



DELHI ELECTRICITY REGULATORY COMMISSION

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

F.11(1366) /DERC/2015-16/

Petition No. 15/2017

In the matter of: Petition for determination of Generation Tariff and Submission of Business Plan for the MYT Period from FY 2016-17 to FY 2020-21.

And

Petition No. 26/2017

In the matter of: Petition for True up of expenditure for FY 2014-15 and FY 2015-16 for RPH and GTPS

Indraprastha Power Generation Company Ltd.
Through its: **Director (Technical)**
Himadri,
Rajghat Power House Complex
New Delhi 110 002.

...Petitioner/Licensee

Coram: Sh. B. P. Singh, Member.

ORDER

(Date of Order: 31.08.2017)

M/s. Indraprastha Power Generation Co. Ltd. filed aforesaid Petition No. 15 of 2017 for determination of Generation Tariff and Submission of Business Plan for the MYT Period from FY 2016-17 to FY 2020-21, admitted by the Commission vide Order dated 26.05.2017; and Petition No. 26 of 2017 for True up of expenditure for FY 2014-15 and FY 2015-16 for RPH and GTPS, admitted by the Commission vide Order dated 30.05.2017. The Petitions along with Executive summary were uploaded on the website of the Commission seeking response of the stakeholders. This was also widely publicised through advertisement in newspapers. In response to the advertisement the Commission received comments from the Stakeholders, which have been replied to by the Petitioner. The comments and suggestions of the stakeholders, the submissions made during the public hearing held on 19.07.2017 and the arguments advanced by the Petitioner have been taken into consideration.

After having considered the above, the Commission in exercise of the power vested in it by the Electricity Act, 2003 and Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017, hereby pass this Tariff Order signed, dated and issued on 31.08.2017.

The Petitioner shall take immediate steps to implement the said Order, so as to make the revised tariffs applicable from 01.09.2017.

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



(B. P. Singh)
Member

CONTENTS

A1: INTRODUCTION.....	11
Indraprastha Power Generation Company Limited.....	11
Delhi Electricity Regulatory Commission	11
Multi Year Tariff Regulations.....	12
Public Notice	14
Layout of the Order.....	17
Approach of the Order	18
Approach for FY 2014-15 and FY 2015-16.....	18
Approach for FY 2016-17.....	19
Approach for FY 2017-18.....	20
A2: RESPONSE FROM STAKEHOLDERS.....	20
Introduction	20
Issue 1: Norms of Operation.....	21
Issue 2: NCL Bills for UP forest transit fee.....	23
Issue 3: De-commissioning	25
Issue 4: Station Heat Rate	25
Issue 5: Auxiliary power consumption	28
Issue 6: Plant Availability	29
Issue 7: GTPS - Gas Utilisation	30
Issue 8: Forced Scheduling from GTPS.....	32
Issue 9: Working capital & Interest on Working Capital	32
Issue 10: GTPS- Form 27	34
Issue 11: Capital Expenditure	34
Issue 12: Rajghat Power House – Billing	35
Issue 13: Rajghat - Cost of Fuel.....	37
Issue 14: Rajghat- Special allowances for RPH	38
Issue 15: Rajghat – Depreciation	39
Issue 16: Backing down	40
Issue 17: Rajghat- Gross & Net Generation.....	40
Issue 18: Rajghat - Variable Cost	41
Issue 19: Rajghat - Loan from Delhi Govt.....	42

Issue 20: Rajghat - Return on Equity	43
A3: TRUE UP OF FY 2014-15 AND FY 2015-16.....	44
Indraprastha Power Station (I. P. Station).....	44
Rajghat Power House (RPH)	47
Norms of Operation	47
Availability	47
Station Heat Rate (SHR).....	48
Auxiliary Power Consumption	50
Energy Charge Rate and Variable Cost.....	52
Fixed Charges.....	54
Operation & Maintenance (O&M) Expenses.....	54
Capital Expenditure	57
Depreciation	58
Cost of secondary fuel oil	65
Interest on Working Capital	67
Summary of Fixed Cost.....	69
Revenue (Gap)/ Surplus	72
Gas Turbine Power Station (GTPS).....	73
Norms of Operation	73
Availability	73
Station Heat Rate (SHR).....	74
Auxiliary Power Consumption	80
Energy Charge Rate and Variable Cost.....	82
Fixed Cost	85
Operation & Maintenance (O&M) Expenses.....	85
Summary of O&M cost:.....	86
Capital Expenditure	88
Depreciation	89
Interest on loans	91
Return on Equity	95
Interest on Working Capital	96
Summary of Fixed Cost.....	98
Revenue Surplus/ (Gap)	101

A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR) FOR FY 2017-18.....	103
Rajghat Power House (RPH)	103
Gas Turbine Power Station (GTPS).....	103
Norms of Operation	103
Plant Availability and Plant Load Factor	104
Station Heat Rate (SHR).....	105
Auxiliary Power Consumption	110
Gross Generation and Net Generation	112
Energy Charge Rate and Variable Cost.....	113
Fixed Cost	117
Operation & Maintenance (O&M) Expenses.....	117
Capital Expenditure	119
Depreciation	120
Means of Financing	121
Working Capital	124
Weighted Average Cost of Capital (WACC) and Return on Capital Employed (RoCE).....	125
Fixed Auxiliary Consumption Expenses.....	132
Summary of Fixed Cost.....	132
ANNEXURE-I.....	135
ANNEXURE-II.....	137
ANNEXURE-III.....	146

LIST OF TABLES

Table 1: List of Correspondence with the Petitioner	14
Table 2: Plant Availability submitted by the Petitioner	47
Table 3: Plant Availability approved by the Commission	48
Table 4: Station Heat Rate submitted by the Petitioner	48
Table 5: Station Heat Rate approved by the Commission	50
Table 6: Actual Auxiliary Power Consumption submitted by the Petitioner	51
Table 7: Auxiliary Power Consumption approved by the Commission (%)	51
Table 8: Net Generation submitted by the Petitioner	52
Table 9: Secondary Fuel Consumption submitted by the Petitioner	53
Table 10: Variable Cost submitted by the Petitioner	53
Table 11: O&M Expenses (as per CERC Regulations, 2014) submitted by the Petitioner	55
Table 12: Actual O&M Expenses submitted by the Petitioner	55
Table 13: O&M Expenses approved by the Commission	57
Table 14: Capitalization submitted by the Petitioner	58
Table 15: Capitalization approved by the Commission	58
Table 16: Depreciation submitted by the Petitioner	58
Table 17: Depreciation approved by the Commission	60
Table 18: Loan details submitted by the Petitioner	61
Table 19: Requirement of Loan computed by the Commission	63
Table 20: Details of Equity submitted by the Petitioner	64
Table 21: Return on Equity submitted by the Petitioner	64
Table 22: Return on Equity approved by the Commission	65
Table 23: Secondary Fuel details submitted by the Petitioner	66
Table 24: Secondary fuel cost approved by the Commission	67
Table 25: Interest on working capital submitted by the Petitioner	68
Table 26: Interest on working capital approved by the Commission	68
Table 27: Annual Fixed Cost submitted by the Petitioner	69
Table 28: Annual Fixed Cost approved by the Commission (Rs Cr)	71
Table 29: Revenue (Gap)/ Surplus approved by the Commission	72
Table 30: Actual Availability submitted by the Petitioner	73
Table 31: Plant Availability approved by the Commission	73
Table 32: CEA recommended technical standards submitted by the Petitioner	74
Table 33: Open cycle certified by SLDC	76
Table 34: Comparison of Availability & PLF for GTPS	76
Table 35: Station Heat rate submitted by the Petitioner	78
Table 36: Station Heat rate approved by the Commission (kCal/ kWh)	80
Table 37: Comparison of Availability & PLF for GTPS submitted by the Petitioner	80
Table 38: Auxiliary Power Consumption submitted by the Petitioner	81
Table 39: Auxiliary Power Consumption approved by the Commission	82
Table 40: Net Generation submitted by the Petitioner	82
Table 41: Fuel Cost submitted by the Petitioner	84
Table 42: O&M Expenses (As per CERC Regulation, 2014) submitted by the Petitioner	86
Table 43: Actual O&M Expenses submitted by the Petitioner	87
Table 44: O&M Expenses approved by the Commission	88
Table 45: Capitalisation submitted by the Petitioner	88
Table 46: Capitalisation approved by the Commission	88
Table 47: Depreciation submitted by the Petitioner	89
Table 48: Depreciation approved by the Commission	90
Table 49: Loan details submitted by the Petitioner	92
Table 50: Requirement of Loan approved by the Commission	93
Table 51: Details of Equity submitted by the Petitioner	95
Table 52: Return on Equity submitted by the Petitioner	95

Table 53: Return of Equity approved by the Commission.....	96
Table 54: Interest on Working Capital submitted by the Petitioner.....	97
Table 55: Interest on Working Capital approved by the Commission	98
Table 56: Annual Fixed Cost submitted by the Petitioner.....	98
Table 57: Annual Fixed Cost approved by the Commission (Rs Cr)	101
Table 58: Revenue Surplus/(Gap) approved by the Commission	101
Table 59: Summary of the Fixed and Variable cost submitted by the Petitioner	103
Table 60: Actual and Proposed Availability submitted by the Petitioner	104
Table 61: Actual and Proposed SHR submitted by the Petitioner (kCal/ kWh)	105
Table 62: Recommendation of Heat Rate by CEA submitted by the Petitioner (Kcal/Kwh).....	106
Table 63: Open cycle certified by SLDC submitted by the Petitioner (%)	107
Table 64: Comparison of Availability & PLF for GTPS submitted by the Petitioner	108
Table 65: Actual and Proposed Auxiliary Power Consumption submitted by the Petitioner.....	110
Table 66: Gross and Net Generation submitted by the Petitioner	112
Table 67: Gross and Net Generation approved by the Commission.....	112
Table 68: Fuel Cost for GTPS submitted by the Petitioner.....	114
Table 69: ECR and Fuel Cost approved by the Commission	116
Table 70: O&M Expenses as per CERC Regulation, 2014	118
Table 71: O&M Expenses approved by the Commission (Rs Cr)	119
Table 72: Capital Expenditure submitted by the Petitioner	119
Table 73: Capital Expenditure approved by the Commission	119
Table 74: Depreciation submitted by the Petitioner	120
Table 75: Depreciation approved by the Commission.....	121
Table 76: Equity Bifurcation for IPGCL Power Plants submitted by the Petitioner	122
Table 77: Loan Details for GTPS submitted by the Petitioner	122
Table 78: Requirement of Loan and Equity computed by the Commission	123
Table 79: Working Capital submitted by the Petitioner	124
Table 80: Interest on Working Capital approved by the Commission	125
Table 81: Return on Equity for GTPS submitted by the Petitioner	126
Table 82: RRB approved by the Commission	131
Table 83: WACC and RoCE approved by the Commission.....	131
Table 84: Fixed Auxiliary Consumption Expenses approved by the Commission.....	132
Table 85: Total Fixed Cost submitted by the Petitioner.....	132
Table 86: Annual Fixed Cost approved by the Commission	133

List of Abbreviation

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 and Transport
BHEL	Bharat Heavy Electricals Limited
BIS	Bureau of Indian Standards
BPTA	Bulk Power Transmission Agreement
BRPL	BSES Rajdhani Power Limited
BST	Bulk Supply Tariff
BTPS	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
DPCL	Delhi Power Company Limited

Abbreviation	Explanation
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	Jhuggi 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 Council
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	Original 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
TOWMCL	Timarpur Okhla Waste Management Company (P) Limited
TPDDL	Tata Power Delhi Distribution Limited
TPS	Thermal Power Station
UI	Unscheduled Interchange
UoM	Units of Measurement
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 Indraprastha Power Generation Company Limited (hereinafter referred to as 'IPGCL' or the 'Petitioner') for True-up of expenses for FY 2014-15 & FY 2015-16 for Generation Business in terms of "Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 (hereinafter referred to as the 'MYT Generation Regulations, 2011') and approval of Aggregate Revenue Requirement & Tariff for FY 2017-18 in terms of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017 (hereinafter referred to as the 'Tariff Regulations, 2017').

Indraprastha Power Generation Company Limited

- 1.2 IPGCL is wholly owned by the Government of National Capital Territory of Delhi and operates the following Generating Stations:
- (a) Indraprastha Thermal Power Station (IP Power Station) having capacity of 247.5 MW (which was decommissioned on December 31, 2009);
 - (b) Rajghat Thermal Power House (RPH) having capacity of 135 MW; and
 - (c) Indraprastha Gas Turbine Power Station (GTPS) having capacity of 270 MW.

Delhi Electricity Regulatory Commission

- 1.3 Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC' or the 'Commission') was constituted by the GoNCTD on 03.03.1999 and it became operational from 10.12.1999.
- 1.4 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'). The Electricity Act, 2003 mandates the Commission to take measures conducive to the development and management of the electricity industry in an efficient, economic and competitive manner, which inter-alia includes Tariff determination.

Multi Year Tariff Regulations

- 1.5 The Commission issued Tariff Regulations vide its gazette notification dated 31.01.2017 specifying Terms and Conditions for Determination of Tariff for Generation of electricity under the Multi Year Tariff (MYT) framework. Further the operational norms for Generation utilities has also been approved by the Commission in Delhi Electricity Regulatory Commission Business Plan Regulations, 2017 under Tariff Regulations for the period FY 2017-18 to FY 2019-20.
- 1.6 The Commission issued 'MYT Generation Regulations, 2011' vide Order dated 02.12.2011 specifying Terms and Conditions for Determination of Tariff for Generation of electricity under the Multi Year Tariff (MYT) framework for the period FY 2012-13 to FY 2014-15.
- 1.7 The Commission vide order dated October 22, 2014 has extended the MYT period of FY 2012-13 to FY 2014-15 for a further period of one year till FY 2015-16.

Filing of Petition for True-Up of Expense for FY 2014-15 & FY 2015-16 and Approval of Aggregate Revenue Requirement & Tariff for FY 2017-18.**Filing and Acceptance of Petition**

- 1.8 IPGCL has filed its petition before the Commission on 25.02.2016 for "Determination of Generation Tariff for FY 2016-17 to FY 2020-21".
- 1.9 Further, IPGCL has filed its petition before the Commission on 01.05.2017 for "True up of expenditure for FY 2014-15 and FY 2015-16".
- 1.10 The Commission admitted both the petitions vide its Orders dated 26.05.2017 and 30.05.2017 for True Up and Tariff Determination respectively subject to clarifications/ additional information, if any, which would be sought from the Petitioner from time to time. A copy of the Admission Order is enclosed as **Annexure I** to this Order.

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 Officers of the Commission and the Staff Consultants appointed by the Commission for carrying out the due diligence on the petition filed by the Petitioner, obtaining and analyzing information/clarifications received from the Petitioner and submitting all issues for consideration by the Commission.

- 1.12 For this purpose, the Commission Officers and Staff Consultants held discussions with the Petitioner, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided.
- 1.13 The Commission held public hearing on 19.07.2017 to take a final view with respect to various issues concerning the principles and guidelines for tariff determination. The Commission has considered due diligence conducted by the Officers of the Commission and the Staff Consultants in arriving at its final decision. The use of the term “Commission” may, therefore, be read in the context of the above clarification.
- 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 were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed key issues raised in the petition, which included details of O&M Expenses, Assets Capitalization, Depreciation, Working Capital Requirement, Return on Capital Employed (RoCE), Implementation of Judgment of APTEL etc. The Petitioner submitted additional information through various letters.
- 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 Petitioner, as mentioned in the Table 1 as follows have been considered for approval of True Up and ARR of the Petitioner:

Table 1: List of Correspondence with the Petitioner

Sl. No.	Letter No.	Letter Dated	Subject
1	F.3(390)/Tariff/DERC/2014-15/4596/3452	18.12.2015	Tariff Petition for MYT 2016-17 to FY 2020-21
2	Commercial/DERC/F.12/211	31.12.2015	Tariff Petition for MYT 2016-17 to FY 2020-21
3	Commercial/DERC/F.12/224	14.01.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
4	F.3(390)/Tariff/DERC/2014-15/4596/3859	02.02.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
5	F.3(390)/Tariff/DERC/2014-15/4596/035	15.02.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
6	IPGCL/Comml./F.12/249	25.02.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
7	F.11(1367)/DERC/2015-16/5192/4382	30.03.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
8	IPGCL/Commercial/DERC/F.12/12	21.04.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
9	F.3(503)/Tariff-Engg/DERC/2016-17/5614/2224	02.02.2017	Tariff Petition for MYT 2016-17 to FY 2020-21
10	Comml./DERC/F.12/205	13.02.2017	Tariff Petition for MYT 2016-17 to FY 2020-21
11	IPGCL/Commercial/DERC/F.12/12	01.05.2016	Tariff Petition for MYT 2016-17 to FY 2020-21
12	F.11(1479)/DERC/2017-18/5735/428	24.05.2017	Tariff Petition for MYT 2016-17 to FY 2020-21
13	F.11(1479)/DERC/2017-18/5735/428	24.05.2017	Tariff Petition for MYT 2016-17 to FY 2020-21
14	IPGCL/Comml/F.12/25	30.05.2017	Tariff Petition for MYT 2016-17 to FY 2020-21
15	IPGCL/Comml./F.13/41	03.07.2017	CAPEX details
16	IPGCL/Comml./DERC/F.13/52	20.07.2017	CAPEX details

Public Notice

1.17 The Commission published a Public Notice in the following newspapers on 07.06.2017 inviting comments from stakeholders on the Tariff petitions filed by the Petitioners latest by 27.06.2017:

i) Indian Express (English) - 07.06.2017

ii) The Pioneer (English)	-	07.06.2017
iii) Times of India (English)	-	07.06.2017
iv) Hindustan (Hindi)	-	07.06.2017
v) Dainik Jagaran (Hindi)	-	07.06.2017
vi) Educator (Punjabi)	-	07.06.2017

Copies of the above Public Notices are available on Commission's website (www.derc.gov.in).

- 1.18 The Petitioner also published a Public Notice indicating salient features of its petition for inviting comments from the stakeholders and requesting to submit response on the petition on or before 27.06.2017 in the following newspapers on the respective dates mentioned alongside:

i) The Hindu (English)	-	24.06.2017
ii) Business Standard (English)	-	24.06.2017
iii) Punjab Kesari (Hindi)	-	24.06.2017
iv) The Daily Milap (Urdu)	-	24.06.2017
v) The Daily Educator (Punjabi)	-	24.06.2017

Copies of the above Public Notices are available on Commission's website (www.derc.gov.in).

- 1.19 A copy of the petition was also made available for purchase from the head-office of the Petitioner on any working day between 11 A.M. and 4 P.M. on payment of Rs.100/- for hard copy of each petition either by cash or demand draft/pay order. 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.

- 1.20 At the request of the stakeholders, the Commission extended the last date for filing objections and suggestions up to 18.07.2017 for which the public notice was issued in the following newspapers on the respective dates mentioned along side:

i) Pioneer (English)	-	25.06.2017
ii) Hindustan Times (English)	-	25.06.2017
iii) Mail Today (English)	-	25.06.2017

iv) Hindustan (Hindi)	-	25.06.2017
v) Punjab Kesari (Hindi)	-	25.06.2017
vi) Rashtriya Sahara (Hindi)	-	25.06.2017
vii) The Educator (Punjabi)	-	25.06.2017

Copies of the above Public Notices are available on Commission's website (www.derc.gov.in).

1.21 In order to extend help to the stakeholders in understanding the ARR Petition and filing their comments, the Commission prepared a Executive Summary highlighting salient features of the Tariff Petition filed by the Petitioner, which was uploaded on the Commission's website. In this regard, three officers of the Commission viz. Joint Director (Tariff-Finance), Joint Director (Engineering) and Joint Director (PS&E) were nominated for discussion on the ARR Petitions. This was duly highlighted in the Public Notices published by the Commission.

1.22 Further, the Commission published a Public Notice indicating the venue, date and time of public hearing on 4th and 5th July, 2017 in the following newspapers on the respective dates mentioned alongside:

i) Pioneer (English)	-	25.06.2017
ii) Hindustan Times (English)	-	25.06.2017
iii) Mail Today (English)	-	25.06.2017
iv) Hindustan (Hindi)	-	25.06.2017
v) Punjab Kesari (Hindi)	-	25.06.2017
vi) Rashtriya Sahara (Hindi)	-	25.06.2017
vii) The Educator (Punjabi)	-	25.06.2017

Copies of the above Public Notices are available on Commission's website (www.derc.gov.in).

1.23 At the request of the stakeholders, the Commission extended the date of Public hearing from 04th and 05th of July 2017 to 19th of July 2017.

The public notice was issued in the following newspapers on the respective dates mentioned along side:

i) Pioneer (English)	-	02.07.2017
ii) Hindustan Times (English)	-	02.07.2017
iii) Mail Today (English)	-	02.07.2017
iv) Indian Express (English)	-	02.07.2017
v) Hindustan (Hindi)	-	02.07.2017
vi) Punjab Kesari (Hindi)	-	02.07.2017
vii) Dainik Jagran (Hindi)	-	02.07.2017
viii) Jadid in dinon (Urdu)	-	02.07.2017
ix) The Jan Ekta (Punjabi)	-	02.07.2017

Copies of the above Public Notices are available on Commission's website (www.derc.gov.in).

- 1.24 The Commission received written comments from stakeholders. The comments of the stakeholders were also forwarded to the Petitioner who, responded to the comments of the stakeholders with a copy of its replies to the Commission. The Commission invited all stakeholders, including those who had filed their objections and suggestions, to attend the Public Hearing. List of the stakeholders who submitted their comments on True-up of expense for FY 2014-15 & FY 2015-16 and approval of Aggregate Revenue Requirement & Tariff for FY 2017-18 is enclosed as Annexure II to this Order.
- 1.25 The public hearing was held at the Auditorium of Scope Convention Centre, Scope Complex, New Delhi for all stakeholders on 19.07.2017 to discuss the issues related to the petition filed by the Petitioner. The issues and concerns voiced by various stakeholders have been examined by the Commission. The major issues discussed during the public hearing and/or written comments made by the stakeholders, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter A2. List of Stakeholders/consumers who attended the public hearing is enclosed as Annexure III to this Order.

Layout of the Order

- 1.26 This Order is organised into five Chapters:

- (a) **Chapter A1** provides the approach of the Order;
- (b) **Chapter A2** provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Petitioner's response and views of the Commission thereon;
- (c) **Chapter A3** provides analysis of trueing up for FY 2014-15 to FY 2015-16 for Indraprastha Thermal Power Station, Rajghat Power House and Gas Turbine Power Station;
- (d) **Chapter A4** provides determination of tariff for Gas Turbine Power Station;
- (e) **Chapter A5** provides summary of all the directives issued by the Commission in this Order.

1.27 The Order contains following Annexure, which are an integral part of the Tariff Order:

- (a) **Annexure I** - Admission Order.
- (b) **Annexure II** - List of the stakeholders who submitted their comments on True-up of expense for FY 2014-15 & FY 2015-16 and approval of Aggregate Revenue Requirement & Tariff for FY 2017-18.
- (c) **Annexure III** – List of Stakeholders/consumers who attended the public hearing.

Approach of the Order

Approach for FY 2014-15 and FY 2015-16

1.28 Under the MYT Framework, the Commission had projected the ARR of the Petitioner for FY 2014-15 and FY 2015-16 in the MYT Order issued on 13.07.2012 and Tariff Order issued on 29.09.2015. Under 'MYT Generation Regulations, 2011', the components of ARR have been segregated into controllable and un-controllable parameters. As per regulation 5.8, 5.10, 5.11 and 5.12 of the '2nd MYT Regulation', various controllable and un-controllable parameters shall be trued-up as per the principle stated as follows:

- a) Actual capital expenditure incurred and capitalisation at the end of each year of the Control Period vis-à-vis the approved capital expenditure and capitalisation schedule shall be reviewed. Capital expenditure and capitalisation for remaining years of the Control Period based on trued up capital expenditure and

capitalisation for any year may be revised.

- b) For controllable parameters,
- i. Any surplus or deficit on account of Gross Station Heat Rate, Normative Annual Plant Availability Factor, Auxiliary Energy Consumption, Secondary Fuel Oil Consumption, Operation and Maintenance (O&M) expenses) shall be to the account of the Generating Company and shall not be adjusted in tariffs; and
 - ii. Depreciation, Loan and Return on Equity shall be trued-up every year based on the actual capital expenditure and actual capitalization vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission.

Provided that any surplus or deficit in Working Capital shall be to the account of the Generating Company and shall not be trued-up in ARR.

Provided further that the Commission shall not true-up interest rate, if variation in State Bank of India Base Rate as on 01.04.2012, is within (+ /-) 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond (+/-) 1% only shall be trued-up.

- 1.29 The Commission has accordingly, trued up the uncontrollable based on the audited accounts and other information submitted by the Petitioner for FY 2014-15 and FY 2015-16 after exercising prudence check. The true up of controllable parameters is governed by Regulation 5.12 of the 'MYT Generation Regulations, 2011' as mentioned above. The detailed treatment of each component of uncontrollable and controllable parameters is provided in Chapter A3 of this Order.

Approach for FY 2016-17

- 1.30 The Petitioner has requested for a review of ARR for FY 2016-17. The mechanism for True up as specified in the 'MYT Generation Regulations, 2011' envisages that variations on account of uncontrollable items 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

'MYT Generation Regulations, 2011' the True up of FY 2016-17 can only be considered based on the audited financial statement once the Petitioner makes a regular tariff Petition for True up of FY 2016-17.

Approach for FY 2017-18

- 1.31 The Commission vide its notification dated January 31, 2017 issued the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017.
- 1.32 Further, the Commission has issued the Delhi Electricity Regulatory Commission Business Plan Regulations, 2017
- 1.33 The Commission has evaluated the ARR submitted by the Petitioner on the basis of the provisions in Tariff Regulations, 2017 read with Delhi Electricity Regulatory Commission Business Plan Regulations, 2017 and other factors considered appropriate by the Commission.

A2: RESPONSE FROM STAKEHOLDERS

- 2.1 Summary of objections/ suggestions from stakeholders, response of IPGCL (Indraprastha Power Generation Company Limited) and Commission's view.

Introduction

- 2.2 Section 62 of the Electricity Act, 2003 mandates the Commission to determine the Generation tariff after consideration of all suggestions received from the public and the response of the Petitioner to the objections/suggestions of stakeholders, issue a tariff order accepting the applications with such modifications or such conditions as may be specified in the order. Public hearing, being a platform to understand the problems and concerns of various stakeholders, the Commission has encouraged transparent and participative approach in hearings to obtain necessary inputs required for tariff determination. Accordingly public hearing was held on 19th July, 2017 in SCOPE Convention Centre SCOPE Complex, New Delhi.
- 2.3 In the Public Hearing, stakeholders put forth their comments/suggestions before the Commission in the presence of the Petitioner. The Petitioner was given an opportunity

to respond to the comments put forth by the stakeholders.

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

Issue 1: Norms of Operation

Stakeholders' View

- 2.6 IPGCL has filed its Tariff Petition in line with CERC (Terms and Conditions of Tariff) Regulations, 2014, ("CERC Regulations, 2014") and has placed reliance upon letter dated 18.12.2015 issued by this Commission. IPGCL cannot rely upon a letter of this Commission to justify filing of present Petition in line with CERC Regulations since this Commission has already notified the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 ("DERC Tariff Regulations"). Accordingly, the Petition and the operational parameters claimed in the Petition have to be in line with the DERC Tariff Regulations, 2017 and therefore the Commission is requested not to consider the submissions of IPGCL, which are based upon CERC Tariff Regulations, 2014.
- 2.7 The petitioner has submitted that the Repair and Maintenance (R&M) expenditure would be relatively high due to small size of the units and their poor condition. It has been further submitted by the Petitioner that R&M shall result in improved efficiency. It is submitted that the prayer of the Petitioner is liable to be rejected since the Petitioner has been claiming regular O&M cost (including R&M cost) till now and therefore the responsibility to keep the plant in healthy condition lies with the petitioner. Further, it is submitted that the useful life of GTPS is expiring in 2021 and accordingly a plan for phasing out of the plant needs to be laid out in the upcoming Tariff Order to avoid unnecessary complications. Any capital investment plan at the fag end of useful life of GTPS is unnecessary and will burden the end consumers.

- 2.8 The petitioner has submitted that GTPS plant cannot achieve the normative operational parameters and therefore the same may be relaxed. In this regard it is submitted that it is the obligation of the Petitioner to maintain operational parameters. The plant needs to be closed down if it cannot meet desired efficiency norms laid down by this Commission, which will lead to a higher tariff burden on the end consumers who are already reeling under high power purchase costs of these uneconomic power stations. Accordingly, the plant needs to be closed down if it cannot meet the efficiency norms.

Petitioner's Submission

- 2.9 In this regard, the petitioner submitted that as per clause 61 of Electricity Act 2003, all State Electricity regulatory Commissions (all SERCs) shall, subject to the provisions of the act, specify the terms and conditions for determinations of tariff, in doing so shall be guided by the following:
- "(a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;"*
- 2.10 The petitioner further submitted that DERC is to necessarily frame its tariff regulation in line with CERC Regulation, 2014 for the generating companies. The petitioner had written various letters showing its inability to compile content of business plan and MYT tariff petition for the period for FY 2016-17 to 2020-21 in absence of business plan & tariff regulation of DERC. Accordingly as per provisions of clause 61(a) of electricity Act 2003, the petitioner had submitted its petition for the period in compliance of DERC order No. F3(390)/Tariff/DERC/2014-15/4596/035 dated 15.02.2016 and related letters.
- 2.11 Further, as regard expiring of PPA of GTPS plant in 2021. It is to submit that it is five years from now when the PPA will get expired. Therefore, the Plant cannot be operated without necessary capital expenditure. Therefore, Submission of TPDDL not to allow CAPEX schemes and plan for phasing out is un-realistic submission and should not be entertained by the Commission.
- 2.12 As regards maintenance of normative operation parameters of GTPS it is to mention

that Plant is subject to frequent backing downs due to irritating scheduling of the SLDC/ DISCOMs.

Commission's View

- 2.13 The Commission has trued up the expenses for FY 2014-15 and FY 2015-16 in line with the provisions of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011.
- 2.14 The Commission has determined the Aggregate Revenue Requirement (ARR) for FY 2017-18 in line with the provisions of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017 read with Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017.
- 2.15 The Commission has allowed only necessary and approved expenses with regards to Capitalization for GTPS for FY 2014-15 and FY 2015-16.

Issue 2: NCL Bills for UP forest transit fee

Stakeholders' View

- 2.16 NCL has raised bill for UP forest transit fee for period 21.01.1991 to 31.03.2012. The Commission considered that this station is closed since 31.12.2009 as per petition. Hence any liability beyond 2009 ought not to be passed on to Discoms. Even liability prior to 2009 ought to be dealt as per DERC norms only. Further, the PPA with IP Station is expired.
- 2.17 The Commission is requested not to consider the request of the Petitioner for billing of around Rs 40 Crs to DISCOMs pertaining to IP station and RPH regarding NCL bills on forest transit fee.
- 2.18 In addition, it is also requested that an independent third party audit should be conducted to verify the correctness of the cost charged like price of coal/gas, Quantity of coal /gas consumed, gross calorific value of coal/gas in case of RPH/GT etc so that the end consumers are not heavily burdened. Third Party agencies like Bureau of Energy Efficiency (BEE) can be appointed to perform such audits on randomly basis across all the stations and the reports should be submitted on monthly basis to the Commission.

Petitioner's Submission

2.19 These claims are related for the period w.e.f. 01.01.2012. NCL bills for UP Forest transit fee as per following details:

1. NCL has raised the bills of Rs.40,91,64,309.24 for UP forest transit fee (Rs.20,84,04,150.43 for RPH and Rs.20,07,60,158.81 for IP Stn.) for the period from 21.01.1999 to 31.03.2012. IPGCL has further submitted RPH was procuring coal from NCL and for IP Stn. (closed on 31.12.2009) coal was procured from NCL.
2. As the claim of UP forest transit fee is a part of variable cost (fuel) the same is required to be claimed from the receptive distribution companies i.e. from Delhi Transco Ltd. For the period from 01.07.2002 to 31.03.2007 and from other DISCOMs i.e. BYPL, BRPL, TPDDL (then NDPL), HVPNL and NDMC from 01.04.2007 to 31.03.2012. Thus claims as given by IPGCL are too paid from effective date till closure plant from the beneficiaries.

2.20 With regards to audit of fuel related parameters, the petitioner has submitted that charges of fuel are payable as per existing PPA. Moreover, all the fuel bills are already forwarded to beneficiaries. The summary of the bills contain Form 27 and copy of the paid bills to the fuel suppliers has already being uploaded on the website of IPGCL, as per direction of the Commission.

Commission's View

2.21 The Commission has trued up the expenses for FY 2014-15 and FY 2015-16 in line with the provisions of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011.

2.22 The Commission has determined the Aggregate Revenue Requirement (ARR) for FY 2017-18 in line with the provisions of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017 read with Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017.

- 2.23 Accordingly, the concern of fuel related expenses has been appropriately dealt with in the relevant sections of this order.

Issue 3: De-commissioning

Stakeholders' View

- 2.24 IPGCL has not submitted the details regarding sale of assets and land of I.P. Station as directed by the Commission in Para 3.9 of the Tariff Order dated 29.09.2015. The Commission is requested **not** to consider petitioner prayer for recovery of Rs. 175 Cr.

Petitioner's Submission

- 2.25 IPGCL in its true up petition for the period has submitted as under: "To allow the recovery of trued up amount of I.P Station of Rs.175.41 Cr. without linking it to final disposal of scrap material and land for I.P. Station. This has been requested in view nature of component of allowance in Rs 175.41 crores. Moreover in a specific query on the matter, IPGCL has already replied to DERC through Email that matter is in arbitration between IPGCL and the vendor, therefore sale of IP station has not been completed till date.

Commission's View

- 2.26 The Commission has appropriately dealt with the matter in the relevant section of this Tariff Order.

Issue 4: Station Heat Rate

Stakeholders' View

GTPS

- 2.27 The petitioner has not carried out any performance test as directed by the Commission in Tariff Order dated 29.09.2015. The Heat Rate is 2503 kcal/kg and 2520 kcal/kg for FY15 and FY16 respectively. As per APTEL judgement in Appeal no. 26 of 2008 GT heat rate is 2200 kcal/kWh. In absence of data till such time, the Commission requested to consider 2200 kcal/kWh as Station Heat rate for the plant.

RPH

- 2.28 As per the Commission's Tariff Order dated 29.09.2015 Para 3.23, after Aug 2010 the petitioner has not carried out any performance test. As per the petition, Heat rate is 3367 kcal/kg and 3292 kcal/kg for FY15 and FY16 respectively. However, as per APTEL judgement in Appeal no. 81 of 2007, Rajghat Heat rate is 3167kcal/kwh. As per clause 7.6 of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulation, 2011, the norms specified by the Commission are ceiling norms only and any efficiency on parameters ought to be adjusted in ARR. In absence of any data till such time, the Commission is requested to consider 3167 kcal/kwh as Station Heat rate for the plant.
- 2.29 The Petitioner has requested for allowing higher SHR as against the ceiling norms specified by the Commission. Such relaxations are not justified as all new plants of similar configuration are able to operate well within norms. As this relaxation will lead to increase in variable charges perennially affecting overall tariff to the retail consumer, it is requested to not consider the request of the Petitioner for relaxation in specified norms.
- 2.30 As per NTPC-CENPEEP report dated 26.08.2011 submitted by IPGCL the unit heat rate achieved for Unit#1 is 3050 kCal/kWh and 3220 kCal/kWh for Unit#2. The average station heat rate comes out to 3135 kCal/kWh. The heat rate of Unit#2 was higher at the relevant time due to the fact that boiler efficiency of Unit#2 was low on account of moisture in fuel and loss due to carbon monoxide which are temporary phenomenon. Evidently, the Unit heat rate that could have been achieved by IPGCL could have been significantly better than 3200 kcal/kWh. GTPS Plant of IPGCL had been able to achieve the actual heat rate under combined cycle mode below the target SHR of 2450 kCal/kWh. Therefore, it is clear that a heat rate of 2450 kcal/kWh is achievable. Therefore, it is requested to not consider the request of the Petitioner for relaxation in specified norms.

Petitioner's Submission

GTPS

- 2.31 In this regard it is to mention that in appeal No. 26 of 2008 APTEL in its order dated 07.04.20011 has mentioned as under:

"The data sheet submitted by the Appellant in I.A. No. 13 of 2009 indicates heat rate for 30 MW gas turbine with age more than 10 year in combined cycle mode, which is the normal operation, as 2200 kCal/kWh. Against this the State Commission has allowed a higher Station Heat Rate of 2450 kCal/kWh in DERC tariff Regulations 2011.

In view of the above, there is no reason to interfere with the findings of the State Commission with respects to station heat rate for Indraprastha Gas Station (GTPS) and auxiliary consumption for Rajghat Power Station."

- 2.32 Thus, the APTEL has not ordered to allow heat rate 2200 kcal/kwh as Station Heat rate for the plant.

RPH

- 2.33 The True up Petition relates to the period when PPA was operational. In the submissions, IPGCL has submitted the reasons of higher heat rate. As submitted in the petition the SHR has gone high, accordingly IPGCL has requested to consider actual higher heat rate while truing up.
- 2.34 RPH plant was run without meeting out any major expenditure on spares. Therefore, frequent Start/Stop and only need based maintenance resulted in increased heat rate and Auxiliary Power Consumption over and above the specified norms. Therefore, IPGCL has requested the Commission to relax operational norms.

Commission's View

- 2.35 The Commission has specified normative parameters of operation for Delhi GENCOs in Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 and Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017 after due deliberations. Accordingly, the Commission has considered the same in truing up of FY 2014-15 & FY 2015-16 and in determining the Aggregate Revenue Requirement (ARR) for FY 2017-18.

Issue 5: Auxiliary power consumption**Stakeholders' View**

- 2.36 There is no separate arrangement for recording of unit auxiliary transformers consumption as no meters have been provided/installed for unit auxiliary consumption measurement of IPGCL's RPH and GTPS power Stations in contrary to the Central Electricity Authority (Installation and Operation of Meters) Regulation, 2006 (as amended on 04.06.2010) ("CEA Metering Regulations"). Therefore, no auxiliary consumption ought to be allowed in absence of data.
- 2.37 IPGCL has failed to provide details regarding higher auxiliary consumption on account of the backing down of generation, as sought by the Commission for assessing the impact of backing down on the Auxiliary Consumption.
- 2.38 "Southern Generating Station of CESC", whose commissioning date and capacity match with that of IPGCL's Rajghat Power Station, has been allowed an Auxiliary Energy Consumption @ 9% for FY 2012-13 and FY 2013-14 as per prevailing WBERC's Tariff Regulations, 2011.
- 2.39 The Commission rather than allowing any prayer of relaxation on behalf of the Petitioner should fix stringent norms so that the inefficiencies of the Petitioner are not passed on to the consumers.

Petitioner's Submission

- 2.40 The Para 3.33 of Tariff Order dated 29.9.2015 of IPGCL as indicated above is not in line with DERC regulations, 2011. Therefore IPGCL has filed an Appeal (284 of 2015) before APTEL.
- 2.41 IPGCL has provided Ex-bus energy metering provisions as per Central Electricity Authority (Installation and Operation of Meters) Regulation, 2006 (as amended on 04.06.2010 ("CEA Metering Regulations")). Accordingly, as per CEA regulations there is no provisions for separate accounting of auxiliary power.
- 2.42 The Southern generating station of CESC is embedded power plant of same capacity as

of RPH install in the year 1990. Almost the same year i.e. RPH plant was installed. As per WBERC tariff order for FY 16-17 in case no. TP-56/13-14, the auxiliary consumption of 3 embedded Power plants of CESC is 9% for the year 2016-17. Further, as per order it is average percentage auxiliary consumption of all the three plants. Moreover, other benefits being allowed for the plant by WBSERC have been ignored. For instance, Coal & Ash handling related charges, Cost of Manpower & regular establishment, Insurance, Interest on capital expenditure, interest on temporary accommodation, Lease rental, advance depreciation and water charges.

Commission's View

- 2.43 The Commission has specified normative parameters of operation for Delhi GENCOs in Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 and Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017 after due deliberations. Accordingly, the Commission has considered the same in truing up of FY 2014-15 & FY 2015-16 and in determining the Aggregate Revenue Requirement (ARR) for FY 2017-18.

Issue 6: Plant Availability

Stakeholders' View

GTPS

- 2.44 GTPS has been wrongly declaring its availability. In order to optimise the power purchase cost in Delhi, various meetings were held with Delhi SLDC, GNCTD, and DISCOMs and accordingly IPGCL has to transfer its gas to Bawana (PPCL) station. In view of the same, GTPS cannot declare its plant capacity as the fuel has already been transferred.

RPH

- 2.45 Rajghat has been wrongly declaring its Availability. As per Delhi Electricity Regulatory Commission (Terms and conditions for Determination of Generation Tariff) Regulations, 2011, the Declared Capacity of the plant should be duly taking into account of availability of fuel or water.

- 2.46 Further as per Form-F4, Sr. No. 13, quantity of coal has been decreased up to 94% from FY12-13 to FY15-16. However, the availability is similar.

Petitioner's Submission

GTPS

- 2.47 In this regard it is to mention that it was agreed in various meetings that in case the cheaper gas is not utilised at GTPS due to less scheduling then the same will be diverted to PPS-III Bawana for the larger interest of beneficiaries of Delhi as Bawana is more efficient. It is not correct to say that the gas has been transferred from GTPS to PPS-III on permanent basis. Further, GTPS has declared availability on RLNG up to the extent where APM or Non-APM gas is not available for the station.

RPH

- 2.48 Availability of coal has never been an issue for the station. The quantity as indicated above relates to actual purchase over and above accumulated quantity of un-utilized coal. The PLF of the Plant has always been lesser or equal to declared availability. Therefore coal purchased in previous periods to meet out generation equivalent to declared availability got accumulated. Therefore, in subsequent years lesser quantity of coal was required to be purchased to declare the same capacities.

Commission's View

- 2.49 The Commission has specified normative parameters of operation for Delhi GENCOs in Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 and Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017 after due deliberations. Accordingly, the Commission has considered the same in truing up of FY 2014-15 & FY 2015-16 and in determining the Aggregate Revenue Requirement (ARR) for FY 2017-18.

Issue 7: GTPS - Gas Utilisation

Stakeholders' View

- 2.50 As per Form F4 for FY 2015-16, the quantity of gas is 123.04 MMSCM or (0.34 MMSCMD). While, on page no. 23 of petition it has been mentioned that GTPS has 0.72

MMSCMD of gas (0.61 MMSCMD after 15% cut). Hence, despite of cheap APM gas availability, GTPS used costly gas i.e. R-LNG. Therefore, GTPS cost towards R-LNG purchases should not be passed through and GTPS ought to refund to beneficiaries excessive amount billed along with applicable interest.

Petitioner's Submission

- 2.51 G.T. Power Station of IPGCL runs on the Natural Gas being supplied by GAIL and liquid Fuel supplied by IOCL. The total (APM+PMT+LNG) allocation for GTPS is 1.44 MMSCMD which is sufficient to run six gas turbines. This allocation was reduced to 1.32 MMSCMD during the FY2006-07. Out of the total allocation of 1.32 MMSCMD the contracted quantity of R-LNG is 0.60 MMSCMD and balance i.e. 0.72 MMSCMD comes from APM, PMT. These quantities are further subject to daily cuts in the range of 15% depending on the availability of Gas from ONGC. In view of constrained in availability of fuel gas, the Commission has approved the conversion of two Gas turbines on dual fuel system in FY 2008-09. MoP&NG has further allocated 0.23 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011.
- 2.52 The petitioner has an agreement with GAIL for supply of 0.6 MMSCMD R-LNG. As per the agreement with GAIL, the contracted quantity is subject to Take or pay clause. Accordingly, the cost of this contracted quantity has to be born even if there is no off take of fuel gas. IPGCL is also using spot R-LNG in-case amount of power scheduled is more than which can be generated from cheaper domestic gases of APM, PMT & Non-APM. The quantity of spot RLNG is purchased only to meet the instances of shortage of cheaper domestic gas. In this regard, it is to further clarify that the contracted quantity of gas is 0.72 MMSCMD and has permanent cut of 15%. Thus, contracted quantity has reduced to 0.61 MMSCMD. However, this allocation is also subjected to day to day cut and over all actual consumption average basis comes to 0.34 MMSCMD for FY2015-16 total amount being 123.04 MMSCMD.

Commission's View

- 2.53 The Commission has appropriately dealt with the matter of "Take or Pay" clause in

Chapter 5 (Directives)

Issue 8: Forced Scheduling from GTPS**Stakeholders' View**

2.54 SLDC forcibly schedules power from GTPS station to beneficiaries. The Commission is requested to consider GTPS power under forced scheduling.

Petitioner's Submission

2.55 The statement of forced scheduling is incorrect as IPGCL has always a decreasing trend of PLF due to less Scheduling. The Plant has been scheduled to such a minimum level and frequent Start/ Stop by state SLDC/ beneficiaries that all operating parameters like SHR and APC has gone beyond normative limits. IPGCL has been requesting state SLDC to schedule the station not below the technical minimum limits.

Commission's View

2.56 Power Scheduling is done by Delhi SLDC on the principle of Merit Order Despatch considering grid security and technical constraints.

Issue 9: Working capital & Interest on Working Capital**Stakeholders' View****GTPS**

2.57 No Working capital is required because as per petitioner the plant has been utilized only for 40% in FY15 and 20% in FY16. Therefore, working capital is ought to be allowed on actual basis.

RPH

2.58 No Working capital is required because as per Petitioner, the plant is not functioning from July'15 due to non-scheduling of any power. Therefore, no working capital is ought to be allowed.

2.59 The Petitioner has calculated Working Capital based on the NAPAF of 80% and normative parameters of CERC Tariff Regulations which is incorrect. The Petitioner

needs to recalculate the Interest on Working Capital based on norms specified in MYT 2011 and DERC Terms and Condition for Determination of Tariff Regulations, 2017.

Petitioner's Submission

GTPS

2.60 IPGCL has claimed Interest on Working capital as per norms specified in DERC Tariff Regulations, 2011.

RPH

2.61 IPGCL has claimed Interest on Working capital as per norms specified in DERC Tariff Regulations, 2011.

2.62 Petitioner submits that as per clause 61 of Electricity Act 2003, all State Electricity regulatory commissions shall, subject to the provisions of the act, specify the terms and conditions for determinations of tariff, in doing so shall be guided by the following:

(a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

Thus, DERC is to necessarily frame its tariff regulation in line with CERC regulation 2014 for the generating companies for applicable period. The petitioner had written various letters showing its inability to compile content of business plan and MYT tariff petition for the period for FY 2016-17 to 2020-21 in absence of business plan & tariff regulation of DERC.

2.63 Accordingly as per provisions of clause 61(a) of electricity Act 2003, the petitioner had submitted its petition for the period in compliance of DERC order No. F3 (390)/Tariff/DERC/2014-15/4596/035 dated 15.02.2016 and related letters. Therefore, it is requested to fix the parameters for norms of operation in line with CERC Regulation 2014.

Commission's View

2.64 The Commission has specified the principles for determination of Working Capital in

Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011 and in Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017.

- 2.65 Accordingly, the Commission has considered the same in truing up of Interest on Working Capital of FY 2014-15 & FY 2015-16 and in determining the Interest on Working Capital for FY 2017-18.

Issue 10: GTPS- Form 27

Stakeholders' View

- 2.66 Form 27 submitted by the petitioner is not complete and component wise details have not been provided in contrary to DERC MYT Generation Regulations, 2011.

Petitioner's Submission

- 2.67 In this regard it is submitted that IPGCL as per direction of DERC submits copy of fuel bills and form 27 to the extent the information is available in the fuel bills of fuel supplier. The form 27 along with copy of actual bills paid for the relevant fuel supplied is also available on IPGCL website i.e. <http://ipgcl-ppcl.gov.in>.

Commission's View

- 2.68 The Commission has directed the Petitioner to submit required information pertaining to fuel in Chapter 5 (Directives) of this Order.

Issue 11: Capital Expenditure

Stakeholders' View

GTPS

- 2.69 The Petitioner has submitted capital investment plan for Gas Turbine Power Stations in order to improve the efficiency of the plant under various heads. In this regard it may be noted that the PPA signed between beneficiaries and IPGCL for power procurement shall expire in 2021. Under such circumstance it is not prudent to allow Rs. 49.44 Cr as capital cost to GTPS for the period 2016-17 to 2019-20. Further the PLF of the plant has

been very low ranging from to 55.29% in FY 2012-13 to 39.59% in FY 2014-15. Accordingly, any expense targeted at improving the efficiency of the plant shall not yield desired result as the PLF of the plant has been very low due non-availability of gas.

- 2.70 Therefore it is requested to disallow any capital cost at this stage and allow only O&M cost for running of the plant. Any expense at this stage shall not provide the desired benefit as only 4 years are left before the plant finishes its useful life.

RPH

- 2.71 The beneficiaries shall not be liable for any Capital Cost allowed to RPH as their PPA with IPGCL for RPH has already expired in 2015. RPH has requested CAPEX under various heads. However, no CAPEX should be allowed to RPH Station due to expiry of PPA with Discoms and non-conformance to environmental norms.

Petitioner's Submission

- 2.72 IPGCL has submitted to the Commission the status of RPH. The plant is non-operational since long and a committee formed by GNCTD has recommended its closure which is under consideration by GNCTD.
- 2.73 In case of GTPS, the PPA is valid up to year 2021 i.e. around 5 years from now. Therefore plant cannot be run without meeting necessary capital expenditure.

Commission's View

- 2.74 The Commission has allowed only necessary and approved expenses with regards to Capitalization for GTPS. Further, no Capitalization has been allowed for RPH Station.

Issue 12: Rajghat Power House – Billing

Stakeholders' View

- 2.75 RPH is raising negative bills of Energy Charges to DISCOMs despite expiry of PPA. The beneficiaries are not scheduling power from RPH after the expiry of PPA in May 2015.
- 2.76 It is requested to direct RPH to take electricity connection from DISCOMs under Non-Domestic category. If Non-Domestic Tariff is considered, then the amount of Refund to

- BRPL is Rs. 10.49 Cr. Hence, BRPL requests the Commission to direct RPH to refund Rs. 10.49 Cr. along with interest to BRPL.
- 2.77 The Delhi Pollution Control Committee (“DPCC”) had held a meeting on 30.12.2015 before Secretary Power for deciding the issues related to air pollution from BTPS and Rajghat Power House (“RPH”). The DPCC further issued a letter No. DPCC/ WMC-II/ 2015/ 2441-2455 dated 31.12.2015, in line with Minutes of Meeting held on 30.12.2015, under Section 31(A) of Air (Prevention & Control Act) 1981 wherein it had directed to closed down the plants.
- 2.78 Further BYPL’s PPA with RPH has expired in June, 2015. BYPL has also filed a petition before the Commission with following prayers:
- (a) Direct RPH to withdraw the energy bills raised upon the Petitioner w.e.f. August, 2015; and
 - (b) Restrain RPH from raising any energy bills as the Petitioner is not purchasing nor scheduling any power from RPH and RPH is not entitled to recover any cost from the Petitioner; and
 - (c) Pass appropriate orders to direct RPH and SLDC not to schedule and despatch power; and
- 2.79 The Commission in another petition filed by TPDDL (petition no. 56 of 2015) vide order dated 05.08.2016 has observed as under:
- “On the issue of surrender of power from RPH station of the Respondent the Commission observed that the RPH station of the Respondent was commissioned in May, 1990 and the relevant PPA with the Petitioner got expired in May, 2015 therefore the Respondent cannot continue to bill the petitioner for the fixed cost for recovery of capital cost of the plant. In such a situation the Respondent is at liberty to enter into a fresh PPA with any other party so as to recover its capital cost.”*
- 2.80 In view of the above we request the Commission not to consider any claim of the Petitioner regarding recovery of any amount beyond the expiry period of PPA.

Petitioner’s Submission

- 2.81 RPH is raising bills as per Energy account issued by SLDC. The case for decision to close down is pending with GNCTD. The plant is still a generation station as per SLDC records and billing is done/credit is given as per earlier decision of state constituents of OCC & commercial sub-committees.

Commission's View

- 2.82 The PPA for power procurement from RPH has been expired in May 2015. Further, no beneficiary has extended the said PPA. The Commission in Petition No. 56 of 2015 observed the following:

"On the issue of surrender of power from RPH station of the Respondent the Commission observed that the RPH station of the Respondent was commissioned in May, 1990 and the relevant PPA with the Petitioner got expired in May, 2015 therefore the Respondent cannot continue to bill the petitioner for the fixed cost for recovery of capital cost of the plant. In such a situation the Respondent is at liberty to enter into a fresh PPA with any other party so as to recover its capital cost."

Issue 13: Rajghat - Cost of Fuel

Stakeholders' View

- 2.83 There is a mismatch between rate of coal and GCV. (Form F4 of the petition). As per CIL notification dated 27.05.2013 on cost of coal vis-a-vis GCV, RPH cost of coal is abruptly high. For Cost of coal of Rs. 3500/- Te, the Grade of Coal should be in range of 6100 kcal/kg. However, RPH grade is only 3600 kcal/kg. Therefore it requested to the Commission to re-evaluate the same so that consumers would not be unduly burdened.

Petitioner's Submission

- 2.84 There is no basis in the submissions referred above as no documents have been attached as reference. The cost of coal is as billed by NCL. Moreover the rates charged are for washed coal.

Commission's View

2.85 The Petitioner has appropriately addressed the issue.

Issue 14: Rajghat- Special allowances for RPH

Stakeholders' View

2.86 The Regulation 6.11 of the DERC Terms and Conditions of Tariff Regulations, 2011 notified by this Commission stipulate as follows.

“The generating company or the transmission licensee, as the case may be, for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the useful life of the generating station or a unit thereof or the transmission system, shall make an application before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, record of consultation with beneficiaries and any other information considered to be relevant by the generating company or the transmission licensee”

2.87 The Petitioner had ample opportunity for consultation with beneficiaries of Delhi regarding the R&M/ LE works of Gas Turbine at various forums like commercial committee, operation committee, and customer meet etc. However, for reasons best known to the Petitioner, the Petitioner in disregard of the aforesaid regulation did not consult with the beneficiaries on this issue.

2.88 Hence it is submitted to the Commission to direct the petitioner to furnish additional details for R&M schemes including cost benefit analysis of the scheme.

2.89 The Petitioner has also claimed Rs. 6.75 Cr as Special Allowance for retrofitting of ESP in RPH. TPDDL would reiterate its stand that the PPA of TPDDL with IPGCL for RPH has expired and hence TPDDL shall not be liable for any claim vis-à-vis RPH.

Petitioner's Submission

2.90 This is special allowance being claimed as per clause 6.44 of DERC Regulations, 2011. This allowance is admissible for new assets of capital nature with minor expenditure.

Therefore, above submission is out of context as clause 6.11 of DERC Regulation, 2011 is not applicable.

Commission's View

- 2.91 The Commission has not considered any Special R&M Costs for RPH Station considering the expiry of PPA and non-renewal of the same.

Issue 15: Rajghat – Depreciation

Stakeholders' View

- 2.92 IPGCL has requested that the remaining depreciation of RPH which has not been recovered so far should be granted in the FY 2015-16 and FY 2016-17 as RPH shall be shut down after FY 2016-17 and GTPS will follow that very soon due to non-viability of the plants. It is submitted that the depreciation should not be allowed in such a short span of time since the same will result in tariff shock to the end consumers which are already burdened with the costs of these uneconomic power plants. Further, the mechanism laid down by the Commission while handling the depreciation issue of Indraprastha Gas should also be applied in this case in terms of which the plants and all its assets should be first sold off and the liability on account of depreciation should be set off against the same.

Petitioner's Submission

- 2.93 IPGCL is claiming only that part of depreciation which has not been allowed by the Commission in earlier years by way of increased percentage or advance against depreciation. In this regard, IPGCL may like to submit that even in case of Southern power plant of CESC, which has been quoted by TPDDL, WBERC has allowed advance against depreciation @ rate of Rs 331 lacs.
- 2.94 Since as per DERC Generation Tariff Regulations, 2011, clause 6.30 to 6.35, the depreciation is allowed up to 90% of asset till the useful life of the plant. The legitimate claim of IPGCL for unclaimed part of depreciation cannot be denied on the ground that it will increase the overall tariff of Delhi consumers.

Commission's View

- 2.95 The Commission has considered the depreciation to be paid to RPH in the last year of its PPA considering the expiry of PPA and non-renewal of the same.

Issue 16: Backing down**Stakeholders' View**

- 2.96 The Petitioner has made submission regarding deterioration of operational parameters due to backing down of the plant. TPDDL in this regard would like to submit that the plant is backed down due to its high operational costs. The Petitioner does not have firm commitment of fuel, i.e. APM gas for running the plant at full capacity on APM gas. Accordingly, the plant is primarily run on spot gas which is very costly. The Distribution Licensees, such as TPDDL are obligated to follow merit order dispatch and with the high cost of the plant it rarely considered in the merit order of the Distribution Licensees.

Petitioner's Submission

- 2.97 The submission of TPDDL on the matter is baseless that IPGCL has no firm allocation of the gas and the plant is run on Spot RLNG. The issue of gas availability is across sectors and applicable for other Power Plants from where Delhi DISCOMs buy power.

Commission's View

- 2.98 Power Scheduling is done by Delhi SLDC on the principle of Merit Order Despatch considering grid security and technical constraints.

Issue 17: Rajghat- Gross & Net Generation**Stakeholders' View**

- 2.99 The Gross generation and Net generation calculated by the Petitioner is neither as per MYT Regulations, 2011 for FY 2016-17 nor as per the DERC Tariff Regulations, 2017 for the period FY 17-18 onwards. Accordingly, the same will have to be re-calculated for FY 16-17 as per DERC Tariff Regulations, 2017 read with DERC Business Plan Regulations,

2017.

Petitioner's Submission

2.100 As per provisions of clause 61(a) of electricity Act 2003 discussed earlier in detail, the petitioner had submitted its petition for the period in compliance of DERC order No. F3 (390)/Tariff/DERC/2014-15/4596/035 dated 15.02.2016 and related letters. Therefore, it is requested to fix the parameters for norms of operation in line with CERC Regulation 2014.

Commission's View

2.101 The Commission has determined the Gross and Net Generation in line with the provisions of Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017.

Issue 18: Rajghat - Variable Cost

Stakeholders' View

2.102 The Variable Cost has been calculated based on the norms of CERC Tariff Regulations, 2014 which is not applicable to the Petitioner plants. The same will have to be re-calculated for FY 16-17 as per DERC Tariff Regulations, 2017 read with DERC Business Plan Regulations, 2017.

Petitioner's Submission

2.103 As per provisions of clause 61(a) of electricity Act 2003 discussed earlier in detail, the petitioner had submitted its petition for the period in compliance of DERC order No. F3 (390)/Tariff/DERC/2014-15/4596/035 dated 15.02.2016 and related letters. Therefore, it is requested to fix the parameters for norms of operation in line with CERC Regulation 2014.

Commission's View

2.104 The Commission has not determined Variable Cost for RPH Station for FY 2017-18 and the matter is appropriately dealt with in the relevant section of this Tariff Order.

Issue 19: Rajghat - Loan from Delhi Govt.**Stakeholders' View**

2.105 The Petitioner has submitted that there is a provision of penal interest of 2.75% in case of default in timely payment. In response to the same it is submitted that any penal interest charged on the Petitioner should not be passed on to the Distribution Licensee as it is attributable to the Petitioner. The burden of such penal interest should not be passed on to the end consumers and should be borne by the Petitioner itself.

Petitioner's Submission

2.106 Delhi DISCOMs including TPDDL are not paying energy bills of IPGCL. Even on repeated reminders and on follow up, TPDDL is defaulting payments since October 2015 and has not established LC since April 2014. This has resulted in erosion of credited of the company. Hence, could not borrow from financial institutions for its working capital needs. Therefore availed loan from GNCTD the interest of the same could not be paid due to defaulting payments by TPDDL & other DISCOMs. Therefore, DERC should allow penal interest which has been imposed by GNCTD as result of defaulting DISCOMs including TPDDL.

Commission's View

2.107 Regulation 6.20 of DERC Generation Tariff Regulations, 2011 deals with penal interest as follows:

"6.20 The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the respective years and shall be further limited to the prescribed rate of return on equity in the Regulation; Provided that all loans considered for this purpose shall be identified with the assets created;

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

Accordingly, the Commission does not consider the penal interest in case of default in timely payment.

Issue 20: Rajghat - Return on Equity

Stakeholders' View

2.108 The Petitioner has considered pre-tax base rate of 15.5% as per CERC Tariff Regulations, 2014, which as stated hereinabove are not applicable to the Petitioner. In terms of MYT 2011 and DERC Tariff Regulations 2017, the ROE for Generating Entity shall be computed at the Base Rate of 14.00% on post-tax basis. Accordingly, the submission of the Petitioner is liable to be rejected and the Petitioner needs to recalculate the ROE based on the Base Rate of 14.00% on post-tax basis.

Petitioner's Submission

2.109 As per provisions of clause 61(a) of electricity Act 2003 discussed earlier in detail, the petitioner had submitted its petition for the period in compliance of DERC order No. F3 (390)/Tariff/DERC/2014-15/4596/035 dated 15.02.2016 and related letters. Therefore, the Commission is requested to consider and allow ROE @ 15.5% of base rate as per CERC Regulations, 2014.

Commission's View

2.110 The Commission has considered the rate of Return on Equity in line with the provisions of Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017.

A3: TRUE UP OF FY 2014-15 AND FY 2015-16

3.1. Regulation 5.8 of MYT Generation Regulations, 2011 specifies the following:

"..... The Commission shall review actual capital expenditure incurred and capitalisation at the end of each year of the Control Period vis-a-vis the approved capital expenditure and capitalisation schedule. The Commission may also revise the capital expenditure and capitalisation for remaining years of the Control Period based on trued up capital expenditure and capitalisation for any year."

3.2. Regulation 5.12 of MYT Regulations, 2011 specifies the following:

"..... Depreciation, Loan and Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission"

3.3. Therefore, in accordance with MYT Generation Regulations, 2011, the Commission has trued up the Capital Expenditure, Depreciation, Interest on Loans and Return on Equity of the Petitioner for FY 2014-15 & FY 2015-16.

Indraprastha Power Station (I. P. Station)**Petitioner's Submission**

- 3.4. I.P. Station initially comprised of five units out of which Unit 1 was decommissioned prior to the unbundling of Delhi Vidyut Board (DVB). Further, IPGCL had been supplying one-third of the power generated from Units 2, 3 and 4 to Haryana, as per the agreement signed between erstwhile DESU and DVB with the Government of Haryana. In view of the above, out of the total installed capacity of 247.5 MW, the power generated corresponding to capacity of 62.5 MW was transferred to Haryana, and the generation corresponding to 185 MW was supplied to Delhi. Unit 2 to Unit 5 were operational since the unbundling, however these were also decommissioned as the units had outlived their lives. The complete plant was finally decommissioned with effect from December 31, 2009. The assets of the station are in the process of disposal.
- 3.5. Further the Petitioner has submitted that the station was more than 40 years old and was closed down on 31.12.2009. Earlier, Petitioner has submitted true up petition for

FY 2007-08 to 2011-12 for IP Station and the Commission vide its order dated 31.07.2013 has trued up Rs.175.41 Cr. to be recovered by Petitioner due to approval of additional expenditure on various heads during the period by the Commission. However, the Commission has not allowed to recover above amount from DISCOMs and have noted as under:

“3.92 However, as discussed earlier the same shall be allowed to be recovered once all the assets of IP Station are disposed off and the final amount of realization from sale of assets including land gets firmed up.

3.93 The Petitioner is directed to inform the Commission once the IP Station is completely disposed off and submit the details of assets disposed off along with salvage value realized on account of sale of assets.

3.95 However, as discussed earlier the same shall be allowed to be recovered once all the assets of IP Station are disposed off and the final amount of realization from sale of assets including land gets firmed up.”

3.6. Further, the petitioner has submitted that it has filed a reply vide letter No. IPGCL/Comml./IDRA/07-12/178 dated 30.10.2013 and requested not to link the recovery of above amount with final disposal of IP Station and the land due to following reasons:

1. The amount allowed by the Commission after truing up is related to O&M expenses, depreciation, interest on loans, return on equity, interest on working capital allowed on account of relaxed norms considered for IP Station. Due to implementation of impact of various courts orders, actual operational conditions accepted and allowed by the Commission in this regard. Therefore, the Commission's decision to link above recovery with final asset disposal and land disposal is not justified.
2. The land was on a lease with notional lease rental. Therefore, no actual disposal / sale of the land is possible. The accumulated depreciation of the IP Station up to the date of closure as allowed by the Commission was not up to 90% of depreciation of the original cost of the assets as allowed in MYT regulation, 2007. Accordingly, Petitioner has requested the Commission to depreciate the

assets up to 90% in FY 2009-10. However, the Commission did not allow depreciation up to 90% with the remarks in tariff order dated 31/07/2013 as under:

“3.74 The Commission has further considered the impact of additional capitalization while computing depreciation. However, with regards to the Petitioner’s claim of balance depreciation to the extent of 90% of the GFA value, the Commission is of the view that the issue shall be dealt with once the assets of IP Station gets disposed off. The commission has therefore only allowed depreciation by applying depreciation rates as specified in the DERC MYT Regulations, 2007 on the opening GFA for the year and on assets added during the year. Accordingly, the depreciation as approved by the Commission in its MYT Order dated December 14, 2007, as requested by the Petitioner and that allowed by the Commission.”

- 3.7. Since the additional information has already been submitted by petitioner in this regard, therefore, the petitioner once again requests the Commission not to link the recovery of Rs.175.41 Cr. With final disposal of assets and land of IP Station and allow the petitioner to allow above amount along with additional cost due to trued up and further submission by petitioner vide its letter dated 30/10/2013.
- 3.8. The Petitioner finally requested the Commission to allow the recovery of trued up amount of I.P Station of Rs.175.41 Cr without linking it to final disposal of scrap material and land for I.P. Station.

Commission’s Analysis

- 3.9. The Commission had directed the petitioner in tariff order dated 31/07/2013 to submit the final amount of realization on disposal of asset after de-commissioning of the IP station as follows:

“3.93 The Petitioner is directed to inform the Commission once the IP Station is completely disposed off and submit the details of assets disposed off along with salvage value realized on account of sale of assets.

3.95 However, as discussed earlier the same shall be allowed to be recovered once all the assets of IP Station are disposed off and the final amount of realization from sale of assets including land gets firmed up.”

- 3.10. The petitioner has submitted vide its e-mail dated 03/07/2017 that the final disposal of I.P. station is still pending as there is pending case of arbitration between Mukti Credit Pvt. Ltd. (the party to whom I.P station has been sold out) and IPGCL.
- 3.11. Therefore, the Commission is of the view that the recovery of trued up amount of I.P Station of Rs. 175.41 Cr. may be finalized after the submission of the details of amount of realization on disposal of asset.

Rajghat Power House (RPH)

Norms of Operation

Availability

Petitioner's Submissions

- 3.12. The power station is out of bar since June, 2015 due to non-scheduling of power by beneficiaries of the plant and order of Delhi Pollution Control Board (DPCB). Therefore, petitioner has requested the Commission to allow the expenditure for FY 14-15 & FY 15-16. The actual Plant Availability submitted by the Petitioner is as under:

Table 2: Plant Availability submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	Rajghat Power House	%	56.50	74.75

Commission's Analysis

- 3.13. It is observed that the Power Purchase Agreement with respect to RPH got expired in the month of May 2015 due to efflux of time. Therefore, the Commission has approved the Availability for True up till May 2015 only.
- 3.14. The Commission sought the actual data regarding plant availability for true up of RPH for FY 2014-15 and FY 2015-16 from SLDC Delhi vide e-mail dated 08/06/2017 and SLDC has submitted the details vide its e-mail dated 19/06/2017. Accordingly, the

Commission has approved the plant availability as submitted by the SLDC for the purpose of true up of FY 2014-15 and FY 2015-16 as follows:

Table 3: Plant Availability approved by the Commission

Sl. No.	Station	UoM	FY 2014-15			FY 2015-16 (April and May)		
			MYT Value	Actual as submitted by Petitioner	Approved for True Up	MYT Value	Actual as submitted by Petitioner	Approved for True Up
1	RPH	%	75	56.50	56.50	75	74.75	55.78

Station Heat Rate (SHR)

Petitioner's Submission

- 3.15. The Petitioner submitted that aging of the machines plays a major role, whereby the plants are not in a position to operate at its full rated capacity due to technical constraints which further affects the station heat rate as well as auxiliary power consumption.
- 3.16. The Petitioner further submitted that earlier, the Commission has approved the station heat rate of 3200kCal/kWh which is below than the level achievable by the station as evident from the actual heat rate achieved during FY 14-15 & FY 15-16. Therefore, petitioner in view of present position of the plant being nonoperational since June, 2015, requests the Commission to allow the actual heat rate for Rajghat Power House in FY 14-15 & FY 15-16.
- 3.17. The actual Heat Rate submitted by the Petitioner is as under:

Table 4: Station Heat Rate submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	Rajghat Power House	kCal/kWh	3367	3292

Commission's Analysis

- 3.18. The Commission had approved the Operational Norms for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 as follows:

“7.1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under:

1) Rajghat Thermal Power House (RPH)

Operational Parameters	2012-13	2013-14	2014-15
<i>Normative Annual Plant Availability Factor (%)</i>	75%	75%	75%
<i>Gross Station Heat Rate (kCal/kWh)</i>	3200	3200	3200
<i>Auxiliary Consumption (%)</i>	11.28%	11.28%	11.28%
<i>Secondary Fuel Oil (LDO) Consumption (ml/kWh)</i>	1.50	1.50	1.50
<i>Secondary Fuel Oil (LSHS) Consumption (gm/kWh)</i>	3.75	3.75	3.75

”

- 3.19. Further, APTEL in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of “Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission” has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15 as follows:

“35. The appellant has also failed to give any reason whatsoever justifying the relaxation of the operation norms fixed in the MYT Regulations. The only reason argued before us, that the station is an old station and is envisaged to be closed down in near future, is not acceptable. We also agree to the finding recorded by the learned State Commission in the impugned order that the relaxation of the said norms/ provisions of DERC (Tariff Regulations), 2011 is not in the public interest and there is no material on record to deviate from this finding recorded by the learned State Commission.

....

....

38. The appeal is dismissed being devoid of merits and the impugned order dated 13.07.2012 passed by the learned Delhi Commission in petition no. 07 of 2012 is hereby affirmed. No order as to costs.”

- 3.20. The Commission vide its Order dated October 22, 2014 had extended the applicability of MYT Generation Regulations, 2011 for FY 2015-16.

- 3.21. In view of the above, the Commission approves the following SHR for RPH for true up of FY 2014-15 and FY 2015-16 as per the approved norms in MYT Generation Regulations, 2011 as follows:

Table 5: Station Heat Rate approved by the Commission

Sl. No.	Station	UoM	FY 2014-15			FY 2015-16		
			MYT Value	Actual as submitted by Petitioner	Approved for True Up	MYT Value	Actual as submitted by Petitioner	Approved for True Up
1	RPH	kCal/kWh	3200	3367	3200	3200	3292	3200

Auxiliary Power Consumption

Petitioner's Submissions

- 3.22. The CEA in its Report dated December, 2004 on 'Technical Standard on Operation Norms for Coal/Lignite fired Thermal Power Station' had recommended Auxiliary Power Consumption of 12% for smaller size units with cooling tower. The Rajghat Power House station having two units each of 67.5 MW with cooling towers was commissioned in the year 1989-90.
- 3.23. The Petitioner submitted that it is pertinent to mention that Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for the period FY 2009-14 in the regulation 26 (iv) (b) has approved an auxiliary consumption of 12% for Tanda Thermal Power Station having four units of 110 MW each. Further, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for the period FY 2014-19 in the regulation 36 (E) (b) (ii) has approved an auxiliary consumption of 12% for Tanda Thermal Power Station. The Commission has already approved the Auxiliary Power Consumption of 12% for FY 2006-07. Further, due to prolonged backing down, un-productive auxiliary consumption also increases percentage of total auxiliary consumption of the station. The percentage of auxiliary consumption as allowed for RPH relates to the time when backing down due to merit order dispatch was not in the practice and the actual auxiliary consumption of the station was related to actual running up of plants & equipments during actual

generation from the station. However, due to present practice of frequent and prolonged backing downs the station heat rate has increased substantially.

3.24. Actual Auxiliary Power Consumption submitted by the Petitioner is as follows:

Table 6: Actual Auxiliary Power Consumption submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	Rajghat Power House	%	15.57	28.97

Commission's Analysis

- 3.25. The Petitioner has claimed higher auxiliary consumption in comparison to normative auxiliary consumption as approved by the Commission in MYT Generation Regulations, 2011. The matter was discussed with IPGCL and it was informed that there is no separate arrangement for recording of unit auxiliary transformer consumption, as no meters have been installed for unit auxiliary consumption measurement at RPH.
- 3.26. It is pertinent to state that ATE in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of "Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission" has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15, wherein the Petitioner had sought relaxation in Operational Norms.
- 3.27. Accordingly, the Commission approves the Auxiliary Power Consumption for RPH for FY 2014-15 and FY 2015-16 as follows:

Table 7: Auxiliary Power Consumption approved by the Commission (%)

Sl. No.	Station	UoM	FY 2014-15			FY 2015-16		
			MYT Value	Actual as submitted by Petitioner	Approved for True Up	MYT Value	Actual as submitted by Petitioner	Approved for True Up
1	RPH	%	11.28	15.57	11.28	11.28	28.97	11.28

Energy Charge Rate and Variable Cost**Petitioner's Submission**

3.28. The Petitioner has submitted Net Generation for RPH as follows:

Table 8: Net Generation submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Capacity	MW	135	135
2	Gross Generation	MU	423.58	46.59
3	Auxiliary Consumption	MU	65.96	13.50
4	Net Generation	MU	357.61	33.10

3.29. Regarding Indigenous Coal/ Washed Coal, the Petitioner submitted that the price of coal is dependent on the distance of the power station from the coal mines. Apart from above, the coal prices also vary from mine to mine depending upon the factors related to the mines, including grade of coal. IPGCL is using washed coal of less than 34% ash content as per the directive of the Supreme Court.

3.30. The Petitioner further submitted that Govt. of India has decided to impose effective service tax of 4.35% (14.5% service tax after 70% abatement) on the freight charge of coal w.e.f. 01.04.2012. The freight charges constitute around 50% of the landed cost of coal. However, the service tax is not considered but it is requested to the Commission to consider the same.

3.31. In addition, the Petitioner submitted that Ministry of Coal, Govt. of India has revised the coal prices w.e.f. 01.01.2012. Further, NCL has raised the bills for UP Forest transit fee of Rs.40,91,64,309.24 for UP forest transit fee (Rs.20,84,04,150.43 for RPH and Rs.20,07,60,158.81 for IP Station) for the period from 21.01.1999 to 31.03.2012.

3.32. The Petitioner further submitted that as the claim of UP forest transit fee is a part of variable cost (fuel) the same is required to be claimed from the beneficiary distribution companies i.e. from Delhi Transco Ltd. For the period from 01.07.2002 to 31.03.2007 and from other DISCOMs i.e. BYPL, BRPL, TPDDL (then NDPL), HVPNL and NDMC from 01.04.2007 to 31.03.2012.

3.33. Regarding Secondary fuel oil, the Petitioner submitted that earlier while submitting the tariff petition for FY 15-16 the cost of secondary fuel was taken by computing average

price and GCV for the months of April 2015 to December 2015 and no escalation was taken. The cost of the secondary fuel has been considered as per CERC Regulation 2014. The year wise consumption of the same has been claimed in true up petition for FY 14-15 are as under:

Table 9: Secondary Fuel Consumption submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Secondary Fuel Oil (HSD) Consumption	ml/kWh	5.89	5.89

3.34. The Petitioner has requested to allow 5.89 ml/kWh of HSD for FY 14-15 & FY 15-16.

3.35. Accordingly the petitioner has estimated the Fuel cost for the station after considering the Gross Generation of the plant, SHR of the station, Gross Calorific Value and the Fuel Prices as explained above, as under:

Table 10: Variable Cost submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Gross Generation	MU	423.58	46.59
2	Net Generation	MU	357.61	33.10
3	Coal Consumption	MT	383324.18	41539.00
4	Cost per Tone of Coal	Rs/ MT	3532	3931
5	Secondary Oil Consumption- HSD	KL	1605.17	118.47
6	Cost of HSD	Rs/ KL	52918	47747
7	Total Cost of Fuel	Rs Cr	136.57	16.80
8	Variable Cost	Rs/ kWh	3.82	5.08

Commission's Analysis

3.36. As per MYT Generation Regulations, 2011 any financial loss / gain on account of under / over-performance on targets for controllable parameters shall not be trued up. The relevant extract is as follows:

"5.10 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:

(a) Gross Station Heat Rate;

(b) Normative Annual Plant Availability Factor;

(c) Auxiliary Energy Consumption;

- (d) Secondary Fuel Oil Consumption;*
- (e) Operation and Maintenance Expenses;*
- (f) Financing Cost which includes cost of debt (interest), cost of equity (return);*
- and*
- (g) Depreciation.*

5.11 Any financial loss on account of underperformance on targets for parameters specified in Clause 5.10 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the generating company's benefit and shall not be adjusted in tariffs."

- 3.37. Further, the Commission vide its e-mail dated 14/06/2017 has sought the authenticity of energy charge rate billed by RPH from the beneficiary DISCOMs. It is observed that no beneficiary has objected the computation of energy charge rate billed by RPH during FY 2014-15 and FY 2015-16. Accordingly, the Commission has not considered true up of fuel cost for FY 2014-15 and FY 2015-16.

Fixed Charges

Operation & Maintenance (O&M) Expenses

Petitioner's Submission

- 3.38. The Petitioner has submitted that the plant is out of bar since June, 2015 due to non-scheduling of power by its beneficiaries and direction from Delhi Pollution Control Board due to higher pollution level than the norms prescribed by DPCC.
- 3.39. The Petitioner further submitted that Barrage at ITO is being maintained by Haryana Irrigation Department for meeting the water requirements of IPGCL and its O&M expenses are shared/ reimbursed by IPGCL. Besides this, water charges are also being paid to Delhi Jal Board for domestic and industrial water consumption in the form of water charges. Accordingly, the Taxes and duties including water Cess, property/ service charges etc. has been reimbursed from the beneficiaries during the previous

years of MYT Control period on actual basis. Therefore, the Commission is requested to allow the same for Current MYT period also.

- 3.40. The Petitioner has further submitted that units of RPH are small in size and are also old in age; hence it will require more man power for operation as well as higher Repair & Maintenance expenses. This fact has also been appreciated by CERC for allowing the higher O&M expenses for small size and old age plants. O&M Expenses (As per CERC Regulation, 2014) submitted by the Petitioner is as follows:

Table 11: O&M Expenses (as per CERC Regulations, 2014) submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	Rajghat Power House	Rs Cr	79.05	84.02

- 3.41. Actual O&M Expenses submitted by the Petitioner is as follows:

Table 12: Actual O&M Expenses submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Repairs and Maintenance (R&M)	Rs Cr	26.45	8.09
2	Employee Expenses	Rs Cr	34.97	36.12
3	Administrative and General Expenses	Rs Cr	8.04	7.48
4	O&M Expenses	Rs Cr	69.46	51.69
5	Special R&M Expenses	Rs Cr	6.67	6.67
6	Total O&M Expenses	Rs Cr	76.13	58.36

Commission's Analysis

- 3.42. Regulation 6.14 and 6.15 of the MYT Generation Regulations, 2011 (extracts of which are reproduced below) provides that the generating company is entitled to claim special allowance for upon expiry of useful life as follows:

“6.14 The generating company in case of thermal generating station, may, in its discretion, avail of a special allowance either for a Unit or a group of Units as compensation for meeting the requirement of expenses including Renovation and Modernization beyond the Useful life of the generating station or a Unit thereof, and in such an event revision of the capital cost shall not be considered and the applicable operational norms shall not be relaxed but the special allowance shall

be included in the annual fixed cost. Provided also that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these Regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.

6.15 A generating company (coal-based thermal generating station) on opting for the alternative in the clause 6.14 of these Regulations, shall be allowed special allowance @ Rs. 5.91 lakh/MW/year in 2012-13 and thereafter escalated @ 5.72% every year during the Control Period 2012-15, unit-wise from the next financial year from the respective date of the completion of useful life with reference to the date of commercial operation of the respective unit of generating station:

Provided that in respect of a unit in commercial operation for more than 25 years as on 1.4.2012, this allowance shall be admissible from the year 2012-13.”

3.43. It is observed that PPA with respect to RPH got expired in May 2015 and no beneficiary has extended/renewed the PPA after completion of its useful life of 25 years. Further, the Petitioner has not submitted the details of expenditure incurred towards Special Allowance on account of R&M. Thus, the Commission has not considered any Special Allowance against R&M for RPH Station over and above normative O&M expenses excluding Special Allowance on account of R&M.

3.44. Further as per Regulations 5.10 and 5.11 of the MYT Generation Regulations 2011, O&M Expenses are controllable parameters and any financial gain or loss on account of over achievement / under performance is on the account of the generating company and is not recoverable / adjusted through the tariff. Relevant extract from the MYT Generation Regulations 2011 is as follows:

“5.10 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be “controllable” and which includes:

(a) Gross Station Heat Rate;

(b) Normative Annual Plant Availability Factor;

(c) Auxiliary Energy Consumption;

(d) Secondary Fuel Oil Consumption;

(e) Operation and Maintenance Expenses;

5.11 Any financial loss on account of underperformance on targets for parameters specified in Clause 5.10 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the generating company's benefit and shall not be adjusted in tariffs."

- 3.45. During the prudence check, the Petitioner submitted that the actual expenditure for O&M incurred were lesser than the normative approved O&M expenses because of the lower availability achieved which is trued up as 56.50% for FY 2014-15 and 55.78% for FY 2015-16. The same has resulted in less actual allowance of O&M Expenses, based on the target vs actual availability. The amount of O&M expenses allowed on the basis of trued up availability is Rs 54.42 Cr for FY 2014-15 and Rs 55.50 Cr for FY 2015-16.
- 3.46. Accordingly, the Commission has allowed the O&M expenses on normative basis approved in relevant tariff order as follows:

Table 13: O&M Expenses approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16		
			Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	Employee Expenses	Rs Cr	64.08	34.97	64.08	69.21	36.12	69.21
2	A&G Expenses	Rs Cr	9.50	8.04	9.50	10.26	7.48	10.26
3	R&M Expenses	Rs Cr	22.73	26.45	22.73	20.02	8.09	20.02
4	Special R&M	Rs Cr	0	6.67	0	6.13	6.67	0
5	Total O&M Expenses	Rs Cr	96.31	76.13	96.31	105.62	58.36	99.49

Capital Expenditure

Petitioner's Submission

- 3.47. The capitalization submitted by the Petitioner during FY 2014-15 and FY 2015-16 is as follows:

Table 14: Capitalization submitted by the Petitioner

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16
1	Opening GFA	Rs Cr	247.78	247.93
2	Addition	Rs Cr	2.35	0.96
3	Deletion	Rs Cr	2.20	0.16
4	Closing GFA	Rs Cr	247.93	248.73

Commission's Analysis

- 3.48. The Commission has sought the details of capitalisation and de-capitalisation during FY 2014-15 and FY 2015-16 from the Petitioner. Capitalisation approved for FY 2014-15 and FY 2015-16 based on the prudence check and subsequent plant visit by officials of the Commission is as follows:

Table 15: Capitalization approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15		FY 2015-16	
			Petitioner Submission	Approved for True up	Petitioner Submission	Approved for True up
1	Opening GFA	Rs Cr	247.79	225.42	247.94	223.16
2	Addition	Rs Cr	2.35	0	0.96	0
3	Deletion	Rs Cr	2.20	2.26	0.16	0.17
4	Closing GFA	Rs Cr	247.94	223.16	248.74	222.99

Depreciation**Petitioner's Submission**

- 3.49. Depreciation is charged on the basis of straight-line method, on the fixed assets. The depreciation is based on the original cost, estimated life and residual life. The depreciation rates applied are as per the Regulation notified by the Commission for respective period.
- 3.50. The Depreciation amount for FY 2014-15 and FY 2015-16 as submitted by the petitioner is as follows:

Table 16: Depreciation submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
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1	Rajghat Power House	Rs Cr	20.50	20.50
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Commission's Analysis

- 3.51. Regulations 6.30 - 6.34 of the MYT Regulations 2011 specify the methodology for calculation of depreciation for a generation company during the Control Period as follows:

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

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

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

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

6.34 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset. Land is

not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset. In the event of Renovation and Modernization expenditure affecting the life of the asset, the depreciation shall be allowed up to a maximum of 90% of the cost of the asset within the enhanced life span of the asset”.

- 3.52. It is observed that RPH Station has completed its useful life in May 2015 and the Power Purchase Agreement (PPA) for RPH Station got expired in May 2015 due to efflux of time. Further, no beneficiary has extended the PPA, therefore the Commission has divided its balance depreciable amount in to FY 2014-15 & FY 2015-16 and has allowed the entire depreciation of FY 2015-16 in two months (April and May) when RPH Station was in operation.

Accordingly, the Commission has approved the Depreciation for true up for FY 2014-15 and FY 2015-16 as follows:

Table 17: Depreciation approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16			Ref.
			Tariff Order	Petitioner's Submission	Approved for True Up	Tariff Order	Petitioner's Submission	Approved for True Up	
A	Opening GFA	Rs Cr	255.90	247.79	225.42	225.42	247.94	223.16	Table 15
B	Additions	Rs Cr	0.00	2.35	0	0.00	0.96	0	Table 15
C	Deletions	Rs Cr	0.00	2.20	2.26	0.00	0.16	0.17	Table 15
D	Closing GFA	Rs Cr	255.90	247.94	223.16	225.42	248.74	222.99	Table 15
E	Average GFA	Rs Cr	255.90	247.87	224.29	225.42	248.34	223.08	(A+D)/2
G	Depreciation Rate	%			8.91%	6.08%		8.44%	(H/E)*100
H	Depreciation	Rs Cr	12.93	20.50	19.99	13.71	20.50	18.82	Para 3.52
I	Opening Accumulated depreciation	Rs Cr	168.12		161.88			181.87	Tariff Order

J	Closing Accumulated depreciation	Rs Cr			181.87			200.69	H+I
K	Average Accumulated depreciation	Rs Cr			171.88			191.28	(I+J)/2

Interest on Loans

Petitioner's Submission

3.53. The Petitioner submitted that as per the Delhi Electricity Reforms (Transfer Scheme) Rules 2001, Rs. 210 Crore of unsecured loan was transferred to IPGCL as on July 1, 2002 and repayable to holding company. This loan has been bifurcated station wise, based on the gross fixed assets of the Company, as under:

Table 18: Loan details submitted by the Petitioner

Sl. No.	Station	UoM	Amount
1	Rajghat Power Station	Rs Cr	16.26
2	GT Power Station	Rs Cr	32.96
Total		Rs Cr	49.22

3.54. The Petitioner submitted that the Plan Funds Loan from Delhi Government was taken @ 13% interest in the FY 2002-03 & from FY 2003-04 and thereafter, the plan funds interest rate is @ 11.50%. A penal interest of 2.75% is payable in case of default in timely payment of interest on principal amount. The penal interest has been accounted in the ARR. IPGCL has made certain capital additions during the Control period FY 2012-13, 2013-14 to FY 2014-15. The same has been funded through internal accruals/ loan from GNCTD (There are no new loans from GNCTD in FY 2012-13 onwards) from GNCTD. As per Regulation, 70% of the capital additions have been considered to be funded through Loans. Accordingly, interest on this normative loan has been taken @ 13 % per annum, as per the Regulations.

Commission's Analysis

- 3.55. Regulation 6.1 of MYT Generation Regulations, 2011 deals with financing of the capital cost in Debt Equity ratio allowed for Generation Business and the relevant extract is as follows:

“6.1 Capital cost for a Project shall include:

(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, as admitted by the Commission after prudence check shall form the basis for determination of tariff;”

- 3.56. Regulation 5.12 of MYT Generation Regulations, 2011 deals with interest on Loan as follows:

“5.12 Depreciation, Loan and Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the generating company and shall not be trued up in ARR;

Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.”

- 3.57. It is observed that the State Bank of India base rate did not vary more than (+/-) 1%, as the same was 10% on 01.04.2012, 01.04.2014 and 01.04.2015. Therefore, the Commission has not trued up the Rate of Interest on Loan.
- 3.58. Accordingly, the Commission has computed the quantum of Loan and Equity required for funding of Net Fixed Asset (NFA) for FY 2014-15 and FY 2015-16 as follows:

Table 19: Requirement of Loan computed by the Commission

Sl. No.	Particulars	UoM	FY 2014-15		FY 2015-16		Ref.
			Petitioner Submission	Approved for True up	Petitioner Submission	Approved for True up	
A	Opening GFA	Rs Cr	247.79	225.42	247.94	223.16	Table 15
B	Opening Accumulated Depreciation	Rs Cr		161.88		181.87	Table 17
C	Opening NFA	Rs Cr		63.54		41.29	A-B
D	Opening Equity	Rs Cr		60.27		59.59	Tariff Order
E	Opening Loan Requirement	Rs Cr		3.27		0	C-D
F	Closing Loan	Rs Cr		0		0	
G	Average Loan	Rs Cr		1.63		0	(E+F)/2
H	Interest Rate on Loan	%		11.84%		11.84%	Tariff Order
I	Interest on Loan	Rs Cr		0.19		0	GxH

- 3.59. The quantum of loan required for funding of capital asset has been dealt in regulation 6.13 and 6.17 of MYT Generation Regulations, 2011 as follows:

“6.13 Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on the estimates of renovation and modernization expenditure and life extension, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.

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

- 3.60. It is observed from conjoint reading of the above provisions and the above table that there is no loan required for funding of Capital Asset for FY 2015-16 as Accumulated Depreciation has already exceeded 70% of the value of Gross Fixed Asset and the remaining written down value of GFA is considered as funding through Equity only as per the provisions of MYT Generation Regulations, 2011. Therefore, the Commission has not considered Interest on Loan for FY 2015-16.

Return on Equity**Petitioner's Submission**

- 3.61. The subscribed and paid up equity capital of IPGCL was fixed at Rs. 140 Crore as on July 1, 2002 in accordance with the Transfer Scheme. The total equity was bifurcated plant wise, on the basis of Gross Fixed Assets of the Company, as under:

Table 20: Details of Equity submitted by the Petitioner

Sl. No.	Station	UoM	Amount
1	IP Power Station	Rs Cr	1.20
2	Rajghat Power Station	Rs Cr	59.56
3	GT Power Station	Rs Cr	79.24
4	Total	Rs Cr	140.00

- 3.62. The Petitioner further submitted that the Central Commission has fixed the pretax base rate of 15.5% in Generation Tariff Regulation 2014 for the period FY 2014-19. Therefore petitioner has taken same values for calculation of ROE in the issuing years. It is further submitted that the petitioner has made certain Capital additions. 30% equivalent amount of the capital additions during current MYT period has been considered for computation of ROE. The details of the same are furnished as under:

Table 21: Return on Equity submitted by the Petitioner

Sl. No.	Description		UoM	FY 2014-15	FY 2015-16
1	Average Equity	A	Rs Cr	74.36	74.50
2	Return on equity at base rate i.e @ 15.5%	B	Rs Cr	11.52	11.54
3	Normal Income tax rate	C	%	33.99	33.99
4	Gross up return on equity rate	D (base rate/ (1-C)	%	23.48	23.48
5	Return on Equity	E (AxD)	Rs Cr	17.46	17.48

Commission's Analysis

- 3.63. Regulation 6.36 of the MYT Generation Regulations, 2011 specifies Return on Equity as follows:

“6.36 Return on equity shall be computed on the equity determined in accordance with clauses 6.6 - 6.10 of these Regulations and shall be 14% (post tax);

Provided that return on equity invested in work in progress shall be allowed from the Date of Commercial Operation.”

3.64. It is observed from the copy of Income Tax Return submitted by the Petitioner for FY 2014-15 and FY 2015-16 that the Petitioner has not paid any tax for FY 2015-16. Accordingly, the Commission has not considered tax for FY 2015-16.

3.65. Return on Equity inclusive of Income Tax allowed for FY 2014-15 and FY 2015-16 in accordance with the provisions of MYT Generation Regulations, 2011 is as follows:

Table 22: Return on Equity approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16			Ref.
			Tariff Order	Petitioner's Submission	Approved for True Up	Tariff Order	Petitioner's Submission	Approved for True Up	
A	Opening Equity	Rs Cr	69.40	74.33	60.27	60.27	74.38	59.59	Tariff Order
B	Additions	Rs Cr	0	0.71	0	0	0.29	0	Table 15
C	Deletions	Rs Cr	0	0.66	0.68	0	0.05	0.05	Table 15
D	Net Additions	Rs Cr	0	0.05	-0.68	0	0.24	-0.05	B-C
E	Closing Equity	Rs Cr	69.40	74.38	59.59	60.27	74.62	59.54	A+D
F	Average Equity	Rs Cr	69.40	74.35	59.93	60.27	74.50	59.57	(A+E)/2
G	Base Rate of return on equity	%	14%	15.5%	14%	14%	15.5%	14%	Tariff Order
H	Income Tax Rate	%		33.99%	33.99%		33.99%	0	
I	Effective Rate of Return on Equity	%		23.48%	21.21%		23.48%	14%	G/(100-H)
J	Effective Return on Equity	Rs Cr		17.46	12.71		17.48	8.34	FxI

Cost of secondary fuel oil

Petitioner's Submission

- 3.66. The Petitioner submitted that earlier while submitting the tariff petition for FY 15-16 the cost of secondary fuel was taken by computing average price and GCV for the months of April 2015 to December 2015 and no escalation was taken. The cost of the secondary fuel has been considered as per CERC Regulation 2014. The year wise consumption of the same has been claimed in true up petition for FY 14-15 are as under:

Table 23: Secondary Fuel details submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Secondary Fuel Oil (HSD) Consumption	ml/kWh	5.89	5.89

- 3.67. Petitioner therefore requested the Commission to allow 5.89 ml/kWh of HSD for FY 14-15 & 15-16.

Commission's Analysis

- 3.68. The Commission had approved the Secondary Fuel Cost for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 as follows:

"7.1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under:

1) Rajghat Thermal Power House (RPH)

Operational Parameters	2012-13	2013-14	2014-15
Normative Annual Plant Availability Factor (%)	75%	75%	75%
Gross Station Heat Rate (kCal/kWh))	3200	3200	3200
Auxiliary Consumption (%)	11.28%	11.28%	11.28%
Secondary Fuel Oil (LDO) Consumption (ml/kWh)	1.50	1.50	1.50
Secondary Fuel Oil (LSHS) Consumption (gm/kWh)	3.75	3.75	3.75

"

- 3.69. Further as per Regulations 5.10 and 5.11 of the MYT Generation Regulations 2011, Secondary Fuel Costs are controllable parameters and any financial gain or loss on

account of over achievement / under performance is on the account of the generating company and is not recoverable / adjusted through the tariff.

3.70. During the prudence check, the Petitioner submitted that the actual expenditure for Secondary Fuel incurred was lesser than the normative approved Secondary Fuel expenses because of the lower availability achieved which is trued up as 56.50% for FY 2014-15 and 55.78% for FY 2015-16. The same has resulted in less actual allowance of Secondary Fuel Expenses, based on the target v/s actual availability.

3.71. Accordingly, the Commission has allowed the Secondary Fuel expenses on normative basis approved in relevant tariff order as follows:

Table 24: Secondary fuel cost approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16		
			Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	Cost of Secondary Fuel Oil	Rs Cr	14.57	8.49	14.57	14.57	0.57	14.57

Interest on Working Capital

Petitioner's Submission

3.72. Interest on Working Capital has been computed as per the following norms for coal based station:

- Cost of coal for 2 months
- Secondary oil for 2 months
- O&M expenses for 1 month
- Receivables equivalent to 2 months average billing
- Maintenance Spares @ 20% of the O&M expenses

3.73. The Petitioner further submitted that the rate of Interest for is computed as 13.5% by additionally allowing 350 basis points on base rate of SBI.

3.74. The interest on working capital for FY 2014-15 and FY 2015-16 submitted by the Petitioner is as follows:

Table 25: Interest on working capital submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Cost of Coal for 2 months	Rs Cr	38.34	22.06
2	Cost of Secondary Fuel Oil for 2 months	Rs Cr	2.43	2.43
3	Maintenance Spares @ 20% of O&M	Rs Cr	19.26	21.12
4	O&M expenses for 1 month	Rs Cr	8.03	8.80
5	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	64.88	49.43
6	Total Working Capital	Rs Cr	132.93	103.84
7	Rate of Interest	%	13.50%	13.50%
8	Interest on Working Capital	Rs Cr	17.95	14.02

Commission's Analysis

- 3.75. Regulation 5.12 of MYT Generation Regulations, 2011 deals with Interest on working Capital and the relevant extract is as follows:

"5.12 Depreciation, Loan and Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the generating company and shall not be trued up in ARR;

Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up."

- 3.76. Accordingly, the Commission has not trued up the quantum of Working Capital. The State Bank of India base rate did not vary more than (+/-) 1%, as the same was 10% on 01.04.2012, 01.04.2014 and 01.04.2015. Therefore, the Commission has not trued up the Interest on Working Capital and thus approves the normative Interest on Working Capital for FY 2014-15 and FY 2015-16 as follows:

Table 26: Interest on working capital approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16		
			Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	Interest on Working Capital	Rs Cr	17.95	17.95	17.95	14.02	14.02	14.02

Summary of Fixed Cost

Petitioner's Submission

3.77. The Petitioner has submitted the total fixed cost of RPH as given under:

Table 27: Annual Fixed Cost submitted by the Petitioner

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16
1	O&M Expenses	Rs Cr	69.46	51.69
2	Depreciation	Rs Cr	20.50	20.50
3	Interest Charges	Rs Cr	6.51	6.62
4	Return on Equity	Rs Cr	17.46	17.48
5	Interest on Working Capital	Rs Cr	17.95	14.02
6	Cost of Secondary fuel	Rs Cr	8.49	0.57
7	Special allowance in lieu of R&M or separate compensation allowance	Rs Cr	6.67	6.67
8	Total Fixed Cost	Rs Cr	147.04	117.55
9	Net Generation	MU	357.61	33.10

Commission's Analysis

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

- Operation & Maintenance Expenses
- Depreciation
- Interest on loans
- Cost of secondary fuel oil (for coal based stations only)
- Interest on Working Capital

- f) Return on Equity
- g) Income Tax
- h) Special allowance in lieu of R&M or separate compensation allowance, wherever applicable

3.79. The Commission has approved the Operational Norms for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 as follows:

“7.1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under:

1) Rajghat Thermal Power House (RPH)

<i>Operational Parameters</i>	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>
<i>Normative Annual Plant Availability Factor (%)</i>	<i>75%</i>	<i>75%</i>	<i>75%</i>
<i>Gross Station Heat Rate (kCal/kWh)</i>	<i>3200</i>	<i>3200</i>	<i>3200</i>
<i>Auxiliary Consumption (%)</i>	<i>11.28%</i>	<i>11.28%</i>	<i>11.28%</i>
<i>Secondary Fuel Oil (LDO) Consumption (ml/kWh)</i>	<i>1.50</i>	<i>1.50</i>	<i>1.50</i>
<i>Secondary Fuel Oil (LSHS) Consumption (gm/kWh)</i>	<i>3.75</i>	<i>3.75</i>	<i>3.75</i>

”

3.80. Further, APTEL in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of “Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission” has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15 as follows:

“35. The appellant has also failed to give any reason whatsoever justifying the relaxation of the operation norms fixed in the MYT Regulations. The only reason argued before us, that the station is an old station and is envisaged to be closed down in near future, is not acceptable. We also agree to the finding recorded by the learned State Commission in the impugned order that the relaxation of the said norms/ provisions of DERC (Tariff Regulations), 2011 is not in the public interest and there is no material on record to deviate from this finding recorded by the learned State Commission.

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38. The appeal is dismissed being devoid of merits and the impugned order dated 13.07.2012 passed by the learned Delhi Commission in petition no. 07 of 2012 is hereby affirmed. No order as to costs.”

- 3.81. The Commission vide its Order dated October 22, 2014 had extended the applicability of MYT Generation Regulations, 2011 for FY 2015-16.
- 3.82. The Commission sought the actual data regarding Net Generation for true up of RPH for FY 2014-15 and FY 2015-16 from SLDC Delhi vide e-mail dated 08/06/2017 and SLDC has submitted the details vide its e-mail dated 19/06/2017. Accordingly, the Commission has considered the Net Generation as submitted by SLDC for the purpose of truing up of FY 2014-15 and FY 2015-16.
- 3.83. Based on the analysis of various components of Fixed Cost, the Commission has trued up the Annual Fixed Cost for FY 2014-15 and FY 2015-16 as follows:

Table 28: Annual Fixed Cost approved by the Commission (Rs Cr)

Sl. No.	Fixed Cost Components	UoM	FY 2014-15			FY 2015-16					Ref.
			MYT Order, 2012	Actual as submitted by Petitioner	Trued up	Tariff Order, 2015	Tariff Order, 2015 (prorated for 2 months)*	Actual as submitted by Petitioner	Trued up	Trued up (prorated for 2 months)*	
A	O&M Expenses	Rs Cr	96.31	76.13	96.31	105.62	17.65	58.36	99.49	16.63	Table 13
B	Depreciation	Rs Cr	12.93	20.50	19.99	13.71	2.29	20.50	18.82	18.82 [#]	Table 17
C	Interest on loans	Rs Cr	5.02	6.51	0.19	5.02	0.84	6.62	0.00	0.00	Table 19
D	Return on Equity	Rs Cr	12.48	17.46	12.71	11.31	1.89	17.48	8.34	1.39	Table 22
E	Interest on working capital	Rs Cr	17.95	17.95	17.95	14.02	2.34	14.02	14.02	2.34	Table 26
F	Secondary Fuel Cost	Rs Cr	14.57	8.49	14.57	14.57	2.44	0.57	14.57	2.44	Table 24
G	Total Fixed Cost	Rs Cr	159.25	147.04	161.72	164.24	27.45	117.55	155.24	41.62	(A+B+C+D+E+F)

Sl. No.	Fixed Cost Components	UoM	FY 2014-15			FY 2015-16					Ref.
			MYT Order, 2012	Actual as submitted by Petitioner	Trued up	Tariff Order, 2015	Tariff Order, 2015 (prorated for 2 months)*	Actual as submitted by Petitioner	Trued up	Trued up (prorated for 2 months)*	
H	Fixed Cost as per achieved availability	Rs Cr	119.97		121.83	122.15	20.41		115.46	30.95	
I	Net Generation	MU		357.61	357.61			33.10	33.10	33.10	Para 3.82
J	Fixed Cost	Rs/kWh		4.11	3.41			35.51	34.88	9.35	(H/I)* 10

* For April and May

#Depreciation is allowed for the entire year as RPH Station has completed its useful life in May 2015

Revenue (Gap)/ Surplus

- 3.84. The Gap on account of Annual Fixed Charges for FY 2014-15 & FY 2015-16 as approved by the Commission after the truing-up of all expenses is as follows:

Table 29: Revenue (Gap)/ Surplus approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16	FY 2016-17	Ref.
A	Opening Surplus/ (Deficit)	Rs Cr	0.00	-1.97	-13.34	
B	Addition Surplus/ (Deficit)	Rs Cr	-1.86	-10.54	0.00	Table 28
C	Interest Rate	%	11.50%	11.50%	11.50%	Tariff Order
D	Carrying Cost	Rs Cr	-0.11	-0.83	-1.53	BxC
E	Closing Surplus/ (Deficit)	Rs Cr	-1.97	-13.34	-14.88	A+B+D

- 3.85. The Commission accordingly directs the DISCOMs (beneficiaries of RPH Station) to pay the Revenue Gap amount (including carrying cost) of Rs 14.88 Cr to IPGCL as per their respective share allocation in RPH Station in three equal monthly installments starting from October, 2017.

Gas Turbine Power Station (GTPS)**Norms of Operation****Availability****Petitioner's Submissions**

3.86. Actual Availability submitted by the Petitioner is as follows:

Table 30: Actual Availability submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	Gas Turbine Power Station	%	68.80	74.81

3.87. The Petitioner further submitted that the availability of the station has been varying since its inception. Further, it is submitted that Central Electricity Regulatory Commission has appreciated to recognize the life cycle of 15 years for Gas Turbines. The CERC has fixed the norm of 72% availability for similar station like Assam Gas based Station for the period FY 2014-15 to 2018-19 based on the average of actual availability achieved during the previous MYT period FY 2009-10 to 2013-14. It is further submitted that CERC while fixing the operational parameters has adopted the principle of average performance during previous MYT period and not the best of the parameters during that period. The petitioner would like to mention that the Gas Turbines of the station are more than 29 years old and no major Renovation and Modernization of the station has been undertaken so far. The Commission is requested to allow recovery of fixed charges for FY 14-15 and 15-16 as per actual availability during the period.

Commission's Analysis

3.88. The Commission sought the actual data regarding plant availability for true up of GTPS for FY 2014-15 and FY 2015-16 from SLDC Delhi vide e-mail dated 08/06/2017 and SLDC has submitted the details vide its e-mail dated 19/06/2017. Accordingly, the Commission has approved the plant availability as submitted by the SLDC for the purpose of truing up of FY 2014-15 and FY 2015-16 as follows:

Table 31: Plant Availability approved by the Commission

Sl. No.	Station	UoM	FY 2014-15			FY 2015-16		
			MYT Value	Actual as submitted by Petitioner	Approved for True Up	MYT Value	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	%	80	68.80	68.80	80	74.81	74.81

Station Heat Rate (SHR)

Petitioner's Submission

- 3.89. The Petitioner submitted that aging of the machines plays a major role, whereby the plants are not in a position to operate at its full rated capacity due to technical constraints which further affects the station heat rate as well as auxiliary power consumption.
- 3.90. The Petitioner further submitted that the turbines of the station are of 30 MW size and more than 29 years old. The STGs of IPGTPS were installed after retrofitting of waste Heat Recovery modules by M/s BHEL, after operation of GTs in open cycle mode for around 10 Years. It may be appreciated that retrofitting of the machines by any supplier other than by the supplier of GTs will have inherent problems.
- 3.91. The Petitioner further submitted that the guaranteed heat rate in simple cycle mode is 11688 kJ/kWh on NCV at compressor inlet temperature of 15°C and atmospheric pressure of 1.019 BAR. The guaranteed heat rate at site conditions of 31.5°C is approximately 3188 Kcal/Kwh. Further, taking into account the correction factor of 5.70% on the guaranteed heat rate as recommended by the CEA, the corrected heat rate for simple cycle mode works out to 3370 kCal/kWh.
- 3.92. The Petitioner further submitted that CEA has also recommended technical standards on operational norms on Gas Turbine stations in their report of December, 2004. As per the recommendations, following simple cycle heat rate has been prescribed in reference to capacity of Gas Turbine applicable to IPGTPS.

Table 32: CEA recommended technical standards submitted by the Petitioner

Capacity of GTs	Simple Cycle Heat rate (Kcal/Kwh)
-----------------	-----------------------------------

	Age less than 10 years	Age more than 10 years
Gas Turbines with Capacity less than 30 MW	3500	3550
Gas Turbines with capacity 30 MW or more but less than 100 MW	3200	3250

- 3.93. CEA has also recognized that the operation efficiency or heat rate and other performance parameters of a Thermal Power Station depends on a number of factors which can be broadly classified as under:-
- Technology and equipment
 - Ambient Conditions
 - Fuel Quality
 - Plant operation and maintenance practices.
 - Unit Sizes
- 3.94. The Petitioner further submitted that the Central Electricity Regulatory Commission in its latest tariff regulation for FY 2014-19 has fixed a heat rate of 3440 Kcal/Kwh in simple cycle mode for similar Assam gas station of NEEPCO having capacity of 291 MW (6 Gas Turbines of 33.5 MW and 3 STG of 30 MW), even though the station was commissioned in 1995-98. Even under the CERC Tariff Regulations, 2014, the heat rate allowed for this station was at a higher level than as allowed by DERC. Further, the Commission in the tariff Order dated 26.08.2011 for determination of aggregate Revenue Requirement for FY 2011-12 in respect of GTPS has also observed that CERC has provided a heat rate of 3440kCal/kWh for Assam Kathal Guri gas based station. However, the Commission has not admitted the contention of the petitioner on the basis that the station is expected to run in combined cycle mode most of the time and open cycle operation is rare. It is submitted that the station runs in open cycle mode only as and when requisitioned by SLDC, Delhi. Further, CERC in its tariff regulation dated 21.02.2014 had allowed 3440 kCal/Kwh for Assam GPS for FY 2014-15 to 2018-19. The operation of IPGTPS in open cycle mode during the last four years is as under:-

Table 33: Open cycle certified by SLDC

Year	Net Generation (MU)	Open cycle generation certified by SLDC (MU)	% Open Cycle
2012-13	1268.422	7.111766	0.56
2013-14	1006.792	5.140309	0.51
2014-15	904.208	15.966	1.76
2015-16	445.386	3.208	0.72
2016-17 (up to 30.06.2016)	515.784	1.816	0.352

- 3.95. Thus, there has been considerable open cycle operation in previous years. Even though the operation of IPGTPS is less in open cycle mode, there is a direct loss of around 10% on recovery of fuel cost when operated in open cycle mode. This loss in absolute terms is on higher side. Station will endeavour to run in combined cycle mode but when operated in open cycle mode on the request of SLDC, the station may be allowed higher heat rate of 3440kCal/kWh.
- 3.96. The Petitioner further submitted that two numbers of Gas Turbines were converted on Liquid Fuel. The Commission has allowed 2% excess heat rate over the allowed operative heat rate for newly set up gas turbine stations operating on liquid fuel. It is requested the Commission to consider and allow 2% excess heat rate over and above the allowed heat rate for operation on liquid fuel for even existing Gas Turbine Power Station.
- 3.97. The Petitioner further submitted that the Station Heat Rate of IPGTPS is also on higher side due to frequent backing by SLDC, resulting in partial operation. The backing down of the station resulted in partial operation of the units. It is further submitted that there has been substantial gap between Availability and PLF of the station due to backing down. The lower PLF has adversely affected the heat rate of the station.

Table 34: Comparison of Availability & PLF for GTPS

Year	Availability (%)	PLF (%)
2012-13	84.22	55.29
2013-14	85.76	44.01
2014-15	68.80	39.59
2015-16	74.81	19.69

Year	Availability (%)	PLF (%)
2016-17(up to 31.12.2016)	81.21	29.92

- 3.98. It is very much evident that PLF has been on much lower side as compared to availability which further affects the station heat rate and auxiliary power consumption of the station.
- 3.99. The Petitioner further submitted that since, heat input is same for de-rated capacity of STGs, the combined cycle heat rate will be impacted and need to be revised accordingly. The petitioner would like to mention that the Gas Turbines of the station are more than 29 years old and no major Renovation and Modernization of the station has been undertaken so far.
- 3.100. In view of the above, the Petitioner has requested the Commission to relax and allowed actual heat rate achieved by the Station in Combined Cycle mode and Open cycle mode for the MYT period FY 2014-15 & 2015-16.

Prayer in respect of Partial Backing Down of GTPS:

- 3.101. The Petitioner submitted that SLDC Delhi has been backing down the generation of the stations depending on the requirement of power in Delhi. IPGTPS consist of three blocks; each block consists of two Gas Turbines and one steam turbine. The capacity of each gas turbine is 30 MW and de-rated capacity of each steam turbine is also 30 MW. IPGTPS has been serving the dual purpose of base load as well as peak load. Many times, SLDC Delhi has been giving instructions to back down the blocks partially, thus resulting in non optimization of fuel consumption. The variation of backing down is enormous depending upon the load curve during the day, change in weather conditions. This partial backing down of the blocks further increases the heat rate and auxiliary power consumption.
- 3.102. The Petitioner has therefore requested the Commission to direct SLDC Delhi to back down complete block of the station only. Further, it is requested that there should not

be frequent backing down. The complete backing down of the block to some extent will help to control the heat rate and auxiliary Power consumption.

3.103. The Petitioner further submitted that the above mentioned reasons for higher heat rate of the stations are beyond the control of the petitioner and therefore, the petitioner requests the Commission to adopt more liberal approach.

3.104. Actual Heat Rate as submitted by the Petitioner is as follows:

Table 35: Station Heat rate submitted by the Petitioner

Sl. No.	Mode of Operation	UoM	FY 2014-15	FY 2015-16
1	Combined Cycle	kCal/kWh	2503	2520
2	Open Cycle	kCal/kWh	3473	3464

Commission's Analysis

3.105. The Commission had approved the Operational Norms for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 as follows:

"7.1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under:

2) Indraprastha Gas Turbine Power Station (IP GTPS)

Operational Parameters	2012-13	2013-14	2014-15
<i>Normative Annual Plant Availability Factor (%)</i>	80%	80%	80%
<i>Combined Cycle Gross Station Heat Rate (kCal/kWh)</i>	2450	2450	2450
<i>Open Cycle Gross Station Heat Rate (kCal/kWh)</i>	3125	3125	3125
<i>Combined Cycle Auxiliary Consumption (%)</i>	3.0%	3.0%	3.0%
<i>Open Cycle Auxiliary Consumption (%)</i>	1.0%	1.0%	1.0%

”

3.106. The Commission has directed the Petitioner several times in the past to get the performance guarantee test conducted in open cycle and combined cycle mode on its machines so that the Commission may have a scientific basis for relaxation of the heat rate allowed to the Petitioner. However, the Petitioner has not complied with the directive of the Commission till date.

3.107. The Commission observes that the Petitioner had been able to achieve the heat rate of 2439 kCal/kWh and 2416 kCal/kWh for FY 2012-13 and FY 2013-14 respectively under

combined cycle mode. Therefore, it is evident that the heat rate of 2450 kCal/kWh is achievable for GTPS.

3.108. Further, on Petitioner's submission regarding Heat Rates allowed by CERC for Assam GPS, it is pertinent to mention here that Assam GPS is located at a very distant location from the location of GTPS and is operating under different atmospheric conditions. Thus, comparing the two plants does not hold good.

3.109. Further, APTEL in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of "Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission" has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15 as follows:

"35. The appellant has also failed to give any reason whatsoever justifying the relaxation of the operation norms fixed in the MYT Regulations. The only reason argued before us, that the station is an old station and is envisaged to be closed down in near future, is not acceptable. We also agree to the finding recorded by the learned State Commission in the impugned order that the relaxation of the said norms/ provisions of DERC (Tariff Regulations), 2011 is not in the public interest and there is no material on record to deviate from this finding recorded by the learned State Commission.

....

....

38. The appeal is dismissed being devoid of merits and the impugned order dated 13.07.2012 passed by the learned Delhi Commission in petition no. 07 of 2012 is hereby affirmed. No order as to costs."

3.110. The Commission vide its Order dated October 22, 2014 had extended the applicability of MYT Generation Regulations, 2011 for FY 2015-16.

3.111. In view of the above, the Commission approves the following SHR for GTPS for true up of FY 2014-15 and FY 2015-16 as per the approved norms in MYT Generation Regulations, 2011 as follows:

Table 36: Station Heat rate approved by the Commission (kCal/ kWh)

Sl. No.	Station	Mode of Operation	UoM	FY 2014-15			FY 2015-16		
				MYT Value	Actual as submitted by Petitioner	Approved for True Up	MYT Value	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	Combined Cycle	kCal/ kWh	2450	2503	2450	2450	2520	2450
		Open Cycle	kCal/ kWh	3125	3473	3125	3125	3464	3125

Auxiliary Power Consumption

Petitioner's Submissions

3.112. The Petitioner has requested the Commission to allow auxiliary consumption as per actual for FY 14-15 & 15-16 as the Gas Turbines of the station were commissioned in the year 1985-86 and the Waste Heat Recovery Units were retrofitted in the year 1995-96. The STGs of the station are not able to produce the rated output and hence the auxiliary power consumption of the station calculated in terms of percentage over the gross generation of the station increases. It is further mentioned that due to less system demand, the generation of the station gets backed down, resulting in partial loading of the units. Further, due to prolonged backing down, un-productive auxiliary consumption also increases percentage of total auxiliary consumption of the station. The percentage of auxiliary consumption as allowed for GTPS relates to the time when backing down due to merit order dispatched was not in the practice and the actual auxiliary consumption of the station was related to actual running up of plants & equipments during generation from the station. However, due to present practice of frequent and prolonged backing downs the station auxiliary consumption has increased substantially. This is also evident from difference in availability and PLF of the station. The year wise availability and PLF of the Station as certified by SLDC has been presented in the following table:

Table 37: Comparison of Availability & PLF for GTPS submitted by the Petitioner

Year	Availability (%)	PLF (%)
2012-13	84.22	55.29
2013-14	85.76	44.01
2014-15	68.80	39.59
2015-16	74.81	19.69
2016-17	81.21	29.92

3.113. The Petitioner further submitted that PLF indicates the actual generation of the station based upon the scheduled generation whereas the availability indicates the capacity of the station to inject the power into the system. This lower PLF has resulted into higher Auxiliary Power Consumption of the station.

3.114. Actual Auxiliary Power Consumption as submitted by the Petitioner is as follows:

Table 38: Auxiliary Power Consumption submitted by the Petitioner

Sl. No.	Mode of Operation	UoM	FY 2014-15	FY 2015-16
1	Combined Cycle	%	3.43	4.65
2	Open Cycle	%	1	1

Commission's Analysis

3.115. The Petitioner has claimed higher auxiliary consumption in comparison to normative auxiliary consumption as approved by the Commission in MYT Generation Regulations, 2011. However, matter was discussed with IPGCL and it is informed that there is no separate arrangement for recording of unit auxiliary transformer consumption, as no meters have been installed for unit auxiliary consumption measurement at GTPS.

3.116. It is pertinent to state that ATE in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of "Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission" has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15, wherein the Petitioner had sought relaxation in Operational Norms.

3.117. Accordingly, the Commission approves the Auxiliary Power Consumption for GTPS for FY 2014-15 and FY 2015-16 as follows:

Table 39: Auxiliary Power Consumption approved by the Commission

Sl. No.	Station	Mode of Operation	UoM	FY 2014-15			FY 2015-16		
				Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	Combined Cycle	%	3	3.43	3	3	4.65	3
		Open Cycle	%	1	1	1	1	1	1

Energy Charge Rate and Variable Cost**Petitioner's Submission**

3.118. The Petitioner has submitted the Net Generation for GTPS as follows:

Table 40: Net Generation submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Capacity	MW	270	270
2	Gross Generation	MU	936.29	467.09
3	Auxiliary Consumption	MU	32.09	21.70
4	Net Generation	MU	904.21	445.39

3.119. The Petitioner further submitted that GT Power Station of IPGCL runs on the Natural Gas being supplied by GAIL and Liquid Fuel supplied by IOCL. Earlier the total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCMD which was sufficient to run six gas turbines. This allocation was reduced to 1.32 MMSCMD during the FY 2006-07. Out of the total allocation of 1.32 MMSCMD, the contracted quantity of R-LNG is 0.60 MMSCMD and balance i.e. 0.72 MMSCMD comes from APM and PMT and these quantities are further subject to daily cuts in the range of 15% depending on the availability. In view of constrained availability of fuel gas, the Commission has approved the conversion of two Gas Turbines on dual fuel system in FY 2008-09. MoP&NG has further allocated 0.23 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011.

3.120. The Petitioner further submitted that the Petitioner has an agreement with GAIL for supply of 0.6 MMSCMD R-LNG. As per the agreement with GAIL, the contracted quantity is subject to Take or Pay clause. Accordingly, the cost of this contracted

quantity has to be born even if there is no off take of fuel gas. Petitioner is also using spot R-LNG, subject to amount of power schedule and requirement of RLNG to meet the instances of shortage of gas.

- 3.121. However, the Commission in its order dated 29-09-2015 disallowed the Take or pay charges to be recovered from beneficiary with following remark:

“The Commission also directs the petitioner to ensure that the fuel supply agreements do not contain the ‘Minimum Off Take Guarantee’ clause linked with “Take or Pay” obligation, so as to optimize the cost of generation. Any cost on account of such clause shall not be allowed to be billed to the beneficiaries and the liability on this shall be solely to the account of the petitioner. The petitioner shall be allowed to recover only the actual cost of fuel (including fuel price adjustment / Power Purchase Cost Adjustment, if any but excluding cost on account of “Minimum Off Take Guarantee” / “Take or Pay” obligation) from the respective beneficiaries.”

- 3.122. In this regard Petitioner has submitted that the PPA signed between Petitioner and DTL, which was latter assigned to Delhi DISCOMs has following provisions:

“3.2 Minimum fuel off take charge

The transco shall reimburse the IPGCL for charges paid in respect of its failure to take delivery of minimum levels of fuels, but only if and to the extent that the PPCL’s failure to take such fuel is due to the Transco issuance of dispatch instructions requiring that the project be operated at a level less than the level of demand capacity set forth in any then applicable availability declaration or the Transco ‘s failure or inability to accept delivery of net electrical energy from the project (where due to force measure events or otherwise)”.

- 3.123. The Petitioner further submitted that all the fuel supply agreements with GAIL and Coal India, both Central Govt. Undertakings, have compulsory clause of MGO / ACQ. The provision of these clauses have also been mentioned in the initial PPA of the petitioner as given above and has been duly approved by State Commission and re-assigned to distribution companies vide State Commission’s Order dated 31.03.2007. Therefore,

petitioner aggrieved by above order of the Commission has challenged same in APTEL wide appeal number 284 of 2015. Therefore, petitioner is filing this petitioner without prejudice to outcome of above appeal.

- 3.124. Accordingly, the Petitioner after considering the Gross Generation of the plant, SHR of the station, Gross Calorific Value and the Fuel Prices as explained above, has estimated the Fuel cost for the station as under:

Table 41: Fuel Cost submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Gross Generation	MU	936.298	467.086
2	Net Generation	MU	904.208	445.386
3	Total Gas Consumption	MMSCM	243.43	123.05
4	Total Gas Cost	Rs Cr	423.34	189.46
5	HSD Consumption	KL	6.70	8.15
6	HSD Rate	Rs/ KL	28897.18	28897.00
7	Cost of HSD	Rs Cr	0.02	0.02
8	Total Fuel Cost	Rs Cr	423.36	189.49
9	Variable Cost in	Rs/ kWh	4.682	4.254

Commission's Analysis

- 3.125. As per MYT Generation Regulations, 2011 any financial loss / gain on account of under / over-performance on targets for controllable parameters shall not be trued up. The relevant extract is as follows:

"5.10 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:

(a) Gross Station Heat Rate;

(b) Normative Annual Plant Availability Factor;

(c) Auxiliary Energy Consumption;

(d) Secondary Fuel Oil Consumption;

(e) Operation and Maintenance Expenses;

(f) Financing Cost which includes cost of debt (interest), cost of equity (return);

and

(g) Depreciation.

5.11 Any financial loss on account of underperformance on targets for parameters specified in Clause 5.10 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the generating company's benefit and shall not be adjusted in tariffs."

- 3.126. Further, the Commission vide its e-mail dated 14/06/2017 has sought the authenticity of energy charge rate billed by RPH from the beneficiary DISCOMs. It is observed that no beneficiary has objected the computation of energy charge rate billed by GTPS during FY 2014-15 and FY 2015-16. Accordingly, the Commission has not considered true up of fuel cost for FY 2014-15 and FY 2015-16.

Fixed Cost

Operation & Maintenance (O&M) Expenses

Petitioner's Submission

- 3.127. The Petitioner submitted that in the case of GTPS, Repair and Maintenance expenses are varying on year to year basis because of cyclic nature of maintenance activities of Gas Turbines. Normally, Combustion Inspection is carried out after every 8000 hours, Hot Gas Path Inspection after operation of machines for 24000 hours and Major Inspection after every 48000 Hours of Operation of Gas Turbines. In a cyclic period of six years gas turbine will undergo four Combustion Inspections, one Hot Gas Path Inspection, and one major Inspection. The station is having nine units (six Gas Turbines and three steam turbines). The repair and maintenance expenditure will vary on year to year depending on the type of inspection carried out in the machines.
- 3.128. The Petitioner further submitted that IPGTPS is having nine numbers of machines and the major inspection of one Gas Turbine costs around Rs. 12-15 Crore, Hot Gas Path Inspection of one Gas Turbine is around Rs. 6-7 Crore and cost of one Combustion Inspection is around Rs. 2-3 Crore. The petitioner would like to submit that in a cycle of six years, the average repair & maintenance expenditure of the station includes various

inspections of GTs from time to time, repair & maintenance of STGs, HRSGs, balance of plant, civil work and share of headquarters.

RLA study of GTPS:

3.129. The Petitioner submitted that the turbines of the station were commissioned in the year 1986-95. It is therefore proposed to carry out RLA study of the station to assess the further life of the plant. The Petitioner is already working on it and detailed expenditure along with scope of work and expenditure involved for life extension in the interest of consumers of Delhi will be submitted to the Commission in due course of time.

Water Charges and Property Tax:

3.130. The Petitioner submitted that barrage at ITO is being maintained by Haryana Irrigation Department for meeting the water requirements of IPGCL and its O&M expenses are shared/ reimbursed by IPGCL. Besides this, water charges are also being paid to Delhi Jal Board for domestic and industrial water consumption in the form of water charges.

3.131. The Petitioner further submitted that Taxes and duties including water Cess, property/ service charges etc. has been reimbursed from the beneficiaries during the previous years of MYT Control period on actual basis. Therefore the Commission is requested to allow the same for Current MYT period also.

Summary of O&M cost:

3.132. The Petitioner submitted that the units of IPGCL are small in size and are also old in age; hence it will require more man power for operation as well as higher Repair & Maintenance expenses. This fact has also been appreciated by CERC for allowing the higher O&M expenses for small size and old age plants. O&M Expenses (As per CERC Regulation, 2014) submitted by the Petitioner is as follows:

Table 42: O&M Expenses (As per CERC Regulation, 2014) submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	GT Power Station	Rs Cr	90.26	96.39

3.133. The Petitioner has submitted actual O&M Expenses as follows:

Table 43: Actual O&M Expenses submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Repairs and Maintenance (R&M)	Rs Cr	23.82	28.49
2	Employee Expenses	Rs Cr	24.43	29.64
3	Administrative and General Expenses	Rs Cr	13.42	13.93
4	Total O&M Expenses	Rs Cr	61.67	72.06

Commission's Analysis

3.134. As per Regulations 5.10 and 5.11 of the MYT Generation Regulations 2011, O&M Expenses are controllable parameters and any financial gain or loss on account of over achievement / under performance is on the account of the generating company and is not recoverable / adjusted through the tariff. Relevant extract from the MYT Generation Regulations 2011 is as follows:

"5.10 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:

- (a) Gross Station Heat Rate;*
- (b) Normative Annual Plant Availability Factor;*
- (c) Auxiliary Energy Consumption;*
- (d) Secondary Fuel Oil Consumption;*
- (e) Operation and Maintenance Expenses;*

5.11 Any financial loss on account of underperformance on targets for parameters specified in Clause 5.10 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the generating company's benefit and shall not be adjusted in tariffs."

3.135. During the prudence check, the Petitioner submitted that the actual expenditure for O&M incurred were lesser than the normative approved O&M expenses because of the lower availability achieved which is trued up as 68.80% for FY 2014-15 and 74.81% for

FY 2015-16. The same has resulted in less actual allowance of O&M Expenses, based on the target v/s actual availability. The amount of O&M expenses allowed on the basis of trued up availability is Rs 89.66 Cr for FY 2014-15 and Rs 101.68 Cr for FY 2015-16.

3.136. Accordingly, the Commission has allowed the O&M expenses on normative basis approved in relevant tariff order as follows:

Table 44: O&M Expenses approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16		
			Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	Employee Expenses	Rs Cr	45.91	24.43	45.91	49.59	29.64	49.59
2	A&G Expenses	Rs Cr	19.47	13.42	19.47	21.03	13.93	21.03
3	R&M Expenses	Rs Cr	38.88	23.82	38.88	38.11	28.49	38.11
4	Total O&M Expenses	Rs Cr	104.26	61.67	104.26	108.73	72.06	108.73

Capital Expenditure

Petitioner's Submission

3.137. The Petitioner has submitted the capitalisation during FY 2014-15 and FY 2015-16 as follows:

Table 45: Capitalisation submitted by the Petitioner

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16
1	Opening GFA	Rs Cr	421.59	429.20
2	Addition	Rs Cr	8.81	1.81
3	Deletion	Rs Cr	1.20	0.80
4	Closing GFA	Rs Cr	429.20	430.21

Commission's Analysis

3.138. The Commission has sought the details of capitalisation and de-capitalisation during FY 2014-15 and FY 2015-16 from the Petitioner. Capitalisation approved for FY 2014-15 and FY 2015-16 based on the prudence check and subsequent plant visit by officials of the Commission is as follows:

Table 46: Capitalisation approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15		FY 2015-16	
			Petitioner Submission	Approved	Petitioner Submission	Approved
1	Opening GFA	Rs Cr	421.59	421.59	429.20	425.94
2	Addition	Rs Cr	8.81	5.55	1.81	0
3	Deletion	Rs Cr	1.20	1.20	0.80	0.80
4	Closing GFA	Rs Cr	429.20	425.94	430.21	425.14

Depreciation

Petitioner's Submission

3.139. The Petitioner Depreciation is charged on the basis of straight-line method, on the fixed assets. The depreciation is based on the original cost, estimated life and residual life. The depreciation rates applied are as per the Regulation notified by the Commission for respective period.

3.140. The Depreciation amount for FY 2014-15 and FY 2015-16 submitted by the petitioner is as follows:

Table 47: Depreciation submitted by the Petitioner

Sl. No.	Station	UoM	FY 2014-15	FY 2015-16
1	GTPS	Rs Cr	26.76	24.76

Commission's Analysis

3.141. Regulations 6.30-6.34 of the MYT Regulations 2011 specify the methodology for calculation of depreciation for a generation company during the Control Period as follows:

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

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

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

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

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

- 3.142. It is observed that GTPS was commissioned in year 1996 and shall complete its useful life by year 2021. Therefore, the Commission has considered balance useful life of GTPS as 6 years at the opening of FY 2015-16. Accordingly, the Commission has approved the depreciation for FY 2014-15 and FY 2015-16 as follows:

Table 48: Depreciation approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16			Ref.
			Tariff Order	Petitioner's Submission	Approved for True Up	Tariff Order	Petitioner's Submission	Approved for True Up	
A	Opening GFA	Rs Cr	430.29	421.59	421.59	421.59	429.20	425.94	Table 46
B	Additions	Rs Cr	0	8.81	5.55	5.95	1.81	0.00	Table 46
C	Deletions	Rs Cr	0	1.20	1.20	0	0.80	0.80	Table 46
D	Closing GFA	Rs Cr	430.29	429.20	425.94	427.54	430.21	425.14	Table 46
E	Average GFA	Rs Cr	430.29	425.40	423.77	424.57	429.71	425.54	(A+D)/2
F	Depreciation Rate	%			6.30%	3.01%		2.59%	(G/E)x100
G	Depreciation	Rs Cr	22.71	26.81	26.70	12.78	24.76	11.02	Para 3.142
H	Opening Accumulated depreciation	Rs Cr			290.15			316.85	Tariff Order
I	Closing Accumulated depreciation	Rs Cr			316.85			327.87	G+H
J	Average Accumulated depreciation	Rs Cr			303.50			322.36	(H+I)/2

Interest on loans

Petitioner's Submission

3.143. Interest on loans depends on the outstanding loan, repayments, and applicable interest rates. Further, the capital additions funding also have a bearing on the interest cost.

Loan from Holding Company:

3.144. The Petitioner submitted that as per the Delhi Electricity Reforms (Transfer Scheme) Rules 2001, Rs. 210 Crore of unsecured loan was transferred to IPGCL as on July 1, 2002 and repayable to holding company. This loan has been bifurcated station wise, based on the gross fixed assets of the Company, as under:

Table 49: Loan details submitted by the Petitioner

Sl. No.	Station	UoM	Amount
1	Rajghat Power Station	Rs Cr	16.26
2	GT Power Station	Rs Cr	32.96
Total		Rs Cr	49.22

Loan from Delhi Government:

3.145. The Petitioner submitted that the Plan Funds Loan from Delhi Government was taken @ 13% interest in the FY 2002-03 & from FY 2003-04 and thereafter, the plan funds interest rate is @ 11.50%. A penal interest of 2.75% is payable in case of default in timely payment of interest on principal amount. The penal interest has been accounted in the ARR. IPGCL has made certain capital additions during the Control period FY 2012-13, 2013-14 to FY 2014-15. The same has been funded through internal accruals/ loan from GNCTD (There are no new loans from GNCTD in FY 2012-13 onwards) from GNCTD. As per Regulation, 70% of the capital additions have been considered to be funded through Loans. Accordingly, interest on this normative loan has been taken @ 13 % per annum, as per the Regulations.

Commission's Analysis

3.146. Regulation 6.1 of MYT Generation Regulations, 2011 deals with financing of the capital cost in Debt Equity ratio allowed for Generation Business and the relevant extract is as follows:

"6.1 Capital cost for a Project shall include:

(b) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the

project, as admitted by the Commission, as admitted by the Commission after prudence check shall form the basis for determination of tariff;”

3.147. Regulation 5.12 of MYT Generation Regulations, 2011 deals with interest on Loan as follows:

“5.12 Depreciation, Loan and Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the generating company and shall not be trued up in ARR;

Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.”

3.148. It is observed that the State Bank of India base rate did not vary more than (+/-) 1%, as the same was 10% on 01.04.2012, 01.04.2014 and 01.04.2015. Therefore, the Commission has not trued up the Rate of Interest on Loan.

3.149. Accordingly, the Commission has computed the quantum of Loan and Equity required for funding of NFA for FY 2014-15 and FY 2015-16 as follows:

Table 50: Requirement of Loan approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15		FY 2015-16		Ref.
			Petitioner Submission	Approved for True Up	Petitioner Submission	Approved for True Up	
A	Opening GFA	Rs Cr	421.59	421.59	429.20	425.94	Table 46
B	Opening Accumulated Depreciation	Rs Cr		290.15		316.85	Table 48
C	Opening NFA	Rs Cr		131.44		109.09	A-B
D	Opening Equity	Rs Cr		117.81		119.12	Tariff Order
E	Opening Loan Requirement	Rs Cr		13.63		0	C-D

Sl. No.	Particulars	UoM	FY 2014-15		FY 2015-16		Ref.
			Petitioner Submission	Approved for True Up	Petitioner Submission	Approved for True Up	
F	Closing Loan	Rs Cr		0		0	
G	Average Loan	Rs Cr		6.82		0	(E+F)/2
H	Rate of Interest on Loan	%		11.79%		11.79%	Tariff Order
I	Interest On Loan	Rs Cr		0.80		0	GxH

3.150. It is observed that the Petitioner has done Capital Expenditure during FY 2014-15. However, the requirement of funding of the same from Loan is covered by the amount of respective depreciation allowed in FY 2014-15.

3.151. The quantum of loan required for funding of capital asset has been dealt in regulation 6.13 and 6.17 of MYT Generation Regulations, 2011 as follows:

“6.13 Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on the estimates of renovation and modernization expenditure and life extension, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.

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

3.152. It is observed from conjoint reading of the above provisions and the above table that there is no loan required for funding of Capital Asset for FY 2015-16 as Accumulated Depreciation has already exceeded 70% of the value of Gross Fixed Asset and the remaining written down value of GFA is considered as funding through Equity only as per the provisions of MYT Generation Regulations, 2011. Therefore, the Commission has not considered Interest on Loan for FY 2015-16.

Return on Equity**Petitioner's Submission**

3.153. The subscribed and paid up equity capital of IPGCL was fixed at Rs. 140 Crore as on July 1, 2002 in accordance with the Transfer Scheme. The total equity was bifurcated plant wise, on the basis of Gross Fixed Assets of the Company, as under:

Table 51: Details of Equity submitted by the Petitioner

Sl. No.	Station	UoM	Amount
1	IP Power Station	Rs Cr	1.20
2	Rajghat Power Station	Rs Cr	59.56
3	GT Power Station	Rs Cr	79.24
4	Total	Rs Cr	140.00

3.154. The Petitioner further submitted that the central Commission has fixed the pretax base rate of 15.5% in Generation Tariff Regulation 2014 for the period FY 2014-19. Therefore petitioner has taken same values for calculation of ROE in the issuing years. It is further submitted that the petitioner has made certain Capital additions. 30% equivalent amount of the capital additions during current MYT period has been considered for computation of ROE. The details of the same are furnished as under:

Table 52: Return on Equity submitted by the Petitioner

Sl. No.	Description		UoM	FY 2014-15	FY 2015-16
1	Average Equity	A	Rs Cr	127.62	128.91
2	Return on equity at base rate i.e @ 14%	B	Rs Cr	19.78	19.98
3	Normal Income tax rate	C	%	33.99	33.99
4	Gross up return on equity rate	D = (base rate/ (1-C)	%	21.21	21.21
5	Return on Equity	E = (AxD)	Rs Cr	29.96	30.26

Commission's Analysis

3.155. Regulation 6.36 of the MYT Generation Regulations, 2011 specifies Return on Equity as follows:

“6.36 Return on equity shall be computed on the equity determined in accordance with clauses 6.6 - 6.10 of these Regulations and shall be 14% (post tax);

Provided that return on equity invested in work in progress shall be allowed from the Date of Commercial Operation.”

- 3.156. It is observed from the copy of Income Tax Return submitted by the Petitioner for FY 2014-15 and FY 2015-16 that the Petitioner has not paid any tax for FY 2015-16. Accordingly, the Commission has not considered tax for FY 2015-16.
- 3.157. Return on Equity inclusive of Income Tax allowed after true up for FY 2014-15 and FY 2015-16 in accordance with the provisions of MYT Generation Regulations, 2011 is as follows:

Table 53: Return of Equity approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16			Ref.
			Tariff Order	Petitioner's Submission	Approved for True Up	Tariff Order	Petitioner's Submission	Approved for True Up	
A	Opening Equity	Rs Cr	119.37	126.48	117.81	117.81	128.76	119.12	Tariff Order
B	Additions	Rs Cr	0	2.64	1.67	1.79	0.54	0	Table 46
C	Deletions	Rs Cr	0	0.36	0.36	0	0.24	0.24	Table 46
D	Net Addition	Rs Cr	0	2.28	1.31	1.79	0.30	-0.24	B-C
E	Closing Equity	Rs Cr	119.37	128.76	119.12	119.59	129.06	118.88	A+D
F	Average Equity	Rs Cr	119.37	127.62	118.46	118.71	128.91	119.00	(A+E)/2
G	Base Rate of return on equity (%)	%	14%	15.5%	14%	14%	15.5%	14%	Tariff Order
H	Income Tax Rate (%)	%		33.99%	33.99%		33.99%	0	
I	Effective Rate of Return on Equity (%)	%		21.21	21.21		21.21	0	G/(100-H)
J	Effective Return on Equity	Rs Cr		29.96	25.12		30.26	16.66	FxI

Interest on Working Capital

Petitioner's Submission

3.158. Interest on Working Capital has been computed as per the following norms for coal based station:

- Cost of gas for 1 month
- Cost of liquid fuel for 1/2 month
- O&M expenses for 1 month
- Receivables equivalent to 2 months average billing
- Maintenance Spares @ 30% of the O&M expenses

3.159. The Petitioner has considered the generation of two Gas Turbines on liquid fuel and other four gas turbines on gas. Accordingly, the requirement of 15 days liquid fuel as per the Regulations has been considered for requirement of working capital for FY 2016-17 to FY 2020-21.

3.160. The Petitioner further submitted that the rate of Interest for is computed as 13.5% by additionally allowing 350 basis points on base rate of SBI.

3.161. The interest on working capital (Rs Cr.) for FY 2014-15 and FY 2015-16 as submitted by the petitioner is as follows:

Table 54: Interest on Working Capital submitted by the Petitioner

Sl. No.	Description	UoM	FY 2014-15	FY 2015-16
1	Cost of gas for 1 month	Rs Cr	45.17	35.25
2	Cost of liquid fuel for 1/2 month	Rs Cr	20.78	20.78
3	Maintenance Spares @ 30% of O&M	Rs Cr	31.28	32.62
4	O&M expenses for 1 month	Rs Cr	8.69	9.06
5	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	122.50	101.11
6	Total Working Capital	Rs Cr	228.42	198.82
7	Rate of Interest	%	13.50%	13.50%
8	Interest on Working Capital	Rs Cr	30.84	26.84

Commission's Analysis

3.162. Regarding True up of Interest on Loans, Regulation 5.12 of MYT Regulations 2011 specifies the following:

“5.12 Depreciation, Loan and Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the generating company and shall not be trued up in ARR;

Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.”

- 3.163. Accordingly, the Commission has not trued up the quantum of Working Capital. The State Bank of India base rate did not vary more than +/- 1%, as the same was 10% on 01.04.2012, 01.04.2014 and 01.04.2015. Therefore, the Commission has not trued up the Interest on Working Capital and thus approves the normative Interest on Working Capital for FY 2014-15 and FY 2015-16 as follows:

Table 55: Interest on Working Capital approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15			FY 2015-16		
			Tariff Order	Actual as submitted by Petitioner	Approved for True Up	Tariff Order	Actual as submitted by Petitioner	Approved for True Up
1	Interest on Working Capital	Rs Cr	30.84	30.84	30.84	26.84	26.84	26.84

Summary of Fixed Cost

Petitioner's Submission

- 3.164. The Petitioner has submitted the total fixed cost of GTPS as follows:

Table 56: Annual Fixed Cost submitted by the Petitioner

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16
1	O&M Expenses	Rs Cr	61.67	72.06
2	Depreciation	Rs Cr	26.76	24.76

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16
3	Interest Charges	Rs Cr	15.68	15.80
4	Return on Equity	Rs Cr	27.07	27.34
5	Interest on Working Capital	Rs Cr	30.84	26.84
6	Total Fixed Cost	Rs Cr	162.01	166.80
7	Net Generation	MU	904.21	445.39
8	Fixed Cost	Rs/ kWh	1.792	3.745

Commission's Analysis

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

- Operation & Maintenance Expenses
- Depreciation
- Interest on loans
- Cost of secondary fuel oil (for coal based stations only)
- Interest on Working Capital
- Return on Equity
- Income Tax
- Special allowance in lieu of R&M or separate compensation allowance, wherever applicable

3.166. The Commission had approved the Operational Norms for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 as follows:

"7.1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under

2) Indraprastha Gas Turbine Power Station (IP GTPS)

<i>Operational Parameters</i>	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>
<i>Normative Annual Plant Availability Factor (%)</i>	<i>80%</i>	<i>80%</i>	<i>80%</i>
<i>Combined Cycle Gross Station Heat Rate (kCal/kWh)</i>	<i>2450</i>	<i>2450</i>	<i>2450</i>

Open Cycle Gross Station Heat Rate (kCal/kWh)	3125	3125	3125
Combined Cycle Auxiliary Consumption (%)	3.0%	3.0%	3.0%
Open Cycle Auxiliary Consumption (%)	1.0%	1.0%	1.0%

”

3.167. Further, APTEL in its Judgment dated 12/12/2012 in Appeal No. 168 of 2012 in the matter of “Indraprastha Power Generation Company Limited Versus Delhi Electricity Regulatory Commission” has upheld the operational norms approved by the Commission for FY 2012-13 to FY 2014-15 as follows:

“35. The appellant has also failed to give any reason whatsoever justifying the relaxation of the operation norms fixed in the MYT Regulations. The only reason argued before us, that the station is an old station and is envisaged to be closed down in near future, is not acceptable. We also agree to the finding recorded by the learned State Commission in the impugned order that the relaxation of the said norms/ provisions of DERC (Tariff Regulations), 2011 is not in the public interest and there is no material on record to deviate from this finding recorded by the learned State Commission.

....

....

38. The appeal is dismissed being devoid of merits and the impugned order dated 13.07.2012 passed by the learned Delhi Commission in petition no. 07 of 2012 is hereby affirmed. No order as to costs.”

3.168. The Commission vide its Order dated October 22, 2014 had extended the applicability of MYT Generation Regulations, 2011 for FY 2015-16.

3.169. The Commission sought the actual data regarding Net Generation for true up of GTPS for FY 2014-15 and FY 2015-16 from SLDC Delhi vide e-mail dated 08/06/2017 and SLDC has submitted the details vide its e-mail dated 19/06/2017. Accordingly, the Commission has considered the Net Generation as submitted by SLDC for the purpose of truing up of FY 2014-15 and FY 2015-16.

3.170. Based on the analysis of various components of Fixed Cost, the Commission has trued up the Annual Fixed Charges for FY 2014-15 and FY 2015-16 as follows:

Table 57: Annual Fixed Cost approved by the Commission (Rs Cr)

Sl. No.	Fixed Cost Components	FY 2014-15			FY 2015-16			Ref.
		MYT Order, 2012	Actual as submitted by Petitioner	Approved by the Commission	Tariff Order, 2015	Actual as submitted by Petitioner	Approved by the Commission	
A	O&M Expenses	104.26	61.67	104.26	108.73	72.06	108.73	Table 44
B	Depreciation	22.71	26.81	26.70	12.78	24.76	11.02	Table 48
C	Interest on loans	13.05	15.69	0.80	13.05	15.80	0.00	Table 50
D	Return on Equity	22.13	29.97	25.12	22.27	30.27	16.66	Table 53
E	Interest on working capital	30.84	30.84	30.84	26.84	26.84	26.84	Table 55
F	Total Fixed Cost	192.99	164.97	187.73	183.66	169.73	163.25	A+B+C+D+E
G	Fixed Cost as per achieved availability	165.97		161.45	171.75		152.66	
H	Net Generation (MU)	1835	904.21	904.26	900	445.39	445.39	Para 3.169
I	Fixed Cost (Rs/kWh)	1.052	1.824	1.785	2.041	3.811	3.428	(G/H)x10

Revenue Surplus/ (Gap)

3.171. The Surplus on account of Annual Fixed Charges for FY 2014-15 & FY 2015-16 as approved by the Commission after the truing-up of all expenses is as follows:

Table 58: Revenue Surplus/(Gap) approved by the Commission

Sl. No.	Particulars	UoM	FY 2014-15	FY 2015-16	FY 2016-17	Ref.
A	Opening Surplus/(Deficit)	Rs Cr	0.00	4.78	25.52	
B	Addition Surplus/(Deficit)	Rs Cr	4.52	19.09	0.00	Table 57
C	Interest Rate	%	11.50%	11.50%	11.50%	Tariff Order
D	Carrying Cost	Rs Cr	0.26	1.65	2.93	BxC
E	Closing Surplus/(Deficit)	Rs Cr	4.78	25.52	28.45	A+B+D

- 3.172. The Commission accordingly directs the Petitioner to refund the surplus amount (including carrying cost) of Rs 28.45 Cr to the respective beneficiaries in three equal monthly installments starting from October, 2017.

A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR) FOR FY 2017-18**Rajghat Power House (RPH)**

4.1 The Petitioner has submitted the projected Fixed Cost and Operational Parameters for Rajghat Power House (RPH) for FY 2017-18. Summary of the Fixed and Variable cost submitted by the Petitioner as follows:

Table 59: Summary of the Fixed and Variable cost submitted by the Petitioner

Sl. No.	Description	Unit	FY 2017-18
1	Gross Generation	MU	886.95
2	Net Generation	MU	763.84
3	Total Fixed Cost	Rs Cr	115.14
4	Total Variable Cost	Rs Cr	319.19
5	Total Cost (3 + 4)	Rs Cr	434.33
6	Variable Cost Per Unit	Rs./kWh	4.18
7	Fixed Cost Per Unit	Rs./kWh	1.51
8	Total Cost Per Unit (6 + 7)	Rs./kWh	5.69

Commission Analysis

4.2 It is observed that RPH Station has completed its useful life in May 2015 and the Power Purchase Agreement (PPA) for RPH Station got expired in May 2015 due to efflux of time. Further, no beneficiary has extended the PPA, therefore the Commission has not determined tariff for RPH for FY 2017-18.

Gas Turbine Power Station (GTPS)**Norms of Operation**

4.3 The Commission has specified the target norms of operation, for the purpose of determination of tariff in Business Plans Regulations, 2017. The Petitioner has made submissions for relaxation of certain operational norms. The submissions made by the Petitioner in this regard and the Commission's view on the same has been discussed in the following sections.

Plant Availability and Plant Load Factor**Petitioner's Submissions**

4.4 The Petitioner has submitted actual plant availability for FY 2007-08 to FY 2015-16 and has proposed plant availability for FY 2017-18 as follows:

Table 60: Actual and Proposed Availability submitted by the Petitioner

Sl.No.	Station	UoM	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2017-18
1	Gas Turbine Power Station	%	60.98	70.14	85.50	81.91	79.41	84.22	85.76	68.80	74.81	80.00

4.5 Further, the petitioner has submitted that average availability (%) achieved by the station during the last two Control period is around 67.17%. The availability of the station has been varying since its inception and Central Electricity Regulatory Commission has also recognized the life cycle of 15 years for Gas Turbines. The CERC has fixed the norm of 72% availability for similar station like Assam Gas based Station for the period FY 2014-15 to 2018-19 based on the average of actual availability achieved during the previous MYT period FY 2009-10 to FY 2013-14. It is further submitted that CERC while fixing the operational parameters has adopted the principle of average performance during previous MYT period and not the best of the parameters during that period. The petitioner would like to mention that the Gas Turbines of the station are more than 29 years old and no major Renovation and Modernization of the station has been undertaken so far. The Commission is requested to retain the normative availability of 80% for recovery of full fixed cost, based upon the principles adopted by CERC.

Commission Analysis

- 4.6 The Commission has specified the Normative Annual Plant Availability Factor (NAPAF) and Normative Annual Plant Load Factor (NAPLF) in Business Plan regulations, 2017 and relevant extract is as follows:

“8. NORMS OF OPERATION FOR GENERATING STATIONS:

(1) Normative Annual Plant Availability Factor and Normative Annual Plant Load Factor for existing generating stations of Delhi shall be as follows:

I. Normative Annual Plant Availability Factor (NAPAF): 85%

II. Normative Annual Plant Load Factor (NAPLF): 85%”

- 4.7 Further, it is pertinent to state that Plant Availability allowed by CERC for Assam GPS may not be comparable with that of GTPS due to different atmospheric conditions of both the plants. Accordingly, the Commission has not considered relaxation in Plant Availability for GTPS for FY 2017-18.
- 4.8 In view of the above, the Commission has considered Plant Availability and Plant Load Factor as approved in Business Plan regulations, 2017.

Station Heat Rate (SHR)

Petitioner's Submission

- 4.9 The Petitioner has submitted Actual SHR for FY 2007-08 to FY 2015-16 and has Proposed SHR for FY 2017-18 as follows:

Table 61: Actual and Proposed SHR submitted by the Petitioner (kCal/ kWh)

Sl. No.	Station	Mode of Operation	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2017-18
1	Gas Turbine Power Station	Combined Cycle	2554	2553	2557	2504	2463	2439	2416	2503	2520	2555
		Open Cycle	3416	3397	3390	3394	3391	3449	3442	3473	3464	3425

- 4.10 It is submitted that aging of the machines plays a major role, whereby the plants are not in a position to operate at its full rated capacity due to technical constraints which further affects the station heat rate as well as auxiliary power consumption.
- 4.11 The Commission has approved the station heat rate of 2450 kCal/kWh in combined cycle operation and 3125kCal/kWh in open cycle mode for the Gas Turbine Power Station which is below the level achievable by the station.
- 4.12 It is submitted that the turbines of the station are of 30 MW size and more than 29 years old. The STGs of IPGTPS were installed after retrofitting of waste Heat Recovery modules by M/s BHEL, after operation of GTs in open cycle mode for around 10 Years. It may be appreciated that retrofitting of the machines by any supplier other than by the supplier of GTs will have inherent problems.
- 4.13 The guaranteed heat rate in simple cycle mode is 11688 kJ/kWh on NCV at compressor inlet temperature of 15°C and atmospheric pressure of 1.019 bar. The guaranteed heat rate at site conditions of 31.5°C is approximately 3188 Kcal/Kwh. Further, taking into account the correction factor of 5.70% on the guaranteed heat rate as recommended by the CEA, the corrected heat rate for simple cycle mode works out to 3370 kCal/kWh.
- 4.14 It is further submitted that CEA has also recommended technical standards on operational norms on Gas Turbine stations in their report of December, 2004. As per the recommendations, following simple cycle heat rate has been prescribed in reference to capacity of Gas Turbine applicable to IPGTPS.

Table 62: Recommendation of Heat Rate by CEA submitted by the Petitioner (Kcal/Kwh)

Capacity of GTs	Simple Cycle Heat rate	
	Age less than 10 years	Age more than 10 years
Gas Turbines with Capacity less than 30 MW	3500	3550
Gas Turbines with capacity 30 MW or more but less than 100 MW	3200	3250

4.15 CEA has also recognized that the operation efficiency or heat rate and other performance parameters of a Thermal Power Station depends on a number of factors which can be broadly classified as under:

- a) Technology and equipment
- b) Ambient Conditions
- c) Fuel Quality
- d) Plant operation and maintenance practices
- e) Unit Sizes

4.16 Further, the Central Electricity Regulatory Commission in its latest tariff regulation for FY 2014-19 has fixed a heat rate of 3440 Kcal/Kwh in simple cycle mode for similar Assam gas station of NEEPCO having capacity of 291 MW (6 Gas Turbines of 33.5 MW and 3 STG of 30 MW), even though the station was commissioned in 1995-98. Even under the CERC Tariff Regulations, 2004, the heat rate allowed for this station was at a higher level than as allowed by DERC. Further, the Commission in the tariff Order dated 26.08.2011 for determination of aggregate Revenue Requirement for FY 2011-12 in respect of GTPS has also observed that CERC has provided a heat rate of 3440kCal/kWh for Assam Kathal Guri gas based station. However, the Commission has not admitted the contention of the petitioner on the basis that the station is expected to run in combined cycle mode most of the time and open cycle operation is rare. It is submitted that the station runs in open cycle mode only as and when requisitioned by SLDC, Delhi. Further, CERC in its tariff regulation dated 21.02.2014 had allowed 3440 kCal/Kwh for Assam GPS for FY 2014-15 to 2018-19. The operation of IPGTPS in open cycle mode during the last four years is as under:

Table 63: Open cycle certified by SLDC submitted by the Petitioner (%)

Year	Net Generation (MU)	Open cycle generation certified by SLDC (MU)	% Open Cycle
2012-13	1268.422	7.111766	0.56
2013-14	1006.792	5.140309	0.51
2014-15	695.562	10.906382	1.56
2015-16 (upto Jan)	391.549	3.870	0.98

Year	Net Generation (MU)	Open cycle generation certified by SLDC (MU)	% Open Cycle
2016)			

- 4.17 Thus, there has been considerable open cycle operation in previous years. Even though the operation of IPGTPS is less in open cycle mode, there is a direct loss of around 10% on recovery of fuel cost when operated in open cycle mode. This loss in absolute terms is on higher side. Station will endeavour to run in combined cycle mode but when operated in open cycle mode on the request of SLDC, the station may be allowed higher heat rate of 3440kCal/kWh.
- 4.18 It is further submitted that two numbers of Gas Turbines were converted on Liquid Fuel. The Commission has allowed 2% excess heat rate over the allowed operative heat rate for newly set up gas turbine stations operating on liquid fuel. It is requested to the Commission to consider and allow 2% excess heat rate over and above the allowed heat rate for operation on liquid fuel for even existing Gas Turbine Power Station.
- 4.19 Station Heat Rate of IPGTPS is also on higher side due to frequent backing by SLDC, resulting in partial operation. The backing down of the station resulted in partial operation of the units. It is further submitted that there has been substantial gap between Availability and PLF of the station due to backing down. The lower PLF has adversely affected the heat rate of the station.

Table 64: Comparison of Availability & PLF for GTPS submitted by the Petitioner

Year	Availability (%)	PLF (%)
2012-13	84.22	55.29
2013-14	85.76	44.01
2014-15	68.80	39.59
2015-16 (up to Dec 2015)	70.73	21.23

- 4.20 It is very much evident that PLF has been on much lower side as compared to availability which further affects the station heat rate and auxiliary power consumption of the station.

- 4.21 It is submitted that since, heat input is same for de-rated capacity of STGs, the combined cycle heat rate will be impacted and need to be revised accordingly. The petitioner would like to mention that the Gas Turbines of the station are more than 29 years old and no major Renovation and Modernization of the station has been undertaken so far.
- 4.22 In view of the above, the Commission is requested to relax and allowed actual heat rate achieved by the Station in Combined Cycle mode and Open cycle mode for the MYT period FY 2016-17 to FY 2020-21. It is further requested to allow the heat rates of 2525 kCal/kWh in combined cycle mode & 3425 kCal/kWh in open cycle mode for FY 16-17 to FY 2020-21 for current MYT period.
- 4.23 Petitioner has further submitted that SLDC Delhi has been backing down the generation of the stations depending on the requirement of power in Delhi. IPGTPS consist of three blocks; each block consists of two Gas Turbines and one steam turbine. The capacity of each gas turbine is 30 MW and de-rated capacity of each steam turbine is also 30 MW. IPGTPS has been serving the dual purpose of base load as well as peak load. Many times, SLDC Delhi has been giving instructions to back down the blocks partially, thus resulting in non optimization of fuel consumption. The variation of backing down is enormous depending upon the load curve during the day, change in weather conditions. This partial backing down of the blocks further increases the heat rate and auxiliary power consumption.
- 4.24 Therefore, Commission is requested to direct SLDC Delhi to back down complete block of the station only. Further, it is requested that there should not be frequent backing down. The complete backing down of the block to some extent will help to control the heat rate and auxiliary Power consumption.
- 4.25 The above mentioned reasons for higher heat rate of the stations are beyond the control of the petitioner and therefore, the petitioner requests the Commission to adopt more liberal approach.
- 4.26 The petitioner prays to the Commission to approve the SHR levels as proposed in this petition keeping in view:
- A. Old age and technology of the stations.

- B. Practical difficulty in achieving lower SHR, as reflected in various technical reports.
- C. Various ATE rulings, CEA guidelines and CERC regulations

Commission Analysis

4.27 The Commission has specified the Station Heat Rate (SHR) for existing generating stations of Delhi in Business Plan Regulations, 2017 and relevant extract is as follows :

"8. NORMS OF OPERATION FOR GENERATING STATIONS:

...

...

(2) GROSS STATION HEAT RATE (GHR)

Gross Station Heat Rate for existing generating stations of Delhi shall be as follows:

Table 5: Gross Station Heat Rate (GHR)

Sr.	Generating Station	Combined Cycle	Open Cycle
		(kCal/ kWh)	
1	Gas Turbine Power Station (GTPS)	2100	3045
2	Pragati Power Station I (PPS I)	2000	2900

"

4.28 Further, it is pertinent to state that Station Heat Rate allowed by CERC for GPS of NEEPCO may not be comparable with that of GTPS due to different atmospheric conditions of both the plants. Accordingly, the Commission has not considered relaxation in Station Heat Rate for GTPS for FY 2017-18.

4.29 In view of the above, the Commission has considered Station Heat Rate as approved in Business Plan regulations, 2017.

Auxiliary Power Consumption

Petitioner's Submissions

4.30 The Petitioner has submitted actual Auxiliary Power Consumption for FY 2007-08 to FY 2015-16 and has Proposed Auxiliary Power Consumption for FY 2017-18 as follows:

Table 65: Actual and Proposed Auxiliary Power Consumption submitted by the Petitioner

Sl. No.	Station	UoM	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2017-18
1	GTPS	%	3.01	3.28	3.43	4.65	3.37

4.31 Petitioner further submitted that the Gas Turbines of the station were commissioned in the year 1985-86 and the Waste Heat Recovery Units were retrofitted in the year 1995-96. The STGs of the station are not able to produce the rated output and hence the auxiliary power consumption of the station calculated in terms of percentage over the gross generation of the station increases. It is further mentioned that due to less system demand, the generation of the station gets backed down, resulting in partial loading of the units. Further, due to prolonged backing down, un-productive auxiliary consumption also increases percentage of total auxiliary consumption of the station. The percentage of auxiliary consumption as allowed for GTPS relates to the time when backing down due to merit order dispatched was not in the practice and the actual auxiliary consumption of the station was related to actual running up of plants & equipments during generation from the station. However, due to present practice of frequent and prolonged backing downs the station auxiliary consumption has increased substantially. This is also evident from difference in availability and PLF of the station.

4.32 PLF indicates the actual generation of the station based upon the scheduled generation whereas the availability indicates the capacity of the station to inject the power into the system. This lower PLF has resulted into higher Auxiliary Power Consumption of the station. It is further submitted that the average Auxiliary Power Consumption from FY 2007-08 to FY 2015-16 in combined cycle mode is around 3.37%. Therefore, the petitioner requests the Commission to approve auxiliary power consumption @ 3.37% in combined cycle mode for current MYT.

Commission Analysis

4.33 The Commission has specified the Auxiliary Energy Consumption for existing generating stations of Delhi in Business Plan Regulations, 2017 and relevant extract is as follows:

“8. NORMS OF OPERATION FOR GENERATING STATIONS:

...

...

(3) AUXILIARY ENERGY CONSUMPTION

Auxiliary Energy Consumption shall be computed in two parts:

a) Fixed: 0.5% of the generation at normative PLF of the plant capacity which shall form part of other expenses under Fixed Cost, at energy charge rate approved by the Commission in respective Tariff Order.

b) Variable: 2.0% of the actual generation which shall form part of computation of energy charge rate of the respective month.”

- 4.34 The Commission has already considered the submission of the Petitioner regarding lower PLF, which has resulted into higher Auxiliary Power Consumption of the station. Accordingly, the Commission has considered Auxiliary Power Consumption as approved in Business Plan Regulations, 2017

Gross Generation and Net Generation**Petitioner’s Submissions**

- 4.35 The Petitioner has submitted Gross and Net Generation for Gas Turbine Power Station for FY 2017-18 as follows:

Table 66: Gross and Net Generation submitted by the Petitioner

Sl. No.	GT Power Station	UoM	FY 2017-18
1	Capacity	MW	270
2	Gross Generation	MU	1892.16
3	Auxiliary Consumption	MU	63.77
4	Net Generation	MU	1828.39

Commission Analysis

- 4.36 Gross and Net generation of GTPS for FY 2017-18 approved by the Commission based on the norms of operation specified in Business Plan Regulations, 2017 is as follows:

Table 67: Gross and Net Generation approved by the Commission

Sl. No.	GT Power Station	UOM	FY 2017-18	Ref.
---------	------------------	-----	------------	------

A	Capacity	MW	270	
B	NAPLF	%	85	Para 4.8
C	Gross Generation	MU	2010.42	$(A \times B \times 365 \times 24) / 1000$
D	Auxiliary Consumption	%	2.0	Para 4.33
E	Auxiliary Consumption	MU	40.21	CxD
F	Net Generation	MU	1970.21	C-E

Energy Charge Rate and Variable Cost

Petitioner's Submission

- 4.37 IPGCL has submitted that it has considered weighted average price of fuels e.g. Coal, Oil and Gas prevailing during the three months of FY 2015-16 i.e. October 2015 to December 2015. GTPS runs on the Natural Gas being supplied by GAIL and Liquid Fuel supplied by IOCL. Earlier the total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCMD which was sufficient to run six gas turbines. This allocation was reduced to 1.32 MMSCMD during the FY 2006-07. Out of the total allocation of 1.32 MMSCMD, the contracted quantity of R-LNG is 0.60 MMSCMD and balance i.e. 0.72 MMSCMD comes from APM and PMT and these quantities are further subject to daily cuts in the range of 15% depending on the availability. In view of non availability of sufficient gas, Commission has approved the conversion of two Gas Turbines on dual fuel system in FY 2008-09. MoP&NG has further allocated 0.23 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011.
- 4.38 The Petitioner has further submitted that it has entered into an agreement with GAIL for supply of 0.6 MMSCMD R-LNG and the contracted quantity is subject to Take or Pay clause. Accordingly, the Petitioner has to bear the cost of this contracted quantity even if there is no off take of supply. Petitioner is also using spot R-LNG, subject to amount of power schedule and requirement of RLNG to meet the shortage of gas. However Commission in its order dated 29-09-2015 disallowed the Take or pay charges to be recovered from beneficiary with following remark:

"The Commission also directs the petitioner to ensure that the fuel supply agreements do not contain the 'Minimum Off Take Guarantee' clause linked with 'Take or Pay' obligation, so as to optimize the cost of generation. Any cost on

account of such clause shall not be allowed to be billed to the beneficiaries and the liability on this shall be solely to the account of the petitioner. The petitioner shall be allowed to recover only the actual cost of fuel (including fuel price adjustment / Power Purchase Cost Adjustment, if any but excluding cost on account of “Minimum Off Take Guarantee” / “Take or Pay” obligation) from the respective beneficiaries.”

- 4.39 In this regard petitioner has submitted that the PPA signed with DTL, which was latter assigned to Delhi DISCOMs has following provisions:

“3.2 Minimum fuel off take charge

The transco shall reimburse the PPCL for charges paid in respect of its failure to take delivery of minimum levels of fuels, but only if and to the extent that the PPCL’s failure to take such fuel is due to the Transco issuance of dispatch instructions requiring that the project be operated at a level less than the level of demand capacity set forth in any then applicable availability declaration or the Transco ‘s failure or inability to accept delivery of net electrical energy from the project (where due to force measure events or otherwise)”

- 4.40 Petitioner has challenged the issue of minimum fuel off take charge before APTEL vide Appeal No. 284 of 2015 against the Commission’s direction in tariff order dated 29/09/2015. Therefore petitioner is filing this petitioner without prejudice to outcome of above appeal.

- 4.41 The Petitioner has submitted total fuel cost considering the Gross Generation of the plant, SHR of the station, Gross Calorific Value and the Fuel Prices as follows:

Table 68: Fuel Cost for GTPS submitted by the Petitioner

GT Power Station	UoM	FY 2017-18
Gross Generation	MU	1892.160
Net Generation	MU	1828.394
Total Gas Consumption	MMSCM	509.16
Total Fuel Cost	Rs Cr	641.74
Variable Cost	Rs/ kWh	3.51

Commission’s Analysis

4.42 The Commission has specified the formula for computation of energy charge rate in Tariff Regulations, 2017 as follows:

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

(a) For coal based stations:

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

(b) For gas and liquid fuel based stations

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage

CVPF = (a) Weighted Average Gross calorific value of coal on as received basis from the loaded wagons at the generating stations -in kCal per kg for coal based stations

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations.

(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

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

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

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

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

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

LPSFi=Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month;

Provided that energy charge rate for a gas/liquid fuel based station shall be adjusted for open cycle operation based on certification of Delhi SLDC for the open cycle operation during the month.

107. Landed Fuel Cost for Tariff Determination: The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted moving average cost of respective fuel before the start of the tariff period for existing and new generating stations”

4.43 Landed Price of Primary fuel and Gross Calorific Value has been computed as per the information available in Form 27 of March 2017, April 2017 and May 2017 uploaded by the Petitioner on its website as follows:

Sl. No.	Particulars	UoM	Mar-17	Apr-17	May-17
1	Quantum	000'SCM	15306.63	11133.44	12920.37
2	Cost	Rs Cr	18.67	15.90	11.68
3	GCV	kCal/ SCM	9399.57	9501.61	9501.61
4	LPPF (Rs/ SCM)	Rs/ SCM	12.20	14.28	9.04
5	Weighted Average LPPF	Rs/ SCM	11.75		
6	Weighted Average GCV	kCal/ SCM	9461.93		

4.44 Accordingly, the Commission approves the Energy Charge Rate (ECR) and Fuel Cost for FY 2017-18 as follows:

Table 69: ECR and Fuel Cost approved by the Commission

Sl. No.	Particulars	UoM	Petitioner's Submission	Approved	Ref
A	Net Generation	MU	1828.39	1970.21	Table 67
B	ECR	Rs/ kWh	3.51	2.661	
C	Fuel Cost	Rs Cr	641.74	524.30	AxC

Fixed Cost**Operation & Maintenance (O&M) Expenses****Petitioner's Submission**

- 4.45 Petitioner has submitted that in the case of GTPS, Repair and Maintenance expenses are varying on year to year basis because of cyclic nature of maintenance activities of Gas Turbines. Normally, Combustion Inspection is carried out after every 8000 hours, Hot Gas Path Inspection after operation of machines for 24000 hours and Major Inspection after every 48000 Hours of Operation of Gas Turbines. In a cyclic period of six years gas turbine will undergo four Combustion Inspections, one Hot Gas Path Inspection, and one major Inspection. The station is having nine units (six Gas Turbines and three steam turbines). The repair and maintenance expenditure will vary on year to year depending on the type of inspection carried out in the machines. It is further submitted that IPGTPS is having nine numbers of machines and the major inspection of one Gas Turbine costs around Rs. 12-15 Crore, Hot Gas Path Inspection of one Gas Turbine is around Rs. 6-7 Crore and cost of one Combustion Inspection is around Rs. 2-3 Crore.
- 4.46 The Petitioner further submitted that pay and perks of employees of the petitioner is determined in line with Central Pay Commission. The Central Commission's 7th pay recommendations are already notified and the same are likely to be implemented shortly. The wages are due for revisions w.e.f. 01/01/2016 and the anticipated hike in the total wages will be in the range of 15-25% . However, the actual impact will be known only after the submission and the acceptance of the wage-hike recommendation by the Wage Committee.
- 4.47 The Commission is requested to allow the O&M expenses along with anticipated impact of GST and 7th Pay Commission for the smooth operations of the plant to achieve the target level of generation.
- 4.48 The units of IPGCL are small in size and are also old in age, hence it will require more man power for operation as well as higher Repair & Maintenance expenses. This fact has also been appreciated by CERC for allowing the higher O&M expenses for small size and old

age plants. O&M Expenses as per CERC Regulation, 2014 submitted by the Petitioner for GTPS is as follows:

Table 70: O&M Expenses as per CERC Regulation, 2014

Sl. No.	Particulars	UoM	FY 2017-18
1	GT Power Station	Rs Cr	109.97

Commission's Analysis

4.49 The Commission has specified the normative Operation and Maintenance Expenses for existing generating stations of Delhi in Business Plan Regulations, 2017 and relevant extract is as follows:

"6. OPERATION AND MAINTENANCE EXPENSES

(1) Normative Operation and Maintenance expenses in terms of Regulation 4(3) and Regulation 92 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity shall be as follows:

(a) Normative Operation and Maintenance expenses for existing generating stations shall be as follows:

Table 2: O&M Expenses (Rs. Lakh/MW)

Station	2017-18	2018-19	2019-20
GTPS	29.66	31.32	33.08
PPS I	17.69	18.68	19.73

....

(2) Impact of seventh pay commission on employee cost shall be considered separately, based on actual payment made by the Generation Entity and prudence check at the time of true up of ARR for the relevant financial year."

4.50 Accordingly, the Commission approves the O&M Expenses for GTPS for FY 2017-18 except the impact of seventh pay commission on employee cost is as follows:

Table 71: O&M Expenses approved by the Commission (Rs Cr)

Sl. No.	Station	Capacity (MW)	Amount
1	GTPS	270	80.08

4.51 Impact of any statutory Pay revision on employee's cost as may be applicable on case to case basis shall be considered separately, based on actual payment made by the Petitioner and prudence check at the time of true up as specified in the Business plan Regulations, 2017.

Capital Expenditure

Petitioner's Submission

4.52 The capitalization plan submitted by the Petitioner during FY 2017-18 is as follows:

Table 72: Capital Expenditure submitted by the Petitioner

Sl. No.	Particulars	UoM	FY 2017-18
1	Opening GFA	Rs Cr	429.20
2	Addition	Rs Cr	0.00
3	Deletion	Rs Cr	0.00
4	Closing GFA	Rs Cr	429.20

Commission's Analysis

4.53 The Commission has sought the details of the schemes to be capitalized during FY 2017-18 for GTPS during the prudence check and the Petitioner informed that the Schemes proposed for Capitalisation are pending for approval of the Board of Directors. Therefore, the Commission has not considered any additional capitalization for FY 2017-18.

4.54 Accordingly, the GFA approved by the Commission for FY 2017-18 is as follows:

Table 73: Capital Expenditure approved by the Commission

Sl. No.	Particulars	UoM	FY 2017-18		Ref.
			Petitioner Submission	Approved	
A	Opening GFA	Rs Cr	429.20	425.14	Table 46
B	Addition	Rs Cr	0.00	0.00	
C	Deletion	Rs Cr	0.00	0.00	
D	Closing GFA	Rs Cr	429.20	425.14	A+B-C
E	Average GFA	Rs Cr	429.20	425.14	(A+D)/2

Depreciation

Petitioner's Submission

- 4.55 Petitioner has submitted that GTPS has completed its useful life of 25 years in 2011. However, the depreciation recovered is less than 70% of the asset value upto FY 2015-16 even after operation of 29 years. It is therefore requested to consider and allow relaxation in the depreciation norms; and allow to recover the remaining depreciation up to 90% during current years of MYT period.
- 4.56 Accordingly, the Petitioner has requested to approve the accelerated depreciation for FY 2017-18 as follows:

Table 74: Depreciation submitted by the Petitioner

Sl. No.	Particulars	UoM	2017-18
1	GTPS	Rs Cr	16.63

Commission's Analysis

- 4.57 The Commission has specified provisions pertaining to Depreciation in Regulation 78 to 83 of the Tariff Regulations, 2017 and relevant extracts are as follows:

"78. Annual Depreciation shall be computed based on Straight Line Method for each class of asset as specified in Appendix-1 of these Regulations.

79. The base value for the purpose of depreciation shall be the capital cost of the asset approved by the Commission. Depreciation shall be chargeable from the first year of commercial operation and in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

80. The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

81. Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

82. In case of existing assets, the balance depreciable value as on 1st April of any financial year shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31st March of the preceding financial year from the gross depreciable value of the assets.

83. The Depreciation for Life extension projects/scheme shall be allowed in the manner as indicated in Regulation 51 of these Regulations.”

4.58 It is observed that GTPS was commissioned in year 1996 and shall complete its useful life by year 2021. Therefore, the Commission has considered balance useful life of GTPS as 4 years at the opening of FY 2017-18. Accordingly, the Commission has approved the depreciation for FY 2017-18 as follows:

Table 75: Depreciation approved by the Commission

Sl. No.	Particulars	UoM	Petitioner's Submission	Approved	Ref
A	Average GFA	Rs Cr	429.20	425.14	Table 73
B	Opening Accumulated Depreciation	Rs Cr		338.83*	Table 48
C	Balance Depreciation	Rs Cr		43.80	(90%xA)-B
D	Remaining useful life	Years		4	Para 4.58
E	Depreciation	Rs Cr		10.95	C/D
F	Average Depreciation Rate (%)	%		2.58%	(E/A)x100

*A depreciation of Rs 10.95 Cr has been considered for FY 2016-17

Means of Financing

Petitioner's Submission

4.59 The Petitioner has submitted that subscribed and paid up equity capital of IPGCL was fixed at Rs. 140 Crore as on July 1, 2002 in accordance with the Transfer Scheme. The

total equity was bifurcated plant wise, on the basis of Gross Fixed Assets of the Company, as under:

Table 76: Equity Bifurcation for IPGCL Power Plants submitted by the Petitioner

Power Stations	UoM	Amount
IP Power Station	Rs Cr	1.20
Rajghat Power Station	Rs Cr	59.56
GT Power Station	Rs Cr	79.24
Total	Rs Cr	140.00

4.60 The Petitioner has further submitted that as per the Delhi Electricity Reforms (Transfer Scheme) Rules 2001, Rs. 210 Crore of unsecured loan was transferred to IPGCL as on July 1, 2002 and repayable to holding company. This loan has been bifurcated station wise, based on the gross fixed assets of the Company, as under:

Table 77: Loan Details for GTPS submitted by the Petitioner

Sl. No.	Power Stations	UoM	Amount
1	GT Power Station	Rs Cr	32.96

4.61 The Petitioner further submitted that Plan Funds Loan from Delhi Government was taken @ 13% interest in the FY 2002-03 & from FY 2003-04 and thereafter, the plan funds interest rate is @ 11.50%. A penal interest of 2.75% is payable in case of default in timely payment of interest on principal amount. The penal interest has been accounted in the ARR. IPGCL has made certain capital additions during the Control period FY 2012-13, 2013-14 to FY 2014-15. The same has been funded through internal accruals/ loan from GNCTD (There are no new loans from GNCTD in FY 2012-13 onwards) from GNCTD. As per Regulation, 70% of the capital additions have been considered to be funded through Loans. Accordingly, interest on this normative loan has been taken @ 13 % per annum, as per the Regulations.

Commission's Analysis

- 4.62 Regulation 63 of the Tariff Regulations, 2017 deals with financing of the capital cost in Debt Equity ratio to be allowed for existing project or scheme and the relevant extract is as follows:

“63. For determination of Tariff, the debt-equity ratio for any project or scheme under commercial operation shall be considered as 70:30:

Provided that:

Where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff;

Where equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as notional loan;

The equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;

Any grant/contribution/deposit obtained for the execution of the project/scheme shall not be considered as a part of capital structure for the purpose of debt: equity ratio.”

- 4.63 Accordingly, the Commission has computed the quantum of Loan and Equity required for funding of NFA for FY 2017-18 as follows:

Table 78: Requirement of Loan and Equity computed by the Commission

Sl. No.	Particulars	UoM	FY 2017-18		Ref.
			Petitioner Submission	Approved	
A	Opening GFA	Rs Cr	429.20	425.14	Table 73
B	Opening Accumulated Depreciation	Rs Cr		338.83	Table 75
C	Opening NFA	Rs Cr		86.31	A-B
D	Opening Equity	Rs Cr		25.89	30%xC
E	Opening Loan	Rs Cr		60.42	C-D
F	Depreciation for the year	Rs Cr		10.95	Table 75
G	Closing NFA	Rs Cr		75.36	C-F
H	Closing Equity	Rs Cr		22.61	D-(30%xF)
I	Closing Loan	Rs Cr		52.76	E-(70%xF)
J	Average Loan	Rs Cr		56.59	(E+I)/2

Sl. No.	Particulars	UoM	FY 2017-18		Ref.
			Petitioner Submission	Approved	
K	Average Equity	Rs Cr		24.25	(D+H)/2

Working Capital

Petitioner's Submission

4.64 The Petitioner has submitted that Working Capital has been computed as per the following norms for gas turbine:

- Cost of Gas for 1 month
- Cost of liquid fuel for gas station for 1/2 month
- O&M expenses for 1 month
- Receivables equivalent to 2 months average billing
- Maintenance Spares @ 30% of the O&M

4.65 The petitioner has considered the generation of two Gas Turbines on liquid fuel and other four gas turbines on gas. Accordingly, the requirement of 15 days liquid fuel as per the Regulations has been considered for requirement of working capital for FY 2017-18 as follows:

Table 79: Working Capital submitted by the Petitioner

Particulars	UoM	FY 2017-18
Cost of Fuel for 1 month	Rs Cr	35.65
Liquid fuel stock for ½ month	Rs Cr	35.52
O&M expenses for 1 month	Rs Cr	32.99
Maintenance Spares @ 30% of O&M	Rs Cr	9.16
Receivables equivalent to 2 months average billing	Rs Cr	250.53
Total Working Capital	Rs Cr	363.86

Commission's Analysis

4.66 Regulation 84 of the Tariff Regulations, 2017 deals with computation of Working Capital requirement as follows:

"84. The Commission shall calculate the Working Capital requirement for:

(2) Open-cycle Gas Turbine/Combined Cycle thermal generating stations as follows:

- (a) Fuel Cost for 30 days corresponding to the Normative Annual Plant Availability Factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;
- (b) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;
- (c) Maintenance spares @ 30% of Operation and Maintenance expenses specified in this Regulation;
- (d) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and
- (e) Operation and maintenance expenses for one month.”

4.67 Accordingly, Working Capital requirement for FY 2017-18 has been computed as follows:

Table 80: Interest on Working Capital approved by the Commission

Sl. No.	Particulars	UoM	FY 2017-18		Ref.
			Petitioner Submission	Approved	
A	Fuel expenses for 1 month	Rs Cr	35.65	43.69	Table 69
B	Liquid Fuel for 1/2 month	Rs Cr	35.52	35.52	
C	Maintenance spares @ 30% of O&M	Rs Cr	32.99	24.02	Table 71
D	O&M expenses for 1 month	Rs Cr	9.16	6.67	Table 71
E	Annual Fixed Cost for the year	Rs Cr	220.65	127.30	Table 86
F	Fuel Cost for the year	Rs Cr	641.74	524.30	Table 69
G	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	250.53	108.60	(E+F)/6
H	Total Working Capital	Rs Cr	363.86	218.51	A+B+C+D+G

Weighted Average Cost of Capital (WACC) and Return on Capital Employed (RoCE)

Petitioner's Submission

- 4.68 The Petitioner has submitted rate of Interest for FY 2017-18 at 13.5% by additionally allowing 350 basis points on base rate of SBI.
- 4.69 Further, the Central Commission has fixed the pretax base rate of return on equity at 15.5% in Generation Tariff Regulation 2014 for the period FY 2014-19 and has also grossed up with the rate of income-tax. Accordingly ROE of GTPS has been Grossed up as follows:

Table 81: Return on Equity for GTPS submitted by the Petitioner

Sl. No.	Particulars		UoM	2017-18
1	Average Equity	A	Rs Cr	138.13
2	Return on equity at base rate i.e @ 15.5%	B	Rs Cr	21.41
3	Normal Income tax Rate	C	%	33.99
4	Gross up return on equity rate	$D = (\text{base rate} / (1 - C))$	%	23.48
5	Return on Equity	$E = (A \times D)$	Rs Cr	32.43

Commission's Analysis

- 4.70 Regulation 3 and 4 of Business Plan Regulations, 2017 deal with Return on Equity (RoE) and Tax on Return on Equity as follows:

“3. RATE OF RETURN ON EQUITY

Return on Equity in terms of Regulation 4(1) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for Generating Entity shall be computed at the Base Rate of 14.00% on post tax basis.

4. TAX ON RETURN ON EQUITY

The base rate of Return on Equity as allowed by the Commission under Regulation 3, shall be grossed up with the Minimum Alternate Tax or Effective Tax Rate of the respective financial year in terms of Regulation 72 and 73 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017, as per the following formula:

$$\text{Rate of Return on Equity} = 14 / [(100 - \text{Tax Rate}) / 100]$$

where, Tax Rate is Minimum Alternate Tax (MAT) or Effective Tax Rate, as the case may be.”

4.71 In view of the above, the Commission has considered the base rate of return on equity at 14% and the same has been grossed up with rate of income tax at 33.99%. Accordingly grossed up rate of return on equity has been computed at 21.21% for FY 2017-18.

4.72 Regulation 77 of Tariff Regulations, 2017 deal with interest on Loan as follows:

“77. The rate of interest on loan shall be based on weighted average rate of interest for actual loan portfolio subject to the maximum of bank rate as on 1st April of the year plus the margin as approved by the Commission in the Business Plan Regulations for a Control Period:

Provided that in no case the rate of interest on loan shall exceed approved rate of return on equity:

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

Provided also that if the Utility does not have actual loan then the rate of interest shall be considered at the bank rate plus margin, as specified by the Commission in the Business Plan Regulations, for the notional loan of the relevant control period:

Provided also that the loan availed through open tendering process (Competitive Bidding) among Scheduled Banks, Financial Institutions etc., shall be considered at the rate discovered through open tendering process.”

4.73 Regulation 85 and 86 of Tariff Regulations, 2017 deal with Interest on Working Capital and relevant extract is as follows:

“85. Rate of Interest On Working Capital shall be considered as the bank rate as on 1st April of the year plus margin as specified by the Commission for the Control Period and shall be trued up on the basis of prevailing bank rate as on 1st April of the respective financial year:

Provided that the rate of interest availed through open tendering process (Competitive Bidding) among Scheduled Banks, Financial Institutions etc., shall not be trued up.

86. *Interest on working capital shall be payable on normative basis notwithstanding that the Utility has availed any loan for the working capital."*

4.74 The Commission has specified Margin for Rate of Interest on loan in Business Plan Regulations, 2017 as follows:

"5. MARGIN FOR RATE OF INTEREST ON LOAN

(1) Margin for rate of interest in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity shall be allowed over and above 1 (one) year Marginal Cost of Fund based Lending Rate (MCLR) of SBI for computation of rate of interest on loan:

Table 1: Margin for Rate of Interest on Loan

Sr. No.	Generating Station	Margin for Rate of Interest on Loan (%)		
		2017-18	2018-19	2019-20
1	Gas Turbine Power Station (GTPS)	2.34%	2.11%	2.01%
2	Pragati Power Station I (PPS I)	2.98%	2.98%	2.98%

(2) The rate of interest on loan (MCLR plus Margin) shall not exceed approved base rate of return on equity i.e., 14.00%."

4.75 In view of the above, the Commission has considered the rate of interest on loan by considering the Bank Rate as Marginal Cost of Fund based Lending Rate (MCLR) of SBI as notified by the State Bank of India and margin as approved in Business Plan Regulations, 2017. Accordingly rate of interest on loan has been approved at 10.34% on the basis of SBI MCLR of 8% as on 1st April, 2017 plus margin of 2.34%.

4.76 Further, the Commission has specified the methodology for allowing Return on Capital Employed in Tariff Regulations, 2017 as follows:

"65. Return on Capital Employed shall be used to provide a return to the Utility, and shall cover all financing costs except expenses for availing the loans, without providing separate allowances for interest on loans and interest on working capital.

66. The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the Original Cost of Fixed Assets (OCFA) and Working Capital. Capital work in progress (CWIP) shall not form part of the RRB.

Accumulated Depreciation, Consumer Contribution, Capital Subsidies / Grants shall be deducted in arriving at the RRB.

67. *The RRB shall be determined for each year of the Control Period at the beginning of the Control Period based on the approved capital investment plan with corresponding capitalisation schedule and normative working capital.*

68. *The Regulated Rate Base for the i^{th} year of the Control Period shall be computed in the following manner:*

$$RRBi = RRB\ i-1 + \Delta ABi / 2 + \Delta WCi;$$

Where,

“i” is the i^{th} year of the Control Period;

RRBi: Average Regulated Rate Base for the i^{th} year of the Control Period;

ΔWCi : Change in working capital requirement in the i^{th} year of the Control Period from $(i-1)^{th}$ year;

ΔABi : Change in the Capital Investment in the i^{th} year of the Control Period;

This component shall be arrived as follows:

$$\Delta ABi = Invi - Di - CCI - Ret_i;$$

Where,

Invi: Investments projected to be capitalised during the i^{th} year of the Control Period and approved;

Di: Amount set aside or written off on account of Depreciation of fixed assets for the i^{th} year of the Control Period;

CCI: Consumer Contributions, capital subsidy / grant pertaining to the ΔABi and capital grants/subsidies received during i^{th} year of the Control Period for construction of service lines or creation of fixed assets;

Ret_i: Amount of fixed asset on account of Retirement/ Decapitalisation during i^{th} Year;

RRB $i-1$: Closing Regulated Rate Base for the Financial Year

preceeding the i^{th} year of the Control period. For the first year of the Control Period, Closing RRB $i-1$ shall be the Opening Regulated Rate Base for the Base Year i.e. RRBO;

$$RRBO = OCFAO - ADO - CCO + WCO;$$

Where;

OCFAO: Original Cost of Fixed Assets at the end of the Base Year;

ADO: Amounts written off or set aside on account of depreciation of fixed assets pertaining to the regulated business at the end of the Base Year;

CCO: Total contributions pertaining to the OCFAO, made by the consumers, capital subsidy / grants towards the cost of construction of distribution/service lines by the Distribution Licensee and also includes the capital grants/subsidies received for this purpose;

WCO: working capital requirement in the $(i-1)^{th}$ year of the Control Period.

69. Return on Capital Employed (RoCE) for the year “i” shall be computed in the following manner:

$$RoCE = WACC_i * RRB_i$$

Where,

WACC_i is the Weighted Average Cost of Capital for each year of the Control Period;

RRB_i – Average Regulated Rate Base for the i^{th} year of the Control Period.

70. The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:

Where,

D is the amount of Debt derived as per these Regulations;

E is the amount of Equity derived as per these Regulations;

Where equity employed is in excess of 30% of the capital employed, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount

shall be considered as notional loan. The amount of equity in excess of 30% treated as notional loan. The interest rate on excess equity shall be the weighted average rate of interest on the actual loans of the Licensee for the respective years. Where actual equity employed is less than 30%, the actual equity and debt shall be considered;

Provided that the Working capital shall be considered 100% debt financed for the calculation of WACC;

rd is the Cost of Debt;

re is the Return on Equity."

- 4.77 In view of the above, the Commission has computed Regulated Rate Base for FY 2017-18 as follows:

Table 82: RRB approved by the Commission

Sl. No.	Particulars	UoM	FY 2017-18	Ref.
A	Opening GFA	Rs Cr	425.14	Table 73
B	Opening Accumulated Depreciation	Rs Cr	338.83	Table 75
C	Opening RRB	Rs Cr	86.31	A-B
D	Working Capital	Rs Cr	218.51	Table 80
E	Depreciation for the year	Rs Cr	10.95	Table 75
F	Net Addition	Rs Cr	0	Table 73
G	Closing RRB	Rs Cr	293.87	C+D+F-E
H	Average RRB	Rs Cr	299.35	C+D+(F-E)/2

- 4.78 Further, the Commission has computed Weighted Average Cost of Capital (WACC) and Return on Capital Employed (RoCE) as follows:

Table 83: WACC and RoCE approved by the Commission

Sl. No.	Particulars	UoM	Quantum	Ref.
A	Average RRB	Rs Cr	299.35	Table 82
B	Average Loan Requirement for Capital Investment	Rs Cr	56.59	Table 78
C	Loan for Working Capital Requirement	Rs Cr	218.51	Table 80
D	Total Loan	Rs Cr	275.10	B+C

Sl. No.	Particulars	UoM	Quantum	Ref.
E	Average Equity	Rs Cr	24.25	Table 78
F	WACC	%	11.22%	
G	RoCE	Rs Cr	33.59	AxF

Fixed Auxiliary Consumption Expenses

4.79 The Commission has allowed Fixed Auxiliary Consumption (0.5%), as discussed above in the relevant section. Accordingly, the Commission allows Fixed Auxiliary Consumption Expenses as follows:

Table 84: Fixed Auxiliary Consumption Expenses approved by the Commission

Sl. No.	Particulars	UoM	FY 2017-18	Ref.
A	Gross Generation at Normative PLF	MU	2010.42	Table 67
B	Fixed Auxiliary Consumption	%	0.5%	Para 4.33
C	Fixed Auxiliary Consumption	MU	10.05	BxC
D	Energy Charge Rate	Rs/ kWh	2.661	Table 69
E	Fixed Auxiliary Consumption Expenses	Rs Cr	2.67	(Cx D)/10

Summary of Fixed Cost

Petitioner's Submission

4.80 Annual Fixed Cost for FY 2017-18 submitted by the Petitioner is as follows:

Table 85: Total Fixed Cost submitted by the Petitioner

Particulars	UoM	FY 2017-18
O&M Expenses	Rs Cr	109.97
Depreciation	Rs Cr	16.63
Interest Charges	Rs Cr	14.70
Return on Equity	Rs Cr	32.43
Interest on Working Capital	Rs Cr	49.12
Total Fixed Cost	Rs Cr	222.85
Net Generation	MU	1828.39
Fixed Cost/Unit	Rs/ kWh	1.22

Commission's Analysis

4.81 Regulation 99 of Tariff Regulations, 2017 provides components to be considered for computation of Annual Fixed Cost for a Generating Entity and relevant extract is as follows:

“99. The annual fixed cost (AFC) of a Generating Entity shall consist of the following components as specified in these Regulations:

Return on Capital Employed;

Depreciation; and

Operation and Maintenance expenses.”

4.82 Accordingly, the Commission approves the Annual Fixed Cost for FY 2017-18 by considering the various components as follows:

Table 86: Annual Fixed Cost approved by the Commission

Sl No.	Particulars	UoM	FY 2017-18		Ref.
			Petitioner's Submission	Approved	
A	Return on Capital Employed	Rs Cr	94.05	33.59	Table 83
B	Depreciation	Rs Cr	16.63	10.95	Table 75
C	Operation & Maintenance Expenses	Rs Cr	109.97	80.08	Table 71
D	Fixed Auxiliary Consumption	Rs Cr	-	2.67	Table 84
E	Annual Fixed Cost	Rs Cr	220.65	127.30	A+B+C+D
F	Net Generation	MU	1828.39	1970.21	Table 67

A5: DIRECTIVES ISSUED BY THE COMMISSION

- 5.1 The Commission directs the Petitioner to ensure that the fuel supply agreement does not contain the "Minimum Off Take Guarantee" clause linked with "Take or Pay" obligation, so as to optimize the cost of generation. Any cost incurred on account of such clause shall not be allowed to be billed to the beneficiaries and the liability on this count shall be solely to the account of the petitioner. The petitioner shall be allowed to recover only the actual cost of fuel (including fuel price adjustment/Power Purchase Cost Adjustments, if any but excluding cost on account of "Minimum Off Take Guarantee" / "Take or Pay" obligation) from the respective beneficiaries.
- 5.2 The Commission directs the Petitioner to ensure that the fuel procured should be strictly utilized only for the purpose of power generation, failing which the associated cost would be disallowed in full.
- 5.3 The Commission directs the Petitioner to submit the required details/ associated documents related to claims made against the dismantling of the "IP Station" along with the audited statements for final disposal of the station.
- 5.4 The Commission directs the Petitioner to furnish information related to Energy Charge Rate as per Form-21 of Tariff Regulations, 2017 along with monthly invoice to the beneficiaries. Source wise fuel details are to be provided in the said form and the same is to be uploaded on Petitioner's website on monthly basis, failing which the penalty will be imposed as stated at Para 5.5
- 5.5 Save and except the penalty as specifically provided in these directives, in all other cases, the punishment for non-compliance of directions of the Commission shall be dealt as per the Section 142 of the Electricity Act, 2003.

ANNEXURE-I

**DELHI ELECTRICITY REGULATORY COMMISSION**

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

F.11(1366) /DERC/2015-16/

Petition No. 15/2017

In the matter of: Petition for determination of Generation Tariff and Submission of Business Plan for the MYT Period from FY 2016-17 to FY 2020-21.

Indraprastha Power Generation Company Ltd.
Through its: **Director (Technical)**
Himadri,
Rajghat Power House Complex
New Delhi 110 002.

...Petitioner/Licensee

Coram:

Sh. B. P. Singh, Member.

ORDER

(Date of Order 26.05.2017)

1. M/s. Indraprastha Power Generation Co. Ltd. (IPGCL) has filed the instant Petition for determination of Generation Tariff and Submission of Business Plan for the MYT Period from FY 2016-17 to FY 2020-21. The said Petition has been scrutinised and found generally in order as per the DERC Comprehensive (Conduct of Business) Regulations, 2001. Clarifications/additional information, if and when required would be sought from the Petitioner.
2. The Petition is admitted.

Sd/-
(B. P. Singh)
Member

**DELHI ELECTRICITY REGULATORY COMMISSION**

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

F.11(1479) /DERC/2017-18/

Petition No. 26/2017

In the matter of: Petition for True up of expenditure for FY 2014-15 and FY 2015-16 as per DERC Generation Tariff Regulation, 2011.

Indraprastha Power Generation Company Ltd.
Through its: **Director (Technical)**
Himadri,
Rajghat Power House Complex
New Delhi 110 002.

...Petitioner/Licensee

Coram:

Sh. B. P. Singh, Member.

ORDER

(Date of Order: 30.05.2017)

1. M/s. Indraprastha Power Generation Co. Ltd. (IPGCL) has filed the instant Petition for True up of expenditure for FY 2014-15 and FY 2015-16. The said Petition has been scrutinised and found generally in order as per the DERC Comprehensive (Conduct of Business) Regulations, 2001. Clarifications/additional information, if and when required, would be sought from the Petitioner.
2. The Petition is admitted.

Sd/-
(B. P. Singh)
Member

ANNEXURE-II

LIST OF RESPONSES RECEIVED FROM STAKEHOLDERS ON THE TRUE UP OF EXPENSES UP TO FY 2014-15 & FY 2015-16, AND ANNUAL REVENUE REQUIREMENT (ARR) AND TARIFF FOR FY 2017-18

S. No.	R. No.	Name	Address	Date of Receipt
1.	1 1A 1B	Sh. B.S. Vohra	East Delhi RWAs Joint Front, F-19/10, Krishna Nagar, Delhi 110 051 rwabhagidari@yahoo.in	09.06.2017 12.06.2017 18.07.2017
2.	2	Sh. O.P. Gupta	Advopgupta95@rediffmail.com	14.06.2017
3.	3 3A	Sh. B.S. Sachdev President	45, North Avenue, New Delhi 110 001 grahakevraja@rediffmail.com , grahakevraja@gmail.com	12.06.2017 29.06.2017
4.	4 4A 4B 4C	Sh. A.K. Dutta	222, Pocket E, Mayur Vihar II Delhi 110 091 Mmathur2001@yahoo.com	15.06.2017 20.06.2017 20.06.2017 17.07.2017
5.	5	Sh. S.K. Juneja	sudershankumarjuneja@gmail.com	20.06.2017
6.	6	Sh. Gulshan Desh	gulshanadesh@gmail.com	20.06.2017
7.	7	Sh. Jagjeet Singh	coolmanjagga@gmail.com	20.06.2017
8.	8	Smartjain.vikas	Smartjain.vikas@gmail.com	18.06.2017
9.	9	Sh. Sumit Jaswanil	Sumitjava2008@gmail.com	20.06.2017
10.	10 10A	Sh. Sat Goel Sh. Sat Goel	satgoel1947@gmail.com satgoel1947@gmail.com	20.06.2017 27.06.2017
11.	11 11A 11B	Sh. Saurabh Gandhi General Secretary	urdrwas@gmail.com	20.06.2017 18.07.2017 18.07.2017
12.	12 12A	Sh. B.B. Tiwari	sarwasharpan@gmail.com	21.06.2016 22.06.2017
13.	13 13A	Sh. Pankaj Sharma	pankaj.sharma@iitb.ac.in	27.06.2017 27.06.2017
14.	14 14A	Sh. Manmohan Verma	Rohini EWS Flats Residents Welfare Association, C-1/128, Sec.-5, Rohini, Delhi 110 085 mmverma.rwc@gmail.com	27.06.2017 18.07.2017
15.	15 15A 15B	Sh. Ashok Bhasin	North Delhi Resident Welfare Federation 1618, Main Chandrawal Road, Delhi 110 017 Ashok.bhasin2015@gmail.com	27.06.2017 28.06.2017 29.06.2017

S. No.	R. No.	Name	Address	Date of Receipt
16.	16	Sh. Anil Kumar Jha	Jan Chetna Sangam (Regd.) A-4, Gali No. 13, Mandawali Unchepar, Delhi 110 092	27.06.2017
17.	17	Sh. Rajiv Kakria	E-230, Greater kailash, New Delhi 110 048	27.06.2017
18.	18 18A	Sh. Sudhir Aggarwal	C-3/2, Model Town III, Delhi 110 009	22.06.2017 18.07.2017
19.	19 19A 19B 19C	Sh. V.K. Malhotra General Secretary	DVB Engineers' Association D-3, Vikas Puri, New Delhi 110 018	27.06.2017 27.06.2017 27.06.2017 19.07.2017
20.	20	Sh. Anil Grover President	Resident's Welfare Society (Regd.) Pocket-C, Mayur Vihar Phase II, Delhi 110 091	27.06.2017
21.	21	Sh. P.S. Tomar Secretary	Resident's Welfare Association C-7/89, Yamuna Vihar, Delhi	27.06.2017
22.	22	Sh. Kailash Katyal Patron President	Senior Citizens Welfare Association 49-B Pocket-1, Mayur Vihar, Phase- 1, Delhi 110 091	27.06.2017
23.	23	Sh. Kulwant Singh President	Dilshad Colony Residents Welfare Association (Regd.) G-87, List Floor, Dilshad Colony, Delhi 110 095	27.06.2017
24.	24	Sh. Sarvesh Kumar Verma	Resident Welfare Association A-2/219, New Kondli, Delhi 110 096	27.06.2017
25.	25	Rohit Arora President	Resident's Welfare Association 12A, Gyan Park Chander Nagar, Near Krishna Nagar, Delhi 110051 gyanparkwelfaresociety@gmail.com	27.06.2017
26.	26	Sh. S. Hassan Retired Officer Ministry of Defence	F-172, Dilshad Colony, Delhi 110095 shassanrwa@gmail.com	29.06.2017
27.	27	Ms. Ritu Bhatia	Mahila Pragatisheel Association (Regd.) B-186, Vivek Vihar Phase-I, Delhi 110095	28.06.2017

S. No.	R. No.	Name	Address	Date of Receipt
28.	28	Sh. D.M. Narang President	Joint RWAs, R-Block & Double Storey New Rajinder Nagar, New Delhi	28.06.2017
29.	29	Sh. Kunwar Pratap Singh General Secretary	Bhajan Pura Jan Sahyog Sabha D-10, Dispensary Chowk, Bhajan Pura, Delhi 110053	29.06.2017
30.	30	Sh. Umardin Gen. Secretary	The Consortium An Alliance of the Registered RWA's of the Walled City 1570, Ground Floor, Pataudi House, Darya Ganj, New Delhi 110002	28.06.2017
31.	31	Sh. Haji Mohd. Rais President	Resident's Welfare Association 3199, Kucha Tara Chand, Darya Ganj, New Delhi 110002	28.06.2017
32.	32	Sh. Farooq Engineer	Rehayeshi Welfare Anjuman Shivaji Road, Azad Market, Delhi 110006	28.06.2017
33.	33	Sh. Sudhir Kalra Addl. Secretary	E-93, Greater Kailash-I New Delhi 110048 kalrasudhir@gmail.com	28.06.2017
34.	34	Sh. Rajan Gupta	355, Udhyan, Narela, Delhi 110040	27.06.2017
35.	35	Sh. Rajesh Agarwal	Shahdara Resident Welfare Association , 356, Farsh Bazar, Shahdara, Delhi 110032 shahdararwa@gmail.com	29.06.2017
36.	36	Sh. Sanjeev Bhatnagar	Resident's Welfare Association New MIG Flats, Prasad Nagar, New Delhi 110005	28.06.2017
37.	37	Sh. Naeem Bhartee Vice President	Nai Subah Welfare Society 3731, Chowk Shah Ganj, Ajmeri Gate, Delhi 110006	28.06.2017
38.	38	Sh. Mohammad Shadab Qureshi President	Resident's Welfare Association 7642, Al-quresh Library, Near Badi Masjid, Qasab Pura, Delhi 110006	28.06.2017
39.	39	Haveli Azam Khan Welfare Society	849, Gali Godowali, Haweli Azam Khan, Chitli Qubar, Jama Masjid, Delhi 110006	28.06.2017

S. No.	R. No.	Name	Address	Date of Receipt
40.	40	Sh. Dayaram Dwivedi Vice President	Nidhi Fabrics, 262, Katra Pyarelal, Chandni Chowk New Delhi 110006	29.06.2017
41.	41	Sh. Arvind Mehta	Joint RWAs, R-Block & Double Storey, New Rajinder Nagar, New Delhi	30.06.2017
42.	42	Sh. Balkishan	Sudhar Smiti Durgapuri (Regd.) 1449/22, Gali No. 9, Durgapuri, Shahdra, Delhi 110093	30.06.2017
43.	43	Sh. M.P. Singh President	Jan-Hit Residents Welfare Association, Pocket-I, 47a, Dilshad Garden, Delhi 110095	30.06.2017
44.	44.	Sh. Kamal Kiran Seth Addl. Secretary General	Apex Chamber of Commerce & Industry of NCT of Delhi A-8, Naraina Industrial Area, Phase-II New Delhi 110028 delhichamber@airtelmail.in	30.06.2017
45.	45	Sh Samson Frederick General Secretary	All India Minorities Fundamental Rights Protection Committee 2109/18, Turkman Gate, New Delhi 110092	28.06.2017
46.	46	Sh. Shashi Goyal Sr. Manager- Regulatory Affairs	BSES Rajdhani Power Ltd. NSES BHawan, Nehru Place New Delhi 110019	29.06.2017
47.	47	Sh. Satya Narain Rohtagi Sr. Citizen	618F-2/2/1, Shankar Gali Vishwas Nagar, Delhi – 110032	29.06.2017
48.	48	Sh. Shiv Kumar Sharma	Brijpuri Resident Welfare Association (Regd.) D-8/154, Brij Puri, Delhi 110094	03.07.2017
49.	49	Sh. Chaman Singh Gen. Secretary	DDA Janta Flats Residents Welfare Association (Regd.) Pocket D-2, Mayur Vihar Phase III, Delhi 110096	05.07.2017
50.	50	Sh. Sanjay Dhingra	Jama Masjid Citizen Welfare Society dr.sanjay.dhingra007@gmail.com	11.07.2017

S. No.	R. No.	Name	Address	Date of Receipt
51.	51	Dr. Faheem Benoj Gen. Secretary	Jafrabad Resident Welfare Association (RWA) 1202, Street No. 39/4, Jafrabad, Delhi 110053 Jafrabadrwa2006@gmail.com	14.07.2017
52.	52	Sh. Jagadish Prasad	A-129, Pul Prahalad New Delhi 110044	17.07.2017
53.	53	Sh. V.S. Mahindra	H3/45, Vikaspuri, New Delhi 110018	17.07.2017
54.	54	Sh. Rajeshwar Kapoor	A-35, Nizamuddin East, New Delhi	17.07.2017
55.	55	Sh. J.N. Bagehi	F-1152, C.R. Park New Delhi 110019	17.07.2017
56.	56	Sh. J.B. Sahdev Area Representative	Qutab Enclave MIG Residents Welfare Association, Qutab Enclave, Phase-I New Delhi 110016	17.07.2017
57.	57	Sh. Sushil	Sofia Education and Welfare Society 73, Street No. 9, Main Brijpur Road, Old Mustafabad, Delhi ngosofia@gmail.com	17.07.2017
58.	58	Sh. A.K. Jain	DDA Flats, Kalkaji, New Delhi 110019	17.07.2017
59.	59	Sh. V.P. Garg	B-2/48/A, Keshav Puram New Delhi 110035	17.07.2017
60.	60	Sh. P.S. Gupta	C-5A/209, Janakpuri, New Delhi	17.07.2017
61.	61	Sh. S.K. Bhatia	3/102, Subhash Nagar, New Delhi 110027	17.07.2017
62.	62	Sh. Anil Sharma	V.T. Enterprises, 1124-E-1/46, Molarband Extn. Badarpur, Delhi	17.07.2017
63.	63 63A	Sh. B.P. Agarwal	Delhi Bar Association Through its Secretary Sh. Jaiveer Singh Chauhan, Tis Hazari Courts Delhi 110054	17.07.2017 19.07.2017
64.	64	Ms. Asha Uniyal	B-20, Street Nagar, New Delhi 110092	18.07.2017

S. No.	R. No.	Name	Address	Date of Receipt
65.	65	Sh. Manmohan Verma Chairman	Rohini EWS Flats Residents Welfare Association C-1/128, Sector-5, Rohini, Delhi 110085 Urdrwas@gmail.com	18.07.2017
66.	66	Sh. Ashok Sharma	House No. A-87, Gali #, Brahmpuri, New Delhi 110 053	18.07.2017
67.	67	Sh. Sanjeev Tyagi	House No. A-96 Ashok Nagar, Gali # 4 Shahdara, New Delhi 110093	18.07.2017
68.	68	Sh. Ishwar Dutt	V-1150, Vijay Park, Maujpur, New Delhi -53	18.07.2017
69.	69	Sh. Deepak Kumar,	A Block, 387 Gokal Puri, Delhi 110094	18.07.2017
70.	70	Sh. Ram Udgar	House No. 27/103, Bajar Gali, Vishwas Nagar, Delhi 110003	18.07.2017
71.	71	Sh. Sanjay Sharma	House No. 298, Gali No. 1, Chanderlok, Durgapuri Delhi 110032	18.07.2017
72.	72	Sh. Umesh	House No. WS 33, Sudamapuri, Babarpur, Delhi 110032	18.07.2017
73.	73	Sh. Karan	House No. 8/242 Khichdipur, Delhi 110091	18.07.2017
74.	74	Sh. Vimal	House No. 495, Jwala Nagar, Badi Ramleela Ground Shahdara, Delhi 110032	18.07.2017
75.	75	Sh. Dushyant Kumar	RWA Nagar Market, Harsh Vihar Hari Nagar, Part III, Welfare Society Badarpur, New Delhi 110044	18.07.2017
76.	76	Sh. K.K. Singh President	Shakti Vihar , A Block Rahaysi Welfare Association (Regd.) Office No. 15, Street No. 5/2 A Block, Shakti Vihar, Badarpur, New Delhi 110044	18.07.2017
77.	77	Sh. S.P. Rana President	Woman Exploit Grievance Federation I-Block, H.O. 456/12B, Harnagar, Jaitpur, New Delhi 110044	18.07.2017

S. No.	R. No.	Name	Address	Date of Receipt
78.	78	Nilothi Extention Kalyan Sangthan	C-2/2 Himgiri Enclave, Gali No. 6, Nilothi Extension, Delhi 110041	18.07.2017
79.	79	Sh. Anil Chandi Gen. Secretary	Maharana Pratap Bagh, RWA, C-Block, C-8/1 Rana Pratap Bagh, Delhi 110007	18.07.2017
80.	80	Sh. Tej. B. Khattar Vice President	Mother.decghs@gmail.com	18.07.2017
81.	81	Sh. Vivek Aggarwal General Manager	Delhi Metro Rail Corporation Ltd. Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi 110001	18.07.2017
82.	82	Sh. G. S. Kohli	C-6/6468, Vasant Kunj New Delhi 110 070	18.07.2017
83.	83	Sh. Ram Babu Gupta	Jan Nyaya Bhomi 227, Nilgiri Apartment Alaknanda New Delhi -110019	18.07.2017
84.	84	Sh. Gulshan Bawa	E-14/8 Vasant Vihar, New Delhi	18.07.2017
85.	85	Sh. Vivek Goel	C-2/66 Janak Puri, Delhi	18.07.2017
86.	86	Sh. D.N Gopal	C-2/167 Janakpuri, New Delhi	18.07.2017
87.	87	Sh. S.C. Dua	R/o 21, Kailash Hills New Delhi 110065	18.07.2017
88.	88	Sh. N.G. Dagar President	RWA Gopal Nagar, D-Block Najafgarh, New Delhi	18.07.2017
89.	89	Sh. S.D Bhatt	Mahavir Enclave Residents Welfare Society, H-2/109, Mahavir Enclave-I New Delhi 110045	18.07.2017
90.	90	Sh. Yugul Kishore Dwivedi Chairman	RZ-935, St. No. 14/3 Sadh Nagar, Palam Colony New Delhi 110045	18.07.2017
91.	91	Sh. Satvir Singh	Shri Ganga Vihar Resident's Welfare Association, Village Dindar Pur, Najafgarh, New Delhi 110043	18.07.2017
92.	92	Sh. Manoj Mautiyal	Shri Ganga Vihar Resident's Welfare Association, Village Dindar Pur, Najafgarh, New Delhi 110043	18.07.2017
93.	93	Sh. Gurpreet Singh President	Residents welfare Association WZ-958, Shop No. 2, Gali No. 10, Guru Nanak Nagar, New delhi 110018	18.07.2017

S. No.	R. No.	Name	Address	Date of Receipt
94.	94	Sh. Muni Raj Chairman	Residents welfare Association WZ-958, Shop No. 2, Gali No. 10, Guru Nanak Nagar, New delhi 110018	18.07.2017
95.	95	Ms. Sushma Sharma	sushmayanv@gmail.com	20.07.2017
96.	96	Sh. Jitender Agarwal	bawanacri@gmail.com	20.07.2017
97.	97	Smt. Huma Vice President	Jan Kalyan Mahila Samiti Community Centre DDA Flats Turkman Gate, Asaf Ali Road, Delhi 110006	20.07.2017
98.	98	Sh. A.K. Singh	Plot No. 669, Near Shahadr Metro, Sahadar, Delhi	20.07.2017
99.	99	Sh. Yog Raj Goswami	Resident Welfare Association GH-1/231, Archana Apartments Paschim Vihar, New Delhi-63	18.07.2017
100.	100	Sh. B.D. Sharma	H. No. 69, Extn. -1 B, Nangloi New Delhi-110041	18.07.2017
101.	101	Sh. Ompal Singh Ahlawat President	Resident Welfare Association Kh. No. 826, VIII Chhattarpur, The.: Mehrauli, New Delhi	18.07.2017
102.	102	Sh. Krishan Kumar	Resident Welfare Society 455, Kakrola Housing Complex, Najafgarh Road, Near Metro Pillar No. 796, New Delhi 110059.	18.07.2017
103.	103	Sh. Veerpal Singh President	F-2 Block Residential Welfare Association, F-2/544A, Sangam Vihar, New Delhi 110062	18.07.2017
104.	104 104A	Jyotish Kumar Sinha, HoD Regulatory	Tata Power Delhi Distribution Ltd. NDPL House, Hudson Lines Kingsway Camp Delhi 110009	18.07.2017 18.07.2017
105.	105	Sh. Rajeev Chowdhury Head Regulatory Affairs	BSES Rajdhani Power Ltd. BSES Bhawan, Nehru Place, New Delhi 110019	18.07.2017
106.	106 106A	Sh. Sunil Kakkar Addl. Vice President	BSES Yamuna Power Ltd. 2 nd Floor, B-Block, Shakti Kiran Building, Karkardooma, New Delhi 110092	18.07.2017 18.07.2017

S. No.	R. No.	Name	Address	Date of Receipt
107.	107	Sh. Ved Kumar Arya	Samaj Sudhar Simiti Islam Colony, 895A/ Ward No. 06, Mahrauli, New Deli 110 030	18.07.2017
108.	108	Sh. Brij Mohan Mehta	Chamber No. 3 Lawyers Chamber Block Rohini Courts Complex Delhi 110086	20.07.2017
109.	109 109A	Flt. Lt. I.D. Sharma General Secretary	Arjun Nagar House Owners Welfare Association, 150, Arjun Nagar, New Delhi 110029	21.07.2017 21.07.2017
110.	110	Sh. Rajeev Goel Coordinator	Confederation of Relocated Industries Bawana G-1, Sector-5 DSIIDC Bawana Industrial Complex, Bawana, Delhi 110039 bawanacri@gmail.com	21.07.2017
111.	111	Sh. Satish Nabardar	H. No. 760, Panna Mojan, Bawan, Delhi 110039	21.07.2017
112.	112	Sh. Dharmendra Kumar	Federation of Vikas Nagar Residents Welfare Association (Regd.), F-126, Shiva Enclave (Shiv Mandir Road), Vikas Nagar, New Delhi – 59	21.07.2017

ANNEXURE-III

STAKEHOLDERS WHO HAVE ATTENDED THE HEARING FOR THE PETITION FILED BY DISCOMS FOR TRUE UP OF EXPENSES UP TO FY 2014-15 & FY 2015-16, AND ANNUAL REVENUE REQUIREMENT (ARR) AND TARIFF FOR FY 2017-18

S. No.	Name	Organization
1	Sh. Sharad Sharma	DMRC
2	Sh. Subodh Pandey	DMRC
3	Sh. Vivek Aggarwal	DMRC
4	Sh. Ved Parkash Arya	Consumer
5	Ms. Manuj Singhal	DMRC
6	Mr. Pawan Kumar	DMRC
7	Ms. Savita Swami	Consumer
8	Sh. G. S. Kohli	Consumer
9	Sh. Dr. S. P. Rana	Consumer
10	Sh. Shubham Kumar	DMRC
11	Sh. R. S. Jarout	DMRC
12	Sh. Vivek Bhandari	DMRC
13	Flt. Lt. I.D. Sharma	RWA
14	Sh. Om Pal Singh	RWA
15	Sh. S. R. Abrol	Consumer
16	Sh. K. K. Singh	RWA
17	Sh. Iqbal Ahmed	RWA
18	Sh. Farooq Engineer	Consumer
19	Sh. M. Shadab Qureshi	Consumer
20	Sh. Yograj Goswami	RWA
21	Sh. Sat Goel	RWA
22	Sh. Rajeev Kakaria	RWA
23	Sh. B. S. Vohra	RWA
24	Sh. Anil Kumar Khanna	RWA
25	Sh. Vinay Kumar	RWA
26	Sh. V.K. Malhotra	Pension Trust, DVB
27	Sh. R.K. Khurana	RWA
28	Sh. Anil Wadhera	RWA
29	Dr. Faheem BIG	RAW
30	Sh. Sohail Khan	Sophia NGO
31	Sh. Daya Ram Diwedi	Daily Passengers Association
32	Sh. Saurabh Gandhi	RWA
33	Sh. Dilip Chadha	RWA
34	Sh. Atul Gola	RWA
35	Sh. Tej B Khattar	Mother Dairy
36	Dr. M.K. Aggarwal	URD
37	Sh. Bal Krishan Gupta	RWA
38	Sh. Ram Pal Saini	RWA
39	Sh. Balbir Singh	RWA

S. No.	Name	Organization
40	Sh. M.C. Sharma	RWA
41	Sh. Damodar Keshyap	RWA
42	Kusum Sharma	Consumer
43	Sh. Rajeev Sharma	Consumer
44	Naeem Bharti	RWA
45	Satyaveer Singh	RWA
46	Sh. Manoj Nautiyal	RWA
47	Ms. Sushila Bansal	RWA
48	Sh. Manmohan Verma	RWA
49	Sh. P.S. Tomar	RWA
50	Sh. Jitender Aggarwal	CRI
51	Sh. Ashok Bhasin	NDRWF
52	Sh. Sanjay Gupta	CRI
53	Sh. Prem Kumar Sharma	NBCC
54	Sh. Lal Keshwar Shah	NBCC
55	Sh. Anil Kumar Jha	RWA
56	Sh. S.K. Sharma	RWA
57	Sh. Shabhonath Thakur	RWA
58	Sh. Shushil Kumar	RWA
59	Sh. Harish Kumar	RWA
60	Sh. Sanjay Gupta	IWA
61	Ms. Reena Kori	IDAM
62	Sh. P.K. Singhal	RWA
63	Sh. Shiv Kumar Sharma	NBCC
64	Sh. S.L. Gosain	RWA
65	Sh. Jitender Tyagi	URD
66	Sh. Jawed	URD
67	Smt. Sarla Rani	RWA
68	Ms. Arti	RWA
69	Sh. Sunil Kumar	RWA
70	Sh. Pramod Kapoor	RWA
71	Sh. Om Prakash Ahuja	RWA
72	Sh. Sandeep Bhatnagar	RWA
73	Sh. Surender Tomar	URD
74	Ms. Poonam Taneja	MMTC
75	Ms. Anita Guptrishi	MMTC
76	Ms. Radha Bhardwaj	RWA
77	Ms. Geeta Mahour	RWA
78	Sh. D.M. Narang	RWA
79	Sh. Arvind Mehta	RWA
80	Sh. Sukhveer Singh	RWA
81	Sh. Satish Nambardar	RWA
82	Sh. Sukhveer Singh	RWA

S. No.	Name	Organization
83	Sh. Sunny	RWA
84	Sh. Satveer Singh Fauji	RWA
85	Sh. Karanvir Singh	Delhi Pradesh
86	Sh. Rajan Gupta	Consumer
87	Sh. Balram	Consumer
88	Sh. Shiv Kumar Sharma	Consumer
89	Sh. Parvinder	Consumer
90	Dr. Ompal Singh Dhingan	RWA
91	Sh. Balvinder Singh Thappar	RWA
92	Ms. Jyoti Nanda	IERS
93	Ms. Priya Diwedi	IERS
94	Ms. Sushma Sharma	RWA
95	Sh. Vineet Goel	RWA
96	Sh. V. K. Sharma	RWA
97	Sh. Bhudev Sharma	RWA
98	Sh. Krishan Kumar	RWA
99	Sh. R. P. Sharma	RWA
100	Sh. S. C. Dua	Consumer
101	Sh. J. S. Marwah	Consumer
102	Sh. Subash Goel	Consumer
103	Sh. Basant Somani	Consumer
104	Sh. Ashish Garg	Consumer
105	Sh. A.K. Dutta	Consumer
106	Ms. Roshni	Consumer
107	Sh. H.R. Bhardwaj	DVB Pensioner
108	Sh. B. M. Mehta	Advocate