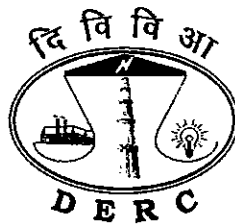




**Order
on
TRUE UP
for
FY 2007-12,
Aggregate Revenue Requirement
and
Generation Tariff
for
FY 2013-14
for
Pragati Power Corporation Limited (PPCL)**



DELHI ELECTRICITY REGULATORY COMMISSION

July, 2013



DELHI ELECTRICITY REGULATORY COMMISSION

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

F.11/880/DERC/2012-13/

Petition No. 09/2013

In the matter of: Filing of Tariff Petition under section 62 of the Electricity Act, 2003 for truing up of the Capital Expenditure for previous MYT Control Period FY 2007-08 to FY 2011-12 and the impact of its revision in subsequent Tariff Order

Pragati Power Corporation Ltd.
Through its: **Director Technical**
Himadri,
Rajghat Power House Complex
New Delhi 110 002.

...Petitioner/Licensee

Coram:

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

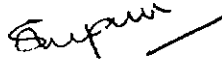
ORDER

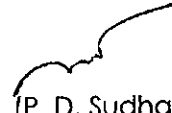
(Date of Order: 31/2/2013)

Having deliberated upon the Petition for Truing up of Capital Expenditure for the previous MYT Control Period FY 2007-08 to FY 2011-12 and giving the impact of its revision in a subsequent Tariff Order filed by M/s Pragati Power Corporation 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 passes this Order signed, dated and issued on 31/2/2013

This Tariff Order 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 there under.


(J. P. Singh)
MEMBER


(Shyam Wadhera)
MEMBER


(P. D. Sudhakar)
CHAIRPERSON

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
A&G	Administrative and General
AAD	Advance Against Depreciation
ABT	Availability Based Tariff
APC	Auxiliary Power Consumption
ARR	Aggregate Revenue Requirement
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)
DLN	Dry Low Nox
ERP	Enterprise Resource Planning
FPA	Fuel Price Adjustment
GAIL	GAIL (India) Ltd.
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoNCTD	Government of National Capital Territory of Delhi
GTPS	Gas Turbine Power Station
IoWC	Interest on Working Capital
IPGCL	Indraprastha Power Generation Company Limited
MU	Million Units
MYT	Multi Year Tariff
NTPC	NTPC Ltd.
O&M	Operations and Maintenance
PLF	Plant Load Factor
PPCL	Pragati Power Corporation Limited
R&M	Repair and Maintenance
RGCCP	Rajiv Gandhi Combined Cycle Power Plant
RoE	Return on Equity
RPH	Rajghat Power House
SHR	Station Heat Rate
SLDC	State Load Despatch Centre
STG	Steam Turbine Generator



Abbreviation	Explanation
UAT	Unit Auxiliary Transformer



A1: INTRODUCTION

- 1.1 This Order disposes of the Petition filed by Pragati Power Corporation Limited (hereinafter referred to as 'PPCL' or the 'Petitioner') for Truing up of MYT Control Period from FY 2007-08 to FY 2011-12 and impact of its revision in subsequent Tariff Order under the Multi Year Tariff 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 is wholly owned by the Government of National Capital Territory of Delhi, is a generating company which operates the Pragati Power Station-I (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 (GoNCTD) 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'). The Act mandates 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 and Extension of the Control Period

- 1.5 The Commission issued regulations 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 2007-08 to FY 2010-11 following due process of Law. The Regulations were notified in the official



Gazette on May 30, 2007.

- 1.6 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 after following the due process of law.
- 1.7 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 following the due process of law. The Regulations were notified in the official Gazette on January 19, 2012.

Filing of Petition for Truing up of MYT Control Period from FY 2007-08 to FY 2011-12 and impact of its revision in subsequent Tariff Order

Filing and Acceptance of Petition

- 1.8 PPCL has filed a Petition before the Delhi Electricity Regulatory Commission on January 11, 2013 for truing up of MYT Control Period from FY 2007-08 to FY 2011-12 and impact of its revision in subsequent Tariff Order. The Commission admitted the Petition vide its Order dated February 07, 2013 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 07, 2013 is enclosed as **Annexure I** to this Order.
- 1.9 Further, at the request of the stakeholders, the Commission directed the Petitioner to submit a 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

- 1.10 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.

- 1.11 For the purpose of truing up exercise, the Staff of the Commission and Consultants held discussions with the Petitioners, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.
- 1.12 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.
- 1.13 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 04, 2013. The reply to the preliminary deficiency note was received by the Commission on February 21, 2013 and April 22, 2013.
- 1.14 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. The Petitioner submitted additional information through various letters, as listed in Table 1 below.
- 1.15 The Commission also conducted validation sessions with the Petitioner during which the discrepancies and additional information required by the Commission were sought. The Petitioner submitted its replies to the list of queries raised by the Commission in these sessions and provided documentary evidence to substantiate its claims regarding various submissions.
- 1.16 The replies of the Petitioner, as mentioned in the Table below, have been considered for approval of the Truing up of the Petitioner:



Table 1: List of correspondence with PPCL

S. No.	Date	Letter No.	Subject
1	11.01.2013	PPCL/Comml./PDRA 07-12/17	Truing up for FY 2007-08 to FY 2011-12 in Petition No. 09/2013
2	21.02.2013	PPCL/Comml./PDRA 07-12/62	Tariff/ARR Petitions filed by PPCL (additional information)
3	22.04.2013	PPCL/Comml./PDRA 07-12/38	Tariff/ARR Petitions filed by PPCL (additional information)
4	30.05.2013	PPCL/Comml./IDRA 07-12/63	Tariff/ARR Petitions filed by PPCL (additional information)
5	03.06.2013	PPCL/Comml./IDRA 07-12/65	Tariff/ARR Petitions filed by PPCL (additional information)
6	10.06.2013	PPCL/Comml./PDRA 07-12/68	Tariff/ARR Petitions filed by PPCL (additional information)
7	17.06.2013	PPCL/Comml./PDRA 07-12/71	Tariff/ARR Petitions filed by PPCL (additional information)

Public Hearing

1.17 The Petitioner published a Public Notice indicating the salient features of its Petition for inviting responses from the stakeholders, in the following newspapers on the respective dates mentioned alongside:

- | | |
|------------------------------|---------------|
| a. Hindustan Times (English) | March 1, 2013 |
| b. Times of India (English) | March 2, 2013 |
| c. Punjab Kesari (Hindi) | March 1, 2013 |
| d. Hamara Samaj (Urdu) | March 1, 2013 |

1.18 Copies of the Public Notice in English, Hindi and Urdu are enclosed as **Annexure II** to this Order. Both soft copy in the form of CD and hard Copy of the Petition was also made available for purchase from the head-office of the Petitioner on any working day from March 01, 2013 to March 15, 2013 between 11 A.M. and 4 P.M. on payment of Rs 25 per CD and Rs 100/- for a hard copy. 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.



1.19 The Commission also published a Public Notice in the following newspapers on as per details provided below inviting comments from stakeholders on the Petition filed by the Petitioner latest by March 15, 2013:

(a) Hindustan Times (English)	March 5, 2013
(b) Times of India (English)	March 6, 2013
(c) The Indian Express (English)	March 5, 2013
(d) The Hindu (English)	March 6, 2013
(e) Dainik Jagran (Hindi)	March 6, 2013
(f) The Daily Milap (Urdu)	March 5, 2013
(g) Educator (Punjabi)	March 5, 2013

1.20 Copies of the above Public Notice published by the Commission in English, Hindi, Punjabi and Urdu are attached as **Annexure III** to this Order.

1.21 At the request of the stakeholders, the Commission extended the last date for filing objections and suggestions upto April 1, 2013 for which the Public Notice was issued in the following newspapers:

(a) Hindustan Times (English)	March 19, 2013
(b) Times of India (English)	March 19, 2013
(c) The Indian Express (English)	March 19, 2013
(d) The Hindu (English)	March 20, 2013
(e) Dainik Jagran (Hindi)	March 20, 2013
(f) The Daily Milap (Urdu)	March 20, 2013
(g) Educator (Punjabi)	March 20, 2013

1.22 Copies of the above Public Notice in English, Hindi, Punjabi and Urdu are attached as **Annexure IV** of this Order.

1.23 To extend help to the consumers in understanding the Petition and filing their comments, the Commission prepared a Staff Paper highlighting salient features of the Petition filed by the Petitioner, which was uploaded on the Commissions' 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 Petition. 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.

- 1.24 The Commission received comments from two stakeholders. The comments of the stakeholders were forwarded to the Petitioner. The Petitioner responded to the comments of the stakeholders with a copy of its 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 the Petition and those who attended the public hearing is enclosed as **Annexure V** to this Order.
- 1.25 The Public Hearing was held in the Commission's Court Room on April 29, 2013 from 11:00 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

- 1.26 This Order is organised into three Chapters:
- (a) Chapter A1 provides details of truing-up process and the approach of the Order;
 - (b) Chapter A2 provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Petitioner's response and views of the Commission thereon;
 - (c) Chapter A3 provides analysis of truing up for FY 2007-08 to FY 2011-12 for PPCL Station;



1.27 The Order contains the following Annexure, which are an integral part of the 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 Public Notice Published by the Commission granting extension for last date of submissions of Comments.
- (e) Annexure V – List of the respondent Stakeholders.

Approach of the Order

- 1.28 The Petitioner has filed a Petition for truing up of MYT Control Period from FY 2007-08 to FY 2011-12 and impact of its revision in subsequent Tariff Order.
- 1.29 Under the MYT Framework, the Commission had projected the ARR of the Petitioner for FY 2007-08 to FY 2010-11 in the MYT Order issued on December 14, 2007 (hereinafter referred to as ‘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 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.
- 1.30 Accordingly, this Order deals with the truing up of MYT Control Period from FY 2007-08 to FY 2011-12.



A2: RESPONSES FROM STAKEHOLDER'S

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 on April 29, 2013 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. 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:

Increase in Generation Cost

Stakeholder's Comments

- 2.4 The escalations proposed by GENCOs in their Petition are unjustified. On the contrary, there is a fit case for reduction of their fixed and variable charges by almost 35% as observed in the Central Generating Stations post CERC Order dated December 31, 2012.
- 2.5 The Commission should limit the unjustified escalation of generation cost by all state generating companies which has gone up over 108.41% as compared to the 2008 levels, whereas, actual fuel prices have not gone up in the same proportion



- 2.6 The generation cost had increased from Rs.1.97/Unit in FY 2007-08 to Rs. 4.11/Unit approx in FY 2011-12 with a CAGR of 20.15%.

Petitioner's Response

- 2.7 The Petitioner has submitted that the Commission has determined the tariff for PPS-I in accordance with the regulations applicable from time to time. The Petitioner has further submitted that the price of gas has steeply increased from June 2010.

Commission's Views

- 2.8 The Commission has been approving tariff in accordance with the norms specified in DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 and on the basis of prevalent fuel prices. The tariff for PPS-I consists of two components i.e., fixed charges and variable charges. The fixed charges are approved by the Commission and remain fixed during the Control Period. However, the variable charges are recovered based on normative heat rate as approved by the Commission subject to recovery of fuel cost on account of variation in fuel price and calorific value of fuel received as compared to that approved by the Commission. The Price of gas has increased from Rs 4411/ 1000 SCM in FY 2007-08 to Rs 8962/1000 SCM in FY 2011-12 , due to which the generation cost has increased.

Compliance with ceiling norms of Performance

Stakeholder's Comments

- 2.9 GENCOs should not be allowed any relaxation on the ceiling norms of performance like Station Heat Rate, Auxiliary Consumption, Specific Oil Consumption because DISCOMs pay for all the repair & Maintenance expenses and renovation and modernisation for the capex incurred for achieving these norms.
- 2.10 Relaxation of norms to the Generators and allowing the cost inefficiencies to be passed on to the DISCOM/end users would encourage inefficiency and discourage replacement of inefficient plants.
- 2.11 If generator's fails to comply with any norms of the MYT Regulations, the Commission could stipulate payment of only 50% of variable charges on provisional



basis so that it acts as a deterrent to the Generators for not complying with the Regulations/Orders.

- 2.12 The Delhi DISCOMs and average consumers of Delhi are being burdened with all expenses of the Generating Company and PPCL is not passing on any of the efficiency gains to the DISCOM or the end users despite more relaxed operational norms specified by the Commission in comparison to CERC norms for similar Stations Tanda TPS and BTPS.

Petitioner's Response

- 2.13 The Petitioner submitted that it has been always submitting the reasons to the Commission for non achievement of the norms which are beyond its control.
- 2.14 The Petitioner further submitted that PPCL is complying with the Regulations of the Commission and recovering the fixed & variable cost based on the normative parameters as stipulated in the regulations. The Petitioner has further submitted that the non-achievement of the operational parameters in itself leads to non recovery of cost.

Commission's Views

- 2.15 The norms of operation provided in the MYT Regulations, 2007 had been specified considering then prevailing state of each plant, and the expected performance improvements during the Control Period. The Commission has analysed the reasons submitted by the Petitioner for not achieving the norms specified and has taken an appropriate view with detailed justification in Chapter A3 of this Order. Further, poor performance on account of technical problems is not tenable as such problems have to be mitigated by the Petitioner and therefore should not be passed on to the consumer except in case of force majeure events. Further, there is no provision for sharing of efficiency gains in DERC MYT Regulations, 2007 and hence for previous years till FY 2011-12, sharing of efficiency gains cannot be undertaken. However, the provision of sharing has been incorporated in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011. Accordingly, sharing will be undertaken from FY 2012-13 onwards in the second Control Period from FY 2012-13 to FY 2014-15.



Fuel Cost

Stakeholder's Comment

- 2.16 CERC vide its Order dated 31 December, 2012 had directed the Generators to disclose their fuel charges as incurred by them for both basic fuel and transportation cost along with Gross Calorific Value of fuel as received at the Stations. Accordingly the Commission should stipulate such conditions for State Generators also so as to bring transparency and to enable reduction in variable charges as witnessed in the case of Central Generating Stations.

Petitioner's Submission

- 2.17 The Petitioner submitted that DERC (Terms and Conditions for Determination of Generation Tariff), Regulations, 2011 and Regulations, 2007 do not stipulate such condition as stated by the Stakeholder. The Petitioner submitted that it shall comply with the directions of the Commission.

Commission's View

- 2.18 The Petitioner is submitting the information as per the provisions of existing Regulations. The Commission is modifying the Regulation to ensure greater transparency in variable cost for Delhi Generating Companies on the lines of the amendment made by CERC vide its Order dated December 31, 2012.

Availability

Stakeholder's Comments

- 2.19 Non availability of fuel should be treated as non availability of plant and accordingly the fixed charge payment should be moderated.

Petitioner's Response

- 2.20 The Petitioner has submitted that the provisions are already made in clause 7.15 of the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 for computation in case of shortage of fuel.

Commission's Views

- 2.21 The Commission is of the view that poor performance of the plant due to gas supply

constraints are to be mitigated by the Petitioner and will not be passed on to the consumers, except in case of force majeure events.

Station Heat Rate

Stakeholder's Comments

- 2.22 Pragati Power Station claim of 5% as additional factor over the designed heat rate specified under Regulation 7.3(b) of DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 does not hold true because according to the Regulations it is applicable only on the stations other than the existing stations.
- 2.23 The Commission has already rejected the prayer of Petitioner claiming higher Station Heat Rate on the ground that operation/heat rate of gas turbines depends upon technology and climatic conditions of operations therefore it cannot be same for Rajiv Gandhi Combined Cycle Power Plant of NTPC at Kayamkulam and Pragati Power Station-1.
- 2.24 The Commission should reject the request of the Petitioner claiming actual SHR of 3135 kCal/kWh achieved in open cycle during the FY 2007-08 to FY 2011-12. The power plant is expected to run most of the time in combined cycle mode and the operation of the plant in open cycle mode is rare.

Petitioner's Response

- 2.25 The Petitioner has submitted that with the advancement of technology & developments in the power sector, high efficiency and low heat rate CCPPs are being installed. The norms fixed by the Commission for newly generating stations are getting tougher & stringent. The older stations are less efficient and have higher heat rate. If the Commission is allowing the additional factor of 5% over the designed heat rate for gas based station in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011, then the heat rate allowed for older existing stations should have been more than its normative heat rate as the station is already more than 10 years old. The Petitioner further submitted that the PPCL in its petition has requested the Commission for applying a factor of 5% over designed heat rate which is only the bare minimum normative heat rate that could have been allowed as if the station was new.



- 2.26 The Petitioner further submitted that the heat rate depends upon the climatic conditions. The atmospheric condition of Kayamkulam is favourable for gas turbine operation in comparison to site condition for Pragati Power Station, at Delhi. The Petitioner has also submitted that the heat rate of PPS-I cannot be kept at the same levels as that of NTPC plant at Kayamkulam because the heat rate of gas turbines also depends upon the climatic conditions of operation. Petitioner further submitted that Kayamkulam and Delhi has average temperature of 28.5⁰C and 31.5⁰C respectively. As per the Petitioner, lower temperature of climate results into better heat rate for gas turbines therefore the heat rate for RGPP at Kayamkulam of 2000 kCal/kWh in combined cycle & 2900 kCal/kWh in open cycle mode, should not be applicable on the Pragati Power Station-1.
- 2.27 The Petitioner has further submitted that the plant is operating in open cycle mode as & when requisitioned by the SLDC, Delhi on merit order dispatch. It is submitted that the PPCL is claiming the generation in open cycle mode as per the energy certified by the SLDC, Delhi based upon the requisitions and the variable cost incurred by it should allowed to be recovered in full.

Commission's Views

- 2.28 The Commission fixed the operational norms in DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 duly considering the operating conditions of the plant and the norms specified by CERC for similar stations both for combined cycle and open cycle mode.

Auxiliary Consumption

Stakeholder's Comment

- 2.29 The Commission should stipulate the incorporation of meters at all Unit Auxiliary Transformer (UAT) in all Generating Stations so as to make available actual Auxiliary Consumption. The claim of entire ceiling norms by the Gencos without any verification/meter reading has an adverse impact on overall Tariff.

Petitioner's Submission

- 2.30 The Petitioner submitted that its Generating Stations are having the meters installed at

Unit Auxiliary Transformers and the accounting of energy is being done in accordance with Availability Based Tariff (ABT) based upon the normative Auxiliary Consumption as fixed by the Commission considering the condition of the Plant and prevailing standards of the industry.

Commission's View

- 2.31 Meters have already been installed at all Unit auxiliary transformers. However, the Commission while fixing norms for auxiliary consumption of the Petitioner has considered the meter reading as well as norms for auxiliary consumption for similar units elsewhere in the country.

Capital Expenditure

Stakeholder's Comments

- 2.32 The Commission has already approved Rs.1.95 crore for FY 2011-12 for various schemes vide its order dated August 26, 2011. The Commission should approve further capital expenditure on the basis of submission of a Detailed Project Report, reasonableness of the cost estimates, use of efficient technology, cost-benefit analysis, and other factors as may be considered relevant by the Commission.

Petitioner's Response

- 2.33 The Petitioner has submitted that it has provided the necessary data/information as desired by the Commission from time to time for capital expenditure.

Commission's Views

- 2.34 The Commission carries out due prudence check before approving capital expenditure of the Petitioner. The detailed project reports are received by the Commission and after assessing the reasonableness of cost estimates, cost benefit analysis etc, the schemes for capital expenditure are approved.

Interest on Working Capital

Stakeholder's Comments

- 2.35 The Petitioner claiming the impact of increased fuel cost in working capital requirement for FY 2010-11, over and above the Commission's already allowed



annual escalation of 4% in working capital should be rejected by the Commission.

- 2.36 The Commission in its Tariff Order dated December 14, 2007 had already made clear that variation in the fuel costs would be adjusted automatically through the FPA mechanism, and therefore the Commission shall not true up the working capital requirement due to the same, and has only allowed for escalation of working capital requirement for FY 2009, FY 2010 and FY 2011 at an annual rate of 4% to consider for escalation of fuel costs.
- 2.37 The tariff consists of number of packages and each packages need not be examined on the anvil of reasonability. As, the tariff is a complete package, its reasonability is required to be examined in its totality.
- 2.38 The Commission should stipulate and audit the fuel stock, spare etc. allowed as part of the working capital to the generators and in case monthly random verification of the generators are not found meeting the norms, the Commission may moderate the fixed charge on pro-rata basis so that the interest of DISCOM and end consumers are not jeopardised.

Petitioner's Response

- 2.39 The Petitioner has submitted that it has given the detailed justification for requesting the Commission to allow the impact of steep rise in gas cost in working capital for FY 2010-11. The Petitioner submits the same reason as submitted by it in the Petition as follows.

“Petitioner submits that the fuel cost has increased sharply in FY 2010-11. The Hon’ble Commission has determined the cost of fuel for 1 month and receivables equivalent of 2 months in working capital requirement, based upon the initial gas price. It is submitted that the Hon’ble Commission has considered the fuel cost of Rs.215.26 crore for working capital requirement at a PLF of 80%, whereas the actual fuel cost incurred for FY 2010-11 is Rs.411.30 crores at a PLF of 80.44%. It is evident that there has been an increase of fuel cost of more than 90%. However, the Hon’ble Commission has allowed an annual escalation of 4% only in working capital to consider for the escalation in fuel cost. It is submitted that an escalation of 4% was not sufficient to cover the steep rise of fuel cost of more than 90% in FY 2010-11.



Therefore, in the present submission, the increase in the fuel cost for FY 2010-11 has been considered for working capital corresponding to 80% PLF as per the norms. The Hon'ble Commission vide its Order dated December 14, 2007 has stated as under;-

“4.88 The Commission has not considered any escalation in fuel costs in its calculation for working capital requirements for the Control Period. Though the variation in fuel costs would be adjusted automatically through the FPA mechanism, the Commission shall not true-up the working capital requirements due to the same. Hence, the Commission has escalated the working capital requirement for FY09, FY10 and FY11 at an annual rate of 4% to consider for the escalation in fuel costs.”

It is submitted that it was an exceptional case of sharp rise in fuel cost in comparison to escalation allowed by the Hon'ble Commission is requested to consider and allow the impact of increased fuel cost in working capital requirement for FY 2010-11 only.”

- 2.40 The Petitioner has further submitted that as per the provisions of DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 the working capital is allowed on normative basis. Inventory of the fuel & spares is maintained keeping in view the operational requirement of the plants. The Petitioner further submitted that BRPL and BYPL have defaulted in making payments of energy bills since October 2010. This has worsened the financial health of the organisation. Due to this PPCL is finding it difficult to meet its day to day obligations and expenses.

Commission's Views

- 2.41 The Commission has allowed normative working capital requirement in accordance with DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 and any efficiency gain or loss of the same is to the account of the generator.



A3: Commission's Analysis, Scrutiny and Conclusions

- 3.1 The Commission has analysed the Petition submitted by the Petitioner for truing-up of Aggregate Revenue Requirement for the Control Period from FY 2007-08 to FY 2011-12.
- 3.2 The Commission held various discussions with Petitioner to validate the data submitted by the Petitioner and sought further clarifications on various issues. The Commission has considered all information submitted by the Petitioner, responses to various queries raised during the discussions and also during the public hearing, for the truing-up purpose.
- 3.3 In the present Petition, the Petitioner has requested for true-up of ARR for FY 2007-08 to FY 2011-12. A summary of the fixed cost submitted by the Petitioner for FY 2007-08 to FY 2011-12 in the True-up Petition is shown as under:

Table 1 Total Fixed Cost as submitted by the Petitioner and as approved by the Commission in MYT/Tariff Order

Particulars	Units	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
		TO for FY 2011-12	Petition	TO for FY 2011-12	Petition	TO for FY 2011-12	Petition	TO for FY 2011-12	Petition	TO for FY 2011-12	Petition
Gross Generation	MU	2313	2367	2313	2401	2313	2453	2313	2336	2319	2560
Net Generation	MU	2243	2300	2243	2335	2243	2382	2243	2270	2249	2492
Total Fixed Cost*	Rs Crore	221.24	221.26	219.22	219.57	226.72	228	218.94	226	211.00	212
Fixed Cost per Unit	Rs/unit	0.99	0.96	0.98	0.94	1.01	0.96	0.98	0.99	0.94	0.85

*Excludes Taxes and Duties

Norms of Operation

Station Heat Rate (SHR)



Petitioner's Submission

3.4 The actual heat rate submitted by the Petitioner for the Control Period is as shown below:

Table 2 Actual Heat Rate as submitted by the Petitioner (kCal/kWh)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Station Heat Rate (Combined Cycle)	1973	1967	1984	2003	1988
Station Heat rate (Open Cycle)	3130	3075	3084	3138	3095

3.5 The Petitioner in its Petition has submitted that it had put in all efforts to achieve the norms of heat rate as approved by the Commission. However, it has expressed its inability to achieve the Station Heat Rate (SHR) of 2000 kCal/kWh in combined cycle mode on consistent basis. Further, the Petitioner has submitted that it is not at all possible to achieve heat rate of 2900 kCal/kWh in open cycle mode as specified in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 for MYT control period FY 2007-08 to FY 2011-12.

3.6 The Petitioner has submitted that the manufacturer has guaranteed the heat rate of 1939 kCal/kWh in combined cycle mode and 2986 kCal/kWh in open cycle mode at 100% PLF for turbines. Further, the Petitioner submitted that CEA has computed the combined cycle heat rate of 1978 kCal/kWh.

3.7 The Petitioner has further submitted that the Commission in its DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 at point 7.3(b) on operational norms for gross heat rate for newly Commissioned projects has allowed an additional factor of 5% over the designed heat rate.

3.8 The Petitioner has submitted that after applying the additional factor of 5%, the heat rate works out to be 2036 kCal/kWh in combined cycle mode and 3135 kCal/kWh in open cycle mode.

- 3.9 The Petitioner has further submitted that the Hon'ble Commission has not considered the prayer made by the Petitioner for allowing higher heat rate on the ground that same norms are also fixed for 359.77 MW Rajiv Gandhi Combined Cycle Power Plant at Kayamkulam, a similar station of NTPC having 2 x 115.2 MW gas Turbines + 1 x 129.177 MW STG. In this regard, the Petitioner has submitted that the ambient and operating conditions at Kayamkulam (Kerala) are different to the ambient conditions of Delhi. The average yearly temperature at Kayamkulam is around 28.5⁰C as compared to 31.5⁰C in Delhi. Further, the Petitioner submitted that from the manufacturer's data curve, it is evident that the average increase in temperature of 3⁰C increases the heat rate of around 1.5% and the designed heat rate for RGCCP is 1928 kCal/kWh which is lower than the guaranteed heat rate of PPS-I.
- 3.10 The Petitioner has submitted that Central Electricity Authority (CEA) has also considered the open cycle heat rate as 3075.3 kCal/kWh at 100% PLF on page no. 24 of its report of December, 2004 on technical standards on operational norms for Gas Turbine Stations. The Petitioner further submitted that the Hon'ble Commission has given the reason to disallow the actual heat rate in open cycle mode that the station is expected to run in combined cycle mode most of the time and open cycle operation is rare. In this regard, the Petitioner has 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 higher side.
- 3.11 The Petitioner has further submitted that apart from factors considered by CEA, PPCL is also facing the problem of backing down of generating station on the instruction of SLDC. The backing down has resulted into lower PLF and higher SHR for the Station. The Petitioner has requested the Commission to true-up the actual SHR achieved in open cycle mode during the FY 2007-08 to FY 2011-12.

Commission's Analysis

- 3.12 The Commission observes that except for the year FY 2010-11 the Petitioner had been able to achieve the actual heat rate under combined cycle mode below the target



SHR of 2000 kCal/kWh. Even in the year FY 2010-11 the heat rate for the plant in combined cycle mode was only 3 kCal/kWh higher than the target norm. Therefore, it is clear that a heat rate of 2000kcal/kWh is achievable and does not require any relaxation as claimed by the Petitioner.

- 3.13 The Petitioner's contention that the Commission in its DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 at point 7.3(b) on operational norms for gross heat rate for newly Commissioned projects has allowed an additional factor of 5% over the designed heat rate is concerned, the Commission would like to state that these operational norms are applicable for only new gas based generating stations and in no case are applicable for existing generating stations.
- 3.14 With regards to Petitioner's contention that the ambient temperature of Rajiv Gandhi Combined Cycle Power Plant at Kayamkulam is 3⁰C less than that of PPS-I, the Commission would like to state that CERC has also specified same norms of 2900 kCal/kWh for open cycle generation for Faridabad GTPS which is geographically closer and has similar ambient temperature when compared to PPS-I.
- 3.15 Further, the Hon'ble Appellate Tribunal in its Judgment in Appeal No. 25 of 2008 has rejected the prayer of the Petitioner to allow higher Station Heat Rate for the PPCL. The judgment of Hon'ble Appellate Tribunal is reproduced as under:

"22. We notice that the assertions of the Appellant regarding effect on heat rate due to shortage of gas and grid constraints are of general nature without any supporting data. The Appellant could not produce any documents to establish its claim for the circumstances for the State Commission to exercise its power to relax the normative parameters for station heat rate under the MYT Regulations. The Appellant furnished some data sheet for the gas turbine station submitted by the suppliers in support of its claim for station heat rate. However, the data sheet indicates the degraded guaranteed heat rate based on degradation factor of 4% for Pragati Power Station of the Appellant as 1978.08 kCal/kWh in combined cycle mode which is the normal mode of operation. The station heat rate allowed in the impugned order is 2000 kCal/kWh which is more than that indicated in the data sheets.



23. On the other hand, the State Commission has passed a reasoned order for adoption of the norms based on the Central Commission's Regulations, its own MYT tariff regulations and has also given directions for diversion of gas from IPGCL Gas Turbine Station, where two Gas turbines were allowed to be modified to operate on dual fuel, to Pragati Power Station of the Appellant to meet the gas shortage.

24. In view of above, we do not find any substance in the contentions of the Appellant regarding Station Heat Rate for the MYT Control Period."

3.16 Further, the Commission in its Regulation 5.8 of DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 has stated as follows:

"Any financial loss on account of underperformance on targets for parameters specified in Clause 5.7 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the Generating Company's benefit and shall not be adjusted in tariffs."

3.17 Accordingly, the Commission has decided to retain the SHR as per the norms specified in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007, which were set in accordance with the CERC norms for similar stations.

Table 3: Station Heat Rate as approved by the Commission (kCal/kWh)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up
Station Heat Rate (Combined Cycle)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Station Heat rate (Open Cycle)	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900

Availability

Petitioner's Submission

3.18 The Petitioner has submitted the actual Availability for Pragati Power Station - I as achieved by the Petitioner during the MYT control period and is as shown in the table below.

Table 4: Availability (%) of PPS-I as submitted by the Petitioner

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Plant Availability	84.08%	85.41%	85.50%	86.31%	92.61%

3.19 Petitioner has submitted that it has achieved the target availability of more than 80% during the MYT control period starting from FY 2007-08 to FY 2011-12.

Commission's Analysis

3.20 The Commission in the MYT Order and Tariff Order for FY 2011-12 has approved the availability of 80%. Petitioner during the Control Period had achieved higher availability than the target availability. The Commission in its additional queries asked PPCL to submit a copy of SLDC certifying the actual availability of PPS-I during the Control Period. The Petitioner has submitted the SLDC certificate to substantiate the availability submitted by it in the Petition. The following table shows the availability approved by the Commission in its MYT Order dated December 14, 2007, the actual availability as certified by SLDC as approved by the Commission.

Table 5: Availability as Approved by the Commission

Particulars	Unit	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
		MYT Order	Actual Availability approved	MYT Order	Actual Availability approved	MYT Order	Actual Availability approved	MYT Order	Actual Availability approved	Tariff Order FY 2011-12	Actual Availability approved
Availability	%	80.00%	84.08%	80.00%	85.41%	80.00%	85.50%	80.00%	86.31%	80.00%	92.61%

3.21 In view of the above, the Petitioner is eligible for the recovery of entire capacity charge. Therefore, the Commission has allowed the recovery of entire capacity charge for each year of the Control Period from FY 2007-08 to FY 2011-12 in accordance



with DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007.

Auxiliary Power Consumption (APC)

Petitioner's Submission

- 3.22 Petitioner has submitted the Auxiliary Power Consumption (%) achieved in combined cycle mode during the control period starting from FY 2007-08 to FY 2011-12. Petitioner has further submitted that it has considered the open cycle auxiliary power consumption of 1%.

Table 6: Auxiliary Power Consumption (%) as submitted by the Petitioner

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Auxiliary Consumption	2.90%	2.88%	2.92%	2.90%	2.70%

Commission's Analysis

- 3.23 The Petitioner has achieved lower auxiliary power consumption than the target norm for all the years of the Control period. Therefore, the Commission approves Auxiliary Power Consumption for combined cycle as approved in the MYT Order and Tariff Order for FY 2011-12.
- 3.24 The financial gain on account of better performance with respect to auxiliary power consumption shall be to the generating company and the benefits shall not be adjusted in tariff as per DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007.

Table 7: Auxiliary Power Consumption

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	Tariff Order FY 2011-12	Approved in True-up
Auxiliary Power Consumption	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%



- 3.25 Further, the Commission approves 1% as Auxiliary Consumption for Open Cycle operation as specified in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 for Pragati Power Station-I.

Capital Expenditure

Petitioner's Submission

- 3.26 In the Petition, Petitioner has submitted the additional capital expenditure incurred during the control period starting from FY 2007-08 to FY 2011-12. Petitioner further submitted that it had not submitted any capital expenditure plan for the approval of the Commission for FY 2007-08 to FY 2010-11 in its MYT Petition for the first Control Period from FY 2007-08 to FY 2010-11. The Petitioner submitted that it has obtained in-principle approval of the Commission for capital expenditure on Enterprise Resource Planning (ERP). The Petitioner further submitted that the Commission had accorded In-Principle capital expenditure approval of Rs. 1.95 Crore for FY 2011-12 towards various schemes in its Tariff Order dated August 26, 2011.
- 3.27 The Petitioner has further submitted that it has funded its entire capital expenditure from internal resources however, for tariff calculation it has considered debt-equity ratio of 70:30. The Petitioner has submitted the summary of Capital Expenditure for the Control Period as shown in the table below.

Table 8: Capital Expenditure for the Control Period (Rs Lakhs)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Furniture & Fittings	0.66	1.20	0.90	1.45	56.15
Communication Equipments		0.10			
Other Building			30.79	5.14	
Generator Assembly Exciter		383.61			
Gas Turbine Atomising Air Compressor		24.84			



Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
ERP Software			205.00		11.99
Computer Hardware			43.00		25.13
Leak Proof Body Hydraulic dumper			13.04		
Speed Reduction of HPBFPs					95.35
Laying of new raw water pipe line from GTPS to PPCL					16.00
Laboratory Equipments					17.30
Fire Tender					39.55
Total	0.66	409.75	292.73	6.59	261.47

- 3.28 The Petitioner has submitted that on the basis of recommendations of OEM it had replaced faulty STG exciter. Further, the Petitioner submitted that it had to replace Gas Turbine Atomising Air Compressor in the plant as it got damaged.
- 3.29 The Petitioner further submitted that at the time of construction of plant it had not conceived fire station, later on as per the recommendations of CISF it had constructed the fire station building and shed during FY 2009-10.
- 3.30 The Petitioner in its Petition has submitted that it had implemented ERP in FY 2009-10. The Petitioner further submitted that it had further incurred an expense of Rs. 37.12 lakhs for ERP software and hardware in FY 2011-12.
- 3.31 Petitioner further submitted that it had also completed the following works in the station
- Procurement of leak proof body hydraulic dumper for transportation of sludge
 - Speed reduction of High Pressure Boiler Feed Pumps,
 - Laying of raw water pipe from auxiliary plant area of GTPS to raw water pond of PPCL
 - Procurement of laboratory equipment.
 - Procurement of Fire tenders.



- vi) Apart from this, Petitioner has also made capital expenditure on furniture's and fittings during the control period.

3.32 Further, the Petitioner in its submissions has made a negative adjustment of Rs 3.92 Crore in the Gross Fixed Assets while computing the depreciation for FY 2011-12.

Commission's Analysis

3.33 In the MYT Order, the Commission had not approved any capital expenditure for PPS-I for the Control Period starting from FY 2007-08 to FY 2010-11 as the Petitioner had not submitted any additional capital expenditure at that time to the Commission.

3.34 In its tariff determination Petition for FY 2011-12, the Petitioner had submitted additional capital expenditure up to FY 2010-11 for the truing up purpose. However, in accordance with DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007, the Commission had directed the Petitioner to submit the details of additional capital expenditure for true up at the end of the extended Control Period and had provisionally approved the additional capital expenditure of Rs.1.95 Crore towards various schemes for FY 2011-12. The Petitioner in its Petition has requested the Commission to true up the actual capital expenditure incurred by it during the Control Period starting from FY 2007-08 to FY 2011-12.

3.35 In this regard, Regulation 5.6 of DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007 stipulates that *"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."*

3.36 Accordingly, the Commission has scrutinised and examined package-wise details of additional capitalisation as submitted by the Petitioner for FY 2007-08 to FY 2011-12. Therefore, the Commission approves the capital expenditure as submitted by the Petitioner for FY 2007-08 to FY 2011-12.

3.37 Further, with regards to the negative capital adjustment made in depreciation



computation for FY 2011-12 the Commission had directed the Petitioner to submit the details of adjustment of Rs. 3.92 crore. In this regards, the Petitioner in its reply had submitted that it had earlier booked the liability of Rs.13.76 crore for BHEL and Rs.7.29 crore for GAIL towards ongoing works. However, during the final settlement of the works, Petitioner had paid an amount of Rs.10.07 crore to BHEL and Rs.7.06 crore to GAIL. Therefore, Petitioner has adjusted an amount of Rs. (-3.92) crore in the capital cost of PPS-I for excess liability booked earlier.

- 3.38 The Commission further asked the Petitioner to submit the year in which such liability was booked. In reply to it the Petitioner submitted that in FY 2002-03 GAIL raised bill on MGO (Minimum Guarantee off-take) of Rs 7.29 Crore. However, at a later stage it was settled at Rs 7.06 Crore. Earlier Rs 7.29 Crore was booked as liability, the actual payment made in FY 2011-12 was Rs 7.06 Crore only.
- 3.39 Further, in order to achieve design parameter of the water treatment plant, BHEL was to provide ultra filtration plant, however same was not installed by BHEL on the given schedule, therefore an amount of Rs 13.76 Crore was withheld and Rs 3.69 crore was not paid to BHEL due to delayed supply. Thus from the withheld amount of Rs 13.76 Crore only Rs 10.07 Crore was paid to BHEL and Rs 3.69 crore was deducted from the approved capital cost of PPS-I. The Petitioner further submitted that the above settlement was done in FY 2011-12.
- 3.40 The Commission is of the view that the excess cost was provisioned in the Capital Cost of the Project and therefore the deduction should be carried out from the beginning of the Control Period and not from FY 2011-12.
- 3.41 Since such excess provisioning was made before the commencement of first Control Period, the Commission has therefore reduced the excess amount booked earlier from the Gross Fixed Asset from the beginning of the Control Period i.e. FY 2007-08. Accordingly, the impact of the capital adjustment has been considered in the ARR of the Control Period starting from FY 2007-08 to FY 2011-12.



Determination of Fixed Cost

Operation & Maintenance Expenses

Petitioner's Submission

3.42 The Petitioner has claimed O&M expenses as approved by the Hon'ble Commission vide its Order dated August 26, 2011 for the Control Period from FY 2007-08 to FY 2011-12. The details of O&M expenses submitted by the Petitioner are reproduced as under:

Table 9: Operation & Maintenance Expenses (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Employee Expenses	12.27	12.76	13.27	13.80	21.87
R&M Expenses	9.95	10.35	10.76	11.19	11.64
A&G Expenses	10.05	10.45	10.86	11.30	16.45
Base O&M Expenses	32.26	33.55	34.89	36.29	49.96
Water Charges	2.55	2.65	2.76	2.87	2.63
Additional R&M	20.00	20.00	20.00	20.00	0.00
Pay Commission	0.00	0.91	14.24	7.22	4.99
Total O&M Expenses	54.81	57.11	71.89	66.38	57.58
Additional CISF Expenses	0.00	1.38	0.47	0.52	0.54
Additional Employee Cost for IP Station Employees	0.00	0.00	0.00	2.98	3.28
Total	54.81	58.49	72.36	69.88	61.40

Commission's Analysis

3.43 The Petitioner has claimed O&M expenses as approved by the Commission in its Tariff Order for FY 2011-12.

3.44 In the Tariff Order for FY 2011-12, the Commission had, revised the base O&M Expenses for the control period, and had considered the Impact of 6th Pay Commission on Employee Cost & CISF Expenses and Impact of Transfer of Employees from I.P. Power Station to PPCL on the O&M Expenditure after decommissioning of I.P. Station. While approving the O&M expenses in its Tariff Order dated August 26, 2011 the Commission had provisionally approved the impact



of 6th Pay Commission on CISF Expenses and impact of Transfer of Employees from I.P. Power Station. The Commission had stated that it shall true-up these expenses at the end of the extended Control Period once the actual impact on account of same is known. In this regard, the Commission in its additional queries asked the Petitioner to submit the actual CISF Expenses and impact of Employees Transferred from I.P. Station to PPCL.

- 3.45 The Petitioner in its response submitted the additional impact of sixth pay Commission on CISF expenses as shown in the table below:

Table 10: Actual CISF Expenses submitted by the Petitioner (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY2011-12
Actual Expenses	2.41	3.36	2.78	2.84	4.28

- 3.46 The Petitioner further submitted that the actual CISF expenses in FY 2006-07 were Rs 2.12 Crore. The Commission has verified the above data with the audited accounts of the Petitioner.
- 3.47 The Commission while approving the O&M expenses for FY 2007-08 to FY 2011-12 had considered the actual CISF expenses for FY 2006-07 in the base O&M expenses and had escalated it by 4% to derive the approved O&M expenses for the Control Period. In addition to that, the Commission had provisionally allowed additional impact of Sixth Pay Commission on CISF expenses in its Tariff Order for FY 2011-12. Therefore, the Commission has only considered the difference in actual CISF expenses due to impact of sixth pay Commission and that already allowed by the Commission while carrying out the truing up as shown in the table below.

Table 11: Additional Impact on account of CISF Expenses (Rs Crore)

Particulars	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Approved in MYT Order (a)	2.12	2.20	2.29	2.38	2.48	2.58
Additional Impact of VI th Pay allowed in August 26, Order for FY 2011-12 (b)			1.38	0.47	0.52	0.54
Actual CISF Expenses incurred (c)		2.41	3.36	2.78	2.84	4.28
Excess/(Deficit) (a+b-c)		-0.21	0.31	0.07	0.16	-1.16

- 3.48 The Petitioner with regards to the impact of transfer of employees of I.P. Station



submitted that 35 number of employees were transferred from I.P. Station to PPS-I and the impact on employee expenses on account of such transfer is as shown in the table below:

Table 12: Additional Impact on account transfer of Employees of I.P Station (Rs Crore)

Particulars	PPS-I
FY 2010-11	2.98
FY 2011-12	2.48
TOTAL	5.46

- 3.49 The Commission in its additional queries asked PPS-I to submit the detailed methodology followed by it to compute the impact of transfer of employees from I.P Station to PPS-I. In reply PPCL submitted that the impact has been computed on the basis of actual payments on account of salaries made to the employees who got transferred from I.P Station. The Petitioner further submitted supporting documents to substantiate its claim.
- 3.50 The Commission observed that in addition to the 35 employees transferred to PPS-I, 94 employees were transferred from IP Station to Headquarters (HQ). The Commission observed that the Petitioner has allocated the expenses of entire employees transferred to Headquarters to IPGCL, which further has been allocated to RPH and GTPS in the ratio of 1:2 derived based on the capacity of the plant. The Petitioner has not allocated any cost of the employees transferred from HQ to PPCL stations.
- 3.51 The Commission is of the view that the head office expenses of IPGCL should also be allocated to PPCL as the head office is common for IPGCL and PPCL. Hence the Commission has reallocated the impact of head office expenses to the stations of IPGCL and PPCL based on the Capacity. The Commission has further allocated PPCL share to PPS-I and PPS-III in the ratio of their installed capacity. The following table shows the net impact as approved by the Commission for PPS-I.

Table 13: Impact of transfer of employees of I.P. Station to HQ on PPS-I (Rs Crore)

Particulars	Petitioner			Trued Up		
	Direct Transfer	HQ share	Total	Direct Transfer	HQ share	Total
FY 2010-11	2.98	0.00	2.98	2.98	0.97	3.95
FY 2011-12	2.48	0.00	2.48	2.48	0.79	3.27
Total	5.46	0.00	5.46	5.46	1.76	7.22

3.52 The Commission in MYT Order dated December 14, 2007 approved an additional R&M expenses of Rs 20 crore per year for FY 2007-08 to FY 2010-12 totalling Rs 80 Crore towards DLN burners. In the Tariff Order for FY 2011-12 the Petitioner submitted that till FY 2010-11, it had spent an amount of Rs 67.55 Crore out of Rs 80 Crore allowed by the Commission. The Commission accordingly in its Order dated August 26, 2011 had not allowed any R&M expenses for DLN burner for FY 2011-12 and directed PPCL to first utilise the fund already allowed by the Commission. In this regards the Commission in the current tariff proceedings asked the Petitioner to submit the actual R&M expenses on account of DLN burners for FY 2011-12. The Petitioner in its reply submitted that Rs. 2.79 Crore were spent towards R&M of DLN burners in FY 2011-12.

3.53 The Commission has therefore allowed actual R&M expenses incurred by the Petitioner on DLN burners and has accordingly trued up yearly R&M expenses on DLN burners as shown in the table below.

Table 14: Actual R&M expenses on account of DLN burners approved by the Commission (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Approved in MYT Order	20.00	20.00	20.00	20.00	0.00
Actual R&M Expenses on DLN Burners	26.21	2.05	10.49	28.80	2.79
Excess/(Deficit) Allowed	-6.21	17.95	9.51	-8.80	-2.79

3.54 Further, the Commission in its Order dated August 26, 2011 with regards to SAP License fee for FY 2010-11 of Rs 1.15 Crore had stated that the same shall be



considered at the time of truing up of FY 2010-11..The Commission in its additional queries asked the Petitioner to submit the basis of allocating ERP Cost including SAP License Fee to PPCL and IPGCL in the ratio of 80.77:19.23 and the basis of allocation of such cost within PPCL among PPS-I and PPS-III. The Petitioner in its reply submitted that A&G expenses like ERP cost including License Fees are allocated between IPGCL & PPCL on the basis of the plant capacity in MW, further, the A&G Cost within PPCL i.e. between PPS-I & PPS-III is also allocated on the basis of plant capacity in MW.

- 3.55 The Commission in its Tariff Order for FY 2011-12 dated August 26, 2011 had approved a total of Rs 5.82 Crore towards ERP related expenditure for IPGCL and PPCL. The Commission had further allocated 80.77% of the total cost to PPCL which worked out to be Rs 4.70 Crore. Further, the Commission had allocated this cost to PPS-I alone. The Commission in view of the above submission has now allocated Rs 4.70 Crore on PPS-I and PPS-III on the basis of their installed Capacity. The amount thus allocated to PPS-I works out to be Rs 0.91 Crore and therefore excess cost of Rs 3.79 Crore allowed earlier has been trued up for FY 2011-12.
- 3.56 For FY 2010-11, the Commission has similarly allocated the SAP License Fee of Rs 1.15 Crore to PPS-I which works out to Rs 0.18 Crore and has therefore been additionally approved for FY 2010-11.
- 3.57 The Commission has carried out detailed scrutiny of the expenses as discussed above and accordingly the Commission has approved the O&M expenses for the Control Period shown in the next table.



Table 15: O&M Expenses (Rs Crore)

Particulars	FY 2007-08			FY 2008-09			FY 2009-10			FY 2010-11			FY 2011-12		
	ARR Order for FY 2011-12	Petition	Trued- Up	ARR Order for FY 2011-12	Petition	Trued- Up	ARR Order for FY 2011-12	Petition	Trued- Up	ARR Order for FY 2011-12	Petition	Trued- Up	ARR Order for FY 2011-12	Petition	Trued- Up
Employee Expenses	12.27	12.27	12.27	12.76	12.76	12.76	13.27	13.27	13.27	13.80	13.80	13.80	21.87	21.87	21.87
R&M Expenses	9.95	9.95	9.95	10.35	10.35	10.35	10.76	10.76	10.76	11.19	11.19	11.19	11.64	11.64	11.64
A&G Expenses	10.05	10.05	10.05	10.45	10.45	10.45	10.86	10.86	10.86	11.30	11.30	11.30	16.45	16.45	16.45
Base O&M Expenses	32.27	32.26	32.27	33.56	33.55	33.56	34.90	34.89	34.90	36.29	36.29	36.29	49.96	49.96	49.96
Water Charges	2.55	2.55	2.55	2.65	2.65	2.65	2.76	2.76	2.76	2.87	2.87	2.87	2.63	2.63	2.63
Additional R&M for DLN Burners	20.00	20.00	26.21	20.00	20.00	2.05	20.00	20.00	10.49	20.00	20.00	28.80	0.00	0.00	2.79
Impact of 6 th Pay Commission	0.00	0.00	0.00	0.91	0.91	0.91	14.24	14.24	14.24	7.22	7.22	7.22	4.99	4.99	4.99
Total O&M Expenses	54.81	54.81	61.03	57.11	57.11	39.17	71.89	71.89	62.39	66.38	66.38	75.18	57.58	57.58	60.37
Additional CISF Expenses	0.00	0.00	0.21	1.38	1.38	1.07	0.47	0.47	0.40	0.52	0.52	0.36	0.54	0.54	1.70
Additional Employee Cost for IP Station Employees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.98	2.98	3.95	3.28	3.28	3.27
Total O&M Expenses approved in August 2012 Order	54.81	54.81	61.24	58.49	58.49	40.24	72.36	72.36	62.79	69.88	69.88	79.49	61.40	61.40	65.34
Impact of Reallocation of A&G Expenses on account of ERP												0.18			-3.79
Total	54.81	54.81	61.24	58.49	58.49	40.24	72.36	72.36	62.79	69.88	69.88	79.67	61.40	61.40	61.56

Depreciation

Petitioner's Submission

- 3.58 Petitioner has submitted that the Commission has approved the Opening Gross Fixed Asset of Rs. 1031.57 Crore in the beginning of FY 2007-08 and accorded in-principle approval for implementation of Enterprise Resource Planning system in the company. The share of cost of ERP implementation in PPCL was Rs.2.48 Crore in FY 2009-10. Besides ERP, certain other capital additions were made during the Control Period. Petitioner has considered a negative capital adjustment of Rs. 3.92 Crore on account of excess provisioning in FY 2011-12
- 3.59 Further, the Petitioner has submitted that it has computed depreciation based on the straight-line method, on the fixed assets put to use at the beginning of the year.
- 3.60 Petitioner has also submitted that the depreciation during the Control Period from FY 2007-08 to FY 2011-12 has been computed based on the Depreciation Rates specified in the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007. Petitioner further submitted that the weighted average depreciation rate of 5.80% has been considered by the Commission in the MYT Order.
- 3.61 Petitioner further submitted that the depreciation for new asset has been computed based on the straight-line method at the weighted average rate of 5.80% on the average of fixed assets. The details of depreciation as submitted by the Petitioner is reproduced as under:

Table 16: Depreciation as submitted by the Petitioner (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Opening GFA	1031.57	1031.58	1035.68	1038.60	1038.67
Additions to GFA	0.01	4.10	2.93	0.07	2.61
Adjustments	0.00	0.00	0.00	0.00	-3.92
Closing GFA	1031.58	1035.68	1038.60	1038.67	1037.36
Depreciation	59.86	59.98	60.18	60.27	60.23

Commission's Analysis

- 3.62 The Commission has reduced the capital adjustment of Rs. 3.92 Crore from the

opening GFA as on April 01, 2007. Further, the Commission has considered the approved yearly additional capital addition to arrive at the Gross Fixed Asset for each year in the Control Period starting from FY 2007-08 to FY 2011-12. The details of revised approved GFA are reproduced as under:

Table 17: Gross Fixed Asset (Rs. Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Adjustment in Capital Cost	-3.92	0.00	0.00	0.00	0.00
Opening GFA	1027.65	1027.66	1031.75	1034.68	1034.75
Addition	0.01	4.10	2.93	0.07	2.61
Closing GFA	1027.66	1031.75	1034.68	1034.75	1037.36

- 3.63 Based on the above GFA, the Commission has computed the depreciation for the Control Period starting from FY 2007-08 to FY 2011-12.
- 3.64 The Commission for computation of depreciation on Opening GFA has considered the same rate of depreciation as considered by it in MYT Order dated December 14, 2007.
- 3.65 With regards to depreciation on additional capitalisation, the Commission has considered asset class wise depreciation rates as specified in Appendix-1 of the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007.
- 3.66 The depreciation for new asset has been computed on average basis in the year of its addition. The details of the asset wise depreciation on additional capital expenditure are shown as under:

Table 18: Depreciation on Additional Capital Expenditure (Rs Crore)

Particulars	Rates	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Furniture & Fittings	6.00%	0.00	0.00	0.00	0.00	0.02
Communication Equipments	6.00%	0.00	0.00	0.00	0.00	0.00
Other Building	1.80%	0.00	0.00	0.00	0.01	0.01
Generator Assembly Exciter	6.00%	0.00	0.11	0.23	0.23	0.23
Gas Turbine	6.00%	0.00	0.01	0.01	0.01	0.01



Particulars	Rates	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Atomising Air Compressor						
ERP Software	6.00%	0.00	0.00	0.06	0.12	0.13
Computer Hardware	6.00%	0.00	0.00	0.01	0.03	0.03
Leak Proof Body Hydraulic dumper	18.00%	0.00	0.00	0.01	0.02	0.02
Speed Reduction of HPBFPs	6.00%	0.00	0.00	0.00	0.00	0.03
Laying of new raw water pipe line from GTPS to PPCL	6.00%	0.00	0.00	0.00	0.00	0.00
Laboratory Equipments	6.00%	0.00	0.00	0.00	0.00	0.01
Fire Tender	6.00%	0.00	0.00	0.00	0.00	0.01
Total		0.00	0.12	0.34	0.43	0.50

Note: The zero value reflected above is on account of minor/negligible amount in Rs Crore

3.67 The detailed computation of year wise approved total depreciation for the Control Period starting from FY 2007-08 to FY 2011-12 is shown as under:

Table 19: Computation of Depreciation for the Control Period (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Depreciation according to the Tariff Order FY 2011-12	59.86	59.86	59.86	59.86	59.92
Depreciation allowed by Commission on Rs.1.95 Crore					-0.06
Depreciation without Additional Capital Expenditure	59.86	59.86	59.86	59.86	59.86
Depreciation @ 5.80% corresponding to Adjustment of Rs 3.92 Crore	-0.23	-0.23	-0.23	-0.23	-0.23
Depreciation on Add Cap	0.00	0.12	0.34	0.43	0.50
Total Depreciation trued up	59.63	59.76	59.97	60.06	60.14

Note: The zero value reflected above is on account of minor/negligible amount in Rs Crore

3.68 The approved depreciation in MYT Order dated December 14, 2007 and Tariff Order for FY 2011-12 vis-à-vis now trued-up depreciation is as shown in the table below.



Table 20: Approved Depreciation (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	T.O for FY 2011-12	Approved in True-up
Depreciation	59.86	59.63	59.86	59.76	59.86	59.97	59.86	60.06	59.92	60.14

Advance Against Depreciation (AAD)

Petitioner's Submission

3.69 The Petitioner has not asked for truing up of AAD and has claimed AAD as approved by the Commission in the MYT Order dated December 14, 2007 and Tariff Order FY 2011-12. The details of Advance Against Depreciation (AAD) as submitted by the Petitioner and as approved by the Commission in its earlier orders is reproduced as under:

Table 21: Advance Against Depreciation (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Advance Against Depreciation	7.19	7.19	7.19	7.19	7.61

Commission's Analysis

3.70 Based on the truing up of depreciation, Advance Against Depreciation (AAD) has been revised by the Commission. The negative loan adjustment of Rs.2.74 Crore (i.e. 70% of Rs.3.92 Crore) on account of capital adjustment of Rs. 3.92 Crore has been made in loan at the beginning of the control period i.e. FY 2007-08 and the impact of the same has been taken on AAD. The computation of Advance Against Depreciation is shown as under:

Table 22: Computation of Advance Against Depreciation (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
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Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Opening of Gross Loan	670.53	667.79	667.79	667.79	667.79
Capital Adjustment of Rs (3.92) Crore	-2.74	0.00	0.00	0.00	0.00
Closing of Gross Loan	667.79	667.79	667.79	667.79	667.79
1/10 of the Loan Amount	66.78	66.78	66.78	66.78	66.78
Repayment of Loan	67.53	67.53	67.53	67.53	67.53
Minimum of the above	66.78	66.78	66.78	66.78	66.78
Less: Depreciation during the year	59.63	59.76	59.97	60.06	60.14
A	7.15	7.02	6.81	6.72	6.64
Cumulative of the Loan(s) as considered for working out Interest on Loan	335.95	403.48	471.01	538.54	606.07
Less: Cumulative Depreciation	315.21	382.11	449.11	515.97	582.83
B	20.74	21.37	21.90	22.57	23.24
AAD	7.15	7.02	6.81	6.72	6.64

3.71 The Details of approved AAD in MYT Order dated December 14, 2007 and True-up is shown as under:

Table 23: Approved Advance Against Depreciation (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up
Advance Against Depreciation	7.19	7.15	7.19	7.02	7.19	6.81	7.19	6.72	7.61	6.64



Return on Equity (ROE)

Petitioner's Submission

- 3.72 Petitioner has submitted that it has computed return on equity considering approved equity of Rs. 323.19 Crore for the project and 30% of the capital additions made during the control period.
- 3.73 Petitioner also submitted that the Return on Equity for the Control Period from FY 2007-08 to FY 2011-12 has been taken by it at a rate of 14% in accordance with the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007. The details of Return on Equity as submitted by the Petitioner are reproduced as under:

Table 24: Return on Equity (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Equity (Opening Balance)	323.19	323.19	324.42	325.30	325.32
Additions during the year	0.00	1.23	0.88	0.02	0.78
Equity (Closing Balance)	323.19	324.42	325.30	325.32	326.10
Average Equity	323.19	323.81	324.86	325.31	325.71
Return on Equity	45.25	45.33	45.48	45.54	45.60

Note: The zero value reflected above is on account of minor/negligible amount in Rs Crore

Commission's Analysis

- 3.74 The Petitioner has submitted the adjustment of Rs.3.92 Crore in the Gross Fixed Asset. The Commission has deducted 30% of Rs. 3.92 Crore from the opening equity for FY 2007-08.
- 3.75 The Commission has determined the Return on Equity (ROE) at a rate of 14% applied on the average equity (i.e. average of opening and closing of the year).
- 3.76 The Commission has further considered 30% of approved additional capital expenditure as equity addition.

Table 25: Return on Equity (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	Tariff Order FY 2011-12	Approved in True-up
Capital adjustment of Rs. (3.92) Crore	0.00	-1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equity (Opening Balance)	323.19	322.01	323.19	322.02	323.19	323.25	323.19	324.12	323.19	324.14
Additions during the year	0.00	0.00	0.00	1.23	0.00	0.88	0.00	0.02	0.59	0.78
Equity (Closing Balance)	323.19	322.02	323.19	323.25	323.19	324.12	323.19	324.14	323.78	324.93
Average Equity	323.19	322.01	323.19	322.63	323.19	323.68	323.19	324.13	323.48	324.54
Return on Equity	45.25	45.08	45.25	45.17	45.25	45.32	45.25	45.38	45.29	45.43

Note: The zero value reflected above is on account of minor/negligible amount in Rs Crore

Interest on Loan

Petitioner's Submission

3.77 The Petitioner has submitted that it has incurred capital expenditure during the MYT Control Period from FY 2007-08 to FY 2011-12. The Petitioner has further submitted that it has funded the entire additional capital expenditure from its internal accruals. However, as per the DERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007, in case of funding of entire capital addition through internal accruals, 70% of the capital addition has to be considered as Normative Loan.

3.78 The Petitioner has also submitted that the Commission has approved the PFC subsidized interest rate of 8.45% on normative loan in its Tariff Order for FY 2011-12. The Petitioner has submitted that no loan is available at such rate as approved by the Commission for capital addition. Further, the Petitioner submitted that even the



interest rate for loan, taken by the PPCL for Pragati-III Bawana Project, is falling in the range of 10.50% to 11.50%. Petitioner also submitted that the funds deployed by it has higher opportunity cost than the interest rate approved by the Commission in the Tariff Order for FY 2011-12. Petitioner has requested the Commission to approve the interest rate of 11.50% on normative loan.

- 3.79 The Interest on Loan submitted by the Petitioner for the truing-up is reproduced as under:

Table 26: Interest on Loan (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Interest Charges	38.38	32.11	25.47	19.60	13.45

Commission's Analysis

- 3.80 In the MYT Order dated December 14, 2007 and Tariff Order for FY 2011-12, the Commission has approved the interest on term loan for the Control Period based on the true-up for FY 2006-07. The Petitioner has submitted the amount of adjustment of Rs.3.92 Crore corresponding to which loan of Rs.2.74 Crore (i.e. the 70% of Rs.3.92 Crore) has been reduced from the total loan in FY 2007-08. Further, the Commission has considered the impact of capital adjustment on the interest on term loan from FY 2007-08 to FY 2011-12. The interest on the loan component of 70% of capital adjustment has been computed on average basis.
- 3.81 Further, as the Commission in its Tariff Order dated August 26, 2011 has approved the capital expenditure for FY 2011-12 therefore the impact of the interest computed on the provisionally approved normative loan of Rs.1.37 Crore (i.e. 70% of capital expenditure of Rs.1.95 Crore) in Tariff Order for FY 2011-12 has been removed from the interest allowed for FY 2011-12 before taking into consideration the interest expenses on loan component corresponding to the revised approved capital expenditure.
- 3.82 The Commission has computed the interest by considering 70% of approved additional capital expenditure as normative loan. Further, the Commission has



computed the interest on normative loan based on the weighted average interest rate applicable in each year of the control period. The Commission has considered the term of 10 years for computation of interest on normative loan. Based on the above assumptions, loan repayment of normative loan has been computed as follows:

Table 27: Normative Loan Repayment (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Opening Loan	0.00	0.005	2.86	4.61	4.16
Addition	0.005	2.87	2.05	0.05	1.83
Repayment	0.00	0.01	0.30	0.49	0.51
Closing	0.005	2.86	4.61	4.16	5.49
Interest Rate	9.09%	9.01%	8.72%	8.67%	8.45%
Interest on Loan	0.00*	0.13	0.33	0.38	0.41

* zero value reflected above is on account of minor/negligible amount in Rs Crore

3.83 Based on the repayment of normative loan and year wise interest rate, interest has been computed as follows:

Table 28: Interest on Loan (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
As per MYT Order and Tariff Order for FY 2011-12	38.38	31.94	25.02	19.03	12.89
Interest on Capital Expenditure allowed in FY 2011-12					-0.06
Interest after adjustment of capital expenditure /adjustment	38.38	31.94	25.02	19.03	12.83
Interest Adjustment on account of negative Capital adjustment of Rs. 3.92 Crore	-0.24	-0.21	-0.18	-0.15	-0.13
Interest due to Additional Capitalisation	0.00	0.13	0.33	0.38	0.41
Total Interest	38.14	31.86	25.17	19.26	13.11

3.84 The Details of approved Interest on Loan in MYT Order dated December 14, 2007 and as Trued-up now is shown as under:



Table 29: Approved Interest on Loan (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	TO For FY 2011-12	Approved in True-up
Interest on Term Loan	38.38	38.14	31.94	31.86	25.02	25.17	19.03	19.26	12.89	13.11

Interest on Working Capital (IoWC)

Petitioner's Submission

3.85 The Petitioner has submitted that the Commission has revised the O&M expenses of the Station from FY 2007-08 to FY 2010-11 vide its Order dated August 26, 2011. However, the Commission has not considered impact on the difference of O&M expenses in the working capital. In the Petition, Petitioner has considered the impact of the revised O&M expenses in the working capital computation.

3.86 Petitioner further submitted that the fuel cost has increased sharply in FY 2010-11. The Hon'ble Commission had considered the cost of fuel for 1 month and receivables equivalent of 2 months in working capital requirement, based upon the initial gas price. The Petitioner further submitted the Hon'ble Commission has considered the fuel cost of Rs.215.26 crore for working capital requirement at a PLF of 80%, whereas the actual fuel cost incurred for FY 2010-11 is Rs.411.30 crore at a PLF of 80.44%. The Petitioner submitted that it is evident that there has been an increase of fuel cost of more than 90%. However, the Hon'ble Commission has allowed an annual escalation of 4% only in working capital to compensate for the escalation in fuel cost. It is submitted that an escalation of 4% was not sufficient to cover the steep rise of fuel cost of more than 90% in FY 2010-11. Therefore, in the present submission, the increase in the fuel cost for FY 2010-11 has been considered for working capital corresponding to 80% PLF as per the norms.

3.87 Further, the Petitioner has submitted that it was an exceptional case of sharp rise in fuel cost in comparison to escalation allowed by the Hon'ble Commission and



therefore it is requested to consider and allow the impact of increased fuel cost in working capital requirement for FY 2010-11 only.

3.88 Petitioner also submitted that the variation in the return on equity, interest on loan and depreciation will also have an impact on the receivables.

3.89 Interest rates of 12.75% and 13.00% have been considered by Petitioner for FY 2007-08 to FY 2010-11 and FY 2011-12 respectively. The details of Interest on Working Capital submitted by the Petitioner are reproduced as under:

Table 30: Interest on Working Capital (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Change in Working Capital	0.14	-0.19	3.69	44.47	0.23
Interest on Working Capital	12.75%	12.75%	12.75%	12.75%	13.00%
Additional impact on interest on working capital	0.02	-0.02	0.47	5.67	0.03
Approved Interest on Working Capital	13.52	14.20	14.67	15.29	21.39
Total Interest on Working Capital	13.54	14.18	15.14	20.96	21.42

Commission's Analysis

3.90 The Petitioner has calculated its working capital requirements considering the following components:

- Cost of fuel for 1 month;
- O&M Expenses for 1 month;
- Receivables equivalent to 2 months average billing; and
- Maintenance Spares @ 1% of project cost plus escalation @ 6%.

3.91 The Petitioner in its submission has requested the Commission to allow hike in fuel charges in the working capital of FY 2010-11. According to the Petitioner, the cost of gas has been increased to more than 90% which has led to increase in working capital



requirement of the Petitioner in the FY 2010-11.

- 3.92 However, the Commission in its MYT Order dated December 14, 2007 has approved the escalation of 4% on working capital requirement for the increase in the gas cost. In MYT Order dated December 14, 2007 order, regarding the true-up of the working capital the Commission has also stated as follows:

“4.88 The Commission has not considered any escalation in fuel costs in its calculation for working capital requirements for the Control Period. Though the variation in fuel costs would be adjusted automatically through the FPA mechanism, the Commission shall not true-up the working capital requirements due to the same. Hence, the Commission has escalated the working capital requirement for FY09, FY10 and FY11 at an annual rate of 4% to consider for the escalation in fuel costs.”

- 3.93 Further, the Commission in its Tariff Order for FY 2011-12 has re-stated that:

“3.136. In view of the above, the Commission had already accounted for increase in the working capital requirements of the Petitioner due to increase in fuel costs while approving the working capital requirement for each year of the Control Period in the MYT Order. Therefore, there is no requirement for true up the interest on working capital.”

- 3.94 The Commission has already provided the justification in the MYT Order dated December 14, 2007 and Tariff Order for FY 2011-12 for not considering the impact of increased fuel cost on IoWC. Accordingly, the Commission is not trueing-up the interest on working capital on account of increase in fuel cost.

- 3.95 The Petitioner has further submitted increase in interest on working capital considering the impact of capital expenditure on depreciation, O&M expenses, interest on term loan and return on equity.

- 3.96 The Commission is of the view that it has already provided enough escalation on working capital and had accounted the prospective increase in the working capital requirement while approving interest on working capital during MYT Order. The



escalation provided by the Commission was applicable on the entire working capital requirement which includes receivables, O&M expenses, maintenance spares and fuel expenses. The Commission had already accounted for increase in the working capital requirement and had provided sufficient escalation to the Petitioner. Therefore, the Commission has not trued up the interest on working capital due to additional capital expenditure, revision in O&M expenses and increase in fuel cost.

Table 31: Interest on Working Capital (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	Tariff Order FY 2011-12	Approved in True-up
Total Working Capital	106.04	106.04	111.34	111.34	115.08	115.08	119.95	119.95	164.52	164.52
Rate of Interest (%)	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	13.00%	13.00%
Interest on Working Capital	13.52	13.52	14.20	14.20	14.67	14.67	15.29	15.29	21.39	21.39

Fixed Fuel Cost

Petitioner's Submission

3.97 The Petitioner has claimed the Fixed Fuel Cost as approved by the Commission vide its MYT Order dated December 14, 2007 and Tariff Order dated August 26, 2011. The details of Fixed Fuel Cost as submitted by the Petitioner in Petition are reproduced as under:

Table 32: Fixed Fuel Cost (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Fixed Fuel Cost	2.23	2.29	2.36	2.43	2.51

Commission's Analysis

3.98 The Petitioner has claimed the Fixed Fuel Cost as approved by the Commission in the



MYT Order dated December 14, 2007 and Tariff Order for FY 2011-12. The Commission has trued up the fixed fuel cost as approved by it in its MYT Order and is as shown in the table below:

Table 33: Fixed Fuel Cost (Rs Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10		FY 2010-11		FY 2011-12	
	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	MYT Order	Approved in True-up	Tariff Order FY 2011-12	Approved in True-up
Fixed Fuel Cost	2.23	2.23	2.29	2.29	2.36	2.36	2.43	2.43	2.51	2.51

Revenue Gap

3.99 The Annual Fixed Charges of the Petitioner for the Control Period starting from FY 2007-08 to FY 2011-12, as approved by the Commission after the truing-up of all expenses as discussed above is shown as under:

Table 34: Total Fixed Charges approved for FY 2007-08 (Rs Crore)

Particulars	FY 2007-08			
	Approved Fixed Cost in MYT Order / Tariff Order FY 2011-12 (A)	Submitted by Petitioner (B)	Trued Up (C)	Surplus (+)/ Deficit (-) (A) – (C)
O&M Expenses	54.81	54.81	61.24	-6.42
Depreciation	59.86	59.86	59.63	0.23
Advance Against Depreciation	7.19	7.19	7.15	0.04
Interest on Loans	38.38	38.38	38.14	0.24
Return on Equity	45.25	45.25	45.08	0.17
Interest on Working Capital	13.52	13.54	13.52	0.00
Fixed Fuel Cost	2.23	2.23	2.23	0.00
Total Annual Fixed Cost	221.24	221.26	226.99	-5.75



Table 35: Total Fixed Charges approved for FY 2008-09 (Rs Crore)

Particulars	FY 2008-09			
	Approved Fixed Cost in MYT Order and Tariff Order FY 2011-12 (A)	Submitted by Petitioner (B)	Trued Up (C)	Surplus (+)/ Deficit (-) (A) –(C)
O&M Expenses	58.49	58.49	40.24	18.25
Depreciation	59.86	59.98	59.76	0.10
Advance Against Depreciation	7.19	7.19	7.02	0.17
Interest on Loans	31.94	32.11	31.86	0.08
Return on Equity	45.25	45.33	45.17	0.08
Interest on Working Capital	14.20	14.18	14.20	0.00
Fixed Fuel Cost	2.29	2.29	2.29	0.00
Total Annual Fixed Cost	219.22	219.57	200.54	18.69

Table 36: Total Fixed Charges approved for FY 2009-10 (Rs Crore)

Particulars	FY 2009-10			
	Approved Fixed Cost in MYT Order /Tariff Order FY 2011-12 (A)	Submitted by Petitioner (B)	Trued Up (C)	Surplus (+)/ Deficit (-) (A) –(C)
O&M Expenses	72.36	72.36	62.79	9.57
Depreciation	59.86	60.18	59.97	-0.11
Advance Against Depreciation	7.19	7.19	6.81	0.38
Interest on Loans	25.02	25.47	25.17	-0.15
Return on Equity	45.25	45.48	45.32	-0.06
Interest on Working Capital	14.67	15.14	14.67	0.00
Fixed Fuel Cost	2.36	2.36	2.36	0.00
Total Annual Fixed Cost	226.72	228.18	217.08	9.63



Table 37: Total Fixed Charges approved for FY 2010-11 (Rs Crore)

Particulars	FY 2010-11			
	Approved Fixed Cost in MYT Order / Tariff Order FY 2011-12 (A)	Submitted by Petitioner (B)	Trued Up (C)	Surplus (+)/ Deficit (-) (A) –(C)
O&M Expenses	69.88	69.88	79.67	-9.79
Depreciation	59.86	60.27	60.06	-0.20
Advance Against Depreciation	7.19	7.19	6.72	0.47
Interest on Loans	19.03	19.60	19.26	-0.23
Return on Equity	45.25	45.54	45.38	-0.13
Interest on Working Capital	15.29	20.96	15.29	0.00
Fixed Fuel Cost	2.43	2.43	2.43	0.00
Total Annual Fixed Cost	218.94	225.87	228.81	-9.88

Table 38: Total Fixed Charges approved for FY 2011-12 (Rs Crore)

Particulars	FY 2011-12			
	Approved Fixed Cost in MYT Order / Tariff Order FY 2011-12 (A)	Submitted by Petitioner (B)	Trued Up (C)	Surplus (+)/ Deficit (-) (A) –(C)
O&M Expenses	61.40	61.40	61.56	-0.16
Depreciation	59.92	60.23	60.14	-0.22
Advance Against Depreciation	7.61	7.61	6.64	0.97
Interest on Loans	12.89	13.45	13.11	-0.22
Return on Equity	45.29	45.60	45.43	-0.15
Interest on Working Capital	21.39	21.42	21.39	0.00
Fixed Fuel Cost	2.51	2.51	2.51	0.00
Total Annual Fixed Cost	211.00	212.22	210.78	0.22

Net impact of truing up with Carrying Cost

3.100 The Commission has determined year wise surplus/gap with respect to the approved values as shown above. The Commission has computed the total surplus/gap with carrying cost as shown in the next table.

3.101 As shown below the carrying cost on annual truing up amount has been computed and added to the total surplus. Since the truing up impact for the first Control Period is surplus, therefore the Petitioner has to credit the excess amount recovered by it during



the Control Period i.e. FY 2007-08 to FY 2011-12 alongwith the carrying cost.

Table 39: Surplus/Deficit with Carrying Cost (Rs Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	Total Surplus with Carrying Cost
Opening Surplus/ (Deficit)	0.00	-6.01	12.98	24.17	15.96	17.54	
Addition Surplus/ (Deficit)	-5.75	18.69	9.63	-9.88	0.22	0.00	12.93
Interest Rate	9.09%	9.01%	8.72%	8.67%	8.45%	8.51%	
Carrying Cost	-0.26	0.30	1.55	1.67	1.36	1.49	6.11
Closing Surplus/ (Deficit)	-6.01	12.98	24.17	15.96	17.54	19.04	19.04

3.102 The Commission accordingly directs the Petitioner to credit the amount of Rs 19.04 Crore to the Distribution Utilities of Delhi in three equal monthly instalments starting August 2013.