BEFORE THE DELHI ELECTRICITY REGULATORY COMMISSION

Filing No:

Case No. :

IN THE MATTER OF	Filing of Tariff Petition under section 62 of the Electricity Act, 2003 for determination of Generation Tariff for the Financial Year 2011-12, & Truing-up for the Control period from FY2007-08 to FY2010-11.
AND	
IN THE MATTER OF	Pragati Power Corporation Limited "Himadri", Rajghat Power House Complex, New Delhi - 110002 PETITIONER

THE APPLICANT ABOVE NAMED RESPECTFULLY SUBMITS

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Chapter 1 : Background

This Chapter deals with the background of this Petition.

1.1 Introduction

1. The Govt. of India notified the Electricity Act, 2003 on 10th June, 2003 repealing the Indian Electricity Act-1910, the Electricity (Supply) Act 1948 and the E.R.C. Act, 1998. Among the tariff related provisions, the State Electricity Regulatory Commission (SERC) has to be guided by National Electricity Policy and National Tariff Policy. The generation, transmission and distribution tariff have to be determined separately. The State Commission has framed MYT Regulations for the control period FY 2007-08 to FY 2010-11 specifying the terms and conditions for determination of tariff.

2. To fulfill this statutory requirement, PPCL submitted the petition on 10th August, 2007 for approval of the Aggregate Revenue Requirement for Pragati Power Station-I for the control period of four years i.e. from FY2007-08 to FY2010-11 and truing-up of tariff for FY2006-07.

3. Hon'ble Commission passed the Order on 14.12.2007 and determined the tariff for first control period and trued –up the tariff for FY 2006-07.

4. Hon'ble Commission has now decided to extend the principles of MYT control period FY2007-08 to 2010-11 to the next FY 2011-12.

1.2 Brief Company Profile

1. "Pragati Power Corporation Ltd." (PPCL) is a Government Company engaged in Power generation within the meaning of Companies Act, 1956 and is wholly owned by the Government of National Capital Territory of Delhi.

2. To bridge the gap between demand and supply and to give reliable supply to the Capital City, Delhi Govt. established the 330 MW combined cycle gas based Pragati Power Project-I on fast track basis. Further it is a Generating Company as defined under Section 2(28) of The Electricity Act.

3. Pursuant to the applicable provisions of the Delhi Electricity Reforms Act, 2000, the Government of National Capital Territory of Delhi undertook the reform and restructuring of the erstwhile Delhi Vidyut Board (DVB), which was implemented through a statutory transfer scheme. The Transfer Scheme rules notified provided for reorganization of DVB including transfer of its properties, assets, liabilities etc. The transfer scheme provided for unbundling of the erstwhile DVB into five companies. PPCL took over certain assets and liabilities relating to Pragati Power Station-I from erstwhile DVB on 01.07.2002.

Chapter 2 : Submissions

1. This Chapter lays down the modality of making submissions to the Hon'ble Commission in support of the Prayers made out as under.

2.1 Submission Plan

1. PPS-I propose to make submissions to the Hon'ble Commission in support of this Petition as under:

- Operational Parameters for the Pragati Power Station-I
- Financial Parameters for Pragati Power Station-I
- Capital Expenditure for Pragati Power Station-I
- Prayer

2.2 Brief of Submissions

The petitioner requests the Hon'ble Commission to give due considerations to the following facts while evaluating the present tariff petition:

- The Hon'ble Commission has extended the principles of MYT control period FY2007-08 to 2010-11 to the next FY 2011-12. It is submitted that CERC has issued Central Electricity Regulatory Commission (Terms and Conditions of Tariff), Regulations, 2009. The Central Commission has modified number of parameters in the regulations. DERC MYT Regulations were framed in the year 2007 for the control period from FY 2007-08 to FY 2010-11. It may be appreciated that various circumstances and applicable principles have now changed. Hence, the principles as mentioned in the MYT Regulations can not be extended in to-to to FY 2011-12. Among the tariff related provisions, the State Electricity Regulatory Commission (SERC) has to be guided by National Electricity Policy, National Tariff Policy and CERC Regulations. It is submitted that the extension of the principles of MYT Regulations for FY 2011-12 should not be detrimental to the interest of the Company. It is prayed that the norms for FY 2011-12 may be reviewed in the light of present circumstances and new CERC Tariff Regulations. It is further prayed, CERC Tariff Regulations in respect of Return on Equity, Interest on Working Capital may kindly be applied from FY 2009-10.

- It is submitted that the norms for heat rate (kCal/kWh) in open cycle mode as specified in MYT Regulations are not achievable. The guaranteed heat rate as per the manufacturer works out to 2986kCal/kWh which further needs to be escalated by 5% to arrive at the realistic operational heat rate for the station.

- The Hon'ble Commission in its Order dated 14.12.2007 agreed to true-up the actual impact of Sixth Pay Commission Revision at the time of truing-up. The Hon'ble Commission is requested to consider and allow the same.

- There was an anomaly in the DERC Tariff Order in respect of the weighted Average Price of Gas (Rs./1000SCM). The Hon'ble Commission vide their letter 31.03.2011 rectified the same. It is submitted that the carrying cost on the financial impact of under recovery of fuel cost in the respective years may kindly be considered and allowed.

Detailed submissions on each of the subject matters are made in the Chapters to follow:

Chapter 3 : Estimation of Variable Cost

3.1 Norms for Operation

Petitioner is submitting the actual performance parameters for PPS-I for the control period from FY 2007-08 to FY 2010-11 and based on these values, the parameters for FY 2011-12 have been estimated.

3.1.1 Station Heat Rate

1. Table 1 indicates the SHR values for PPS-I as achieved during the control period FY 2007-08 to FY 2010-11 and projected SHR for FY 2011-12.

Table 1: Station Heat Rates (kCal/kWh) for PPS-I

Description	2007-08	2008-09	2009-10	2010-11 (Provisional)	2011-12
Station Heat Rate (Combined Cycle)	1973.00	1967.00	1984.00	2003	2036.00
Station Heat rate (Open Cycle)	3130	3075	3084	3138	3135

2. The petitioner would like to submit that it is not always possible to achieve SHR of 2000 kCal/kWh in combined cycle mode and is not at all possible to achieve 2900 kCal/kWh in open cycle mode as specified in the DERC Regulations for MYT. The guaranteed heat rate of these turbines as given by the manufacturer is 1939 kCal/kWh in combined cycle mode and 2986 kCal/kWh in open cycle mode at 100% PLF. CEA has computed the Combined Cycle heat rate as 1978 kCal/kWh.

3. Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations,2009 for the period FY 2009-14 in the regulation 26 (ii)(B)(b) on gross heat rate for newly Commissioned projects also provides a correction of 5% over the designed heat rate.

4. After applying the correction factor of 5%, the combined cycle heat rate computes to 2036 kCal/kWh and 3135 kCal/kWh in open cycle mode.

5. The actual Station Heat Rate (on GCV) was 2003 kCal/kWh during FY2010-11 in combined cycle mode. Therefore, petitioner requests the Commission to allow a combined cycle heat rate of 2036 kCal/kWh on Gross Calorific Value (GCV) basis for FY 2011-12, considering the correction factor specified by the CERC. It is submitted that apart from factors considered by CEA, PPS-I is also facing considerably higher number of grid trippings in Delhi compared to National Grid, and backing down of generation on the instruction of SLDC resulting into lower PLF and higher SHR. Petitioner requests the Hon'ble Commission that these are uncontrollable factors and should be considered with leniency at the time of truing –up and finalisation of Tariff Order for FY2011-12.

6. The actual Station Heat Rate in open cycle mode is varing from 3075-3153 kCal/kWh during the period FY 2007-08 to FY 2010-11. The manufacturer guaranteed heat rate is 2986 kCal/kWh at 100% PLF. It is submitted that CEA has also considered the open cycle heat rate as 3075.3 kcal/kwh at 100% PLF on Page no. 24 of the report of December, 2004 on technical standards on operational norms on Gas Turbine stations. Petitioner requests the Hon'ble Commission to approve the open cycle heat rate of 3135 kCal/kWh for FY 2011-12 and allow the actual SHR achieved in open cycle mode during the FY 2007-08 to FY 2010-11.

3.1.2 Availability

1. Table 2 indicates the achieved parameter for Availability for PPS-I during the Control period from FY 2007-08 to FY 2010-11 and proposed Availability for FY 2011-12.

Table 2: Availability (%) for PPS-I

Description (%)	2007-08	2008-09	2009-10	2010-11	2011-12
Plant Availability	84.08%	85.41%	85.50%	86.31%	80%

2. The station has been able to achieve the target availability of 80% during the MYT control period from FY 2007-08 to FY 2010-11.

3. Petitioner proposes to maintain the norm of 80% Availability for PPS-I during the FY2011-12 as indicated in the MYT Regulations issued by the Hon'ble Commission.

3.1.3 Auxiliary Power Consumption (APC)

1. Table 3 indicates the achieved parameter for Auxiliary Power Consumption (%) in combined cycle mode during the control period FY 2007-08 to FY2010-11 and proposed APC for FY 2011-12. The open cycle auxiliary power consumption (%) has been considered as 1%.

Table 3: Auxiliary Power Consumption (%) in CC mode

Description (%)	2007-08	2008-09	2009-10	2010-11 (Provisional)	2011-12
Auxiliary Consumption	2.90%	2.88%	2.92%	2.86%	3.00%

2. The Actual Auxiliary Power Consumption in combined cycle mode for PPS-I is in the range of 3%. PPS-I would be able to perform within the norm of 3% auxiliary power consumption in combined cycle mode and 1% in open cycle mode during FY 2011-12.

3.2 Gross Generation and Net Generation

1. Gross generation of PPS-I for FY 07-08 , FY 08-09 , FY 09-10 and FY 2010-11 was 2366.74MU, 2401.34, 2452.93MU and 2335.649 MU respectively. The proposed Gross generation of PPS-I is 2318.98 MU for the FY 2011-12.

2. On the basis of Availability as referred in the Table 2 and Auxiliary Power Consumption as referred in Table 3, Gross and Net Generation from the power station are as per the Table 4.

3. Petitioner shall endeavor to perform better than the proposed target of generation at 80% Availability during FY 2011-12 in accordance with system requirement and provisions of new electricity Grid Code. The incentives/dis-incentives during the FY 2011-12 may kindly be allowed based on the target availability of 80% as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations,2009 The relevant clause is reproduced as under:

21. Computation and Payment of Capacity Charge and Energy Charge for Thermal Generating Stations

(1) The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating station.

(2) The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

(a) Generating stations in commercial operation for less than ten (10) years on 1st April of the financial year:

AFC x (NDM / NDY) x (0.5 + 0.5 x PAFM / NAPAF) (in Rupees);

Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to

AFC x (0.5 + 35 / NAPAF) x (PAFY / 70) (in Rupees).

(b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:

AFC x (NDM / NDY) x (PAFM / NAPAF) (in Rupees).

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative annual plant availability factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percent:

PAFY = Plant availability factor achieved during the year, in percent

(4) In case of fuel shortage in a thermal generating station, the generating company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The concerned Load Despatch Centre may then specify a pragmatic day-ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the beneficiaries. DCi in such an event shall be taken to be equal to the maximum peak-hour expower plant MW schedule specified by the concerned Load Despatch Centre for that day."

Table 4: Gross and Net Generation

Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
Gross Generation (MU)	2366.74	2401.34	2452.93	2335.649	2318.98
Auxiliary Consumption (%)	2.84%	2.78%	2.90%	2.80%	3.00%
Net Generation (MU)	2299.50	2334.50	2381.80	2270.2	2249.41

3.3 Variable Cost for PPS-I

3.3.1 Fuel Consumption:

1. Pragati Power Station-I has a long-term agreement with Gas Authority of India Limited (GAIL) for supply of Gas. Initially, PPS-I was having an allocation of 1.75 MMSCMD of APM Gas. This gas was sufficient to run both the Gas Turbines on base load. Due to depleting Gas reserves of ONGC, GAIL has been imposing cuts on its supply on day to day basis. The present gas allocation on day to day basis is between 1.1MMSCMD to 1.2 MMSCMD of APM gas and 0.28 MMSCMD of PMT gas. To meet the short fall in the gas supply, fall back agreement has been signed with GAIL for supply of spot R-LNG gas on take and pay basis.

2. The Consumption of APM Gas, PMT Gas, R-LNG gas and Spot- Gas during the control period from FY2007-08 to FY 2010-11 is depicted in Table 5.

3. During the MYT Control period FY 2007-08 to FY2010-11, the station has also operated in open cycle mode. The quantum of open cycle generation calculated in terms of percentage is around 3.5% of the total generation of the station. The petitioner has taken 3.5% open cycle generation for calculation of fuel consumption for FY 2011-12.

4. Considering the heat rate of 2036kCal/kWh in combined cycle mode and 3135kCal/kWh in open cycle mode, at the gross calorific value of 9250kCal/SCM, the gas consumption for FY 2011-12 has been estimated 520.07MMSCM.

Table 5: Total Consumption of Gas

Particulars	Unit	2007-08	2008-09	2009-10	2010-11	2011-12
APM Gas	MMSCM	372.89	362.13	396.18	396.47	
PMT Gas	MMSCM	100.43	89.08	72.81	60.71	
R-LNG Gas	MMSCM	34.13	59.69	57.17	55.69	
Spot R-LNG Gas	MMSCM		6.50	0.04	0.047	
Total Gas Consumption	MMSCM	507.46	517.40	526.20	512.91	520.07

Projected Fuel Cost

1. There has been an increasing trend in Gas prices. The price of the Gas has increased steeply from June, 2010. The weighted average price of gas for the month of February-11 for PPS-I is Rs. 9320.67/1000SCM.

2. The prices of APM /PMT gas will be determined by Group of Ministers, GOI whereas Spot prices of RLNG is driven by market fundamentals in the LNG market worldwide. The key pricing determinants will be the movement in Henry-Hub prices and crude oil prices. Petitioner would like to submit that the Energy Charge Rate for PPS-I during the FY 2011-12 may be determined as per the regulations of CERC which account for fuel price adjustment.

3. The weighted average price for the FY 2011-12 is estimated to increase by 5% over the weighted average price for the month of February, 2011.

Variable Cost for Pragati Power Station-I

1. Based on above, Petitioner has estimated the total Fuel cost of Rs. 508.98 Crores for FY 2011-12 for generation on target availability.The Variable Cost is depicted in the following Table.

Table 6: Total Variable Cost

Particulars	**Unit**	**FY2011-12**
Total Gas Consumption	MMSCM	520.07
Average Gas Price	Rs./1000SCM	9786.70
Total Gas Cost	Rs. Crores	508.98
Net Generation	MU	2249.41
Variable Cost	Rs./kWh	2.263

Chapter 4 : Estimation of Fixed Cost

4.1 Parameters for Fixed Cost

1. Total fixed cost for PPS-I for the period FY 2007-08, FY 2008-09 & FY 2009-10 is based on actual audited accounts, FY 2010-11 is based on provisional accounts and FY 2011-12 is based on estimation.

2. Fixed cost calculations includes the following components:

   a. Operation & Maintenance Expenses
   b. Interest on loan
   c. Depreciation
   d. Advance against Depreciation
   e. Return on Equity
   f. Interest on Working Capital
   g. Fixed Fuel Cost

4.2 Operation and Maintenance Expenses

O & M expenses comprises of Employees Expenses, Repairs and Maintenance, Administrative and General Expenses, Water Charges, etc. The O&M expenses for FY 2007-08, FY 2008-09 and FY 2009-10 are based on the audited accounts for these periods. O&M expenses for FY 2010-11 are as per the provisional accounts and for FY 2011-12 are based on escalation on the previous year.

4.2.1 Employees Expenses

Employee expenses comprise of salaries, dearness and other allowances, exgratia, contribution towards terminal benefits, leave encashment, staff welfare expenses etc.

Petitioner has taken the estimated employee expenses for FY 2011-12 based upon the provisional employee expenses for FY 2010-11.

It is submitted that GNCTD has approved the Wage Revision Committee recommendations, based on Sixth Pay Commission in the month of October-2009 with effect from 1-1-2006. An approximate 40% increase has been allowed to the employees on account of pay revision. The Company has paid the interim relief w.e.f. 1.4.2008 and implemented the GNCTD orders on Wage Revision Committee recommendations in the month of October-2009 and paid the arrears for past period.

The Hon'ble Commission has allowed 10% for impact of sixth Pay Commission. The Hon'ble Commission in its Order dated 14.12.2007 further stated as under:-

"Since the arrears on account of revision of employee costs are expected to be paid only in FY09, the Commission has considered the payment of arrears in tariff of FY09. Similarly, increase in salaries has been considered for each year, but the impact of such increase has only been taken from FY09 onwards. ***The Commission shall true-up the***

impact on account of 6th Pay Commission recommendations based on the actual impact of the same".

As per the transfer scheme, the terms and condition of service applicable to the erstwhile employees of Delhi Vidyut Board in the transferee company shall in no way be less favourable or inferior to that applicable to them immediately before the transfer. Their service shall continue to be governed by various rules and laws applicable to them prior to unbundling. The salaries of employees of the company are governed by FRSR structure. The company has to mandatory follow the salary structure as per the FRSR and it has no control over the same. Hence, the increase in dearness allowance, Pay & allowances are at par with the increase allowed to Government employees. The Government allows two installments of DA every year effective in July and January. Due to high inflation in the past, the DA increased in the range of 4 to 9%. The increase in Basic salary further increases other allowances like DA, HRA. The average increase in salary of employees is more than 10% against the 4% hike allowed by Hon'ble Commission in MYT Tariff Order for the Control period for FY 2007-08 to FY 2010-11.

The estimated salary & allowances for the FY 2010-11 has been escalated by 10% annually for FY 2011-12. This 10% increase in salaries & allowances is mainly due to annual increments, DA etc. on which PPCL have no control as this forms part of the service conditions of the employees.

The petitioner would like to pray to the Hon'ble Commission that salaries/employee cost increase should be considered as uncontrollable factor. The petitioner would not be in the position to not allow these increases as any deviation will be against law/policy.

The impact of Sixth Pay Commission upto September, 2009 is based upon the actuals paid in the month of October-2009, thereafter it has been estimated for the remaining control period with 10% escalation.

Table 7 : Impact of Sixth Pay Commission

Particulars (Rs. Crores)	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Actual	0.72	2.86	2.83	3.49	3.84	4.22
Allowed	-	-	-	3.91	1.30	1.36
Difference	**0.72**	**2.86**	**2.83**	**-0.42**	**2.54**	**2.86**
Total Difference	**11.39**					

Table 8: Employee Expense for PPS-I

Particulars (Rs. Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
PPS-I	**16.59**	**23.48**	**16.45**	**23.71**	**26.08**

The Hon'ble Commission is requested to approve employee expenses for FY 2011-12 and true-up the actual employee expenses for the control period FY 2007-08 to FY 2010-11 as summarized in Table 8, after considering the above facts.

4.2.2 Repair & Maintenance

1. These expenses include expenses on repairs and maintenance of Plant and Machinery, Building, Other Civil works, Vehicles, Furniture & Fixtures, Office equipment, etc.

2. Pragati Power Station-I is sourcing plant water requirement from the treated effluent water from sewage treatment plants and has to incur more cost to get raw water, as compared to other similar stations being operated elsewhere in the country, drawing water from river and paying nominal water cess. PPS-I has taken over the sewage water treatment plants from Delhi Jal Board for treating the sewerage water from Delhi Gate Nala and Sen Nursing Home Nala. The estimated expenditure on this account is Rs.2.63 Crore during the FY 2011-12 which mainly includes expenditure on operation, electricity, Chemicals etc.

3. Petitioner has projected R&M expenses for PPS-I for FY 2011-12 by applying 5.72% annual increase (as stipulated in CERC Tariff Regulation for FY 2009-14) on the estimated costs for FY 2010-11.

4. Petitioner further submits that it has installed DLN Burner at PPS-I to control the NOx level. These types of burners were installed for the first time in India. The additional R&M expenses towards R&M of DLN burners and for critical components of Gas Turbines are required to be incurred by the PPS-I for the smooth operations of the plant and to achieve the target level of generation. All the inspections and overhauling of the machines are as per the manufactures recommendation. The next inspection cycle will repeat from FY 2009-10 to FY 2015-16. The Hon'ble Commission has allowed Rs. 20 Crores additional R&M expenses every year during the Control period FY 2007-08 to FY 2010-11. The expenditure on account of DLN burner and critical components of Gas Turbine will continue to be incurred in FY 2011-12.

5. The actual Repair & Maintenance expenses including additional expenditure due to DLN burners and expenditure on STP for sewage treated water during the control period FY 2007-08 to FY 2010-11 and the projected expenditure for FY 2011-12 are depicted in the table as under:

Table 9: R&M Expenses of PPS-I

Particulars (Rs Cr.)	2007-08	2008-09	2009-10	2010-11	2011-12
R& M expenses including additional expenditure on account of DLN Burners	33.91	13.42	20.17	42.32	44.75
Additional expenditure on Water from Sewage Treatment Plant	2.26	2.29	2.62	2.49	2.63
Total	**36.17**	**15.71**	**22.79**	**44.81**	**47.38**

6. The Hon'ble Commission is requested to allow the R&M expenses as mentioned for FY 2011-12 for the smooth operations of the plant to achieve the target level of generation.

4.2.3 Administrative & General expenses

1. Administration expenses mainly comprise of security expenses, rents, insurance, telephone and other communication expenses, professional charges, conveyance & traveling allowances, etc.

2. PPCL has deployed CISF for the security of its plants. Their manpower deployment and expenditure are as per their specified norms. Their pay structure is also governed by the Central Government rules. The Sixth Pay Commission recommendations were also implemented in CISF. Accordingly, the expenditure on security has also increased substantially. The impact of Sixth Pay Commission on CISF manpower is as under:

Table10: Impact of Sixth Pay Commission on CISF Security expenses

Particulars (Rs. Crores)	2008-09	2009-10	2010-11
PPS-I	**1.38**	**0.47**	**0.52**

3. Petitioner has projected A&G expenses for FY 2011-12 by applying 5.72% annual increase as stipulated in CERC Tariff Regulation for 2009-14, on the provisional costs for FY 2010-11. An additional expenditure of Rs. 7.25 crores is also considered during FY 2011-12 in regard to ERP licenses and its Annual Maintenance charges.

4. As allowed by the Hon'ble Commission in MYT period from FY 2007-08 to FY 2010-11, the Hon'ble Commission is requested to approve the MCD property/service tax, water-cess, other taxes etc. as pass-through on actual basis besides the other O&M expenses.

5. The A&G expenses during the Control period FY 2007-08 to FY 2010-11 and estimated for FY 2011-12 are indicated in Table 11.

Table 11: A&G Expenses

Particulars (Rs Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
A&G Expenses	9.20	10.54	9.26	12.43	20.37

6. The Hon'ble Commission is requested to approve the A&G expenses for FY 2011-12 as projected in the above table.

4.2.4 Summary of O&M expenses

Operation and maintenance expenditure has been restricted by the Hon'ble Commission by providing an escalation of 4% on the average of the normative operating and maintenance expenditure allowed by the Commission during the financial year 2005-06 and 2006-07, instead of the O& M expense for previous year 2006 – 07 as per the accepted practice

The Hon'ble Commission in its Review Order dated 20.7.2009 in respect of Petition No.2/2008 on the issue of O&M expenditure escalation has also agreed to true-up the same in accordance with MYT Regulations, at the end of the Control Period.

The impact of the above is summarized in the following table

Table 12: Impact of Incorrect Base O&M Expenses

Particulars (Rs Crores)	2006-07	2007-08	2008-09	2009-10	2010-11
Base O&M allowed by DERC	31.02	31.69	32.96	34.28	35.65
Base O&M should be		32.26	33.55	34.89	36.29
Difference		**0.57**	**0.59**	**0.61**	**0.64**
Total Difference		**2.41**			

Table 13: Impact of Sixth Pay Commission

Particulars (Rs. Crores)	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Actual	0.72	2.86	2.83	3.49	3.84	4.22
Allowed	-	-	-	3.91	1.30	1.36
Difference	**0.72**	**2.86**	**2.83**	**-0.42**	**2.54**	**2.86**
Total Difference	**11.39**					

Table 14: Impact of Sixth Pay Commission on CISF Security expenses

Particulars (Rs. Crores)	2008-09	2009-10	2010-11
PPS-I	**1.38**	**0.47**	**0.52**

Table15: O&M Cost

Description (Rs. Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
O&M expenses	**61.96**	**49.73**	**48.5**	**80.95**	**93.83**
Employee expenses	16.59	23.48	16.45	23.71	26.08
R&M expenses	36.17	15.71	22.79	44.81	47.38
A&G expenses	9.20	10.54	9.26	12.43	20.37

The Hon'ble commission is requested to allow the impact of incorrect base O&M, Impact of sixth Pay Commission during the Control Period and approve the O&M expenses for FY 2011-12 as projected above.

4.3 Interest on Loan

1. Interest expenditure on account of long-term loans depends on the outstanding loan, repayments and applicable interest rates.

2. Petitioner has made certain capital additions in PPS-I during the Control period FY 2007-08 to FY 2010-11. The same has been funded through Reserve and surplus. As per Regulations, 70% of the capital additions has been considered to be funded through Loans. Accordingly, interest on this loan has been taken @ 11.00% i.e. PFC lending rate in FY 2007-08.

3. The Interest Charges during the Control period FY2007-08 to FY 2010-11 and the projected interest charges for FY2011-12 has been shown in Table16. Hon'ble Commission is requested to approve the Interest and finance charges.

Table16: Interest Charges

Particulars (Rs Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
Interest Charges	23.17	31.37	25.21	19.17	13.37

4.4 Depreciation

1. The Hon'ble Commisson has approved the Opening Gross Fixed Asset of Rs. 1031.57 Crores in the beginning of FY 2007-08 and accorded in–principle approval for implementation of Enterprise Resource Planning system in the company. The cost of ERP implementation was Rs. 12.79 Crore in FY 2009-10. Beside ERP, certain capital additions were made during the control period.

2. Depreciation is charged on the basis of straight-line method, on the fixed assets in use at the beginning of the year. The depreciation is based on the original cost, estimated life and residual life.

3. Depreciation amount during the control period from FY 2007-08 to FY 2011-12 has been as per the Depreciation Rates specified under Generation Tariff Regulations for MYT issued by the Commission.

4. The Hon'ble Commission is requested to approve the Depreciation for FY 2011-12 along with the truing up of Depreciation for FY 2007-08 & FY 2010-11.

Table 17: Depreciation

Particulars (Rs Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
Depreciation	59.85	59.98	62.08	64.07	64.12

5. Advance against depreciation is the difference between actual debt repayment and depreciation recovered during the year. Advance against depreciation has been calculated as per the regulations issued by the Hon'ble Commission.

Table 18: Advance against Depreciation

(Rs Crores)

S. No	Particulars	PY	PY	PY	CY	EY
		2007-08	2008-09	2009-10	2010-11	2011-12
		Actual	Actual	Actual	Estimated	Projected
1	1/10th of the Loan(s)	67.53	67.82	68.82	68.82	68.96
2	Repayment of the Loan(s) as considered for working out Interest on Loan	67.53	67.82	68.82	68.82	68.96
3	Minimum of the Above	67.53	67.82	68.82	68.82	68.96
4	Less:Depreciation during the year	59.85	59.98	62.08	64.07	64.12
	A	**7.68**	**7.84**	**6.74**	**4.75**	**4.83**
5	Cumulative Repayment of the Loan(s) as considered for working out Interest on Loan	287.02	354.55	422.37	491.19	560.01
6	Less: Cumulative Depreciation	315.43	375.41	437.50	501.56	565.68
	B	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
7	**Advance Against Depreciation**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.5 Return on Equity

1. The Return on equity has been computed on approved equity of Rs. 323.19 Crores of the project and the 30% equivalent amount of the capital additions made during the Control period.
2. Return on Equity has been taken during the FY 2007-08 & FY 2008-09 at 14% in line with the regulations issued by the Delhi Electricity Regulatory Commission.
3. Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations,2009 for the period FY 2009-14 has increased the base rate of return on equity to 15.5%. The extract of the regulation is produced as under:

***15. Return on Equity**. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.*

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

Illustration.-

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.1133) = 17.481%

(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.3399) = 23.481%

4. The Return on Equity for FY 2009-10 to FY 2011-12 has been computed @ 15.5%, as per the rate specified in CERC Regulations. The taxes on Income shall continue to be reimbursed as per the existing norms of DERC Regulations.
5. The details of return on equity are given in table 19. The Hon'ble Commission is requested to true-up the Return on equity from FY 2007-08 to FY 2010-11 and approve the Return on Equity for FY 2011-12 as proposed in the table.

Table 19: Return on Equity

S No	Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
1	Equity (Opening Balance)	323.19	323.19	324.42	328.72	328.72
2	Net additions during the year	0.00	1.23	4.30	0.00	0.59
3	Equity (Closing Balance)	323.19	324.42	328.72	328.72	329.30
4	Average Equity	323.19	323.81	326.57	328.72	329.01
5	Rate of Return on Equity	14 %	14 %	15.50 %	15.50 %	15.50 %
	Return on Equity	**45.25**	**45.33**	**50.62**	**50.95**	**51.00**

4.6 Interest on Working Capital

1. Petitioner has calculated the Interest on Working Capital as per the following norms:

   - Cost of fuel for 1 month
   - O&M expenses for 1 month
   - Receivables equivalent to 2 months average billing
   - Maintenance Spares @ 30% of the O&M expenses for FY 2009-10 onwards (for FY 2007-08 to FY 2008-09 @1% of project cost plus escalation)

2. The petitioner would like to highlight that as per CERC Regulations, 2009, Maintenance Spares @ 30% of the O&M expenses is allowed. The same has been considered in the working capital computations for FY 2009-10 onwards and request the Hon'ble Commission to allow the same in the tariff.

3. The petitioner submitts that the fuel cost has increased steeply in FY 2010-11. The Hon'ble Commission has determined the cost of fuel for 1 month and receivables equivalent of 2 months in working capital requirement based upon the initial gas price. This increase in prices of fuel had substantial impact on certain components considered in the computation of working capital and resultantly the interest on working capital has considerably increased in comparison to the interest allowed by the Commission.

Table20: Total working Capital

Particulars (Rs Cr.)	2007-08	2008-09	2009-10	2010-11	2011-12
Cost of Fuel for 1 month	19.64	23.84	22.30	34.31	42.42
Cost of Liquid Fuel for 0.5 month	0	0	0	0	0
O&M expenses for 1 month	5.16	4.14	4.04	6.75	7.82
Receivables equivalent to 2 months average billing	81.17	90.03	86.28	107.10	128.72
Maintenance Spares	10.93	12.04	14.55	24.29	28.15
Total Working Capital	**116.9**	**130.05**	**127.17**	**172.45**	**207.10**

4. The Interest rate has been assumed at 12.75% which is the SBI PLR (as on 1.04. 2007) for calculating Interest on working Capital till FY 2010-12. Since the SBI PLR has increased to 13% w.e.f 12.2.2011, the increased rate has been considered for FY2011-12.
5. The interest on working capital during the Control period from FY 2007-08 to FY 2010-11 and FY 2011-12 is as per under mentioned table. The petitioner requests the Hon'ble Commission to true- up the interest on working capital.

Table21: Interest on Working Capital

Description	2007-08	2008-09	2009-10	2010-11	2011-12
Total Working Capital	**116.9**	**130.05**	**127.17**	**172.45**	**207.10**
Rate of Interest	12.75%	12.75%	12.75%	12.75%	13.00%
Interest on Working capital	14.90	16.58	16.21	21.99	26.92

4.7 Fixed Fuel Cost

1. As per the Fuel Supply Agreement entered into between PPS-I and GAIL, PPS-I is required to pay fixed monthly transmission and other service charges of Rs. 15,54,682 for base year FY 2002-03, which is escalated @3% p.a. The fixed cost towards fuel supply is as under.

Table 22: Fixed Fuel Cost

Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
Fixed Fuel Cost (Rs Crore)	2.23	2.29	2.36	2.43	2.50

2. The Honorable Commission is requested to approve Fixed Fuel Cost for the FY 2011-12.

4.8 Annual Fixed Cost of Pragati Power Station-I

1. The total Fixed Cost[1] for the control period FY 2007-08 to FY2010-11 and projection for the FY2011-12 is summarized in Table 23.

Table23: Total Annual Fixed Cost

Particulars (Rs. Crores)	2007-08	2008-09	2009-10	2010-11	2011-12
O&M Charges	61.96	49.73	48.50	80.95	93.83
Depreciation	59.85	59.98	62.08	64.07	64.12
Advance against depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loans	23.17	31.37	25.21	19.17	13.37
Return on Equity	45.25	45.33	50.62	50.95	51.00
Interest on Working Capital	14.90	16.58	16.21	21.99	26.92
Fixed Fuel Cost	2.23	2.29	2.36	2.43	2.50
Total Fixed Cost	207.36	205.28	204.98	239.56	251.74
Net Generation (MU)	2299.5	2334.5	2381.8	2270.2	2249.4
Fixed Cost Per Unit (Rs/Kwh)	0.9018	0.8793	0.8606	1.0552	1.1191

2. On the basis of above submissions, the Hon'ble Commission is requested to true-up the total fixed cost for PPS-I for the control period FY2007-08 to FY 2010-11 and approve the total fixed cost for FY 2011-12.

[1] The taxes should be allowed as pass through on actual basis.

Chapter 5: Capital Expenditure

5.1 Capital Expenditure

This Chapter deals with the various Capital Expenditure. The same has been segregated into the debt and equity on the basis of 70:30 ratio in the control period while calculating the fixed cost.

Table24: Capital Expenditure for the Control Period

Description (Rs.in lacs)	2007-08	2008-09	2009-10	2010-11	2011-12
Furniture	0.66	0.08	4.53		
Communication Equipments		0.07			
Fire Station Building & Temporary Shade			30.79		
EDP Equipments & ERP Software			1278.68		
Generator Assembly Exciter		383.61			
Atomising Air Compressor		24.84			
Refrigerator & Water Cooler		1.15			
Vehicle(Truck)			13.04		
Speed Reduction of HPBFPs					100.00
Installation of PHE in GT water circuit					80.00
Laying of new raw water pipe line from GTPS to PPCL					15.00
Total	**0.66**	**409.75**	**1327.04**		**195.00**

Note: The additions in FY 2010-11 are minor. Hence, the same has not been reflected in the above statement.

The rationale behind the Capex schemes

1. **Speed reduction of HPBFPs**

   Estimated cost of the Scheme: Rs.1,00,00,000/-

   Completion period : FY 2011 – 2012

   The Petroleum Conservation Research Association (PCRA) carried out energy audit of Pragati Power Station and in the report it has been recommended to reduce parameters of HPBFPs as a step to energy conservation. The PCRA has recommended to remove one stage of HPBFPs so that operating parameters are reduced to optimum, resulting in sufficient amount of energy saving. The matter was discussed with OEM M/s BHEL. M/s BHEL has advised not to remove the stage but to go for speed reduction. Presently the pump is driven with a motor connected through a gear box and operates at the speed at 4200 RPM. The complete pump running data was forwarded to BHEL Hyderabad to suggest for optimum speed reduction. According to suggestion of BHEL, the reduced speed should be 4080 RPM. The speed reduction from 4200 to 4080 will result in around 100 KW power saving per BFP. Therefore, there will be around 200 KW of energy saving from two running BFPs. The pay back period works out to be around 4.5 years. The additional 200KW power will be available to feed in the grid.

2. **Installation of Plate type Heat Exchangers (PHE) in the gas turbine cooling systems**

   Estimated cost of the Scheme: Rs.80, 00,000/-

   Completion period: FY 2011 – 2012

   In the Energy audit Report of PCRA, it was also recommended to replace fin fan coolers of gas turbines as during hot and dry summer months of April, May, June, when atmosphere temperature is 40^0C & above, the effective cooling of water used for cooling lube oil, atomizing air, scanners, Generator coolers gets increased. This rise in cooling water temperature results in reduction of operating parameters of the Gas Turbines. There is no spare source of cooling water available at Pragati Power station to be used for above requirement as the amount of water required for replacing fin fan coolers of both the Gas Turbines is 1260 meter^3 / hour. A detailed study of various cooling water scheme was carried out which indicated that the ECW cooling system of the steam turbine has very small rise in temperature ranging 1 -2^0 C. The amount of available water also matches with the above requirement as ESW /ACW flow on either side is 1289 meter^3 / hour. Accordingly it is estimated that for a total cost of 80 lacs , the fin fan coolers will be replaced with PHE resulting in trouble less running of gas turbines in the peak summer months.

3. **Laying of Raw Water Pipe from Auxiliary area of GTPS to Raw water pond of PPCL**

Estimated cost of the Scheme:	Rs.15,00,000/-
Completion period :	FY 2011 – 2012

The raw water source of Pragati Power Station is STP treated water of Delhi Gate and Sen Nursing Home. The total quantity of water available from these two sources in 19 MLD. However, due to varying nature of availability of sewage water at above STPs the requirement of raw water is badly affected during summer months. Due to less availability of sewage treated water for Pragati Power Station during summer season, the maintenance of operating parameters of various water uses are not met with. The scarcity of makeup cooling water for cooling water system of the station results in maintaining of higher COC. The higher COC water results in erosion and corrosion of various pumps, pipings and valves of the system. Therefore, Pragati Power Station has worked out to lay additional water pipe for sourcing raw water from existing auxiliary area of gas turbine power station. These alternate arrangements will help in to run the plant as per recommended parameters of water chemistry. The estimated cost for laying raw water pipings is around Rs.15 lacs and the scheme is proposed to be undertaken in FY 2011-12.

4. **Installation of Inlet Air Coolers in the Gas Turbines**

Estimated cost of the Scheme: Rs.68000000/-

The scheme was submitted to the Hon'ble Commission in FY 2009-10 for in-principle approval. The scheme was deferred as the results of the implementation of the similar schemes in NTPC plants is being monitored. If, the results are encouraging, the same will be taken up in FY 2012-13.

The Hon'ble Commission is requested to true-up the capital additions during the control period FY2007-08 to FY 2010-11 and approve the further addition for FY 2011-12.

Chapter 6: Prayer

6.1 Prayer

Petitioner respectfully prays to the Hon'ble Commission;

- To admit this petition.
- To true up the tariff for FY 2007-08 to FY 2010-11 and approve the tariff for the FY 2011-12.
- To approve the operational and financial parameters as proposed for FY 2011-12.
- To allow taxes, property/service tax, cess, etc as pass through on actual basis for FY 2011-12.
- To implement the Order of the Hon'ble ATE in appeal no. 25/2008.
- To apply the principles of MYT Tariff Regulations for control period FY2007-08 to FY 2010-11 to FY 2011-12 with necessary modifications.
- To grant any other relief as Hon'ble Commission may consider appropriate. The petitioner craves leave of the Hon'ble Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time.

- Pass any other order as Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

(R. K. Jain)
General Manager (Comml.)
Pragati Power Corporation Limited
PETITIONER

New Delhi
DATED: 13.04.2011