



Order
on
True up for FY 2010-11,
Aggregate Revenue Requirement
for
FY 2012-13 to FY 2014-15
and
Distribution Tariff (Wheeling & Retail Supply)
for
FY 2012-13
for
New Delhi Municipal Council



DELHI ELECTRICITY REGULATORY COMMISSION
July, 2012



DELHI ELECTRICITY REGULATORY COMMISSION

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

F.11(781)/DERC/2011-12/C.F.No.3339/

Petition No. 09/2012

In the matter of: Petition for approval of True-up for FY 2010-11, Annual Performance Review for FY 2011-12 & Multi Year Tariff (MYT) for FY 2013-15.

New Delhi Municipal Council
Through its: **Secretary**
Palika Kendra,
New Delhi.

...Petitioner/Licensee

Coram:

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

ORDER

(Date of Order: 13.07.2012)


Having deliberated upon the Petition for True-up for FY 2010-11, Annual Performance Review for FY 2011-12 & Multi Year Tariff (MYT) for FY 2013-15 filed by New Delhi Municipal Council; 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 Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 hereby pass this Order signed, dated and issued on 13.07.2012.

The Tariff Schedule, issued by the Commission on 26.06.2012 vide Order no. F.11(781)/DERC/2011-12/C.F.No.3339/1754 with the revised tariffs made applicable from 01.07.2012, is an integral part of this Order.

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 thereunder.


(J. P. Singh)
MEMBER


(Shyam Wadhera)
MEMBER


(P. D. Sudhakar)
CHAIRMAN

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List of Abbreviations

Abbreviation	Explanation
ARR	Aggregate Revenue Requirement
A&G	Administrative and General
AAD	Advance Against Depreciation
ABT	Availability Based Tariff
ACD	Advance Consumption Deposit
AMR	Automated Meter Reading
APDRP	Accelerated Power Development and Reforms Program
AT&C	Aggregate Technical and Commercial
ATE	Appellate Tribunal for Electricity
BEST	Birhanmumbai Electric Supply Test
BHEL	Bharat Heavy Electrical Limited
BIS	Bureau of Indian Standards
BPTA	Bulk Power Transmission Agreement
BRPL	BSES Rajdhani Power Limited
BST	Bulk Supply Tariff
Badarpur TPS	Badarpur Thermal Power Station
BYPL	BSES Yamuna Power Limited
CAGR	Compounded Annual Growth Rate
CCGT	Combined Cycle Gas Turbine
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFL	Compact Fluorescent Lamp
CGHS	Cooperative Group Housing Societies
CGS	Central Generating Stations
CIC	Central Information Commission
CISF	Central Industrial Security Force
CoS	Cost of Supply
CPI	Consumer Price Index
CPRI	Central Power Research Institute
CPSUs	Central Power Sector Utilities
CSGS	Central Sector Generating Stations
CWIP	Capital Work in Progress
DA	Dearness Allowance
DDA	Delhi Development Authority
DERA	Delhi Electricity Reform Act
DERC	Delhi Electricity Regulatory Commission
DIAL	Delhi International Airport Limited
DISCOMs	Distribution Companies (BRPL, BYPL, TPDDL & NDMC)
DMRC	Delhi Metro Rail Corporation

Abbreviation	Explanation
DPCL	Delhi Power Company Limited
DTL	Delhi Transco Limited
DVB	Delhi Vidyut Board
DVC	Damodar Valley Corporation
EHV	Extra High Voltage
EPS	Electric Power Survey
FBT	Fringe Benefit Tax
FPA	Fuel Price Adjustment
GFA	Gross Fixed Assets
GIS	Geographical Information System
GoNCTD	Government of National Capital Territory of Delhi
GTPS	Gas Turbine Power Station
HEP	Hydro Electric Power
HPSEB	Himachal Pradesh State Electricity Board
HRA	House Rent Allowance
HT	High Tension
HVDS	High Voltage Distribution System
IDC	Interest During Construction
IGI Airport	Indira Gandhi International Airport
IPGCL	Indraprastha Power Generation Company Limited
JJ Cluster	Jhugghi Jhopadi Cluster
KSEB	Kerala State Electricity Board
LED	Light Emitting Diode
LIP	Large Industrial Power
LT	Low Tension
LVDS	Low Voltage Distribution System
MCD	Municipal Corporation of Delhi
MES	Military Engineering Service
MLHT	Mixed Load High Tension
MMC	Monthly Minimum Charge
MoP	Ministry of Power
MTNL	Mahanagar Telephone Nigam Limited
MU	Million Units
MYT	Multi Year Tariff
NABL	National Accreditation Board for Testing and Calibration of Laboratories
NAPS	Narora Atomic Power Station
NCT	National Capital Territory
NCTPS	National Capital Thermal Power Station
NDLT	Non Domestic Low Tension
NDMC	New Delhi Municipal Corporation
NEP	National Electricity Policy

Abbreviation	Explanation
NGO	Non Government Organisation
NHPC	National Hydroelectric Power Corporation
NPCIL	Nuclear Power Corporation of India Limited
NRPC	Northern Regional Power Committee
NTI	Non Tariff Income
NTP	National Tariff Policy
O&M	Operations and Maintenance
OCFA	Opening Cost of Fixed Assets
PGCIL	Power Grid Corporation of India
PLF	Plant Load Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement / Power Purchase Adjustment
PPCL	Pragati Power Corporation Limited
PTC	Power Trading Corporation
PWD	Public Works Department
R&M	Repair and Maintenance
RAPS	Rajasthan Atomic Power Station
REA	Regional Energy Account
RoCE	Return on Capital Employed
ROE	Return on Equity
RRB	Regulated Rate Base
RTI	Right to Information
RWA	Resident Welfare Associations
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SIP	Small Industrial Power
SJVNL	Satluj Jal Vidyut Nigam Limited
SLDC	State Load Despatch Centre
SPD	Single Point Delivery
SPUs	State Power Utilities
SVRS	Special Voluntary Retirement Scheme
THDC	Tehri Hydro Development Corporation
ToD	Time of Day
TPPDL	Tata Power Delhi Distribution Limited
TPS	Thermal Power Station
UI	Unscheduled Interchange
WACC	Weighted Average Cost of Capital
WC	Working Capital
WPI	Wholesale Price Index

A1: INTRODUCTION

- 1.1 This Order relates to the petition filed by New Delhi Municipal Council (hereinafter referred to as 'NDMC' or the 'Petitioner') for true up for FY 2010-11, Annual Performance Review for FY 2011-12 under the Multi Year Tariff Principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2007 (hereinafter referred to as the 'MYT Regulations 2007') & MYT Petition for Distribution (Wheeling & Retail Supply) Business for FY 2012-13 to FY 2014-15 under the Multi Year Tariff Principles specified in the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011 (hereinafter referred to as the 'MYT Regulations').

New Delhi Municipal Council

- 1.2 New Delhi Municipal Council (NDMC) is a Municipal Council engaged in the distribution of electricity to the consumers in the New Delhi area under Section 195 to 201 of the New Delhi Municipal Council Act 1994. NDMC has the obligations of a Licensee under the Indian Electricity Act 1910 and a deemed licensee under the Electricity Act 2003 in respect of the New Delhi Area.
- 1.3 Under Section 200 of the New Delhi Municipal Council Act 1994, NDMC has power to fix the charges to be levied for the electricity supplied by it, subject to the provisions of any law for the time being in force.

Delhi Electricity Regulatory Commission (DERC)

- 1.4 Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC or the 'Commission') was constituted by the GoNCTD on March 3, 1999 and it became operational from December 10, 1999.
- 1.5 The Commission's approach to regulation is driven by the Electricity Act 2003, the National Electricity Plan, the Tariff Policy and the Delhi Electricity Reform Act 2000 (hereinafter referred to as 'DERA'). These Acts mandate the Commission to take measures conducive to the development and management of the electricity industry in an efficient, economic and competitive manner which inter alia includes tariff determination.

The Coordination Forum

- 1.6 The Commission has, since the constitution of the Co-ordination Forum on June 16, 2005 held 25 meetings. Two meetings, viz. the 24th and 25th meetings were held in FY 2011-12. In the 24th and 25th Co-ordination Forum Meeting held on November 9, 2011 and March 19, 2012 respectively, the Commission discussed the following:

24th Co-ordination Forum Meeting

- (a) Repair and utilization of distribution transformers of erstwhile DVB period handed over to DISCOMs.

- (b) Replacement of oil filled transformers by dry type transformers inside residential / commercial buildings.
- (c) Commissioning of Bawana Power Project by PPCL.
- (d) Regulation of power by central PSUs for BRPL and BYPL.
- (e) Commission advised the DISCOMs to examine their cash flow on monthly basis and make the payment on account of power purchase and wheeling charges on priority to Central/ State Generation and Transmission utilities to avoid regulation of power.

25th Co-ordination Forum Meeting

- (a) Various issues such as replacement of oil filled type by dry type transformers, repair of distribution transformers etc. were discussed.
- (b) The guidelines of implementation of Intra State Open Access in Delhi were discussed and it was decided that suitable modification may be carried out to the draft guidelines.
- (c) Compliance of the directions issued by the Commission regarding Residual Back Flow, Absolute Earth Potential and Separate neutral for each connection were reviewed.
- (d) The distribution licensees were advised to carry out energy audit from time to time.
- (e) Introduction of Time of Day tariff from FY 2012-13 onwards was discussed with the distribution licensees.
- (f) The schedule of submission of the Asset Register was discussed with the distribution licensees and DTL. They were directed to make the Asset Register available to the Commission within 15 days.

Multi Year Tariff Regulations

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

Filing of Petition for True Up of Expenses for FY 2010-11 and Approval of ARR for FY 2012-13 to FY 2014-15**Filing & Acceptance of Petition**

- 1.8 NDMC has filed its petition for true up for FY 2010-11, Annual Performance Review for FY 2011-12 & Multi Year Tariff (MYT) for FY 2012-13 before the Commission on February 21, 2012.
- 1.9 The Commission admitted the petition vide its Order dated February 22, 2012 subject to clarifications/additional information, if any, which would be sought from the Petitioner from time to time. A copy of the Admission Order dated February 22, 2012 is enclosed as **Annexure I** to this Order.
- 1.10 Further, as per the request of the stakeholders, the Commission directed all the Power Utilities to submit Hindi version of the Petition filed by them. 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

- 1.11 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.
- 1.12 For this purpose, the Commission Staff and Consultants held discussions with the Petitioners, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.
- 1.13 The role of the Commission is 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.
- 1.14 A preliminary scrutiny/analysis of the petition submitted by the Petitioner was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/ clarifications from the Petitioner were solicited as and when required. The Petitioner submitted additional information through various letters, as listed in the Table 1.
- 1.15 The Commission also conducted multiple validation sessions with the Petitioner during which discrepancies in the petition and additional information required by the Commission were sought. Subsequently, the Petitioner submitted replies to the issues

raised in these sessions and provided documentary evidence to substantiate its claims regarding various submissions.

- 1.16 The replies of the petitioners as mentioned in the table below have been considered for approval of the ARR of the Petitioner:

Table 1: List of correspondence with NDMC

S. No.	Date	Letter No.	Subject
1.	29/12/2011	D. No.456 / AEE(P)/11	Request for filing the true up petition for FY 2010-11 and revised ARR and MYT 2012-15(Extension of Time)
2.	12/03/2012	-----	Multi Year Tariff for the FY 2012-13 to 2014-15 in the N.D.M.C. area
3.	21/03/2012	D. No.43/ AEE(P) /12	Submission of Additional Responses /Clarification on Petition for approval of True Up for 2010-11. Annual Performance Review of FY 2011-12 and Aggregate Revenue Requirement for the MYT second control period from FY 2012-13 to FY 2014-15.
4.	21/03/2012	D. No.43 / AEE(P) /12	Submission of Additional Responses /Clarification on Petition for approval of True Up for FY 2010-11. Annual Performance Review of FY 2011-12 and Aggregate Revenue Requirement for the MYT second control period from FY 2012-13 to FY 2014-15.
5.	04/06/2012	D. No.199 / AEE(P)/2012	Details regarding energy consumption under the category "Public Lightning".
6.	06.06.2012	D-205/AEE(P)12	Submission of information in respect of power purchase cost for FY 2010-11.
7.	13/06/2012	NDMC/Comml./Commp/10192	-----

Public Hearing

- 1.17 The Petitioner published a Public Notice on March 8, 2012 indicating the salient features of its petition for inviting comments from the stakeholders, in the following newspapers:

- Hindustan Times (English)
- Times of India (English)
- Hindustan (Hindi)
- Pratap (Urdu)

- 1.18 Copies of the Public Notice in English, Hindi and Urdu are enclosed as **Annexure II** to this Order. A copy of the petition was also made available for purchase from the head-office of the Petitioner on any working day from March 9, 2012 to March 29, 2012 between 11 A.M. and 4 P.M. on payment of Rs 100/-. A copy of the complete

petition was also uploaded on the website of the Commission, as well as that of the Petitioner, requesting for comments of the stakeholders thereon.

- 1.19 The Commission also published a Public Notice in the following newspapers on March 15, 2012 inviting comments from stakeholders on the MYT petitions filed by the Petitioner latest by March 30, 2012:
- (a) Hindustan Times (English)
 - (b) Times of India (English)
 - (c) The Pioneer (English)
 - (d) Dainik Jagran (Hindi)
 - (e) Dainik Bhaskar (Hindi)
 - (f) The Educator (Punjabi)
 - (g) Milap (Urdu)
- 1.20 Copies of the Public Notices in English, Hindi, Punjabi and Urdu are attached as **Annexure III** to this Order.
- 1.21 At the request of the stakeholders, the Commission extended the last date for filing objections and suggestions till April 10, 2012 for which the Public Notice was issued on March 31, 2012 / April 1, 2012 in the following newspapers:
- (a) Hindustan Times (English)
 - (b) Times of India (English)
 - (c) The Pioneer (English)
 - (d) Dainik Jagran (Hindi)
 - (e) Dainik Bhaskar (Hindi)
 - (f) The Educator (Punjabi)
 - (g) Milap (Urdu)
- 1.22 Copies of the above Public Notices in English, Hindi, Punjabi and Urdu are attached as **Annexure IV** to this Order.
- 1.23 At the request of the stakeholders, to extend help to the consumers in understanding the ARR Petition and filing their comments, the Commission prepared a Staff Paper highlighting salient features of the MYT Petition filed by the Petitioner, which was

uploaded on the 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 ARR Petitions. This was duly highlighted in the Public Notices brought out by the Commission. In order to increase participation of the stakeholders, the Commission also uploaded the Hindi version of the Staff Paper on its website.

- 1.24 The Commission received comments from 1 stakeholder. A copy of the comments of the stakeholder were forwarded to the Petitioner. The Petitioner responded to the stakeholder comments with a copy of its replies to the Commission. The Commission invited all stakeholders to attend the Public Hearing. A list of the stakeholders who responded to the Public Notice on ARR and tariff petitions and/or who attended the public hearing is enclosed as **Annexure V** to this Order.
- 1.25 The Public Hearing was held at the Commission's Court Room from April 26, 2012 to April 28, 2012 from 10.30 A.M. onwards to discuss the issues related to the petition filed by the Petitioner. The issues and concerns voiced by various stakeholders have been examined by the Commission. The major issues discussed during the public hearing and/or written comment 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 six Chapters:
 - (a) Chapter A1 provides details of the tariff setting process and the approach of the Order;
 - (b) Chapter A2 provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Petitioner's responses and views of the Commission thereon;
 - (c) Chapter A3 provide details/ analysis of the true up for FY 2010-11;
 - (d) Chapter A4 provides analysis of the petition for determination of the Aggregate Revenue Requirement for FY 2012-13 to FY 2014-15 and Wheeling and Retail Supply Tariff for FY 2012-13;
 - (e) Chapter A5 details of the possible options for determination of Wheeling and Retail Supply Tariff for all consumer categories, and the approach adopted by the Commission in determining the tariff; and
 - (f) Chapter A6 provides details of Directives of the Commission for compliance of the petitioner.
- 1.27 The Order contains the following Annexures, which are an integral part of the Tariff Order:

- (a) Annexure I – Admission Order;
- (b) Annexure II – Copies of Public Notices published by the Petitioner;
- (c) Annexure III – Copies of the Public Notices published by the Commission inviting comments from the stakeholders;
- (d) Annexure IV – Copies of the Public Notices published by the Commission regarding extension of last date of submission of comments.
- (e) Annexure V – List of the respondent stakeholders and stakeholders present in the Public Hearing.

Approach of the Order

Approach for FY 2010-11

- 1.28 Under the MYT Framework, the Commission has projected the ARR for the Petitioner for each year of the Control Period in the MYT Order 2008-11 issued on February 23, 2008 (hereinafter referred to as the ‘MYT Order’).
- 1.29 Under the MYT Regulations 2007, the components of ARR have been segregated into Controllable and Uncontrollable Parameters. As per Regulation 5.41 & 5.42 of the MYT Regulations, 2007 the Uncontrollable Parameters shall be trued up each year based on the audited accounts and prudence check by the Commission; and, the Controllable Parameters shall not be trued up. As per Regulation 4.16 of the MYT Regulations, 2007:

“The true up across various controllable and uncontrollable parameters shall be conducted as per principle stated below:

- (a) *Variation in revenue / expenditure on account of uncontrollable sales and power purchase shall be trued up every year;*
- (b) *For controllable parameters,*
 - (i) *Any surplus or deficit on account of O&M expenses shall be to the account of the Licensee and shall not be trued up in ARR; and*
 - (ii) *Depreciation and RoCE shall be trued up at the end of Control Period.”*

- 1.30 The Commission has accordingly, trued up the uncontrollable parameters viz. power purchase cost, energy sales and revenue based on the audited accounts and other information submitted by the Petitioner for FY 2010-11 after exercising prudence check. The true up of controllable parameters is governed by Regulation 4.16(b) of the MYT Regulations, 2007 as mentioned above. The detailed treatment of each

component of uncontrollable and controllable parameters is provided in Chapter A4 of this Order.

Approach for FY 2011-12

- 1.31 The Petitioner has requested for a review and provisional true up of ARR for FY 2011-12 which had been determined earlier by the Commission in its Order dated August 26, 2011. The mechanism for True Up as specified in the MYT Regulations envisages that variations on account of uncontrollable items like energy sales and power purchase cost shall be trued up. Truing up shall be carried out for each year based on actual / audited accounts and prudence checks undertaken by the Commission. Accordingly, the Commission is of the opinion that in accordance with the Regulations, the True up of FY 2011-12 can only be considered based on the audited financial statement once the Petitioner makes a regular tariff Petition for True up of FY 2011-12.

Approach for FY 2012-13 to FY 2014-15

- 1.32 The ARR for the FY 2012-13 to FY 2014-15 shall be determined inter alia based on the following provision of the MYT Regulations, etc. pertaining to Distribution business:
- (a) Regulation 3.2 – ARR and Tariff for Wheeling Business and Retail Supply business separately.
 - (b) Regulation 4.5 & 4.6 – Base line values (operating and cost parameters) and performance targets.
 - (c) Regulation 4.7 and 4.8 – Targets for controllable Parameters –including AT&C loss, O&M expenditure, Return on capital employed, Depreciation and quality of supply.
 - (d) Regulations 4.10, 4.11 and 4.12 – Sales forecast
 - (e) Regulation 5.28 and 5.29 – AT&C loss reduction trajectory for each year of the Control Period.
 - (f) Regulation 5.30 – Transmission and Load Dispatch Charges and Wheeling charges
 - (g) The allocation from the unallocated quota of Power at the disposal of GoNCTD may change from time to time and needs to be considered based on the latest available data or the Commission may have to make reasonable assumptions with respect to allocation of Power from the unallocated quota.
 - (h) Availability of Power from the new sources of generation, based on their actual / revised Commissioning schedule.

A2: RESPONSE FROM STAKEHOLDERS

Introduction

- 2.1 The public hearing was held at the Commission's Court Room from April 26, 2012 to April 28, 2012 from 10.30 A.M. onwards to discuss the issues related to the petition filed by the Petitioner. In the public hearing, the stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. The Petitioner was also given an opportunity to respond to the comments put forth by the stakeholders.
- 2.2 The issues and concerns voiced by various stakeholders in their written comments as well as in the Public hearing along with the response of the Petitioner there on, have been examined by the Commission. The comments/suggestions of various stakeholders, the replies given by the Petitioner and the views of the Commission have been summarized below:

Concessional rates for Charitable Institutions

Stakeholders' View

- 2.3 Nirmal Shiksha Kendra, a charitable organisation running the Nirmal Primary School, has submitted that the existing tariff schedule for NDMC does not permit concessional rates to be charged from Charitable Institutions. The stakeholder has requested that suitable adjustments be made to the tariff schedule of NDMC.

Petitioner's Submission

- 2.4 *No reply has been received from the licensee*

Commission's View

- 2.5 As per the DERC (Supply code & Performance Standards) Regulations, 2007 only the schools run by the Municipal Corporation of Delhi or the Government of NCT of Delhi are eligible for Domestic Tariff Category. This position is being maintained in the Tariff Schedule.

A3: TRUE UP FOR FY 2010-11**Background**

- 3.1 The Commission had approved the Aggregate Revenue Requirement (ARR) of NDMC for each year of the Multi Year Tariff Control Period (FY 2007-08 to FY 2010-11) in its Multi Year Tariff Order for NDMC dated March 7, 2008. The MYT Regulations, 2007 provide for truing up of the uncontrollable parameters of the ARR at the end of each year of the Control Period based on the audited accounts and prudence check by the Commission.
- 3.2 NDMC in its Petition has sought truing up of the expenditure and revenue for FY 2010-11. In this Chapter, the Commission has analysed the Petition of NDMC in accordance with the principles laid down under MYT Regulations, 2007.

Energy Sales**Petitioner's Submission**

- 3.3 The Petitioner has submitted total sales of 1201.73 MU in its True up Petition as against 1226.08 MU approved by the Commission in its MYT Order.

Commission's Analysis

- 3.4 The Commission analysed category-wise annual sales data submitted by the Petitioner for FY 2010-11.
- 3.5 The Commission therefore, for truing up of sales, approves the sales figures submitted by the Petitioner for FY 2010-11. The category wise trued up sales for FY 2010-11 as approved by the Commission are shown below:

Table 2: Trued Up Energy Sales for FY 2010-11 (MU)

	Categories	Approved in the MYT Order	Petitioner's Submission	Now Approved
1	Domestic	223.56	239.13	239.13
	Single Delivery Point	65.65	84.02	84.02
	Separate Delivery Point up to 100 kW	134.67	136.10	136.10
	Domestic Power up to 100 kW	23.24	19.01	19.01
2	Non Domestic	278.62	250.84	250.84
	Up to < 5 kW	65.25	50.85	50.85
	More than 5 kW and less than 100 kW	213.37	199.98	199.98
3	Mixed Load	642.86	693.58	693.58
	Supply at 11 kV (HT)	403.21	483.06	483.06
	Supply on LT where supply is given from NDMC sub station	7.95	4.24	4.24
	Supply on LT where applicant provides built up space for sub station	231.70	206.28	206.28

	Categories	Approved in the MYT Order	Petitioner's Submission	Now Approved
4	Small Industrial Power	0.36	0.32	0.32
5	Public Lighting	8.49	8.37	8.37
6	Others	4.20	9.50	9.50
7	DMRC	68.00	0.00	0.00
	Total	1226.08	1201.73	1201.73

AT&C Losses

Petitioner's Submission

- 3.6 The Petitioner has submitted that its AT&C loss level for FY 2010-11 was at 11.94% instead of 10.00% as approved for the year, FY 2010-11 in the MYT Order.
- 3.7 The Petitioner has submitted that the actual collection efficiency for FY 2010-11 was 98.05% against target of 100% approved in the MYT Order. The Petitioner has requested the Commission to approve the revised AT&C Loss level for FY 2010-11, as shown below:

Table 3: AT&C Loss level for FY 2010-11 as submitted by the Petitioner

Particulars	Approved in the MYT Order	Petitioner's Submission
AT&C Losses	10.00%	11.94%
Distribution Losses	10.00%	10.20%
Collection Efficiency	100%	98.05%

- 3.8 The Petitioner, in its True-up Petition, has submitted its computation for AT&C loss level of 11.94% achieved during FY 2010-11 as summarised below:

Table 4: AT&C loss for FY 2010-11 as computed by the Petitioner

Energy Balance	Units	Petitioner's Submission
Units Available at NDMC periphery	MU	1338.15
Units Billed by NDMC	MU	1201.73
Distribution Loss	%	10.20%
Revenue Billed	Rs Cr	620.23
Revenue Realised	Rs Cr	608.16
Collection Efficiency	%	98.05%
AT&C Loss	%	11.94%

Commission's Analysis

- 3.9 In the MYT Order, the Commission has considered a total reduction of 1.50% in the Petitioner's AT&C losses (from 11.50% in FY 2006-07 to 10.00% in FY 2010-11) during the Control Period. The Commission had also approved a reduction of 25% of the total AT&C loss reduction target in each year of the Control Period.

- 3.10 A comparison of AT&C loss level specified in the MYT Order and the actual AT&C loss level claimed by the Petitioner during FY 2010-11 is mentioned below:

Table 5: AT&C loss for FY 2010-11 as submitted by the Petitioner

Particulars	Approved in the MYT Order	Petitioner's Submission
AT&C Loss Target	10.00%	11.94%

- 3.11 Due to inability shown by the Petitioner to validate the requisite information, the Commission is constrained to provisionally consider the sales, revenue billed and revenue realized submitted for the computation of AT&C loss.
- 3.12 Energy input at the Petitioner periphery has been validated from the information submitted by DTL/SLDC and it is observed that the Petitioner has claimed 1338.15 MU, which is in conformity with DTL/SLDC's submission for FY 2010-11.
- 3.13 The Commission has thus considered the power purchase information provided by NDMC for computing the Trued-up AT&C loss of the Petitioner for FY 2010-11. The revised AT&C loss of the Petitioner for FY 2010-11 is summarised below:

Table 6: Trued up AT&C loss for FY 2010-11

S. No	Energy Balance	Units	Now Approved
1	Units Input at NDMC Periphery	MU	1338.15
2	Energy Sold to the Consumers	MU	1201.73
3	Distribution Losses	MU	10.20%
4	Revenue Billed (including NDMC Tax @ 5%)	Rs. Cr	620.23
5	Revenue Realised (including NDMC Tax @ 5%)	Rs. Cr	608.16
6	Collection Efficiency	%	98.05%
8	AT&C Losses trued up for FY 2010-11	%	11.94%

- 3.14 As specified in the MYT Order, for the purpose of calculating the incentive/ penalty on account of over/under achievement of AT&C loss reduction target the Commission would consider the following:
- (a) First year of the Control Period: The Petitioner shall be eligible for an incentive if the AT&C loss reduction in the first year of the Control Period is above 25%. Any under recovery in the revenue realised, if the AT&C loss reduction in the first year of the Control Period is below 20%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the AT&C loss reduction in the first year of the Control Period is between 20% and 25%.
- (b) Second year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction in that year and in the previous year is over 50%. Any under recovery in the revenue realised, if the AT&C loss reduction in the second year of the Control Period is below 20%

and that the cumulative value of loss reduction in that year and in the previous year is below 45%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction in the first and second year of the Control Period is between 45% and 50%.

- (c) Third year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction in that year and in the previous two years is over 75%. Any under recovery in the revenue realised, if the AT&C loss reduction in the third year of the Control Period is below 20% and that the cumulative value of loss reduction in that year and in the previous two years is below 70%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction in the first, second and third year of the Control Period is between 70% and 75%.
- (d) Last year of the Control Period: The Petitioner shall be eligible for an incentive if the cumulative value of loss reduction at the end of the Control Period is over 100%. Any under recovery in the revenue realised, if the AT&C loss reduction in the last year of the Control Period is below 20% and that the cumulative value of loss reduction at the end of the Control Period is below 100%, shall be to the account of the Petitioner. The Petitioner shall not be eligible for any incentive or penalty if the cumulative AT&C loss reduction at the end of the Control Period is 100%.

3.15 Accordingly, the under-recovery in the revenue realized on account of under-achievement of the minimum AT&C loss target of the Petitioner for FY 2010-11 is summarised below:

Table 7: Computation of Under-achievement by the Commission

Particulars	Units	Target	Actual
AT&C Losses	%	10.00%	11.94%
Under Achievement	%	-1.94%	
Energy Input (MU)	MU	1338.15	
Units Realized	MU	1204.34	1178.34
Average Billing Rate	Rs./Unit	5.16	
Amount Realized	Rs. Cr	621.57	608.16
		X	Y
Total financial impact on account of underachievement (Y – X)	Rs. Cr	-13.41	
Revenue available towards ARR (inclusive of E-Tax)	Rs Cr	621.57	
Less: Actual E-Tax collected	Rs Cr	22.93	
Revenue available towards ARR	Rs Cr	598.64	

3.16 Hence, the total revenue available towards ARR for FY 2010-11 has been computed by the Commission to be Rs. 598.64 Cr.

Power Purchase Quantum**Petitioner's Submission**

- 3.17 Against the actual sales of 1201.73 MU during FY 2010-11, the Petitioner has claimed a net power purchase requirement of 1338.23 MU based on the actual distribution loss level of 10.20% for FY 2010-11.

Commission's Analysis

- 3.18 The Commission, in its MYT Order had approved a net power purchase quantum of 1338.15 MU for the Petitioner from all sources including central sector generating stations, inter-state bilateral, intra-state power and Delhi generating stations for FY 2010-11.
- 3.19 The Commission directed the Petitioner to submit month-wise station-wise power purchase details along with the bills, which was complied with by the Petitioner.
- 3.20 The Commission has reviewed the month-wise station-wise power purchase details submitted by the Petitioner and cross-verified the same with the monthly Regional Energy Accounts for FY 2010-11.
- 3.21 Based on the information submitted by DTL/SLDC and the submission made by NDMC, the Commission observed that the Petitioner has received 1338.15 MU of energy at the NDMC periphery.
- 3.22 Therefore, the Commission approves the net power purchase for the True-up of FY 2010-11 as summarised below:

Table 8: Trued-up Power Purchase Quantum for FY 2010-11 (in MU)

Source	Approved in MYT Order	Petitioner's Submission	Now Approved
Gross Power Purchase Quantum	2088.29	2015.46	2015.46
Power Sold To Other Sources	677.66	520.42	520.42
Under-drawal of Power under UI		82.53	82.53
Net Power Purchase	1410.63	1412.50	1412.50
Transmission Losses			
Total Transmission Losses	48.31	74.35	74.35
Net Power Available after Transmission Losses	1362.32	1338.15	1338.15

Power Purchase Cost**Petitioner's Submission**

- 3.23 The Petitioner has submitted a gross power purchase cost of Rs. 684.60 Cr. Further, the Petitioner has claimed transmission and SLDC charges of Rs 41.72 Cr. Hence, the

total power purchase cost submitted by the Petitioner for FY 2010-11 is Rs. 726.32 Cr.

- 3.24 The Petitioner has submitted that on account of its efforts in selling surplus energy at the best possible rates, the revenue from sale of surplus power in FY 2010-11 was Rs. 177.34 Cr. Hence, the net power purchase cost to NDMC for sale to its consumers is Rs. 548.98 Cr for FY 2010-11, against Rs. 331.88 Cr approved as net power purchase cost (including transmission charges) in the MYT Order. Thus, the actual rate of power sale to the Petitioner's consumers for FY 2010-11 is Rs. 4.10 per unit, as against Rs 2.44 per unit approved by the Commission in the MYT Order.

Commission's Analysis

- 3.25 The Commission, in the MYT Order had approved a gross power purchase cost of Rs. 530.18 Cr for FY 2010-11. Further, the Commission has approved inter-state transmission charges of Rs 7.85 Cr and intra-state transmission charges of Rs. 22.56 Cr (including SLDC charges).
- 3.26 The Commission had estimated the revenue from sale of surplus power to be Rs. 228.71 Cr. Hence, the Commission had approved net power purchase cost (inclusive of transmission charges) of Rs. 331.88 Cr for FY 2010-11 in the MYT Order.
- 3.27 The Commission directed the Petitioner to submit month-wise station-wise power purchase details along with the bills, which was complied with by the Petitioner.
- 3.28 The Commission has reviewed the details of month-wise station-wise power purchase cost and transmission charges submitted by the Petitioner.
- 3.29 The Commission approves the net power purchase cost for FY 2010-11 at Rs. 548.98 Cr for FY 2010-11 as submitted by the Petitioner.

Table 9: Trued-up Power Purchase Cost for FY 2010-11 (in Rs Cr)

Source	Approved in MYT Order	Petitioner's Submission	Now Approved
Gross Power Purchase Cost	530.18	684.60	684.60
Power Sold To Other Sources	228.71	177.34	177.34
Net Power Purchase Cost	301.47	507.26	507.26
Total Transmission Charges	30.41	41.72	41.72
Net Power Purchase Cost including Transmission Charges	331.88	548.98	548.98

Review of Controllable Parameters

- 3.30 As per Regulations 8.8 and 11.2 of the MYT Regulations, 2007, the Petitioner is required to submit information as a part of annual review on actual performance to assess the performance vis-à-vis the targets approved by the Commission. The Petitioner in its petition has submitted expenses on account of Controllable Parameters for FY 2010-11 as approved by the Commission in MYT Order.

- 3.31 As per Regulation 4.7 of the MYT Regulations, 2007, the Commission has specified targets for controllable parameters which inter alia include Operation & Maintenance expenditure (comprising employee expenses, repair & maintenance expenses, administration & general expenses and other miscellaneous expenses, viz. audit fee, rent, legal fees etc.), Return on Capital Employed and depreciation. Further, as per Regulation 4.14 of the MYT Regulations, 2007, adjustment to depreciation and return on capital employed for actual capital investment vis-a-vis approved capital investment shall be done at the end of the Control Period.
- 3.32 As per Regulation 4.16(b), for controllable parameters, any surplus or deficit on account of O&M expenses shall be to the account of the Licensee and shall not be trued up in the ARR; and, depreciation and ROCE shall be trued up at the end of the Control Period.
- 3.33 The Commission has reviewed the Controllable components in the subsequent paragraphs based on inter alia the above Regulations. The Commission has observed that the Petition filed by the Petitioner had several discrepancies with respect to the provisions of the MYT Regulations and the MYT Order. The Commission has admitted the Petition despite discrepancies and information gaps in the Petition in order to expedite the process of tariff determination. The Commission issued a deficiency note to the Petitioner highlighting the deficiencies observed in the Petition, directing the Petitioner to submit clarifications and/or further information. The Petitioner did not furnish any additional information and supporting documents/clarifications relevant to some of the issues mentioned in the deficiency note for the consideration of the Commission.
- 3.34 In consideration of the non-availability of the audited accounts for the electricity business for the FY 2010-11 and in accordance with the provisions of the MYT Regulations, 2007, the Commission continues with the provisional expenses approved in the MYT Order for the True-up of FY 2010-11.

Employee Expenses

Petitioner's Submission

- 3.35 The Petitioner has proposed an Employee Expense of Rs 71.43 Cr for FY 2010-11I, as shown below:

Table 10: Employee Expenses proposed for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 26, 2011 Order	Petitioner's Submission
Gross Employee Cost	70.07	78.66	71.43
Employee Capitalisation	8.87	9.96	
Net Employee Expenses	61.19	68.70	71.43

Commission's Analysis

- 3.36 As per the MYT Regulations, 2007, employee expense is classified as a controllable expense. In the MYT Order, permissible employee expense has been provided for each year of the Control Period as per the methodology prescribed in the MYT Regulations, 2007.
- 3.37 The Commission approves the employee expenses for FY 2010-11 as shown below:

Table 11: Employee expenses approved for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission	Now Approved
Gross Employee Expenses (Without Impact of Sixth Pay Commission)	70.07	64.94	71.43	64.94
Add: Interim Relief Paid on account of Sixth Pay Commission		13.72		13.72
Less: Capitalisation		9.96		9.96
Net Employee Expenses	61.19	68.70	71.43	68.70

Administration & General (A&G) Expenses**Petitioner's Submission**

- 3.38 In its Petition, the Petitioner had submitted that it incurred an amount of Rs. 1.14 Cr towards A&G expenses in FY 2010-11, as shown in the table below:

Table 12: A&G Expenses proposed for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission
A&G Expenses	13.48	13.75	1.14

Commission's Analysis

- 3.39 In terms of Regulation 4.16 (a) (i) of the MYT Regulations, 2007, the Commission approves the A&G Expenses for FY 2010-11 as approved in Tariff Order dated August 26, 2011 as shown in the table below:

Table 13: A&G Expenses approved for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission	Now Approved
A&G Expenses	13.48	13.75	1.14	13.75

Repairs & Maintenance (R&M) Expenses**Petitioner's Submission**

3.40 NDMC has proposed R&M cost of Rs 38.41 Cr for FY 2010-11.

Table 14: R&M Expenses proposed for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission
R&M Expenses	39.05	39.05	38.41

Commission's Analysis

3.41 In terms of Regulation 4.16 (a) (i) of the MYT Regulations, 2007, R&M expenses are approved at the same level as provided in the MYT Order for FY 2010-11 as shown below:

Table 15: R&M Expenses approved for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission	Now Approved
R&M expenses	39.05	39.05	38.41	39.05

Operation & Maintenance Expense**Petitioner's Submission**

3.42 Operation & Maintenance (O&M) Expense is the sum total of expenses incurred towards employee, A&G and R&M. The Petitioner has claimed O&M expenses of Rs. 106.53 Cr (net of efficiency factor of 4%) which is lower than the amount approved in the August 2011 Order, i.e. Rs 116.64 Cr.

Commission's Analysis

3.43 The Commission has approved O&M expense as approved in the Order dated August 26, 2011, as shown in the table below:

Table 16: Proposed and Approved O&M expenses for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in the August 2011 Order	Petitioner's Submission	Now Approved
Employee Expenses (Net of Capitalisation)	61.19	68.70	71.43	68.70
A&G Expenses	13.48	13.75	1.14	13.75
R&M Expenses	39.05	39.05	38.41	39.05
Gross O&M Expenses	113.72	121.50	110.97	121.50
Less: Efficiency improvement factor	4%	4%	4%	4%
Net O&M expenses	109.17	116.64	106.53	116.64

Review of Capital Expenditure & Capitalisation

- 3.44 The Commission had approved the capital investment plan for the MYT Control Period as under:

Table 17: Capital Investment Plan Approved for Control Period (Rs. Cr)

Particulars	FY 2007-08	FY 2009-10	FY 2009-10	FY 2010-11	Total
Capital Investment	81.60	228.64	174.88	109.82	594.94

- 3.45 Regulations 4.13 & 4.14 of the MYT Regulations, 2007, stipulate as under;

“4.13 The Commission shall approve capital investment plan of the Licensees for the Control Period commensurate with load growth, distribution loss reduction and quality improvement proposed in the Business Plan. The investment plan shall also include corresponding capitalization schedule and financing plan.

4.14 The Commission shall review the actual capital investment at the end of each year of the Control Period. Adjustment to depreciation and return on capital employed for the actual capital investment vis-à-vis approved capital investment shall be done at the end of Control Period.”

- 3.46 The Commission shall review the actual Capital Investment at the end of the extended MYT control period i.e. March 31, 2012 and adjustment for depreciation and RoCE shall be done.
- 3.47 In the MYT Order dated March 7, 2008, the Commission had expressed the view that the capital investment of Rs. 594.94 Cr projected by NDMC was an ambitious investment programme and the annual investment proposed for each year were significantly higher than the actual investments made by the NDMC in the previous years. Still the Commission approved the projections as it believed that future capital investments need to be considered on the basis of future requirements and not on past performance alone.
- 3.48 However, the Commission reiterates that the consideration of capital investment including capitalization of interest and establishment expenses during the Control Period for the purpose of determination of ARR did not imply the approval of schemes and the Petitioner has to obtain the scheme wise approval for the capital expenditure to be incurred during each year of the Control Period as per the annual investment plan drawn for the purpose.
- 3.49 The Commission is of the view that capitalization will ultimately depend upon the actual completion of a scheme, statutory approvals like Electrical Inspector Certificate etc and actual commissioning of the proposed assets. The said exercise shall be taken up by the Commission before finalizing the next year Tariff Order.

Review of Depreciation

- 3.50 As per Regulation 4.7 of the MYT Regulations, 2007, depreciation is a controllable parameter for which the Commission has set targets for each year of the Control Period. Further, as per Regulation 4.14 of the MYT Regulations, 2007, adjustment to depreciation and return on capital employed for the actual investment vis-à-vis approved capital investment shall be done at the end of the Control Period. Regulation 4.16(b)(ii) of the MYT Regulations, 2007 also provides for True Up of Depreciation and RoCE at the end of the Control Period.
- 3.51 The Commission had approved an amount of Rs. 30.04 Cr towards depreciation for FY 2010-11 in the MYT Order.
- 3.52 The Commission observes that it had erroneously allowed depreciation on consumer contributions and grants for the MYT Control Period (FY 2007-08 to FY 2010-11). As per the MYT Regulations, 2007:
- “5.13Provided that depreciation shall not be allowed on assets funded by any capital subsidy/ grant.”*
- 3.53 Since the Regulations allow depreciation only on assets capitalised, information is required from the Petitioner regarding the consumer contribution capitalized till date by the Petitioner. However, this information is not readily available with the Petitioner. As and when such information is made available to the Commission, the Commission will revise the depreciation approved for the Petitioner.
- 3.54 For now, in view of provisions of the MYT Regulations, 2007 as indicated in Para 3.98 of the Tariff Order dated August 26, 2011, as also mentioned in Para 3.50 above, the Commission, in the Tariff Order dated August 26, 2011 had approved the amount of depreciation at Rs. 30.04 Cr as approved for FY 2010-11 in the MYT Order. Necessary adjustments shall be carried out at the end of Control Period (i.e. at the end of FY 2011-12) along with the carrying cost.

Table 18: Proposed and Approved Depreciation for FY 2010-11 (Rs. Cr)

Depreciation	Approved in the MYT Order	Approved in August 2011 Order	Petitioner's Submission	Now Approved
Depreciation	30.04	30.04	30.43	30.04

Review of Return on Capital Employed (RoCE)

- 3.55 As per the MYT Regulations, 2007, RoCE is a controllable parameter, for which the Commission has set targets for each year of the Control Period. Further, adjustment to RoCE for the actual investment vis-à-vis approved capital investment shall be done at the end of the Control Period.
- 3.56 The Commission had approved an amount of Rs. 66.37 Cr towards RoCE in the MYT Order for FY 2010-11.

- 3.57 Hence, the Commission has retained the amount of RoCE as approved in the MYT Order. Necessary adjustments will be carried out at the end of Control Period in accordance with the provisions of the MYT Regulations, 2007.

Table 19: RoCE approved for True Up for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in August 2011 Order	Petitioner's Submission	Now Approved
RoCE including Supply Margin	66.37	66.37	81.20	66.37

Administrative and Civil Engineering Departments Expenses

Petitioner's Submission

- 3.58 The Petitioner has submitted that the services of the Administration & Civil Engineering Department are common to all the functions carried out by it and the expenditure pertaining to these departments should be allocated to all functions of the Petitioner.
- 3.59 The Petitioner has quoted the Commission's Tariff Order for FY 2005-06 for considering an allocation of 19% of the salary expenses of its Administrative department towards its electricity distribution business for FY 2010-11. The allocation of expenses against this head comes out to be Rs. 82.75 Cr.

Commission's Analysis

- 3.60 The Commission is of the view that since the segregated account of the Petitioner's electricity business is not available, the exact details of the cost of works carried out by the Civil Engineering Department and Administrative Department for electricity business cannot be identified. The Commission, therefore, retains the amount of Rs. 35.37 Cr for Administrative Department expenses allocated to the electricity business and Rs. 10 Cr for Civil Engineering Department expenses allocated to the electricity business, as approved for FY 2010-11 in the MYT Order.
- 3.61 Though the amount towards administrative department and civil engineering department expenses is being approved in the True-up of FY 2010-11, the Commission is of the opinion that the electricity business cannot subsidise any other business of NDMC. The Commission had, in its Tariff Order dated November 2, 2005, elaborated in detail the justification for allocating the administrative department expenses to the electricity department. Subsequently in its Order dated December 6, 2006 and March 7, 2008, the Commission reiterated its opinion that the Administrative department of NDMC is a common department which serves the requirement of all the departments of NDMC and hence the electricity business cannot subsidise any other business of NDMC. This view of the Commission is identical to the views expressed by the Hon'ble ATE in the matter of BEST vs. MERC (Order dated August 18, 2006 against Appeal no. 61 of 2006)
- 3.62 The Petitioner has submitted in its MYT Petition that it has decided to adopt the National Municipal Accounting Manual and NDMC's Accounts Manual is being

modified by customising the Municipal Accounting Manual to the requirement of NDMC. This adoption, inter alia, will involve implementation of double entry accounting system and separate booking of cost of works carried out by the Civil engineering department for electricity department. NDMC has assured to provide complete details of expenditure relating to common departments to electricity supply once the Manual and the Double Accounting System is implemented.

- 3.63 In this regard, the Commission had directed the Petitioner to separately book the cost of works carried out by civil engineering department for electricity department and provide complete details of such works and associated costs at the end of the year bringing out clearly the percentage expenditure of Civil Engineering Department booked to electricity department vis-à-vis all other departments. However, the Petitioner has not submitted any compliance to this directive.
- 3.64 Therefore, the Commission retains the same amounts of Administrative expenses and Civil Engineering Department expenses allocated to the electricity business, as approved for FY 2010-11 in the MYT Order.

Table 20: Administrative and Civil Engineering Department Expenses for FY 2010-11 (Rs. Cr)

Particulars	Approved in the MYT Order	Approved in August 2011 Order	Petitioner's Submission	Now Approved
Allocation of Administrative expenses to the electricity business	35.37	35.37	82.75	35.37
Allocation of Civil Engineering Department expenses to the electricity business	10.00	10.00		10.00
Total Allocation of Administrative and Civil Engineering Department expenses to the electricity distribution business	45.37	45.37	82.75	45.37

Non Tariff Income

Petitioner's Submission

- 3.65 The Petitioner in its True up Petition has considered non-tariff income of Rs. 18.04 Cr for FY 2010-11, while the amount approved in the MYT Order was Rs. 3.48 Cr.

Commission's Analysis

- 3.66 Regulation 5.25 of the MYT Regulations, 2007 states that *"The amount received by the licensee on account of Non Tariff Income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such licensee"*. Regulation 5.27 further elaborates that *"The net aggregate revenue requirement of the licensee eligible for recovery during each year of the Control Period shall be determined after deducting from the aggregate revenue requirement, the non tariff*

income and the other income". A joint reading of both the above Regulations indicates that NTI being an integral part of the revenue requirement shall be trued up at the end of each year of the Control Period.

- 3.67 As per the MYT Regulations only two sets of parameters are recognized i.e. controllable and uncontrollable. While the uncontrollable parameters include revenue / expenditure on account of sales and power purchase and provide for its annual true up, the controllable parameters include O&M expense, Capex related expenses and RoCE, and does not specifically include Non Tariff Income. Also, the MYT Regulations in regard to controllable expenses specifically provide for true up of Capex related expenditure i.e. RoCE and Depreciation at the end of the Control Period. Hence, the Commission has approved the amount of Non Tariff Income as the submissions made by the Petitioner, as summarised below:

Table 21: Trued-up Non Tariff Income approved (Rs. Cr)

Non Tariff Income	Approved in the MYT Order	Approved in August 2011 Order	Petitioner's Submission	Now Approved
Total Non-Tariff Income	3.48	3.48	18.04	18.04

Annual Revenue Requirement for FY 2010-11

- 3.68 The Commission approves the Annual Revenue Requirement (ARR) after incorporating the above changes at Rs. 789.36 Cr for FY 2010-11. The ARR approved in the MYT Order, as claimed by the Petitioner and the Trued up ARR is summarised below:

Table 22: Aggregate Revenue Requirement now approved for FY 2010-11 (Rs Cr)

Aggregate Revenue Requirement	Approved in MYT Order	Approved in August 2011 Order	Petitioner's Submission	Now Approved
Cost of Power Purchase	301.47	301.47	507.26	507.26
Transmission Charges	30.41	30.41	41.72	41.72
O&M expenses	109.17	116.64	106.53	116.64
Depreciation	30.04	30.04	30.43	30.04
RoCE including supply margin allowed	66.37	66.37	81.20	66.37
Administrative & Civil Engineering Department Expenses allocated to electricity	45.37	45.37	82.75	45.37
Less: Truing Up Expense			0.59	0.00*
Less: Non Tariff Income	3.48	3.48	18.04	18.04
Aggregate Revenue Requirement	579.35	598.13	831.28	789.36

*Already included in the different expense heads under "Now approved" ARR for FY 2010-11

Revenue available towards ARR**Petitioner's Submission**

- 3.69 The Petitioner has submitted that based on the tariff rates as approved by the Commission and the monthly consumption, it has raised bills of Rs. 620.23 Cr to its consumers against energy and demand charges. The total revenue realized from consumers in 2010-11 is submitted to be Rs. 608.16 Cr including the NDMC tax amount. The Petitioner has considered revenue billed amount to be considered as revenue available for ARR, as against revenue collected.

Commission's Analysis

- 3.70 The total amount realized by the Petitioner and approved by the Commission is detailed in Table 7 of this Order. The Commission has computed the total revenue of the Petitioner available towards ARR to be Rs. 598.64 Cr (excluding Electricity Tax), as detailed below:

Table 23: Revenue available towards ARR approved for FY 2010-11 (Rs Cr)

Particulars	Petitioner's Submission	Now Approved
Revenue available towards ARR including E-Tax	620.23	621.57
Less Actual E-Tax collected		22.93
Revenue available for ARR	620.23	598.64

Revenue (Gap)/ Surplus

- 3.71 The revenue surplus/(gap) for FY 2010-11 as approved in the MYT Order, submitted by the Petitioner and Trued up the Commission is summarised below:

Table 24: Revenue Surplus/(Gap) for FY 2010-11 (Rs Cr)

Particulars	Petitioner's Submission	Now Approved
ARR for FY 2010-11	831.28	789.36
Revenue available towards ARR	620.23	598.64
Total (Gap)/Surplus	(211.05)	(190.72)

- 3.72 As shown above, the approved net revenue gap is Rs. 190.72 Cr for FY 2010-11 which would be adjusted in the determination of the Aggregate Revenue Requirement for FY 2012-13 to FY 2014-15. The treatment of this net revenue gap is dealt with in Chapter A5.

**A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR)
FOR MYT CONTROL PERIOD (FY 2012-13 TO FY 2014-15)****Introduction**

- 4.1 NDMC has filed a Petition for determination of Aggregate Revenue Requirement for each year of the MYT Control Period (FY 2012-13 to FY 2014-15). The Commission has analysed the Petition submitted by the Petitioner for approval of Aggregate Revenue Requirement (ARR) for each year of the Control Period (FY 2012-13 to FY 2014-15) and determination of Wheeling and Retail Supply Tariffs for FY 2012-13.
- 4.2 The Commission held discussions 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 as part of the tariff petition, responses to various queries raised during the discussions and also during the public hearing, for determination of tariff.
- 4.3 This Chapter contains detailed analysis of the Petition submitted by the Petitioner and the various parameters approved by the Commission for determination of ARR for the Petitioner for each year of the Control Period (FY 2012-13 to FY 2014-15).

Energy Sales**Petitioner's Submission**

- 4.4 The Petitioner has mentioned in its Petition that it has computed the energy sales for FY 2011-12 based on the actual energy sales in the first nine months to various categories and estimated energy sales for the remaining three months and past trends of slab wise consumption for domestic category during January, February and March of FY 2009-10.
- 4.5 The energy sales for FY 2012-13 to FY 2014-15 have been determined considering the growth rate for past five-years in actual energy sales (up to FY 2010-11) in various consumer categories and applied on the estimated sales for FY 2011-12. For projecting sales of DMRC category, average of energy sales for the last 5 months up to September 2010 has been considered. Further no growth has been considered in this category during the second Control Period.
- 4.6 The Petitioner's submission for energy sales for FY 2012-13 to FY 2014-15 are given below:

Table 25: Sales Projections (in MU) for FY 2012-13 to FY 2014-15 submitted by the Petitioner

Consumer Category	FY 2012-13 (Projected)	FY 2013-14 (Projected)	FY 2014-15 (Projected)
Domestic	240.30	247.97	255.98
Single Delivery Point	85.07	90.06	95.35
Separate Delivery Point	139.65	142.33	145.06
Power	15.58	15.58	15.58
Non Domestic	219.49	222.48	225.53
Single Phase (up to 5 kW)	42.81	42.81	42.81
Three Phase (5 - 100 kW)	176.68	179.67	182.72
Mixed Load	746.65	785.13	826.27
Supply at 11 kV (HT)	542.56	580.49	621.07
Supply on LT where supply is given from NDMC sub station	3.97	3.97	3.97
Supply on LT where applicant provides built up space for sub station	200.13	200.68	201.23
Small Industrial Power	0.31	0.31	0.31
Public Lighting	14.50	14.64	14.79
DMRC	33.56	33.56	33.56
Others	9.02	10.03	11.19
Total	1263.83	1314.13	1367.62

Commission's Analysis

- 4.7 The Commission feels that there are various factors which can have an effect on the actual consumption of electricity that are often beyond the control of the licensee, such as Government policy, economic climate, weather conditions, force-majeure events like natural disasters, etc. Hence, an attempt has been made to take into consideration various factors affecting electricity consumption and estimate the interrelationships among them to arrive at a reasonably accurate forecast for energy sales within a range for the purpose of estimating future costs/ revenues.
- 4.8 Accordingly, for projecting the category-wise energy sales of each Distribution Licensee for FY 2012-13 to FY 2013-14, the Commission has considered the past growth trends in each consumer category as explained below:
- The Commission has adopted an Adjusted Trend Analysis Method for projecting the sales/ connected load/ number of consumers of Domestic, Non Domestic, Industrial, Agriculture, Public Lighting and Other categories. This method assumes that the underlying factors which drive the demand for electricity are expected to follow the same trend as in the past. The Commission has however, discounted for any outlier (relative to the trend) observed in the growth rates over the period of 5 years and excluded them while projecting energy sales for FY 2012-13 to FY 2014-15.
 - The strength of this method, when used with balanced judgment, lies in its ability to reflect recent changes and therefore makes it well suited as a basis for medium-term projections in context of multi year sales determination.

- (c) This method makes use of two statistical tools, namely the Compounded Annual Growth Rate (CAGR) and a simple average of the year-on-year growth rates (excluding the outliers), wherever appropriate. As per this method, Compounded Annual Growth Rates (CAGRs) were calculated from the past figures for each category, corresponding to different lengths of time in the past five years, along with the year on year growth rates since FY 2005-06. Pertinently, the CAGR is computed for each category for the past 5-year period FY 2005-06 to FY 2010-11, the 4-year period FY 2006-07 to FY 2010-11, the 3-year period FY 2007-08 to FY 2010-11, and the 2-year period FY 2008-09 to FY 2010-11, along with the 1-year growth rate of FY 2010-11 over FY 2009-10.
- (d) Subject to the specific characteristics of each consumer category, either a particular CAGR or an average of the year-on-year growth rates is chosen as the basis of sales projection for that category. For example, if an abnormal growth rate (high or low), relative to the trend, is observed at the beginning of the five year period considered, then a shorter period is considered for the trend analysis and projections, i.e. appropriately a 3-year CAGR or a 4-year CAGR has been considered. However, if any outlier(s) is observed in the 5 year period, then a simple average of the year-on-year growth rates, excluding the outlier(s), has been considered while making projections for FY 2011-12.
- (e) For making projection of sales, the estimated energy sales in FY 2011-12 for each consumer category, as submitted by the Petitioner, is taken as the base, i.e. the CAGR is applied over the estimated consumption in FY 2011-12 to obtain the projection for each category for FY 2012-13. Similarly, for making projections for FY 2013-14, projected sales for FY 2012-13 are taken as base and for FY 2014-15, sales for FY 2013-14 are the base. For that, the Commission has considered the Petitioner's submission (as additional information submitted to the Commission) of month-wise actual energy sales up to December 2011 to project energy sales for the entire FY 2011-12 (extrapolating for the remaining months in the same proportion of sales observed in those months in FY 2009-10). The Commission has projected energy sales of 1195.38 MU for FY 2011-12.
- (f) For projecting sale to DMRC, the Commission has considered the submission made by DMRC to the Commission.
- (g) The Commission has considered the proportion of actual energy sales for each slab in the domestic category to total sales in that category as observed from Form 2.1(a) submitted by the Petitioner for January 2012 to March 2012 for making projections for FY 2012-13 to FY 2014-15.
- 4.9 Thus, following the above mentioned method, the Commission has approved the sales for FY 2011-12 for each consumer category as detailed below:

Table 26: Approved sales for FY 2012-13 to FY 2014-15 (MU)

Sales in MU		FY 2012-13	FY 2013-14	FY 2014-15
1	Domestic	239.06	256.43	275.26
	0-100 units	26.72	28.67	30.77
	101-200 units	45.26	48.55	52.11
	201-400 units	73.90	79.28	85.10
	Above 400 units	93.17	99.94	107.28
2	Non- Domestic (Low Tension) (NDLT) up to 100 kW/108 kVA	422.98	426.00	429.17
	Up to 5 kW	42.02	41.24	40.48
	More than 5 kW and less than 100 kW	177.42	181.19	185.03
	More than 100 kW	203.53	203.57	203.65
	<i>Supply on LT where supply is given from NDMC sub station</i>	3.53	3.13	2.78
	<i>Supply on LT where applicant provides built up space for sub station</i>	200.01	200.44	200.87
3	Non- Domestic High Tension (NDHT) Supply at 11 kV	536.32	567.22	599.90
4	Small Industrial Power	0.32	0.33	0.35
5	Public Lighting	14.81	15.28	15.77
6	Others	9.94	12.15	14.86
7	DMRC	30.00	40.00	50.00
	Total	1253.43	1317.43	1385.31

Revenue in FY 2012-13 at Existing Tariff

- 4.10 As per the two-part tariff principle followed in the NCT of Delhi, the tariff for each category consists of fixed/ demand charges as well as energy charges. The fixed/ demand charges are specified for different categories as a fixed amount per month, or as a fixed amount per kW of connected load or per kVA of sanctioned demand per month. Energy charges, on the other hand, are always usage-based and are specified per unit of electricity consumed.
- 4.11 Taking into account the sales approved for each tariff slab for FY 2012-13 (as shown in Table 26 above), the Commission has projected the revenue billed in FY 2012-13 as detailed below:

Table 27: Revenue projected for FY 2012-13 by the Commission at Existing Tariff (Rs. Cr)

Consumer Category	Energy Charges	Demand Charges	Revenue Billed
Domestic	84.70	1.39	86.08
Non- Domestic (Low Tension) (NDLT) up to 100 kW/108 kVA	254.65	23.15	277.81
Up to 5 kW	22.27	0.23	22.50
More than 5 kW and less than 100 kW	108.23	1.32	109.55
More than 100 kW	124.15	21.60	145.76

Consumer Category	Energy Charges	Demand Charges	Revenue Billed
<i>Supply on LT where supply is given from NDMC sub station</i>	0.36	2.31	2.67
<i>Supply on LT where applicant provides built up space for sub station</i>	21.24	121.84	143.09
Non- Domestic High Tension (NDHT) Supply at 11 kV	314.39	31.93	346.32
Small Industrial Power	0.18	0.00	0.18
Public Lighting	8.30	0.00	8.30
Others	5.47	0.04	5.51
DMRC	11.88	1.00	12.88
Total Revenue Billed	679.59	57.51	737.08
Total Revenue Realized @ 100% Collection Efficiency			737.08

- 4.12 Since the collection efficiency for FY 2011-12 was approved at 100% in the Tariff Order for FY 2011-12, the revenue realized in FY 2012-13 is projected to be equal to the amount of revenue billed.

AT&C Losses

Petitioner's Submission

- 4.13 The Petitioner has proposed the trajectory for AT&C losses in the Control Period as shown in Table 28 below:

Table 28: Proposed AT&C losses for the Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Distribution Loss	9.35%	9.10%	8.85%
Collection Efficiency	99.00%	99.00%	99.00%
AT&C loss	10.26%	10.01%	9.76%

Commission's Analysis

- 4.14 During the Policy Direction Period, Delhi adopted AT&C loss (Aggregate Technical and Commercial Loss) as a measure of efficiency which indicated the difference between units input into the distribution system and the units for which payment is collected or realised.
- 4.15 The Commission introduced the previous MYT Regulations for the period FY 2007-08 to FY 2010-11 and fixed the AT&C Loss reduction targets to be achieved by the distribution licensees at the end of the Control Period. The year wise targets and actual achievement for FY 2007-08 to FY 2010-11 has been as under:

Table 29: AT&C Loss levels (FY 2007-08 to FY 2010-11)

DISCOM		FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
BYPL	Target	34.77	30.52	26.26	22.00
	Achievement	29.80	24.02*	24.32	21.95
BRPL	Target	26.69	23.46	20.23	17.00
	Achievement	27.17	20.59*	20.53	18.82
TPDDL	Target	22.03	20.35	18.67	17.00
	Achievement	18.56	16.74	15.16	13.10*
NDMC	Target	11.13	10.75	10.38	10.00
	Achievement	14.79	13.72	10.25	11.94

*As claimed by the Discom, but not approved by the Commission

- 4.16 During the true-up for FY 2008-09 and FY 2009-10, it came to light that there were certain inconsistencies in the methodology for computing the actual achievements of AT&C loss (for estimation of energy in kWh corresponding to enforcement amount realised, exclusion of DVB arrears from amount realised, considering LPSC realised after allowing borrowing cost etc.) which were corrected while doing these true-ups. The revised methodology is now being carried forward in subsequent true-ups also.
- 4.17 The above achievements against the challenging targets have been possible as a result of the substantial capital investments which have been made by the distribution licensees for improving the distribution network and thereby reducing technical and commercial losses, government support in the form of special courts for power theft related cases, police support during theft control drives, etc.
- 4.18 In view of a writ petition No. 4821/201 filed in the High Court of Delhi, the process of tariff determination for FY 2010-11 could not be completed and no Tariff Order could be issued and also new MYT Regulations could not be framed. The Commission on May 10, 2011 passed an Order extending the previous MYT Regulations by one more year and fixed the following AT&C loss targets for FY 2011-12:

Table 30: AT&C Loss levels (FY 2011-12)

DISCOM	FY 2011-12
BYPL	18.00
BRPL	15.00
TPDDL	13.00
NDMC	9.60

AT&C Loss reduction targets for the Control Period (FY 2012-13 to FY 2014-15)

- 4.19 While fixing the AT&C loss reduction targets for the Control Period (FY 2012-13 to FY 2014-15), the Commission has been guided by:

- (a) The achievements in AT&C loss reduction vis-à-vis targets fixed by the Commission in the past, capital expenditure programs, review of the consumer mix of Delhi, metering status, etc.
 - (b) Delhi is an urban area with very small number of agricultural consumers (less than 0.1% of total sales) and with 100 percent retail consumer metering.
 - (c) Loss levels in similar private urban distribution licensees, such as Ahmedabad Electricity Supply Company, BEST and BSES, Mumbai, Torrent Power Limited, Gujarat and public utilities viz., MGVL in Gujarat and BESCOM in Karnataka.
- 4.20 Considering the past trend of AT&C loss reduction vis-à-vis targets fixed and the expectations of various stakeholders as expressed during the Public Hearings, the need is felt to continue with the trajectory of AT&C loss reduction into the next Control Period, especially in view of the fact that all distribution licensees still have areas where losses are significantly higher than the average AT&C losses achieved by them (above 40% in many areas). None of the distribution licensees have pleaded for higher AT&C loss targets on the grounds of the targets proposed by the Commission being technically incapable of being achieved. This matter, therefore, has to be seen in the context of the higher level of commercial losses for which the distribution utilities have to intensify their efforts. The Commission is of the view that it is not only desirable to fix challenging targets, but to make all efforts to see that these are achieved in the overall interest of determining tariffs which are fair and equitable and help in taking the Delhi Distribution business towards achievements of performance benchmarks set by the best distribution utilities in the country.
- 4.21 Accordingly, the AT&C loss target as approved by the Commission for the Control Period is given below:

Table 31: AT&C Loss Targets approved by the Commission

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Distribution Loss Target	10.35%	10.10%	9.85%
Collection Efficiency Target	100.00%	100.00%	100.00%
AT&C Loss Target	10.35%	10.10%	9.85%

Energy Requirement

- 4.22 The quantum of power purchase is decided by the expected sale of energy by the Licensee, as well as the targeted loss levels. Higher expected sales require a greater quantum of power to be purchased. Similarly, higher loss levels also require a proportionately greater amount of power purchase by the Licensee because it needs to meet the expected sales (in MU) after accounting for various losses in the process of supplying electricity.
- 4.23 The energy sale for each year is grossed up by the distribution loss level for the year, to arrive at the required quantum of power purchase for that year in the following manner:

$$\text{Quantum of power purchase (MU)} = \frac{\text{Energy sales}}{(1 - \text{Distribution Loss (\%)})}$$

Petitioner's Submission

- 4.24 Based on the proposed loss reduction trajectory and energy sales proposed, the Petitioner has proposed the following energy balance for each year of the Control Period:

Table 32: Proposed Energy Balance for the Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Sales (MU)	1263.83	1314.13	1367.62
Distribution losses	9.35%	9.10%	8.85%
Energy Requirement (MU)	1394.19	1445.68	1500.41

Commission's Analysis

- 4.25 The Commission has computed the energy requirement for the Control Period as per the approved sales and distribution losses. The approved energy requirement for the Control Period is summarised below:

Table 33: Approved Energy Requirement (MU)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Sales (MU)	1253.43	1317.43	1385.31
Distribution Losses	10.35%	10.10%	9.85%
Energy Requirement (MU)	1398.14	1465.44	1536.67

Determination of Aggregate Revenue Requirement

- 4.26 The Commission has analyzed all the components of the Aggregate Revenue Requirement (ARR) submitted by the Petitioner to approve suitable values for each component, for each year of the Control Period. As per the MYT Regulations, 2011 the ARR for the distribution function shall include the following components:

- (a) Power Purchase Cost (including transmission charges and load dispatch charges)
- (b) Operations and Maintenance Expenses;
- (c) Return on Capital Employed;
- (d) Depreciation;
- (e) Income Tax;
- (f) Interest on Consumer Security Deposit
- (g) Less: Non-Tariff Income; and

- (h) Less: Income from other businesses or other receipts.

Power Purchase

- 4.27 Under the framework of MYT Regulations, power purchase quantum has been classified as an uncontrollable component. Since power purchase cost constitutes major component of the total Annual Revenue Requirement of the Petitioner, it is pertinent that the projection of power purchase expense is done with utmost care. Power from all the sources including Central Sector Generating Stations (CSGS), State Generating Stations (SGS), Future Plants, etc is analysed to determine the total power purchase quantum and cost for the Petitioner.

Allocation of Power from Central and State Generating Stations

Petitioner's Submission

- 4.28 The allocation from various power stations from which the Petitioner sources power is as per the table given below:

Table 34: Allocations from Delhi Stations to NDMC as submitted by Petitioner

Stations	NDMC share (MW)	Firm Allocation (85%) (MW)	Share from Unallocated Power (MW)	Total Share (MW)	%age Share
NCTPS Dadri	125	106.25	2.06	108.31	12.89%
Badarpur TPS	125	106.25	1.78	108.03	15.32%
Gas Turbine Power Station	0	0	0.73	0.73	0.27%
Rajghat Power House	0	0	0.36	0.36	0.27%
PPCL I	100	85	0.9	85.9	26.03%
PPCL III	100	100	0	100	6.67%

- 4.29 The Petitioner has also submitted that the allocation from Gas Turbine Power Station and Rajghat Power House is not a firm allocation to NDMC. Further, the Petitioner has submitted that for meeting the supply-demand gap during the peak hours, the Petitioner relies upon Bilateral and Inter Discom power purchase. However, if inevitable, the Petitioner also resorts to Unscheduled Interchange (UI) to meet further gap.

Commission's Analysis

- 4.30 The Commission had reallocated the power among the distribution licensees from the Generating Stations in Delhi System through its Order dated March 7, 2008. NDMC has been allocated power from three plants namely Badarpur TPS (125 MW), NCTPS Dadri (125 MW) and Pragati Power plant (100 MW) vide this order. The balance firm power from said stations has been distributed among the DISCOMs in the ratio specified in the Reassignment Order dated March 31, 2007 (i.e. 43.58%, 27.24% and 29.18% to BRPL, BYPL and TPDDL, respectively).

- 4.31 Govt. of NCT of Delhi (GoNCTD) through its letter no. F.11 (41)/2007-Power/PF-1/14350 dated 20 May, 2011 has revised the allocation of unallocated power generation share of GoNCTD in Central Power Station (NCTPS Dadri and Badarpur TPS) and Delhi Power Generation Stations (RPH, GT, PPCL). According to the above, the allocation of 323.5 MW of unallocated power quota is extended for auxiliary consumption for IP station equivalent to 1 MW. Also, 0.9 MW power which was allocated to Aravali power plant, Jhajjar for construction activities is now available to Delhi as the plant has now become operational. Therefore, 0.9 MW has been equally allocated among three DISCOMS. As per the said letter, the allocation of balance 321.6 MW power quota among distribution companies is reassigned as follows:

Table 35: Allocation of Unallocated quota to Delhi DISCOMs

Distribution licensee	Quantum of power
BYPL	39.65% of available power i.e. 127.5 MW +0.3 MW=127.8 MW
TPDDL	30.94% of the available power i.e. 99.5 MW +0.3 MW= 99.8 MW (From 10.00 A.M to 05.00 P.M) 37.16% of the available power i.e. 119.5 MW +0.3 MW= 119.8 MW (For rest of the time)
BRPL	23.19% of available power i.e. 74.5 MW+0.3 MW =74.8 MW
NDMC	6.22% of the available power i.e. 20 MW (10:00 AM to 05:00 P.M)

- 4.32 The unallocated power (15%) from NDMC's share in NCTPS Dadri, Badarpur TPS and Pragati would be at the disposal of the GoNCTD and may be allotted by the Government to the needy distribution company (ies).
- 4.33 If GoNCTD allocates the unallocated power in any manner other than the assumption considered in the preceding paragraphs above, the same shall be accounted for at the time of True-up of power purchase costs in the subsequent Orders.
- 4.34 The allocation considered by the Commission for projection of power availability from the Delhi Stations is summarised below:

Table 36: Allocations from Delhi Stations to NDMC

Stations	Installed Capacity (MW)	NDMC share (MW)	Firm Allocation (85%) (MW)	Share from Unallocated Power (MW)	Total Share (MW)
Badarpur TPS*	705	125	106.25	1.78	108.03
NCTPS Dadri**	840	125	106.25	2.06	108.31
IP Station***	0	-	-	0.00	0.00
Rajghat Power House [#]	135	-	-	0.36	0.36
Gas Turbine Power Station ^{##}	270	-	-	0.73	0.73
PPCL-I ^{###}	330	100	85.00	0.90	85.90
Total	2280		297.50	5.83	303.33

- * Total installed capacity of Badarpur TPS 705 MW. However, 530MW is allocated to BRPL, BYPL and TPDDL. Remaining 175 MW is allocated to NDMC and MES.
- ** Total installed capacity of NCTPS Dadri is 840 MW, 756 MW allocated to Delhi of which 631MW is allocated to BRPL, BYPL and TPDDL. Remaining 125MW is allocated to NDMC.
- *** IP station has been decommissioned
- # Total installed capacity of Rajghat is 135MW. However 0.9 MW power was given as construction power to Aravali Power Project at Jhajjar and 1.0 MW as auxiliary power for IP station
- ## The capacity has been derated from 330 MW to 270 MW
- ### Total installed capacity of Pragati 330 MW. However, 230MW is allocated to BRPL, BYPL and TPDDL. Remaining 100 MW is allocated to NDMC.
- Figures rounded off to zero decimal places

Energy Availability from Generating Stations

Petitioner's Submission

- 4.35 The Petitioner has considered average PLF from April 2010 to December 2011 of the allocated generating units; and auxiliary consumption as per CERC Tariff Regulations 2009 for NCTPS Dadri and Badarpur TPS, and as per DERC MYT Generation Regulations 2011 for Pragati Power Station, Gas Turbine Power Station and Rajghat Power House. The same has been considered for projection power purchase quantum for FY 2012-13 to FY 2014-15.
- 4.36 The Petitioner submitted that the power to the tune of 1500 MW of PPCL-III is also envisaged to commence supply power from May 1, 2012 onwards (of which 750 MW is projected to come from April 1, 2012).
- 4.37 The power purchase estimated by the Petitioner from various generating plants in the Delhi system are summarised below:

Table 37: Energy Available to NDMC as per the Petitioner (MU)

Plant	FY 2012-13	FY 2013-14	FY 2014-15
NCTPS Dadri	751.72	751.72	751.72
Badarpur TPS	641.43	641.43	641.43
Gas Turbine Power Station	3.54	3.54	3.54
Rajghat Power House	1.91	1.91	1.91
PPCL I	577.79	577.79	577.79
PPCL III	692.58	722.26	722.26
Total	2668.97	2698.65	2698.65

Commission's Analysis

- 4.38 The Commission has computed the energy availability from the State Generating Stations i.e. Rajghat Power House, Gas Turbine Power Station and PPCL-I based on the approved PLF and auxiliary consumption in the respective Tariff Order for IPGCL and PPCL-I stations for the Control Period.

- 4.39 For Badarpur TPS the energy availability has been computed based on the station PLF taken as an average for the last three Financial Years (FY 2009-10 to FY 2011-12) and auxiliary consumption as approved in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, hereinafter referred to as 'CERC Tariff Regulations, 2009'.
- 4.40 For NCTPS Dadri, the energy availability has been computed based on the station PLF taken as an average for last three Financial Years (FY 2009-10 to FY 2011-12) and auxiliary consumption as per the CERC Tariff Regulations, 2009.
- 4.41 The effective share of firm and unallocated power from these plants has been applied on the net energy available from each plant to compute the total energy available for the Petitioner during each year. The effective share for the Petitioner has been computed based on the allocation of power from Delhi system generating stations discussed earlier under "Allocation of Power from Central and State Generating Stations".
- 4.42 In case of PPCL-III, Bawana station, the Commission based on the latest available data has decided to project the CoD of the station as shown in the table below. Accordingly, energy availability is calculated at 85% PLF and by taking auxiliary consumption at 3%.

Table 38: Dates of Energy Available from Future Stations as Approved by the Commission

Plant	Owning Agency	CoD Considered by the Commission
Pragati -III, Bawana	SGS	GT 1 : 27-Dec-11 GT 2: Beyond July-12 STG 1: Beyond Apr-12 GT 1 : Beyond Sep-12 GT 2: Beyond Jan-13 STG 2: Beyond Nov-12

- 4.43 The Commission is of the opinion that actual power availability from the generating stations in Delhi System may vary from the projected units based on the actual units generated and share of the Petitioner in unallocated power. However, since power purchase quantum is an uncontrollable parameter, it will be subjected to True Up at the end of the year.
- 4.44 The projected net energy available to the Petitioner during FY 2012-13 to FY 2014-15 from the generating stations is summarised below:

Table 39: Energy Available from Delhi Generating Stations to NDMC approved by the Commission (MU)

Plant	FY 2012-13	FY 2013-14	FY 2014-15
Badarpur TPS	675.23	675.23	675.23
NCTPS Dadri	798.45	798.45	798.45
Rajghat Power House	2.11	2.11	2.11
Gas Turbine Power Station	4.99	4.99	4.99
PPCL-I	620.41	620.41	620.41
PPCL III	326.13	722.97	722.97

Plant	FY 2012-13	FY 2013-14	FY 2014-15
Total	2427.33	2824.17	2824.17

Power Purchase Quantum from Other Sources: Intra-State, Bilateral & Banking**Petitioner's Submission**

- 4.45 The Petitioner has submitted that the increase in energy availability in the last few years has helped the Petitioner in meeting the growing peak demand from the consumers within its distribution area during the year. Further, these additional capacities have resulted in substantial energy surplus to the Petitioner. The Petitioner has submitted that as such for FY 2012-13 to FY 2014-15, bilateral and inter Discom purchase are assumed at zero and surplus energy is sold by the Petitioner under bilateral arrangement, IEX, UI and to other DISCOMs in Delhi.

Table 40: Energy Purchase /Sales through Other Sources submitted by the Petitioner (MU)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral purchases	0.00	0.00	0.00
Inter-Discom sales	1198.30	1176.11	1121.38
Bilateral sales	0.00	0.00	0.00
IDT Ex Bil net purchase/(sale)	0.00	0.00	0.00
Exchange net Purchase/(sale)	0.00	0.00	0.00
UI net purchase/(sale)	0.00	0.00	0.00
Bilateral - Total	1198.30	1176.11	1121.38

Commission's Analysis

- 4.46 Based on the analysis of energy availability from various sources and the requirement of power for sale in the distribution area of the Petitioner, the Commission is of the view that the Petitioner would have an overall surplus power for sale to others during each year of the Control Period.
- 4.47 The Commission has considered that the quantum of power to be purchased through intra-state purchases and through bilateral purchase during the Control Period to be nil.
- 4.48 The Commission has considered that the surplus power available to the Petitioner will be entirely sold under bilateral/ banking arrangements during the respective year.
- 4.49 The units purchased and sold through others sources are summarised below:

Table 41: Energy Purchase /Sales through Other Sources approved by the Commission (MU)

Other Sources	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral Sale	960.55	1271.39	1200.16

Power Purchase Cost**Cost of Power Purchase from Generating Stations****Petitioner's Submission**

- 4.50 The Petitioner has submitted that the fixed capacity charges for the stations has been derived after considering factors viz. PAFM (last 21 months average from April 2010 to December 2011), approved annual fixed charges as per the latest tariff orders, approved NAPAF as per tariff regulation for respective generating units and petitioners %age share in the generating units installed capacity.
- 4.51 Based on the approved annual fixed charges for FY 2009-10 to FY 2013-14, the Petitioner has computed CAGR of 2.91% and 9.39% of NCTPS Dadri and Badarpur TPS respectively to derive the annual fixed charge for FY 2014-15.
- 4.52 In case of PPCL-I, Gas Turbine Power Station, Rajghat Power House, CAGR has been calculated based on approved annual fixed charges for FY 2007-08 to FY 2011-12. The computed CAGR of 2.95%, 16.03% and 26.13% is then applied to derive annual fixed charges of PPCL-I, Gas Turbine Power Station, Rajghat Power House respectively for FY 2012-13 to FY 2014-15.
- 4.53 Variable energy charge of FY 2011-12 of all generating units of NCTPS Dadri, Badarpur TPS, PPCL-I, Gas Turbine Power Station, Rajghat Power House has been escalated at 5% per annum to derive the variable energy charge through FY 2014-15. Power purchase cost of PPCL-III, Bawana has been assumed at Rs 4.07 per unit as per the latest tariff order.

Table 42: Total Power Purchase Cost submitted by the Petitioner (Rs. Cr)

Source	FY 2012-13		FY 2013-14		FY 2014-15	
	MU	Rs Cr	MU	Rs Cr	MU	Rs Cr
NCTPS Dadri	751.72	303.79	751.72	318.65	751.72	333.01
Badarpur TPS	641.43	286.54	641.43	306.55	641.43	325.53
Gas Turbine Power Station	3.54	1.72	3.54	1.88	3.54	2.05
Rajghat Power House	1.91	1.11	1.91	1.28	1.91	1.50
PPCL-I	577.79	210.08	577.79	218.72	577.79	227.76
PPCL-III	692.58	281.88	722.26	293.96	722.26	293.96
Total Units	2668.97	1085.11	2698.65	1141.04	2698.65	1183.80

Commission's Analysis

- 4.54 The following methodology has been adopted by the Commission for estimation of the power purchase cost for each year of the Control Period:
- (a) The Commission has projected the variable cost for NTPC stations based on the average of the variable cost and FPA, submitted by BYPL and TPDDL for March 2012 as additional information, and an escalation of 5% during each year.

- (b) The fixed charges for NTPC stations have been taken from the latest Tariff Orders issued by CERC up to June 15, 2012. The fixed charges for FY 2014-15 have been taken equal the fixed charges approved for each station in FY 2013-14.
- (c) The fixed cost for state generating stations has been considered as per the MYT Order issued by the Commission for the respective generating stations for the Control Period. The variable of state generating stations has been estimated by considering an escalation of 5% on the approved Energy Charge Rate (ECR) per annum.
- (d) The Commission has computed the total power purchase cost considering fixed cost and variable cost (including FPA) for each plant taking into account the approved energy availability and share of the Petitioner.
- (e) The power purchase cost for PPCL-III, Bawana has been considered at Rs 4.50/kWh in line with the power purchase cost for other new thermal generating stations.

4.55 The total power purchase cost computed by the Commission is summarised below:

Table 43: Total Power Purchase Cost approved by the Commission (Rs. Cr)

Source	FY 2012-13		FY 2013-14		FY 2014-15	
	MU	Rs Cr	MU	Rs Cr	MU	Rs Cr
Badarpur TPS	675.23	316.98	675.23	329.87	675.23	343.40
NCTPS Dadri	798.45	307.77	798.45	322.87	798.45	335.72
Rajghat Power House	2.11	1.05	2.11	1.09	2.11	1.14
Gas Turbine Power Station	4.99	2.05	4.99	2.14	4.99	2.23
PPCL-I	620.41	202.30	620.41	209.33	620.41	217.57
PPCL-III	326.13	146.76	722.97	325.34	722.97	325.34
Total Units	2427.33	976.92	2824.17	1190.65	2824.17	1225.41

Cost of Power from Other Sources

Petitioner's Submission

4.56 The Petitioner has projected the sale of surplus energy at Rs. 3.50 unit for the Control Period. as per the tables given below:

Table 44: Cost of Power Purchase/ revenue from Sale submitted by the Petitioner (Rs. Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral purchases	0.00	0.00	0.00
Inter Discom sales	419.40	411.64	392.48
Bilateral sales	0.00	0.00	0.00
IDT Ex Bil net purchase/(sale)	0.00	0.00	0.00
Exchange net Purchase/(sale)	0.00	0.00	0.00
UI net purchase/(sale)	0.00	0.00	0.00

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral - Total	419.40	411.64	392.48

Commission's Analysis

- 4.57 The Commission has considered that there will be no requirement of power purchase for meeting the seasonal demand in the Petitioner's area of operation through intra-state purchase.
- 4.58 With regards to the rate of sale of surplus power, the Commission observes that the estimated average landed cost of power purchase (after including transmission losses and charges) for the Petitioner is Rs 4.49/unit in FY 2012-13, Rs 4.60/unit in FY 2013-14 and Rs 4.76/unit in FY 2014-15. As against this the Petitioner has proposed the rate of sale of surplus power at only Rs 3.50/unit.
- 4.59 The average rate at which power was sold by the Petitioner during FY 2010-11 was Rs 2.94/unit. In the same year the average rate of sale of power achieved by BRPL, BYPL and TPDDL was Rs 3.21/unit, Rs 3.54/unit and Rs 2.93/ unit respectively.
- 4.60 The Commission observes that if the Petitioner were to sell surplus power at a rate that is lower than the average landed cost (per unit) at which it purchases the power, it shall result in additional burden on the consumers on account of the transaction of sale and purchase of power.
- 4.61 Taking into account the interests of the consumers and the actual rate at which power has been sold by the DISCOMs in the past, the Commission has considered a rate of Rs 4.00/unit for the sale of surplus power by the Petitioner during each year of the Control Period.

Table 45: Cost of Power Purchase/ revenue from Sale approved by the Commission (Rs. Cr)

Other Sources	FY 2012-13	FY 2013-14	FY 2014-15
Bilateral Sale	384.22	508.56	480.06

Transmission Losses and Charges

Petitioner's Submission

- 4.62 The Petitioner has considered PGCIL losses in the Northern Region at 5.81% and losses in DTL network at 1.25% as considered by the Commission in the latest MYT tariff order 2011.
- 4.63 The Petitioner has submitted that the PGCIL transmission charges for the MYT period are projected as per CERC order dated 29/6/2011, for POC (point of connection) rates and escalated at 5% per annum, similarly base DTL charges of FY 2011-12 are escalated at 5% per annum to derive DTL charges through FY 2014-15:

Table 46: Transmission Losses and Charges for the Petitioner

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
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Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Transmission Losses (in MU)			
Inter-State (PGCIL)	43.68	43.68	43.68
Intra-State (DTL)	32.82	33.19	33.19
Total Transmission Losses	76.49	76.86	76.86
Transmission Charges (Rs. Cr)			
Inter-State (PGCIL)	20.25	21.26	22.32
Intra-State (DTL)	125.11	131.36	137.93
Total Transmission Charges	145.35	152.62	160.25

Commission's Analysis

- 4.64 In the absence of consolidated data for the eastern grid for FY 2011-12, the Commission has considered the eastern region losses based on the average of the weekly losses reported by ERPC on its website from April 1, 2010 to March 27, 2011 at 2.43%. The losses for the northern region have considered based the average losses for FY 2011-12 at 3.55%, as reported on the NRPC website.
- 4.65 The intra-state transmission losses of 1.20% have been approved based on the actual losses for FY 2011-12 reported by Delhi Transco Limited on its website.
- 4.66 Since the actual PGCIL transmission charges for NDMC for FY 2011-12 were not available, the Commission has estimated the same by considering the actual PGCIL transmission charges submitted by TPDDL for FY 2011-12 and the allocation of total long term PPAs to NDMC and TPDDL. The Commission has approved inter-state transmission charges for FY 2012-13 to FY 2014-15 by considering an inflation factor of 5% per annum on the estimated charges for FY 2011-12.
- 4.67 The intra-state transmission charges have been allowed based on the ARR approved by the Commission for Delhi Transco Limited (DTL) for each year of the Control Period. The charges for SLDC have been projected by escalating the approved SLDC charges for FY 2010-11 by 5% per annum.
- 4.68 The PGCIL and DTL transmission losses and the cost is summarised below:

Table 47: Transmission Losses and Charges approved by the Commission for Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Transmission Losses (in MU)			
Inter-State (PGCIL)	39.92	54.01	54.01
Intra-State (DTL)	28.72	33.33	33.33
Total Transmission Losses	68.64	87.33	87.33
Transmission Charges (Rs. Cr)			
Inter-State (PGCIL)	21.47	22.55	23.68
Intra-State (DTL) including SLDC charges	81.53	70.23	80.08
Total Transmission Charges	103.00	92.77	103.75

Energy Balance**Petitioner's Submission**

4.69 The total power purchase cost and the energy balance submitted by the Petitioner is shown in the table below:

Table 48: Energy Balance for the Control Period submitted by the Petitioner

Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)
NCTPS Dadri	751.72	303.79	4.04	751.72	318.65	4.24	751.72	333.01	4.43
Badarpur TPS	641.43	286.54	4.47	641.43	306.55	4.78	641.43	325.53	5.08
IPGCL - Gas Turbine	3.54	1.72	4.86	3.54	1.88	5.29	3.54	2.05	5.77
IPGCL - Rajghat	1.91	1.11	5.80	1.91	1.28	6.72	1.91	1.50	7.86
Pragati Power Station	577.79	210.08	3.64	577.79	218.72	3.79	577.79	227.76	3.94
Pragati III	692.58	281.88	4.07	722.26	293.96	4.07	722.26	293.96	4.07
Generating Stations-Total	2668.97	1085.11	4.07	2698.65	1141.04	4.23	2698.65	1183.80	4.39
Bilateral purchases	0.00	0.00		0.00	0.00		0.00	0.00	
Inter Discom sales	-1198.30	-419.40	3.50	-1176.11	-411.64	3.50	-1121.38	-392.48	3.50
Bilateral sales	0.00	0.00		0.00	0.00		0.00	0.00	
Bilateral-Total	-1198.30	-419.40	3.50	-1176.11	-411.64	3.50	-1121.38	-392.48	3.50
Grand Total	1470.68	665.71	4.53	1522.55	729.40	4.79	1577.27	791.32	5.02
Total Apportioned Inter-State transmission losses	43.68	20.25		43.68	21.26		43.68	22.32	
Total Apportioned Intra-State transmission losses	32.82	125.11		33.19	131.36		33.19	137.93	
Total energy input to Distribution Company system	1394.19	811.07	5.82	1445.68	882.02	6.10	1500.41	951.57	6.34

Commission's Analysis

4.70 Total power purchase for the Control Period as approved by the Commission is summarised in the table below.

Table 49: Energy Balance for the Control Period approved by the Commission

Source	FY 2012-13			FY 2013-14			FY 2014-15		
	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)	Quantum (MU)	Amount (Rs Cr)	Rate (Rs/unit)
Power Purchase from CSGS [#]	1124.59	454.53	4.04	1521.42	648.21	4.26	1521.42	661.06	4.35
PGCIL losses & Charges	39.92	21.47		54.01	22.55		54.01	23.68	
Power purchase from Delhi Stations ^{\$}	1302.75	522.39	4.01	1302.75	542.44	4.16	1302.75	564.35	4.33
Power Available at Delhi Periphery	2387.41	998.39		2770.16	1213.19		2770.16	1249.08	
DTL loss & Charges including SLDC Charges	28.72	81.53		33.33	70.23		33.33	80.08	
Power Purchase Rebate @ 2%		19.54			23.81			24.51	
Rebate on Transmission Charges @ 2%		2.06			1.86			2.08	
Power available to NDMC	2358.69	1058.32	4.49	2736.83	1257.75	4.60	2736.83	1302.57	4.76
Sales	1253.43			1317.43			1385.31		
Distribution loss	144.71			148.01			151.36		
Required Power	1398.14	674.10	4.82	1465.44	749.19	5.11	1536.67	822.51	5.35
Surplus/ (Deficit) Power available at NDMC Boundary	960.55	384.22	4.00	1271.39	508.56	4.00	1200.16	480.06	4.00

* Average cost in Rs per unit

[#] Includes NTPC (except Badarpur TPS), NHPC, SJVNL, THDC, NPCIL, NCTPS Dadri, and Future Stations

^{\$} Includes Badarpur TPS, PPCL, IP Stations, Rajghat and GTPS

Power Purchase Adjustment

- 4.71 The Distribution Licensees procure power from central generating stations, state generating stations through the long-term power purchase agreements and through short-term purchases. The power purchase cost accounts for about 80% of Annual Revenue Requirement of the distribution licensees and includes the cost paid for procurement of power, transmission charges, UI charges, SLDC/RLDC charges. The net power purchase cost after deducting amounts realized from sale of surplus power is considered for purpose of ARR.
- 4.72 The Commission recognizes that the power purchase costs are uncontrollable in nature and are volatile making it difficult to accurately estimate power purchase costs at the time of annual tariff fixation. The power purchase cost is beyond the control of distribution licensees and dependent upon following factors:
- (a) Price of Fuel (Coal/Gas) which is highly unpredictable as has been seen from the data of past few years.
 - (b) Availability of power from new sources.
 - (c) Weather conditions such as extreme harsh summers/cold which have direct impact on the demand.
 - (d) Demand supply gap of power within the country.
- 4.73 Any fluctuation in the cost of fuel is a pass through for the generator through a fuel price adjustment formula and is payable by the distribution licensees in their monthly bills.
- 4.74 Power purchase cost being uncontrollable, in nature, is pass-through to the consumers but the difference in actual cost of procurement of power and the estimated cost of purchase of power gets trued up only after 2 years. The time lag of two years puts additional burden on consumers by way of interest charges which have to be borne by the consumers, additionally.
- 4.75 A public hearing was held in the Commission's court room from April 26, 2012 to April 30, 2012 regarding the petitions filed by the TPDDL, BRPL, BYPL and NDMC for true-up of expenses for FY 2010-11 and approval of ARR and Generation Tariff for FY 2012-13 to FY 2014-15. In the public hearing, stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. Some of the stakeholders put forth their views on power purchase adjustments also.
- 4.76 The Commission heard the stakeholders, consumers and the petitioners at length. The Commission has also pursued the suggestions and objections of various stakeholders and consumers received in the Commission. Further, the Commission has examined the entire record placed before the Commission and also considered the relevant provisions of the Electricity Act, 2003, Rules & Regulations made there under, Tariff Policy and National Electricity Policy.

- 4.77 The Commission observed that Section 62(4) of the Electricity Act, 2003 provides that:

“No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified”

- 4.78 The provision 5.3(4) of the Tariff Policy provides that:

“Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation taxes and cess, variations in power purchase unit costs including on account of hydro-thermal mix in case of adverse natural events.”

- 4.79 The Hon’ble ATE vide in its judgment dated November 11, 2011 in the matter of Suo-Motu action on the letter received from Ministry of Power (O.P. 1 of 2011) has observed that the Power Purchase Cost is a major expenditure in the ARR of the Distribution Licensee. Both the Fuel and Power Purchase Cost are uncontrollable and both have to be allowed to be recovered as quickly as possible.

- 4.80 In view of the above, Commission has decided to implement a Power Purchase Cost Adjustment for generating stations having long term PPA’s with DISCOMs on quarterly basis in order to adjust the changes in the Power Purchase Cost levied by these Generating Companies on the Distribution Companies.

- 4.81 The power purchase adjustment mechanism will ensure that these changes are passed on to the consumer in a timely manner instead of being deferred to the time when true up is carried out for the Discoms and then recovered with carrying cost.

- 4.82 The Commission does not intend to include the variation on account of short term power purchase and sale in the power purchase adjustment since it would require prudence check and would delay quarterly Power Purchase Adjustment.

- 4.83 The Power Purchase Adjustment would be done according to the formula given below:

Power Purchase Adjustment (PPA) formula

$$\text{PPA for } n^{\text{th}} \text{ Qtr. (\%)} = \frac{(A-B)*C}{\{Z * (1 - \frac{\text{Distribution losses in \%}}{100})\} * \text{ABR}}$$

Where,

A = Total units procured in (n-1)th Qtr (in kWh) from power stations having long term PPAs – (To be taken from the bills of the Gencos issued to distribution licensees)

B = Proportionate bulk sale of power from Power stations having long term PPAs in (n-1)th Qtr (in kWh)

$$= \frac{\text{Total bulk sale in (n-1)}^{\text{th}} \text{ Qtr (in kWh)} * A}{\text{Gross Power Purchase including short term power in (n-1)}^{\text{th}} \text{ Qtr (in kWh)}}$$

Total bulk sale and gross power purchase in (n-1)th Qtr to be taken from provisional accounts to be issued by SLDC by the 10th of each month

C = Actual average Power Purchase Cost (PPC) from power stations having long term PPAs in (n-1)th Qtr (Rs./ kWh) – Projected average Power Purchase Cost (PPC) from power stations having long term PPAs (Rs./ kWh) (from tariff order).

$$Z = \frac{[\{\text{Actual Power purchased from Central Generating Stations having long term PPA in (n-1)}^{\text{th}} \text{ Qtr (in kWh)} * (1 - \frac{\text{PGCIL losses in \%}}{100}) + \text{Power from Delhi Gencos including BTPS (in kWh)} * (1 - \frac{\text{DTL losses in \%}}{100}) - B]}{\text{in kWh}}$$

$$\text{Power from Delhi Gencos including BTPS to be taken from provisional accounts to be issued by SLDC by the 10}^{\text{th}} \text{ of each month}$$

ABR = Average Billing Rate for the year (to be taken from the Tariff Order)

Distribution Losses (in %) = Target Distribution Losses (from Tariff Order)

PGCIL Losses (in %)

$$= 100 \times \frac{\text{Approved PGCIL losses in Tariff Order (kWh)}}{\text{Approved Long Term Power Purchase from Central Generating Stations having long term PPA in the Tariff Order (kWh)}}$$

$$\text{DTL Losses (in \%age)} = \frac{\text{Approved DTL Losses (from the Tariff Order)}}{\text{Power available at Delhi periphery (from energy balance table tariff order)}}$$

Table 50: Schedule – Base Cost FY 2012-13*

Name of the Station	Quantum	Total Cost (Rs/Cr.)	Average rate (Rs/Cr.)
BTPS	675.23	316.98	4.69
NCTPS (Dadri)	798.45	307.77	3.85
Rajghat	2.11	1.05	4.97
GAS TURBINE	4.99	2.05	4.11
Pragati -I	620.41	202.30	3.26
PPCL-III, Bawana	326.13	146.76	4.50
Total	2427.33	976.92	4.02

*Power Purchase Cost of stations from which power is being received as on March 31, 2012 have been considered for calculation of the Base Rate

4.84 In order to give effect to the Power Purchase Adjustment (PPA) on quarterly basis the following be implemented:

- (a) The PPA will be charged to all categories of consumers.
- (b) The PPA for any quarter would be charged only after it is approved by the Commission.
- (c) The weighted average base cost in Rs./kWh shall be as approved in this Tariff Order for FY 2012-13, as given below:

$$\text{NDMC} = \text{Rs. } 4.02^*$$

* Detailed computation is given in Table 50 above for NDMC. The Schedule will be revised in every subsequent Tariff Order.

- (d) The Distribution licensee shall submit to the Commission the details in respect of changes in power purchase cost of plants having long term PPAs, as listed in Table 50, for (n-1)th quarter. Further, Auditor's Certificate along with statement indicating plant-wise details of fixed charges, variable charges, other charges and units purchased from each plant having long term PPA, as listed in Table 50, for (n-1)th quarter shall be furnished along with the proposal of PPA surcharge submitted for the Commission's approval.
- (e) The percentage of PPA will be rounded off to two decimal places.
- (f) The percentage increase on account of PPA will be applied as a surcharge on the total energy and fixed charges (excluding theft bills, arrears, LPSC, E. Tax etc.) billed to a consumer of the utility.
- (g) The bill format shall clearly identify the PPA percentage and amount of PPA billed as separate entries.
- (h) The PPA calculated for any quarter, the first quarter being July-September 2012, shall be applied prospectively for 3 months after approval is received from the Commission.
- (i) In view of the fact that PPA computed for any quarter will be applied after a time delay for a subsequent 3-month period, there would necessarily be a difference between the actual power purchase cost increase and the recovery by the distribution utility through the quarterly adjustments. The difference will be adjusted at the time of annual true-up undertaken by the Commission for that year.
- (j) This Power Purchase Adjustment (PPA) formula shall remain applicable till it is amended, reviewed, revised or otherwise amended.

Controllable Parameters**Operation and Maintenance Expenses**

4.85 As per MYT Regulations, 2011, the Operation and Maintenance (O&M) expenses for a licensee shall include:

- (a) Salaries, wages, pension contribution and other employee costs;
- (b) Administrative and General expenses which shall also include expense related to raising of loans;
- (c) Repairs and Maintenance; and
- (d) Other miscellaneous expenses, statutory levies and taxes (except corporate income tax).

4.86 The Commission has specified the following methodology for calculation of O&M expenses for the Control Period.

“5.4 The Licensee shall submit the O&M expenses for the Control Period as prescribed in Multi Year Tariff filing procedure. The O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.

5.5 O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:

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

Where,

- (i) $R\&M_n = K * GFAn-1$;
- (ii) $EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX)$;
- (iii) $INDX = 0.55 * CPI + 0.45 * WPI$;
- (iv) X_n is an efficiency factor for n th year. Value of X_n shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;
- (v) EMP_n – Employee Costs of the Licensee for the n th year;

- (vi) *A&Gn – Administrative and General Costs of the Licensee for the nth year; and*
- (vii) *R&Mn – Repair and Maintenance Costs of the Licensee for the nth year.*

Where,

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

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

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

Base year and Inflation Factor

- 4.88 As per the MYT Regulations 2011, the O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.
- 4.89 As per Regulation 5.5 of the MYT Regulations 2011, the inflation factor (INDX) to be used for projection of employee and A&G expenses shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year.
- 4.90 The CPI and WPI values for calculation of the inflation factor are given below.

Table 51: Actual CPI and WPI

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

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

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

Table 52: Projected CPI and WPI during the Control Period

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

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

Table 53: Inflation factor for the Control Period approved by the Commission

Year	Index (Consolidated)	Escalation Factor
2011-12 (Base Year)	176.45	
2012-13	190.62	1.080
2013-14	205.94	1.080
2014-15	222.53	1.081

Employee Expenses

Petitioner's Submission

- 4.93 The Petitioner has submitted that the projected Employee Expense for FY 2012-13 to FY 2014-15 as Rs 92.68 Cr, Rs 100.50 Cr and Rs 108.99 Cr respectively.

- 4.94 Further, the Petitioner submitted that Rs 10.86 Cr of employee expense is expected to be capitalised during FY 2012-13. Capitalisation of employee expense in FY 2013-14 and FY 2014-15 are Rs 11.77 Cr and 12.77 Cr respectively.
- 4.95 To compute the escalation factor, NDMC has considered the CPI (overall) for Industrial Workers published by the Labour Bureau and the WPI component is linked to A&G costs and hence has been taken from the WPI (overall) published by the Central Statistical Organization. The Petitioner has considered an escalation factor of 1.0844 for calculating employee and A&G expense.
- 4.96 The following table shows the projections for employee expenses allocated to the electricity business of NDMC for the Control Period as submitted by the Petitioner.

Table 54: Proposed Employee Expenses for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Total Employee Expenses	92.68	100.50	108.99
Less: Capitalisation	10.86	11.77	12.77
Net Employee Expenses	81.82	88.73	96.22

Commission's Analysis

- 4.97 The Commission has determined the employee expenses of the Petitioner for the Control Period using the methodology detailed in the MYT Regulations, 2011. As per the MYT Regulations;

$$“EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX_n / INDX_{n-1})”$$

- 4.98 Hence, the employee expenses for the nth year (FY 2012-13) of the Control Period (EMP_n) shall be determined using the employee expenses for the (n-1)th year (FY 2011-12) (EMP_{n-1}) and the applicable inflation factor.
- 4.99 The Commission in the Order dated August 26, 2011 had revised the Employee expense for each year of the previous Control Period (FY 2007-08 to FY 2011-12) on account of implementation of the 6th Pay Commission Recommendation for DVB employees (specified in Para 3.18 to 3.25 of the August Order)
- 4.100 The Commission has adopted the principle laid in the MYT Regulations 2011 and applied an inflation factor, specified in Table 53, on the Gross Employee Expense approved for FY 2011-12, as per the Order dated August 26, 2011.
- 4.101 The capitalisation of employee expenses has been discussed later in this Tariff Order in the section “Capitalisation of Expenses and Interest charges”.
- 4.102 The approved employee expenses of the Petitioner for each year of the Control Period are as shown below.

Table 55: Approved Revised Employee Expenses for the Previous Control Period (Rs Cr)

Particulars	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Index(n)/ Index (n-1)		1.0466	1.0466	1.0466	1.0466	1.0466
Gross Employee Expense Approved	54.13	56.65	59.29	111.07	78.66	82.32
Less: Capitalisation		8.48	8.87	9.29	9.96	10.01
Net Employee Expense Approved		48.17	50.42	101.78	68.70	72.32

Table 56: Approved Employee Expense for the current Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Index(n)/ Index (n-1)	1.0800	1.0800	1.0810
Gross Employee Expense Approved	88.91	96.02	103.80
Less: Capitalisation	10.42	11.25	12.16
Net Employee Expense Approved	78.49	84.78	91.64

Administration & General Expenses**Petitioner's Submission**

- 4.103 The Petitioner has submitted that in accordance with the MYT regulations, A&G expenses is linked to an inflation-based escalation factor (1.0844) that takes into account the inflation indices of the immediate past five years, as submitted in the table below:

Table 57: A&G Expense proposed by Petitioner for Control Period (Rs Cr)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Index(n)/ Index (n-1)		1.0844	1.0844	1.0844
Base A&G Expense	14.11			
A&G Expense		15.30	16.59	18.00

Commission's Analysis

- 4.104 For the purpose of calculating A&G Expense the Commission has determined the A&G Expenses for the Control Period using the methodology as specified in the MYT Regulations, 2011.
- 4.105 The Commission has approved A&G expense for the Control Period by applying the inflation factor (specified in Table 53) on the A&G Expense approved for FY 2011-12 in the Order dated August 26, 2011.
- 4.106 The summary of A&G Expenses as approved by the Commission is given in the table below:

Table 58: Approved A&G Expense for previous Control Period (Rs Cr)

Particulars	Base Year FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Index(n)/ Index (n-1)		1.0466	1.0466	1.0466	1.0466	1.0466
Gross A&G Expense approved	11.46	11.99	12.55	13.14	13.75	14.39
Less: approved capitalisation	0.00	0.00	0.00	0.00	0.00	0.00
Net A&G Expense approved	11.46	11.99	12.55	13.14	13.75	14.39

Table 59: Approved A&G Expense for current Control Period (Rs Cr)

Particulars	Base Year FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Index(n)/ Index (n-1)		1.0800	1.0800	1.0810
Gross A&G Expense approved	14.39	15.54	16.79	18.15

R&M Expenses

Petitioner's Submission

4.107 The Petitioner has submitted that R&M expenses have been worked out by applying the formula as per MYT Regulations given by the Commission. Considering the FY 2006-07 as a base year, the value of 'K' factor by considering FY 2006-07 as base year the value of K is calculated by considering the R&M expenses as per Commission's MYT Order 2007 (4.99%).

4.108 R&M expenses as proposed by the Petitioner for the Control Period are as follows:

Table 60: Proposed R&M Expenses for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
GFA (Opening)	1050.00	1118.70	1150.40
R&M Expenses	52.50	55.82	57.40

Commission's Analysis

4.109 The Commission has considered the approved values of R&M Expenses and opening GFA approved after truing up of expenses for FY 2006-07 to calculate the of 'K factor' for the determination of R&M expenses for the previous Control Period. Since the petitioner does not maintain separate accounts for the electricity business, data on R&M expense incurred in the previous Control Period pertaining to electricity business is not available. Thus, the K factor considered by the Commission for the Control Period is kept at 4.99%.

4.110 The Commission has determined the R&M Expenses for FY 2012-13 to FY 2014-15, considering the closing level of GFA for FY 2011-12, as approved in the Order dated August 26, 2011 and 'K' factor approved by the Commission in the MYT Order (4.99%). The summary of R&M Expenses approved by the Commission for the Control Period is as shown below:

Table 61: Approved R&M Expenses for FY 2012-13 to FY 2014-15 (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
GFA (Opening)	1018.23	1086.94	1118.58
R&M Expenses	50.82	54.25	55.83

Capitalisation of Expenses

- 4.111 For capitalizing the Employee Expenses for the Control Period, in the MYT Order, the Commission has approved the capitalisation of Employee Expenses as submitted by the Petitioner in the ratio of approved gross Employee Expense to that proposed by the Petitioner, as shown in the table below:

Table 62: Employee Expense Capitalisation (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Employee Expenses Capitalised	10.42	11.25	12.16

Efficiency Factor

Petitioner's Submission

- 4.112 NDMC has not proposed any efficiency factor to be considered while making projections for the O&M expenses.

Commission's analysis

- 4.113 As per the MYT Regulations, 2011, for determination of distribution tariff, O&M expenses for the Control Period are to be determined using the following methodology:

"The O&M expenses for the n^{th} year of the Control Period shall be approved based on the formula shown below:

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

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

- 4.114 The Commission is of the view that the O&M trajectory for the Control Period shall be decided considering an expected annual efficiency improvement factor.
- 4.115 The Commission expects the Petitioner to improve its performance considering the significant investment made during the Control Period. Hence, the Commission has determined the efficiency improvement factor as 2%, 3% and 4% for FY 2012-13, FY 2013-14 and FY 2014-15 respectively.

- 4.116 The summary of total O&M Expenses approved by the Commission for the Control Period is provided in the table below.

Table 63: Approved O&M Expenses for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Employee Cost (Net of capitalisation)	78.49	84.78	91.64
A&G Expenses	15.54	16.79	18.15
R&M Expenses	50.82	54.25	55.83
Total O&M Expenses	144.86	155.81	165.61
Efficiency Improvement	2%	3%	4%
Net O&M Expenses	141.96	151.14	158.99

Administrative Department and Civil Engineering Department Expenses

Petitioner's Submission

- 4.117 The Petitioner has submitted that NDMC has a separate Administration department consisting of NDMC Board, Finance Department, General Administration, Law Department, Public Relations, Staff and Labour welfare, Vigilance department, Auto workshop, Information & Technology, Engineer-in-Chief etc. Also, there is a separate Civil Engineering Department and the services of the department are utilized for the civil portion of electrical works. Thus, the services of the Administration & Civil Engineering Department are common to all the functions carried out by the Petitioner and the expenditure pertaining to these departments should be allocated to all functions of the Petitioner.
- 4.118 For the Control Period, the Petitioner has submitted that it has proposed an escalation (by the inflation factor of 1.0844) as per the MYT regulations over the actual Administration and Civil Engineering department expense for FY 2010-11.
- 4.119 NDMC has submitted that it has followed the Commission Order dated November 2, 2005 for allocation of expenditure relating Administrative and Civil Engineering Departments to Electricity Supply. In line with the aforesaid Order NDMC has allocated 19% of the employee salaries (except for the electricity business) in the electricity supply business. Besides, NDMC has made an additional provision of Rs. 13.36 Cr, Rs 14.49 Cr and 15.71 Cr for FY 2012-13, FY 2013-14 and FY 2014-15 respectively for the cost incurred by the Civil Engineering Department.
- 4.120 Allocation of total expenses against admin and civil engineering department towards electricity distribution business for the Control Period is summarized below:

Table 64: Proposed Administrative & Civil Engineering Department Expenses for Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Expenses related to administrative department	80.56	87.37	94.74
Expenses related to civil engineering department	13.36	14.49	15.71
Total Expenses allocated	93.92	101.85	110.45

Commission's Analysis

- 4.121 The Petitioner has decided to adopt the National Municipal Accounting Manual by customising it to the requirements of NDMC. The adoption of Accounting Manual will involve the implementation of the double entry accounting system and hence, separate booking of the cost of works carried out by Civil Engineering Department for Electricity Department. The Petitioner would provide complete details of expenditure relating to common departments to the electricity supply once the National Municipal Accounting Manual and double entry accounting system is implemented within NDMC.
- 4.122 The Commission had in its Tariff Order dated November 2, 2005, already elaborated in detail the justification for allocating the cost of Civil Engineering Department to the Electricity Department. As the exact details of the cost of the works carried out by the Civil Engineering Department for Electricity Department were not available, the Commission, for the purpose of determination of ARR for FY 2005-06, has considered a lump sum amount of Rs. 10.00 Cr on provisional basis towards this expenditure. As the details of cost of works carried out by the Civil Engineering Department for electricity are still not available, the Commission has considered the same amount for the Control Period towards this expense. The Commission will consider the actual cost of works carried out by Civil Engineering Department for electricity appropriately during the truing up process at the end of the year.
- 4.123 *The Commission directs the Petitioner to separately book the cost of works carried out by civil engineering department for electricity department and provide complete details of such works and associated costs at the end of the year bringing out clearly the percentage expenditure of Civil Engineering Department booked to electricity department vis-à-vis all other departments.*
- 4.124 The Commission had in its Tariff Order dated November 2, 2005 elaborated in detail the justification for allocating the Administrative Department expenses to the Electricity Department. With respect to allocation of the Administrative Department expenses, the Commission re-iterates its opinion that the Administrative Department of NDMC is a common department, which serves the requirement of all the departments of NDMC. Therefore, the expenses of Administrative Department need to be shared by all the departments of NDMC. As the total cost incurred on administrative department is not available, therefore the Commission proposes to consider Rs 35.37 Cr towards administrative expenses allocated to electricity department for each year of the Control Period, same as approved for FY 2006-07 in previous Tariff Order.
- 4.125 The summary of Administrative and Civil Engineering Department expenses allocated to electricity department as considered by the Commission for the Control Period is given below:

Table 65: Approved Admin & Civil Engg. Dept. Expenses for the Control Period

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Civil Engineering Department	10.00	10.00	10.00
Administrative Department	35.37	35.37	35.37
Total Expenses allocated (Rs Cr)	45.37	45.37	45.37

Capital Investment

Petitioner's Submission

4.126 The Petitioner has proposed a capital expenditure for FY 2012-13 to FY 2014-15 as per the table given below:

Table 66: Estimated Capital Investment Plan for the Second Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Capital Investments Plan on new schemes proposed during FY 2012-13 to FY 2014-15			
AT&C Loss Reduction	13.00	11.00	6.00
System Reliability Improvement Works	6.88	3.00	3.15
Load Growth	2.00	2.38	2.28
Capital Repairs	0.00	0.00	0
Sub-total	21.88	16.38	11.43
Capital Investments Plan on old schemes/ongoing schemes spill over to FY 2011-12 to FY 2014-15			
AT&C Loss Reduction	0.10	0.00	0.00
System Reliability Improvement Works	8.62	0.00	0.00
Load Growth	15.00	1.30	0.00
Capital Repairs	0.00	0.00	0.00
Sub-total	23.72	1.30	0.00
Total	45.60	17.68	11.43

Commission's Analysis

4.127 The Commission provisionally approves Rs 45.60 Cr, Rs 17.68 Cr and Rs 11.43 Cr as capital expenditure for FY 2012-13, FY 2013-14 and FY 2014-15 respectively, as proposed by the Petitioner.

Asset Capitalisation

Petitioner's Submission

4.128 The Petitioner has proposed to capitalize assets for FY 2012-13 to FY 2014-15, as shown in the table below:

Table 67: Proposed CWIP for the Second Control Period (Rs Cr.)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening CWIP	45.91	22.80	8.84
Additions to CWIP	45.60	17.68	11.43
Capitalisation of Investment	68.71	31.64	14.56
Closing CWIP	22.80	8.84	5.72

Commission's Analysis

- 4.129 The Commission has approved a capitalisation of assets worth Rs 68.71 Cr, Rs 31.64 and Rs 14.56 Cr for FY 2012-13, FY 2013-14 and FY 2014-15 respectively, as per the submissions made by the Petitioner. The Commission has considered the opening CWIP for FY 2012-13 as the approved closing CWIP for FY 2011-12 in the Order dated August 26, 2011.
- 4.130 The Commission would like to clarify that capitalisation approved below is provisional and is subjected to True-up on the basis of actual capital investment made and the schemes Commissioned by NDMC.

Table 68: Approved CWIP for the Control Period (Rs Cr)

Particular	FY 2012-13	FY 2013-14	FY 2014-15
Opening CWIP	62.41	39.30	25.34
Additions to CWIP	45.60	17.68	11.43
Capitalisation of Investment	68.71	31.64	14.56
Closing CWIP	39.30	25.34	22.22

Depreciation**Petitioner's Submission**

- 4.131 The Petitioner has submitted that it has charged depreciation on the basis of straight-line method, on the fixed assets in use at the beginning of the year. The depreciation is based on the original cost, estimated life and residual life. As per the methodology adopted by the Hon'ble Commission, depreciation has been computed at 3.6% of opening level of GFA. The Table below summarizes the depreciation claimed by the NDMC:

Table 69: Proposed Depreciation for FY 2012-13 to FY 2014-15 (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Opening Balance of Fixed Assets	1050.02	1118.73	1150.37
Addition during the year	68.71	31.64	14.56
Retirement during the year	0	0	0
Closing balance of fixed assets	1118.73	1150.37	1164.92
Average fixed assets	1084.37	1134.55	1157.65
Rate of Depreciation	3.60%	3.60%	3.60%
Depreciation	39.04	40.84	41.68

Commission's Analysis

- 4.132 As the asset-wise break up of assets is still not made available to the Commission by the Petitioner, the Commission has considered an average depreciation rate of 3.6% for the Control Period. The Commission may True Up depreciation expenses for the Control Period, once the break up of assets and their classification is provided.
- 4.133 The Petitioner is hereby directed to submit the break up of opening block of assets and assets capitalized during the year as per the classification specified in the MYT Regulations, 2011.
- 4.134 Based on the asset values during the previous Control Period and the average rate of depreciation considered in the MYT Order, the Commission has approved depreciation as follows.

Table 70: Approved Depreciation for the previous Control Period (Rs Cr)

Scheme	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
Opening Balance of Fixed Assets	343.14	406.50	561.62	763.38	905.73
Addition during the year	63.36	155.12	201.76	142.35	112.50
Retirement during the year	0.00	0.00	0.00	0.00	0.00
Closing balance of fixed assets	406.50	561.62	763.38	905.73	1018.23
Avg. fixed assets	374.82	484.06	662.50	834.56	961.98
Rate of Depreciation	3.60%	3.60%	3.60%	3.60%	3.60%
Depreciation	13.49	17.43	23.85	30.04	34.63

Table 71: Approved Depreciation for the current Control Period (Rs Cr)

Scheme	FY 2012-13	FY 2013-14	FY 2014-15
Opening Balance of Fixed Assets	1018.23	1086.94	1118.58
Addition during the year	68.71	31.64	14.56
Retirement during the year	0.00	0.00	0.00
Closing balance of fixed assets	1086.94	1118.58	1133.14
Avg. fixed assets	1052.59	1102.76	1125.86
Rate of Depreciation	3.60%	3.60%	3.60%
Depreciation	37.89	39.70	40.53

Return on Capital Employed

- 4.135 The Return on Capital Employed (RoCE) for the Petitioner shall be determined as specified in the MYT Regulations, 2011. The RoCE can be determined only after determination of the Regulated Rate Base (RRB) for any particular year, and the Weighted Average Cost of Capital (WACC) for the year.

Regulated Rate Base**Petitioner's Submission**

- 4.136 The Petitioner has estimated its Regulated Rate Base (RRB) for each year of the Control Period based on the formula specified in the MYT Regulations, as shown below.

Table 72: Proposed RRB for the Control Period (Rs Cr.)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RB (Opening)	720.60	783.82	779.97
$\Delta AB (E=F-G-H)$	29.67	-9.20	-27.12
Investments in the Year (F)	68.71	31.64	14.56
Depreciation (G)	39.04	40.84	41.68
Consumer Contribution (H)	0	0	0
Change in WC (I)	33.55	5.35	5.65
RB (Closing) (J=D+E+I)	783.82	779.97	758.5
Regulated Rate Base (RRB_i) (K=D+(E/2)+I)	768.98	784.57	772.06

Commission's Analysis

- 4.137 The Commission has approved RRB as per the MYT Regulations, 2011. The summary of RRB approved by the Commission for the previous and current Control Period is provided in the table below:

Table 73: Approved RRB for the previous Control Period (Rs Cr)

	Particulars	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12
A	OCFA	343.14	-	-	-	-	-
B	Opening Balance of Working Capital	8.18	-	-	-	-	-
C	Accumulated Depreciation	239.25	-	-	-	-	-
E	RRB (opening)	-	112.07	179.20	327.86	509.97	633.28
F = G-H-I-J	ΔAB	-	49.87	137.69	177.91	112.31	77.87
G	Investments capitalized	-	63.36	155.12	201.76	142.35	112.50
H	Depreciation	-	13.49	17.43	23.85	30.04	34.63
J	Consumer Contribution	-	0.00	0.00	0.00	0.00	0.00
K	Change in WC	-	17.26	10.97	4.20	11.00	26.99
L = E+F+K	RRB (Closing)	112.07	179.20	327.86	509.97	633.28	738.14
M = E+F/2+K	RRB(i)	-	154.27	259.02	421.02	577.13	699.20

Table 74: Approved RRB for the current Control Period (Rs Cr)

	Particulars	FY 2012-13	FY 2013-14	FY 2014-15
A	RRB (opening)	738.14	797.41	797.73
B= C-D-E	Δ AB	30.82	-8.06	-25.98
C	Investments capitalized	68.71	31.64	14.56
D	Depreciation	37.89	39.70	40.53
E	Consumer Contribution	0.00	0.00	0.00
F	Change in WC	26.66	8.30	7.19
G = A+B+F	RRB (Closing)	795.62	795.86	777.07
H= A+B/2+F	RRB(i)	780.21	799.89	790.06

Working Capital Requirement

Petitioner's Submission

4.138 The Petitioner has submitted that Working Capital requirement estimates are done as per the MYT regulations, 2007 and has considered the following components for calculating its working capital requirements:

- Receivables for two months towards tariffs & charges; and
- Operation and Maintenance expenses for one month.
- Less Power Purchase Expenses for one month

Table 75: Proposed Working Capital for the Second Control Period (Rs Cr.)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Annual Revenue for Wheeling and Retail supply Charges	731.46	763.79	798.47
Receivables equivalent to 2 months average billing	121.91	127.3	133.08
O&M Expense	149.52	161.15	171.62
1/12 th of O&M Expense	12.46	13.43	14.30
Power Purchase expenses	811.06	882.02	951.57
Less: 1/12th of power purchase expenses	39.82	39.82	39.82
Less: Consumer Security Deposit	30.36	31.37	32.37
Total Working capital	64.18	69.53	75.18

Commission's Analysis

4.139 As per MYT Regulations, 2011:

“Working Capital

5.14 Working capital for wheeling business of electricity shall consist of

(a) Receivables for two months of Wheeling Charges.

5.15 Working capital for retail supply of electricity shall consist of

(a) Receivables for two months of revenue from sale of electricity;

(b) Less: Power purchase costs for one month;

(c) Less: Transmission charges for one month.”

- 4.140 Based on the principles of the MYT Regulations, 2011, the Commission approves the working capital requirement for the Second Control Period (FY 2012-13 to FY 2014-15) for Wheeling and Retail Supply Business as shown in the table below:

Table 76: Approved Working Capital for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Receivables			
Annual revenues from Tariffs and Charges	968.66	1055.98	1135.78
Receivables equivalent to 2 months average billing	161.44	176.00	189.30
Power Purchase expenses	573.16	658.28	720.83
Less: 1/12 th of power purchase expenses	47.76	54.86	60.07
Transmission Expense	100.94	90.92	101.68
Less: 1/12 th of transmission expense	8.41	7.58	8.47
Wheeling Expense	0.00	0.00	0.00
Less: wheeling expense for 2 months	0.00	0.00	0.00
Total Working Capital - Retail Supply	105.27	113.56	120.75

Means of Finance

Petitioner's Submission

- 4.141 The Petitioner has submitted that NDMC does not have any debt on its books and proposes no debt financing in future for its capital expenditure plan also. The Petitioner has proposed to finance entire capital expenditure for the Control Period through internal funds from other departments which would be treated as debt and interest would be paid on it. However, the Petitioner while calculating the RoCE has considered normative debt-equity ratio of 70:30.

Commission's Analysis

- 4.142 The Commission has observed that the funding of capital works in NDMC is done either through budgetary allocation or through internal funds from various departments. Since there is no equity funding the Commission has considered the funding of capital investment entirely through debt.

Determination of WACC and RoCE**Petitioner's Submission**

- 4.143 The Petitioner has submitted that as it does not have any debt on its books and no debt financing is proposed in future also. Therefore, the Petitioner has proposed to consider a notional loan at 70% of the total capital employed. Hence the D/E ratio taken to calculate WACC is considered as 70:30. The Petitioner has considered the cost of equity at 16% and the cost of debt at 11.50%. The WACC calculated using these figures comes out to be 13.8%.
- 4.144 The Petitioner has calculated the return on capital employed considering the RRB and the WACC for the respective years. The summary of the WACC and RoCE calculations, submitted by the Petitioner is provided in the table below.

Table 77: Proposed RoCE for FY 2012-13 to FY 2014-15 (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RRB - for each year	768.98	784.57	772.06
Gross Interest			
Average Loans Outstanding {(Op.Bal + Cl.Bal)/2}	518.87	553.99	570.16
Op. Balance of Debt (Normative)	494.82	542.92	565.07
Cl. Balance of Debt(Normative)	542.92	565.07	575.25
R _d - Percentage of Cost of Debt	11.50%	11.50%	11.50%
Average Balance of Equity {(op.Bal + Cl.Bal)/2}	565.51	580.57	587.50
R _e - Percentage of Return on Equity	16.00%	16.00%	16.00%
WACC	13.8%	13.8%	13.7%
RoCE	106.48	108.29	106.42

Commission's Analysis

- 4.145 The Commission observed that the Petitioner has applied the normative debt-equity ratio of 70:30 on the opening balance of the regulated rate base and the average value of all investments during the Control Period to obtain the closing balance of debt and equity in any year of the Control Period.
- 4.146 The Commission has however, considered the entire 100% financing of capital investment through debt.
- 4.147 The Commission has thereby calculated the RoCE for the Control Period based on the WACC derived and the regulated rate base approved for the Control Period, as explained above. The table below summarises the RoCE approved by the Commission for the Control Period.

Table 78: Approved RoCE for the FY 2011-12 (Rs Cr.)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
RRB _i	780.21	799.89	790.06

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Average Equity	278.88	276.46	268.67
Average Debt	650.72	645.08	626.90
Rate of Return on Equity	16.00%	16.00%	16.00%
Rate of Return on Debt	11.50%	11.50%	11.50%
WACC	11.50%	11.50%	11.50%
RoCE	89.72	91.99	90.86

Non Tariff Income

Petitioner's Submission

4.148 The Petitioner has submitted the Non Tariff Income (NTI) for FY 2012-13 to FY 2014-15 as per the table given below:

Table 79: Proposed Non-Tariff Income for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Miscellaneous Receipts	6.72	7.05	7.41
Meter Rent	0.41	0.43	0.45
Recovery of theft of energy	3.59	3.77	3.96
Service Administrative Charge	0.7	0.74	0.78
Sales & Hires Charges	0.02	0.02	0.03
Misc. Charges from Consumers	3.79	3.98	4.18
Delayed Payment Surcharge from Consumers	1.37	1.44	1.51
New Connection/Re-connection fees	0.27	0.28	0.3
Recovery of cost of burnt meters/ metering equipments	0.04	0.04	0.05
Meter Testing Charges	0.01	0.01	0.01
Recovery on Deposit Work	2.1	2.2	2.31
Other Receipts	1.38	1.44	1.52
Total	20.39	21.41	22.48

Commission's Analysis

4.149 The Commission has approved NTI for the Control period as per the submission made by the Petitioner:

Table 80: Approved Non-Tariff Income for the Control Period (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Non Tariff Income	20.39	21.41	22.48

Aggregate Revenue Requirement**Petitioner's Submission**

4.150 The table given below provides a summary view of the Aggregate Revenue Requirement (ARR) as proposed by the Petitioner for 2012-13 to FY 2014-15:

Table 81: Proposed ARR for FY 2012-13 to FY 2014-15 (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of power purchase	665.71	729.40	791.32
Inter-State Transmission charges	20.25	21.26	22.32
Intra-state Transmission (Delhi Transco) charges	0.41	0.43	0.45
Wheeling charges payable to other distribution licensee	124.70	130.93	137.48
O&M Expenses	149.52	161.15	171.62
Depreciation	39.04	40.84	41.68
Allocated Administrative and Civil Engineering Dept Exp	93.92	101.85	110.45
Advance against depreciation	0.00	0.00	0.00
RoCE	106.48	108.29	106.42
Income Tax	0.00	0.00	0.00
Less:			
Non Tariff income	20.39	21.41	22.48
Aggregate Revenue Requirement (A-B)	1179.63	1272.75	1359.26

Commission's Analysis

4.151 The table given below provides a summary view of the Revenue Requirement as approved by the Commission for FY 2012-13 to FY 2014-15. Detailed analysis of each expense head has already been provided in the above sections.

Table 82: Approved ARR for FY 2012-13 to FY 2014-15 (Rs Cr)

Particulars	FY 2012-13	FY 2013-14	FY 2014-15
Cost of power purchase, including T&D losses	573.16	658.28	720.83
Inter-State Transmission charges	21.04	22.10	23.20
Intra-state Transmission charges	74.03	62.66	72.01
SLDC Charges	5.87	6.16	6.47
Net Operation & Maintenance (O&M)	141.96	151.14	158.99
Depreciation	37.89	39.70	40.53
Administrative Dept. & Civil Engg. Dept	45.37	45.37	45.37
RoCE	89.72	91.99	90.86
Less:			
Non Tariff Income	20.39	21.41	22.48
Aggregate Revenue Requirement (A-B)	968.66	1055.98	1135.78

A5: TARIFF DESIGN

Components of Tariff Design

5.1 The Commission has considered the following components for tariff designing of the DISCOMs.

(d) Cross-subsidization in tariff structure

(e) Consolidated Sector Revenue Gap/(Surplus)

Cross-subsidisation in Tariff Structure

5.2 The Electricity Act, 2003 provides for reduction of cross subsidies by moving the category wise tariffs towards cost of supply. The Commission also recognises the need for reduction of cross subsidy. However, it is equally incumbent on the Commission to keep in mind the historical perspective for the need to continue with cross-subsidy for some time.

5.3 Regarding cross subsidy, clause 8.3 of the National Tariff Policy states,

“... Direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross subsidizing the tariff across the board. Subsidies should be targeted effectively and in transparent manner. As a substitute of cross subsidies, the State Government has the option of raising resources through mechanism of electricity duty and giving that subsidy to only needy consumers. This is a better way of targeting subsidies effectively.”

5.4 In line with the above provision of the National Tariff Policy, Regulation 9.1 of the MYT Regulations states that any consumer desirous of getting subsidized tariff shall approach the State Government and if the request for subsidy is found justified, the State Government may give subsidy to that class of consumers so that these consumers get electricity at concessional tariff.

5.5 At present, there are a number of consumer classes such as some slabs of domestic consumers, Agriculture & Mushroom Cultivation, Government Schools/Colleges, Hospitals, etc. which are being cross subsidized by other consumers. Several stakeholders have raised serious concern over cross subsidization of some categories and argued that after privatization, electricity distribution is purely commercial operation and there is no justification for making some consumers pays for others. If any class of consumers is to be given concessional tariff on socio-economic ground, the State government shall bear the cost on this count as supporting weaker sections of society is the responsibility of the government and this responsibility cannot be thrust upon other sections of consumers.

5.6 The Commission is of the view that in an ideal case electricity tariff for all categories of consumers should be fixed on cost to serve basis. In accordance with the Act and the policies prescribed from time to time, the Commission has made an attempt in this

Tariff Order to reduce the prevailing cross-subsidy as detailed in the subsequent sections.

Revenue (Gap)/ Surplus for NDMC

Revenue (Gap)/ Surplus till FY 2010-11

5.7 The Commission has approved the revenue (gap)/surplus for the Petitioner for FY 2010-11 (as discussed in detail in Chapter A3 of this Order) as summarised in the table below:

Table 83: Net Revenue (Gap)/ Surplus of NDMC for FY 2007-08 to FY 2010-11 (Rs. Cr)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
Opening level of Surplus/(Gap)	113.49	317.42	640.98	573.07
Revenue (Gap)/Surplus approved in the True-up Order for FY 2007-08	183.93			
Revenue Requirement for the year		240.50	641.70	789.36
Revenue at existing tariffs		519.67	519.76	598.64
Surplus/ (Gap) for the year		279.17	(121.94)	(190.72)
Additional Surplus/ (Gap) for the year on account of Hon'ble ATE orders	0.46			
Closing level of (Gap)/Surplus	297.88	596.59	518.07	382.36
Carrying Cost for the year @	9.50%	9.50%	9.50%	9.50%
Carrying Cost	19.54	43.42	55.01	45.38
Closing Balance of Net (Gap)/ Surplus	317.42	640.01	573.07	427.74

5.8 It can be seen from the above that the accumulated revenue surplus till FY 2010-11 for NDMC is Rs 427.74 Cr.

Revenue (Gap)/ Surplus for FY 2012-13 at Existing Tariffs

5.9 The Summary of net revenue (gap)/ surplus approved for NDMC at existing tariffs for the current year, FY 2012-13 is shown below:

Table 84: Approved Revenue Gap for FY 2012-13 at existing Tariff (Rs Cr)

Particulars	FY 2012-13
Revenue Requirement for the year	968.66
Revenue available at existing tariffs	737.08
(Gap)/ Surplus for the year	(231.58)

Treatment of Revenue (Gap)/Surplus

5.10 The revenue deficit for FY 2012-13 as submitted by the Petitioner for FY 2012-13 is R 448.17 Cr and the Petitioner has proposed a 27% hike in tariff to cover a part of the revenue gap. Keeping in view the significant deficit with NDMC and in an attempt to make tariffs cost reflective, the Commission has decided to revise the tariff for all

consumer categories in order to enable the Petitioner to, at the least, recover a part of the approved revenue requirement for FY 2012-13.

- 5.11 In the Tariff Orders issued for BRPL, BYPL and TPDDL, the Commission has taken steps towards reduction of cross-subsidy and has attempted to align the tariffs with the cost of supply at various voltage levels. However, the Commission would like to highlight that this Petitioner does not maintain asset-wise break-up at each voltage level. Therefore, it is difficult for the Commission to compute the cost of service at each voltage level for the Petitioner.
- 5.12 In view of the above, the Commission in this Tariff Order has still made an effort to reduce the prevailing cross subsidy level in the existing tariff structure. The prevailing tariff structure in Delhi contains a large degree of cross subsidy, with some categories of consumers paying well above the cost of supply. It has to be recognised that low and subsidised tariffs initiate inefficient high demand for power, which puts pressure on the system capacity and the quality of service. As per Section 61 (g) of the Electricity Act 2003, the tariff should progressively reflect the cost of supply of electricity and also reduce and eliminate cross-subsidies within the period to be specified by the Commission.
- 5.13 The Commission has also incentivised the category of consumers availing power at higher voltages since the incidence of loss at a higher voltage is lower as compared to the loss level of consumers connected at lower voltages.
- 5.14 With respect to Public Lighting, DMRC and Railway Traction, the Commission proposes to same fixed and energy charges as determined in case of BRPL, BYPL and TPDDL.
- 5.15 The Commission has replaced the two sub categories under NDLT from “Up to < 5 kW” and “More than 5 kW and less than and up to 100 kW/108 kVA” to “Up to < 10 kW” and “More than 10 kW and less than and up to 100 kW/108 kVA” respectively. Further, the consumption slabs for the domestic category have been re-categorised from the existing slabs of “0-200, 200-400 and above 400 units” to “0-200, 0-400 and above 400 units” (as detailed in the Tariff Schedule).

Revenue (Gap)/Surplus at Revised Tariffs

- 5.16 The summary of revenue billed at existing tariffs for NDMC for FY 2012-13 is shown below:

Table 85: Revenue at existing tariffs for FY 2012-13 (Rs. Cr)

Category	Revenue Billed
Domestic	86.08
Non Domestic	624.13
<i>Supply on Low Tension</i>	277.81
<i>Supply on 11 kV</i>	346.32
Small Industrial Power	0.18

Category	Revenue Billed
Public Lighting	8.30
Others	5.51
DMRC	12.88
Total	737.08
Total Revenue Realized @ 100% Collection Efficiency	737.08

- 5.17 After revision of the tariff, the summary of revenue at the tariff approved now is shown below:

Table 86: Revenue at revised tariffs for FY 2012-13 (Rs. Cr)

Category	Revenue Billed
Domestic	100.86
Non Domestic	714.78
<i>Supply on Low Tension</i>	319.65
<i>Supply on 11 kV</i>	395.13
Small Industrial Power	0.18
Public Lighting	10.14
Others	5.52
DMRC	15.72
Total	847.20
Total Revenue Realized @ 100% Collection Efficiency	847.20

- 5.18 After revision of the tariff, the net revenue (gap)/ surplus for NDMC for FY 2012-13 is shown below:

Table 87: Net Revenue (Gap)/ Surplus of NDMC at Revised Tariffs (Rs. Cr)

Particulars	FY 2012-13
Revenue Requirement for the year	968.66
Revenue available at revised tariffs	847.20
(Gap)/ Surplus for the year	(121.46)

- 5.19 The Commission has not bridged the entire revenue gap of FY 2012-13 in view of the accumulated surplus that is available to NDMC after true up of FY 2010-11 viz. Rs. 427.74 Cr.

Time of Day (ToD) Tariff

- 5.20 The Commission believes that Time of Day (ToD) tariff is an important Demand Side Management (DSM) measure to give a tariff signal so that peak hour consumption is charged at higher rates which reflect the higher cost of power purchase during peak hours. At the same time, a rebate is offered on consumption during off-peak hours. This is also meant to incentivise consumers to shift a portion of their loads from peak

time to off-peak time, thereby improving the system load factor and even out the load curve. The ToD tariff is aimed at optimizing the cost of power purchase, which constitutes over 80% of the tariff charged from the consumers. It also assumes importance in the context of propagating and implementing DSM and achieving energy efficiency. This is important in Delhi situation as load varies from 3000 MW to 5000 MW in summer causing problem of surplus during off peak hours.

- 5.21 Introduction of higher peak hour tariff would initially generate additional revenue which would compensate for the reduction in revenue on account of lower tariff during off-peak hours.
- 5.22 In the long run, this would provide signals to the consumers to reduce load during peak hours and, where possible, shift this consumption to off-peak hours. Any loss of revenue to the utility on account of shifting of load from peak to off-peak hours in the long run would be compensated by way of reduction of off-peak surplus to the extent of increase in off-peak demand.
- 5.23 The ToD Tariff would thus have immediate as well as long term benefits for both consumers as well as the utility and contribute towards controlling the rise in power purchase costs.
- 5.24 The Commission has decided to introduce TOD Tariff on a pilot basis for large industrial and consumers (300 kW and above). This pilot is targeted to the consumer segment which has capacity to bear a higher burden for peak hour consumption and also at least partly (if not fully) offset the impact of this increase through higher off-peak consumption at lower rates.
- 5.25 Time of Day (ToD) Tariff shall be applicable on all consumers (other than domestic) whose sanctioned load/MDI (whichever is higher) is 300 kVA and above as shown below:

Month	Peak Hour	Surcharge on Energy charges	Off-Peak Hour	Rebate on Energy Charges
April to September	15:00-24:00 Hrs.	10%	24:00-6:00 Hrs.	10%
October to March	17:00-23:00 Hrs.	5%	23:00-6:00 Hrs.	10%

**For other than peak and off-peak hours, normal energy charges will be applicable.*

Tariff Structure

Category		Fixed Charges ¹	Energy Charges ²
1	Domestic		
	0-200 ³	15 Rs/kW/month	310 Paisa/kWh
	0-400 ⁴	15 Rs/kW/month	410 Paisa /kWh
	Above 400units	15 Rs/kW/month	515 Paisa /kWh
2	Non Domestic		
2.1	Non- Domestic (Low Tension) (NDLT) up to 100 kW/108 kVA		
a)	Up to < 10 kW	25 Rs/kW/month	650 Paisa /kWh
b)	More than 10 kW and less than and up to 100 kW/108 kVA	30 Rs/kVA/month	700 Paisa /kVAh
c)	More than 100 kW/108 kVA		
I	Where supply is given from NDMC sub station	150 Rs/kVA/month	720 Paisa /kVAh
II	Where applicant provides built up space for sub station	135 Rs/kVA/month	680 Paisa /kVAh
2.2	Non- Domestic High Tension (NDHT) Supply at 11 kV		
	More than 100 kW/108 kVA	125 Rs/kVA/month	620 Paisa /kVAh ⁵
3	Small Industrial Power⁶	25 Rs/kW/month	600 Paisa /kWh
4	Public Lighting		
	Street Lighting ⁷		725 Paisa/kWh
	Signals and Blinkers		725 Paisa/kWh
5	Railway Traction⁸ (Supply at 33 kV and 66 kV)	150 Rs/kVA/month ⁹	580 Paisa/kVAh ⁵
6	DMRC (220kV/ 66kV)	125 Rs/kVA/month	500 Paisa/kVAh
7	Advertisements and Hoardings	500 Rs/ connection month/	1000 Paisa/kVAh
8	Temporary Supply		
8.1	For a total period of		
A.	Less than 16 Days	50% of the relevant category	Higher by 30% (Temporary Surcharge) of the relevant category
B.	More than or equal to 16 days	Same as that of relevant category	Higher by 30% (Temporary Surcharge) of the relevant category
8.2	For religious functions of traditional and established characters and cultural activities	Same as Domestic Category	Same as Domestic Category without Temporary Surcharge
8.3	For Major Construction projects	Same as that of relevant category	Higher by 30% (Temporary Surcharge) of the relevant category

Notes on superscripts:

- 1 For all categories other than Domestic, Fixed charges are to be levied on sanctioned load or MDI reading, whoever is higher, on per kW, or part thereof basis. Where the MDI reading exceeds contract demand by more than 5%; a surcharge of 30% shall be levied on the fixed plus energy charges for such billing cycle only. Wherever sanctioned load / contract demand is in kW/HP, the kVA shall be calculated on the basis of actual power factor of the consumer for the relevant billing cycle.
- 2 Time of Day (TOD) Tariff[#] - TOD tariff shall be applicable on all consumers (other than domestic) whose sanctioned load/MDI (whichever is higher) is 300 kVA and above as shown below:

Month	Peak hours	Surcharge on Energy Charges	Off-Peak hours	Rebate on Energy Charges
April-September	1500-2400 Hrs	10%	0000-0600 Hrs	10%
October-March	1700-2300 Hrs	5%	2300-0600 Hrs	10%

[#] For other than peak and off-peak hours normal energy charges will be applicable.

- 3 Applicable if consumption is up to 200 units per month for the relevant billing cycle.
- 4 Applicable if consumption is more than 200 units per month for the relevant billing cycle.
- 5 The incumbent shall be entitled for a rebate of 2.5% on the energy charges on 11 kV rates for availing supply on 33/66 kV and 4% for supply at 220 kV.
- 6 For industrial consumers having valid NDMC factory license.
- 7 Maintenance Charges on street lights would be additional to the specified tariff @ Rs. 84/light point/month and material cost at the rate Rs 19/point/month as per the Commission's order dated 22 September 2009 till further amended by the Commission. These charges will be payable to the DISCOM only if maintenance services are provided by the DISCOM.
- 8 Tariffs for northern railways Traction are based on the supply being given through a single delivery and metering point at single voltage. An additional capacity blockage charge is also applicable to be calculated as Rs 1260 x (2.97 A+5) where A is contract/maximum demand, whichever is higher, in MVA subject to a minimum of Rs 25000.
- 9 The simultaneous maximum demand, for all metering points, shall be considered for levy of demand violation charges.

Other Terms and Conditions of the Tariff

Category	Availability	Character of Service
1. Domestic	<p>1.1 Domestic Lighting/Fan and Power (Single Delivery Point and Separate Delivery Points/Meters)</p> <p>A) Available to following categories of consumers: Residential consumers Hostels of recognized/aided institutions of Government of the NCT of Delhi. Staircase lighting in residential flats separately metered. Compound lighting, lifts and water pumps etc., for drinking water supply and fire fighting equipment in residential complexes, if separately metered.</p> <p>In cooperative group housing societies etc. for bonafide use of lighting/fan and power, subject to the provision that the supply is at single delivery point for combined lighting/fan & power.</p> <p>(B) It is available to following consumers. Dispensary / Hospitals / Public Libraries / School / College / Working Women's Hostel /Orphanage/Charitable homes run by the Government of the NCT of Delhi.</p> <p>Small Health Centers approved by the Department of Health, Government of NCT of Delhi for providing Charitable Services only.</p> <p>Recognized Centers for welfare of blind, deaf and dumb, spastic children, physically handicapped persons, mentally retarded persons, as approved by the Government of NCT of Delhi.</p> <p>(C) Bed and Breakfast Establishments (Residential Premises) registered u/s 3 of the National Capital Territory of Delhi (Incredible India) Bed and Breakfast Establishments (Registration & Regulations) Act, 2007.</p> <p>(D) Places of worship.</p> <p>(E) Cheshire homes/orphanage.</p> <p>(F) Shelter Homes (including Night Shelters) approved by Delhi Urban Shelter Improvement Board, GoNCTD</p> <p>(G) Electric crematoriums.</p>	<p>AC 50 Hz, single phase, 230 Volts for load up to 10 kW & AC 50 Hz, three phase, 400 Volts for loads beyond 10 kW AC 50 Hz, 3 phase, 11 kV beyond 100 kW (108 kVA)</p>

Category	Availability	Character of Service
	<p>(H) Professionals i.e. individuals engaged in those activities involving services based on professional skills, viz. Doctor, Lawyer, Architect, Chartered Accountant, Company Secretary, Cost & Work Accountant, Engineer, Town Planner, Media Professional and Documentary Film Maker may utilize the domestic connection at their residence for carrying out their professional work in the nature of consultancy without attracting non-domestic tariff for the electricity consumed, provided the area used for professional activity does not exceed the area permitted to be used for such activity in residential area under the Master Plan for Delhi, 2021 (MPD-2021), which as per MPD-2021 is permissible on any one floor only but restricted to less than 50% of the permissible or sanctioned FAR whichever is less on that plot or dwelling unit.</p> <p>(I) Available, for loads up to 21 kW, to farm houses for bonafide domestic self use and bounded farm houses having minimum 50% of the total land for agriculture/vegetable cultivation.</p> <p>(J) The consumers running small commercial establishments from their households in JJ Clusters shall be charged domestic tariff provided that the total consumption of electricity in a month does not exceed 200 units.</p> <p>(K) Cattle / Dairy Farms with a total consumption of not more than 200 units/month and connected load of up to 2kW.</p>	
1.2 Domestic Connection on 11 kV single delivery point	Same as 1.1(A) and for CGHS flats and loads above 100 kW in case of individual	AC 50 Hz, three phase, 11 kV; on single delivery point

Category	Availability	Character of Service
2. Non-Domestic	<p>2.1.1 Non-Domestic (Low Tension) – NDLT</p> <p>Available to all consumers having load (other than the industrial load) up to 100 kW/108 kVA for lighting, fan & heating/cooling power appliances in all non-domestic establishments as defined below:</p> <p>Hostels (other than those recognized/aided institutions of Government of the NCT of Delhi)</p> <p>Schools/colleges (Other than those run by the Government of NCT of Delhi)</p> <p>Auditoriums, Hospitals, nursing homes / diagnostic centers other than those run by the Government of NCT of Delhi.</p> <p>Railways (other than traction)</p> <p>Hotels and restaurants</p> <p>Cinemas</p> <p>Banks</p> <p>Petrol pumps</p> <p>All other establishments, i.e., shops, chemists, tailors, washing, dyeing etc. which do not come under the Factories Act.</p> <p>Cattle farms, fisheries, piggeries, poultry farms, floriculture, horticulture, plant nursery Farm houses being used for commercial activity DMRC for its commercial activities other than traction.</p> <p>Ice-cream parlours and</p> <p>Any other category of commercial consumers not specified/covered in any other category in this Schedule</p>	<p>AC 50 Hz, single phase, 230 Volts up to 10 kW load;</p> <p>AC 50 Hz, 3 phase, 400 Volts for loads above 10 kW and up to 100 kW (108 kVA)</p>
	<p>2.1.2 Non-Domestic High Tension (NDHT) Non-Domestic Power on 11 kV</p> <p>Single Delivery Point NDHT for Commercial Complexes</p> <p>Available to consumers having load (other than industrial load) above 100 kW/108 kVA Non-Domestic establishments including pumping loads of DDA and supply to Delhi Metro Rail Corporation (DMRC) Ltd. for their on going construction projects etc and for commercial purposes other than traction.</p> <p>Available to commercial complexes having load more than 100kW for group of consumers for non-domestic use.</p>	<p>AC 50 Hz, 3 phase, 11 kV</p>
3. Industrial (For consumer having valid	<p>3.1.1 Small Industrial Power (SIP)</p> <p>Available to Industrial consumers with load up to 100 kW including lighting, heating and cooling load.</p>	<p>AC 50 Hz, single phase, 230 Volts;</p> <p>AC 50 Hz, 3 phase,</p>

Category	Availability	Character of Service
Licence under Factories Act)		400 Volts
4. Public Lighting	4.1 Street lighting	Available to all street lighting consumers including DDA, PWD/CPWD, Slums department/DSIIDC/MES/CGHS etc.
	4.2 Signals & Blinkers	Available for traffic signals and blinkers of Traffic Police
5. Railway Traction (other than DMRC)		Available for railway traction for connected load above 100 kW/108 kVA.
6. Delhi Metro Rail Corporation		Available to Delhi Metro Rail Corporation (DMRC) (not for construction projects)
7. Temporary Supply	7.1(a) for less than 16 days	Available as temporary connection under the respective category
	7.1(b) for more than or equal to 16 days	
	7.2 for residential cooperative group housing connections	Same as that of relevant category
	7.3 for religious functions of traditional and established characters and cultural activities	Provided for religious functions of traditional and established characters like Ram lila, Dussehra, Janmashtami, Nirankari Sant Smagam, Gurupurb, Durga Puja, Id, Christmas celebrations, Easter, Pageants and cultural activities like NCC camps, scouts & guides camps etc. (normally for a period less than 10 days).
	7.4 for major construction projects	With loads more than 10 kW
	7.5 for threshers	During the threshing season
8. Advertisement/ Hoardings		Electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway/Metro Stations shall be separately metered and charged at the tariff applicable for 'Advertisements and Hoardings' category, except such displays which are for the purpose of indicating/displaying the name and other details of the shops or commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises.

Electricity taxes and other levies

5.26 The rates stipulated in the Schedule are exclusive of electricity tax and other taxes and charges, as levied from time to time by the Government or any other competent authority, which are payable extra.

Surcharges

- 5.27 All surcharges shall be levied on the basic tariff applicable to the category of use or category of sanction, whichever has higher tariff.

Payments

- 5.28 In the event of the electricity bill rendered by the licensee, not being paid in full within the time specified on the bill, a surcharge @ 1.5% on the principal amount of bill which has not been paid shall be levied for each 30 days successive period or part thereof until the payment is made in full without prejudice to the right of the licensee to disconnect the supply after due date in the event of non-payment in accordance with Section 56 of Electricity Act, 2003. This will also apply to temporary connections, where payment of final bill amount after adjustment of consumption deposit, is not made by due date.
- 5.29 The Commission directs the Petitioner, that in case the bill for consumption of electricity is more than Rs. 4000, payment for the bill shall only be accepted by the Petitioner by means of an Account Payee cheque/DD. However, visually challenged consumers shall be allowed to make payment of electricity bills for any amount through cash.

Billing in kVAh

- 5.30 Wherever the fixed or energy charges are specified in Paisa per kVAh, for the purpose of billing the kVAh as read from the meter in the relevant billing cycle shall be used.

Interpretation/ clarification

- 5.31 In case of doubt or anomaly, if any, in the applicability of tariff or in any other respect, the matter will be referred to the Commission and Commission's decision thereon shall be final and binding.

A6: DIRECTIVES

- 6.1 Distribution licensee is directed to post the monthly distribution transformer losses and zone/district wise AT&C loss data giving break-up of energy input, energy billed and revenue realization on its website within 3 weeks from the end of the month.
- 6.2 Distribution licensee is directed to reduce AT&C losses by at least 10% in respect of those zones/districts which are currently having losses in excess of 30% within one year i.e. by August, 2013. These targets shall have to be met by distribution licensee irrespective of the overall AT&C loss achievement targets specified in this Order. Failure to do so will invite penalties.
- 6.3 All data required for True-up (including kWh & kVAh for the consumers billed on kVAh basis) shall be maintained & shall not be deleted from the data base prior to issuance of Order for True-up for that period by the Commission.
- 6.4 The Commission directs the distribution licensee to get the Form 2.1(a) audited by the Statutory auditors on a quarterly basis. The auditor certificate in this regard shall be filed in the Commission within 30 days from the end of the quarter.
- 6.5 The Commission directs the distribution licensee to show power station wise power purchase quantum and cost along with break up under various heads in its audited accounts.
- 6.6 Distribution licensee shall be responsible for making timely payment of bills/dues to central & state generating stations and transmission utilities. The Commission shall not allow surcharge as a pass through in the ARR, if paid by the distribution licensee, on account of delayed payments.
- 6.7 Distribution licensee shall prepare the “Asset Register” and submit to the Commission by October 31, 2012.
- 6.8 Distribution licensee is directed to meter electricity consumption in its offices, grid substations, consumer care centres, etc. within 2 months from the date of issue of this order.
- 6.9 The Commission directs the distribution licensee to conduct a safety audit and carry out preventive maintenance as per schedule.
- 6.10 With respect to AT&C losses, the Commission directs the Petitioner for the following:
 - (a) Submit Form 2.1(a) on monthly basis along with billing database to the Commission within 3 weeks of the following month.
 - (b) Submit category wise revenue collection on monthly basis along with the supporting documents within 3 weeks of the following month.

- (c) In respect of the directive to include Form 2.1(a) in the quarterly and annual balance sheet, the Commission has decided to accept Auditor's Certificate in respect of quarterly information. Further, the information may be included as a part of Regulatory accounts annually.
 - (d) Include the category wise / slab wise consumer details i.e. no of consumer, connected load, sales, power factor, revenue from fixed charges, revenue from demand charges in the quarterly and annual balance sheet.
 - (e) Include source wise power purchase and sale details i.e. quantum in MU and Rs Cr in the quarterly and annual balance sheet.
 - (f) Submit monthly report to the Commission giving details of category wise consumer addition and their detail within 3 weeks of the following month.
 - (g) Submit monthly report to the Commission giving details of no. of connection disconnected / reconnected and their detail within 3 weeks of the following month.
 - (h) Submit monthly report to the Commission on change of consumer category for consumer within 3 weeks of the following month.
 - (i) Submit monthly report to the Commission giving details on number of connections disconnected / reconnected and their details within 3 weeks of the following month.
 - (j) Submit monthly report to the Commission on bill correction / JE entries within 3 weeks of the following month.
- 6.11 The Commission directs that whenever journal entries are to be made for bill correction, they shall indicate both the amount reversed as well as the units reversed. The Petitioner shall submit monthly report to the Commission on bill correction / JE entries within 3 weeks of the following month.
- 6.12 The Commission directs that 100% metering shall be done for street lighting. Energy consumption on account of ballast etc shall be accounted through metered consumption.
- 6.13 All effort shall be made for prudence in short term sale and purchase so as optimize power purchase cost for which detailed directions will be issued by the Commission separately.
- 6.14 The Commission directs that provisions made on account of power sale and purchase at the end of year i.e. in March shall be adjusted within one month, i.e. in the month of April. Remaining provisions if any shall be considered by the Commission for next year True-up.
- 6.15 The Commission directs the distribution licensee to submit information regarding capitalisation of consumer contribution for the period from FY 2007-08 till date.

- 6.16 The Commission directs the distribution licensee to separately book the cost of works carried out by civil engineering department for electricity department and provide complete details of such works and associated costs at the end of the year bringing out clearly the percentage expenditure of Civil Engineering Department booked to electricity department vis-à-vis all other departments.