejected.
5.	**Depreciation** The EDP submits that depreciation is adopted at a flat rate of 7.84% for plant and machinery inclusive of associated building. Since liquidated damages are finalized in year 2003-04, the excess depreciation provided from date of COD is accounted as prior period income. As per JERC Regulation 5 of 2009, the rate of depreciation considered in the working of tariff rate of Rs. 1.72/Unit has to be made applicable upto 2010-11. So EDP submits that the Commission may account for the depreciation paid as tariff order issued by Government of Puducherry.	It is submitted that, the depreciation rate for the tariff period 201 1-12 has been arrived as per the JERC Regulation, 26 and the details of the workings has been given at page-23 of the original tariff petition. However, it is submitted to the Hon'ble Commission, the depreciation has been recomputed as per JERC Regulations 26(ii) &26(iv), considering historical cost including additional capitalization. Therefore, it is submitted that, there is no excess depreciation charged in the rate than what actually has been stated in the regulations of JERC under Sec.26 (iv). Hence, the contentions raised by Respondent may be rejected.

6.	**Heat rate** EDP states that (1) Heat rate of plant is 2277 Kcal/kWh for combined cycle. (2) 3232 Kcal/kWh for open cycle. Which was approved by CEA. The petitioner in his reply stated that for 2009-10, the outages of GTG & STG are higher due to non availability of fuel and heat rate was 2410.25 Kcal/kWh. During 2010-11, the heat rate will be higher due to non availability of gas and less generation. As petitioner is receiving normal quantity of gas without any restrictions during FY 2011-12, the heat rate of 2277 Kcal/kWh or average of heat rate for period 2002-03 to 2008-09 may be considered for fixation of tariff.	Electricity Department, Puducherry has raised the issue on heat rate of the station. It is again submitted that the Petitioner in its additional submission vide affidavit dt.07.02.I 1 has already submitted year wise actual heat rate since COD of the station up to the year 2009-10. The Petitioner again submits that the guaranteed heat rate of the station (as per manufacturer) is higher than as mentioned by the Respondent. Again, for the FY 2009-10 the outages of GTG and STG was higher due non availability of fuel as the Petitioner has already mentioned in para 9.4(iv) to (vi) of its original petition, so the heat rate has actually 2410.25 Kcal/Kwh. Thus, the Petitioner has claimed heat rate 2400 Kcal/ Kwh, as per CERC Regulation, 2009 (Assam GPS of same capacity of Plant of PPCI) which is less than actual heat rate of the instant station. Further, Electricity Department, Puducherry has raised the issue of clause of 7(1) of CERC Regulation, 2009. It is to be submitted that the Hon'ble. Commission's Regulation 22(2) on "Capital Cost and Capital Structure" arid CERC Regulation 7(2) has categorically mentioned that for the existing station the approved capital before 31.3.09, shall be the basis for determination of tariff. The Petitioner is submitting that the Petitioner has not claimed any cost for its expansion of project. Hence, all the contentions raised by Respondent may be rejected.
7.	**Interest and finance charges** The EDP submits that the claim of interest on loan capital for Rs. 1.63 crore cannot be considered because the entire fund for the establishment of instant plant was made available to petitioner through state plan funds. This is also in line with tariff order issued by the Hon'ble JERC inrespect of EDP, Dadra and Nagar Haveli (DNH and Diu & Daman (DD)	It is submitted that, it has been stated Hon'ble Jt. Commission's Regulation, 23 Debt- Equity Ratio, where equity employed is more that 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Accordingly, the Corporation treated the balance amount in excess of 30% as loan after adjusting the necessary adjustment as required in the regulation to arrive the loan amount for interest charges under Sec25 of JERC - Interest and Finance Charges on Loan. Therefore, it is submitted that, the PPCL raised the interest charges on Normative Loan as entitled in the relevant provisions of the Tariff Rules & Regulations of the JERC, 2009. It is relevant to mention that, the claim of Electricity Department, Puducherry is wrong; and also the Corporation is entirely different from the Electricity Department and the entire Share Capital of the PPCL has been funded by the Government of Puducherry. Hence, the all the contentions raised by Respondent may be rejected.

8.	**Recovery of capacity charges for the year 2010-11** **Electricity Department Puducherry submits that the claim of charges for the year 2010-11 by the petitioner is not admissible as the petitioner has filed the tariff petition only for the year 2011-12.**	It is submitted that in the petition (no.18/10), Petitioner has informed the Hon'ble Commission inability to achieve NAPAF is due to reasons, beyond the control of Petitioner and requested the Hon'ble Commission to relax the norm-"Normative Annual Plant Availability Factor" NAPAF for the Karaikal Station for recovery of full fixed charges in the FY 2010-11 based on actual availability of fuel. The prayer was under the provision 43 of JERC (Terms and Conditions of Tariff) Regulations, 2009. Hence, the contention raised by Respondent may be rejected. In view of above, it is submitted that the contentions raised by Respondent in its reply and also the prayers of the Respondent in its reply may be rejected. The Petitioner prays that the Hon'ble Commission may please allow the tariff as claimed by the Petitioner.

Name of the Objector

Sri. R M Bairavan, Kairakal Industries Forum, Karaikal

S.No	Objections Raised	Response of PPCL
1.	It is inopportune time for PPCL to revise the tariff for a) PPCL had annual shut down for 15 days. b) Nearly three months shut down based on major break down. c) There was strike by employees. d) There was only 75% production for considerable period	It is to be informed that there is a mandatory provision for every Generating station schedule for maintaining the plant. There has been a major forced breakdown in PPCL power plant due to abnormal temperature raised in one of the bearings of the main shaft of Gas Turbine on 7th January, 2011 and the Plant was brought back in to the operation on 14th March 2011. The plant was down for 64 days out of which 30 days per year is allowed for normal shutdown and 34 days as breakdown. Hence there was no shut down for three months as projected by the Forum. Therefore the annual shutdown program cannot be considered as an obstacle for this petition filed by PPCL. There was no strike in the financial year 2010-11 by the employees. There has been reduced production from Jan, 2010 to Jun, 2010 as there was 30% cut in the supply of Natural Gas supplied by GAIL. The contentions of the Respondent may be rejected.
2.	Whenever there is a short supply of gas from ONGC and GAIL the generation reduced. This could have been avoided by alternative fuel to keep up the performance and run the plant at the maximum generation capacity.	It is submitted that PPCL power plant has no alternate fuel linkage. So whenever there is a short supply of natural gas the generation has to be reduced. This reduction has happened in the year 2010 only due to short supply of Fuel. PPCL has tried upto highest level for scheduled supply of fuel. For the previous 10 years there has been no reduction. In this current financial year 2011-12 there has been no reduction of fuel till date. The contentions of the Respondent may be rejected.
3	Frequent reduced power supply to Industries from the allotted power by department without prior information is causing much hardship to Industries. Coordination between generation and distribution is to be improved.	It is submitted that PPCL is not supplying power directly to Industries. Further, PPCL has not reduced in supply from PPCL to EDP. Again, there is a regular and proper co-ordination Generation and Distribution entity. The objection raised by the Respondent may be rejected.
4	The Forum request that any tariff increase at this time is not justifiable & it can be deferred.	It is submitted this objection has no basis, the Petitioner has filed the tariff petition as per the Hon'ble Commission's provisions of the relevant Tariff Regulations, 2009 and for the last 8 to 9 years and then there was no hike in tariff. The reduction of performance in 2009-2010 and 2010-11 has been due to short supply in gas. The objection raised by

		of the Respondent may be rejected.
5	Any revision in tariff should be marginal. The PPCL generation is 219.83MU compared to total energy bill 2706.20MU i.e. 8% of total requirement is from PPCL generation.	It is submitted the issue has raised by Forum is irrelevant in present Tariff petition and the Petitioner has no comment on the issue. The Forum has indicated selling price for PPCL is 2.067 Rs/kwh which is highly escalated to Rs. 3.76/kwh. The Forum again raised the issue on any marginal based on the costing from the audited balance sheet is to have an impact of 8% on the chargeable tariff to the consumer. Hence any small increase permitted by the Hon'ble Commission to PPCL need not be passed on the consumer by the Department since there is good scope for performance improvement and to accommodate small revision to PPCL.
6	Already indicated purchase price for PPCL =2.067/kWh & escalated to Rs. 3.76/kWh. Any marginal increase has impact of 8% on chargeable tariff to consumers. Small increase in tariff by Commission to PPCL should not be passed on to consumer by the Electricity Department as there is scope for performance improvement.	It is submitted that the average Selling Price per unit of PPCL at present is Rs. 3.20/kwh and not Rs. 2.067/kwh as bought out by the Forum. The hike in selling price happened in June, 2010 when the Gas price was doubled by the Ministry of Petroleum & Natural Gas. The Petitioner has filed its Tariff petition as per the relevant provisions of the Hon'ble Commission Tariff Regulations, 2009. The objection raised by of the Respondent may be rejected.
7	Industries in Karaikal with captive power generation may be permitted to wheel between Industries through State GRID (Open Access Policy) on a chargeable basis, as the department can purchase excess power at the purchase rate of PPCL & Pump into grid & utilized for consumers.	It is submitted that the above matters does not come under the purview of PPCL hence PPCL has no comments to offer.