



## DELHI ELECTRICITY REGULATORY COMMISSION

Vaidyarak Bhawan, 'C' Block, Shivalik, Mayapuri Nagar, New Delhi-110017.

F.11(1556)/DERC/2017-18/

### Petition No. 05/2018

In the matter of: **Petition for Truing up of Tariff for FY 2016-17 and ARR for FY 2018-19 for IPGCL Stations.**

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

...Petitioner/Licensee

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

### ORDER


(Date of Order: 28.03.2018)

M/s. Indraprastha Power Generation Co. Ltd. (IPGCL) has filed the instant Petition for Truing up of Tariff for the FY 2016-17 and approval of Annual Revenue Requirement for FY 2018-19 for IPGCL Stations. The Petition was admitted by the Commission vide Order dated 02.02.2018. The Petition along with Executive summary was uploaded on the website of the Commission seeking response of the stakeholders; and was also widely publicised through advertisement in newspapers.

The comments and suggestions of the stakeholders, the submissions made during the public hearing held on 23.03.2018 and the arguments advanced by the Petitioner have been duly considered and 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 28.03.2018.

The Petitioner shall take immediate steps to implement the said Order, so as to make the revised tariffs applicable from 01.04.2018.

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

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## 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
NGO	Non Government Organisation
NHPC	National Hydroelectric Power Corporation

Abbreviation	Explanation
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 2016-17 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 2018-19 in terms of Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017 (hereinafter referred to as the 'Tariff Regulations, 2017') and Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017 (hereinafter referred to as the 'Business Plan 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, 2017 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 Business Plan Regulations, 2017 for the period FY 2017-18 to FY 2019-20 under Tariff Regulations, 2017.
- 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 control period of FY 2012-13 to FY 2014-15 for a further period of one year till FY 2015-16.
- 1.8 The Commission has further extended the applicability of MYT Generation Regulations, 2011 for FY 2016-17 in Tariff Regulations as follows:

*"NORMS OF OPERATION AND TRUING UP*

*139. Performance review and adjustment of variations in the ARR and Revenue for the Utilities for FY 2016-17 shall be considered in accordance with the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011, Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011 and Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011."*

**Filing of Petition for True-Up of Expenses for FY 2016-17 and Approval of Aggregate Revenue Requirement & Tariff for FY 2018-19.****Filing and Acceptance of Petition**

- 1.9 IPGCL has filed its petition before the Commission on 30.01.2018 for True Up of expenses for FY 2016-17 and Annual Revenue Requirement of FY 2018-19.
- 1.10 The Commission admitted the Petition vide its Order dated 02.02.2018 for True Up and Tariff Determination 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’s 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 23.03.2018 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 and the same was conveyed 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) etc. The Petitioner submitted additional information through various letters/ Emails.
- 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 correspondence with the Petitioner, as mentioned in the Table 1 as follows has

been considered for approval of True Up and ARR of the Petitioner:

**Table 1: List of Correspondence with the Petitioner**

Sr. No.	Letter No./ Email	Letter/ Email Date	Subject
1	Email	03.01.2018	Prudence Check Session at DERC Office at 11.00 AM on 07.03.2018
2	IPGCL-PPCL/Comml.2017-18/F.12/260	12.03.2018	Submission of additional documents to DERC for prudence check
3	Email	14.03.2018	Status of final disposal of IP Station

### Public Notice

1.17 The Commission published a Public Notice on its website and in the following newspapers on 26.02.2018 inviting comments from stakeholders on the Tariff petitions filed by the Petitioner latest by 09.03.2018:

- |       |                              |   |            |
|-------|------------------------------|---|------------|
| (i)   | Indian Express (English)     | : | 26.02.2018 |
| (ii)  | Hindustan Times (English)    | : | 26.02.2018 |
| (iii) | The Times of India (English) | : | 26.02.2018 |
| (iv)  | Navbharat Times (Hindi)      | : | 26.02.2018 |
| (v)   | Dainik Jagaran (Hindi)       | : | 26.02.2018 |
| (vi)  | Educator (Punjabi)           | : | 26.02.2018 |
| (vii) | Jandid-in-dinon (Urdu)       | : | 26.02.2018 |

The copies of above Public Notices are available on Commission's website ([www.derc.gov.in](http://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 09.03.2018 in the following newspapers on the respective dates mentioned alongside:

- |       |                             |   |            |
|-------|-----------------------------|---|------------|
| (i)   | Indian Express (English)    | : | 25.02.2018 |
| (ii)  | Business Standard (English) | : | 25.02.2018 |
| (iii) | Dainik Jagran (Hindi)       | : | 25.02.2018 |
| (iv)  | The Daily Milap (Urdu)      | : | 25.02.2018 |
| (v)   | Daily Educator (Punjabi)    | : | 25.02.2018 |

The copies of above Public Notices are available on Commission's website

([www.derc.gov.in](http://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 11:00 A.M. and 04:00 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 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. This was duly highlighted in the Public Notices published by the Commission.
- 1.21 Further, the Commission published a Public Notice indicating the venue, date and time of public hearing held on 23<sup>rd</sup> March, 2018 in the following newspapers on the respective dates mentioned alongside:

(i)	Hindustan Times (English)	:	09.03.2018
(ii)	Mail Today (English)	:	09.03.2018
(iii)	The Times of India (English)	:	09.03.2018
(iv)	The Hindu (English)	:	13.03.2018
(v)	Punjab Kesari (Hindi)	:	09.03.2018
(vi)	Navbharat Times (Hindi)	:	09.03.2018
(vii)	Dainik Jagran (Hindi)	:	09.03.2018
(viii)	Jadid Indino (Urdu)	:	09.03.2018
(ix)	Jan Ekta (Punjabi)	:	09.03.2018

The copies of above Public Notices are available on Commission's website ([www.derc.gov.in](http://www.derc.gov.in)).

- 1.22 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 2016-17 and approval of Aggregate Revenue Requirement &

Tariff for FY 2018-19 is enclosed as **Annexure II** to this Order.

- 1.23 The public hearing was held at the Auditorium of Scope Convention Centre, Scope Complex, New Delhi for all stakeholders on 23.03.2018 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

- 1.24 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 2016-17 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 for FY 2018-19;
  - (e) **Chapter A5** provides summary of all the directives issued by the Commission in this Order.
- 1.25 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 2016-17 and approval of Aggregate Revenue Requirement & Tariff for FY 2018-19.
  - (c) **Annexure III** – List of Stakeholders/consumers who attended the public hearing.

### APPROACH OF THE ORDER

#### Approach for FY 2016-17

- 1.26 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 MYT Generation Regulations, 2011, 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.

- 1.27 The Commission has accordingly, trued up the uncontrollable based on the audited accounts and other information submitted by the Petitioner for FY 2016-17 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 2018-19**

- 1.28 The Commission vide its notification dated January 31, 2017 issued the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017.
- 1.29 Further, the Commission has issued the Delhi Electricity Regulatory Commission Business Plan Regulations, 2017
- 1.30 The Commission has evaluated the ARR submitted by the Petitioner on the basis of the provisions of Tariff Regulations, 2017 read with 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 23<sup>rd</sup> March, 2018 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 of GTPS for FY 2016-17****Stakeholder's View**

- 2.6 The Petitioner has considered actual performance for FY 2016-17 which is incorrect and should be rejected. It may be noted that norms have already been specified by DERC and same needs to be adopted by the Petitioner. Further, Tata Power-DDL in this regard would like to submit that the plant needs to be closed down if it cannot meet the efficiency norms laid down. The plant cannot be allowed to be burden on the end consumers who are already reeling under high tariff. The plant therefore needs to be



closed down if it cannot meet the efficiency norms.

### Petitioner's Submission

- 2.7 In this regard, IPGCL has filed true-up petitions in line with DERC tariff regulation 2011. The actual parameter has been mentioned as per clause 8.7 of DERC regulation 2011 which reads as under:

*"8.7 The applicant shall submit information as part of annual review on actual performance to assess its performance vis-a-vis performance targets approved by the commission at the beginning of the control period. The applicant shall submit information on performance on controllable parameters (NAPAF, Station Heat Rate, Secondary Fuel Oil Consumption, Auxiliary Power Consumption, O&M Expenses, Capital Investment, Capitalisation, Depreciation, RoCE, etc."*

- 2.8 Accordingly true up petitions has been filed.

### Commission's View

- 2.9 The Commission has considered the principles specified in MYT Generation Regulations, 2011 for truing up of FY 2016-17.

## Issue 2: Disposal of IP Station

### Stakeholder's View

- 2.10 The Petitioner has reiterated its claim for recovery of trued up amount of I.P Station of Rs. 175.41 Cr. It may however be noted that DERC has already noted its observation in the Tariff Order dated 31.08.2017 of the IPGCL that the claim of the recovery of trued up amount of I.P Station of Rs. 175.41 Cr. may be finalized only after the submission of the details of amount of realization on disposal of asset.

The observation of DERC is as follows:

### ***"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.”*

2.11 However, IPGCL, as on date has not disposed off the entire assets of the plant. It is evident that IPGCL has made no substantiate efforts to dispose of the assets and land of IP station, depicting its inefficiency. Despite clear direction from the Commission IPGCL in the instant Petition is requesting to allow the trued up amount before disposing off assets of the IP station.

2.12 By this request in the instant Petition, the Petitioner is in fact seeking a review of the Commission's order dated 31.07.2013 which should not be permitted. The Petitioner should not be allowed to claim any such cost. Instead of this, DISCOMs to be entitled to claim interest from IPGCL for not being able to dispose of the assets and land of IP station since 2009.

### **Petitioner's Submission**

2.13 In this regard it is to resubmit that the amount of allowed expenditure is related to O&M expenditure recoverable additionally due to direction of APTEL or DERC on case to case basis. Therefore IPGCL had time and again requested state commission to release the amount as land did not belong to IPGCL (already handed over to urban department Govt. of India). The disposal of the plant is under litigation with the vendor M/s Mukti Credit Private Limited.

### **Commission's View**

2.14 The issue has been dealt in detail in the relevant section of this Order.

**Issue 3: Station Heat Rate for GTPS for FY 2016-17****Stakeholder's View**

- 2.15 The Petitioner has requested DERC to consider actual SHR of 2463 Kcal/kwh in Combined Cycle and 3443 Kcal/kwh in Open Cycle in place of Normative SHR for FY 2016-17 which may be rejected. The Petitioner needs to achieve Normative Parameters specified by Commission. The Commission in MYT Regulations 2011 (which were effective up to FY 2015-16) and in Business Plan Regulations, 2017 (Which is effective from FY 2017-18 to FY 2019-20) has provided heat rate of 2450 and 3125 for combined cycle and Open Cycle Operations respectively. The said norms have been specified taking due consideration of all the factors involved which includes the Petitioners concern and attained finality in terms of Regulations. Accordingly, the Normative SHR of 2450kCal/kWh for Combined cycle and 3125 kCal/kWh for Open cycle as specified in MYT Regulations 2011 for GTPS needs to be considered.
- 2.16 Further such relaxations are not justified as all comparable new plants of similar configuration are all able to operate well within norms. Also, IPGCL have not been able to clarify technically why there should be any exception in their case. As this relaxation would lead to increase in variable charges perennially affecting overall tariff to the retail consumer, the Commission is requested not to consider the Petitioner's proposal for relaxing the norms in the larger interest of average consumer of Delhi.

**Petitioner's Submission**

- 2.17 In this regard it is to submit that normative heat rate may be achieved only in the cases of continuous running without frequent start/stop and backing downs of the plant. However as submitted in the petition the station has been subject to open cycle operation, part load operation and frequent start/stops resulting in higher SHR & APC. The PLF of the plant has been very low as compared to availability. For example: PLF for FY 16-17 has been very low as compared to its availability. The total availability of the plant being 82.84% and PLF was only 29.41% for FY 2016-17.

**Commission's View**

- 2.18 The Commission has considered the normative SHR as specified in MYT Generation Regulations, 2011 for truing up of FY 2016-17.

**Issue 4: Partial Backing Down of GTPS****Stakeholder's View**

- 2.19 The petitioner has made submission regarding deterioration of operational parameters due to backing down of the plant. Tata Power-DDL in this regard would like to submit that the plant is backed down due to its high cost. The petitioner does not have adequate tie up of APM gas for running the plant at full capacity on APM gas. Accordingly, the plant is run on spot gas which is costly. The Distribution Licensee is obligated to follow merit order dispatch and with the high cost of the plant it rarely figures in the merit order of the Distribution Licensee.
- 2.20 Further, the Scheduling & Despatch is done strictly adhering to Grid Codes and accordingly cannot be altered to suit the needs of the Petitioner. The Petitioner's request for relaxation may therefore be rejected.

**Petitioner's Submission**

- 2.21 The comment of TPDDL is general without any reference. The spot RLNG has been used only in cases of cuts in domestic gas supply, which is not in the preview of the generator. The generation on RLNG has been done only on request of DISCOMs including TPDDL as per schedule given by Delhi SLDC.

**Commission's View**

- 2.22 SLDC does the Scheduling & Despatch as per the principles of Merit Order Despatch and the provisions of relevant grid code.

**Issue 5: Auxiliary Consumption for GTPS for FY 2016-17****Stakeholder's View**

- 2.23 The Petitioner has requested DERC to consider actual Auxiliary Consumption of 3.34% in Combined Cycle in place of Normative Auxiliary Consumption for FY 2016-17 which may be rejected. The Petitioner needs to achieve Normative Parameters specified by Commission. The said norms have been specified taking due consideration of all the

factors involved which includes the Petitioners concern and attained finality in terms of Regulations. Further the norm are only the ceiling limit and the actual auxiliary Consumption by installing meters on UAT and station transformers to rule out any possibility of abuse of such auxiliary electricity. Accordingly, the Normative Auxiliary Consumption of 3% for Combined cycle and 1% for Open cycle as specified in MYT Regulations 2011 for GTPS needs to be considered.

#### **Petitioner's Submission**

2.24 IPGCL is well aware of the fact that auxiliary consumption should be limited up to normative value of 3% in combined cycle and 1% in open cycle. However in real operation plant had been subject to full/part back down and frequent start/stops which had resulted in increase unproductive part of APC resulting in overall increased APC of the station.

#### **Commission's View**

2.25 The Commission has considered the normative Aux. Consumption as specified in MYT Generation Regulations, 2011 for truing up of FY 2016-17.

#### **Issue 6: Gross Generation and Net Generation for FY 2016-17**

##### **Stakeholder's View**

2.26 The petitioner has calculated Net generation for FY 16-17 based on Auxiliary Consumption of 3.34% which is incorrect. The same should be calculated based on Auxiliary Consumption of 3%. Accordingly, the Net Generation shall be 674.69 MUs

#### **Petitioner's Submission**

2.27 In this regard it is to submit that TPDDL comment is given without referring to the provisions of Grid Code and procedures being followed by SLDC in arriving ex-bus energy. SLDC always schedules the Ex-bus energy considering Normative values of APC. However, in cases of higher APC in real time basis as in the present case plant lands in case of less ex-bus energy supply than the scheduled. The station is penalised in form of DSM (earlier UI) by paying for less generation as per applicable rate of energy cost in the

given time block. Therefore, TPDDL comment to re-calculate the Ex-bus energy by taking APC of 3% is futile exercise and against provisions of energy accounting and Grid Code. Accordingly, the Net Generation of 674.69 MUs is meaningless in light of above provisions.

- 2.28 However, IPGCL submission and relaxation of norms has been done as per Clause 8.7 of DERC regulation 2011.

### Commission's View

- 2.29 The Commission has considered the Net Generation as specified in the Annual Report of SLDC for FY 2016-17.

### Issue 7: Variable Cost for operational parameters

#### Stakeholder's View

- 2.30 The Petitioner has requested DERC to consider "Minimum Off Take Guarantee" clause linked with "Take or Pay" obligation which is liable to be rejected. DERC has already rejected the request through its directive in its order dated 29.09.2015. The Petitioner is well aware of the directive and has quoted the same in the Petition. The Petitioner therefore needs to follow the directive and stop raising the relaxation time and again.
- 2.31 The Commission is 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 random basis across all the stations and the Petitioner should be directed to submit these reports on monthly basis to the Commission. This would enable to have more transparency to the system.
- 2.32 Further, Variable Cost for Operational parameters of GT station for FY2016-17 are as under:

Month	Plants	Type	Contribution of RLNG Fuel (%)
Apr-16	GT	RLNG	1%
May-16			27%
June-16			44%
July-16			27%
Aug-16			3%
Sep-16			0%

Month	Plants	Type	Contribution of RLNG Fuel (%)
Oct-16			2%
Nov-16			1%
Dec-16			10%
Jan-17			15%
Feb-17			3%
March -17			17%

- 2.33 During the financial year it is observed that GT have tremendously increased the contribution of RLNG fuel to the tune of 15 to 44% rather than domestic gas. However, the cost of RLNG is very high. The Commission is requested to put a cap on use of RLNG fuel.

### Petitioner's Submission

- 2.34 In this regard it is to submit that the clauses of MGO and ACQ or part of every FSA (Fuel Supply Agreement). The PPA including FSA clauses signed between IPGCL & TPDDL and other beneficiaries of the station where duly approved by state commission on 31.03.2007. The state commission cannot unilaterally act against its own order; therefore, agreed by state commissions order on the matter, IPGCL has already filed an appeal No. 284 of 2015 in APTEL. Therefore, comments of TPDDL on above matter have been done ignoring above facts of the case.
- 2.35 The Petitioner has submitted that IPGCL had always forwarded the actual bill paid to gas supply by GAIL on monthly basis and also uploads the same on regular basis along with FORM-15 in its website <http://ipgcl-ppcl.gov.in/> as per direction of DERC. Therefore, request for additional audits by third party and BEE is inappropriate.
- 2.36 Regarding increasing share of RLNG consumption the Petitioner has submitted that spot RLNG has been used only in cases of cuts in domestic gas supply, which is not in the preview of the generator. The generation on RLNG has been done only on request of DISCOMs including BYPL as per schedule given by Delhi SLDC.

### Commission's View

- 2.37 The Commission in its directive has directed IPGCL to not enter in to any Fuel Supply

Agreement with “Take or Pay” clause.

### Issue 8: Actual Variable Cost

#### Stakeholder’s View

- 2.38 The Petitioner has calculated the Variable Cost considering the Auxiliary Consumption of 3.34% which is incorrect. The Variable Cost needs to be calculated based on Auxiliary Consumption of 3%.

Particulars	Unit	Variable Cost	
		Petitioners Submission	Respondents Submission
Total Consumption	MMSCM	182.195379	182.195379
Average Gas Price	Rs./SCM	11.455	11.455
Total Gas Cost	Rs. Crores	208.71	208.71
Net Generation	MU	672.330	674.690
Variable Cost – CC	Rs..kWh	3.104	3.093

#### Petitioner’s Submission

- 2.39 In this regard it is to submit that arriving a Net generation of 674.690 is against accounting and billing procedures and settlement of DSM as provided in state Grid Code, being followed by State SLDC for scheduling Ex-Bus energy and UI/DSM accounts. IPGCL has never billed beyond normative SHR & APC for a month. The actual Ex-bus generation as given in the petition has been submitted in line with DERC regulation 2011 clause 8.7. However, Ex-bus schedule generation for the plant for FY 16-17 is 672.886 (MU). Therefore, re-calculation of Ex-Bus scheduled energy other than already approved by State SLDC is against Grid code and Energy accounting methodology of SLDC.

#### Commission’s View

- 2.40 The issue has been dealt in detail in the relevant section of this Order.

### Issue 9: Return on Equity & Income Tax

#### Stakeholder’s View

- 2.41 IPGCL in its true up Petition has sought grossed up ROE of Rs. 21.46 Cr @ 17.80% on average equity of Rs. 120.58 Cr. The said amount of Rs 21.46 Cr includes an amount of Rs. 4.58 Cr.



- 2.42 With respect to average equity, it is submitted that in table no 15 of the true up petition equity deployed in the GT Power station comes to Rs 79.24 Cr whereas IPGCL has seeking the ROE on Rs. 120.58 Cr. The Commission is requested to do the prudence check of the same.
- 2.43 Further, with respect to seeking claim of Income Tax, no proof has been submitted with respect to payment of Income tax. IPGCL is requested to provide the necessary supporting with respect to Income Tax claim of Rs 4.58 Cr. The Commission has allowed the Return on Equity based on the closing Equity of FY 2015-16 and net additions during FY 2016-17.

#### **Petitioner's Submission**

- 2.44 In this regard it is once again submitted that the amount of Rs 79.24 crore is related to gross fixed asset of GTPS as on 01.07.2002; being initial equity value of the plant after unbundling in 2002. However the average opening equity of the plant for FY 16-17 is Rs 120.28 Cr which has been arrived as per table 50 of DERC tariff order dated 31.08.2017 wherein opening equity of FY 15-16 has been given as Rs 119.12 Cr. The reply related to Income Tax has already been forwarded to DERC vide letter no. IPGCL-PPCL/Comml./2017-18/F.12/183 dated 06.03.2018. Copy of the same is annexed as Annexure 'A'.

#### **Commission's View**

- 2.45 The Commission has not allowed Income Tax for FY 2016-17 as the Petitioner has not paid any Income Tax for FY 2016-17.

#### **Issue 10: Interest on Loans**

##### **Stakeholder's View**

- 2.46 IPGCL in its true up Petition has claimed Rs 16.17 Cr on account of interest on capex loans @ 13% (including penal) for FY 2016-17
- 2.47 In line with the Commission observation in Tariff Order dated August, 2017 it is requested not to allow any normative interest towards CAPEX loans.

**Petitioner's Submission**

2.48 In this regard, it is submitted that similar treatment as commented by TPDDL should be applicable to TPDDL and other DISCOMs.

**Commission's View**

2.49 The Commission has not allowed Interest on Loans for FY 2016-17.

**Issue 11: Non-Tariff Income****Stakeholder's View**

2.50 IPGCL in its petition has not offered any non-tariff income towards ARR for FY 2016-17. Therefore it is requested to the Commission to do the prudence check of the balance sheet of IPGCL.

**Petitioner's Submission**

2.51 The true-up petition as submitted by IPGCL for FY 16-17 excludes non-tariff incomes. However, unlike DISCOMs including TPDDL there is no non-tariff income for the plant.

**Commission's View**

2.52 DERC MYT Generation Regulations, 2011 do not provide for non-tariff income for Generation Companies.

**Issue 12: Balance Sheet****Stakeholder's View**

2.53 IPGCL has not provided copy of its Audited Financial Statement, hence our response is limited to the extent of information provided in Tariff Petition. It is requested to the Commission to issue directive to Generation companies to provide copy of their financial statement to DISCOMs.

**Petitioner's Submission**

2.54 IPGCL has already submitted details of audited annual accounts and cost audit account statement for FY 16-17 vide its letter dated 06.03.2018. Copy of the same is enclosed as Annexure 'A'.

**Commission's View**

2.55 The Petitioner has submitted the required Financial Statement to the Commission.

**Issue 13: Norms of Operation for FY 2018-19****Stakeholder's View**

2.56 The Petitioner has considered proposed performance for FY 18-19 which is incorrect and should be rejected. It may be noted that norms have already been specified by DERC and same needs to be adopted by the Petitioner. Further, Tata Power-DDL in this regard would like to submit that the plant needs to be closed down if it cannot meet the efficiency norms laid down. The plant cannot be allowed to be burden on the end consumers who are already reeling under high tariff. The plant therefore needs to be closed down if it cannot meet the efficiency norms.

**Petitioner's Submission**

2.57 In this regard it is to submit that tariff petition has been filled strictly in line with DERC tariff regulation 2017 and BPR 2017 for ARR of FY 2018-19. Therefore comments of TPDDL on the matter are irrelevant to present submission.

**Commission's View**

2.58 The Commission has considered the principles specified in Tariff Regulations, 2017 and Business Plan Regulations, 2017 for determining the ARR for FY 2018-19.

**Issue 14: Availability of GTPS for FY 2018-19****Stakeholder's View**

2.59 The Petitioner has proposed the availability of 80% for FY 2018-19 which does not match Business Plan Regulations, 2017 and accordingly is incorrect. The Normative Annual Plant Availability Factor as per BPR, 2017 is 85% for Gas Turbine Power Station (GTPS). Accordingly, the NAPAF of 85% should be considered for the GTPS.

**Petitioner's Submission**

2.60 In this regard it is to submit that IPGCL has submitted ARR for FY 18-19 based upon previous years availability. As it is not possible to achieve availability of 85% for Gas Turbine Power Station (GTPS) which is around 30 years old.

**Commission's View**

2.61 The Commission has considered the Availability as specified in Business Plan Regulations, 2017 for determining the ARR for FY 2018-19.

**Issue 15: Gross Generation and Net Generation of GTPS for FY 2018-19****Stakeholder's View**

2.62 The petitioner has calculated Net generation for FY 18-19 based on Auxiliary Consumption of 2.5% which is incorrect. The same should be calculated based on Auxiliary Consumption of 2% while calculating Variable Cost. Accordingly, the Net Generation shall be 1854.316 MUs

**Petitioner's Submission**

2.63 It is resubmitted that calculation of Ex-bus energy based upon 2% Auxiliary consumption is illogical and incorrect. It should be necessarily based upon of 2.5 % of auxiliary consumption while arriving Ex-bus schedule energy calculation.

**Commission's View**

2.64 The Commission has considered the Aux. Consumption as specified in Business Plan Regulations, 2017 for determining the Net Generation for FY 2018-19.

**Issue 16: Actual Variable Cost****Stakeholder's View**

2.65 The Petitioner has calculated the Variable Cost considering the Auxiliary Consumption of 2.5% which is incorrect. The Variable Cost needs to be calculated based on Auxiliary Consumption of 2%.

Particulars	Unit	Variable Cost	
		Petitioners Submission	Respondents Submission
Total Consumption	MMSCM	491.60	491.60
Average Gas Price	Rs./SCM	14.342	14.342
Total Gas Cost	Rs. Crores	705.05	705.05
Net Generation	MU	1844.856	1854.316
Variable Cost – CC	Rs..kWh	3.822	3.800

**Petitioner's Submission**

2.66 In this regard it is to reiterate that Ex-bus energy is to be calculated considering APC of 2.5% and not @ 2% of APC.

#### **Commission's View**

2.67 The Commission has considered the Aux. Consumption as specified in Business Plan Regulations, 2017 for determining the Variable Cost for FY 2018-19.

### **Issue 17: Excess Depreciation claimed for FY 2018-19**

#### **Stakeholder's View**

2.68 IPGCL has sought depreciation of Rs 14.35 Cr. for FY 2018-19. The Commission has allowed Rs 10.95 Cr. as deprecation for FY 2017-18 and FY 2016-17. Thus, it is submitted that as the deprecation is allowed on straight line method, hence, same amount of depreciation i.e. Rs 10.95 Cr should be allowed for FY 2018-19 in the absence of any addition in Gross Fixed Assets.

#### **Petitioner's Submission**

2.69 In this regard it is to submit that the amount of deprecation of Rs 10.95 crores as allowed by DERC for FY 17-18 is based upon GFA ending FY 16-17. Since GFA for FY 16-17 was not trued up by DERC at the time of issuing of tariff order for FY 17-18. However the present petitions of IPGCL includes true up for FY 16-17 including capital expenditure of Rs 12.80 crores during FY 16-17. Accordingly, the amount of depreciation will work out to be Rs 14.35 crores for FY 18-19. As GFA ending FY 16-17 will change and affect the amount of depreciation recoverable in FY 18-19.

#### **Commission's View**

2.70 The issue has been dealt in detail in the relevant section of this Order.

### **Issue 18: Component wise Interest on Loans/ Return on Equity/ Interest on Working capital**

#### **Stakeholder's View**

2.71 IPGCL in its true up Petition has claimed component wise return in line with MYT Regulations, 2011. The ARR for FY 2018-19 (to the extent of ROCE) does not prepared in accordance with the applicable MYT Regulations, 2017. As per MYT Regulations, Return in the form of ROCE shall be allowed instead of allowing separate claim for each

parameter.

#### **Petitioner's Submission**

- 2.72 This is contradictory statement at one place TPDDL has quoted that "IPGCL in its true up Petition has claimed component wise return in line with MYT Regulations, 2011", however, while making comments under " TPDDL comments." TPDDL has commented on ARR for FY 18-19. Thus it is to submit that the ARR for FY 18-19 has been submitted as per clause 3, 4, 5, 6, 7, 8 of DERC Business Plan regulation 2017.

#### **Commission's View**

- 2.73 The Commission has followed the principles specified in Tariff Regulations, 2017 and Business Plan Regulations, 2017 for determining the Return on Capital Employed (RoCE) for FY 2018-19.

#### **Issue 19: Interest on Working Capital**

##### **Stakeholder's Comment**

- 2.74 IPGCL in its true up Petition has sought working capital interest rate @ 13.50% for FY 2018-19. The Rate of Interest for working capital loans shall be fixed as per the methodology prescribed in Delhi Electricity Regulatory Commission Business Plan Regulations, 2017.
- 2.75 Further, the Fuel Cost for Working Capital needs to be calculated considering Auxiliary Consumption of 2% in place of 2.5% as considered by the Petitioner.

#### **Petitioner's Submission**

- 2.76 In this case also TPDDL has given contradictory comments by referring true up petition that too referring FY 18-19 which is in fact ARR petition for FY 18-19. In this regard it is to submit that interest on working capital for FY 18-19 has been taken as per clause 85 & 86 DERC tariff regulation 2017 which reads as under:-

*"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.....*

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

- 2.77 Further fuel cost is to be necessarily calculated considering Aux. Consumption of 2.5% and not @ 2% as commented by TPDDL.

#### Commission's View

- 2.78 The Commission has considered the provisions of Tariff Regulations, 2017 and Business Plan Regulations, 2017 for computing the Interest on Working Capital for FY 2018-19.

#### Issue 20: Higher Gas Price for FY 2018-19

##### Stakeholder's View

- 2.79 IPGCL in its true up Petition has considered Rs 14.342 /SCM for the purpose of computation of fuel cost for FY 2018-19. The Commission has considered Rs. 11.75/SCM for FY 2017-18 in its Tariff order dated August, 2017. Considering the fuel cost of Rs 14.342/SCM there is an increase of 22% in fuel cost over the previous year cost of 11.75/SCM. Further, in the Tariff Petition, IPGCL has not provided any specific reason for such increase. Therefore, it is requested to IPGCL to provide the justification for such higher increase in fuel cost.

##### Petitioner's Submission

- 2.80 In this regard it is to submit that the TPDDL comment does not relate to true up petition rather ARR petition for FY 18-19. However it is to submit that fuel cost of Rs 11.75/SCM as referred for FY 17-18 in DERC tariff order dated 31.08.2017 is not related in any way while arriving gas cost for FY 18-19. The TPDDL is well aware of the trends of gas cost as IPGCL always submits gas related information in the form of FORM-15 and uploads the copy of paid gas bills as per the direction of state commission. It is further to submit that fuel cost for arriving applicable gas cost is based upon clause 107 of DERC tariff regulation 2017 which reads as under:-

*"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."*

- 2.81 Accordingly, IPGCL has calculated weighted moving average fuel cost for FY 18-19 is based upon moving average fuel cost of three months of September, October &

November 2017. This is in line as per FORM-15 DERC regulation 2017 calculating average fuel cost three months prior to COD for new generating station and as on 1st April for existing stations. The detailed calculations are also attached at page no. 64, 65 & 66 of tariff petitions filed by IPGCL.

- 2.82 In this regard it is further to submit that during finalisation of the tariff petitions the fuel cost for January, February and March 2018 i.e 03 months prior to 01.04.2018 was not available (as required in form 15), therefore, IPGCL has calculated weighted average for September, October & November 2017 for Plant GTPS. The content of the gas composition, quantity & cost are same as available in FORM-15 of the respective months for GTPS.

#### **Commission's View**

- 2.83 The Commission has followed the principles specified in Tariff Regulations, 2017 for considering the Gas Price for determination of Energy Charge Rate for FY 2018-19.



**A3: TRUE UP OF FY 2016-17**

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 5.10 of MYT Generation Regulations, 2011 specifies the following:

*"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 include:*

- (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"*

3.3 Regulation 5.11 of MYT Generation Regulations, 2011 specifies the following:

*"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."*

3.4 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"*

3.5 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 2016-17.

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

3.6 The Petitioner has submitted that the station was more than 40 years old and was closed down on 31.12.2009 and the Petitioner had submitted true up petition for FY 2007-08 to 2011-12 for IP Station and the Commission vide its order dated 31.07.2013 had 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 did not allow 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."*

3.7 The Petitioner has further submitted that as directed vide above order, the Petitioner had submitted its reply vide letter No. IPGCL/Comml./IDRA/07-12/178 dt. 30.10.2013 and requested Commission not to link the recovery of above amount with final disposal of IP Station and the land due to following reasons:

- a. The amount allowed by 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 Commission in this regard. Therefore, Commission's decision to link above recovery with final asset disposal and land disposal is not justified.

- b. The land was on a lease with notional lease rental and the same has already been handed over to GNCTD. 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 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 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 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 Stn. 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.”*

- 3.8 The petitioner has further submitted that since the additional information has already been submitted by the 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 true up and further submission by petitioner vide its letter dated 30.10.2013.
- 3.9 In view of the above, the Petitioner has requested the commission to allow recovery of Rs 175.41 without linking it to final disposal of Station as allowed expenditure is not related to assets value rather part of O&M expenditure allowed by DERC in respective years while carrying out true up for MYT period 2007-08-2011-12

### Commission’s Analysis

- 3.10 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."*

- 3.11 It is observed that the Petitioner has recognized the disposal of IP station in its books of account which has been indicated in Tariff Order dated 31/07/2013 as follows:

*"3.8 The Commission has gone through the information submitted by the Petitioner and observed that the Petitioner, in its audited accounts had booked profit from sale of fixed assets during the Control Period. The profits booked from the sale of fixed assets were Rs 9.36 crore, Rs 7.45 Crore and Rs 45.89 Crore for FY 2007-08, FY 2009-10 and FY 2010-11 respectively. The Commission accordingly directed the Petitioner to clarify the details of assets sold on account of which such profits were booked.*

*.....*

*.....*

*3.11 The Commission has gone through the submissions made by the Petitioner and is of the view that the sale proceedings of I.P station has not achieved finality, however, the Petitioner has booked considerable amount of profits from sale of fixed assets in the respective years from the sale proceedings that it received.*

*3.12 The Commission observes that the Opening GFA of the station as on April 01, 2007 as approved by the Commission was Rs 69.57 Crore against which a sale order of Rs 101.51 Crore for Unit 2 to Unit 5 and Rs 9.89 Crore for Unit 1 was issued by the Petitioner which is higher when compared to the opening GFA approved by the Commission."*

- 3.12 Further closing GFA of IP station has been approved as Rs.72.96 Crore at the end of FY 2009-10 and approved accumulated depreciation on GFA was Rs. 48.07 Crore. Therefore, any amount realized after disposal of the plant over and above net Fixed Asset of Rs. 24.89 should be passed on to the beneficiaries of the IP station in the ratio of their allocation.

- 3.13 The Commission had withheld the impact of truing up upto FY 2009-10 of Rs.175.41 Crore in tariff order dated 31/07/2013 due to pending disposal of the plant by the Petitioner. The Petitioner has submitted that the Land of the Plant was acquired by the Petitioner on lease basis and after the disposal of the Plant the ownership of the land is with GoNCTD only and the Petitioner is not be entitled to the proceeds of sale of the land.
- 3.14 In view of the above, the Commission has derived the net amount to be recovered by the Petitioner on account of the impact of truing up upto FY 2009-10 and after adjustment of the profit on sale of the plant based on the information available indicated in the table below:

**Table 2: Carrying cost on Profit on sale of plant**

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
Opening balance	0.00	9.90	11.04	20.18
Profit	9.36	0.00	7.45	69.70
Carrying cost rate	11.50%	11.50%	11.50%	11.50%
Carrying cost	0.54	1.14	1.70	6.33
Closing balance	9.90	11.04	20.18	96.21

- 3.15 The Profit on sale of plant of Rs. 96.21 Crore has been adjusted in the amount of Rs. 127.14 Crore due to be recovered from the beneficiaries in the opening gap of FY 2011-12 and net amount to be recovered with carrying cost is indicated in table below:

**Table 3: Carrying cost on the impact of Truing up (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Opening Balance	30.93	34.48	38.45	42.87	47.80	53.30	59.43
Carrying cost rate	11.50%	11.50%	11.50%	11.50%	11.50%	11.50%	10.26%
Carrying cost	3.56	3.97	4.42	4.93	5.50	6.13	6.10
Closing balance	34.48	38.45	42.87	47.80	53.30	59.43	65.52
Impact of carrying cost (Implementation of Hon'ble ATE Judgment in Appeal No. 81 of 2007)							17.35
Total							82.87

- 3.16 The Petitioner is directed to recover 80% of the total amount due upto FY 2017-18 in six monthly equal installments from the date of issuance of this Order and the balance amount shall be recovered from the beneficiaries after final disposal of the pending

case of arbitration between Mukti Credit Pvt. Ltd. (the party to whom I.P station has been sold out) Vs IPGCL and no carrying cost shall be allowed on the same.

### **Rajghat Power House (RPH)**

#### **Petitioner's Submissions**

- 3.17 The Petitioner has submitted that the power station is out of bar since June, 2015 in view of non scheduling of power by beneficiaries of the plant and order of Delhi Pollution Control Committee (DPCC).

#### **Commission's Analysis**

- 3.18 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 and 90% of the GFA has already been allowed as depreciation in tariff order dated 31/08/2017. Therefore, the Commission is of the view that no further action is required.

### **Gas Turbine Power Station (GTPS)**

#### **Norms of Operation**

#### **Availability**

##### **Petitioner's Submissions**

- 3.19 Actual Availability submitted by the Petitioner is as follows:

**Table 4: Petitioner Submission - Actual Availability for FY 2016-17**

Sr. No.	Station	UoM	FY 2016-17
1	Gas Turbine Power Station	%	82.84

- 3.20 The Petitioner submitted that the availability of the station has been varying since its inception. Further, the Petitioner has submitted that Central Electricity Regulatory Commission (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 and the 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 has further mentioned 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. Accordingly, the Petitioner has requested the Commission

to allow recovery of fixed charges for FY 2016-17 as per actual availability during the period in line with CERC regulation.

### Commission's Analysis

- 3.21 The Commission in its MYT Generation Regulations, 2011 and MYT Order July, 2012 has approved the availability of 80% for FY 2012-13 to FY 2014-15. Further, the said Regulations were extended for FY 2016-17 for the purpose of Performance review and adjustment of variations in the ARR and Revenue in Tariff Regulations, 2017.
- 3.22 The Commission has verified the data regarding plant availability for true up of GTPS for FY 2016-17 from Annual Report of SLDC Delhi and has approved the plant availability for the purpose of truing up of FY 2016-17 as follows:

**Table 5: Commission Approved - Plant Availability for FY 2016-17**

Sr. No.	Station	UoM	FY 2016-17		
			MYT Order July 2012	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	%	80	82.84	82.84

### Station Heat Rate (SHR) Petitioner's Submission

- 3.23 The Petitioner 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.
- 3.24 The Petitioner further 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.
- 3.25 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.

- 3.26 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 6: Petitioner Submission - CEA recommended technical standards**

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

- 3.27 The Petitioner further submitted that 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
- 3.28 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 3440 kCal/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 years is as under:-

**Table 7: Petitioner Submission - Open cycle certified by SLDC**

Year	Net Generation (MU)	Open cycle generation certified by SLDC (MU)	% Open Cycle
2012-13	1268.422	7.111	0.56
2013-14	1006.792	5.140	0.51
2014-15	904.208	15.966	1.76
2015-16	445.386	3.208	0.72
2016-17	672.330	4.862	0.72

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.

- 3.29 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.
- 3.30 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 8: Petitioner Submission - 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	82.84	29.41

- 3.31 The Petitioner further submitted that 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 and since, heat input is same for de-rated capacity of STGs, the combined cycle heat rate is impacted and need to be revised accordingly.
- 3.32 In view of the above, the Petitioner has requested the Commission to relax and allow actual heat rate achieved by the Station in Combined Cycle mode and Open cycle mode for FY 2016-17.
- 3.33 The Petitioner has 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.
- 3.34 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 while truing up expenditure for FY 2016-17.
- 3.35 Actual Heat Rate as submitted by the Petitioner is as follows:

Table 9: Petitioner Submission - Station Heat rate

Sr. No.	Mode of Operation	UoM	FY 2016-17
1	Combined Cycle	kCal/kWh	2463
2	Open Cycle	kCal/kWh	3443

### Commission's Analysis

- 3.36 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
Normative Annual Plant Availability Factor (%)	80%	80%	80%
Combined Cycle Gross Station Heat Rate (kCal/kWh)	2450	2450	2450
Open Cycle Gross Station Heat Rate (kCal/kWh)	3125	3125	3125

<b>Operational Parameters</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
Combined Cycle Auxiliary Consumption (%)	3.0%	3.0%	3.0%
Open Cycle Auxiliary Consumption (%)	1.0%	1.0%	1.0%

”

- 3.37 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.
- 3.38 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.
- 3.39 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 geographically different location as compared with the location of GTPS and is operating under different atmospheric conditions. Thus, comparing the two plants does not hold good.
- 3.40 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.”*

- 3.41 The Commission has extended the applicability of MYT Generation Regulations, 2011 for FY 2016-17 for the purpose of Performance review and adjustment of variations in the ARR and Revenue in Tariff Regulations, 2017.
- 3.42 It is observed that Gross Station Heat Rate has been indicated as a controllable parameter in Regulation 5.10 (a) of MYT Generation Regulations, 2011 and Regulation 5.11 of MYT Generation Regulations, 2011 provides that any financial loss on account of underperformance on targets for parameters specified in Clause 5.10 (a) to (e) is not recoverable through tariff.
- 3.43 In view of the above, the Commission approves the normative Gross Station Heat Rate for GTPS for true up of FY 2016-17 as per the approved norms in MYT Generation Regulations, 2011 as follows:

**Table 10: Commission Approved - Station Heat rate (kCal/ kWh)**

Sr. No.	Station	Mode of Operation	UoM	FY 2016-17		
				MYT Order July 2012	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	Combined Cycle	kCal/ kWh	2450	2463	2450
		Open Cycle	kCal/ kWh	3125	3443	3125

### Auxiliary Power Consumption

#### Petitioner's Submissions

- 3.44 The Petitioner has requested the Commission to allow auxiliary consumption as per actual for FY 2016-17 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 11: Petitioner Submission - 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
2016-17	82.84	29.41

3.45 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.

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

**Table 12: Petitioner Submission - Auxiliary Power Consumption**

Sr. No.	Mode of Operation	UoM	FY 2016-17
1	Combined Cycle	%	3.34

### Commission's Analysis

3.47 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 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 GTPS.

3.48 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.

3.49 The Commission had approved the Auxiliary Power Consumption for GTPS as 3% in Combined Cycle Mode and 1% in Open Cycle Mode for FY 2012-13 to FY 2014-15 in MYT Generation Regulations, 2011 which were extended by the Commission for FY 2016-17 in Tariff Regulations, 2017.

3.50 Accordingly, the Commission approves the Auxiliary Power Consumption for GTPS for FY 2016-17 as follows:

**Table 13: Commission Approved - Auxiliary Power Consumption for FY 2016-17**

Sr. No.	Station	Mode of Operation	UoM	FY 2016-17		
				MYT Order July 2012	Actual as submitted by Petitioner	Approved for True Up
1	GTPS	Combined Cycle	%	3	3.34	3
		Open Cycle	%	1	-	1

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

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

**Table 14: Petitioner Submission - Net Generation**

Sr. No.	Description	UoM	FY 2016-17
1	Capacity	MW	270
2	Gross Generation	MU	695.58
3	Auxiliary Consumption	%	3.34
4	Net Generation	MU	672.33

3.52 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.

3.53 The Petitioner has submitted the details of total gas consumption, rate per SCM and total cost of the gas for FY 2016-17 as per actual as under:

**Table 15: Total Variable Cost**

Particulars	UoM	2016-17
Total Gas Consumption	MMSCM	182.19
Average Gas Price	Rs./SCM	11.46
Total Gas Cost	Rs. Cr	208.71
Net Generation	MU	672.33
Variable Cost - CC	Rs./kWh	3.104

**Commission's Analysis**

3.54 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."*

3.55 Further, the Commission vide its e-mail dated 01/03/2018 has sought the authenticity of energy charge rate billed by GTPS from the beneficiary DISCOMs. It is observed that beneficiary has submitted that the computation of energy charge rate billed by GTPS during FY 2016-17 is as per the provisions of MYT Generation Regulations, 2011. Accordingly, the Commission has not considered true up of fuel cost for FY 2016-17.

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

3.56 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 during the period in the machines.

- 3.57 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 further submitted 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 and has requested the Commission to consider above aspect while truing up expenditure for FY 2016-17.
- 3.58 As regards Water Charges and Property Tax, 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. In the meantime as per Govt. of India Tariff Policy 2016 all the power plants falling within 50 Km radius of Municipality has to necessarily use sewage treated water for its raw water requirement. The content of the provisions are reproduced as under:

*“(5). The thermal power plant (s) including the existing plants located within 50 KM radius of sewage treatment plant of Municipality / local bodies / similar organizations shall in order of their closeness to the sewage treatment plant, mandatorily use treated sewage water produced by these bodies and the associated cost on this account be allowed as a pass through in the tariff. Such thermal plants may also ensure back up source of water to meet their requirement in the event of shortage of supply by sewage treatment plant. The associated cost on this account shall be factored into the fixed cost so as not to disturb the merit order of such thermal plant. The shutdown of sewage treatment plant will be taken in consultation with the developer of the power plants.”*



- 3.59 Accordingly, Central Electricity Regulatory Commission in its Tariff Regulations 2014, has already allowed water charges as additional charge under Regulation 29 (2). The relevant part of the same is reproduced as under:

*“29(2) The water charges and capital spares for the thermal generating stations shall be allowed separately:*

*Provided that water charges shall be allowed based on water consumption depending upon the type of the plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with petition:*

*Provided that generating station shall submit the detail of year wise capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance are claimed as part of additional capitalization or consumption of stores and spares and renovation and modernization.”*

- 3.60 The Petitioner further submitted that accordingly, they are also working to arrange sewage water for GTPS in similar lines as had already been provided to PPS-I plant, one of its sister concern the Pragati Power Corporation Ltd. and the Commission is already allowing recovery of expenditure of sewage treated water for PPS-I since long. Accordingly, the Petitioner has requested the Commission to allow the same in case of GTPS from the date the same is availed.
- 3.61 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 and has requested the Commission to allow the same for Current MYT period also.
- 3.62 Regarding the Impact of 7<sup>th</sup> Pay Commission Implementation, the Petitioner has submitted that pay and perks of employees of the petitioner Company is determined in line with Central Pay Commission Recommendations. The Central pay Commission's 7<sup>th</sup> pay recommendations are already notified and implemented at Central and State level employees. In case of the Petitioner, the same has been partially implemented in FY

2017-18. Therefore, the expenditure as given above does not include the impact of 7<sup>th</sup> Central Pay Commission implementation.

3.63 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.

3.64 The Petitioner has submitted actual and normative O&M Expenses as follows:

**Table 16: Petitioner Submission - Actual and Normative O&M Expenses for FY 2016-17**

Sr. No.	Description	UoM	Actual	Normative
1	Repairs and Maintenance (R&M)	Rs Cr	11.36	39.74
2	Employee Expenses	Rs Cr	31.12	51.72
3	Administrative and General Expenses	Rs Cr	14.09	21.93
4	Total O&M Expenses	Rs Cr	56.57	113.40

### Commission's Analysis

3.65 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;*

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*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."*

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

$$R\&M_n = K * GFAn-1;$$

Where,

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

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

- 3.67 The Commission had approved the  $K$  factor for the purpose of  $R\&M$  Expenses at 9.04% in MYT Order dated 13.07.2012 and closing GFA of FY 2015-16 at Rs 425.14 Cr in Tariff Order dated 31.08.2017. The Commission has analyzed the submissions made by the Petitioner regarding its Repair & Maintenance Expenses and has determined  $R\&M$  Expenses in line with the provisions of MYT Regulations, 2011 as follows:

**Table 17: Commission Approved -  $R\&M$  Expenses for FY 2016-17**

Sr. No.	Particulars	Petitioner Submission (Actual)	Petitioner Submission (Normative)	Trued up	Remarks
A	Opening GFA			425.14	Tariff Order 31.08.2017
B	“ $K$ ” Factor			9.04%	MYT order 13.07.2012
C	$R\&M$ Expenses	11.36	39.74	38.43	$C = A*B$

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

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

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

$EMP_n$  – Employee Costs of the Licensee for the  $n$ th year;

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

Where,

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

- 3.69 The Commission had approved escalation factor as 8% for Employee Expenses and  $A\&G$  Expenses in its MYT order dated 13.07.2012. Further, the Employee Expenses and  $A\&G$

Expenses approved for FY 2015-16 in Tariff Order dated 29.09.2015 was Rs. 49.59 Cr. and Rs. 21.03 Cr respectively. Accordingly, the Commission has considered the Employee Expenses and A&G Expenses for FY 2016-17 based on escalation factor of 8% as approved by the Commission and as approved in FY 2015-16 in the table below:

**Table 18: Commission Approved - Employee and A&G Expenses for FY 2016-17 (Rs.Crore)**

Particulars	Petitioner Submission (Actual)	Petitioner Submission (Normative)	Approved for FY 2015-16 (A)	Escalation Factor (B)	Approved for FY 2016-17 (C)	Remark
Employee Expenses	31.12	51.72	49.59	1.08	53.56	C = A*B
A&G Expenses	14.09	21.93	21.03	1.08	22.71	

3.70 In view of the above, the O&M Expenses approved by the Commission are as follows:

**Table 19: Commission Approved - O&M Expenses for FY 2016-17**

Sr. No.	Particulars	UoM	FY 2016-17	
			Normative as submitted by Petitioner	Approved for True Up
1	Employee Expenses	Rs Cr	51.72	53.56
2	A&G Expenses	Rs Cr	21.93	22.71
3	R&M Expenses	Rs Cr	39.74	38.43
4	Total O&M Expenses	Rs Cr	113.40	114.70

## Capital Expenditure

### Petitioner's Submission

3.71 The capitalization submitted by the Petitioner during FY 2016-17 is as follows:

**Table 20: Petitioner Submission - Capitalisation for FY 2016-17**

Sr. No.	Particulars	UoM	FY 2016-17
1	Opening GFA	Rs Cr	425.14
2	Addition	Rs Cr	12.81
3	Deletion	Rs Cr	1.46
4	Closing GFA	Rs Cr	436.49

### Commission's Analysis

3.72 The Commission had sought the details of capitalisation and de-capitalisation during FY 2016-17 from the Petitioner. It is observed that the capitalization expenses claimed are of O&M in nature, therefore the Commission has not approved the same under Capitalisation.

Table 21: Commission Approved - Capitalisation

Sr. No.	Particulars	UoM	FY 2016-17	
			Petitioner Submission	Approved for True up
1	Opening GFA	Rs Cr	425.14	425.14
2	Addition	Rs Cr	12.81	0
3	Deletion	Rs Cr	1.46	0
4	Closing GFA	Rs Cr	436.49	436.49
5	Net Capitalization	Rs Cr	10.35	0

## Depreciation

### Petitioner's Submission

3.73 The Petitioner submitted that 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.

3.74 The Depreciation amount for FY 2016-17 submitted by the petitioner is as follows:

Table 22: Petitioner Submission - Depreciation for FY 2016-17

Sr. No.	Station	UoM	FY 2016-17
1	GTPS	Rs Cr	10.95

### Commission's Analysis

3.75 Regulations 6.30-6.34 of the MYT Generation 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”.*

3.76 It is observed that the Accumulated Depreciation at the closing of FY 2015-16 has reached in excess of 70% of the total depreciation to be allowed. Further, it is observed that GTPS was commissioned in year 1996 and shall complete its useful life by year 2021. Accordingly, the Commission has spread the remaining depreciable value over the remaining life of the asset and has computed depreciation for FY 2016-17.

3.77 The Depreciation approved by the Commission for true up for FY 2016-17 is as follows:

**Table 23: Commission Approved - Depreciation for FY 2016-17**

Sr. No.	Particulars	UoM	FY 2016-17		Ref.
			Petitioner's Submission	Approved for True Up	
A	Opening GFA	Rs Cr	425.14	425.14	Table 21
B	Additions	Rs Cr	12.81	0	Table 21
C	Deletions	Rs Cr	1.46	0	Table 21
D	Closing GFA	Rs Cr	436.49	425.14	Table 21
E	Average GFA	Rs Cr	430.82	425.14	(A+D)/2
F	Depreciation	Rs Cr	10.95	10.95	Para 3.76
G	Opening Accumulated Depreciation	Rs Cr		327.87	Tariff Order
H	%age of Accumulated Depreciation to the GFA at opening of FY 2016-	%		77.12	G/A

Sr. No.	Particulars	UoM	FY 2016-17		Ref.
			Petitioner's Submission	Approved for True Up	
	17				
I	Closing Accumulated depreciation	Rs Cr		338.83	F+G
J	Average Accumulated depreciation	Rs Cr		333.35	(G+I)/2
K	Depreciation Rate	%		2.58%	(F/E)x100

**Interest on loans****Petitioner's Submission**

3.78 The Petitioner has submitted that the 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:**

3.79 The Petitioner submitted that as per the Delhi Electricity Reforms (Transfer Scheme) Rules 2001, unsecured loan was transferred to IPGCL as on July 1, 2002 and repayable to holding company. The same is as under:

**Table 24: Petitioner Submission - Loan details**

Sr. No.	Station	UoM	Amount
1	GT Power Station	Rs Cr	32.96

**Loan from Delhi Government:**

3.80 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. The Petitioner further submitted that it has made certain capital additions during FY 2016-17. 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.

3.81 Interest Charges submitted by the petitioner for FY 2016-17 is as follows:

Table 25: Petitioner Submission - Interest Charges for FY 2016-17

Sr. No.	Station	UoM	FY 2016-17
1	GTPS	Rs Cr	16.17

### Commission's Analysis

- 3.82 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;”*

- 3.83 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.”*

- 3.84 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.”*

- 3.85 Further, Regulation 6.18 of MYT Generation Regulations, 2011 specifies the principle for determination of rate of interest on Loan as follows:

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

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

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

- 3.86 It is observed from reading of the above provisions and the fact that Accumulated Depreciation has already exceeded 70% of the value of Gross Fixed Asset at the opening of FY 2016-17 and no Capitalization is approved for FY 2016-17, there is no loan required for FY 2016-17. Accordingly, the Commission has not considered Interest on Loan for FY 2016-17.

### Return on Equity (ROE)

#### Petitioner's Submission

- 3.87 The Petitioner submitted that 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 26: Petitioner Submission - Details of Equity**

Sr. 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

Sr. No.	Station	UoM	Amount
4	Total	Rs Cr	140.00

- 3.88 The Petitioner further submitted that it has taken values as given in DERC regulation for calculation of amount of ROE. Further, it has made certain Capital additions and 30% equivalent amount of the capital additions during current MYT period has been considered for computation of ROE.
- 3.89 Further, the Petitioner has considered income tax rate of 21.34 % in grossing up of ROE of 14.00 % accordingly grossed up ROE is 17.80%. The details of grossed up ROE being claimed for FY 2016-17 is as under:

Table 27: Petitioner Submission - Return on Equity for FY 2016-17

Sr. No.	Description		UoM	FY 2016-17
1	Average Equity	A	Rs Cr	120.58
2	Return on equity at base rate i.e @ 14%	B	Rs Cr	16.88
3	Normal Income tax rate as considered by the Commission	C	%	21.34
4	Gross up return on equity rate	$D = (\text{base rate} / (1 - C))$	%	17.80
5	Return on Equity	$E = (A \times D)$	Rs Cr	21.46

### Commission's Analysis

- 3.90 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."*

- 3.91 As there is no capitalization approved for FY 2016-17, the Commission has allowed the return on equity on the closing balance of equity for FY 2015-16 as approved by the Commission in Tariff order dated 31.08.2017 for true up of FY 2016-17 in accordance with the provisions of MYT Generation Regulations, 2011. Further, It is observed from the copy of Income Tax Return submitted by the Petitioner for FY 2016-17 that the Petitioner has not paid any tax for FY 2016-17. Accordingly, the Commission has not considered tax for FY 2016-17.

3.92 Return on Equity inclusive of Income Tax allowed after true up for FY 2016-17 in accordance with the provisions of MYT Generation Regulations, 2011 is as follows:

**Table 28: Commission Approved - Return of Equity**

Sr. No.	Particulars	UoM	FY 2016-17		Ref.
			Petitioner's Submission	Approved for True Up	
A	Average Equity	Rs Cr	120.58	118.88	Tariff Order and Para 3.91
B	Base Rate of return on equity (%)	%	14.00%	14.00%	MYT Regulations
C	Income Tax Rate (%)	%	21.34%	0	Para 3.91
D	Effective Rate of Return on Equity (%)	%	17.80%	14.00%	B/(100-C)
E	Effective Return on Equity	Rs Cr	21.46	16.64	A x D

#### Interest on Working Capital (IoWC) Petitioner's Submission

3.93 The petitioner has submitted the Interest on Working Capital as per the following norms:

- 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

3.94 The interest on working capital for FY 2016-17 as submitted by the petitioner is as follows:

**Table 29: Petitioner Submission - Interest on Working Capital for FY 2016-17**

Sr. No.	Description	UoM	FY 2016-17
1	Cost of gas for 1 month	Rs Cr	58.12
2	Cost of liquid fuel for 1/2 month	Rs Cr	30.52
3	Maintenance Spares @ 30% of O&M	Rs Cr	34.02
4	O&M expenses for 1 month	Rs Cr	9.45
5	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	149.57
6	Total Working Capital	Rs Cr	281.68
7	Rate of Interest	%	13.50%
8	Interest on Working Capital	Rs Cr	38.03

**Commission's Analysis**

- 3.95 MYT Generation Regulations 2011 specifies the principles for determination of working capital requirement and rate of interest applicable on working capital as following:

*"6.26 For Open-cycle Gas Turbine/Combined Cycle thermal generating stations, the working capital requirements shall be calculated using the following components:*

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

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

*(c) Maintenance spares @ 30% of operation and maintenance expenses specified in clause 6.39- 6.44 of these Regulations;*

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

*(e) O&M expenses for 1 month.*

*6.27 The cost of fuel in cases covered under sub-clauses (a) and (b) of clause 6.25 and 6.26 of these Regulations shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the Control Period.*

*6.28 Rate of interest on working capital shall be on normative basis and shall be equal to Base Rate of State Bank of India plus 350 basis points as on 1.4.2012 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later.*

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

- 3.96 Further, Regulation 5.12 of MYT Generation Regulations, 2011 specifies the principles for true up of rate of interest on working capital as 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.”*

- 3.97 It is observed that the working capital and rate of interest was not determined for FY 2016-17 due to non issuance of tariff order for FY 2016-17 for the Petitioner. Therefore, the Commission has determined the requirement of working capital and rate of interest on working capital based on the provisions of MYT Generation Regulations, 2011 as follows :

**Table 30: Commission Approved - Interest on Working Capital**

Sr. No.	Particulars	Unit	Petitioner Submission	Approved by the Commission	Ref.
A	Cost of gas for 1 month	Rs Cr	58.12	58.12	
B	Cost of liquid fuel for 1/2 month	Rs Cr	30.52	20.78	Tariff Order
C	Maintenance Spares @ 30% of O&M	Rs Cr	34.02	34.41	
D	O&M expenses for 1 month	Rs Cr	9.45	9.56	
E	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	149.57	146.01	
F	Total Working Capital	Rs Cr	281.68	268.88	
G	Rate of Interest	%	13.50	13.50	MYT Regulations
H	Interest on Working Capital	Rs Cr	38.03	36.30	F x G

### Summary of Fixed Cost Petitioner's Submission

- 3.98 The Petitioner has submitted the total fixed cost of GTPS for FY 2016-17 as follows:

**Table 31: Petitioner Submission - Annual Fixed Cost**

Sr. No.	Particulars	UoM	Actual	Normative
1	O&M Expenses	Rs Cr	56.57	113.40
2	Depreciation	Rs Cr	10.95	10.95
3	Interest Charges	Rs Cr	16.17	16.17

Sr. No.	Particulars	UoM	Actual	Normative
4	Grossed up Return on Equity	Rs Cr	21.46	21.46
5	Interest on Working Capital	Rs Cr	38.03	38.03
6	Total Fixed Cost	Rs Cr	143.18	200.01
7	Net Generation	MU	672.330	1835.40
8	Fixed Cost per unit	Rs/ kWh	2.130	1.090

### Commission's Analysis

3.99 The Commission analyzed all the components of fixed cost submitted by the Petitioner in detail to determine the applicable fixed cost. 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

3.100 The Commission has considered the Net Generation as specified in the Annual Report of SLDC for the purpose of truing up of FY 2016-17.

3.101 Based on the analysis of various components of Fixed Cost, the Commission has trued up the Annual Fixed Charges for FY 2016-17 as follows:

**Table 32: Commission Approved - Annual Fixed Cost for FY 2016-17 (Rs Crore)**

Sr. No.	Fixed Cost Components	UoM	FY 2016-17			Ref.
			Actual as submitted by Petitioner	Normative as submitted by Petitioner	Trued up by the Commission	
A	O&M Expenses	Rs. Cr.	56.57	113.40	114.70	Table 19
B	Depreciation	Rs. Cr.	10.95	10.95	10.95	Table 23
C	Interest on loans	Rs. Cr.	16.17	16.17	0.00	Para 3.86
D	Return on Equity	Rs. Cr.	21.46	21.46	16.64	Table 28

Sr. No.	Fixed Cost Components	UoM	FY 2016-17			Ref.
			Actual as submitted by Petitioner	Normative as submitted by Petitioner	Trued up by the Commission	
E	Interest on working capital	Rs. Cr.	38.03	38.03	36.30	Table 30
F	Total Annual Fixed Cost (AFC)	Rs. Cr.	<b>143.18</b>	<b>200.01</b>	<b>178.59</b>	A+B+C+D+E
G	AFC as per achieved availability	Rs. Cr.			<b>184.93</b>	
H	Net Generation	MU	672.33	1835.40	673.79	Para 3.100
I	Fixed Cost per unit	(Rs/kWh)	<b>2.130</b>	<b>1.090</b>	<b>2.745</b>	(G/H)x10

3.102 The Petitioner is directed to recover/refund, if any, based on the true up of Annual Fixed Cost as indicated in the above table in the next bill to the respective beneficiaries after the issuance of this order.

**A4: ANALYSIS OF AGGREGATE REVENUE REQUIREMENT (ARR) FOR FY 2018-19****Rajghat Power House (RPH)**

- 4.1 The Petitioner has submitted that the power station is out of bar since June, 2015 in view of non scheduling of power by beneficiaries of the plant and order of Delhi Pollution Control Committee (DPCC).

**Commission's Analysis**

- 4.2 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 and 90% of the GFA has already been allowed as depreciation in tariff order dated 31/08/2017. Therefore, the Commission is of the view that no further action is required.

**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 the actual plant availability achieved by the station for last three years including FY 2016-17 as under:

**Table 33: Petitioner Submission - Actual Plant Availability**

Sr. No.	Station	UoM	FY 2014-15	FY 2015-16	FY 2016-17
1	GTPS	%	68.80	74.81	82.84

- 4.5 Further, the Petitioner has submitted that the availability of the station has been varying since its inception. 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.

### Commission's 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 2018-19.
- 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 projected SHR for FY 2018-19 as follows:

**Table 34: Petitioner Submission - Projected SHR (kCal/ kWh)**

Sr. No.	Station	Mode of Operation	FY 2018-19
1	Gas Turbine Power Station	Combined Cycle	2450
		Open Cycle	3125

### Commission's Analysis

- 4.10 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)	2450	3125
2	Pragati Power Station I (PPS I)	2000	2900

"

4.11 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**

4.12 The Petitioner has submitted Auxiliary Power Consumption for FY 2018-19 as follows:

**Table 35: Petitioner Submission - Auxiliary Power Consumption**

Sr. No.	Particulars	UoM	FY 2018-19
1	Auxiliary power consumption in CC mode	%	2.5%

### **Commission's Analysis**

4.13 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% in Combined Cycle mode and 0.5% in Open Cycle mode of the actual generation which shall form part of computation of energy charge rate of the respective month."*

- 4.14 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 the Business Plan Regulations, 2017.

### Gross Generation and Net Generation Petitioner's Submissions

- 4.15 The Petitioner has submitted Gross and Net Generation for Gas Turbine Power Station for FY 2018-19 as follows:

**Table 36: Petitioner Submission - Gross and Net Generation**

Sr.No.	GT Power Station	UoM	FY 2018-19
1	Gross Generation	MU	1892.16
2	Auxiliary Consumption	%	2.5
3	Net Generation	MU	1844.86

### Commission's Analysis

- 4.16 Gross and Net Generation of GTPS for FY 2018-19 approved by the Commission based on the norms of operation specified in Business Plan Regulations, 2017 is as follows:

**Table 37: Commission Approved - Gross and Net Generation**

Sr. No.	GT Power Station	UOM	FY 2018-19	Ref.
A	Capacity	MW	270	
B	NAPLF	%	85	Para 4.8
C	Gross Generation	MU	2010.42	(AxBx365x24)/1000
D	Auxiliary Consumption	%	2.0	Para 4.14
E	Auxiliary Consumption	MU	40.21	CxD
F	Net Generation	MU	1970.21	C-E

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

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

Table 38: Petitioner Submission - Fuel Cost for GTPS

Sr. No.	Particulars	UoM	FY 2018-19
1	Total Gas Consumption	MMSCM	491.60
2	Average Gas price	Rs./SCM	14.34
3	Total Gas Cost	Rs. Cr	705.05
4	Net Generation	MU	1844.86
5	Variable Cost per unit	Rs./kWh	3.822

### Commission's Analysis

4.18 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”*

4.19 Landed Price of Primary fuel and Gross Calorific Value has been computed as per the information available in Form 15 of November 2017, December 2017 and January 2018 submitted by the Petitioner as follows:

Sr.No.	Particulars	UoM	Nov-17	Dec-17	Jan-18
1	Quantum	000'SCM	13666.42	8872.60	11591.40
2	Cost	Rs Cr	14.70	9.67	16.46
3	GCV	kCal/ SCM	9385.84	9349.70	9340.36
4	LPPF (Rs/ SCM)	Rs/ SCM	10.76	10.90	14.20
5	Weighted Average LPPF	Rs/ SCM	11.96		
6	Weighted Average GCV	kCal/ SCM	9361.00		

4.20 Accordingly, the Commission approves the Energy Charge Rate (ECR) and Fuel Cost for FY 2018-19 as follows:

**Table 39: ECR and Fuel Cost approved by the Commission**

Sr. No.	Particulars	UoM	Petitioner's Submission	Approved	Ref
A	Net Generation	MU	1844.86	1970.21	Table 37
B	ECR	Rs/ kWh	3.822	3.195	
C	Fuel Cost	Rs Cr	705.05	629.46	(AxB)/10

### Fixed Cost

### Operation & Maintenance (O&M) Expenses

### Petitioner's Submission

4.21 The Petitioner has 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 implemented at Central and State level employees. In case of Petitioner, the same has been partially implemented in FY 2017-

18. The petitioner, therefore has requested the Commission to kindly consider the impact of 7<sup>th</sup> Pay Commission while deciding the ARR for FY 2018-19 as final implementation of pay commission's recommendations is likely to be implemented during FY 2018-19.

4.22 The O&M Expenses submitted by the Petitioner for GTPS for FY 2018-19 is as follows:

**Table 40 : Petitioner Submission - O&M Expenses for FY 2018-19**

Sr. No.	Particulars (Rs.Cr.)	UoM	2018-19
A	O&M expenses	Rs Cr	84.56

### Commission's Analysis

4.23 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 1: 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."*

4.24 Accordingly, the Commission approves the O&M Expenses for GTPS for FY 2018-19 except the impact of seventh pay commission on Employee Cost (as the Petitioner has not submitted the amount due on account of same) as follows:

**Table 41: Commission Approved - O&M Expenses for FY 2018-19**

Sr. No.	Station	Capacity (MW)	Expenses (Rs. Lakh/ MW)	Amount (Rs Cr)
1	GTPS	270	31.32	84.56

- 4.25 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

- 4.26 The Petitioner has not submitted any addition or deletion of assets during FY 2018-19.

#### Commission's Analysis

- 4.27 The GFA approved by the Commission for FY 2018-19 is as follows:

**Table 42: Commission Approved - Capital Expenditure**

Sr. No.	Particulars	UoM	FY 2018-19		Ref.
			Petitioner Submission	Approved	
A	Opening GFA	Rs Cr	436.49	425.14	Table 21
B	Addition	Rs Cr	0	0	
C	Deletion	Rs Cr	0	0	
D	Closing GFA	Rs Cr	436.49	425.14	A+B-C
E	Average GFA	Rs Cr	436.49	425.14	(A+D)/2

### Depreciation

#### Petitioner's Submission

- 4.28 The Petitioner has claimed depreciation amount as per provisions of DERC Regulation as following:

**Table 43: Petitioner Submission - Depreciation**

Sr. No.	Particulars	UoM	2018-19
1	GTPS	Rs Cr	14.35

#### Commission's Analysis

- 4.29 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.”*

4.30 Further, it is observed that GTPS was commissioned in year 1996 and shall complete its useful life by year 2021.

4.31 Accordingly, the Commission has approved the depreciation for FY 2018-19 as follows:

**Table 44: Commission Approved - Depreciation for FY 2018-19**

Sr. No.	Particulars	UoM	Approved	Ref
A	Average GFA	Rs Cr	425.14	Table 42
B	Opening Accumulated Depreciation	Rs Cr	349.78	Table 23
C	Balance Depreciation	Rs Cr	32.85	(90%xA)-B
D	Balance useful life at opening of FY 2018-19	Years	3	Para 4.30
E	Depreciation	Rs Cr	10.95	C/D
F	Closing Accumulated Depreciation	Rs Cr	360.73	B+E
G	Average Accumulated Depreciation	Rs Cr	355.25	(B+F)/2
H	Average Net Fixed Asset	Rs Cr	69.89	A-G

## Working Capital

### Petitioner's Submission

4.32 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



4.33 Accordingly, the Petitioner has submitted the requirement of Working Capital as follows:

**Table 45: Working Capital submitted by the Petitioner**

Particulars	UoM	FY 2018-19
Cost of Fuel for 1 month	Rs Cr	58.75
Liquid fuel stock for ½ month	Rs Cr	30.52
O&M expenses for 1 month	Rs Cr	25.37
Maintenance Spares @ 30% of O&M	Rs Cr	7.05
Receivables equivalent to 2 months average billing	Rs Cr	146.97
Total Working Capital	Rs Cr	268.66

### Commission's Analysis

4.34 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."*

4.35 Accordingly, Working Capital requirement for FY 2018-19 has been computed as follows:

**Table 46: Commission Approved - Working Capital Requirement for FY 2018-19**

Sr. No.	Particulars	UoM	FY 2018-19		Ref.
			Petitioner Submission	Approved	
A	Fuel expenses for 1 month	Rs Cr	58.75	52.46	Table 39
B	Liquid Fuel for 1/2 month	Rs Cr	30.52	30.52	
C	Maintenance spares @ 30% of O&M	Rs Cr	25.37	25.37	Table 41
D	O&M expenses for 1 month	Rs Cr	7.05	7.05	Table 41

Sr. No.	Particulars	UoM	FY 2018-19		Ref.
			Petitioner Submission	Approved	
E	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	146.97	126.97	
F	Total Working Capital	Rs Cr	268.66	242.36	A+B+C+D+E

### Return on Capital Employed Petitioner's Submission

4.36 The Petitioner has submitted the details of Return on Equity for FY 2018-19 as under:

**Table 47: Petitioner Submission - Return on Equity with Grossed up**

Particulars		FY 2018-19
Average Equity (Rs. Cr.)	A	122.29
Base Rate of return on equity i.e @ 14 (%) (Rs in Cr.)	B	17.12
Normal Income tax Rate as considered by Commission (%)	C	21.34
Gross up return on equity (%)	D= (base rate/ (1-C))	17.80
Grossed up Return on equity (Rs. Cr.)	E=(AxD)	21.76

### Commission's Analysis

4.37 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:*

- (i) *Where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff;*
- (ii) *Where equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as notional loan;*
- (iii) *The equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;*
- (iv) *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."*

- 4.38 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:*

*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.”*

- 4.39 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 21.34%. Accordingly grossed up rate of return on equity has been computed at 17.80% for FY 2018-19.

- 4.40 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."*

- 4.41 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."*

- 4.42 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 10.26% on the basis of SBI MCLR of 8.15% as on 1<sup>st</sup> March, 2018 plus margin of 2.11%.
- 4.43 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;*

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

*$\Delta ABi$ : 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  $\Delta ABi$  and capital grants/subsidies received during  $i^{th}$  year of the Control Period for construction of service lines or creation of fixed assets;*

*Ret<sub>i</sub>: 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)<sup>th</sup> year of the Control Period.*

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

$$RoCE = WACC_i * RRBi$$

Where,

*WACC<sub>i</sub> is the Weighted Average Cost of Capital for each year of the Control Period;*

*RRBi – Average Regulated Rate Base for the ith 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:

$$WACC = \left[ \frac{D}{D + E} \right] * r_d + \left[ \frac{E}{D + E} \right] * r_e$$

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.”*

4.44 Accordingly, the Commission has computed Return on Capital Employed for FY 2018-19 as follows:

**Table 48: Commission Approved - Return on Capital Employed**

Sr. No.	Particulars	UoM	FY 2018-19		Ref.
			Petitioner's Submission	Approved	
A	Average Net Fixed Asset	Rs Cr		69.89	Table 44
B	Average Equity	Rs Cr	122.29	20.97	30% of A
C	Average Capex Loan	Rs Cr		48.92	70% of A
D	Working Capital Loan	Rs Cr		242.36	Table 46
E	Average Loan Requirement	Rs Cr		291.28	C+D
F	Average RRB			312.25	B+E
G	Grossed up Rate of Return on Equity	%		17.80	
H	Rate of Interest on Loan	%		10.26	Tariff Regulations, 2017
I	Weighted Average Cost of Capital (WACC)	%		10.77	$(B/F)*G+(E/F)*H$
J	RoCE	Rs Cr		33.62	$I*F$

### Fixed Auxiliary Consumption Expenses

#### Petitioner's Submission

4.45 The Petitioner has submitted Fixed Auxiliary Consumption of Rs. 3.61 Crore for FY 2018-19.

#### Commission's Analysis

4.46 The Commission allows Fixed Auxiliary Consumption Expenses as per the Regulation 8(3) of DERC (Business Plan) Regulations, 2017. The 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% in Combined Cycle mode and 0.5% in Open Cycle mode of the actual generation which shall form part of computation of energy charge rate of the respective month."

4.47 Accordingly, Fixed Auxiliary Consumption Expenses has been determined for FY 2018-19 as follows:

**Table 49: Commission Approved - Fixed Auxiliary Consumption Expenses**

Sr. No.	Particulars	UoM	FY 2018-19	Ref.
A	Gross Generation at Normative PLF	MU	2010.42	Table 37
B	Fixed Auxiliary Consumption	%	0.5%	Para 4.46
C	Fixed Auxiliary Consumption	MU	10.05	A x B
D	Energy Charge Rate	Rs/ kWh	3.195	Table 39
E	Fixed Auxiliary Consumption Expenses	Rs Cr	3.21	(Cx D)/10

### Summary of Fixed Cost Petitioner's Submission

4.48 Annual Fixed Cost for FY 2018-19 submitted by the Petitioner is as follows:

**Table 50: Petitioner Submission - Total Fixed Cost submitted by the Petitioner**

Sr. No.	Particulars	UoM	FY 2018-19
1	O&M Charges	Rs Cr	84.56
2	Depreciation	Rs Cr	14.35
3	Interest on Loans	Rs Cr	15.58
4	Grossed up Return on Equity	Rs Cr	21.76
5	Interest on Working Capital	Rs Cr	36.27
6	Fixed APC	Rs Cr	3.61
7	Total Fixed Cost	Rs Cr	176.13
8	Net Generation	MU	1844.85
9	Fixed Cost Per Unit	Rs/ kWh	0.955

### Commission's Analysis

4.49 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."



4.50 Accordingly, the Commission approves the Annual Fixed Cost for FY 2018-19 by considering the various components as follows:

**Table 51: Commission Approved - Annual Fixed Cost for FY 2018-19**

Sr. No.	Particulars	UoM	FY 2018-19		Ref.
			Petitioner's Submission	Approved by Commission	
A	Return on Capital Employed	Rs Cr	73.61	33.62	Table 48
B	Depreciation	Rs Cr	14.35	10.95	Table 44
C	Operation and Maintenance Expenses	Rs Cr	84.56	84.56	Table 41
D	Fixed Auxiliary Consumption	Rs Cr	3.61	3.21	Table 49
E	Annual Fixed Cost	Rs Cr	176.13	132.34	A+B+C+D

**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 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.
- 5.4 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(1556) /DERC/2017-18/

**Petition No. 05/2018**

**In the matter of:** Petition for Truing up of Tariff for FY 2016-17 and ARR for FY 2018-19 for IPGCL Stations.

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

...Petitioner/Licensee

Coram:

Sh. B. P. Singh, Member.

**ORDER**

(Date of Order: 02.02.2018)

1. M/s. Indraprastha Power Generation Co. Ltd. (IPGCL) has filed the instant Petition for Truing up of Tariff for the FY 2016-17 and ARR for FY 2018-19 for IPGCL Stations. 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 UPTO FY 2016-17 AND ANNUAL REVENUE REQUIREMENT (ARR) AND TARIFF FOR FY 2018-19.**

S. No.	R. No.	Name	Address	Date of Receipt
1.	1	Sh. Raj Kumar Member	<a href="mailto:rajkumaraapka@gmail.com">rajkumaraapka@gmail.com</a>	03.01.2018
2.	2	Sh. S.R. Abrol	L-2-97B, DDA, LIG Kalkaji, New Delhi 110 019 <a href="mailto:Nyayabhoomi2003@gmail.com">Nyayabhoomi2003@gmail.com</a>	04.01.2018
3.	3	Sh. Jagdish Khetarpal	<a href="mailto:jagdishpowerip@yahoo.co.in">jagdishpowerip@yahoo.co.in</a>	04.01.2018
4.	4	Dr. Pradeep Gupta	Plot No. 4, Sukhbir Nagar, Karala, Delhi 110 081 <a href="mailto:pradeepgupta111@yahoo.in">pradeepgupta111@yahoo.in</a>	04.01.2018
5.	5 5A 5B	Sh. Vivek Agarwal General Manager/Electrical	Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi 110 001	12.01.2018
6.	6	Sh. Anil Sood Hony President CHETNA	A-403-414-415, Somdutt Chamber-1 5 Bhikajicama Place, New Delhi <a href="mailto:anilsood@spchetna.com">anilsood@spchetna.com</a>	15.01.2018
7.	7	Sh. S.K. Jain	4509, Trilok Bhawan, 7 Darya Ganj, New Delhi 110 002	16.01.2018
8.	8	Sh. Ashok Bhasin	North Delhi Residents Welfare Association 1618, Main Chandrawal Road Delhi 110 007	19.01.2018
9.	9	Sh. Kanwar Ajay Singh	<a href="mailto:Kanwarajaysingh74@icloud.com">Kanwarajaysingh74@icloud.com</a>	19.01.2018
10.	10	Sh. R.D. Singh	J6C, East Vinod Nagar, Delhi 110 091 <a href="mailto:Rdsingh1949@gmail.com">Rdsingh1949@gmail.com</a>	19.01.2018
11.	11 11A	Sh. B.S. Sachdev President	B-2/13A, Keshav Puram, Delhi 110 035	23.01.2018 12.03.2018
12.	12 12A 12B 12C	Sh. V.K. Malhotra General Secretary	DVB Engineers' Association D-3, Vikas Puri, New Delhi 110 018	29.01.2018
13.	13	Sh. Harmeet Singh President	Koshish Resident's Welfare Association (regd.) 2462, Basti Punbian, Roshnara Road, Subzi Mandi Delhi 110 0017	29.01.2018
14.	14	Sh. Jagdish Khetarpal	<a href="mailto:jagdishpowerip@yahoo.co.in">jagdishpowerip@yahoo.co.in</a>	29.01.2018
15.	15	Sh. Sanjay Dangi	Gali No. 20, Plot 12 Uttam Nagar, Delhi <a href="mailto:Sanjudangi88@yahoo.in">Sanjudangi88@yahoo.in</a>	30.01.2018
16.	16	Sh. Kuldeep Kumar General Secretary	Delhi State Electricity Workers Union, Genco, Transo DISCOM iii L-2, Main Road, Brahmipuri, Delhi	30.01.2018

S. No.	R. No.	Name	Address	Date of Receipt
17.	17	Sh. Bittu Bhardwaj	<a href="mailto:Bittoobhardwaj42@gmail.com">Bittoobhardwaj42@gmail.com</a>	30.01.2018
18.	18	Sh. Krishan Kumar	<a href="mailto:Krishankumar2360@gmail.com">Krishankumar2360@gmail.com</a>	31.01.2018
19.	19	Dr. Pradeep Gupta	Plot No. 4, Sukhbir Nagar, Karala, Delhi 110 081 <a href="mailto:Pradeepgupta111@yahoo.in">Pradeepgupta111@yahoo.in</a>	31.01.2018
20.	20	Sh. B.B. Tiwari	<a href="mailto:sarwasharpan@gmail.com">sarwasharpan@gmail.com</a>	20.02.2018
21.	21 21A	Sh. A.K. Datta	222, Pocket E, Mayur Vihar, Phase 2 Delhi 110 091 <a href="mailto:Mmathur2001@yahoo.com">Mmathur2001@yahoo.com</a>	20.02.2018
22.	22 22A	Sh. Saurabh Gandhi Gen. Secretary	United Residents of Delhi C-6/7, Rana Pratap Bagh Delhi 110 007 <a href="mailto:urdwas@gmail.com">urdwas@gmail.com</a>	21.02.2018
23.	23 23A 23B	Sh. Sudhir Aggarwal Secretary	Brotherhood Society G-3/5, Model Town III Delhi 110 009	21.02.2018
24.	24	Sh. Anil Chandi Gen. Secretary	C-8/1, Rana Pratap Bagh, Delhi 110 007	21.02.2018
25.	25	Sh. Rajan Gupta	H. No. 355, Udyan, Nerala Delhi 110 040	16.02.2018
26.	26	Ms. Neeta Gupta	A-17, Antriksh Apartments New Town Co-op. Group Housing Society Ltd. Sector : 14 Extn. Rohini, Delhi 110 085 <a href="mailto:Neetagupta.vg111@gmail.com">Neetagupta.vg111@gmail.com</a>	20.02.2018
27.	27	Sh. Rohit Arora President	Gyan Park Welfare Society (Regd.) 12A, Gyan Park, Chander Nagar, Krishna Nagar, Delhi 110 051	21.02.2018
28.	28	Sh. Vipin Gupta	A-17, Antriksh Apartments New Town Co-op. Group Housing Society Ltd. Sector : 14 Extn. Rohini, Delhi 110 085 <a href="mailto:Vipin.bfi@gmail.com">Vipin.bfi@gmail.com</a>	20.02.2018
29.	29	Sh. Mukesh Rikhi Gen. Secretary	Resident Welfare Association Hakikat Nagar, (Regd.) 97, Hakikat Nagar, GTB Nagar, Delhi 110 009	22.02.2018
30.	30	Sh. Chander Singh Kataria Gen. Secretary	Keshav Nagar Jan Kalyan Samiti Regd. B-246/4, Keshav Nagar, Near Mukti Ashram Burari Road, Delhi 110 036	22.02.2018
31.	31	Sh. Rajiv Kakria Hony President Chetna	A-403-414-415, Somdutt Chamber-1, 5, Bhikajicama Place New Delhi <a href="mailto:Rkakria2@gmail.com">Rkakria2@gmail.com</a>	22.02.2018
32.	32	Sh. Anil Sood Hony President Chetna	A-403-414-415, Somdutt Chamber-1,5, Bhikajicama Place New Delhi	22.02.2018
33.	33	Sh. Alam Gir President	Rani Garden Resident's Welfare Association REgd. C-17, Rani Garden,	23.02.2018

S. No.	R. No.	Name	Address	Date of Receipt
			Geeta Colony, Near Taj Enclave Delhi 110 031	
34.	34	Ms. Madhu Malhotra President	Krishna Nagar Janhit Vikas Samiti E-7/12, Krishna Nagar, Delhi 110 051	23.02.2018
35.	35	Sh. Sarvesh Kumar Verma President	Resident Welfare Association A-2/219, New Kondli Delhi 110 096	26.02.2018
36.	36	Sh. P.S. Tomar	C-7/89 Yamuna Vihar, Delhi 110 053	26.02.2018
37.	37	Sh. K. Pratab Singh	D-408, St. No. 90 Bhajan Pura, Delhi 110 53	26.02.2018
38.	38 38A	Sh. D.M. Narang President	R-Block Welfare Association R-599, New Rajinder Nagar, New Delhi 110 060	26.02.2018
39.	39	Dr. Faheem Baig Gen. Secretary	Jafirabad Resident Welfare Association 1202, Street No. 39/4 Jafirabad, Delhi 110 053	27.02.2018
40.	40	Smt Sushma Sharma President	Resident's Welfare Association, Control Romm Gate No. 1 Pocket B, Dilshad Garden, Delhi 110 095	28.02.2018
41.	41	Sh. Anil Kumar Jha	A-4, St. No. 13 Mandawali Unchepar, Delhi 110 092	27.02.2018
42.	42 42A	Sh. K.K. Verma Gen. Manager (C&RA)	33KV Grid S/Station Building, IP Estate, New Delhi 110 002	22.02.2018 06.03.2018
43.	43 43A 43B	Sh. Bharat Kumar Bhadawat HoD Regulatory	Tata Power Delhi Distribution Ltd. NDPL House Hudson Lines Kingsway Camp, Delhi 110 009	23.02.2018 12.03.2018 12.03.2018
44.	44	Sh. Abhishek Srivastava Authorised Signatory	BSES Yamuna Power Ltd. Shakti Kiran Building, Karkardooma, Delhi 110 032	28.02.2018
45.	45	Sh. Deepak Narang LPresident	Resident's Welfare Association, Pkt H-164A, Dilshad Garden, Delhi 110 095	28.02.2018
46.	46	Sh. Syed Khalid Akbar Gen. Secretary	DVB Pensioners Association 85, Ram Nagar, Krishna Nagar, Delhi 110 051	28.02.2018
47.	47	Sh. Kulwant Rana President	Dilshad Colony Residents Welfare Association G-87, 1st Floor, Dilshad Colony Delhi 11 095	05.03.2018
48.	48	Sh. Harbansh Sharma	RWA, 295 Kucha Ghasi Ram, Chandni Chowk, Delhi 110 006	05.03.2018
49.	49	Sh. Kishan Kumar	Kucha Brijnath Resident Welfare Association, 420, Kucha Brijnath, Chandni Chowk, Delhi 110 006	05.03.2018
50.	50	SH. Daya Ram Dwivedi	Daily Passengers Association	05.03.2018

S. No.	R. No.	Name	Address	Date of Receipt
		Vide President	262, Katra Pyare Lal Chandni Chowk, Delhi 110 006	
51.	51	Sh. Vijay S. Rawat Vice President	DDA Janta Flats Resident Welfare Association 12-A, Pkt. D2, Mayur Vihar Phase III, Delhi 110 096	05.03.2018
52.	52	Sh. Gyanender Kaushik Vice President	East Babarpur Residential Welfare Association E-1044-4/F, Inder Gali, Babarpur, Shahdara, Delhi 110 032	05.03.2018
53.	53	SH. Pradeep Arora President	Resident Welfare Association A-87, East Nathu Colony, Main Mandoli Road, Delhi 110 093	05.03.2018
54.	54	Sh. Pawan Salwan President	Residents' Welfare Association Pocket IV, Mayur Vihar, Phase -1 Delhi 110 091	05.03.2018
55.	55	Sh. Mini Shreekumar President	Residents' Welfare Association Pocket-2, Mayur Vihar, Phase-1 Delhi 110 091	05.03.2018
56.	56	Sh. Sanjeev Singh Tomar President	Vikas Simiti, Durga Puri Vistar Loni Road, Delhi 110 093	05.03.2018
57.	57	Sh. Subhash Chand Saxena	Resident Welfare Association 4996, Ground Floor, Ghas Mandi Ahata Kidara Pahari Dhiraj, Delhi-110 006	05.03.2018
58.	58	Sh. Shivkumar Sharma	Brijpuri Residents Welfare Association D-8/154, Brij Puri, Delhi 110 094	05.03.2018
59.	59	Dr. Arjun Kumar Founder Chairman	Dignity Restoration & Grievance Settlement Association B-4/84/2, Safdarjung Enclave, New Delhi 110 029	05.03.2018
60.	60	Sh. Arvind K. Mehta President	Residents Welfare Association 542, Double Storey, New Rajinder Nagar, New Delhi	28.02.2018
61.	61	Sh. Farooq Engineer	Rehayeshi Welfare Anjunman Shivaji Road, Azad Market, Delhi 110 006	28.02.2018
62.	62	Sh. B.S. Vohra President	East Delhi RWAs Joint Front-Federation F-19/10, Krishna Nagar, Delhi-51 <a href="mailto:rwabhagidari@yahoo.com">rwabhagidari@yahoo.com</a>	06.03.2018
63.	63	Sh. Samson Frederick Joseph Gen. Secretary	All India Minorities Fundamental Rights Protection Committee 2109/18, Turkman Gate, New Delhi	06.03.2018
64.	64	Sh. Ompal Singh	New Chauhan Pur Residents Welfare Association 40/240, New Chauhanpur, Karawal Nagar Road, Delhi 110 094	06.03.2018
65.	65	Sh. Vivek Agarwal	Delhi Metro Rail Corporation Ltd.	07.03.2018

S. No.	R. No.	Name	Address	Date of Receipt
		General Manager	Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi 110 001	
66.	66 66A 66B	Sh. B.B. Tiwari	<a href="mailto:sarwasharpan@gmail.com">sarwasharpan@gmail.com</a>	07.03.2018 12.03.2018 14.03.2018
67.	67	Sh. Sanjeev Bhatnagar President	Resident's Welfare Association New MIG Flats Prasad Nagar, New Delhi	08.03.2018
68.	68	Sh. Prem Nagpal Vice President	E-221, West Patel Nagar, New Delhi 110 008	08.03.2018
69.	69	Sh. Deepak Kumar Goyal President	Delhi Dall Mill Association 4122, Ground Floor, Main Road Naya Bazar, Delhi 110 006	12.03.2018
70.	70	Sh. Rajesh Chhabra Vice President	West Patel Nagar Veopar Mandal A/31, West Patel Nagar, Main Market, New Delhi 110 008	08.03.2018
71.	71	Sh. Sushil Mishra Patrons	Jhilmil DDA Flats Residents Welfare Association Gate No. 2, Satyam Enclave, Delhi 110 095	09.03.2018
72.	72	Sh. G.R. Luthra Secretary	Vivek Vihar Phase-II, A-Block Residents Welfare Association A-98, Vivek Vihar, Phase II, Delhi 110 095	12.03.2018
73.	73	Choori Walan Welfare Society	Choori Walan, Tokri Walan, Pahari Imli, Chitla Gate, Delhi 110 006	09.03.2018
74.	74	Sh. Mazar Ullah President	Resident Welfare Association 1855, Gali Pattey Wali Sui Walan, Darya Ganj New Delhi 110 002 <a href="mailto:galipatteywalidaryaganj@in.com">galipatteywalidaryaganj@in.com</a>	08.03.2018
75.	75	Sh. Mahesh Chand General Secretary	Khatik Kalyan Parisad 1820, Gali Khatikan, Chowk Shan Mubarak, Baar Sita Ram, Delhi 110 006	09.03.2018
76.	76	Ms. Kalpana Chawla, Adv. President	Wall City Mahila Panchayat Samiti 1831-32, Gali Mandir Wali, Chowk Shah Mubarak, Bazar Sita Ram, Delhi 110 006	09.03.2018
77.	77	Sh. Atul Chawla	<a href="mailto:Chawla.atul@yahoo.com">Chawla.atul@yahoo.com</a>	09.03.2018
78.	78	Sh. Arun Kumar Chairman	Dignity Restoration & Grievance Settlement Association B4/84/2, Safdarjung Enclave, New Delhi 110 029 <a href="mailto:director@dignityindia.org">director@dignityindia.org</a>	18.03.2018
79.	79	Sh. J.B. Sahdev	Qutab Enclave MIG Residents Welfare Association Qutab Enclave, Phase-1 New Delhi 110 016	19.03.2018
80.	80	Sh. V.S. Mahindra	H-3/45, Vikaspuri, New Delhi 110 018	19.03.2018
81.	81	Sh. S.K. Bhatia	3/102, Subhash Nagar,	19.03.2018



S. No.	R. No.	Name	Address	Date of Receipt
			New Delhi 110 027	
82.	82	Sh. Suresh Gupta	B-71, New Town Cooperative Gourp Housing Society Limited Sector – 14 Extension Rohini, New Delhi 110 085	19.03.2018
83.	83	Sh. V.P. Garg	B-2/48A, Keshavpuram New Delhi 110 035	19.03.2018
84.	84	Sh. A.K. Jain	DDA Flats, Kalkaji New Delhi 110 019	19.03.2018
85.	85	Sh. Jagdish Prasad	A-129, Pulprhalad New Delhi 110 019	19.03.2018
86.	86	Sh. J.N. Bagehi	F-1152, C.R. Park New Delhi	19.03.2018
87.	87	Sh. Vishvas, President,	1, North West Avenue , Punjabi Bagh, New Delhi-110026	19.03.2018
88.	88	Sh. Gyanender Kaushik	RWA, Babur Pur, Delhi	23.03.2018
89.	89	Sh. Ashok Bhasin	President, North Delhi Residents Welfare Federation 1618, Main Chandrawal Road, Delhi-110007	23.03.2018
90.	90	Sh. Deepak Joshi	17D, Pocket B Dilshad Garden, Delhi	23.03.2018
91.	91	Sh. K.K. Verma	DVB-ETBF-2002, Pre-Fabricated Building, Rajghat Power House, New Delhi-110002	23.03.2018
92.	92	Sh. Harmeet Singh	Koshish Residents' Welfare Association(Regd.) 2462 Basti Punjabi, Roshanara Road, Subzi Mandi , Delhi-110007	23.03.2018
93.	93	Sh. Hemanta Madhab Sharma	146 Vinobha Puri(FF), Lajpat Nagar-II, New Delhi-110024	23.03.2018
94.	94	Sh. Narender Kumar	RWA, New Usman Pur, Delhi	23.03.2018
95.	95	Sh. Ompal Singh Ahlawat	E-186, Chhattarpur Ext., New Delhi-110074	23.03.2018
96.	96	Sh. Ved Prakash Arya	RWA, 895A-1 Ward, No 8, Mehrauli-110030	23.03.2018

## Annexure-III

**STAKEHOLDERS WHO HAVE ATTENDED THE HEARING FOR THE PETITION FILED BY DISCOMS, GENCOS, AND  
TRANSCO ON THE APPROVAL PETITION FOR TRUING UP OF EXPENSES UPTO FY 2016-17 AND ANNUAL TARIFF  
PETITION FOR FY 2018-19**

Sr. No.	Name	Address
1	Sh. Vivek Aggarwal	DMRC
2	Sh. Manoj Singhal	DMRC
3	Sh. Subodh Pandey,	DMRC
4	Sh. Satish Moza	DMRC
5	Sh. Reddy Sai Raj	DMRC
6	Sh. Sukhdev Raj, Kalkaji	South Delhi
7	Sh. Om Pal Singh Ahlawat	RWA Chhattapur Extn.
8	Sh. Ved Prakash Arya	RWA Mehrauli
9	Sh. Shankar Swami	RWA Mehrauli
10	Sh. Gyanendra	RWA Babar Pur
11	Sh. G. S. Kohli	RWA Vasant Kunj
12	Mrs. Mini Sree Kumar	RWA Pkt.-2, Mayur Vihar-I
13	Sh. Vishal Malhotra	Naraina
14	Sh. Harsh Puri	Galaxy Print Process
15	Sh. Rajender Singh	DMRC
16	Sh. Gokul Chander Mittal	Model Town
17	Sh. Gaurav Mittal	
18	Sh. Rohit Arora	RWA Krishan Nagar
19	Sh. Noor Mohd. Khurashi	Krishna Nagar
20	Sh. Shubham	DMRC
21	Sh. B. B. Tiwari	URD
22	Sh. Narender Kumar	RWA North East, Usman Pur
23	Sh. Kunwar Pratap Singh	RWA Bhajan Pura
24	Sh. Vijay Singh Rawat	RWA, Mayur Vihar Phase-II
25	Sh. Rajeev Kakaria	GK-I, RWA
26	Sh. Ashok Bhasin	NDRWF, Delhi
27	Sh. Harban Sharma	RWA Chandni Chowk
28	Sh. Kishan Kumar	RWA Chandni Chowk
29	Sh. Harsh Swaroop Bakshi	RWA Rohini
30	Sh. Dharmender Gupta	RWA Mangol Puri
31	Sh. H. M Sharma	Lajpat Nagar, Delhi
32	Sh. Saurav Gandhi	URD
33	Sh. Ramesh Chand	RWA Karol Bagh
34	Sh. Har Bhajan Singh	RWA Shashtri Nagar
35	Sh. Dharminder Kumar	RWA Pritam Pura
36	Sh. Jatin	ES&S Hospitality Services Inc.
37	Sh. Deepak Joshi,	RWA Dilshad Garden
38	Sh. J. G. Abrol	RWA Jasola
39	Sh. Mahesh Chand Chola	RWA Darya Ganj
40	Sh. Daya Ram Diwedi	Chandani Chowk RWA
41	Md. Etbar Ahmed	RWA Darya Ganj
42	Smt. Sudha Sharma	Mahila Panchayat Sumiti
43	Sh. Mazhar Ullah	RWA Gali Pattey Wali Darya Ganj
44	Sh. Man Mohan Verma	RWA Rohini
45	Sh. H. C. Dhupar	RWA Rohini
46	Sh. Prem Pal Sharma	RWA Sultan puri
47	Sh. Dharamveer	RWA Sultan Puri

Sr. No.	Name	Address
48	Sh. Dharam Pal Pawar	RWA Sultan Puri
49	Sh. Harmeet Singh	RWA Subzi Mandi
50	Sh. Dilip Chadha	RWA RP-I
51	Sh. Surender	RWA N.W. Sultan Pur
52	Sh. Mohan Kumar	D-1/249, Sultan Pur
53	Sh. Jagjeet Singh	RWA Hudson Line GTB Nagar
54	Sh. Prem Singh	RWA Khanpur
55	Sh. Balvinder Singh Thaper	RWA Vikas Puri
56	Sh. Paramjeet Singh	RWA Vikas Puri
57	Sh. Dharmender Kumar	RWA Vikas Nagar
58	Sh. Shushil Kumar	RWA, Nagloi
59	Sh. Harish Kumar	RWA Nagloi
60	Sh. Surender Saini	RWA Nangloi
61	Sh. Satya Galla.	Mercados Energy Markets India Pvt. Ltd
62	Sh. Shiv Kumar	RWA, Brijpuri
63	Sh. Surendra Sharma	RWA, Brijpuri
64	Sh. Rakesh Sharma	RWA Prem Nagar, Karawal Nagar
65	Sh. Vijay Batra	Kirti Nagar, Industrial Association
66	Sh. V. K. Malhotra,	DVB Pension Trust
67	Sh. Rajan Gupta	DVB Pension Trust
68	Capt. Anju	Dwarka Sector- 8
69	Dr. Naresh	Dwarka, Sector – 8
70	Sh. A. K. Dutta	Mayur Vihar Phase-II
71	Sh. Ashok Sikka	Kirti Nagar Industrial Association.
72	Sh. Jitender Tyagi	President URD
73	Sh. Karnail Singh	Kirti Nagar Indl. Area
74	Sh. Balbir Singh	Kirti Nagar Indl. Area
75	Smt. Poonam	MMTC
76	Smt. Anita Gupttrishi	MMTC
77	Sh. B.D. Sharma	RWA Mundka Division
78	Sh. Dharamveer	RWA Mundka Division