Order
on
Aggregate Revenue Requirement
and
Generation Tariff
for
FY 2012-13 to FY 2014-15
for
Pragati Power Corporation Limited

DELHI ELECTRICITY REGULATORY COMMISSION

July, 2012

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DELHI ELECTRICITY REGULATORY COMMISSION

Viniyamak Bhawan, 'C' Block, Shivalik, Malviya Nagar, New Delhi- 110017.

F.11(779) /DERC/2011-12/

Petition No. 08/2012

In the matter of: Petition for Determination of Generation Tariff for MYT Control Period FY 2012-13 to 2014-15 and Truing up for MYT Control Period FY 2007-08 to FY 2011-12.

Pragati Power Corporation Ltd.
Through its: **G.M. (Comml.)**
Himadri,
Rajghat Power House Complex
New Delhi 110 002.

...Petitioner/Licensee

Coram:

Sh. P. D. Sudhakar, Chairman,
Sh. Shyam Wadhera, Member &
Sh. J. P. Singh, Member.

ORDER

(Date of Order: 13.07.2012)

Having deliberated upon the Petition for Determination of Generation Tariff for MYT Control Period FY 2012-13 to 2014-15 and Truing up for MYT Control Period FY 2007-08 to FY 2011-12 filed by M/s. Pragati Power Generation Ltd.; and the subsequent filings by the Petitioner during the course of proceedings; and having considered the responses received from stakeholders, the Commission in exercise of the powers vested under the Electricity Act, 2003 and the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 hereby pass this Order signed, dated and issued on 13.07.2012.

This Tariff Order shall be applicable from 01.07.2012 and shall remain in force till replaced by a subsequent Tariff Order and/or is amended, reviewed or modified, in accordance with the provisions of the Electricity Act, 2003 and the Regulations made thereunder.

(J. P. Singh)	(Shyam Wadhera)	(P. D. Sudhakar)
MEMBER	MEMBER	CHAIRMAN

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
A&G	Administrative and General
AAD	Advance Against Depreciation
APC	Auxiliary Power Consumption
APM	Administered Price Mechanism
ARR	Aggregate Revenue Requirement
AT&C	Aggregate Technical and Commercial
ATE (Aptel)	Appellate Tribunal for Electricity
BPTAs	Bulk Power Transmission Agreement
BRPL	BSES Rajdhani Power Limited
BYPL	BSES Yamuna Power Limited
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CISF	Central Industrial Security Force
DERA	Delhi Electricity Reform Act
DERC	Delhi Electricity Regulatory Commission
DISCOMs	Distribution Companies (BRPL, BYPL & TPDDL)
DPCL	Delhi Power Company Limited
DTL	Delhi Transco Limited
DVB	Delhi Vidyut Board
EPF	Employees Contribution to Provident Fund
FPA	Fuel Price Adjustment
FRSR	Fundamental Rules / Supplementary Rules
GAIL	Gas Authority India Limited
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoNCTD	Government of National Capital Territory of Delhi
GTPS	Gas Turbine Power Station
HRA	House Rent Allowance
IPGCL	Indraprastha Power Generation Company Limited
LDO	Light Diesel Oil
LPSC	Late Payment Surcharge
LSC	Leave Salary Contribution
LSHS	Low Sulphur High Speed
LTC	Leave Travel Concession
MU	Million Units
MYT	Multi Year Tariff
NDMC	New Delhi Municipal Corporation
NTPC	National Thermal Power Corporation
O&M	Operations and Maintenance
PC	Pension Contribution

Abbreviation	Explanation
PLF	Plant Load Factor
PMT	Panna Mukta Tapti
PPCL	Pragati Power Corporation Limited
R&M	Repair and Maintenance
RLNG	Regassified liquefied Natural gas
RoCE	Return on Capital Employed
RoE	Return on Equity
RPH	Rajghat Power House
SHR	Station Heat Rate
SLDC	State Load Despatch Centre
TPA	Transport Allowance
TPDDL	Tata Power Delhi Distribution Limited

A1: INTRODUCTION

1.1 This Order relates to the petition filed by Pragati Power Corporation Limited (hereinafter referred to as 'PPCL' or 'the Petitioner') for determination of generation tariff for MYT Control Period for FY 2012-13 to FY 2014-15 , under the principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 (hereinafter referred to as the 'MYT Regulations 2011') and truing up for MYT Control Period FY 2007-08 to FY 2011-12 under the principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 (hereinafter referred to as the 'MYT Regulations, 2007').

Pragati Power Corporation Limited

1.2 PPCL, wholly owned by the Government of National Capital Territory of Delhi, is a generating company which operates the PPCL (330 MW) power generating station, having two gas turbine units of 104 MW each and one steam turbine unit of 122 MW.

Delhi Electricity Regulatory Commission

1.3 Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC' or 'the Commission') was constituted by the Government of National Capital Territory of Delhi on March 3, 1999 and it became operational from December 10, 1999.

1.4 The Commission's approach to regulation is driven by the Electricity Act 2003 (hereinafter referred to as 'the Act'), the National Electricity Plan, the Tariff Policy and the Delhi Electricity Reform Act 2000 (hereinafter referred to as 'DERA'). These Acts mandate the Commission to take measures conducive to the development and management of the electricity industry in an efficient, economic and competitive manner which inter alia includes tariff determination.

Multi Year Tariff Regulations

1.5 The Commission issued the Regulations vide Order dated December 02, 2011 specifying Terms and Conditions for Determination of Tariff for Generation, Transmission and Distribution of electricity under the Multi Year Tariff (MYT) framework for the period FY 2012-13 to FY 2014-15 after following due process of law. The Regulations/amendment in Regulations was notified in the official Gazette on January 19, 2012/ March 15, 2012 respectively.

Filing of Petition for Approval of ARR for FY 2012-13 to FY 2014-15

Filing and Acceptance of Petition

1.6 PPCL has filed a petition before the Delhi Electricity Regulatory Commission on February 15, 2012 for determination of Generation Tariff for MYT Control Period FY 2012-13 to FY 2014-15 and truing up for MYT Control Period FY 2007-08 to FY 2011-12. The Commission admitted the petition vide its Order dated February 15, 2012 subject to clarifications/ additional information, if any, which would be sought from the Petitioner from time to time. A copy of the Admission Order dated February 15, 2012 is enclosed as **Annexure I** to this Order.

1.7 Further, at the request of the stakeholders, the Commission directed the Petitioner to submit Hindi version of the petition filed by it. The Hindi version of the petition was uploaded on the website of the Commission as well as the website of the Petitioner for the benefit of the stakeholders.

Interaction with the Petitioner

1.8 The Order has referred at numerous places to various actions taken by the "Commission". It may be mentioned for the sake of clarity, that the term "Commission" in most of the cases refers to the Staff of the Commission and the Consultants appointed by the Commission for carrying out the due diligence on the petitions filed by the utilities, obtaining and analysing information/clarifications received from the utilities and submitting all issues for consideration by the Commission.

1.9 For this purpose, the Commission Staff and Consultants held discussions with the Petitioners, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.

1.10 The role of the Commission has been to hold Public Hearings and to take the final view with respect to various issues concerning the principles and guidelines for tariff determination. The use of the term "Commission" may, therefore, be read in the context of the above clarification. The Commission has considered due diligence conducted by the Staff of the Commission and the Consultants in arriving at its final decision.

1.11 On preliminary scrutiny of the petition certain deficiencies were observed which required additional information/ clarification/ filing of missing formats. The deficiencies were communicated to the Petitioner vide letter dated February 27, 2012. A partial reply to the preliminary deficiency note was received by the Commission on March 14, 2012.

1.12 Accordingly, the Commission solicited additional information/ clarifications from the Petitioner as and when required. The Commission and the Petitioner also discussed key issues related to the petition, which included norms of operation of the plant, details of fuel expenses submitted to the Commission, loan details, etc. The Petitioner submitted additional information through various letters, as listed in the Table 1.

1.13 The Commission also conducted multiple validation sessions with the Petitioner during which discrepancies in the petition and additional information required by the Commission were sought. Subsequently, the Petitioner submitted replies to the issues raised in these sessions and provided documentary evidence to substantiate its claims regarding various submissions.

1.14 The replies of the Petitioner as mentioned in the Table below have been considered during approval of the Aggregate Revenue Requirement of the Petitioner.

Table 1: List of Correspondence with PPCL

S.No	Date	Letter No.	Subject
1	14.02.2012	No. PPCL/ Comml./PDRA 12-15/923	Filing of Petition for determination of Generation Tariff for MYT control period FY 2012-13 to 2014-15
2	14/03/2012	No.PPCL/Comml./PDRA 12-15/1022	Approval of ARR and Tariff for FY 2012-13 to FY 2014-15 in petition no. 08/2012
3	24/05/2012	No.PPCL/Comml./PDRA 12-15/144	Information in respect of Approval of ARR and Tariff for FY 2012-13 to FY 2014-15 in petition no. 08/2012
4	24/05/2012	PPCL/ Comml./PDRA 12-15/144	Additional Information
5	06/06/2012	PPCL/ Comml./PDRA 12-15/185	Additional Information
6	07/06/2012	PPCL/ Comml./PDRA 12-15/192	Additional Information
7	13/06/2012	PPCL/ Comml./PDRA 12-15/208	Additional Information

Public Hearing

1.15 The Petitioner published a Public Notice indicating salient features of its petition, for inviting responses from the stakeholders, in the following newspapers on their respective dates of publication:

(a) Times of India (English) March 08, 2012

(b) Hindustan Times (English) March 08, 2012

(c) Nav Bharat Times (Hindi) March 10, 2012

(d) Milap (Urdu) March 08, 2012

1.16 Copies of the Public Notice in English, Hindi and Urdu are enclosed as **Annexure II** to this Order. Copy of the petition was also made available for purchase from the head-office of the Petitioner on any working day from March 15, 2012 to March 29, 2012 between 11 A.M. and 4 P.M. on payment of Rs 100/-. A copy of the complete petition was also uploaded on the website of the Commission, as well as that of the Petitioner, for inviting comments of the stakeholders thereon.

1.17 The Commission also published a Public Notice in the following newspapers on March 15, 2012 inviting comments from stakeholders on the MYT petition of the Petitioner latest by March 30, 2012:

(a) Hindustan Times (English)

(b) Times of India (English)

(c) The Pioneer (English)

(d) Danik Jagran (Hindi)

(e) Dainik Bhaskar (Hindi)

(f) The Educator (Punjabi)

(g) Milap (Urdu)

1.18 Copies of the Public Notices in English, Hindi, Punjabi and Urdu are attached as **Annexure III** to this Order.

1.19 At the request of the Stakeholders, the Commission extended the last date of filing the objections and suggestions to April 10, 2012, for which the Public Notice was issued on March 31, 2012/ April 1, 2012 in the following newspapers:

(a) Hindustan Times (English)

(b) Times of India (English)

(c) The Pioneer (English)

(d) Danik Jagran (Hindi)

(e) Dainik Bhaskar (Hindi)

(f) The Educator (Punjabi)

(g) Milap (Urdu)

1.20 Copies of the Public Notices in English, Hindi, Punjabi and Urdu are attached as **Annexure IV** to this Order.

1.21 At the request of the stakeholders, to extend help to the consumers in understanding the ARR petition and filing their comments, the Commission prepared a Staff Paper highlighting salient features of the MYT petition filed by the Petitioner, which was uploaded on the Commission's website. In this regard, two officers of the Commission viz. Joint Director (Tariff-Finance) and Joint Director (Tariff-Engineering) were made available to all the interested stakeholders for discussion on the ARR Petitions. This was duly highlighted in the Public Notices brought out by the Commission. In order to increase participation of the stakeholders, the Commission also prepared and uploaded the Hindi version of the Staff Paper on its website.

1.22 The Commission received comments from 5 stakeholders. The comments of the stakeholders were forwarded to the Petitioner. The Petitioner responded to the comments of the stakeholders with a copy of the replies to the Commission. The Commission invited all stakeholders who had filed their objections and suggestions to attend the Public Hearing. A list of the stakeholders who responded to the Public Notice on ARR and tariff petitions and/or attended the Public Hearing, is enclosed as **Annexure V** to this Order.

1.23 The Public Hearing was held at the Commission's Court Room on April 30, 2012 from 10.30 a.m. onwards to discuss the issues related to the petition filed by the Petitioner. The issues and concerns voiced by various stakeholders have been examined by the Commission. The major issues discussed during the Public Hearing and/or written comments made by the stakeholders, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter A2.

Layout of the Order

1.24 This Order is organised into five Chapters:

(a) Chapter A1 provides details of the tariff setting process and the approach of the Order;

(b) Chapter A2 provides a brief of the Public Hearing process, including the details of comments made by various stakeholders, the Petitioner's response and the views of the Commission thereon;

(c) Chapter A3 provides a summary of the petition filed by PPCL for FY 2012-13 to FY 2014-15;

(d) Chapter A4 provides analysis of the Aggregate Revenue Requirement and Generation tariff for PPCL for FY 2012-13 to FY 2014-15; and

(e) Chapter A5 provides details of the Directives of the Commission and Summary of the Generation Tariffs for PPCL station.

1.25 This Order contains the following Annexures, which are an integral part of the Tariff Order.

(a) Annexure I – Admission Order;

(b) Annexure II – Copies of Public Notices published by the Petitioner;

(c) Annexure III – Copies of the Public Notice published by the Commission inviting comments from the stakeholders;

(d) Annexure IV – Copies of the Public Notice published by the Commission regarding extension of last date of submission of comments.

(e) Annexure V – List of the Stakeholders who had attended the Public Hearing.

Approach of the Order

1.26 The Petitioner has filed a petition for determination of generation tariff for MYT Control period for the FY 2012-13 to FY 2014-15 and truing up for MYT Control Period FY 2007-08 to FY 2011-12.

1.27 Under the MYT Framework, the Commission had projected the ARR of the Petitioner for each year of the Control Period in the MYT Order issued on February 23, 2008 (hereinafter referred to as the 'MYT Order'). The Commission vide its Order dated May 10, 2011 extended the MYT Regulations and the Control Period for a further period of one year up to March 31, 2012. The ARR for FY 2011-12 was approved vide the Commission's Tariff Order dated August 26, 2011. As per the MYT Regulations, 2007 adjustments for the actual capital investment including financing and capitalisation thereof shall be done at the end of the Control Period based on the audited accounts and as per the provisions of the MYT Regulations, 2007. Hence, the true-up for FY 2007-08 to FY 2011-12 will be done at the end of the Control Period, i.e. at the end of FY 2011-12 when the audited accounts of the Petitioner are available.

1.28 Accordingly, this Tariff Order deals with the determination of Aggregate Revenue Requirement for FY 2012-13 to FY 2014-15 under the MYT framework specified in the MYT Regulations, 2011.

Approach for FY 2012-13 to FY 2014-15

1.29 The following provisions of the MYT Regulations, 2011, pertaining to Generation business are relevant and these are dealt with in detail in Chapter A4 of this Order:

(a) Regulation 4.1-4.2 – Determination of Generation Tariff for existing and new generating stations.

(b) Regulation 5.3 – Multi Year Tariff Framework to be based on the Business plan, Applicant forecast, performance trajectory, annual review of performance.

(c) Regulation 5.4 & 5.5 – Base line values (operating and cost parameters) and performance targets.

(d) Regulation 5.6 to 5.12 – Annual performance review and prior approval of actual Capital Expenditure and Capitalisation, Performance Targets for controllable Parameters, Provisions relating to Depreciation, Return, Loan, Equity, Working Capital, Interest on Loans.

(e) Regulations 6 – Principles for determination of Generation tariff

(f) Regulation 7 – Operational norms for Thermal Power Generating Stations.

A2: RESPONSE FROM STAKEHOLDERS

Introduction

2.1 Public Hearing being a platform to understand the problems and concerns of various stakeholders, the Commission has always encouraged transparent and participative approach in the hearings, which are used to obtain necessary inputs required for tariff determination.

2.2 The Public Hearing was held at the Commission's Court Room from April 26, 2012 to April 30, 2012 to discuss the issues related to the petition filed by the Petitioner for True Up of expenses for FY 2007-08 to FY 2011-12 and approval of ARR and Generation Tariff for FY 2012-13 to FY 2014-15. In the Public Hearing stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. The Petitioner was given an opportunity to respond to the comments put forth by the stakeholders.

2.3 The Commission has examined the issues and concerns voiced by various stakeholders in their written comments as well as in the Public hearing and also the response of the Petitioner thereon. The comments/ suggestions submitted by various stakeholders in response to the ARR petition, the replies given by the Petitioner and the views of the Commission have been summarized under various sub-heads as below:

Station Heat Rate

Stakeholders' View

2.4 Stakeholders have opposed the relaxation in Station Heat Rate (SHR) proposed by PPCL. They feel that such relaxation is not justified as all comparable new plants of similar configuration are able to operate well within the norms and PPCL has not provided any technical reason for the same.

2.5 Further, PPCL has requested for making SHR as uncontrollable which is not acceptable by stakeholders. Stakeholders are of the opinion that the SHR should be decided by an independent third party.

2.6 The Stakeholders have requested that PPCL should submit the bills that are raised to PPCL wherein the GCV and total coal is mentioned, so that the SHR could be calculated from it.

Petitioner's Submission

2.7 The Petitioner has submitted that, as already mentioned in the petition, the operating performance of the station depends upon various factors such as Technology and equipment, ambient conditions, etc. The machines of the Pragati Power Station are similar to Rajiv Gandhi Combined Cycle Power Plant at Kayamkulam of NTPC Limited. It is emphasized in the petition that the climatic conditions at Kayamkulam are different as compared to Delhi. The average yearly temperature at Kayamkulam is around 28.5^{0}C whereas the same is 31.5^{0}C in Delhi. It is also mentioned that average increase in temperature of 30^{0}C increases the heat rate of around 1.5%. The manufacturer's data sheets were enclosed with the petition. The Petitioner has already attached the copy of manufacturer's data sheet and guaranteed heat rate along with the petition. PPCL has submitted the detailed submission in respect of the higher heat rate on page 11 & 12 of its petition in respect of combined cycle heat rate and open cycle heat rate. The Petitioner further submitted that station heat rate is being computed as industry practice and the necessary data in this regard is being submitted to the Commission.

Commission's View

2.8 The Commission has fixed the operational norms in the MYT Regulations 2011 duly taking into consideration both the operating conditions of this plant, and the norms specified by the CERC for similar projects.

2.9 The Commission observes that claim of the Petitioner regarding 5% provision over and above design heat rate is for newer machines which are much more efficient, as stipulated in Para 7.3(b) of the MYT Regulations, 2011. For an existing plant i.e. PPCL, the Commission has retained the Commission Combined Cycle Heat Rate of 2000 kCal/kWh and Open Cycle Heat Rate of 2900 kCal/kWh as per the norms of CERC for Kayamkulam Gas Turbine Power Station of NTPC, which is technically a similar plant.

2.10 The Pragati Power Station is an eight year old station, and hence, can be operated optimally to meet the targets set for the norms of operation. Hence, the Commission shall consider the norms specified in the MYT Regulations, 2011 for determination of tariffs for PPCL during the Control Period.

Availability

Stakeholders' View

2.11 Stakeholders have opposed PPCL's proposal for relaxation of target availability norms. Further, stakeholders have directed PPCL to submit the date on which the Hot Gas Path inspection is specified.

Petitioner's Submission

2.12 The Petitioner has submitted that it shall make all efforts to achieve the target availability of 85% as fixed by the Commission in the MYT Regulations, 2011. However, it has submitted that in case PPCL is unable to achieve the target availability norm of 85% due to reasons beyond its control, then the Hon'ble Commission may kindly consider and relax the enhanced target.

Commission's View

2.13 The Commission has taken note of the fact that the availability of the plant during the Control Period (FY 2007-08 to FY 2011-12) was 84.08% in FY 2007-08, 85.41% in FY 2008-09, 85.50% in FY 2009-10, 86.31% in FY 2010-11, 85% in FY 2011-12, thus computing to average availability of 85.3%. Accordingly, the Commission has fixed the target availability of 85%, which is also in line with the CERC norms.

Auxiliary Energy Consumption

Stakeholders' View

2.14 The Stakeholders have submitted that in the event of PPCL not submitting the parameters of Auxiliary consumption for Open cycle, the Hon'ble Commission should assume it at 1%.

2.15 A few of the stakeholders have suggested periodic energy audit for PPCL station for checking the auxiliary consumption.

Petitioner's Submission

2.16 The Petitioner has submitted that the actual auxiliary power consumption of PPCL in combined cycle mode for the period from 2007-08 to FY 2010-11 is in the range of 2.86% to 2.92%, which is marginally lower than the norm of 3% auxiliary power consumption. The actual auxiliary power consumption is being determined by measuring the readings of various meters installed on UAT and station transformers. It may be mentioned that the energy generated by the station excluding the auxiliary power consumption is fed into the system and is utilized by the end consumers of the electricity. There is no abuse of the electricity as pointed out by BYPL. It is further submitted that energy audit of the station are being conducted from time to time.

2.17 Further the Petitioner has submitted that PPCL is a government company and statutory audits are conducted by the statutory auditor appointed by CAG and this audit is further supplemented by CAG. CAG carries out proprietary audit from time to time. The Petitioner has further submitted that PPCL also has a system of internal audit and there are a number of check and balances to vouch for the system. The necessary data is also submitted to Commission. The energy audit is also being conducted from time to time by independent third party.

Commission's View

2.18 The normative auxiliary power consumption allowed @ 1% in Open Cycle Mode and 3% in Combined Cycle Mode is as per Regulation 7.1 of MYT Regulations 2011. The same norms have been consistently followed by the Commission and are also in line with the CERC norms. These are, therefore, being maintained.

Variable Cost

Stakeholders' View

2.19 Stakeholders have requested for submission of copies of bills received from GAIL and also any spot RLNG purchase bills for payment of fuel charge while truing up of FPA.

Petitioner's Submission

2.20 The Petitioner has submitted that the variable cost being charged from the beneficiaries is in accordance with the Regulations specified by the Commission from time to time. The necessary details regarding the fuel cost are being submitted to the Commission.

Commission's View

2.21 The details regarding fuel cost are dealt by the Commission at the time of prudence check during true-up of the ARR. The regular bills are raised by the PPCL based on the parameters prescribed in the tariff order and payments made by them to fuel suppliers. This is an industry practice, followed in the country.

O&M Expense

Stakeholders' View

2.22 The Stakeholders feel that expense incurred by the PPCL towards DLN Burners and other components cannot be treated as revenue expense. These expenses in the O&M head are very high and have deviations from 39% to 45% which is not acceptable. Such type of major expense should be recovered through depreciation as part of capex.

Petitioner's Submission

2.23 The Petitioner has submitted that all the inspections and overhauling of the machines are as per the manufactures recommendation. The expenditure on DLN Burners is cyclical in nature and the amount may vary from year to year depending upon the type of inspections carried out on the machines based on the running hours. The additional R&M expenses towards DLN burners and for critical components of Gas Turbines are required to be incurred by the PPCL for the smooth operations under the prescribed norms of emissions of the plant.

2.24 The Petitioner has further reiterated that since the nature of expenditure is recurring, as being incurred on year to year basis depending upon the inspection schedules, the same cannot be treated as capital expenditure.

Commission's View

2.25 The Commission has been allowing expense on account of DLN Burners and for critical components of Gas Turbine as additional R&M expense since tariff order dated July 7, 2005. The Commission has also taken note of the fact that the expenditure on DLN Burners is cyclic in nature and its amount varies from year to year depending upon type of inspection carried out on the machines based on the running hours. The Commission also takes note of the fact that expenditure on DLN Burners has increased substantially in FY 2010-11 while the same has dropped in FY 2011-12 as combustion inspection of GT-2, Hot Gas Path Inspection of GT#1, overhauling of Generator Exciter and major overhauling of STG was undertaken during the FY 2010-11. The actual repair and maintenance expenditure during the Control Period, including additional expenditure on account of DLN Burners and expenditure on sewage treatment plant will be trued-up at the end of the Control Period (FY 2012-13 to FY 2014-15).

Interest on Loan

Stakeholders' View

2.26 Stakeholders feel that PPCL should explore the possibility of re-financing the loans to reduce the interest liability.

2.27 Further, PPCL has included the 2% rebate that it pays to the DISCOMs for timely payment under the interest liabilities which is not justified.

Petitioner's Submission

2.28 The Petitioner has submitted that PPCL has taken the loan from PFC Limited and the average interest rate is around 8.41%, which is competitive. Also, the entire PFC loan will be repaid during this MYT period.

Commission's View

2.29 The Commission is of the view that PPCL should explore the possibility of refinancing existing loans with lower interest rates. The net gain on account of such refinancing shall be dealt with in accordance with MYT Regulation.

2.30 The Commission is allowing interest on working capital as per the MYT Regulations which prescribe working capital norms taking into account, inter alia, receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on Normative Annual Plant Availability factor. Therefore, the Commission retains the existing practice and has not allowed 2% rebate separately.

Depreciation

Stakeholders' View

2.31 The Asset class on which depreciation has been charged should be provided along with the useful life of each. The complete details of the Gross Block and its depreciable value should be provided to arrive at Net Block.

Petitioner's Submission

2.32 The Petitioner has submitted that details of the Gross Block, Net Block, Asset Class and depreciation year wise have been provided in the petition in Form no. 23.

Commission's View

2.33 The Petitioner has submitted the details in the Format prescribed under MYT Regulations.

Interest on Working Capital

Stakeholders' View

2.34 PPCL should give details of the payment of their energy bills to get the working capital required as cost of fuel. PPCL should make efforts to minimize the working capital to minimize the fixed costs.

2.35 The day tank storage capacity of fuel should be submitted by PPCL to work out the actual working capital locked in inventory.

2.36 List of regular routine spares and insurance spares received by PPCL should be furnished.

Petitioner's Submission

2.37 The Petitioner has submitted that interest on working capital has been computed in line with the Regulations specified by the Commission and working capital requirement has been computed on normative basis. The Petitioner has further submitted that gas is being supplied through pipelines and there is no storage of the same in the system. The inventory of spares considered for computation of interest on working capital has been as per the regulations notified by the Commission.

Commission's View

2.38 The calculation of interest in working capital is in accordance with Regulation 6.28 & 6.29 of MYT Generation Tariff Regulations, 2011, which are as under:

"6.28 Rate of interest on working capital shall be on normative basis and shall be equal to Base Rate of State Bank of India plus 350 basis points as on 01.04.2012 or on Ist April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later.

6.29 Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not take working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures."

2.39 These norms are in line with the CERC Generation Tariff Regulations, 2009-14.

Fixed Fuel Cost

Stakeholders' View

2.40 The fixed fuel cost charged by PPCL under the fixed charges is unacceptable. Any cost borne towards the procurement of fuel should be included in the variable charges instead of the fixed costs.

Petitioner's Submission

2.41 The Petitioner has submitted that PPCL has tied-up the gas sale agreement with GAIL. As per the terms and conditions of the gas sale agreement, fixed fuel cost has been charged by GAIL up to FY 2010-11. This amount was fixed and not varying according to quantum of supply. Hence, the Commission allowed the same as part of fixed cost. Now in the present gas sale agreement, the terms and conditions are modified and there is no requirement of fixed fuel cost. Hence, the same has been excluded from the component of fixed cost.

Commission's View

2.42 The previous Gas Sale Agreement with GAIL had a component of fixed fuel cost (Rs 2.43 crore for the year FY 2010-11) which was fixed in nature and had to be paid by PPCL irrespective of the quantity of gas drawn by them. The Commission had expressed its views on this issue in its tariff orders dated June 9, 2004; July 7, 2005; September 22, 2006 and August 26, 2011. The same had been considered a part of fixed cost in the previous tariff orders of the Commission. However, in the present Gas Sale Agreement, there is no component of fixed fuel cost. Hence, the same has been excluded from the component of fixed cost in the present Tariff Order.

A3: TARIFF PETITION FOR THE CONTROL PERIOD (FY 2012-13 TO FY 2014-15)

Introduction

3.1 PPCL has a total generation capacity of 330 MW, and operates two gas turbine units of 104 MW each and one steam turbine generator of 122 MW, as detailed in the following table:

Table 2: Details regarding PPCL

Details	Gas Turbine I	Gas Turbine II	Steam Gas Turbine
Capacity (MW)	104	104	122
Date of Commissioning	May 2002	Nov 2002	Mar 2003
Fuel	Gas/ LNG		
Source	GAIL (APM,PMT), R-LNG & Spot R-LNG		

3.2 In the present petition, the Petitioner has requested for true up of ARR for the Control Period (FY 2007-08 to FY 2011-12) along with the approval of ARR and the tariff for the FY 2012-13 to FY 2014-15. The Petitioner has submitted the actual information for FY 2007-08 to FY 2010-11 and the provisional estimates for FY 2011-12. A summary of the variable and fixed cost submitted by the Petitioner for FY 2007-08 to FY 2011-12 in the Tariff petition is shown in the table below:

Table 3: Summary of Generation Cost for Control Period (FY 2007-08 to FY 2011-12) for PPCL

Particulars	Units	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
		(Actual)	(Actual)	(Actual)	(Actual)	(Provisional)
Gross Generation	MU	2366.74	2401.34	2452.93	2335.65	2318.98
Net Generation	MU	2299.53	2334.53	2381.81	2270.17	2249.43
Total Fixed Cost*	Rs. Cr	214.55	212.47	204.79	234.24	224.95
Total Variable Cost	Rs. Cr	235.62	286.04	267.6	411.3	514.02
Total Cost	Rs. Cr	450.17	498.51	472.39	645.54	738.97
Variable Cost per Unit	Rs./kWh	1.02	1.23	1.12	1.81	2.29
Total Cost per Unit	**Rs./kWh**	**1.96**	**2.14**	**1.98**	**2.84**	**3.29**

**Excluding tax on income.*

3.3 Based on the values of the operational and financial parameters for FY 2007-08 to FY 2011-12, the Petitioner has projected the ARR and generation tariff for the Control Period (FY 2012-13 to FY 2014-15). A summary of the generation cost, submitted by the Petitioner for the Control Period (FY 2012-13 to FY 2014-15) is shown in the Table 4.

Table 4: Summary of Generation cost for Control Period (FY 2012-13 to FY 2014-15) for PPCL

Particulars	Units	FY 2012-13	FY 2013-14	FY 2014-15
Gross Generation	MU	2457.20	2457.20	2457.20
Net Generation	MU	2383.48	2383.48	2383.48
Total Fixed Cost*	Rs. Cr	231.39	246.03	235.13
Total Fuel Cost	Rs. Cr	548.05	548.05	548.05

Particulars	Units	FY 2012-13	FY 2013-14	FY 2014-15
Total Cost	Rs. Cr	779.44	794.08	783.18
Variable Cost per Unit	Rs/kWh	2.299	2.299	2.299
Total Cost per Unit	**Rs/kWh**	**3.27**	**3.33**	**3.29**

**Excluding tax on income.*

3.4 The Commission had extended the MYT Regulations 2007 and the previous Control Period for a further period of one year up to March 31, 2012. In accordance with MYT Regulations 2007 the Commission shall carry out true up for each year of the Control Period (FY 2007-08 to FY 2011-12) only at the end of the extended Control Period (FY 2007-08 to FY 2011-12) when the audited accounts for all the relevant years are made available by the Petitioner.

3.5 The Commission has analysed the Multi Year Tariff petition submitted by the Petitioner for approval of Aggregate Revenue Requirement and determination of Generation Tariffs for PPCL during the Control Period (FY 2012-13 to FY 2014-15).

3.6 The Commission held technical discussions to validate the data submitted by the Petitioner and sought further clarifications on various issues. The Commission has considered information submitted by the Petitioner as part of the tariff petitions, audited accounts for FY 2007-08 to FY 2010-11, responses to various queries raised during the discussions and also during the Public Hearing, for determination of tariffs.

3.7 This chapter contains detailed analysis of the multi-year tariff petition submitted by the Petitioner and the various parameters approved by the Commission for determination of Generation Tariff for PPCL for the Control Period (FY 2012-13 to FY 2014-15), hereinafter referred to as “the Control Period” or “the Control Period (FY 2012-13 to FY 2014-15)”.

A4: ANALYSIS OF AGGREGATE REVENUE REQUIRMENT FOR MYT CONTROL PERIOD (FY 2012-13 TO FY 2014-15)

Norms of Operation

4.1 The Commission has notified MYT Regulations 2011 for the Control Period. The said Regulations contain the target norms of operation, for the purpose of determination of tariff, for PPCL during FY 2012-13 to FY 2014-15. The Petitioner has, however, made submissions for relaxation of certain operational norms. The submissions made by the Petitioner in this regard and the Commission's views on the same have been discussed in the following sections.

Station Heat Rate

Petitioner's Submission

4.2 The Petitioner has proposed the Station Heat Rate (SHR) at 3135 kCal/kWh for open cycle operations and 2036 kCal/kWh for combined cycle operations during the Control Period.

4.3 The Petitioner has submitted its inability to meet the SHR set by the Commission due to higher guaranteed heat rate as specified by the turbine manufacturer. The guaranteed heat rate of turbines, according to the manufacturers is 1939 kCal/kWh in combined cycle mode and 2986 kCal/kWh in open cycle mode at 100% PLF. The Central Electricity Authority (CEA) has computed the heat rate for combined cycle as 1978 kCal/kWh.

4.4 Also, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for the period FY 2009-14 (regulation 26 (ii) (B) (b) on gross heat rate for newly commissioned projects) provides a correction of 5% over the designed heat rate. 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. The Petitioner has requested that the same be considered for the second MYT Control Period i.e. FY 2012-13 to FY 2014-15.

4.5 The Petitioner has further stated that the station is mostly run in combined cycle mode and open cycle operation is rare. In this regard, it is submitted that the station runs in open cycle mode only as and when requisitioned by SLDC, Delhi. Even though the operation of station is less in open cycle mode, there is a direct loss on account of recovery of lesser fuel cost when operated in open cycle mode. This loss in absolute terms is on the higher side. The Petitioner has submitted that the station endeavours to run in combined cycle mode but, if operated in open cycle mode, on the request of SLDC, Delhi, the station may be allowed higher heat rate of 3135 kCal/kWh.

Table 5: Station Heat Rate (kCal/kWh) submitted by the Petitioner

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Station Heat Rate (Combined Cycle)	2036	2036	2036
Station Heat rate (Open Cycle)	3135	3135	3135

Commission's Analysis

4.6 The Commission has fixed the operational norms in the MYT Regulations 2011 duly taking into consideration both the operating conditions of this plant, and the norms specified by the CERC for similar projects.

4.7 The Commission observes that claim of the Petitioner regarding 5% provision over and above design heat rate is for newer machines which are much more efficient, as stipulated in Para 7.3(b) of the MYT Regulations, 2011. For an existing plant i.e. PPCL, the Commission has retained the Commission Combined Cycle Heat Rate of 2000 kCal/kWh and Open Cycle Heat Rate of 2900 kCal/kWh as per the norms of CERC for Kayamkulam Gas Turbine Power Station of NTPC, which is technically a similar plant.

4.8 The PPCL is an eight year old station, and hence, can be operated optimally to meet the targets set for the norms of operation. Hence, the Commission shall consider the norms specified in the MYT Regulations, 2011 for determination of tariffs for PPCL during the Control Period.

Table 6: Station Heat Rate (kCal/kWh) approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Station Heat Rate (Combined Cycle)	2000	2000	2000
Station Heat rate (Open Cycle)	2900	2900	2900

Plant Availability

Petitioner's Submission

4.9 The Petitioner has submitted that though it will make all efforts to achieve the target availability of 85% as fixed by the Commission in the MYT Regulations 2011 during the Control Period, it has requested the Commission that in case where it is unable to achieve the target availability due to reasons beyond its control, the Commission may relax the normative target availability during the Control Period.

4.10 Table below indicates the projected availability as submitted by the Petitioner for the MYT period.

Table 7: Availability (%) for MYT period submitted by the Petitioner

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Plant Availability	85%	85%	85%

Commission's Analysis

4.11 The Commission has taken note of the fact that the availability of the plant during the Control Period (FY 2007-08 to FY 2011-12) was 84.08% in FY 2007-08, 85.41% in FY 2008-09, 85.50% in FY 2009-10, 86.31% in FY 2010-11, 85% in FY 2011-12, thus computing to average availability of 85.3%. Accordingly, the Commission has fixed the target availability of 85%, which is also in line with the CERC norms and the MYT Regulations 2011.

Table 8: Availability (%) for MYT period approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Plant Availability	85%	85%	85%

Auxiliary Power Consumption (APC)

Petitioner's Submission

4.12 The Petitioner has submitted that the actual auxiliary power consumption in combined cycle mode for PPCL is in the range of 3%. It will continue to perform within the norm of 3% auxiliary power consumption in combined cycle mode and 1% in open cycle mode during FY 2012-13 to FY 2014-15, as summarized in table below.

Table 9: Auxiliary Power Consumption (%) submitted by the Petitioner

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Auxiliary power consumption in CC mode	3.00%	3.00%	3.00%
Auxiliary power consumption in OC mode	1.00%	1.00%	1.00%

Commission's Analysis

4.13 The normative auxiliary power consumption allowed @ 1% in Open Cycle Mode and 3% in Combined Cycle Mode is as per Regulation 7.1 of MYT Regulations 2011. The same norms have been consistently followed by the Commission and are also in line with the CERC norms. These are, therefore, being maintained.

Table 10: Auxiliary Power Consumption (%) approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Auxiliary power consumption in combined cycle mode	3.00%	3.00%	3.00%
Auxiliary power consumption in open cycle mode	1.00%	1.00%	1.00%

Gross and Net Generation

Petitioner's Submission

4.14 On the basis of Availability & Auxiliary Power Consumption as projected above, the Petitioner has projected annual gross generation during the Control Period to be 2457.20 MU and net generation to be 2383.48 MU.

Table 11: Gross and Net Generation submitted by the Petitioner

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Gross Generation (MU)	2457.20	2457.20	2457.20
Auxiliary Consumption (%)	3.00	3.00	3.00
Net Generation (MU)	2383.48	2383.48	2383.48

Commission's Analysis

4.15 The Commission has accepted the amount of gross generation proposed by the Petitioner for PPCL. The Commission has calculated the gross and net generation for determination of fuel cost by considering normative PLF of 85%, the approved auxiliary consumption of 3.00% during combined cycle operations. The approved gross and net generation calculated by the Commission are given below.

Table 12: Gross and Net Generation approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Gross Generation (MU)	2457.20	2457.20	2457.20
Auxiliary Consumption (%)	3.00	3.00	3.00
Net Generation (MU)	2383.48	2383.48	2383.48

4.16 The Petitioner is at liberty to maximize the generation from the station duly complying with the directions of the SLDC, Delhi.

Determination of Variable Charges

4.17 The variable charges (variable cost) of the plant depends upon the operational and fuel parameters such as the Station Heat Rate, Auxiliary Consumption, Fuel Cost and the Gross Calorific Value of fuel used. The Commission has considered all these factors to determine the variable cost of generation from the PPCL.

Energy Charge Rate and Variable Cost

Petitioner's Submission

4.18 The Petitioner submitted that it has a long-term agreement with Gas Authority of India Limited (GAIL) for supply of gas. Initially, the Petitioner had a daily allocation of 1.75 MMSCM of APM gas, which was sufficient to run both gas turbines on base load. The daily gas allocation to PPCL was between 1.1 to 1.2 MMSCMD of APM gas and 0.28 MMSCMD of PMT gas. However, due to depleting gas reserves of ONGC, GAIL has been imposing regular cuts on supply of gas.

4.19 The Petitioner submitted that it then signed a fall back agreement with GAIL for supply of spot R-LNG gas in order to meet the shortfall in gas supply. The Petitioner has submitted that Ministry of Petroleum and Natural Gas (MoP&NG) has allocated 0.02 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011.

4.20 The Petitioner has further submitted that, during the first MYT Control Period from FY 2007-08 to FY 2011-12, 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. However, the Petitioner has not considered the open cycle generation for projection of fuel consumption during FY 2012-13 to FY 2014-15.

4.21 Thus to project the fuel consumption of the station, the Petitioner has considered the heat rate of 2036 kCal/kWh in combined cycle mode at the gross calorific value of 9483 kCal/SCM, which translates into total gas consumption of 527.53 MMSCM during each year from FY 2012-13 to FY 2014-15.

4.22 For projecting the total fuel costs for second MYT Control Period, the Petitioner has pointed out that there has been an increasing trend in gas prices. However, the weighted average price of the gas has been taken for preceding three months i.e. September to November, 2011 in line with the MYT Regulations, 2011. The weighted average price of gas from September to November, 2011 for PPCL is Rs. 10389.00 /1000 SCM. The Petitioner has not considered any escalation in the fuel cost for the projection period.

4.23 Further, the Petitioner has stated that recovery of energy charges, as projected below, would be in accordance with the formula specified in the MYT Regulations 2011.

4.24 The Petitioner submitted the following details for determination of fuel cost for the Control Period, as shown in the table below:

Table 13: Variable Cost submitted by the Petitioner

Particulars	Unit	FY 2012-13	FY 2013-14	FY 2014-15
Total Gas Consumption	MMSCM	527.53	527.53	527.53
Average Gas price	Rs./ SCM	10.39	10.39	10.39
Total Gas Cost	Rs. Crores	548.05	548.05	548.05
Net generation	MU	2383.48	2383.48	2383.48
Variable cost per unit	p./kWh	230	230	230

Commission's Analysis

4.25 The Commission has projected the weighted average rate of gas, for calculation of energy charge rate and variable cost for the Control Period, by considering the average rate of gas procured from various sources in January to March 2012 as submitted by the Petitioner.

4.26 The Petitioner submitted weighted average rates for gas procured from various sources in January to March 2012 as Rs 10449 per 1000 SCM (or Rs. 10.45 per SCM), based on the bills received from GAIL.

Table 14: Weighted average rates for gas procured from various sources in January to March 2012

Gas		UoM	
APM	Quantity	SCM	107485830
	Average Rate	Rs./1000SCM	8938
PMT	Quantity	SCM	13960739
	Average Rate	Rs./1000SCM	9004
RLNG	Quantity	SCM	16053746
	Average Rate	Rs./1000SCM	21569
Spot- RLNG	Quantity	SCM	2033

Gas		UoM	
	Average Rate	Rs./1000SCM	36037
Non APM	Quantity	SCM	865014
	Average Rate	Rs./1000SCM	15128
Total	Quantity	SCM	138367362
	Average Rate	Rs./1000SCM	10449

4.27 The Commission has arrived at the base Energy Charge Rate (ECR) for the Control Period as per the formula specified in the MYT Regulations 2011, as reproduced below:

"7.17 Total Energy charge payable to the generating company for a month shall be:

(Energy charge rate in Rs./kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

7.18 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae :

...

(a) *For gas and liquid fuel based stations*

ECR = GHR x LPPF x 100 / {CVPF x (100 – AUX)}

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

SFC = Specific fuel oil consumption, in ml per kWh."

4.28 The Commission has calculated the variable cost considering the projected generation (ex-bus) and the approved Energy Charge Rate. Details of the fuel cost as approved by the Commission for the Control Period are shown in the table below.

Table 15: Energy Charge Rate and Variable Cost approved by the Commission

Particulars	Unit	FY 2012-13	FY 2013-14	FY
Capacity	MW	330.00	330.00	330.00
Availability	%	85.00%	85.00%	85.00%
PLF	%	85.00%	85.00%	85.00%
Gross Generation	MU	2457.20	2457.20	2457.20
Auxiliary Consumption (AUX) (Combined Cycle)	%	3.00%	3.00%	3.00%
Net Generation	MU	2383.48	2383.48	2383.48
Gross Station Heat Rate (GHR)	kCal/kWh	2000	2000	2000
Weighted Average GCV of Gas (CVPF)	kCal/	9553	9553	9553
Rate of Gas (LPPF)	Rs/ SCM	10.45	10.45	10.45
Energy Charge Rate (ECR)	Rs/kWh	2.26	2.26	2.26
Fuel Cost	Rs Cr	537.56	537.56	537.56

4.29 The Commission directs the Petitioner to inform the SLDC, Delhi when the plant is operated on Spot R-LNG, since the variable cost is expected to be significantly higher and the SLDC, Delhi can consider the same during merit order dispatch.

4.30 The SLDC, Delhi may test the declared capacity of the Pragati Power Station at random and in the event of the power station failing to demonstrate the declared capability, the SLDC, Delhi shall report the matter to the Commission, which would then determine the penalty, if any, to be levied for false declaration.

Determination of Fixed Cost

4.31 The Commission analyzed all the components of fixed cost submitted by the Petitioner in detail to determine the applicable fixed cost for each year of the Control Period. As per the MYT Regulations 2011, the fixed cost of a generating station eligible for recovery through capacity charge shall include the following elements:

(a) Operation and Maintenance Expenses;

(b) Depreciation;

(c) Interest on loans;

(d) Interest on working capital;

(e) Return on Equity;

(f) Income Tax and;

(g) Special allowance in lieu of R&M or separate compensation allowance, wherever applicable.

Operations and Maintenance Expenses

4.32 In accordance with the MYT Regulations 2011, the Normative Operation and Maintenance (O&M) expenses allowable to a generation company shall comprise the following:

(a) Salaries, wages, pension contribution and other employee costs;

(b) Administrative and General costs;

(c) Repairs and maintenance; and

(d) Other miscellaneous expenses.

4.33 The MYT Regulations 2011 specify the following methodology for approval of O&M expenses of an existing generating station for the Control Period (FY 2012-13 to FY 2014-15):

"6.40 <u>Existing Generating Stations:</u> O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:

$O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 – X_n)$

Where,

$R\&M_n = K * GFA_{n-1};$

$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX)$; *and*

$INDX = 0.55 * CPI + 0.45 * WPI$

EMP_n *– Employee Costs of the Licensee for the* n^{th} *year;*

$A\&G_n$ *– Administrative and General Costs of the Licensee for the* n^{th} *year;*

$R\&M_n$ *– Repair and Maintenance Costs of the Licensee for the* n^{th} *year;*

X_n *is an efficiency factor for* n^{th} *year. Value of* X_n *shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate.*

Where,

'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission;

INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year;

6.41 The Applicant shall submit details of O&M expenses as required by the Commission. The O&M expenses for the Base Year shall be determined based on latest accounting statements, estimates of the generating company for relevant years and other factors considered relevant."

4.34 The Commission has used the methodology as specified in the MYT Regulations 2011 for calculation of O&M expenses for the Control Period. The same is detailed in the following sections.

Base year and Inflation Factor (INDX)

Petitioner's Submission

4.35 The Petitioner has submitted that the financial year 2011-12 has been considered as the base year for computing values of certain cost elements for FY 2012-13 to FY 2014-15. The estimated expenses for FY 2011-12 have been considered for projection of O&M expenses for the Control Period.

4.36 Further, the Inflation Factor to be used for indexing has been taken as a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year.

4.37 Based on the actual values of CPI and WPI, the Petitioner has calculated the annual growth in values of CPI (overall) for Industrial Workers and WPI (overall) for the period FY 2005-06 to FY 2010-11. The same has been used for determination of the escalation factor for each year of the Control Period as given in table below.

Table 16: Computation of Escalation Index (%) for the MYT period

Financial Year	WPI	% Change	CPI	% change
2005-06	104.5		117.01	
2006-07	114.4	9.47%	125	6.83%
2007-08	116.6	1.92%	133	6.40%
2008-09	126	8.06%	145	9.02%
2009-10	130.8	3.81%	163	12.41%
2010-11	143.3	9.56%	180	10.43%
Average change		6.56%		9.02%
Weightage		0.45		0.55
Escalation Index	7.91%			

Commission's Analysis

4.38 In accordance with the MYT Regulations 2011 the O&M expenses for the Base Year (the Financial Year immediately preceding the first year of the Control Period i.e. FY 2011-12) are to be determined based on latest accounting statements, estimates of the generating company for relevant years and other factors considered relevant.

4.39 Since the audited accounts for the Base Year (FY 2011-12) are not yet available, the Commission has considered the O&M expenses of the Petitioner as per the audited accounts for FY 2007-08 to FY 2010-11, as submitted by the Petitioner, for estimating the O&M expenses for Base Year. The Commission directed the Petitioner to submit head wise break up of the employee, R&M and A&G expenses for FY 2007-08 to FY 2010-11 and has examined the same for determination of the base year expenses. The value of the employee, R&M and A&G expenses for the Base Year as arrived at by the Commission are detailed in the respective sections dealing with these expenses.

4.40 As per the MYT Regulations 2011, *"the escalation factor (INDX) to be used for projection of employee and A&G expenses shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year."*

4.41 The CPI and WPI values for calculation of revised escalation factor are given in the table below.

Table 17: Actual CPI and WPI

Year	CPI (Overall)	% Growth YoY	WPI (Overall)	% Growth YoY
2005-06	117.12		104.47	
2006-07	125.00	6.73%	111.35	6.59%
2007-08	132.75	6.20%	116.63	4.74%
2008-09	144.83	9.10%	126.02	8.05%
2009-10	162.75	12.37%	130.82	3.81%
2010-11	179.75	10.45%	143.33	9.56%
Average		8.97%		6.55%

Source: Ministry of Labour Website, http://labourbureau.nic.in and Ministry of Commerce and Industry Website, http://eaindustry.nic.in/

4.42 Based on these values, the Commission has calculated the average annual growth in values of CPI (overall) for Industrial Workers and WPI (overall) for the period FY 2006-07 to FY 2010-11 and has considered the same for determination of indices during the base year and the Control Period.

4.43 The summary of the same is provided in the table below:

Table 18: Projected CPI and WPI during the Control Period

Year	CPI (Overall)	Projected Growth in CPI	WPI (Overall)	Projected Growth in WPI
2011-12 (Base Year)	195.87	8.97%	152.71	6.55%
2012-13	213.44	8.97%	162.72	6.55%
2013-14	232.59	8.97%	173.37	6.55%
2014-15	253.45	8.97%	184.73	6.55%

4.44 The Commission has determined the inflation factor for the n^{th} year ($INDX_n$) using a weighted average of CPI and WPI as specified in the MYT Regulations 2011. The inflation factor is then used to calculate the escalation factor for each year ($INDX_n/INDX_{n-1}$) as shown in the table below.

Table 19: Escalation Factor for the Control Period

Year	Index (Consolidated)	Escalation Factor
2010-11	163.36	
2011-12	176.45	1.08
2012-13	190.62	1.08
2013-14	205.94	1.08
2014-15	222.53	1.08

Employee Expenses

Petitioner's Submission

4.45 The Petitioner has submitted that 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 and allowances are at par with the increase allowed to Government employees. The Government allows two instalments of DA every year effective in July and January. Due to high inflation in the past, the DA increased in the range of 6 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 indexation factor of 7.91%.

4.46 The Petitioner also submitted that the headquarters of IPGCL and PPCL are common and the employees posted at headquarters are rendering services to both companies. The expenses of employees posted at headquarters are allocated between IPGCL and PPCL in FY 2011-12 in the ratio of 47:53 based on the generation of the plants.

4.47 Thus, the Petitioner has projected employee expenses for FY 2012-13 to FY 2014-15 on the basis of an escalation factor of 10% p.a. over the base year FY 2011-12.

Table 20: Employee Expenses submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Employee Expenses	38.30	42.13	46.35

Commission's Analysis

4.48 As per MYT Regulations 2011, the employee expenses for the Control Period shall be projected using the following formula:

$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX)$; *and*

$INDX = 0.55 * CPI + 0.45 * WPI$

EMP_n – *Employee Costs of the Licensee for the* n^{th} *year;*

$A\&G_n$ – *Administrative and General Costs of the Licensee for the* n^{th} *year;*

Where,

INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year

4.49 The Commission has followed the methodology specified in MYT Regulations 2011 and has analysed the submissions made by the Petitioner regarding its Employee Expenses related to Medical Reimbursement, Travelling Allowance, Leave Travel Assistance, Staff Welfare Expenses, etc. for approval of employee cost for the Control Period.

4.50 The Commission has estimated the base year employee expenses for the Control Period by considering the employee expenses for FY 2010-11. The Commission directed the Petitioner to clarify if the employee expenses for FY 2010-11 include any arrears on account of 6^{th} Pay Commission. The Petitioner vide letter dated June 7, 2012 submitted that it has made the payments of Rs 0.25 Cr during FY 2010-11 towards the arrears of Overtime and Holiday Pay arising on account of 6^{th} Pay Commission. This payment was made against the liability provision of Rs. 0.21 Crore on this account already provided in earlier year accounts. Hence, the difference of short provision of Rs. 0.04 Crore has been booked on account of arrears of 6^{th} Pay Commission during FY 2010-11. The Commission has reduced the arrears on account of 6^{th} Pay Commission (i.e. Rs 0.04 Cr) from the total employee cost of FY 2010-11 as per the audited accounts (i.e. Rs 21.15 Cr) to arrive at the net employee expenses (i.e. Rs 21.11 Cr).

Table 21: Normalized Employee Expenses for FY 2010-11 (Rs Cr)

Particulars	Rs Cr
Total Employee Expenses	21.15
Arrears of Overtime and Holiday Pay with 6^{th} Pay Commission	0.04
Net Employee Expenses	**21.11**

4.51 The net employee expenses have been escalated first to arrive at the employee expenses for FY 2011-12 (Rs 22.80 Cr) using the escalation factor as derived in Table 19. The employee expenses so arrived at for FY 2011-12 have been further escalated by the escalation factor as shown in Table 19 to arrive at the employee expenses for the Control Period. The employee expenses as approved by the Commission are shown in the table below:

Table 22: Employee Expenses approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Employee Expenses	24.63	26.61	28.75

Repair and Maintenance Expenses

Petitioner's Submission

4.52 The Petitioner has submitted Repair & Maintenance (R&M) Expenses of Rs. 21.01 Cr for FY 2011-12. It further submitted that PPCL has to incur higher R&M Expenses due to Water Charges, for the water obtained from sewage treatment plants. The Petitioner has submitted that it 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, and the treated water is being used in the PPCL.

4.53 The Petitioner has submitted water costs to be Rs. 4.0 Cr for FY 2012-13 and Rs. 3.75 Cr for FY 2013-14 and Rs. 4.03 Cr for FY 2014-15, which mainly includes expenditure on operation, electricity, chemicals, etc.

4.54 The Petitioner has projected R&M expenses for PPCL for FY 2012-13 to FY 2014-15 based upon the assessment of the maintenance activities to be carried out as per the manufacturer's recommendation and other maintenance practices followed, based on experience. Further, the R&M expenditure submitted includes additional expenditure due to DLN burners and expenditure on STP for sewage treated water.

4.55 The Petitioner has also submitted that all inspections, repair & maintenance and replacement of the DLN burners are as per manufacturers' recommendations. The Petitioner has submitted that repair & maintenance expenditure including expenditure on DLN burners have increased substantially in FY 2010-11 while the same is expected to drop in FY 2011-12 as several activities such as combustion inspection of GT-2, Hot Gas Path Inspection of GT-1, Overhauling of Generator Exciter and major overhauling of STG were undertaken during FY 2010-11. The expenditure on account of DLN burner and critical components of Gas Turbine will continue to be incurred in this MYT period from FY 2012-13 to FY 2014-15.

Table 23: R&M Expenses submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
R&M expenses including additional expenditure on account of DLN Burners & STP	39.30	51.15	36.43
Expenditure on DLN Burners included in A	16.32	28.88	12.93
Expenditure on Water from Sewage treatment plant included in A	4.0	3.75	4.03

4.56 The Petitioner has also submitted that the Repair & Maintenance expenses include the expenses on account of routine civil works to be undertaken for Head Quarters i.e.

RPH Office Complex and Residential Colony of IPGCL & PPCL. The residential colony of IPGCL & PPCL at Sarai Kale Khan was constructed in early 1980s. Since the colony is around 30 years old, it requires strengthening of structures and major repair. The Petitioner has submitted that the Commission approved Rs. 2.80 Cr as capital expenditure in the MYT Order for IPGCL towards special repair to structures in IPGCL colony. This expenditure has been accounted under the head Repair to Building as per the accounting standards and the same cannot be capitalized. Hence, expenditure on account of strengthening of structures has been considered under the head 'Special Repair & Maintenance'. IPGCL and PPCL have projected an expenditure of Rs 2.00 Cr during the MYT Control Period FY 2012-13 to FY 2014-15 for strengthening of structure in the colony, a portion of which has been allocated to the R&M expenses of PPCL.

4.57 In subsequent submissions to the Commission dated June 7, 2012, the Petitioner proposed the calculation of 'K' factor for determination of R&M expenses in accordance with Regulation 6.40 of the MYT Regulations 2011. 'K' has been computed for PPCL based upon the average of 'K' for FY 2007-08 to FY 2010-11. The escalation has been taken as 8% on year to year basis. The 'K' proposed by the Petitioner for FY 2012-13 to FY 2014-15 is as under:

Table 24: R&M Expenses submitted by the Petitioner (Rs. Cr)

	FY 2012-13	FY 2013-14	FY 2014-15
Proposed K	3.99%	4.31%	4.66%

Commission's Analysis

4.58 MYT Regulations 2011 specify that R&M expenses for existing generating stations shall be determined using the following formula:

$R\&M_n = K * GFA_{n-1};$

Where,

$R\&M_n$ is Repair and Maintenance Costs of the Licensee for the n^{th} year;

'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission.

4.59 The Commission has followed the methodology specified in MYT Regulations 2011 and has analysed the submissions made by the Petitioner regarding R&M expenses for FY 2007-08 to FY 2010-11 for approval of R&M expenses for the Control Period (FY 2012-13 to FY 2014-15).

4.60 The R&M expenses of the Petitioner for FY 2007-08 to FY 2010-11 include R&M expenses on account of DLN burners and expenses on account of Sewage Treatment Plant. In line with the approach followed by it in its previous Tariff Orders, the Commission has considered the expense on DLN burners and Sewage Treatment Plant separately.

4.61 The Commission has considered the R&M expenses of the Petitioner as per the audited accounts for FY 2007-08 to FY 2010-11. Further, Water Charges (which form a part of the expenses on Sewage Treatment Plant) which are booked under the head of A&G expenses in the accounts have been considered under R&M expenses to arrive at the R&M expenses for each year from FY 2007-08 to FY 2010-11.

Table 25: R&M Expenses for FY 2007-08 to FY 2010-11

	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
R&M Expenses as per accounts	35.24	14.73	21.70	44.97
Water Charges	1.07	1.35	1.41	1.67
Total R&M Expenses	**36.31**	**16.08**	**23.11**	**46.64**

4.62 The Commission has reduced the expenses on DLN Burners and Sewage Treatment Plant from the total R&M expenses for FY 2007-08 to FY 2010-11 and has considered the balance R&M expenses and the approved opening GFA for each year for estimation of 'K' for each year from FY 2007-08 to FY 2010-11. The average K for FY 2007-08 to FY 2010-11 is calculated equal to 1.081% as shown below:

Table 26: K factor for FY 2007-08 to FY 2010-11

Particulars	2007-08	2008-09	2009-10	2010-11
Opening GFA (as approved by the Commission) (Rs Cr)	1031.6	1031.6	1031.6	1031.6
Total R&M Expenses (Rs Cr)	36.31	16.08	23.11	46.64
Expenditure on DLN Burners (Rs Cr)	26.21	2.05	10.49	28.80
STP Expenditure (Rs Cr)	2.26	2.29	2.62	2.80
R&M Expenses excluding expenses on DLN Burners and STP Expenditure (Rs Cr)	7.84	11.74	10.00	15.04
K Factor (on approved GFA)	0.76%	1.14%	0.97%	1.46%
Average K Factor	1.081%			

4.63 The Commission is of the view that since it has not approved any additions to GFA for the Petitioner during FY 2012-13 to FY 2014-15 in this Order (as detailed in paragraph 42), the average value of K obtained above should be escalated to arrive at the K for each year of the Control Period.

4.64 The average K factor arrived above has been escalated by average increase in the relevant price index i.e. the Wholesale Price Index for Machinery and Machine Tools during FY 2007-08 to FY 2010-11 (3.23%) (*Source: Ministry of Commerce and Industry Website*, http://eaindustry.nic.in/) to arrive at 'K' and R&M expenses for each year of the Control Period as shown in the table below:

Table 27: R&M Expenses approved by the Commission for PPCL based on 'K' factor (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening GFA (as approved by Commission)	1033.52	1033.52	1033.52
K Factor	1.21%	1.25%	1.29%
R&M Expenses (excluding expenses on DLN burners and STP)	12.49	12.90	13.31

4.65 With regard to the DLN burners, the Commission, in its MYT Order, had provisionally approved total additional R&M Expenses of Rs 80.00 Cr for FY 2007-08 to FY 2010-11 (Rs. 20.00 Cr for each year). The Commission had followed this approach since the Petitioner had intimated that this is one of the few plants in India with DLN burners and the NOx emission from the power station is limited to 35ppm.

4.66 The Petitioner has submitted that the actual expenditure on DLN burners during the Control Period (from FY 2007-08 to FY 2011-12) was Rs 70.34 Cr or an average of Rs 14.07 Cr per year. The Commission has provisionally approved Rs 15 Cr as expenditure on DLN burners for each year from FY 2012-13 to FY 2014-15. The same shall be trued up at the end of the Control Period after due prudence check of the actual expenditure incurred by the Petitioner.

4.67 The Commission has also considered the expenses on STP (Sewage Treatment Plant) separately in line with the approach adopted by it in previous tariff orders. The expenses on STP in FY 2010-11 (Rs 2.80 Cr) have been escalated using the escalation factor first to arrive at the STP expenses for FY 2011-12 using the inflation factor as derived in Table 19. The STP expenses so arrived at for FY 2011-12 have been further escalated by the same inflation factor to arrive at the STP expenses for the Control Period as shown in Table 28.

4.68 With regard to the R&M expenses towards the residential colony of IPGCL and PPCL, the Commission approved the capital expenditure for the same in its MYT Order for IPGCL. The Commission is of the view that since the amount claimed has already been allowed to IPGCL as capital expenditure (along with the financing cost and depreciation) for the respective years, the same cannot be claimed as R&M expenses now. The same shall also be treated as a part of capital expenditure for IPGCL at the time of truing up for the respective years.

Table 28: R&M Expenses approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
K Factor (%)	1.21%	1.25%	1.29%
R&M Expenses (w/o DLN Burners and STP)	12.49	12.90	13.31
Expense on DLN Burners	15.00	15.00	15.00
Expense on STP	3.27	3.53	3.81
Total R&M Expenses	**30.76**	**31.43**	**32.13**

Administrative and General Expenses

Petitioner's Submission

4.69 The Petitioner has considered the estimated Administration and General (A&G) Expenses for FY 2011-12 as the base for forecasting A&G Expenses for the Control Period. The Petitioner has requested the Commission to consider the expenses incurred on insurance, water and property tax in addition to the A&G Expenses to be approved for the Control Period.

4.70 The Petitioner has projected A&G expenses for FY 2012-13 to FY 2014-15 by applying an indexation factor of 7.91% annually on the estimated cost for FY 2011-12 except of expenditure on CISF & ERP.

4.71 PPCL deploys the 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 and the Sixth Pay Commission recommendations were also implemented in CISF. Accordingly, the expenditure on security has also increased substantially. The increase in security expenses has been escalated 10% annually.

4.72 Further, the Petitioner has implemented the ERP system in year 2009 and projections for expenditure under this head is done on the basis of the Annual Maintenance Fee of SAP licensees and other hardware suppliers, support and training requirements etc.

4.73 Other than the above, the Petitioner has requested that all taxes and cess levied on it to be pass through in ARR as they are uncontrollable parameters.

Table 29: A&G Expenses submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
ERP	3.27	2.57	2.95
Insurance	4.42	4.77	5.15
CISF Expenses	4.08	4.49	4.94
Other A&G Expenses	5.46	5.89	6.36
Total A&G Expenses	**17.23**	**17.72**	**19.40**

Commission's Analysis

4.74 As per MYT Regulations 2011, the employee expenses for the Control Period shall be projected using the following formula:

$$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX);\ and$$

$$INDX = 0.55 * CPI + 0.45 * WPI$$

EMP_n – Employee Costs of the Licensee for the n^{th} year;

$A\&G_n$ – Administrative and General Costs of the Licensee for the n^{th} year;

Where,

INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year

4.75 The Commission has followed the methodology specified in MYT Regulations 2011 and has analysed the submissions made by the Petitioner regarding its A&G Expenses for approval of A&G cost for the Control Period.

4.76 The Commission has estimated the A&G expenses for the Base Year (FY 2011-12) by considering the A&G expenses as appearing in the audited accounts for FY 2010-11 and other information submitted by the Petitioner after due prudence check.

4.77 In its petition the Petitioner submitted A&G expenses for FY 2010-11 at Rs 9.46 Cr. On scrutiny the Commission observed that A&G expenses in the audited accounts of the Petitioner for FY 2010-11 were Rs 11.05 Cr. However, the A&G expenses appearing in the audited accounts also included Rs 1.67 Cr on account of Water & Electricity charges which have been included in the R&M expenses allowed to the Petitioner for the STP (Sewage Treatment Plant). Further the A&G expenses in the accounts included Rs 2.95 Cr on account of insurance expenses which have been considered separately (as detailed in paragraph 4.80). Thus the Commission has considered the balance A&G expenses at Rs 6.43 Cr (Rs 11.05 Cr - Rs 1.67 Cr - Rs 2.95 Cr) for estimation of A&G expenses of the base year.

4.78 In its additional submissions the Petitioner, vide letter dated June 7, 2012, submitted that CISF has given a credit of Rs. 2.56 Cr for IPGCL and PPCL during FY 2010-11 on account of change in methodology for computation of Pension Contribution as per the Sixth Pay Commission. This credit has resulted in lower CISF expenditure in FY 2010-11. The impact of the same on PPCL has been estimated at Rs 0.82 Cr. Since this is a one time credit in the CISF expenses, the Commission has added the same to arrive at the net A&G expenses (excluding expense on insurance) for FY 2010-11 as Rs 7.25 Cr.

4.79 The net A&G expenses for FY 2010-11 as calculated above have been escalated first to arrive at the A&G expenses for FY 2011-12 (Rs 7.84 Cr) using the escalation factor as derived in Table 19. The A&G expenses so arrived at for FY 2011-12 have been further escalated by the escalation factor in Table 19 to arrive at the A&G expenses (excluding expenses on insurance) for the Control Period.

4.80 With regard to expenses on insurance, the Commission observed that the insurance premium paid by the Petitioner has increased substantially during FY 2010-11 and FY 2011-12. The Petitioner has submitted that the insurance expenses during FY 2009-10 and FY 2010-11 were Rs. 2.27 Cr and Rs. 2.95 Cr respectively, while it has projected insurance expenses at Rs 4.10 Cr in FY 2011-12. The Petitioner was directed to submit the reason for the increase in insurance expenses. The Petitioner has explained that the increase in the premium is on account of revaluation of machinery. Further, the Petitioner submitted that insurance policies are taken after inviting bids from all the four Governments Insurance Companies. The Petitioner vide letter dated June 7, 2012 has submitted that the premium for the period November 7, 2011 to November 6, 2012 is Rs. 4.03 Cr.

4.81 The Commission has examined the information submitted by the Petitioner, including the documentary proof of insurance premium payable by the Petitioner, to arrive at the value of insurance expenses for the Control Period. The Commission has arrived at the insurance expense for FY 2012-13 by first considering the actual insurance premium payable from April 1, 2012 to November 6, 2012. The premium payable for the remaining part of the year has been estimated by escalating the actual premium payable by an inflation factor of 1.080. The total insurance expenses for FY 2012-13 have thus been estimated at Rs 4.17 Cr. The same has been escalated by the inflation factor derived in Table 19 for projecting A&G expenses for FY 2013-14 to FY 2014-15.

4.82 The Petitioner has also requested for additional expenditure to be allowed on account of ERP licenses. The scheme for installation of ERP was approved by the Board of Directors of IPGCL and PPCL on December 19, 2008 and work was awarded to M/s NICSI. The Commission has also given in principle approval for implementation of the ERP project vide its letter dated October 15, 2009. Further, additional expenses on account of ERP licenses were allowed to the Petitioner for FY 2011-12 in the Tariff Order dated August 26, 2011.

4.83 No A&G expenses with respect to ERP licenses were booked in the A&G expenses for FY 2010-11 and hence are not a part of the base A&G expenses. The Petitioner was directed to submit the details regarding the expenditure on ERP licenses projected by it for the Control Period (FY 2012-13 to FY 2014-15), including Contract Documents of Annual Maintenance Contracts, SAP licenses etc. The Petitioner, vide its letter dated June 7, 2012 has submitted the amount regarding the budgeted expenditure on ERP licenses/IT support as Rs 2.50 Cr for FY 2012-13, Rs 2.61 Cr for FY 2013-14 and Rs 2.69 Cr for FY 2014-15. The Commission has provisionally allowed expenses on ERP as submitted by the Petitioner separately in the A&G expenses. The same shall however be trued up considering the actual expenditure on ERP after due prudence check by the Commission.

4.84 The A&G expenses approved by the Commission, including the expenditure on ERP, CISF expenses and insurance expenses, for the Control Period are shown in the table below:

Table 30: A&G Expenses (Rs. Cr) approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
ERP Expenses	2.50	2.61	2.69
Insurance Expenses	4.17	4.51	4.87
Other A&G Expenses excluding expense on insurance and ERP	8.47	9.15	9.88
Total A&G Expenses	**15.14**	**16.26**	**17.44**

Efficiency Factor

Petitioner's Submission

4.85 With regard to efficiency norm, the Petitioner submitted that the various operational norms fixed by the Commission i.e. Normative Annual Plant Availability Factor, Heat Rate, auxiliary Power Consumption for PPS-I are as per the CERC norms. It has further submitted that the Commission has already increased the target availability (%) of PPS-I to 85% from existing norm of 80%. The Commission has been allowing the tariff based on the norms fixed by it. Nothing beyond the norms as approved is allowed. It is further submitted that O&M expenses being part of fixed cost is recovered on pro-rata basis depending upon the availability.

4.86 It has submitted that the condition of efficiency factor should not be made applicable to PPCL as the same has been already taken care of while fixing the norms. It has further submitted that the Hon'ble Central Electricity Regulatory Commission in its Generation Tariff Regulations, 2009 has not specified any efficiency factor in determining the O&M expenses.

Commission's Analysis

4.87 The Commission observes that the O&M expenses (per MW) of PPCL (excluding the special expenses allowed on account DLN burners) are lower than the expenses allowed by the CERC for a gas based of similar size and configuration. The Commission thus accepts the submission of the Petitioner and has not imposed any efficiency factor on PPCL.

4.88 The total O&M Expenses submitted by the Petitioner and approved by the Commission for the Control Period are shown in the table below:

Table 31: O&M Expenses (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Employee Expenses	24.63	26.61	28.75
A&G Expenses	15.14	16.26	17.44
R&M Expenses	30.76	31.43	32.13
O&M Expenses	**70.53**	**74.30**	**78.32**

Capital Expenditure

Petitioner's Submission

4.89 The capital expenditure proposed for the second MYT Control Period by the Petitioner has been summarized below:

Table 32: Capital Expenditure submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Capital Expenditure	2.36	12.43	10.74

4.90 The details of proposed capital expenditure and the capitalization schedule during the second MYT period has been based on following schemes:

(a) Upgradation of Mark V control system to Mark Vie Control System.
Estimated Cost of the Scheme: *Rs 10.40 Crores plus taxes*
Completion Period : *FY 2013-14-GT#1*
FY 2014-2015- GT#2

(b) Upgradation of STG Procontrol diagnostic and SK06 to Procontrol Progress 3 System.
Estimated Cost of the Scheme: *Rs 0.85 Crores plus taxes*
Completion Period : *FY 2013-2014*

(c) Retrofitting of Generator/Transformer protection Relays with Numerical Relays including Design, Engineering, installation, Testing & Commissioning for one unit of Pragati Power Station.
Estimated Cost of the Scheme: *Rs 0.82 Crores plus taxes*
Completion Period : *FY 2013-14 GT#1*
FY 2014-15 GT#2

(d) Procurement of two numbers of high pressure portable pumps for fire fighting at Pragati Power Station.
Estimated Cost : *Rs. 0.16 Crores*
Completion Period: *FY 2012-13*

(e) Procurement of Tan Delta Test Kit: -
Estimated Cost : *Rs. 0.20 Crores*
Completion Period: *FY 2012-13*

(f) Procurement of three phase universal test kit:
Estimated Cost : *Rs. 0.20 Crores*
Completion Period: *FY 2012-13*

(g) Procurement of Current Transformer Analyzer Test Kit (Portable):
Estimated Cost : *Rs. 0.05 Crores*
Completion Period: *FY 2012-13*

(h) Variable voltage /current source:
Estimated Cost : *Rs. 0.05 Crores*
Completion Period: *FY 2012-13*

(i) Procurement of Dissolved gas analysis kit:-
Estimated Cost : *Rs. 0.30 Crores*
Completion Period: *FY 2013-14*

(j) Procurement of relay test bench:
Estimated Cost : *Rs. 0.15 Crores*
Completion Period: *FY 2013-14*

(k) Procurement of moisture meter:-
Estimated Cost : *Rs. 0.15 Crores*

Completion Period: *FY 2013-14*

(l) Construction of a Canteen Building at Pragati Power Station-I:-
Estimated Cost : Rs. 0.12 Crores
Completion Period : FY 2012-13

Commission's Analysis

4.91 The Commission had not considered any capital expenditure for PPCL from FY 2007-08 to FY 2010-11 in its previous MYT Order and had approved capital expenditure of Rs 1.95 Cr for FY 2011-12 in the Order dated August 2011. The Petitioner has now requested the Commission to true up the actual capital expenditure incurred by it during FY 2007-08 to FY 2011-12.

4.92 With regard to this, the Commission notes that Regulation 5.6 of the MYT Regulations 2007 states:

"...The Commission shall review the actual capital investment at the end of each year of the Control Period. Adjustment for the actual capital investment vis-à-vis approved capital investment shall be done at the end of Control Period."

4.93 Since the Commission had extended the Control Period for one more year up to March 31, 2012, it has not considered any adjustment in capital expenditure and GFA for FY 2007-08 to FY 2011-12. The adjustment in ARR for the capital expenditure and capitalization actually done by the Petitioner shall be carried out at the end of the extended Control Period when the audited accounts for FY 2007-08 to FY 2011-12 are made available by the Petitioner.

4.94 The Commission has not approved any capital expenditure and additions to GFA for FY 2012-13 to FY 2014-15 in this Order. The Petitioner is directed to approach the Commission for approval of each scheme which it proposes to undertake separately before the execution of the scheme.

4.95 The Commission shall true up the capital expenditure incurred by the Petitioner during each year of the Control Period (FY 2012-13 to FY 2014-15) based on prudence check of the actual capital expenditure incurred during the respective year.

4.96 At the time of filing of the Annual Performance Review petition, the Petitioner shall submit details of capital expenditure and additional capital expenditure incurred during the period under review, duly audited and certified by the auditors.

Depreciation

Petitioner's Submission

4.97 The Petitioner has charged depreciation 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. Depreciation amount during the Control Period from FY 2012-13 to FY 2014-15 has been calculated as per the depreciation rates specified under MYT Regulations 2011 issued by the Commission. The projected depreciation charges by the Petitioner have been summarized below.

Table 33: Depreciation submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening GFA	1040.62	1042.98	1055.41
Additions to GFA	2.36	12.43	10.74
Closing GFA	1042.98	1055.41	1066.15
Depreciation	**54.06**	**54.46**	**54.99**

Commission's Analysis

4.98 The Commission has not considered any revision in GFA and depreciation for the years FY 2007-08 to FY 2011-12. The same shall be carried out at the time of adjustment of the capital expenditure and capitalization done by the Petitioner, at the end of the Control Period (FY 2007-08 to FY 2011-12) when the audited accounts for the years are made available by the Petitioner.

4.99 Regulations 6.30-6.34 of the MYT Regulations 2011 as quoted below specify the methodology for calculation of depreciation for a generation company during the Control Period.

"6.30 Depreciation shall be calculated for each year of the Control Period, on the amount of Capital Cost of the Fixed Assets as admitted by the Commission; Provided that depreciation shall not be allowed on assets funded by any capital subsidy / grant.

6.31 Depreciation for each year of the Control Period shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in Appendix-I of these Regulations.

6.32 Depreciation shall be calculated annually, based on the straight line method, over the useful life of the asset. The base value for the purpose of depreciation shall be capital cost of the asset as admitted by the Commission. Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the date of commercial operation shall be spread over the balance useful life of the assets.

6.33 In case of the existing Projects, the balance depreciable value as on 1.4.2012 shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation as admitted by the Commission up to 31.3.2012 from the gross depreciable value of the assets. The rate of depreciation shall be continued to be charged at the rate specified in Appendix-I till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

6.34 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original *cost of the asset. In the event of Renovation and Modernization expenditure affecting the life of the asset, the depreciation shall be allowed up to a maximum of 90% of the cost of the asset within the enhanced life span of the asset".*

4.100 The Commission has calculated the depreciation according to the methodology and depreciation rates notified in the MYT Regulations 2011 and the approved fixed assets for each year of the Control Period.

Table 34: Depreciation approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening GFA	1033.52	1033.52	1033.52
New Addition	0.00	0.00	0.00
Closing GFA	1033.52	1033.52	1033.52
Accumulated Depreciation	601.90	654.87	707.84
Depreciation	**52.97**	**52.97**	**52.97**

Return on Equity

Petitioner's Submission

4.101 The Petitioner has computed return on equity on approved equity of Rs. 323.19 Cr of the project and the 30% equivalent amount of the capital additions made during the Control Period. For the second MYT Control Period from FY 2012-13 to FY 2014-15, the Petitioner has considered RoE @ 14% in line with the MYT Regulations 2011 of the Commission.

4.102 However the Petitioner has requested the Commission to relax the norm for RoE and revises RoE from 14% to pre-tax rate of return of 15.5% in line with the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Table 35: Return on Equity submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Equity (Opening Balance)	325.90	326.61	330.34
Net Additions during the year	0.71	3.73	3.22
Equity (Closing Balance)	326.61	330.34	333.56
Average Equity	326.26	328.48	331.95
Rate of return on equity	14%	14%	14%
Return on Equity	**45.68**	**45.99**	**46.47**

Note: All figures as per Format F25submitted by the Petitioner

Commission's Analysis

4.103 The Commission has not considered any revision in equity for the years FY 2007-08 to FY 2011-12. The same shall be carried out at the time of adjustment of the capital expenditure and capitalization done by the Petitioner, at the end of the Control Period (FY 2007-08 to FY 2011-12) when the audited accounts for the relevant years are made available by the Petitioner.

4.104 The Commission has considered the closing value of equity for FY 2011-12 as approved in the Tariff Order dated August 26, 2011, as the opening value of equity for this Control Period. Additions to equity during the Control Period have been considered equal to 30% of additional capitalization approved for each year of the Control Period.

4.105 The Commission has considered RoE @ 14% for the second MYT Control Period from FY 2012-13 to FY 2014-15, in line with the MYT Regulations 2011.

4.106 The return on equity approved by the Commission for the Control Period is shown below:

Table 36: Return on Equity approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Equity (Opening Balance)	323.78	323.78	323.78
Net Additions during the year	0.00	0.00	0.00
Equity (Closing Balance)	323.78	323.78	323.78
Average Equity	323.78	323.78	323.78
Rate of return on equity	14%	14%	14%
Return on Equity	**45.33**	**45.33**	**45.33**

Interest on Loan

Petitioner's Submission

4.107 The Petitioner has determined the interest costs for each year of the Control Period by considering the opening balance of loans, the repayment schedule and by applying the actual rate of interest applicable to various components of the loan.

4.108 The Petitioner has made certain capital additions in PPCL during the MYT Control Period. The same has been funded through Reserve and surplus. As per MYT Regulations, 2011. 70% of the capital additions have been considered to be funded through Loans. Accordingly, interest on this normative loan has been taken @ 11% per annum.

Table 37: Interest Expenses submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Loans	119.51	53.50	11.27
Addition during year	1.65	8.70	7.52
Repayment during year	67.67	50.93	1.17
Closing Loans	53.50	11.27	17.62
Average Loans	86.50	32.38	14.44
Rate of Interest	8.63%	12.70%	12.35%
Interest Payment	**7.47**	**4.11**	**1.78**

Commission's Analysis

4.109 The Commission has not considered any revision in loan amounts for the years FY 2007-08 to FY 2011-12. The same shall be carried out at the time of adjustment of the capital expenditure and capitalization done by the Petitioner, at the end of the Control Period (FY 2007-08 to FY 2011-12) when the audited accounts for the relevant years are made available by the Petitioner.

4.110 The Commission has considered the closing value of loan for FY 2011-12, as approved in the Tariff Order dated August 26, 2011, as the opening value of loan for the Control Period. The additions to loan during the Control Period have been considered equal to 70% of additional capitalization approved for each year of the Control Period.

4.111 The Commission has calculated the interest on loan for each year of the Control Period in accordance with the following methodology specified in the MYT Regulations 2011.

"6.16 Interest and finance charges on loan capital shall be computed on the outstanding loans, bond or non convertible debentures as on 31.03.2012 approved by the Commission and additional loan approved during each year of the Control Period.

6.17 The loan repayment for each year of the Control Period 2012-15 shall be deemed to be equal to the depreciation allowed for that year.

6.18 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;

Provided further that if the generating station, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company as a whole shall be considered;

6.19 The interest on loan shall be calculated on the normative average loan of the respective years by applying the weighted average rate of interest.

6.20 The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the respective years and shall be further limited to the prescribed rate of return on equity in the Regulation;

Provided that all loans considered for this purpose shall be identified with the assets created;

Provided that interest and finance charges of re-negotiated loan agreements shall not be considered, if they result in higher charges;

Provided further that interest and finance charges on capital works in progress shall be excluded and shall be considered as part of the capital cost;

Provided further that neither penal interest nor overdue interest shall be allowed for computation of Tariff.

6.21 Notwithstanding any moratorium period availed by the generating company the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed."

4.112 The interest on loans as approved by the Commission for the Control Period is given the table below.

Table 38: Interest Expenses approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Loans	119.54	66.57	13.60
Addition during year	0.00	0.00	0.00
Repayment during year	52.97	52.97	13.60
Closing Loans	66.57	13.60	0.00
Average Loans	93.05	40.09	6.80
Rate of Interest	8.51%	6.87%	6.87%
Interest Payment	**7.92**	**2.75**	**0.47**

Interest on Working Capital

Petitioner's Submission

4.113 The Petitioner has calculated the Interest on Working Capital for the second MYT period as per the following norms:

(a) Cost of fuel for 1 month;

(b) O&M expenses for 1 month;

(c) Receivables equivalent to 2 months average billing;

(d) Maintenance Spares @ 30% of the O&M expenses.

4.114 The Petitioner has submitted that the fuel cost has increased steeply in FY 2010-11; 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.

4.115 The rate of Interest for FY 2012-13 to FY 2014-15 has been projected at 13.5% (350 basis points plus Base Rate of SBI as on April 1, 2012).

Table 39: Interest on Working Capital submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of Fuel for 1 month	45.67	45.67	45.67
O & M Expenses for 1 month	7.90	9.25	8.51
Maintenance Spares	28.45	33.30	30.65
Receivables equivalent to 2 months average billing	132.38	134.83	133.04
Total Working capital	214.41	223.05	217.88
Rate of Interest (%)	13.50%	13.50%	13.50%
Interest on working capital	**28.94**	**30.11**	**29.41**

Commission's Analysis

4.116 The Commission has estimated the working capital requirement of the Petitioner based on the following norms as specified in the MYT Regulations 2011:

(a) Fuel expenses for 1 month corresponding to the Normative Annual Plant Availability Factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(b) Liquid fuel stock for ½ month corresponding to the Normative Annual Plant Availability Factor duly taking into account mode of operation of the generating station of gas fuel and liquid fuel, and in case of use of more than one liquid fuel, cost of main liquid fuel;

(c) Maintenance spares @ 30% of operation and maintenance expenses;

(d) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on Normative Annual Plant Availability factor; and

(e) O&M expenses for 1 month.

4.117 Further, the cost of fuel in cases covered under (a) and (b) is based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the Control Period on the same.

4.118 In accordance with MYT Regulations 2011, the rate of interest on working capital has been considered equal to Base Rate of State Bank of India as on April 1, 2012 plus 350 basis points.

4.119 The Commission has calculated the working capital requirement of the Petitioner considering the approved values of the above components for each year of the Control Period, as shown below:

Table 40: Working Capital for PPCL (Rs. Cr) approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Fuel expenses for 1 month	44.80	44.80	44.80
Liquid fuel stock for ½ month	0	0	0
Maintenance spares @ 30% of O&M	21.16	22.29	23.50
O&M expenses for 1 month	5.88	6.19	6.53
Receivables equivalent to 2 months of capacity and energy charge	124.99	124.79	125.12
Total Working Capital	196.82	198.06	199.94
Rate of Interest	13.50%	13.50%	13.50%
Interest on Working Capital	**26.57**	**26.74**	**26.99**

Tax Expenses

Petitioner's Submission

4.120 In the attached formats to the petition, the Petitioner has also submitted a liability towards income tax which it shall incur during next Control Period and same has been summarized in table below.

Table 41: Income Tax Liability submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Income Tax	14.82	14.92	15.08

Commission's Analysis

4.121 With regard to tax on income the MYT Regulations 2011 states that –

"6.37 Tax on the income streams of the generating company shall be recovered from the beneficiaries. Tax on income, if any, liable to be paid shall however be limited to tax on return on the equity component of capital employed. Any additional tax liability on account of incentive due to improved performance like higher availability, lower station heat rate, lower auxiliary consumption, lower O&M expenses etc and other income shall not be considered."

4.122 In its additional submission dated June 7, 2012, the Petitioner has submitted that the advance income tax was paid by it for FY 2011-12 @ MAT rate of 20.01%. The Commission has projected the value of income tax (limited to the tax on return on equity) considering the MAT rate actually paid by the Petitioner during FY 2011-12. The same shall be trued up at the time of truing up of the respective year of the Control Period.

Table 42: Income Tax Liability approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Income Tax	9.07	9.07	9.07

Fixed Fuel Cost

Petitioner's Submission

4.123 The Petitioner has submitted that it is required to pay fixed monthly transmission and other service charges to GAIL, based on the Fuel Supply Agreement, irrespective of the quantum of gas supplied. These expenses were Rs. 15,54,682 in FY 2002-03, and have an annual escalation of 3.00%. However, GAIL has stopped claiming the fixed fuel cost from FY 2011-12 onwards. In case any demand is received from GAIL in this respect in future, the Petitioner would claim the same at the time of truing-up for the relevant year.

Commission's Analysis

4.124 The previous Gas Sale Agreement with GAIL, had a component of fixed fuel cost (Rs 2.43 crore for the year FY 2010-11) which was fixed in nature and had to be paid by PPCL irrespective of the quantity of gas drawn by them. The Commission had expressed its views on this issue in its tariff orders dated June 9, 2004; July 7, 2005; September 22, 2006 and August 26, 2011. The same had been considered a part of fixed cost in the previous tariff orders of the Commission. However, in the present Gas Sale Agreement, there is no component of fixed fuel cost. Hence, the same has been excluded from the component of fixed cost in the present tariff order.

Annual Fixed Charges

4.125 The Annual Fixed Charges as submitted by the Petitioner for the Control Period are shown below:

Table 43: Annual Fixed Charges submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
O&M expenses	94.84	111.00	102.17
Depreciation	54.06	54.46	54.99
Interest on Loans	7.88	4.47	2.08
Return on Equity	45.68	45.99	46.47
Interest on Working Capital	28.94	30.11	29.41
Income Tax[1]	14.82	14.92	15.08
Annual Fixed Charges	**246.22**	**260.95**	**250.21**

4.126 The Annual Fixed Charges approved for the Petitioner for the Control Period, based on the analysis of various components by the Commission, are shown in the Table below:

[1] The Petitioner has not considered any expenses on account of income tax or FBT for the calculation of fixed cost. It has, however, submitted that taxes should be allowed as pass through on actual basis. However, the projections of the Petitioner, as submitted in the forms to the petition, are shown here for the purpose of comparison.

Table 44: Annual Fixed Charges approved by the Commission (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
O&M expenses	70.53	74.30	78.32
Depreciation	52.97	52.97	52.97
Interest on Loans	7.92	2.75	0.47
Return on Equity	45.33	45.33	45.33
Interest on Working Capital	26.57	26.74	26.99
Income Tax	9.07	9.07	9.07
Annual Fixed Charges	**212.39**	**211.15**	**213.15**

A5: SUMMARY

Directives issued by the Commission

5.1 The Commission directs PPCL to inform the SLDC, Delhi when the plant is operated on Spot R-LNG, since the variable cost is expected to be significantly higher and the SLDC, Delhi can consider the same during merit order dispatch.

5.2 The Commission directs the Petitioner to seek prior permission of SLDC, Delhi before generating in open cycle mode.

5.3 The SLDC, Delhi may test the declared capacity of the PPCL at random and in the event of the power station failing to demonstrate the declared capability, the SLDC, Delhi shall report the matter to the Commission, which would then determine the penalty, if any, to be levied for false declaration.

5.4 The Commission also directs the Petitioner to consider any source of cheaper fuel available in the future, and accordingly restructure the order of scheduling of fuel to ensure that the cheapest available fuel is utilised first.

5.5 The Commission reiterates its direction to the Petitioner to submit performance guarantee test report conducted and the machine specifications, at site conditions, at the time of commissioning of the machines.

Summary of Generation Tariffs

5.6 The generation tariffs applicable to PPCL for each year of the Control Period, based on the fixed and variable costs approved by the Commission, are shown below:

Table 45: Generation Tariff for PPCL for the Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Net Generation (MU)	2383	2383	2383
Annual Fixed Charges (Rs Cr)	212.39	211.15	213.15
Variable Cost (Rs. Cr)	537.56	537.56	537.56
Energy Charge Rate (ECR)	**2.255**	**2.255**	**2.255**
Total Generation Tariff (Rs/kWh)	**3.146**	**3.141**	**3.150**

5.7 The capacity charge (inclusive of incentive) payable to PPCL for a calendar month shall be calculated in accordance with the formula as specified in the MYT Regulations 2011 (and as given below):

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

5.8 For this purpose, the availability of the power station shall be certified by the SLDC, Delhi. Any adjustment of recovery of Annual Fixed Charges shall be based on the cumulative availability as certified by the SLDC, Delhi at the end of the year. The Annual Fixed Charges shall be recovered in 12 equal monthly instalments in proportion to allocated/contracted capacity.

5.9 Intra-state ABT (Availability Based Tariff) is in operation in Delhi since April 1, 2007. Consequent to this, the Variable Cost shall be billed by the Petitioner to the beneficiaries based on the scheduled generation during the month from the station as per the rates approved by the Commission.

5.10 Deviations from the schedule are to be accounted for in accordance with the principals laid down in the order of the Commission regarding Intra-state ABT.