BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION

PETITION NO: ……..
OF 2013

IN THE MATTER OF	:	Petition under Section 62 and 83 (4) of the Electricity Act 2003 read with chapter-II of the Joint Electricity Regulatory Commission (Terms & Conditions for Determination of Tariff) Regulations, 2009 for approval of Tariff for Karaikal Gas Power Station, (32.5MW) for the period 2013-14.
AND IN THE MATTER OF	:	
PETITIONER	:	Puducherry Power Corporation Ltd.(PPCL), #10, Second Cross, Jawahar Nagar, Boomianpet, Puducherry-605 005
Respondent	:	Electricity Department, Govt. of Puducherry, 137, NSC Bose Salai, Puducherry – 605 001.

The Petitioner humbly states that:

1.0 The Petitioner herein i.e. the Puducherry Power Corporation Ltd. (PPCL) is a Government of Puducherry undertaking and is a Government Company within the meaning of the Companies Act, 1956. Further, it is a “Generating Company” as defined under Section 2(28) of the Electricity Act, 2003.

2.0. The Puducherry Power Corporation Ltd was incorporated on 30.03.1993 with the objective of generating 32.5 MW of Electricity (22.9 MW from gas turbine and 9.6 MW from Steam turbine) at Karaikal which is one of the outlying regions of Union Territory of Puducherry. The required gas of 1.91 lakhs cu.m of gas per day is obtained from the gas wells at Narimanam in the Cauvery basin under an agreement with the GAIL (India) Ltd.

3.0. Karaikal Gas Power Station declared commercial operation w.e.f. 03.01.2000 and is supplying power to Electricity Dept., Puducherry under the PPA signed with them on 25.02.2002. Consequent to setting up of Hon'ble Joint Electricity Regulatory Commission, the Petitioner had filed petition for determination of tariff for the period 2011-12. Hon'ble Commission vide Order dtd. 06.08.2011 has approved tariff with effect from June, 2011. Subsequently, based on review petition filed by Petitioner, Hon'ble Commission has revised the tariff vide its order communicated to PPCL on 28.12.2011 and the Corporation has filed the Appeal No.41 of 2012 to APTEL against the review order pertaining to the tariff order 2011-12 which is disposed by the APTEL with directions. The petitioner has already approached to the Hon'ble Commission for implementation of above judgment. At present, the tariff of the instant is at a rate fixed by the Hon'ble Commission to the Electricity Department vide order dated 13.04.2012 on the basis of petition filed for the tariff period 2012-13.

4.0 Section 62 of Electricity Act, 2003 provides for determination of tariff by the Appropriate Commission for supply of electricity by a generating company. The Hon'ble Commission, under Section 83(4) of Electricity Act, 2003, is vested with the jurisdiction to regulate the tariff of the Generating Companies owned or controlled by the Govt. of Union Territories.

The petitioner has formulated the tariff for Karaikal Station for the year 2013-14 as per para 5 of JERC (Terms & Conditions for tariff) Regulations, 2009. As per para 12 of JERC Regulations and accordingly formats 1G to 12G as applicable to generating Companies have been filled in and placed at **Annexure-I.** The various assumptions considered for finalization of tariff are brought up in the following paras as per the methodologies recommended by JERC and CERC as the case may be:

5.0 The Tariff has been calculated as fixed /capacity charges in Cr./per annum and the energy charges calculated based on cost of fuel/gas consumed for generation of electricity, as provided vide para 19 of JERC Regulations, 2009. The JERC/CERC Regulations have been kept in view whereever necessary while finalizing this petition and formulating tariff for instant station.

5.1 CAPITAL COST:

JERC Regulation 22 is as follows:

"22. Capital Cost and Capital Structure

…(2) Investments made prior to and upto 31st March immediately preceding the date of the notification of these Regulations or date of receipt of a petition of tariff determination whichever is earlier shall be considered on the basis of audited accounts……."

The Petitioner had claimed the total capital cost of ` 146.45 crores based on the audited accounts as stated in Regulation 22 (2) of the Tariff Regulations, 2009 for the tariff period 2011-12. But, the Hon'ble Commission while determining tariff for the above period have allowed ` 137.77 Cr. as Capital Cost and disallowed additional capital expenditure incurred ` 8.44 Cr. claimed for the period from 2003-04 to 2010-11 vide orders dt.06.8.2011 & 28.12.2011. The petitioner has filed an Appeal No.41 of 2012 before the Hon'ble ATE for considering additional capital expenditure, PLF, Auxiliary consumption and other components of the tariff against the tariff order and the judgment thereon has been issued by the Appellate Tribunal on 21.11.2012. The Hon'ble Commission has yet to implement the ATE judgment. Thus, the petitioner has prepared the tariff for the year 2013-14 by considering the capital cost of ` 148.07, as per unaudited balance sheet. Further, the total Capital Cost of ` 148.04 crores is upto 31.03.2011 as per the audited financial statement pertaining to the financial year 2010-11 and ` 148.07 crores upto the financial year 2011-12 (unaudited). In this regard, it is submitted to the Hon'ble Commission that an amount of ` 1.55 crores towards capitalization of mandatory spares of Gas Turbine is included in the total additions of the financial year 2010-11.

5.1.1 No generating station can operate on a sustainable basis to achieve the level of performance parameters specified by the Hon'ble Commission without incurring capital expenditure on various items from time to time. The expenditure on capital assets to be incurred by the generating stations are, therefore, a necessity for the proper and effective working of the generating station and, therefore, are beneficial to the respondents. The incurring of additional capital expenditure from time to time towards replacement / refurbishment of old assets has been absolutely necessary to maintain the higher level of performance on a sustainable basis and is in the larger public interest. The significant improvements in the performance which the generating stations have been able to achieve were because of the investment made from time to time in the replacement/ refurbishing of the assets which have served for many years.

5.1.2 It is submitted that the capital cost for purpose of tariff shall be subject to revision by the Commission based on judgment of Hon'ble ATE or other court orders as applicable i.e the claim on the above account / aspect is subject to the final decision / order of the Commission on the judgment given by the Hon'ble Appellate Tribunal for Electricity in Appeal No.41 of 2012 filed by PPCL. PPCL reserves the right to modify / change / add to the claim under the respective head i.e capital cost upon the pronouncement of the judgment of the Hon'ble Appellate Tribunal in Appeal

No.41 of 2012 and hence at present the Corporation is claiming the capital cost of ` 148.04 crores plus additional capital expenditure incurred during the financial year 2011-12.

5.1.3 In light of the above facts, it has been submitted to the Hon'ble Commission to allow the Petitioner for claiming the capital cost of ` 148.07 Cr. for the Financial year 2013-14.

5.2 RETURN ON EQUITY

It is submitted that as per JERC Regulation 23, the tariff determination is by splitting the capital expenditure into debt and equity of 70:30. If the equity employed is more than 30%, the amount of equity for determination of tariff is limited to 30% and the balance amount is considered as normative loan. In case of instant station, since the entire capital cost has been funded from the own funds, the equity has been considered as 30% and the balance 70% has been considered as normative loan for calculation of Interest on Loan component of capacity charges.

The return on capital employed has been arrived @ 23.481% on the equity portion as the Corporation is subject to Corporate Tax and the Tax Holiday under section 80 IA was ended during the financial year 2009-10.

The return on Equity has been calculated @ 23.481% for the year 2013-14 as per JERC Regulations 24 and CERC Regulations 2009. Moreover, it is submitted that Petitioner does not have any tax holiday with effect from the Financial year 2010-11 as the tax holiday was applicable to the Corporation upto 2009-10. As such the Petitioner is claiming return on equity in the tariff petition at grossing rate of 23.481%.

Therefore, it is respectfully submitted that the return on equity as calculated @ 23.481% may be allowed, to recover the fixed charges in line with Tariff Regulations of the Hon'ble Commission on return on equity.

5.3 DEPRECIATION ON ASSETS

The rate of depreciation has been considered as per JERC Regulations 26 and applicable CERC Regulations 2009. In this regard, it is submitted before the Hon'ble Commission that the accumulated depreciation of the respective individual Asset has been restricted to 90% of the Capitalized value of the Assets in order to keep the 10% of the Cost as WDV as stated in the JERC Regulation vide clause No.26 beyond which the depreciation has not been allowed in view of the provisions in JERC on depreciation and accordingly the depreciation has been arrived.

5.4 INTEREST ON WORKING CAPITAL

For computing the element of Interest on Working Capital (IWC) of fixed/capacity charges the rate of interest considered is SBI Base Rate as on 01.4.2012 as per CERC Regulations 2009 para 18(3). The energy charges considered while working out IWC are based on average actual fuel consumption and payments made pertaining the period commencing from July'12, August'12 and September'12 and the same as per Petitioner's unaudited annual accounts.

The Accounts of the Corporation for the year 2010-11 has been audited and adopted in the AGM. A copy of the Accounts along with the Auditors Report along with the Comments of C&AG are enclosed **(Annexure-II)** for perusal.

As regards, the Accounts for the year 2011-12, we submit to inform that the Accounts are in the process of finalization and would be completed at the earliest. However, we are enclosing the unaudited Accounts for the said period

(Annexure-II) and the copies of GAIL (I) Limited invoices from 01.04.2012 to 31.10.2012 are also enclosed in the **Annexure-III.**

5.5 OPERATION & MAINTENANCE(O&M) EXPENSES

The O&M expenses element of Fixed/Capacity charges has been taken @ 22.90 lac/MW as specified by CERC for small gas turbine for the year of 2009-10 and thereafter the O&M expenses for relevant year of tariff has been worked out considering escalation @ of 5.72% p.a. over the base O&M charges of 2009-10 as above based on JERC Regulations 27 and applicable CERC Regulations.

5.6 HEAT RATE AND AUXILIARY CONSUMPTION

The Tariff Regulations of the Hon'ble Commission provides that the norms and parameters of the Central Commission's Tariff Regulations shall be applicable. The Central Commission's Regulations provide for determination of Station Heat Rate on the basis of Gross Calorific Value (**GCV**).

5.6.1 For calculating Energy/Variable charges, the Heat rate considered is 2475 kCal/kWh at actual based on the best heat achieved by the generating company during the financial year 2004-05. The Station design net heat rate is 2291 Kcal/kwh. A copy of the heat balance diagram for design heat rate is enclosed in **Annexure-IV**. The gross design heat rate for net station design heat rate of 2291 Kcal/kwh works out to 2520 Kcal/kwh. The annual heat rate achieved vis-à-vis generation is enclosed in the **Annexure – V**. It is submitted the heat rate achieved for the financial year 2011-12 was 2694.09 and for the first six months of the financial year 2012-2013 is 2586.30 Kcal/kwh and PPCL is not able to recover the Energy Charges fully. The average monthly under recovery is ` 25.79 lakhs per month. Ministry of Power vide its notification dt. 31st March 2012 in consultation with the Bureau of Energy Efficiency specified the energy consumption norms and standards for designated consumers for the period 2012-13 to 2014-15. PPCL is one of the designated consumers and the target net heat rate fixed is 2697 Kcal/kwh i.e. Gross heat rate of 2535 Kcal/kwh @ Auxiliary Power Consumption of 6%. The relevant pages of the Notification from Ministry of Power is enclosed in the **Annexure-VI**. Based on the present performance of the Plant and notification of the Ministry of Power the Hon'ble Commission is requested to grant Gross Heat rate of 2600 Kcal/kwh for the financial year 2013-14. Since the machine of the instant station is already twelve years old, the degradation factor of the machine at least the design heat rate may be granted. The auxiliary power consumption (APC) is considered as per actual based on period from 01.04.2012 to 30.11.2012 because the station has electric Gas Booster Compressor pumps due to which APC is higher and CEA has also recommended higher APC for plants having electric Gas Booster Compressor. Since Natural Gas is supplied at a lower pressure i.e. 3 to 5 kg/sq.cm. Electric driven Gas Booster compressor is required to boost up the gas pressure to 17 kg/sq.cm resulting in increase of APC. Four electric driven Gas Booster Compressor of 300 KW each has to run to achieve full load. It is imperative to submit before the Hon'ble Commission had held in a number of judgments that the vintage of power plants has to be kept in mind before determining the various operating parameters for the power plant and accordingly the petitioner considered APC at 6% which is also less than the actual.

In Gujarat State Electricity Corporation Limited v Gujarat Electrcity Regulatory Commission & Ors (Judgment dated 23.11.2006 in Appeal No. 129 of 2006), where the main issue was seeking relaxation from various norms due to the age of the power plants, the Hon'ble Tribunal held as under-

> *"6. According to the appellant, the first respondent Regulatory Commission disallowed various claims resulting in substantial impact on the finances of the appellant apart from declining to relax the claim as sought for by the appellant. The major headings under which adverse impact on the appellant, as enumerated by the appellant are (i) Overall impact resulting in loss to the appellant (ii) Station heat rate (iii) Auxiliary consumption (iv) Specific oil consumption (v) PLF for GSECL plants (vi) Transit loss of coal (vii) Depreciation (viii) Return of equity and (ix) approving operational and financial parameters for F.Y. 2005-06 to F.Y. 2008-09.*
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> *27. **Point D:** What is the quantum of auxiliary consumption to be allowed? The learned counsel for the appellant nextly contended that the plant auxiliary*

consumption in the case of generating units such as Gandhinagar 1 to 4, Sikka, KLTPS, Dhuravan are higher. It is also pointed out that for the thermal power plant, the auxiliary consumption even after the plant is running at low generation, the auxiliary consumption by the first respondent Commission is far less and it should have been fixed between 12-13% depending upon the plant conditions. The CEA report on operation norms for coal/lignite, fired thermal power station, is found to be variant in large scale. According to the appellant, auxiliary consumption should have been fixed at the rate at which it is claimed. Only in respect of Gandhinagar 4 and Dhuravan 1-6 (oil), there is considerable difference in the auxiliary consumption approved by the first respondent Commission. There is considerable difference in respect of Sikka and KLTPS generating station. Though percentage-wise it appears to be of not much dimension / quantity yet the accumulation thereof reflects on the appellants' generation revenue and finances. ***This requires a modification in respect of the auxiliary consumption of the said generating stations viz. Gandhinagar 1 to 4, Sikka, KLTPS, Dhuravan. Point D is allowed in part."***

5.6.2 This principle has been further elucidated by the Hon'ble Appellate Tribunal for Electricity in Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited v Uttar Pradesh Electricity Regulatory Commission and Ors (Appeal No. 96 of 2008), wherein the Hon'ble Tribunal has held as under:

" *21. The aforesaid recommendation of CEA recognize that the smaller old units which are still under operation are operating at much higher heat rates, Auxiliary Power and Secondary Fuel Consumption levels and that these units require Renovation and Modernization. In the interregnum relaxed operating norms can be set for these before carrying out R&M for such low performing units. A period of 3-5 years had been indicated by CEA and it was expected that the utilities would have meticulously planned R&M and by this time would have progressed well on execution front.*

22. It is also noticed that CERC in their order dated June 19, 2002 in the petition No. 62 of 2000 had allowed relaxed operational norms in case of Talchar Thermal Power Station comprising of four units of 60 MW and two units of 110 MW.

23. ***This Tribunal in its judgment in appeal No. 129 of 2006 dated November 23, 2006 has also recognized that relaxation in norms needs to be allowed in case of smaller old units. A similar dispensation was also allowed by this Tribunal in appeal No. 81 of 2007 vide its judgment dated January 10, 2008 in the case of Indraprastha Power Generation Co. which also has smaller units of 4X62.5 MW in IP Station, 2X67.5 MW in Rajghat Power House and six Gas Turbines of 30 MW rating and with Waste Heat Recovery Boiler and Steam Turbine.***"

5.6.3 The Hon'ble Commission may consider facts and factors and allow the petitioners to avail the actual auxiliary consumption made during the period from 01.04.2011 to 30.11.2011 (coverage of 8 months) of the tariff year 2011-12. The Petitioner reiterates that without prejudice to the above factual position and submissions, the Petitioner states that at the most the Station Heat Rate ought to be worked out at the average of the station heat rate.

In this connection, the Petitioner submits that the Hon’ble Commission has the power to remove difficulties and amend / deviate from the norms provided for Regulations 43 and 44 of the JERC Tariff Regulations, 2009. The power to relax is a judicial discretion vested in this Hon’ble Commission.

5.7 FUEL COST

It is submitted that the petitioner has considered requirement of fuel stock etc. for working out interest on working capital and the Variable Charges for power supply from Karaikal station, based on landed cost of gas for the months of July’12, August’12 and September’12 instead of landed cost of the gas for the months of Jan.’12, Feb.’12 and March’12 as per JERC / CERC Regulations. This has been considered to arrive the fuel cost in the realistic manner. Therefore, it is prayed that Hon’ble Commission may please allow working out of capacity and variable charges based on weighted average landed cost of gas for the months of July’12, August’12 and September’12.

5.8 NORMATIVE ANNUAL PLANT AVAILABILITY FACTOR (NAPAF):

As per JERC Regulation, the Hon’ble Commission shall be guided by the principle and methodologies of Regulation of CERC (Terms and Conditions of Tariff) Regulations, 2009. CERC has specified Normative Annual Plant Availability Factor (NAPAF) for recovery of full fixed charges at 85% for the period 2009-14 for thermal generating stations.

5.8.1 Hon'ble Appellate Tribunal vide its judgment dt.21.11.2012 for appeal no. 41 of 2012 for the instant station has stated that "**The Tariff Regulations provide that the components of generation tariff shall be as laid by the Central Commission in the 2004 Tariff Regulations as amended from time to time. The 2009 Tariff Regulations have been made effective by the Central Commission with effect from 1.4.2009. According to the 2009 Regulations, Normative Plant Availability Factor (NAPF) is to be taken as 85% for thermal power stations. However, the Joint Commission in the impugned order adopted NAPF of 87% contrary to the Tariff Regulations. The State Commission is directed to pass the consequential order in accordance with the Tariff Regulations".**

5.8.2 In view of the above judgment, it is submitted that Hon'ble Commission may be pleased to fix the norm-"Normative Annual Plant Availability Factor" NAPAF for the Karaikal station for recovery of full fixed charges in the FY 2013-14 at 85% as laid down in the terms and conditions of the determination of tariff issued by JERC and based on the factual position of the immediate financial years of 2009-10 and 2010-11 besides ageing of Plant.

5.9 ANNUAL FIXED CHARGES AND ENERGY CHARGES

Based on above, the Annual Fixed/Capacity charges have been worked out for the financial year 2013-14 (for detailed computations please refer **Annexure-I).**

Financial Year	Annual Capacity charge (` In Cr.)
2013-14	24.12 crores

The energy charges to be billed every month shall be as per following formula based on CERC Regulations 2009.

Energy Charge(ECR) = GHRxLGPx100/{GCVx(100-APC)},-------- **A**

Where ECR = Energy charge rate, in Rs per KWH sent out upto three decimal charges, GHR= Normative Gross Station Heat Rate in Kcal/kwh,

LGP= Weighted average landed price of gas in Rs/scm,during calendar month,

GCV= Gross calorific value of gas , in kcal per scm during the calendar month,

APC= Normative Auxiliary Power Consumption in percentage

The petitioner has considered Gross Station Heat Rate = 2600 kcal/Kwh Auxiliary Power Consumption (APC) = 6%.

5.9.1 It is also submitted that the Petitioner is presently raising bills for the energy supplied to Electricity Dept., Govt. of Puducherry as per the formula @ para 5.9 with normative Gross heat rate of 2475 Kcal/kwh and Auxiliary power consumption of 5.5% w.e.f. 1.04.2012 as energy charges per unit and ` 26.17 crores as capacity charges per annum at 87% PLF for the tariff period 2012-13 vide order dated 13.04.2012 issued by the Hon'ble JERC.

6.0 It is submitted that in addition to Billing of Fixed/capacity charges & Energy charges as being submitted for approval of this Hon'ble Commission, the Petitioner may be allowed to recover statuary taxes, duties, etc., on actual.

7.0 Hon'ble Commission vide para no.5 of Tariff order dated 13.04.2012 allowed truing up of Energy charges for the months of June'11, July'11, September'11, October'11 & first fortnight of August'11 based on actual monthly weighted average GCV of gas and average gas price. Truing up for remaining months of the financial year has been done and the figure works out to be ` 2,30,60,432/- (Two crores thirty lakhs sixty thousand four hundred and thirty two only) after adjusting the amount as per the tariff order dt.13.04.2012. The working sheets as well as the gas bills raised by M/s.GAIL are enclosed for perusal in **Annexure-VII**.

8.0 PRAYER

In view of the above submissions, it is humbly prayed that the Hon'ble Commission may be pleased to:

i) Approve the tariff for the year 2013-14 as brought out in this Petition as detailed below at 85% PLF.

Fixed cost	- ` 24.12 crores per annum
Variable Energy Charges	- As per formula in para 5.9 – A with normative GHR of **2600 Kcal/kwh** and normative APC of **6%.**

ii) Allow the "Normative Annual Plant Availability Factor" @ 85% as laid down in the CERC Regulation vide clause No.26 for Karaikal Power Station for the year 2013-14 for full fixed cost recovery and as per the order of Hon'ble Appellate Tribunal.

iii) Allow capital cost as prayed by the Petitioner.

iv) An amount of ` 2,30,60,432/- (Two crores thirty lakhs sixty thousand four hundred and thirty two only) may be allowed to be recovered as a part of review of GCV and gas price for FY.2011-12 for the remaining periods of the tariff period (i.e., Nov'11, Dec'11, Jan'12, Feb'12, Mar'12 and 2nd fortnight of Aug'11).

v) Allow the recovery of filing fees as and when paid to the Hon'ble Commission and publication expenses from the beneficiary.

vi) Pass any other order in this regard as the Hon'ble Commission may find appropriate in the circumstances pleaded above.

(PETITIONER)