

## **TARIFF ORDER**

## True-up of the FY 2013-14 and Approval of Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2018-19

Petition No. 249/2017

For

Electricity Department, Government of Goa (EDG)

28th March 2018

JOINT ELECTRICITY REGULATORY COMMISSION For the State of Goa and Union Territories, 2nd Floor, HSIIDC Office Complex, Vanijya Nikunj, Udyog Vihar, Phase-V, Gurugram-122016 (Haryana) Phone: 0124-2875302 Fax: 0124-2342853 Website: www.jercuts.gov.in Email: secy-jerc@nic.in

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## List of abbreviations

Abbreviation	Full Form
A&G	Administration & General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
Ckt. Km	Circuit Kilometer
COD	Commercial Operation Date
Commission/JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
Cr	Crore
DELP	Domestic Efficient Lightening Program
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
EDG	Electricity Department, Govt. of Goa
EDF	Electricity Development Fund
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FAR	Fixed Asset Register
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
НТ	High Tension
IEX	Indian Energy Exchange Limited
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
KVA	Kilo Volt Ampere

Abbreviation	Full Form
KWh	Kilo Watt Hour
LT	Low Tension
MOD	Merit Order Dispatch
MU	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
NFA	Net Fixed Assets
NTPC	National Thermal Power Corporation
NVVNL	NTPC Vidyut Vyapar Nigam Limited
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Ltd.
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RTC	Round the Clock
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Dispatch Centre
SOP	Standard of Performance
SRPC	Southern Regional Power Committee
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff
WRPC	Western Region Power Committee

### **Before the**

### Joint Electricity Regulatory Commission

### For the State of Goa and Union Territories, Gurugram

QUORUM

Shri. M. K. Goel (Chairperson)

Smt. Neerja Mathur (Member)

Petition No. 249/2017

In the matter of

Approval for the True-up of the FY 2013-14, Annual Performance Review (APR) of the FY 2017-18 and Aggregate Revenue Requirement (ARR) and Tariff proposal for the FY 2018-19.

And in the matter of

Electricity Department, Government of Goa (EDG).....Petitioner

### ORDER

Dated: 28th March 2018

- a) This Order is passed in respect to the Petition filed by the Electricity Department, Government of Goa (EDG) (herein after referred to as "The Petitioner" or "EDG" or "The Licensee") for approval of True-up of the FY 2013-14, Annual Performance Review of the FY 2017-18, Aggregate Revenue Requirement (ARR) and Tariff proposal for the FY 2018-19 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").
- b) On receipt of the Petition, the Commission scrutinised its contents and requisitioned further information/clarifications on the data gaps observed in the Petition to take a prudent view of the Petition. The Commission also held a Technical Validation Session to determine its sufficiency and the veracity of the information submitted. Further, suggestions /comments/objections were invited from the public/stakeholders. A Public Hearing was held and the stakeholders/public were heard. The schedule of activities performed in the course of this quasi-judicial process are given below:

#### Table 1: Timelines w.r.t the Petition filed by EDG

Particular	Details
Date of Admission	11 <sup>th</sup> December 2017
Public Hearing	31 <sup>st</sup> January 2017
Technical Validation Session	18 <sup>th</sup> January 2018

c) The tariff, as detailed in the Chapter "Tariff Schedule," Open Access Charges and other provisions as approved in this Order shall come into force from 1<sup>st</sup> April 2018 and shall remain valid till further Orders of the Commission.

- d) The licensee shall publish the revised Tariff Schedule and the salient features of tariff within one week of receipt of the Order in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply.
- e) Ordered as above, read with the attached document giving detailed reasons, grounds and conditions.

-Sd-Neerja Mathur (Member) -Sd-M.K. Goel (Chairperson)

### JOINT ELECTRICITY REGULATORY COMMISSION (For the State of Goa and Union Territories)

Place: Gurugram Date: 28<sup>th</sup> March 2018

(Certified Copy)

Keerti Tewari

## 1. Chapter 1: Introduction

## 1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted the Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2 May, 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" (hereinafter referred to as "JERC" or "the Commission") vide notification no. 23/52/2003-R&R (Vol. II) dated 30 May, 2008.

JERC is an autonomous body responsible for regulation of the Power Sector in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity etc. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting the interests of consumers and ensuring supply of electricity to all areas.

### **1.2.** About Electricity Department, Government of Goa (EDG)

The Electricity Department was formed in January 1963 under the Government of Goa. It is the only licensee operating in the State of Goa for Transmission and Distribution of Electricity. The power requirement of the State is met through its share from Central Sector Generating stations (CGS), Co-Generation Plants & IPP's operating within the territory and from Open Market.

### 1.3. JERC Tariff Regulations, 2009

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 on 9<sup>th</sup> February 2009 applicable to the whole of the State of Goa and the Union Territories of Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep and Puducherry. The Regulations were applicable till the FY 2015-16 till the MYT Distribution Tariff Regulations, 2014 were notified by the Commission on 30<sup>th</sup> June 2014.

### 1.4. Multi-Year Distribution Tariff Regulations, 2014

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 on 30<sup>th</sup> June 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10<sup>th</sup> August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

### 1.5. Filing and Admission of the Present Petition

The Electricity Department, Government of Goa (EDG) filed the Petition for True-up of the FY 2013-14, APR of the FY 2016-17 and FY 2017-18 and ARR and Tariff Proposal for the FY 2018-19 vide letter dated 7<sup>th</sup> December 2017. On preliminary scrutiny of the Petition, certain data gaps were observed on which the reply of the Petitioner was sought. The Petition was also scrutinized in terms of the JERC (Conduct of Business) Regulations, 2009. The Petition was admitted on 11<sup>th</sup> December 2017 and numbered as Petition No. 249/2017. A letter indicating gaps in the information as well as the documentation was sent to the Petitioner.

### 1.6. Interaction with the Petitioner

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," except for the Hearing and Orders, denotes the Secretariat of the Commission responsible for carrying out technical due diligence and validation of data of the Petitions filed by the utilities, obtaining and analysing information/clarifications received from the utilities, and submitting relevant issues for consideration of the Commission.

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications/ justifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included Energy Sales, revenue from retail tariff, capitalisation, tariff proposal etc. The Petitioner submitted its response on the issue through various letters.

The Commission conducted the Technical Validation Session (TVS) with the Petitioner at the Commission's office in Gurugram, during which the discrepancies in the Petition were discussed 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. The following table provides the list of interactions with the Petitioner along with the date:

Table 2. Timennes of the interaction with the retubler			
S. No	Subject Date		
1	Issue of First Discrepancy Note	20 <sup>th</sup> December 2017	
n	2 Reply received from Petitioner 22 <sup>nd</sup> December 2017 15 <sup>th</sup> January 2018		
2			
3	<b>Technical Validation Session</b>	17 <sup>th</sup> January 2018	
4	Issue of 2 <sup>nd</sup> Discrepancy Note	18 <sup>th</sup> January 2018	
5	Reply received from Petitioner	7 <sup>th</sup> February 2018	
6	Issue of 3 <sup>rd</sup> Discrepancy Note	20 <sup>th</sup> February 2018	
7	Reply received from Petitioner	1 <sup>st</sup> March 2018	
8	Public Hearing	31 <sup>st</sup> January 2018	

### Table 2: Timelines of the interaction with the Petitioner

### 1.7. Notice for Public Hearing

Public Notices were published by the Commission in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing to be conducted by the Commission.

S. No.	Date	Name of Newspaper	Language	Place of Circulation
		The Times of India	English	Goa
1.	4 <sup>th</sup> January 2018	The Navhind Times	English	Goa
		Gomantak	Konkani (Marathi)	Goa
		The Times of India	English	Goa
2.	29 <sup>th</sup> January 2018	The Navhind Times	English	Goa
		Gomantak	Konkani (Marathi)	Goa

### Table 3: Details of Public Notices published by the Commission

Copies of the Public Notices published by the Commission for intimation of the Public Hearing are attached as Annexure 1 to this Order. These notices were also uploaded on the Commission's website.

The Public Notice was published by the Petitioner in the following newspapers for inviting objections/ suggestions from the stakeholders on the Tariff Petition:

Table 4: Details of Public Notices published by the Petitioner				
S. No.	S. No. Date Name of Newspaper Language		Place of Circulation	
1.		The Navhind Times	English	Goa
2.	3 <sup>rd</sup> January 2018	Gomantak	Konkani (Marathi)	Goa
3.		National Herald	English	Goa

Copies of the Public Notices published by the Petitioner for intimation of the Public Hearing are attached as Annexure 2 to this Order.

### **1.8.** Public Hearing

The Public Hearing was held on 31st January 2017 from 10:00 AM onwards at "Ravindra Bhawan" at Goa to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the hearing have been examined by the Commission. The issues discussed during the public hearing and/or written comment made by the stakeholders, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2 of this Order.

## 2. Chapter 2: Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's Views

### 2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments/objections from the public as per the provisions of the MYT Regulations, 2014.

The Public Hearing was held on 31<sup>st</sup> January 2018 from 10:00 AM onwards at Goa. During the Public Hearing, some of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written objections earlier, were also given an equal opportunity to present their views/suggestions in respect of the Petition.

The list of the stakeholders is attached as Annexure 3 to this Order.

### 2.2. Suggestions/ Objections, Response of the Petitioner and Commission's Comments

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/ observations to make the process responsive and efficient. The relevant observations of the stakeholders have been suitably considered by the Commission while finalizing this Tariff Order. The submissions of the stakeholders, response of the Petitioner and views of the Commission are summarized below:

### 2.2.1. Procurement of power from cheaper solar energy sources

#### Stakeholder's Comment:

The Petitioner should procure power from cheaper solar energy sources that will reduce the power purchase cost. Further, the status of fulfillment of RPO has not been submitted.

#### **Petitioner's Response:**

It is submitted that ED-Goa has almost complied with the backlog of the Renewable power obligations (RPO) up to FY 2016-17, ED-Goa further submits that from FY 2017-18 onwards ED-Goa has been procuring renewable Power as per requirement to meet the Renewable Power obligations on year on year basis. Government of Goa has issued Solar Power Policy 2017 to further enable cheaper and local power in the State of Goa. The consumers are also requested to avail the facility of net metering and earn on generating solar power and supplying to ED-Goa.

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

The Commission has taken note of the Petitioner's submission. The Commission has dealt appropriately with the compliance towards RPO for FY 2018-19 while approving the Power Purchase Cost of FY 2018-19 in the Chapter 6 of this Order. The Petitioner has not yet submitted the Petition for True-up of FY 2016-17, therefore, the Commission is unable to verify the Petitioner's submission of clearing all the pending backlog in FY 2016-17.

The Commission directs the Petitioner to give wide publicity to the Solar Policy, 2017 and facilitate the stakeholders in Rooftop Solar Power Generation within the State of Goa. In view of cheaper renewable power available now, the Petitioner needs to continue to purchase physical solar or non-solar power to fulfill its RPO compliance.

### 2.2.2. Power Supply in the State is not reliable

### Stakeholder's Comment:

The quality and reliability of supply in the State is very poor in the State. Further, Power distribution infrastructure is not capable of handling the growing power demand of the State.

### **Petitioner's Response:**

EDG has been taking several measures to improve the infrastructure of the State. ED-Goa has planned for the IT initiatives and distribution infrastructure improvement plan which broadly includes 400KV S/S at Xeldem/Dharbandora for interlinking Western Grid with Southern Grid, as any breakdown causes for black out or load shedding, additional 220/33KV S/S at Tuem, Saligao, Verna and inter connecting 220KV lines from Amona to Cuncolim, New 33/11KV Sub-station (Badem, Mandrem, Karaswada, Calangute, Sal, Altinho-Panaji, Navelim, Colva, Balli and Dhabal) to reduce loading on existing transformers, reduce 11KV feeder length and to cater additional growth, Underground cabling works, ABC works etc.. Further, EDG has implemented LED lighting scheme. The scheme also includes Centralized Control and Monitoring System (CCMS) for remote switching on/off of lights which will be effective from 1<sup>st</sup> April 2018.

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

The Commission has received various complaints against the Petitioner with regards to the quality and reliability of supply in the State. The Petitioner during the past few years has been undertaking lower capitalisation and R&M expenses than approved which clearly implies that enough efforts are not being undertaken to supply quality/reliable power to the consumers. The Commission directs the Petitioner to increase its efforts towards augmenting and maintaining the requisite infrastructure to meet the growing demand and avoid any kind of supply constraints to consumers.

### 2.2.3. Creation of new category for Electric Vehicles

### Stakeholder's Comment:

A new category for Electric Vehicle should be created that will cater to the increasing demand of power due to commercialization of Electric Vehicles.

### **Petitioner's Response:**

It is submitted that determination of tariff is a matter under purview of the Commission and is determined based on the principles of Electricity Act 2003 and National Tariff Policy 2006.

However ED-Goa submits that till the time there is development on a large scale on Electric Vehicles and Charging Stations, LT / HT Commercial Tariff be made applicable. For e.g. In Maharashtra presently LT/HT Commercial tariff is applicable if consumer uses the electricity for charging his own vehicles at his premises.

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

The Commission has noted the submission of the Petitioner. The Commission believes that the demand for charging infrastructure for electric vehicles will increase in the near future due to increased commercialization. However, the Commission doesn't find it practical to consider the consumers under this category under LT/HT Commercial, as suggested by the Petitioner. The Commission would require the Petitioner to submit data on the number of consumers, connected load and the anticipated demand to enable the Commission to determine the

tariff accurately as it will impact the Petitioner's revenue. The Petitioner in this regard is directed to submit a proposal for creation of any such category backed with the requisite data along with the next tariff petition.

### 2.2.4. Submission of Fixed Asset Register (FAR)

### Stakeholder's Comment:

The valuation of assets as per FAR submitted for FY 2013-14 has increased by almost two and a half times as compared to approved. The FAR has been prepared without any basis.

### **Petitioner's Response:**

In regard to the re-valuation of assets, it is submitted that the Commission in its Tariff order dated 27th June 2012 for FY 2011-12 had considered "Nil" opening value of Gross Fixed Asset (GFA) as Audited Accounts and Fixed Asset Register were not available from FY 2006-07 onwards. Accordingly ED-Goa was directed in the said order to undertake preparation of FAR & FS on commercial / regulatory principles.

The Commission in its Order dated 23<sup>rd</sup> May 2017 has approved Gross Fixed Assets (GFA) for FY 2011-12 and FY 2012-13 post its review & prudence check, as per Audited Accounts and also taking into consideration Fixed Asset Register.

It is submitted that it is misconception of objectioner that assets are revalued and audited without any basis. It is submitted that FAR is prepared by Independent agency and the values of FAR are part of audited annual accounts which is certified by CAG from time to time for respective financial years. It is humbly submitted that asset value is same as per original cost / book value and it is just that Commission is considering the GFA value in truing-up process after prudence check and on receipt of audited annual accounts only.

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

The Commission has noted the submission of the Petitioner. The valuation of the assets had been revised by the Commission in the last Tariff Order while undertaking the True-up of FY 2011-12 and FY 2012-13. This was done based on the audited FAR submitted by the Petitioner for the years prior to FY 2013-14 and after proper prudence check by the Commission. The Commission while undertaking the True-up of FY 2013-14 in this Order has considered the same opening GFA as the closing GFA as approved in the True-up of FY 2012-13. The addition in GFA has been approved based on the FAR submitted by the Petitioner for FY 2013-14 duly audited by an Independent Agency.

### 2.2.5. Wastage of electricity in Govt. offices

### Stakeholder's Comment:

Lights are on in government offices even during the daytime leading to wastage of power.

### **Petitioner's Response:**

The Petitioner clarified during the hearing that officers and staff of various government offices are being briefed regularly for conservation of electricity.

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

The Commission notes the submission of the Petitioner and advises it to regularly issue appropriate circulars to various departments/offices to make them aware about the benefits of conservation of electricity. Suitable stickers for electricity conservation at appropriate places may be pasted to remind the users to switch of the lights, when not required.

### 2.2.6. Implementation of Demand Side Management (DSM)

### Stakeholder's Comment:

The Petitioner should implement DSM which will help in reducing the cost of power and conserve electricity.

### **Petitioner's Response:**

EDG has taken various measures under Demand Side Management (DSM) program which include Energy Efficiency measures also. DSM Programs are aimed to reduce consumption at consumer end and lower the peak demand. DSM also includes use of energy efficient appliances by consumers. EDG has taken various measures under LED lighting scheme, replacement of around 1.95 Lakhs conventional street light fixtures has already been done. The scheme also includes Centralised Control and Monitoring System (CCMS) for remote switching on/off of lights. Besides this, EDG has also has been undertaking various DSM schemes such as:

- Jyotirmay Goa Scheme -around 8.20 lakhs LED bulbs (3 LED of 9 W to each household of Goa) were distributed under the scheme.
- UJALA (DELP) -Distribution of LED bulbs on subsidized cost to household consumers which can save energy by up to 80%.
- Street Lighting National Programme (SLNP) Replacement of 1.66 lakh Nos. existing conventional Street lights throughout the entire State of Goa by high quality energy efficient smart LED fixtures/lights with around 4200 Nos of Centralised Control and Monitoring System (CCMS).
- Demonstration of energy efficient technologies through demonstration projects and LED village campaign.

The Petitioner shall continue undertaking a lot of these kind of initiatives for increased energy saving energy and reduce the cost of power purchase.

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

The Commission has noted the submission of the Petitioner. The Petitioner should widely promote the initiatives among the public to create awareness. The stakeholder is requested to get in contact with the nearest EDG office to avail the benefits of these schemes. The Commission has allowed Rs 3.03 Cr towards DSM expenses in the ARR of FY 2018-19.

### 2.2.7. Submission of Energy Audit Report

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

EDG should provide an action plan with timelines for preparation of Energy Audit Report. In case of non-compliance, the Commission should initiate action.

#### **Petitioner's Response:**

DT metering is pending for 250 Distribution Transformer (DTs) (out of total 6154 DTs). Further, the department is also facing teething issues with respect to modems, sims, communications etc. where meters are installed and the same are being addressed. EDG aims to complete DT metering within next 4-6 months. EDG also submits that non-working energy meters are being replaced. Work Order for 1.50 Lakh meters has already been issued and work is expected to commence shortly. Order for another 1.50 Lakh meters will be placed by end of FY 2017-18. Once the above activities are completed, energy audit can be taken as per directives of the Commission.

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

The Commission directs the Petitioner to complete the process of DT and Feeder metering and take up the Energy Audit of the State on priority.

### 2.2.8. Unbundling and Corporatisation

### Stakeholder's Comment:

Unbundling and Corporatisation has still not happened.

#### **Petitioner's Response:**

It is submitted that ED-Goa has pursued this matter with Government of Goa and ED-Goa is yet to receive any specific directives on the same.

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

The Commission has directed the Petitioner to submit the proposal to the State Govt. by 30<sup>th</sup> June 2018. Till such time a decision is taken by the State Govt. ring fencing of the transmission functions should be initiated. Further, it is directed that the Petitioner should increase its efforts towards making the State Load Dispatch Center (SLDC) fully operational.

### 2.2.9. Issue of Solar Policy

#### Stakeholder's Comment:

The Petitioner has still not finalised the Solar Policy of the State.

#### **Petitioner's Response:**

It is submitted that Solar Energy Policy 2017 has been issued by Goa Energy Development Agency (GEDA) with due approval of Government of Goa.

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

The Commission has noted the Petitioner's response. The Petitioner is directed to widely publicise the Solar Policy and upload the same on its website for the benefit of the general public. The Petitioner is also directed to submit a copy of the Policy to the Commission.

### 2.2.10. Residential apartments are being rented out as Commercial/ Paying Guests accommodation and are still paying Domestic tariff.

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

Several tourists are staying in Rent-Back-Apartments in the coastal villages of Goa but pay residential rates instead of commercial, as the Department officials are making no attempt to take any action in the matter, thereby resulting in a revenue loss of crores of rupees.

#### **Petitioner's Response:**

It is submitted that there is already a provision in the Tariff Order dated 23<sup>rd</sup> May 2017 under LT & HT Commercial category for "Houses with Rent back facilities". The consumers having houses with rent back facilities are supposed to take LT/ HT Commercial connection (which has higher tariff than Domestic category).

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

The Commission has taken note of the Petitioner's submission. The Commission directs the Petitioner to ensure that every consumer is given connection based on the categories they come under to avoid any kind of malpractices. The stakeholder is requested to report specific cases, if any, to nearby EDG office so that necessary action can be taken in this regard.

### 2.2.11. Proposed tariff hike is not justified

### Stakeholder's Comment:

The proposed tariff hike to recover the revenue gap is not justified. No tariff hike should be done similar to the previous year.

### **Petitioner's Response:**

It is submitted that out of total revenue gap computed for FY 2018-19, the tariff hike of less than 5% is sought and rest is funded from the budgetary support. Last year there was no tariff hike and the entire burden was borne by the Government of Goa. Considering other inflations across sectors over 2 years which is in the range of 5-8% p.a., the tariff hike of less than 5% is justified. However determination of tariff is in the purview of the Commission.

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

The Commission has noted the Petitioner' submission. The Commission has determined the Revenue gap for the FY 2018-19 based on the revised estimate of Power Purchase Cost of FY 2018-19. The Commission believes that the tariff should progressively reflect the cost of supply. The Commission while determining the tariff for FY 2018-19 has considered the prudent cost of the Petitioner and has accordingly determined the tariff for each consumer category.

### 2.2.12. Implementation of LED Street Lights

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

Street Lights across many areas in the villages are yet to be deployed with LED Lights

#### **Petitioner's Response:**

EDG has already completed the replacement of around 1.95 Lakhs conventional street light fixtures. The scheme also includes Centralised Control and Monitoring System (CCMS) for remote switching on/off of lights. Installation of the same is in progress. Street light is to be maintained and monitored by M/s EESL for the period of 10 years. Work is targeted for completion by March 2018. This will have energy saving of ~27 MU every year.

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

The Commission has taken note of the Petitioner's submission. The Commission directs the Petitioner to expedite the process of replacing the conventional street lights with LED lights and submit a compliance status report of the same to the Commission at the earliest.

## 3. Chapter 3: True-up of FY 2013-14

### 3.1. Background

The Commission issued the Order on Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2013-14 on 31<sup>st</sup> March 2013. Subsequently, the Commission issued the Tariff Order for FY 2014-15, determining the Aggregate Revenue Requirement (ARR) and tariff for FY 2014-15 and Annual Performance Review of FY 2013-14 on 15<sup>th</sup> April 2014 (hereinafter referred to as the "APR Order").

The True-up of the FY 2013-14 is to be carried out as per Regulation 8 (2) of the JERC Tariff Regulations, 2009:

(2) (i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

(ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3) The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.

(6) In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.

(7) The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category."

In this Chapter, the Commission has analysed all the elements of actual revenue and expenses for the FY 2013-14 and has carried out the True up of expenses and revenue with reference to the actual figures (final) as per the audited accounts, after a prudence check and has permitted necessary adjustments in cases where variations are for reasonable and justifiable reasons.

### 3.2. Energy Sales

### **Petitioner's Submission**

The Petitioner has submitted the total quantum of energy sales for FY 2013-14 as 3070.56 MU as against an approved energy sales quantum of 2961.80 MU in the APR Order.

### **Commission's Analysis**

The Commission, after going through the submissions of the Petitioner including the audited accounts, has considered the energy sales as 3,070.56 MU as submitted by the Petitioner for the purpose of True-up of the FY 2013-14 as shown in the table on the next page:

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	800.00	844.23	844.23
2	LTD/L.I.G.	2.00	8.26	8.26
3	LTD Domestic Mixed	6.00	5.00	5.00
4	LTC/Commercial	292.00	280.97	280.97
5	LTP/Motive Power	89.00	74.41	74.41
6	LTP Mixed (Hotel Industries)	5.00	4.73	4.73
7	LTP Ice Manufacturing	8.00	8.00	8.00
8	LTAG/Agriculture	16.00	17.76	17.76
9	LTPL ( Public lighting )	24.00	37.23	37.23
10	LTPWW/Public Water works	6.00	2.08	2.08
11	LT Temporary	10.00	17.89	17.89
	Sub-Total	1258.00	1300.57	1300.57
	<b>B. HIGH TENSION SUPPLY</b>			
12	HT (Mixed)	112.00	117.88	117.88
13	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	532.00	517.37	517.37
14	HTI Industrial	628.00	619.33	619.33
15	HTAG ( Agriculture)	6.00	6.09	6.09
16	EHTI ( Industrial )	184.00	142.55	142.55
17	HT P.W.W. & Sewage system	138.00	138.12	138.12
18	HT. M.E.'s Defence Estt.	24.00	26.66	26.66
19	HTI ( Steel Rolling )	59.00	69.02	69.02
20	HTI / IT High Tech	20.00	66.23	66.23
21	HTI/Ice Manufacturing	0.00	0.85	0.85
22	Sale from EDG to GSPL (Div. VII)	0.00	8.70	8.70
23	HTI Hotel Industry	0.00	57.11	57.11
24	HT Temporary	0.00	0.06	0.06
	Sub-Total	1703.00	1769.99	1769.99
	Total	2961.80	3070.56	3070.56

### Table 5: Energy Sales (MU) trued-up by the Commission

The Commission approves the energy sales as 3070.56 MU in the True-up of FY 2013-14.

### 3.3. Inter-State Transmission loss

### **Petitioner's submission**

Petitioner has submitted the Inter-State transmission loss of 4.68% against a loss of 4.47% approved in the APR Order.

### **Commission's analysis**

The Commission has verified the Inter-State losses from the supporting documentary evidence submitted by the Petitioner and as per information available on WRPC/SRPC websites. The Commission accordingly trues-up the Inter-State Losses as shown in the table below.

	Table 6: Inter-State transmission loss (%)						
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission			
1	Inter-State Transmission Loss	4.47%	4.68%	4.68%			

### The Commission trues-up Inter-State Transmission Loss as 4.68% in the True-up of the FY 2013-14.

### 3.4. Intra- State Transmission & Distribution (T&D) loss

### **Petitioner's submission**

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 11.16% in the FY 2013-14 against an approved loss of 12.00%.

### **Commission's analysis**

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2013-14. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawal at state periphery, available on the Western and Southern Region Power Committee websites and the energy sales as approved above. Therefore, in accordance with the information available on the websites, the Commission approves Intra-State T&D loss of 11.16% for the FY 2013-14 against an approved loss of 12.00% in the APR Order.

The Petitioner in the Technical Validation Session (TVS) held at the Commission's office submitted that due to change in billing agencies, EDG has witnessed a transitional change in energy accounting and billing in the past few years prior to FY 2017-18 which has resulted in distortion in energy sales. The impact of the same can be observed in FY 2013-14 as well. Therefore, in the absence of reliable sales figures for FY 2013-14, the Commission has decided not to consider any incentive for the overachievement of T&D Loss target in the FY 2013-14.

The table below provides the Intra-State T&D loss approved in the APR of FY 2013-14, Petitioner's submission and as approved by the Commission now.

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	12.00%	11.16%	11.16%

The Commission, while Trueing up for FY 2013-14, has considered the actual Intra-State T&D loss of 11.16% for the FY 2013-14.

### 3.5. Power Purchase Quantum & Cost

### Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and Co-generating Companies like Goa Energy Pvt. Ltd and Goa Sponge & Power Ltd. Energy requirement is also met through NVVNL and through IPP (Reliance Infra). The Power Purchase Cost has been submitted as incurred by the Petitioner in FY 2013-14. The Power Purchase cost also includes ED, Cess, Incentive etc. and supplementary charges considered on actual basis.

The transmission charges comprise of transmission charges of Western Region and Southern Region.

With regards to Renewable Purchase Obligation (RPO), the Petitioner submitted that the matter has been pursued in case no. 61/2012. The Petitioner submitted that the Non-Solar RPO is being met through purchase of Co-generation power and the same has been acknowledged by the Commission vide its Order dated 27<sup>th</sup> December 2013 in case no.61/2012.

The power purchase quantum and cost for FY 2013-14, as submitted by the Petitioner has been shown in the following table:

S. No.	Source	Power Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
Α	Central Sector Power Stations					
Ι	NTPC	3181.02	241.72	428.33	40.05	710.10
	KSTPS	1645.01	91.43	154.89	21.04	267.37
	KSTPS - III	41.09	6.39	3.88	0.76	11.02
	VSTPS - I	231.57	18.03	31.75	5.92	55.69
	VSTPS - II	103.89	6.82	13.45	2.45	22.72
	VSTPS -III	92.82	9.80	12.03	1.85	23.68
	VSTPS-IV	49.77	7.30	6.48	0.40	14.17
	KGPP	30.71	7.96	8.30	(2.14)	14.12
	GGPP	30.33	10.39	8.52	(2.02)	16.89
	SIPAT- I	142.91	22.99	22.01	5.23	50.22
	RSTPS	725.58	43.37	152.30	4.40	200.07
	SIPAT- II	80.19	10.46	12.70	1.48	24.64
	Mouda	7.16	6.79	2.02	(1.13)	7.68
	Supplementary charges inclusive of rebate	-			1.82	1.82
II	RGPPL	13.94		8.71	(0.13)	8.58
III	NPCIL	200.21		51.98	(1.18)	50.80
	KAPS	117.98		28.34	(0.65)	27.69
	TAPS	82.23		23.64	(0.53)	23.11
IV	NET OVER- DRAWAL	32.34		24.19	0.00	24.19
В	Within State Generations					
Ι	CO- GENERATION	74.03	-	17.54	0.00	17.54
	Goa Energy Private Limited	67.65		16.08	0.00	16.08
	Goa Sponge & Power Limited	6.37		1.46	0.00	1.46
С	IPP					
	Reliance Infra	115.39		146.46	0.00	146.46
D	OTHER CHARGES	-	-	-	120.79	120.79
	PGCIL Transmission				120.79	120.79

#### Table 8: Power Purchase cost submitted by the Petitioner (in Rs Cr)

Joint Electricity Regulatory Commission (JERC)

S. No.	Source	Power Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
	Charges, Wheeling & Other Charges					
	Total	3616.94	241.72	677.20	160.71	1078.46

### **Commission's analysis**

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, Co- Generating Plants and IPP's. No power has been purchased through IEX/ Bilateral Purchase etc. The Petitioner submitted the overall Power Purchase cost as Rs 1078.46 Cr inclusive of transmission charges but exclusive of revenue from UI Underdrawal/ sale due to surplus power.

The Commission has verified the power purchase details as submitted by the Petitioner in its Petition with the publicly available information from the Regional Energy Accounts (REA) maintained by Western Region Power Committee (WRPC) for the Central Generating Stations (CGS). Further, apart from Western Region, the Petitioner also gets supply from the Southern Region from the NTPC's Ramagundam Thermal Power Station. The Commission has validated the power purchase details pertaining to this station from the publicly available information from the Regional Energy Accounts (REA) maintained by Southern Region Power Committee (SRPC). The Commission has verified the power purchase quantum and cost as per the monthly and station-wise bills submitted by the Petitioner. The cost has further been reconciled with the audited annual accounts of FY 2013-14.

The Petitioner has accounted for the revenue from UI Underdrawal separately and Income from Trading/Power Exchange as part of the Non- Tariff Income (NTI) and adjusted them both in the Overall ARR. Further, it has been noticed that the Petitioner although has considered the quantum of UI Underdrawal in the Total Power Purchase Quantum but has omitted the revenue pertaining to this UI Underdrawal in the Total Power Purchase Cost. The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2013-14 has considered both the Income from UI Underdrawal and Trading/Power Exchange along with the Power Purchase cost approved now.

Other expenses such as the Transmission Charges and the Other Charges submitted have been considered as per actuals incurred by the Petitioner.

The Petitioner submitted that no cost has been incurred towards the compliance of Renewable Purchase Obligation (RPO) in FY 2013-14. The compliance status of RPO has been discussed in detail in the subsequent section. The table below provides the summary of the power purchase quantum and the cost approved by the Commission for FY 2013-14.

S. No.	Source	Power Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
Α	Central Sector					
Α	Power Stations					
Ι	NTPC	3181.02	241.72	428.33	40.05	710.10
	KSTPS	1645.01	91.43	154.89	21.04	267.37
	KSTPS - III	41.09	6.39	3.88	0.76	11.02
	VSTPS - I	231.57	18.03	31.75	5.92	55.69

#### Table 9: Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission

Joint Electricity Regulatory Commission (JERC)

True-up of FY 2013-14

No.	Source	Power Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
	VSTPS - II	103.89	6.82	13.45	2.45	22.72
	VSTPS -III	92.82	9.80	12.03	1.85	23.68
	VSTPS-IV	49.77	7.30	6.48	0.40	14.17
	KGPP	30.71	7.96	8.30	(2.14)	14.12
	GGPP	30.33	10.39	8.52	(2.02)	16.89
	SIPAT- I	142.91	22.99	22.01	5.23	50.22
	RSTPS	725.58	43.37	152.30	4.40	200.07
	SIPAT- II	80.19	10.46	12.70	1.48	24.64
	Mouda	7.16	6.79	2.02	(1.13)	7.68
	Supplementary charges inclusive of rebate	-			1.82	1.82
II	RGPPL	13.94		8.71	(0.13)	8.58
	NIDON					
III	NPCIL	200.21		51.98	(1.18)	50.80
	KAPS	117.98		28.34	(0.65)	27.69
	TAPS	82.23		23.64	(0.53)	23.11
IV	Unscheduled Interchange/ Sale of Surplus Power/ Trading	32.34	-	12.58	-	12.58
	UI Over-drawal	107.02	-	24.19	-	24.19
	Less: UI Underdrawal/ Income from sale of Surplus Power/Trading	74.68	-	11.61	-	11.61
В	Within State Generations	189.42	_	164.00	-	164.00
Ι	Co- Generation	74.03	-	17.54	0.00	17.54
	Goa Energy Private Limited	67.65		16.08	0.00	16.08
	Goa Sponge & Power Limited	6.37		1.46	0.00	1.46
II	IPP	115.39	-	146.46	0.00	146.46
	Reliance Infra	115.39	-	146.46	0.00	146.46
С	Other Charges	-	-	-	120.79	120.79
C	PGCIL Transmission				120.79	120.79
	Charges, Wheeling & Other Charges					

The Commission approves power purchase quantum of 3616.94 MU and cost of Rs 1066.85 Cr in the True-up of the FY 2013-14.

### 3.6. Renewable Purchase Obligation (RPO)

As per Clause 1, Sub-clause (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."

The Commission, in its Business Plan Order dated 22<sup>nd</sup> December 2015 issued in the Petition no. 186/2015, had reiterated that all the pending RPOs upto the FY 2015-16 must be fulfilled by the Petitioner by 31<sup>st</sup> March 2016 and no backlog would be allowed to be carried forward to the MYT Control Period from FY 2016-17 to FY 2018-19.

The Petitioner for FY 2013-14 has not incurred any costs towards compliance of RPOs as mentioned in the previous section. The Petitioner has further submitted that it has completely fulfilled its RPO (both solar and Non-solar) target till FY 2015-16 partly by way of purchase of physical power and partly by RECs.

The Petitioner had made the similar submission before the Commission in the True-up of FY 2011-12 and FY 2012-13 in the previous Tariff Order. The Commission at that time had not accounted for any cost or disincentive towards non-compliance of RPO till FY 2012-13. The Commission believed that since the actual cost towards compliance has been incurred only in FY 2015-16, therefore, the same shall be accounted for in the True-up for FY 2015-16.

In view of the above and keeping similar approach as adopted by the Commission towards RPO Compliance in True-up of FY 2011-12 and FY 2013-14, the Commission has not considered any cost towards RPO compliance in the FY 2013-14. The same shall be considered at the time of True-up of the FY 2015-16.

### 3.7. Energy Balance

### **Petitioner's submission**

The Petitioner has submitted the energy balance as shown in the following table.

S. No	Particulars	Petitioner's Submission
1	Energy Input at Goa Periphery	3267.02
2	Total Power Scheduled/ Purchased at Goa Periphery	
	Total Schedule Billed Drawal - CGS	3395.17
	Add: Over-drawal	107.02
	Add: Power purchase from NVVN / Banking	-
	Add: Power purchase from Traders/ Open Market	-
	Less: Underdrawal	74.68
	Add: Renewable Power	-
	Less: Power diverted to Exchange	-
	Total	3427.52
3	PGCIL Losses - MUs	160.50

### Table 10: Energy Balance (MU) submitted by Petitioner

S. No	Particulars	Petitioner's Submission
	PGCIL Losses - %	4.68%
4	Total Power Purchased within Goa State	
	Add: Co-generation	74.03
	Add: Independent Power Producers (IPP)	115.39
	Total	189.42
5	Total Power Purchase availability after PGCIL Losses	3456.44
	Less: Retail Sales to Consumers	3070.56
	Distribution Losses - MUs	385.88
6	Distribution Losses - %	11.16%

#### **Commission's analysis**

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for FY 2013-14 has been derived. The Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance approved in the APR of FY 2013-14, the Petitioner's submission and now trued-up by the Commission.

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
Α	ENERGY REQUIREMENT			
1	Energy sales within the State/UT	2961.80	3070.56	3070.56
2	Distribution losses			
	%	12.00%	11.16%	11.16%
	MU	385.72	385.72	385.72
3	Energy required at State Periphery	3365.68	3456.28	3456.28
В	Energy Transactions at Periphery			
1	Energy Availability from CGS stations	3313.76	3423.93	3423.93
(a)	Total Availability from sources Outside State	3225.74	3234.51	3234.51
(b)	Total Availability from sources within State	88.02	189.42	189.42
2	UI Over Drawal	77.75	107.02	107.02
3	UI/Under drawal	33.58	74.68	74.68
4	Banking Arrangement	7.75	-	-
5	Total Availability at State Periphery (1+2-3+4)	3365.68	3456.28	3456.28

### Table 11: Energy Balance (MU) approved by Commission at State Periphery

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

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The O&M Expenses have been approved in accordance with the Tariff Regulations, 2009 and the audited accounts submitted by the Petitioner for FY 2013-14.

### 3.8.1. Employee Expenses

### **Petitioner's submission**

The Petitioner has incurred actual employee expenses of Rs 170.07 Cr against the approved expenses of Rs 144.21 Cr in the APR of FY 2013-14.

The following table provides the employee expenses as submitted by the Petitioner:

S. No	Particulars	Petitioner's Submission		
1	Salary			
2	Wages			
3	Stipend	170.07		
4	Transport Allowance			
5	Overtime allowance			
6	Total	170.07		
7	Less: Add/Deduct share of others	-		
8	Total	170.07		
9	Less: Amount capitalized	-		
10	Net amount	170.07		
11	Add: Pension/ DA and other Provision	-		
12	Total Employee Expenses	170.07		

The Petitioner further submitted that the Employee Expenses for FY 2013-14 are on the higher side, on account of increase in Dearness Allowance, HRA and travel allowance, out of which the Dearness Allowance is an uncontrollable factor. The Dearness Allowance accounts to approx. 35% to 40% of the total employee expenses.

### **Commission's analysis**

The Commission observes that the employee expenses approved in the past were based on the estimates prepared on cash basis and not accrual basis. The Petitioner had submitted and prepared the audited accounts prepared on commercial principles for the first time in the previous Tariff Order while undertaking the True-up of FY 2011-12 and FY 2012-13.

Since, the Base Employee Expenses considered while projecting the Employee Expenses for FY 2013-14 in the APR of FY 2013-14 were determined differently, the Commission finds it appropriate to consider the actual employee costs as available in the audited accounts for the purpose of the True-up of the FY 2013-14.

Further, the Petitioner has considered an expense towards CGRF of Rs 0.33 Cr separately in the ARR. The Commission, for the purpose of True-up, has considered this expense along with the Employee Expenses due to its inherent nature.

The table below provides the employee expenses approved in the APR Order, submitted by the Petitioner and now approved by the Commission.

	Table 13: Employee Expenses approved by Commission (In Rs Cr)				
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	
1	Employee Expenses	144.21	170.07	170.07	
2	Expense towards CGRF	-	-	0.33	
3	<b>Total Employee Expenses</b>	144.21	170.07	170.40	

The Commission approves Employee Expenses of Rs 170.40 Cr in the True-up of FY 2013-14.

### 3.8.2. Administrative and General (A&G) Expenses

### Petitioner's submission

The Petitioner has incurred A&G expenses of Rs 18.54 Cr against the approved expenses of Rs 9.08 Cr in the APR Order.

The following table provides the A&G expenses as submitted by the Petitioner:

S. No.	Particulars	Petitioner's Submission
1	Travelling Expenses	0.39
2	Office Expenses	13.51
3	Regulatory Expenses (License + Petition Fees)	0.00
4	Petrol, Oil, Lubricant (P.O.L)	0.00
5	Rent, Rates & Taxes	0.29
6	Advertisement & Publicity	0.26
7	Professional & Special Services	0.97
8	Other A&G Charges	1.46
9	Overtime Allowance	0.00
10	Minor Works	1.66
11	Legal, Professional & Special Service Charges	0.00
12	Total A&G Expenses	18.54

### Table 14: A&G Expenses submitted by Petitioner (In Rs Cr)

### **Commission's analysis**

Similar to the approach followed while approving the Employee Expenses, the Commission approves the A&G Expenses as per the audited accounts for the purpose of True-up of the FY 2013-14. The table below provides the A&G Expenses approved in the APR of FY 2013-14, the Petitioner's submission and the expenses now approved by the Commission.

### Table 15: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	9.08	18.54	18.54

The Commission approves the Administrative & General (A&G) expenses of Rs 18.54 Cr in the True-up of FY 2013-14.

### 3.8.3. Repair & Maintenance Expenses (R&M)

### **Petitioner's submission**

The Petitioner has incurred R&M expenses of Rs 21.45 Cr against the approved expenses of Rs 19.61 Cr in the APR Order. The Petitioner submitted that it has been undertaking various R&M activities as a step towards improvement of systems, reduction in breakdowns, and reduction in response time and increasing preventive maintenance. R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standards of Performance of the Petitioner.

### Commission's analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the R&M Expenses as per actual audited accounts of FY 2013-14:

Table 16: R&M Expenses approved by Commission (In Rs Cr)				
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	19.61	21.45	21.45

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 21.45 Cr in the Trueup of FY 2013-14.

### 3.8.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M Expenses approved in the APR of FY 2013-14, Petitioner's submission and O&M now trued-up by the Commission.

	Table 17. Oaki Expenses approved by commission (in As Cr)			
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	144.21	170.07	170.40
2	Administrative & General Expenses (A&G)	9.08	18.54	18.54
3	Repair & Maintenance Expenses	19.61	21.45	21.45
	Total Operation & Maintenance Expenses	172.90	210.06	210.39

### Table 17: O&M Expenses approved by Commission (In Rs Cr)

The Commission approves the Operation & Maintenance (O&M) expenses of Rs 210.39 Cr in the True-up of FY 2013-14.

### 3.9. Capitalisation

### **Petitioner's submission**

The Petitioner submitted the actual capitalisation for the FY 2013-14 as Rs 66.35 Cr against an approved capitalization of Rs 191.44 Cr

#### **Commission's analysis:**

The Commission with regards to capitalisation submitted by the Petitioner, sought details of the assets created out of Loan/ Equity/ Govt. Grant/ Consumer Contribution etc. In reply, the Petitioner submitted that majority of capital assets are created out of the equity contribution from Govt. of Goa and the actual borrowing of loan is only to the extent of the R-APDRP scheme. The capitalization is inclusive of assets created out of the Electricity Development Fund which is treated as Government Grant. The Petitioner further submitted that no assets have been created out of Consumer Contribution.

It is observed that the capital expenditure and capitalisation achieved by the Petitioner is much lower than approved by the Commission in the APR Order. Lower capital expenditure signifies that enough efforts have not been undertaken in enhancing the reliability of supply to consumers. It also signifies that sufficient measures aren't being taken to provide electricity supply to un-electrified areas and equipping the distribution infrastructure with the growing demand. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for improving the service quality and targeting 24x7 supply to all consumers.

The Commission has examined the Fixed Asset Register (FAR) as submitted by the Petitioner in detail and accordingly approves the capitalisation as shown in the following table.

	Table 18: Capitalisation approved by Commission (In Rs Cr)				
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	
1	RAPDRP Scheme	-	10.06	10.06	
2	Electricity Development Fund (EDF)	-	20.00	20.00	
3	Other Plan Schemes	-	36.29	36.29	
	Total Capitalisation	191.44	66.35	66.35	

### Table 19. Conitalization annound by Commission (In Ba (n)

The Commission approves Capitalisation of Rs 66.35 Cr in the True-up of FY 2013-14.

### 3.10. Depreciation

### **Petitioner's submission**

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2013-14. The depreciation is arrived in annual accounts for FY 2013-14 based on the rates specified by the Commission in the Tariff Regulations, 2009.

The depreciation as claimed by the Petitioner has been tabulated in the table below:

### Table 19: Depreciation submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	816.84
2	Addition During the FY	66.35
3	Adjustment/Retirement During the FY	0.00
4	Closing Gross Fixed Assets	883.20
	Depreciation	<b>39.5</b> 7

### **Commission's analysis**

In respect of depreciation, the Commission has followed Regulation 26 of the Tariff Regulations 2009, as under:

"26. Depreciation

(1) For the purpose of tariff, depreciation shall be computed in the following manner:

(i) The value base for the purpose of depreciation shall be the historical cost of the assets, that is actual expenses limited to approved capital cost where such capital cost has been approved by the Commission:

Provided that land is not a depreciable asset and its cost shall be excluded from the capital cost while computing depreciation.

(ii) The historical cost of the asset shall include additional capitalization.

(iii) The historical cost shall include foreign currency funding converted into equivalent rupees at the exchange rate prevalent on the date when foreign currency was actually availed but not later than the date of commercial operation.

(iv) Depreciation for generation and transmission assets shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

As per the norms specified in the Tariff Regulations, 2009 the Commission has verified the asset wise capitalisation of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2009, given in the following table:

Table 20: Depreciation Rate (%)			
Description	Rate		
Plant & Machinery	5.28%		
SCADA Centre	5.28%		
Testing & Measuring	5.28%		
Equipment	5.2070		
Lines & Cables	5.28%		
Buildings	3.34%		
Vehicles	9.50%		
Furniture & Fixtures	6.33%		
Office Equipment	6.33%		
Computers & Others	15.00%		
Land	0.00%		

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Based on the above depreciation rates and the actual asset addition during the year the weighted average depreciation rate is computed as 5.27% against a rate of 5.28% approved in the APR Order. The Commission has not considered depreciation on assets created from the Electricity Duty Fund as the same has been treated as a Grant from the Government of Goa.

The Commission has calculated the depreciation on average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the closing GFA as approved in the True-Up of FY 2012-13, in the Order dated 23rd May 2017. It is pertinent to mention here that the Commission had revised the GFA value in accordance with the Fixed Asset Register (FAR) of FY 2011-12 and FY 2012-13 while undertaking the True-up of the respective years. Accordingly, the Commission approves the GFA and Depreciation as per the revised opening balance of FY 2013-14. The following table provides the calculation of depreciation during the FY 2013-14:

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	207.30	816.84	816.84
2	Addition During the FY	191.44	66.35	66.35
3	Less: Addition on account of EDF/ Grant	0.00	0.00	20.00
4	Closing Gross Fixed Assets	398.74	883.20	863.19
5	Average Gross Fixed Assets	303.02	-	840.02
6	Weighted average Rate of Depreciation (%)	5.28%	-	5.27%
	Depreciation	16.00	<b>39.5</b> 7	44.29

### Table 21: Depreciation approved by Commission (In Rs Cr)

The Commission approves depreciation of Rs 44.29 Cr in the True-up of FY 2013-14.

### 3.11. Interest and Finance Charges

### **Petitioner's submission**

The Petitioner submitted that majority of capital assets are created out of the equity contribution from the Government of Goa. Interest on Loan has been estimated based on the normative loan calculation whereby 70% of the opening GFA and the capitalization during the year have been considered as normative debt. The Interest expense arrived is based on normative loan considered to the extent of capitalization during the year after deducting the Electricity Duty available as Grant.

Opening balance of normative loan for FY 2013-14 considered as per the approved normative loan in truing up of FY 2012-13. Further, the rate of interest has been considered as State Bank of India Prime Lending Rate (SBI PLR) of 14.45% (rate as on 1<sup>st</sup> April 2013).

In addition to the above, the Petitioner has also claimed certain financial charges related to bank charges, LC charges, etc.

### **Commission's analysis:**

Regulation 25 of the Tariff Regulations, 2009 states:

" 1) For existing loan capital interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the rate of interest and schedule of repayment as per the terms and conditions of relevant agreements.

2) Interest and finance charges on loan capital for new investments shall be computed on the loans, duly taking into account the rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall, however, be restricted to the prevailing Prime Lending Rate of the State Bank of India." (Read SBI Advance Rate)

Further as per Regulation 23 of the said Tariff Regulations 2009:

### "23. Debt-Equity Ratio

1) For the purpose of determination of tariff, debt-equity ratio in case of existing, ongoing as well as new projects commencing after the date of notification of these Regulations shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff:

2) Provided that the Commission may, in appropriate cases, consider equity higher than 30% for the purpose of determination of tariff, where the generating company or the licensee is able to establish to the satisfaction of the Commission that deployment of equity more than 30% is in the interest of the general public: .

3) The debt and equity amounts arrived at in accordance with sub-regulation (1) above shall be used for all purposes including for determining interest on loan, return on equity, Advance against Depreciation and Foreign Exchange Rate Variation.

4) Provided that in the case of an Integrated Utility, till the time it remains Integrated Utility, it shall be entitled to return on its capital base as per Schedule VI to the repealed Electricity (Supply) Act, 1948."

Accordingly, the Commission for the purpose of funding of the capitalisation has considered the normative debtequity ratio of 70:30. The addition in loan has been considered with respect to the total capitalization during the year excluding the assets created out of the Electricity Duty Fund.

The Commission for the purpose of calculation of Interest on Loan has considered an interest rate equivalent to the SBI PLR @ 14.45%, as on 1<sup>st</sup> April 2013. The interest has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved in the True-Up of FY 2012-13. Repayment of the loan has been considered at 10% of the opening loan amount. Additionally, the Commission also allows expenditure towards financing charges as per actuals as reflected in the annual accounts.

The following table provides the Interest and Finance charges as approved by the Commission:

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	136.29	148.07	148.07
2	Add: Normative Loan During the year	134.01	28.22	32.45
3	Less: Normative Repayment equivalent to 10% of opening normative loan	13.63	14.81	14.81
4	Closing Normative Loan	256.67	161.48	165.71
5	Average Normative Loan	196.48	154.78	156.89
6	Rate of Interest (%)	7.99%	14.45%	14.45%
7	Interest on Loan	15.70	22.37	22.67
8	Financing Charges	1.00	1.48	1.48
	Interest and Finance Charges	16.70	23.84	24.15

### Table 22: Interest and Finance charges approved by Commission (In Rs Cr)

The Commission approves Interest and Finance Charges of Rs 24.15 Cr in the True-up of the FY 2013-14

### 3.12. Return on Capital Base

### **Petitioner's submission**

The Petitioner has calculated the return on capital base at 3%. The return is calculated on the Net Fixed Assets (NFA) considering Gross Block inclusive of Capital Works in Progress (CWiP) and thereby deducting the accumulated depreciation.

### Commission's analysis:

Regulation 24 (1) of the JERC Tariff Regulations, 2009 with regards to Return in Equity specifies the following:

"Subject to the proviso to Regulation 23(2), Return on Equity shall be computed on the paid up equity capital determined in accordance with Regulation 23 and shall be guided by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 as amended by the CERC from time to time. The same principles will apply for distribution business also as far as possible."

The Commission, similar to the methodology adopted in the True-ups of FY 2011-12 and FY 2012-13 in the Tariff Order of last year, has determined the Return on Capital Base based on the Gross Fixed Assets as approved above and the Opening Cumulative Depreciation as on 1<sup>st</sup> April 2013, as reflected in the audited annual accounts. The table below shows the computation of the Return on Capital Base as approved in the APR Order, the Petitioner's submission and the Return now approved by the Commission.

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Now Approved by Commission
1	Gross Fixed Assets at the beginning of FY	207.30	1304.08	816.84
2	Less: Opening accumulated depreciation as per annual audited accounts	12.13	217.42	217.42
3	Net Fixed Assets	195.17	1086.66	599.42
	Return at 3% of NFA	5.86	32.60	17.98

### Return on Capital Base approved by Commission (In Rs Cr)

#### The Commission approves a Return on Capital Base as Rs 17.98 Cr in the True-up of FY 2013-14.

## 3.13. Interest on Security Deposits

### **Petitioner's submission**

The Interest on Security Deposit calculated by the Petitioner on normative basis has been shown in the table below:

S. No	Particulars	Petitioner's Submission
1	Opening Security Deposit	17.17
2	Add: Deposits During the year	8.26
3	Less: Deposits refunded	4.33
4	Closing Security Deposit	21.09
5	Average Security Deposit	19.13
6	Rate of Interest (%)	8.50%
7	Interest on Security Deposit	1.63
8	Interest paid to consumers	0.00

### Table 23: Interest on Consumer Security Deposits submitted by Petitioner (In Rs Cr)

The Petitioner has determined the Interest on Security Deposits on normative basis as per Tariff Regulations, 2009 but has not considered the same in the ARR as no interest has been paid to consumers in the FY 2013-14.

### Commission's analysis:

As the Petitioner has not paid any Interest on Security Deposit to consumers, the Commission does not approve any Interest on Security Deposit in FY 2013-14. The following table provides the interest on security deposit as approved in the APR of FY 2013-14, the Petitioner's submission and the interest now approved by the Commission:

### Table 24: Interest on Consumer Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Interest on Security Deposit	5.42	0.00	0.00

The Commission approves Interest on Security Deposit as nil in the True-up of FY 2013-14.

### 3.14. Interest on Working Capital

### **Petitioner's submission**

The Petitioner has determined the Interest on Working Capital on normative basis considering sum of the following:

- a. Power purchase cost
- b. Employees cost
- c. Administration & general expenses
- d. Repair & Maintenance expenses.
- e. Sum of two months requirement for meeting Fuel cost.

The Interest Rate has been considered as SBI PLR as on 1st April, 2013.

### Commission's analysis:

As per Regulation 29 of the Tariff Regulations, 2009:

"(3) Subject to prudence check, the working capital for integrated utility shall be the sum of one month requirement for meeting:

- a. Power purchase cost
- b. Employees cost
- c. Administration & general expenses
- d. Repair & Maintenance expenses.
- e. Sum of two month requirement for meeting Fuel cost.

5) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of State Bank of

India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

The Commission has considered the calculation of the different components of the Working Capital on the basis of the stipulated norms. The Commission has deducted average consumer security deposit from the Working Capital requirement as reflected in the audited annual accounts of FY 2013-14. The Commission has considered the SBI PLR as applicable on 1st April 2013. Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 25: Interest on Working Capital approved by Commission (In Rs Cr)						
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Now Approved by Commission		
1	Power Purchase Cost for one month	77.09	89.87	88.90		
2	Employee Cost for 1 month	12.02	14.17	14.20		
3	A&G Cost for 1 month	0.76	1.55	1.55		
4	R&M Cost for 1 month	1.63	1.79	1.79		
5	Total Working Capital for 1 month	91.50	107.38	106.44		
6	Average Security Deposit	64.95	17.17	19.13		
7	Total Working Capital considered for 1 month	26.55	90.21	87.31		
8	SBI PLR	14.45%	14.45%	14.45%		
	Interest on Working Capital	3.84	13.04	12.62		

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The Commission approves the Interest on Working Capital as 12.62 Cr in the True- up of FY 2013-14.

### 3.15. Provision for Bad & Doubtful Debts

### Petitioner's submission

The Petitioner submitted that it has created a provision of Rs 2.96 Cr towards Bad and Doubtful Debts in the annual accounts of FY 2013-14.

#### **Commission's analysis:**

As specified in Regulation 28 of the Tariff Regulations, 2009 (to be read with the format):

"The Commission may, after the generating company/licensee gets the receivables audited, allow a provision for bad debts up to 1% of receivables in the revenue requirement of the generating company/licensee."

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2013-14. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts.

The Commission approves nil provision of Bad & Doubtful Debts in the True-up of FY 2013-14.

# 3.16. Non-Tariff Income (NTI)

### **Petitioner's submission**

The Petitioner submitted NTI of Rs 17.02 Cr in the True-Up of FY 2013-14 against Rs 22.55 Cr approved by the Commission in the ARR for FY 2013-14. The Non –Tariff Income as submitted by the Petitioner has been shown in the table below:

S. No	Particulars	Petitioner's Submission
1	Meter Rent	3.81
2	Revenue from Power Exchange	0.75
3	Misc./Other Receipts	11.94
4	Income from trading of Power	0.52
	Total	17.02

### Table 26: Non- Tariff Income as submitted by Petitioner (In Rs Cr)

### Commission's analysis:

The Commission has authenticated the submission of the Petitioner from the audited accounts and found the same to be correct. Further, the Commission as discussed while truing up the Power Purchase Cost had considered the revenue from Trading of Power and Power Exchange as part of the Power Purchase Cost. Accordingly, the Commission approves the same remaining NTI as submitted by the Petitioner. The NTI approved in the APR Order, Petitioner's submission and now approved by the Commission is shown in the table below:

### Table 27: Non- Tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Meter Rent	-	3.81	3.81
2	Revenue from Power Exchange	-	0.75	-
3	Misc./Other Receipts	-	11.94	11.94
4	Income from trading of Power	-	0.52	-
	Total	23.22	17.02	15.76

### The Commission approves Non-Tariff Income of Rs 15.76 Cr in the True-up of FY 2013-14.

### 3.17. Revenue from Sale of Surplus Power

### **Petitioner's submission**

The Petitioner has earned a revenue of Rs 10.34 Cr from sale of surplus power/ UI Underdrawal.

### **Commission's analysis:**

The Commission as discussed while approving the Power Purchase Cost has considered the revenue from sale of surplus power/ UI Underdrawal along with the Total Power Purchase Cost due to its inherent nature.

The revenue from sale of surplus power/ UI Underdrawal as approved in the APR Order, Petitioner's submission and now trued-up by the Commission is shown in the following table:

	Table 28: Non- Tariff Income approved by Commission (In Rs Cr)					
S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission		
1	Revenue from sale of surplus power/ UI Underdrawal	8.38	10.34	10.34		

The Commission approves Rs 10.34 as revenue from sale of surplus power/ UI Overdrawal and has considered the same along with the Total Power Purchase cost approved in the True-up of FY 2013-14.

# 3.18. Aggregate Revenue Requirement (ARR)

### **Petitioner's submission**

Based on the expenses as detailed above, the net aggregate revenue requirement of Rs 1373.50 Cr is submitted for approval in the True-up of FY 2013-14.

### **Commission's analysis**

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2013-14 as given in the following table:

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	933.41	1078.46	1066.85
2	Provision for RPO Compliance	29.42	10/8.40	1000.05
3	Operation & Maintenance Expenses	172.90	210.06	210.39
4	Depreciation	16.00	39.57	44.29
5	Interest and Finance charges	16.70	23.84	24.15
6	Interest on Working Capital	3.84	13.04	12.62
7	Interest on Security Deposit	5.42	0.00	0.00
8	Return on Equity	5.86	32.60	17.98
9	Provision for Bad Debt	0.00	2.96	0.00
10	Other Expenses	0.56	0.33	0.00
12	Total Revenue Requirement	1184.11	1400.86	1376.27
13	Less: Non-Tariff Income	22.55	17.02	15.76
14	Revenue from sale of surplus power/UI Overdrawal	8.38	10.34	_*
	Net Revenue Requirement	1153.17	1373.50	1360.51

### Table 29: Aggregate Revenue Requirement approved by Commission for FY 2013-14 (In Rs Cr)

\*Adjusted in Power Purchase Cost

The Commission approves net Aggregate Revenue Requirement of Rs 1360.51 Cr in the True-up of FY 2013-14.

# 3.19. Revenue at existing Retail Tariff

### **Petitioner's submission**

The Petitioner has submitted the net actual revenue for the FY 2013-14 as Rs 1060.29 Cr against revenue of 990.86 Cr approved by the Commission in the APR Order. The table below provides the revenue at existing tariff as submitted by the Petitioner:

S. No	Category	Sales (MU)	Total Revenue (Rs Cr)	ABR (Rs/kwh)
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	844.23	172.74	2.05
2	LTD/L.I.G.	8.26	1.15	1.39
3	LTD Domestic Mixed	5.00	1.67	3.34
4	LTC/Commercial	280.97	119.86	4.27
5	LTP/Motive Power	74.41	26.85	3.61
6	LTP Mixed (Hotel Industries)	4.73	2.62	5.54
7	LTP Ice Manufacturing	8.00	2.60	3.25
8	LTAG/Agriculture	17.76	3.20	1.80
9	LTPL ( Public lighting )	37.23	13.39	3.60
10	LTPWW/Public Water works	2.08	0.99	4.78
11	LT Temporary	17.89	13.33	7.45
	Sub-Total	1300.57	358.39	2.76
	<b>B. HIGH TENSION SUPPLY</b>			
12	HT ( Mixed )	117.88	52.15	4.42
13	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	517.37	193.00	3.73
14	HTI Industrial	619.33	239.96	3.87
15	HTAG ( Agriculture)	6.09	1.35	2,22
16	EHTI ( Industrial )	142.55	56.82	3.99
17	HT P.W.W. & Sewage system	138.12	69.50	5.03
18	HT. M.E.'s Defence Estt.	26.66	9.70	3.64
19	HTI (Steel Rolling)	69.02	28.04	4.06
20	HTI / IT High Tech	66.23	24.43	3.69
21	HTI/Ice Manufacturing	0.85	0.33	3.87
22	Sale from EDG to GSPL (Div. VII)	8.70	3.61	4.15
23	HTI Hotel Industry	57.11	22.93	4.01
24	HT Temporary	0.06	0.08	11.56
	Sub-Total	1769.99	701.90	3.97
	Total	3070.56	1060.29	3.45

### Table 30: Revenue at existing tariff submitted by the Petitioner for FY 2013-14 (In Rs Cr)

### **Commission's analysis**

The Commission has verified revenue from the sale of power within the State in the FY 2013-14 from the audited accounts.

The category-wise revenue as approved in the APR Order, the Petitioner's submission and the revenue now Trued-up by the Commission is shown in the following table:

Ta	Table 31: Revenue at existing tariff approved by Commission for FY 2013-14 (In Rs Cr)						
S. No	Category	Approved in APR Order	Petitioner's Submission	Now Approved by Commission			
	A. LOW TENSION SUPPLY						
1	LTD/Domestic	152.00	172.74	172.74			
2	LTD/L.I.G.	0.73	1.15	1.15			
3	LTD Domestic Mixed	2.00	1.67	1.67			
4	LTC/Commercial	100.00	119.86	119.86			
5	LTP/Motive Power	33.00	26.85	26.85			

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S. No	Category	Approved in APR Order	Petitioner's Submission	Now Approved by Commission
6	LTP Mixed (Hotel Industries)	1.99	2.62	2.62
7	LTP Ice Manufacturing	2.50	2.60	2.60
8	LTAG/Agriculture	2.71	3.20	3.20
9	LTPL ( Public lighting )	6.61	13.39	13.39
10	LTPWW/Public Water works	1.47	0.99	0.99
11	LT Temporary	9.11	13.33	13.33
	Sub-Total	312.12	358.39	358.39
	<b>B. HIGH TENSION SUPPLY</b>			
12	HT (Mixed)	47.14	52.15	52.15
13	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	188.00	193.00	193.00
14	HTI Industrial	262.36	239.96	239.96
15	HTAG ( Agriculture)	0.89	1.35	1.35
16	EHTI ( Industrial )	70.48	56.82	56.82
17	HT P.W.W. & Sewage system	48.47	69.50	69.50
18	HT. M.E.'s Defence Estt.	8.86	9.70	9.70
19	HTI ( Steel Rolling )	29.00	28.04	28.04
20	HTI / IT High Tech	23.25	24.43	24.43
21	HTI/Ice Manufacturing	0.21	0.33	0.33
22	Sale from EDG to GSPL (Div. VII)	-	3.61	3.61
23	HTI Hotel Industry	-	22.93	22.93
24	HT Temporary	0.08	0.08	0.08
	Sub-Total	678.74	701.90	701.90
	Total	990.86	1060.29	1060.29

The Commission approves the revenue from the sale of power as Rs 1060.29 Cr in the True-up of the FY 2013-14.

# 3.20. Standalone Revenue Gap/ Surplus

### Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of Rs 313.21 Cr is arrived at in the True-up of FY 2013-14.

### **Commission's analysis**

The Commission, based on the approved ARR and the retail tariff has arrived at the Revenue Gap/Surplus as follows:

### Table 32: Standalone Revenue Gap/ Surplus approved by Commission for FY 2013-14 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1153.17	1373.50	1360.51
2	Total Revenue	1014.05*	1060.29	1060.29
	Net Gap / (Surplus)	139.12	313.21	300.22
	Net Gap / (Surplus)	139.12	313.21	300

\*Inclusive of FPPCA of Rs. 23.19 Cr.

The Commission, in the True-up of FY 2013-14 approves a standalone gap of Rs 300.22 Cr The Petitioner has submitted that the entire gap for the FY 2013-14 is committed to be funded by the

Government of Goa by way of budgetary support. The Petitioner in this regard had submitted the letter dated 1<sup>st</sup> March 2013 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2013-14. In view of the budgetary support for the FY 2013-14 from the Government of Goa, the Commission approves Nil net revenue gap in the True-up for the FY 2013-14.

# 4. Chapter 4: True-up of the FY 2014-15, FY 2015-16 and FY 2016-17

### 4.1. Applicable provisions of JERC for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009

The True-ups of FY 2014-15 and FY 2015-16 are to be carried out as per Regulation 8 (2) of the Tariff Regulations, 2009:

(2) (i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

(ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3) The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.

(6) In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.

(7) The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category."

The True-up of FY 2016-17 the 1<sup>st</sup> year of the MYT Control Period, is to be carried out as per Regulation 8 (2) of the MYT Regulations, 2014:

"8.Annual Review of Performance and True-up

(2)After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures or the provisional actual accounts as available as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3)The revenue gap/surplus, if any, of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4)While approving such expenses/revenue to be adjusted in the future years as arising out of the Review and/or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenue. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5)For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is due to conditions beyond its control.

(6)In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such additional supply of power.

# 4.2. Approach for the True-up of the FY 2014-15 and FY 2015-16 and FY 2016-17

### **Petitioner's submission:**

The Petitioner submitted that the finalization of audited accounts for the FY 2014-15 and FY 2015-16 is in process and the Commission shall be approached for truing-up at a later date when the audited accounts are available. Further, the provisional figures are available for FY 2016-17 and the finalization of accounts is under process. Based on the provisional accounts, the Petitioner has requested to approve the provisional actual figures of the FY 2016-17 for determination of ARR & Revenue gap and treatment thereof.

### **Commission's analysis:**

The Commission notes that the Petitioner has not submitted the audited accounts prepared on commercial principles for the FY 2014-15, FY 2015-16 and FY 2016-17. The Commission in its previous Orders had stressed upon the requirement of the audited accounts to bring in more accuracy in the estimates made by the Commission. The Tariff Regulations, 2009 and MYT Regulations, 2014 also require the licensee to file the True up along with the audited accounts in the filing.

The Commission now directs the Petitioner to prepare and submit the audited accounts from the FY 2014-15 onwards based on commercial principles along with the True-up Petitions by 30<sup>th</sup> November 2018.

The True-up would therefore be taken up only after submission of the audited accounts. Accordingly, the Commission has decided not to consider True-up for the FY 2014-15, FY 2015-16 and FY 2016-17 in the current Order.

# 5. Chapter 5: Annual Performance Review of FY 2017-18

# 5.1. Background

The Tariff Order for the FY 2017-18 was issued by the Commission on 23<sup>rd</sup> May 2017 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2017-18. The Annual Performance Review for the FY 2017-18 is to be carried out in accordance with the Regulation 8 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014:

"(1) The Commission shall undertake a review along with the next Tariff Order of the expenses and revenue approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

.....(3) The revenue gap/surplus, if any, of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenue to be adjusted in the future years as arising out of the Review and/or Truing-up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenue. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is due to conditions beyond its control.

(6) In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such additional supply of power."

# 5.2. Approach for the Review for the FY 2017-18

### Petitioner's submission:

The Petitioner has submitted the APR of FY 2017-18 based on the actual performance during the H1 (April-September 2017) of the year and the revised estimates for H2 (October 2017- March 2018) of the year. The projections for H2 of FY 2017-18 are arrived at by expected escalation over performance of H1.

### **Commission's analysis:**

The Commission for the purpose of estimating the energy demand of the State sought the information of historical sales, number of consumers and connected load of the previous 5 years till FY 2017-18 (till December 2017) from the Petitioner. The Petitioner was also asked to provide month on month information for the last 3 years from FY 2014-15 to FY 2016-17. Various anomalies and gaps are observed in the data provided, which are listed as follows:

- Data on Energy Sales, Number of Consumers and Connected Load for FY 2015-16 was not submitted.
- Overall Energy Sales were reducing by almost 26% in March 2017 vis-à-vis February 2017.
- Energy sales for Domestic category were submitted as 0.49 MU in March 2017 vis-à-vis average of ~65 MU in earlier months.

• Energy Sales submitted for FY 2014-15 were observed to be higher than FY 2016-17 by almost ~400 MU.

From the various discrepancies as shown above, it is evident that the base data for projecting the energy sales for FY 2017-18 is not reliable.

In the Technical Validation Session (TVS) held at the Commission's office, the Petitioner was asked to submit justifications for these discrepancies. The Petitioner submitted that there were issues related to billing of energy to consumers for a few months in H2 of FY 2015-16 due to changeover of the billing agencies and the transition period thereof. The primary problem was non-billing in certain months of FY 2015-16 and adjustment of the same in FY 2016-17 resulting in lower billing than what should have been in FY 2015-16 and higher billing in FY 2016-17. The Petitioner further submitted that the meter reading and billing was maintained by different agencies separately in each division, and each agency had its separate logic for bill calculation and bill generation. However, now a common agency has taken over all the billing and collection data for HT and LT consumers and a common process is followed for all the divisions to avoid ambiguity in the process and data. While the process is streamlined, a lot of errors in the legacy data have been discovered and the error rectification process is going on.

The Petitioner was asked to provide the segregated quantum of month on month sales, however, the Petitioner expressed its inability to provide this segregated information at this stage as the information is present in the form of software dump and the analysis and segregation of the information will take considerable time.

The Commission is of the view that due to this distortion observed in energy sales, it is not possible to project the energy sales for FY 2017-18 as no definite trends can be observed. It is not prudent to approve the revised power purchase requirement and revenue from retail sale on the basis of the unreliable information presently available. Therefore, the Commission shall consider the actual performance at the time of the True-up of the FY 2017-18 once the audited accounts are submitted by the Petitioner.

Accordingly, the Commission has decided not to consider the Annual Performance Review of the FY 2017-18.

# 6. Chapter 6: Determination of Aggregate Revenue Requirement for the FY 2018-19

# 6.1. Background

The ARR for FY 2018-19 was approved in the MYT Order issued for the 1<sup>st</sup> Control Period (FY 2016-17 to FY 2018-19). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2018-19 based on the actual information available for the previous years and the various norms defined in the MYT Order. The determination of Aggregate Revenue Requirement for the FY 2018-19 is to be carried out as per the following provisions of Regulation 6 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014:

### "6.ARR Forecast

6.1 The applicant shall, based on the Business Plan as approved by the Commission by Order, submit the forecast of Aggregate Revenue Requirement and expected revenue from tariff, for the Control Period by a Petition in accordance with the JERC (Terms & Condition for determination of Tariff) Regulations, 2009 by 30<sup>th</sup> November of the year prior to the commencement of the Control Period and accompanied by such fee payable, as specified in the JERC (Conduct of Business) Regulations, 2009.

6.2 The forecast of Aggregate Revenue Requirement shall be developed using the assumptions relating to the behaviour of individual variables that comprise the Aggregate Revenue Requirement during the Control Period.

6.3 The forecast of expected revenue from tariff and charges shall be developed based on the following:

- (a) Estimates of quantum of electricity to be supplied to consumers and wheeled on behalf of Distribution System Users for each financial year within the Control Period; and
- (b) Prevailing tariff as at the date of making the application."

# 6.2. Approach for determination of ARR for the FY 2018-19

The Petitioner has submitted the same ARR for the FY 2018-19 as approved in the MYT Order dated 18<sup>th</sup> April 2016 along with an additional provision of Interest on Security Deposit. The Petitioner has computed revenue from the sale of power on the basis of the Retail Tariff approved by the Commission in the Tariff Order for FY 2017-18. As the Commission is not undertaking any review for the FY 2017-18 for the reasons detailed in the previous chapter, the Commission is retaining the projections and consequently costs for the FY 2018-19 at the same level as approved in the MYT Order dated 18<sup>th</sup> April 2016 excluding the power purchase cost.

The Commission believes that the projections of Power Purchase Quantum and Cost approved in the MYT Order were based on historical trends and figures. Since the majority of the power procured by the Petitioner is from Central Generating Stations, it is prudent to revise the Power Purchase Cost based on the latest Tariff Orders issued by the Central Electricity Regulatory Commission (CERC) for the Control Period FY 2014-15 to FY 2018-19. Accordingly, the Commission has determined the revised Power Purchase Cost based on the same energy sales and Intra-State T&D loss as approved in the MYT Order for FY 2018-19. Resultantly, the Commission has also determined the Renewable Purchase Obligation (RPO) and the Interest on Working Capital which are dependent on the Power Purchase Cost. The Commission has determined the revenue from sale of power based on the approved energy sales, number of consumers and connected load in the MYT Order for FY 2018-19 to calculate the revenue gap for the year.

### 6.3. Projection of Number of consumers, Connected Load and Energy Sales

### **Petitioner's Submission**

The Petitioner has considered the same number of consumers, connected load and energy sales as approved in the MYT Order.

### **Commission's Analysis**

The Commission for the reasons as discussed above approves the same number of consumers, connected load and energy sales as approved in the MYT Order.

### Table 33: No. of Consumer, Connected Load and Energy Sales approved by Commission

Description	No. of	Connected Load	<b>Energy Sales</b>
	Consumers	(kW/kVA)	(MU)
LTD/Domestic	496725	1429336	984.51
LT-LIG/Low Income Group	3049	338	1.10
Low Tension-DM/LT-DM	4399	13044	14.84
LTC/Commercial	92869	282941	325.42
LTI/Industrial	6466	115580	137.42
LT Mixed/ LT-P Hotel Industries	233	4285	5.31
Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	10821	34481	23.86
LT Temporary	2581	1098	22.08
HTD Domestic	2	193	0.28
HTC Commercial	117	42567	79.05
HTI Industrial	651	417220	1398.09
High Tension-Ferro/SM/PI/SR	37	114756	582.70
High Tension-AG/HT-AGP (Pump	41	8378	6.08
Sets/Irrigation)	41	03/0	0.00
Military Engineering Services/defense	10	7080	26.89
Establishments	12	/000	20.89
Public Lighting	2740	9598	36.95
Hoardings/Signboards	104	35	0.35
Total	620848	2480929	3644.93

The Commission approves Number of consumers as 620847, Connected Load as 2480929 kW/kVA and Energy Sales as 3644.93 MU in the ARR of FY 2018-19

### 6.4. Energy savings under Domestic Efficiency Lamp Programme (DELP)

### **Petitioner's Submission**

The Petitioner has considered the same energy savings under DELP as approved by the Commission in the MYT Order.

### **Commission's analysis**

The Commission in the ARR of FY 2018-19 considers the same energy savings as approved in the MYT Order.

Table 34: Energy Savings under DELP (MU)				
S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Energy savings under DELP	78.60	78.60	78.60

### The Commission approves Energy Savings of 78.60 MU in the ARR of FY 2018-19.

### 6.5. Inter-State Transmission Loss

### **Petitioner's Submission**

The Petitioner has considered the same Inter- State Transmission Loss as approved in the MYT Order.

### **Commission's analysis**

The Commission in the ARR of FY 2018-19 considers the Inter-State Transmission loss levels same as approved in the MYT Order.

### Table 35: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	For Stations in Western Region (WRPC)	3.66%	3.66%	3.66%
2	For Stations in Southern Region (SRPC)	7.50%	7.50%	7.50%

The Commission approves Inter–State Transmission Loss of 3.66% for power received from stations of Western Region and 7.50% for power received from stations of Southern Region in the ARR of FY 2018-19.

# 6.6. Intra-State Transmission and Distribution (T&D) loss

### **Petitioner's Submission**

The Petitioner has considered the same Intra-State T&D Loss as approved in the MYT Order.

### **Commission's analysis**

The Commission approves the Intra-State T&D loss at the same level as approved in the MYT Order. The following table provides the Intra-State T&D loss approved in the MYT Order, the Petitioners submission and T&D Loss now approved by the Commission.

Table 36: Intra-State T&D loss (%)					
S. No Particulars Approved in Petitioner's Now Approved by MYT Order Submission Commission					
1	Intra-State distribution loss	10.75%	10.75%	10.75%	

The Commission approves Intra-State T&D loss of 10.75% in the ARR of FY 2018-19.

# 6.7. Power Purchase Quantum & Cost

### **Petitioner's Submission**

The Petitioner has considered the same power purchase cost as approved by the Commission in the MYT Order for FY 2018-19.

### **Commission's Analysis**

The Commission has projected the power purchase quantum and cost for FY 2018-19 based on the actual monthly power purchase data for 9 months of FY 2017-18 and 12 months data for FY 2016-17, FY 2015-16 and FY 2014-

15, as submitted by the Petitioner. For projecting availability of power, firm allocation from various generating stations has been considered. The source wise methodology followed for projecting the quantum and cost of power procurement has been detailed below:

### 6.7.1. Availability of power

### Availability of energy from NTPC and NPCIL stations:

- The energy availability from all the NTPC and NPCIL stations have been done based on average Plant Load Factor (PLF) of the respective stations in the last 4-5 years depending on the status of operation of the plant during the year.
- The energy availability from Kawas Gas Power Plant (KGPP) and Jhanor- Gandhar Power Plant (JGPP) has been estimated based on the average PLF of the plant during first 9 months of FY 2017-18.
- No energy has been projected from Kakrapara Atomic Power Station (KAPS) as no energy has been scheduled from April- December 2017 as the plant is shutdown for maintenance.

### Availability of energy from Co-Generation Plants:

• The energy availability from all the Co- Generation plants namely Vedanta Plant-1, Vedanta Plant-2 and Goa Sponge Pvt. Ltd, has been considered the same as in FY 2016-17 based on the provisional data submitted by the Petitioner.

### Availability of energy from Renewable Energy Stations:

• The energy availability from Renewable Energy Plants namely NVVNL Hydro, SECI, and NVVNL Solar have been estimated based on the average PLF achieved by the plants in the first 9 months of FY 2017-18.

### Availability from Ratnagiri Gas Power Plant (RGPPL):

• The State of Maharashtra (which has 95% share allocation from RGPPL) is not scheduling power because of non-availability of natural gas and hence non-availability of technical minimum schedule to run the plant. For the period from April-December 2017, no power was purchased. Therefore, the Commission has not considered any availability of power from this station.

### Availability of energy from New Stations

• It is expected that the Kameng Hydro Electric Plant (HEP) of NEEPCO will achieve COD by the starting of FY 2018-19. Accordingly, the Commission has considered the energy availability from this station based on parameters notified in the CERC Tariff Regulations, 2014.

### Availability of energy from Open Market/Unscheduled Interchange

- The energy deficit/surplus for the FY 2018-19, as discussed in the section on energy balance later in the Order, has been assumed to be purchased/ sold in the open market.
- No power has been projected under UI Under-drawal/ Over-drawal.

### 6.7.2. Power Purchase Cost

### Variable Charges:

• The per unit variable costs have been computed by taking the average of the actual per unit variable cost during the months of October- December 2017 for all the stations.

• For procurement of power from the Open Market, the Average Round the Clock (RTC) rate for the Western Region during the calendar year 2017 has been considered.

### **Fixed Charges:**

- The fixed costs for CGS have been considered based on the Tariff Orders issued by the CERC for the respective Central Generating Stations,
- For Cogeneration and Renewable Energy Stations, the tariff has been considered as per the PPA's and Tariff Orders of respective stations.
- The fixed cost has been apportioned on the basis of the Petitioner's share in each station and the average annual plant availability factor achieved during the last five years by the plant.
- For new stations, since no source specifying the tariff is available in the public domain, the Commission has considered an average rate of Rs 5.00/kwh.

### **Other Charges:**

No other charges have been considered for the FY 2018-19.

### 6.7.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the total capacity of the transmission network allocated to the Petitioner.

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010

### 6.7.4. Total Power Purchase Quantum and Cost

The following table provides the Power Purchase quantum and cost approved by the Commission for FY 2018-19:

#### Table 37: Power Purchase Quantum (MU) and cost (Rs Cr) approved by Commission

					-	
Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Total (Rs Cr)	Avg. Rate (@ State Periphery) (Rs/kwh)
NTPC						
KSTPS	1579.30	1521.49	101.50	183.72	285.22	1.87
VSTPS - I	257.32	247.90	21.90	38.25	60.15	2.43
VSTPS - II	95.62	92.12	6.83	13.31	20.15	2.19
VSTPS -III	81.96	78.96	8.84	11.41	20.25	2.56
VSTPS-IV	95.62	92.12	15.47	13.35	28.82	3.13
VSTPS-V	45.08	43.43	7.70	6.33	14.03	3.23
KGPP	46.71	45.00	7.68	15.21	22.89	5.09
GGPP	60.92	58.69	9.74	20.90	30.63	5.22
SIPAT- I	177.86	171.35	23.35	20.69	44.04	2.57
KSTPS-III	46.40	44.70	6.11	5.31	11.42	2.55
RSTPS	724.88	670.51	50.53	172.30	222.84	3.32
SIPAT- II	83.51	80.46	10.38	9.97	20.34	2.53
Mouda II	44.72	43.08	14.46	11.00	25.46	5.91
Mouda	34.85	33.57	18.48	8.78	27.26	8.12
Solapur	81.49	78.50	17.47	23.51	40.98	5.22

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Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Total (Rs Cr)	Avg. Rate (@ State Periphery) (Rs/kwh)
Subtotal - NTPC	3456.23	3301.90	320.43	554.05	874.48	2.65
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00
NPCIL						
KAPS	0.00	0.00	-	0.00	0.00	0.00
TAPS	87.33	84.14	-	25.59	25.59	3.04
Sub Total NPCIL	87.33	84.14	-	25.59	25.59	3.04
Within State Generations						
Vedanta Plant-1- Co-Gen	96.28	96.28	-	23.11	23.11	2.40
Vedanta Plant -2- Co-Gen	75.21	75.21	-	18.05	18.05	2.40
Goa Sponge and private limited	5.82	5.82	-	1.40	1.40	2.40
Sub Total - Within State Generation	177.31	177.31	-	42.55	42.55	2.40
RPO						
NVVNL Solar	10.98	10.57	-	8.45	8.45	7.99
SECI Solar	49.52	47.71	-	26.24	26.24	5.50
Solar-REC	-	-	-	11.46	11.46	_
Non Solar- REC	-	-	-	28.89	28.89	-
Sub Total - RPO	60.49	58.28	-	75.04	75.04	-
NVVNL Hydro (Non Solar)	89.24	85.97	-	38.60	38.60	4.49
New Station- Kameng HEP- NEEPCO	20.25	19.51	_	9.76	9.76	5.00
Total Power from firm sources	3890.85	3727.11	320.43	745.58	1066.01	2.86
Traders						
Open Market	268.78	268.78	_	79.83	79.83	2.97
Sub Total – Open	,		-			
Market	268.78	268.78		79.83	79.83	2.97
Total	4159.64	3995.89	320.43	825.41	1145.84	2.87
Transmission Charges PGCIL Charges					183.84	
Total	4159.64	3995.89	320.43	825.41	1329.68	3.33

The Commission approves the quantum of power purchase for the FY 2018-19 as 3995.89 MU at the State Periphery with a total cost of Rs 1329.68 Cr.

# 6.8. Renewable Purchase Obligation (RPO)

### **Petitioner's Submission**

The Petitioner has considered the same cost towards RPO, as approved by the Commission, in the MYT Order.

### **Commission's analysis:**

As per Clause 1, Sub-clause (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22<sup>nd</sup> August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 9.00% of its total consumption (including 3.60% from Solar) from renewable sources for the FY 2018-19. Further, the Regulation states that the obligation has to be calculated on the mix of consumption excluding power from hydropower sources. Accordingly, the Commission has determined the RPO on revised energy sales as shown in the table below.

The Petitioner is procuring physical power from solar and hydro plants. However, the physical power is not enough to fulfill the standalone RPO for FY 2018-19. Therefore, the Commission has considered the remaining RPO to be fulfilled by the purchase of Renewable Energy Certificate (REC). The Commission has assumed the rate of purchase for both solar and non-solar REC as Rs 1.50/ kWh (IEX Average Clearing Price Rate) due to non –availability of solar REC's in the market. The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2018-19:

Description	FY 2018-19
Sales within State (MU)	3644.93
Percentage of hydropower (NVVNL Hydro) in total power purchase quantum at Ex-bus	2.15%
Resultant Energy Sales for calculation of RPO (after adjustment of power from hydro sources) (MU)	3566.73
RPO obligation (in %)	9.00%
Solar	3.60%
Non-Solar	5.40%
RPO obligation for the year (in MU)	321.01
Solar	128.40
Non-Solar	192.60
RPO compliance (Physical Power available at Consumer Periphery after adjusting Inter- State Transmission of 3.66% and Intra-State T&D Loss of 10.75%)	52.01
Solar	52.01
Non-Solar	0.00
RPO compliance (REC certificates to be purchased)	268.99

### Table 38: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2018-19
Solar	76.39
Non-Solar	192.60

The cost towards compliance of RPO computed by the Commission has been shown in the following table.

#### Table 39: Cost towards compliance of Renewable Purchase Obligation (RPO) (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)	Avg. Rate (Rs/kWh)
NVVNL Solar	9.44	8.45	8.95
SECI Solar	42.58	26.24	6.16
Solar-REC	76.39	11.46	1.50
Non Solar- REC	192.60	28.89	1.50
Total RPO	321.01	75.04	2.34

The cost towards RPO has already been considered in the total power purchase cost approved by the Commission in the previous section.

### 6.9. Energy Balance

### **Commission's analysis**

Based on the approved energy sales and the revised estimates of the Power purchase quantum, the Commission approves the energy balance as shown in the following table:

	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Α	Energy Requirement			
1	Energy sales within the State/UT	3644.93	3644.93	3644.93
2	Open Access Sales	0.00	0.00	0.00
3	Less: Energy Savings	78.60	78.60	78.60
4	Total Sales within the State/UT			3566.33
5	Distribution losses			
	%	10.75%	10.75%	10.75%
	MU	429.56	429.56	429.56
6	Energy required at State Periphery	3995.89	3995.89	3995.89
В	Energy Transactions at Periphery			
1	Add: Sales in Unscheduled Interchange	0.00	0.00	0.00
2	Add: Sales in Power Exchanges	0.00	0.00	0.00
3	Less: Purchase under UI (MU)	0.00	0.00	0.00
4	Less: Open Access Purchase (MU)	0.00	0.00	0.00
5	Total energy scheduled at State Periphery (MU)	3995.89	3995.89	3995.89
6	Energy Available at State Periphery from firm sources	3995.89	3995.89	3727.11
7	Deficit/(Surplus) (5-6)	0.00	0.00	268.78

### Table 40: Energy Balance (MU) approved by Commission

The Commission approves an energy deficit of 268.78 MU in FY 2018-19. The Commission directs the Petitioner to purchase this deficit power from open market or other cheaper sources rather

than from costlier power stations. The Commission has considered the cost towards this shortfall along with the Power Purchase Cost as approved earlier.

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

### **Petitioner's Submission**

The Petitioner has considered the same O&M Expenses as approved in the MYT Order.

#### **Commission's analysis**

The following table provides the O&M expenses approved in the MYT Order, Petitioner's submission and now approved by the Commission.

	Table 41: O&M Expenses approved by Commission (In Rs Cr)						
S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission			
1	Employee Expenses	270.41	270.41	270.41			
2	Administrative & General Expenses (A&G)	10.81	10.81	10.81			
3	Repair & Maintenance Expenses	45.60	45.60	45.60			
	Total Operation & Maintenance Expenses	326.82	326.82	326.82			

# The Commission approves the Operation & Maintenance (O&M) expenses of Rs 326.82 Cr in the ARR of FY 2018-19.

### 6.11. Capitalisation

### **Petitioner's Submission**

The Petitioner has considered the same capitalisation as approved in the MYT Order.

#### **Commission's analysis:**

The Commission approves the same capitalisation as approved in the MYT Order.

#### Table 42: Capitalisation approved by the Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	685.27	685.27	685.27

The Commission approves capitalisation of Rs 685.27 Cr in the ARR of FY 2018-19.

### 6.12. Depreciation

### **Petitioner's Submission**

The Petitioner has considered the same depreciation as approved in the MYT Order.

#### **Commission's analysis:**

The Commission approves the same depreciation as approved in the MYT Order.

### Table 43: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	1454.96	1454.96	1454.96
2	Addition During the FY	685.27	685.27	685.27
3	Less: Capitalization through grants in Business Plan Order	125.77	125.77	125.77
4	Closing Gross Fixed Assets	2014.46	2014.46	2014.46
5	Average Gross Fixed Assets	1734.71	1734.71	1734.71
6	Weighted Average Depreciation rate (%)	5.28%	5.28%	5.28%
	Depreciation	91.59	91.59	91.59

The Commission approves depreciation of Rs 91.59 Cr in the ARR of FY 2018-19.

# 6.13. Interest and Finance Charges

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

The Petitioner has considered the same Interest and Finance Charges as approved in the MYT Order.

#### **Commission's analysis:**

The Commission also approves the same Interest and Finance Charges as approved in the MYT Order.

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	773.99	773.99	773.99
2	Add: Normative Loan During the year	391.65	391.65	391.65
3	Less: Normative Repayment equivalent to Depreciation	91.59	91.59	91.59
4	Closing Normative Loan	1074.05	1074.05	1074.05
5	Average Normative Loan	924.02	924.02	924.02
6	Rate of Interest (%)	11.60%	11.60%	11.60%
	Interest and Finance Charges	107.19	107.19	107.19

### Table 44: Interest and Finance Charges approved by Commission (In Rs Cr)

The Commission approves Interest and Finance Charges as Rs 107.19 Cr in the ARR of FY 2018-19.

# 6.14. Return on Equity (RoE)

### **Petitioner's submission**

The Petitioner has considered the same RoE as approved in the MYT Order.

### **Commission's analysis:**

The Commission, similar to above, approves the same RoE as approved in the MYT Order.

	Table 45: RoE approved by Commission (In Rs Cr)					
S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission		
1	Opening Equity	436.49	436.49	436.49		
2	Additions on account of new capitalisation	167.85	167.85	167.85		
3	Closing Equity	604.34	604.34	604.34		
4	Average Equity	520.41	520.41	520.41		
5	Rate of Return on Equity (%)	16.00%	16.00%	16.00%		
	Return on Equity	83.27	83.27	83.27		

### Table 45: RoE approved by Commission (In Rs Cr)

The Commission approves Return on Equity of Rs 83.27 Cr in the ARR of FY 2018-19.

# 6.15. Interest on Security Deposits

### **Petitioner's submission:**

The Petitioner has considered the same Interest of Security Deposit as approved in the MYT Order. Further, the Petitioner has requested the Commission to allow the provision of unpaid security deposit of Rs 9.15 Cr to be included in the total revenue gap to be recovered in the FY 2018-19.

### **Commission's analysis:**

The Commission has considered the same Interest on Security Deposit as approved in the MYT Order. The Commission has not considered any provision for unpaid Interest on the Consumer Security Deposit. The Commission will consider the interest paid on consumer security deposits for the previous years as and when the same is paid to consumers on actual basis as per the audited accounts.

### Table 46: Interest on Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	90.57	90.57	90.57
2	Add: Deposits During the year	1.16	1.16	1.16
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	91.73	91.73	91.73
5	Average Security Deposit	91.15	91.15	91.15
6	Rate of Interest (%)	7.75%	7.75%	7.75%
7	Interest on Security Deposit	7.02	7.02	7.02
8	Additional provision of unpaid security deposit	-	9.15	-
	Total Interest on Security Deposit	7.02	16.17	7.02

### The Commission approves Interest on Security Deposit as Rs 7.02 Cr in the ARR of FY 2018-19.

### 6.16. Demand Side Management (DSM) Expenses

### **Petitioner's submission**

The Petitioner has considered the expenses towards DSM as approved in the MYT Order.

### **Commission's analysis:**

The Commission approves the same DSM expenses as approved in the MYT Order.

	Table 47: DSM Expenses as approved by Commission (In Rs Cr)				
S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission	
1	DSM Expenses	3.03	3.03	3.03	

The Commission approves DSM Expenses as Rs 3.03 Cr in the ARR of FY 2018-19.

# 6.17. Interest on Working Capital

### **Petitioner's Submission**

The Petitioner has considered the same Interest on Working Capital as approved in the MYT Order.

### **Commission's analysis:**

Since the Power purchase cost has been revised, the same has an impact on the Interest and Working Capital. The Interest on Working Capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) Regulations, 2014. Regulation 25 of the MYT Regulations, 2014 states the following:

Working capital for retail supply activity of the licensee shall consist of:

- (i) Receivables of two months of billing
- (ii) Less power purchase cost of one month
- (iii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt
- (iv) Inventory for two months based on annual requirement for previous year.

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1<sup>st</sup> April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures."

The Commission has determined the Interest on Working Capital in accordance with the Regulation as cited above. The Interest Rate has been considered as the prevailing SBI Base rate. The table below provides the Interest in Working Capital as approved in the MYT Order and now approved by the Commission:

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	342.94	342.94	325.42
2	Less: Power Purchase Cost for one month	119.42	119.42	110.81
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.00	0.00	0.00

### Table 48: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
4	Total Working Capital Requirement	223.52	223.52	214.62
5	Less: Average Security Deposit excluding BG/FDR	90.57	90.57	91.15
6	Net Working Capital	132.94	132.94	123.47
7	Rate of Interest (%)	9.30%	9.30%	8.65%
	Interest on Working Capital	12.36	12.36	10.68

The Commission now approves the Interest on Working Capital as Rs 10.68 Cr in the ARR of FY 2018-19.

# 6.18. Non-Tariff Income (NTI)

### **Petitioner's submission**

The Petitioner has considered the same NTI as approved in the MYT Order.

### **Commission's analysis:**

The Commission also approves the same NTI as approved in the MYT Order.

### Table 49: Non -tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Non-Tariff Income	6.74	6.74	6.74

The Commission approves Non-Tariff Income of Rs 6.74 Cr in the ARR of FY 2018-19.

# 6.19. Aggregate Revenue Requirement (ARR)

### **Petitioner's submission**

The Petitioner has considered the same ARR for FY 2018-19 as approved in the MYT Order along with an additional provision of Interest on Security Deposit.

### **Commission's analysis**

On the basis of the above, the Commission approves the revenue requirement for the FY 2018-19 as shown in the table below:

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost (inclusive of RPO Cost)	1433.09	1433.09	1329.68
2	Operation & Maintenance Expenses	326.82	326.82	326.82
3	Depreciation	91.59	91.59	91.59
4	Interest and Finance charges	107.19	107.19	107.19
5	Interest on Working Capital	12.36	12.36	10.68
6	Interest on Security Deposit	7.02	16.17	7.02
7	Return on Equity	83.27	83.27	83.27

### Table 50: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (In Rs Cr)

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S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
8	Provision for Bad Debt	0.00	0.00	0.00
9	Income Tax	0.00	0.00	0.00
10	Payment towards DSM	3.03	3.03	3.03
11	Total Revenue Requirement	2064.37	2073.52	1959.28
12	Less: Non-Tariff Income	6.74	6.74	6.74
13	Net Revenue Requirement	2057.63	2066.78	1952.54

The Commission approves net ARR of Rs 1952.54 Cr for the FY 2018-19.

# 6.20. Revenue at existing Retail Tariff

### Petitioner's submission

The Petitioner has submitted the revenue from sale of power at existing tariff as Rs 1593.75 Cr based on the approved energy sales, connected load and number of consumers in the MYT Order. The revenue for FY 2018-19 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2017-18 dated 23<sup>rd</sup> May 2017. The table below provides the category wise revenue computed by the Petitioner for FY 2018-19.

### Table 51: Revenue submitted by Petitioner (In Rs Cr)

S. No.	Category	Sales (MU)	Fixed Charges (Rs Cr)	Energy Charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs /kWh)
Α	Low Tension Supply					
1	Tariff LTD/Domestic and Non-Commercial	984.51	16.49	272.07	288.56	2.93
1(a)	0-100 units	89.28	5.09	11.61	16.69	1.87
1(b)	101-200 units	205.24	3.18	38.99	42.18	2.06
1(c)	201 to 300 units	174.49	3.65	41.88	45.53	2.61
1(d)	301 to 400 units	119.79	1.78	37.14	38.91	3.25
1(e)	Above 400 units	395.72	2.79	142.46	145.25	3.67
2	Tariff LTD/Low Income Group	1.10	0.11	-	0.11	1.00
3	Tariff- LTC/Commercial	340.26	5.84	126.41	132.24	3.89
	<u>0-20 KW/Commercial</u> <u>Consumers</u>	268.67	5.72	99.66	105.38	3.92
	1-100 Units	114.26	2.94	37.13	40.07	3.51
	101-200 units	99.42	2.67	38.77	41.45	4.17
	201-400 Units	52.41	0.11	22.53	22.65	4.32
	Above 400 units	2.59	0.00	1.22	1.22	4.71
	>20-90Kw Commercial Consumers	71.59	0.11	26.75	26.86	3.75
	1-100 Units	28.04	0.05	9.11	9.17	3.27
	101-200 units	28.04	0.05	10.94	10.99	3.92
	201-400 Units	14.78	0.00	6.36	6.36	4.30
	Above 400 units	0.73	0.00	0.34	0.34	4.70
4	LTI-Industry	137.42	4.16	47.81	51.97	3.78
	0-500 Units	7.21	0.22	2.24	2.45	3.40
	Above 500 units	130.21	3.94	45.57	49.52	3.80
5	Tariff-LTP/Mixed (Hotel Industries)	5.31	0.15	2.39	2.54	4.79
6	LT-Agriculture	23.86	0.56	3.13	3.69	1.54
7	Tariff- LTAG/Agriculture	23.03	0.40	2.99	3.40	1.48

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S. No.	Category	Sales (MU)	Fixed Charges (Rs Cr)	Energy Charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs /kWh)
	(Pump					
	Sets/Irrigation) (A)					
8	Tariff- LTAG/Agriculture Allied (B)	0.83	0.16	0.13	0.29	3.48
9	Tariff-LTPL/Public Lighting	36.95	0.46	14.41	14.87	4.02
10	Tariff-LT Hoarding and Signboards	0.35	0.00	0.35	0.35	<b>9.9</b> 7
D						
B	High Tension Supply	0.09	0.00	0.40	0.46	- ( )
11	Tariff HTD/Domestic Tariff HT-	0.28	0.03	0.12	0.16	5.64
12	Commercial	79.05	12.77	43.48	56.25	7.12
13	Tariff HTI/Industrial	1398.09	125.17	599.70	724.87	5.18
	Connected at 11/33 kV	1250.34	103.90	537.64	641.55	5.13
	Connected at 110 kV	147.75	21.27	62.06	83.32	5.64
	H.T.Industrial (Ferro					
14	Mettallurgical/ Steel Melting/ Power Intensive)	582.70	34.43	250.56	284.99	4.89
15	HT-Agriculture	6.08	0.37	0.98	1.34	2.21
15	Tariff-HTAG/Agriculture	0.00	0.3/	0.90	34	2.21
	(Pump Sets/Irrigation) (A)	2.95	0.32	0.41	0.73	2.48
	Tariff-HTAG/Agriculture (Allied Activities) (B)	3.13	0.05	0.56	0.61	1.96
16	H.T. MES/Defence Establishments	26.89	1.49	13.45	14.93	5.55
С	Town on own Sumply				-	
17	Temporary Supply Tariff-LT/Temporary Domestic	17.47	0.06	12.23	- 12.29	7.03
18	Tariff-LT/Temporary Commercial	4.61	0.03	4.57	4.60	
19	Tariff- HTTS/Temporary Supply		-	-	-	
D	Single Point Supply				-	
20	Residential Complexes		-	_	-	
20	Commercial Complexes		-	-	-	
22	Industrial Complexes		-	-	-	
					-	
	Total	3644.93	202.11	1391.64	1593.75	4.37

### **Commission's analysis**

The category wise/ sub-category wise and slab wise revenue at retail tariff is determined as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The revenue from LT- AG- Allied Activities, HT-AG- Allied activities, HT Temporary and Single Point Supply categories has not been computed due to non-availability of data on energy sales, connected load and number of consumers for these categories. The category/ sub-category/ slab wise revenue as computed by the Commission for FY 2018-19 has been shown in the following table:

S. No.	Category	Sales (MUs)	Demand Charges	Energy charges	Total Charges	ABR (Rs/unit)
			(Rs Cr)	(Rs Cr)	(Rs Cr)	
1	DOMESTIC	1000.73	15.53	228.58	244.11	2.44
(i)	LT-D Domestic	999.35	15.38	228.46	243.84	2.44
(1)	0-100 units	276.28	6.08	35.92	42.00	1.52
	101-200 units	270.20	3.05	47.83	50.88	2.02
	201-300 units	164.13	3.16	39.39	42.55	2.59
	301-400 units	104.13	1.43	39.39 32.68	34.11	3.24
	Above 400 units	201.75	1.67	72.63	74.30	3.68
(ii)	Low Income Group	1.10	0.11		0.11	1.00
(iii)	HT-D Domestic	0.28	0.03	0.12	0.11	5.64
2 2	COMMERCIAL	404.47	<b>28.88</b>	184.73	<b>213.61</b>	5.28
(i)	LT-C Commercial	325.42	16.11	141.25	157.36	4.84
(1)	0-100 units	49.14	3.33	15.97	19.30	3.93
	101-200 units	31.05	0.81	12.11	19.30	4.16
	201-400 units	52.14	1.69	22.42	24.11	4.62
	Above 400 units	193.08	10.29	90.75	101.03	5.23
(ii)	HT-C Commercial	79.05	10.29	43.48	56.25	7.12
3	INDUSTRIAL	<b>2123.52</b>	124.01	<b>899.10</b>	1023.11	4.82
<u> </u>	LT-I Industrial	137.42	4.16	47.30	51.46	3.74
(1)	0-500 units	19.96	1.95	6.19	8.14	4.08
	Above 500 units	19:90	2.21	41.11	43.32	3.69
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	5.31	0.15	2.39	2.54	4.79
(iii)	High Tension-I/HT-I	1398.09	93.87	598.85	692.73	4.95
	Connected at 11/33 kV	1165.47	85.19	501.15	586.34	5.03
	Connected at 110 kV	232.62	8.69	97.70	106.39	4.57
(iv)	High Tension-Ferro/SM/PI/SR	582.70	25.82	250.56	276.38	4.74
4	AGRICULTURE	29.94	0.85	3.95	<u>4.80</u>	1.60
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	23.86	0.50	3.10	3.60	1.51
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	-	-	-	-	-
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	6.08	0.35	0.85	1.20	1.98
(iv)	High Tension-AG/HT-AG (Allied Activities)	-	-	-	-	-
5	MILITARY ENGINEERING SERVICES/DEFENSE ESTABLISHMENTS	26.89	1.49	13.45	14.93	5.55
6	PUBLIC LIGHTING	36.95	0.46	14.41	14.87	4.02
7	HOARDINGS/SIGNBOARDS	0.35	0.00	0.35	0.35	9.97
0	TEMPORARY	00.00	0.10	01.06	01.10	0.60
8 (i)	LT	22.08	0.13	<b>21.06</b>	<b>21.19</b>	<b>9.60</b>
(1)		22.08	0.13	21.06	21.19	9.60
	LT Domestic	2.74	0.01	1.92	1.93	7.03
(ii)	LT Commercial HT	19.34	0.12	19.14	19.26	9.96
			-			-

### Table 52: Revenue from existing retail tariff for FY 2018-19 (In Rs Cr)

The Commission has determined revenue from sale of power at existing tariff as Rs 1536.97 Cr for FY 2018-19.

# 6.21. Standalone Revenue Gap/ Surplus

### **Petitioner's submission**

Based on the ARR submitted and the revenue from retail tariff, a standalone revenue gap of Rs 473.03 Cr has been determined by the Petitioner for FY 2018-19.

### **Commission analysis**

Based on the approved ARR and existing retail tariff, the following Revenue Gap/Surplus is arrived at for the FY 2018-19:

### Table 53: Standalone Revenue Gap/ Surplus approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	2057.63	2066.78	1952.54
2	Revenue from Retail Sales at Existing Tariff	-	1593.75	1536.97
	Net Gap /(Surplus)	-	473.03	415.57

The standalone gap at existing retail tariff is Rs 415.57 Cr for FY 2018-19. The estimated gap is considered while determining the retail tariff for FY 2018-19, as discussed in the subsequent Chapter.

# 7. Chapter 7: Tariff Principles and Design

# 7.1. Overall Approach

The Commission while designing retail tariffs for FY 2018-19 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2014.

The Commission in this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration the Licensees submissions as well as the public responses in these proceedings.

The supply of electricity to all the people is an essential driver for development, and also influences social and economic change. Since, the majority of the energy sales within the Licensees jurisdiction is of industrial nature, the Commission has attempted to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society.

# 7.2. Applicable Regulations

Regulation 36 of the MYT Regulations, 2014 states the following:

"a. The Commission shall gradually move towards reduction of cross subsidy in accordance with Electricity Act, Tariff Policy and such other guidelines of the government as applicable.

b. The Distribution Licensee shall compute the consumer category-wise cost of supply as per the methodology elaborated below.

c. Allocation of Cost: The Cost to serve shall be allocated to the consumer categories in the following manner:

Step 1: Functional Demarcation of Cost – Total cost shall be divided on the basis of functions performed such as power purchase, distribution etc.

Step 2: Classification of Cost –Each of the functionalized costs shall be further classified, based on its intrinsic nature into Demand related cost, Energy related cost and Customer related cost. Demand related costs shall generally be of fixed nature, related to capacity creation and shall include interest on capital borrowing, depreciation etc. Energy cost shall be related to quantum of electricity consumption of consumer, such as fuel cost, interest on working capital, etc. Consumer related cost shall include operating expenses associated with meter reading, billing and accounting.

Step 3: Allocation of Cost

- (i) Allocation of Demand Costs: Demand costs of all three functions shall be allocated among consumer categories on the basis of average coincident peak demand of the tariff categories (average of past 12 months). To facilitate determination of average coincident peak demand for the various tariff categories, load research shall be made an integral part of the operations of the DISCOMs and systematic load research exercises shall be initiated.
- (ii) Allocation of Energy Costs: Energy related costs of Distribution functions shall be allocated to consumer categories on the basis of ratio of electricity consumption of each consumer category to the total electricity consumption under the purview of the Distribution Licensee. Energy related costs of Power purchase shall be allocated to various tariff categories on the basis of block approach on merit order dispatch and incremental principle, where each tariff category shall be allocated the incremental (energy related) power purchase cost on the basis of their respective share in the

incremental power purchase. For the purpose of operationalizing the block approach and incremental principle, the Commission shall identify and notify a suitable year as the "base year".

(iii) Allocation of Customer Costs: Customer related costs shall be allocated to consumer categories on the basis of the ratio of number of consumers in each category to total number of consumers under the purview of the Distribution Licensee.

d. Summation of allocated Demand cost, Energy cost and Customer cost across functions shall be total Cost to serve for respective consumer categories. Cost to serve reduced by revenue from a consumer category shall give total subsidy for that category. Total subsidy for a consumer category reduced by Government subsidy, if any, shall be cross-subsidy for that consumer category.

e. The consumers below poverty line who consume power below a specified level, say 30 units per month, shall receive a special support through cross subsidy.

f. Cross-subsidy surcharge and additional surcharge in Open Access

- (i) The amount received or to be received by the licensee on account of cross-subsidy surcharge and additional surcharge, as approved by the Commission from time to time in accordance with the Regulations specified by the Commission, shall be shown separately against the consumer category that is permitted open access as per the phasing plan.
- (ii) Cross-subsidy surcharge and additional surcharge shall be shown as revenue from the tariff from the consumer categories who have been permitted open access and such amount shall be utilized to meet the cross-subsidy requirements of subsidized categories and fixed costs of the Distribution Licensee arising out of his obligation to supply. Provided that the licensee shall provide such details in its annual filings.
- g. Tariff Design
  - (i) The Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.
  - (ii) After the costs have been allocated based on the method specified in clauses I and (d) above, tariffs for different consumer categories shall be designed with due regard to factors provided under section 62(3) of the Act.
  - (iii) The time of day tariff would be structured across three time slabs to denote normal, peak and off-peak periods. The time-periods would vary according to different seasons of the year i.e. summer, winter and the monsoon season. The peak tariff would be 10%-20% higher than the normal tariff and the offpeak tariff would be priced 5%-10% lower than the normal tariff.
  - (iv) Time of Day tariff may be introduced in a phased manner, wherein in phase 1 it would be for HT Consumers, in phase 2 – for LT consumers consuming more than 25 KW and in phase 3 for LT consumers consuming more than 10 KW."

# 7.3. Revenue Gap/ Surplus at existing tariff

### **Petitioner's Submission**

The Petitioner has proposed a standalone revenue gap of Rs 473.03 in FY 2018-19. The Petitioner has submitted that the cumulative revenue gap from FY 2014-15 to FY 2017-18 is not being claimed, the same shall be submitted once the audited annual accounts are prepared for respective years. The standalone revenue gap as submitted by the Petitioner has been tabulated below:

### Table 54: Standalone Revenue Gap/ Surplus submitted by Petitioner (In Rs Cr)

Particulars	FY 2018-19
Net Revenue Requirement	2066.78
Revenue from Retail Sales at Existing Tariff inclusive of Regulatory Surcharge applicable	1593.75
in FY 2017-18	-393.73
Standalone Gap /(Surplus) for the year	473.03

### **Commission's analysis**

The Commission in the True-up of FY 2013-14 approved the revenue gap/surplus as nil. Further, the Commission has not approved any revenue gap for FY 2014-15 to FY 2016-17 due to non —availability of audited annual accounts and for FY 2017-18 due to unreliable data. Therefore, the Commission approves the standalone revenue gap for FY 2018-19 as follows:

### Table 55: Standalone Revenue Gap/ Surplus determined by Commission (In Rs Cr)

Particulars	FY 2018-19
Net Revenue Requirement	1952.54
Revenue from Retail Sales at Existing Tariff	1536.97
Standalone Gap /(Surplus) for the year	415.57

The Commission has computed a standalone revenue gap of Rs 415.57 Cr in the FY 2018-19 at the existing tariff.

# 7.4. Treatment of the Revenue Gap/ Surplus and Tariff Design

The revenue gap of Rs 415.57 Cr, signifies that the revenue from the existing tariff is not commensurate with the costs incurred by the Petitioner. Therefore, in order to fulfill this revenue deficit and to be financially sustainable, the retail consumer tariffs are required to be increased. The Commission has accordingly dealt with this gap in the following section.

### 7.4.1. Tariff Proposal

### **Petitioner's Submission**

The Petitioner has proposed to recover the revenue gap of Rs 473.03 Cr, partly from proposed tariff increase and partly from budgetary support from the Govt. of Goa. The Petitioner has proposed an average tariff hike of 4.95% that will earn an additional revenue of Rs 78.94 Cr The remaining gap of Rs 394.09 Cr is proposed to be met from the budgetary support from the Government.

The category wise existing and proposed tariff submitted by the Petitioner is as under:

	Table 50: Ketan Tarin proposed by relitioner						
		Existing Ta	riff	Proposed Ta	riff		
S. No	Category	Energy Fixed Charges Charges (Paisa/kW		Fixed Charges	Energy Charges (Paisa/kWh)		
1	Domestic						
Α	Low Tension-D/LT-D						
	0-100 units		130		140		
	101-200 units	Single Phase Rs 20/Connection/Month	190	Single Phase Rs 25/Connection/Month Three Phase Rs 80/Connection/Month	200		
	201 to 300 units	Three Phase Rs	240		260		
	301 to 400 units	45/Connection/Month	310		330		
	Above 400 units	45/ 00111000101/ 1/201101	360	007000000000000000000000000000000000000	380		
В	Low Tension-LIG/LT- LIG	Rs 30/Connection/Month		Rs 40/Connection/Month			
С	High Tension-D/HT-D						
	All Units	Rs 150/kVA/Month	440	Rs 160/kVA/Month	460		
2	Commercial						

### Table 56: Retail Tariff proposed by Petitioner

S. No		Existing Ta	riff Energy	Proposed Tariff Energy	
51110	Category	Fixed Charges	Charges (Paisa/kWh)	<b>Fixed Charges</b>	Charges (Paisa/kWh)
Α	Low Tension-C/LT-C				
	0-100 units	0-20 kW - Rs	325		330
	101-200 units	50/Conn/Month	390	0-20 kW - Rs	400
	201 units- 400 units	Above 20kW-90 kW	430	60/Conn/Month	480
	Above 400 units	Rs 50/Conn/month + additional Rs55/kW for every kW increase above 20 kW	470	Above 20kW-90 kW Rs 90/Conn/month	520
В	High Tension-C/HT-C				
	All Units	Rs 250/kVA/month	550	Rs 250/kVA/month	550
3	Industrial				
Α	Low Tension-I/LT-I				
	0-500 units	Rs 30/HP/Month	310	Rs 35/HP/Month	330
	Above 500 units	Rs 30/HP/Month	350	Rs 35/HP/Month	380
В	Low Tension- Mixed/LT-P (Hotel Industries)				
	All Units	Rs 30/kW/Month	450	Rs 35/kW/Month	460
С	High Tension-I/HT-I				
	Connected at 11/33 kV	Rs 250/kVA/Month	430	Rs 250/kVA/Month	450
	Connected at 110 kV	Rs 250/kVA/Month	420	Rs 250/kVA/Month	450
D	High Tension- Ferro/SM/PI/SR				
	All Units	Rs 250/kVA/Month	430	Rs 250/kVA/Month	450
4	Agricultural				
Α	Low Tension-AG/LT- AGP (Pump Sets/Irrigation)				
	All Units	Rs 12/HP/Month	130	Rs 15/HP/Month	150
В	Low Tension-AG/LT- AGA (Allied Activities)				
	All Units	Rs 20/HP/Month	160	Rs 20/HP/Month	180
С	High Tension-AG/HT- AGP (Pump Sets/Irrigation)				
	All Units	Rs 35/kVA/Month	140	Rs 35/kVA/Month	150
D	High Tension-AG/HT- AG (Allied Activities)				
	All Units	Rs 50/kVA/Month	180	Rs 60/kVA/Month	200
5	Military Engineering Services/defense Establishments				
	All Units	Rs 175/kVA/Month	500	Rs 175/kVA/Month	500
6	Public Lighting				
	All Units	Rs 40/kW/Month	390	Rs 40/kW/Month	390
7	Hoardings/Signboards				
	All Units	Rs 60/kVA/Month	990	Rs 60/kVA/Month	990

		Existing Ta	riff	Proposed Ta	riff
S. No	Category	Fixed Charges	Energy Charges (Paisa/kWh)	Fixed Charges	Energy Charges (Paisa/kWh)
8	Temporary Supply				
A	LT Temporary Domestic	Rs60 per kW per month or part thereof subject to a minimum of Rs300/- per connection per month or part thereof	700	Rs60 per kW per month or part thereof subject to a minimum of Rs300/- per connection per month or part thereof	720
В	LT Temporary Commercial	Rs100 per kVA per month or part thereof subject to a minimum of Rs500/- per connection per month or part thereof	990	Rs120 per kVA per month or part thereof subject to a minimum of Rs500/- per connection per month or part thereof	990
C	HT Temporary	Rs 120 per kVA per month or part thereof	990	Rs 120 per kVA per month or part thereof	990
9	Single Point Supply				
А	Residential Complexes	Rs 100 per kVA per month or part thereof	310	Rs 100 per kVA per month or part thereof	330
В	Commercial Complexes	Rs 200 per kVA per month or part thereof	430	Rs 200 per kVA per month or part thereof	430
C	Industrial Complexes	Rs 200 per kVA per month or part thereof	390	Rs 200 per kVA per month or part thereof	410

### **Commission's analysis**

As discussed above, the Commission has determined the retail tariff for the FY 2018-19 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2014.

Tariff design in general is guided by the following principles:

- 1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
- 2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slab within a consumer category which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers
- 3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.
- 4. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges
- 5. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs
- 6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs
- 7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs

- 8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer
- 9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

Keeping in view the above principles and the Petitioner's submission the Commission has determined and modified the Retail Tariff for FY 2018-19 as per the following:

- 1. The Commission in accordance with the Petitioner' submission has limited the average tariff hike with the remaining gap to be recovered from Govt's budgetary support as discussed in subsequent sections. A relatively higher tariff increase has been done for cross-subsidized categories such as Domestic and Agriculture than cross-subsidizing categories such as Commercial and Industrial category in order to ensure that tariffs progressively reflect the cost of supply.
- 2. The consumers under the Commercial category having connected load between 20-90 kW used to pay a monthly Demand charge based on both per connection basis as well as on connected load basis. The Commission in this Order has done away with the monthly fixed charge on per connection basis and approved a fixed charge only on the basis of connected load.

# 7.4.2. Tariff Increase and Schedule:

As described earlier, the current tariff is not covering the entire cost of the Petitioner for FY 2018-19 necessitating an increase in Retail Tariff. The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

	Table 57: Existing and approved tariff						
		Existing Ta	ariff	Approved Ta	ariff		
Category		Fixed Charges	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges (Rs/kWh)		
1	Domestic						
Α	Low Tension-D/LT-D						
	0-100 units	Single Phase Rs	1.30	Single Phase Rs	1.40		
	101-200 units	20/Con/Month	1.90	25/Con/Month	2.10		
	201 to 300 units		2.40		2.65		
	301 to 400 units	Three Phase Rs	3.10	Three Phase Rs	3.45		
	Above 400 units	45/Con/Month	3.60	60/Con/Month	4.00		
B	Low Tension-LIG/LT-LIG	Rs 30/Con/Month		Rs 40/Con/Month			
С	High Tension-D/HT-D						
	All Units	Rs 150/kVA/Month	4.40	Rs 100/kVA/Month	3.45		
2	Commercial						
Α	Low Tension-C/LT-C						
	0-100 units	0-20 kW - Rs	3.25	For consumers with	3.40		
	101-200 units	50/Con/Month	3.90	Load upto – Rs	4.10		
	201 units- 400 units	]	4.30	50/Con/Month	4.60		
	Above 400 units	Above 20kW-90 kW Rs 50/Con/Month + additional Rs55/kW for every kW increase above 20 kW	4.70	For consumers with Load more than 20 kW and upto 90 kW- Rs 55/kW/Month	5.00		

### Table 57: Existing and approved tariff

Tariff Principles and Design

		Existing Ta	ariff	Approved Tariff		
	-		Energy	Energy		
	Category	<b>Fixed Charges</b>	Charges	<b>Fixed Charges</b>	Charges	
			(Rs/kWh)		(Rs/kWh)	
B	High Tension-C/HT-C					
	All Units	Rs 250/kVA/month	5.50	Rs 250/kVA/month	5.50	
3	Industrial					
Α	Low Tension-I/LT-I					
	0-500 units	Rs 30/HP/Month	3.10	Rs 35/HP/Month	3.30	
	Above 500 units	Rs 30/HP/Month	3.50	Rs 35/HP/Month	3.80	
В	Low Tension-Mixed/LT-P (Hotel Industries)					
	All Units	Rs 30/kW/Month	4.50	Rs 40/kW/Month	4.70	
С	High Tension-I/HT-I					
	Connected at 11/33 kV	Rs 250/kVA/Month	4.30	Rs 250/kVA/Month	4.50	
	Connected at 110 kV	Rs 250/kVA/Month	4.20	Rs 250/kVA/Month	4.40	
D	High Tension- Ferro/SM/ PI/ SR					
	All Units	Rs 250/kVA/Month	4.30	Rs 250/kVA/Month	4.50	
4	Agricultural					
•	Low Tension-AG/LT-AGP					
Α	(Pump Sets/Irrigation)					
	All Units	Rs 12/HP/Month	1.30	Rs 15/HP/Month	1.40	
В	Low Tension-AG/LT-AGA (Allied Activities)					
	All Units	Rs 20/HP/Month	1.60	Rs 20/HP/Month	1.70	
С	High Tension-AG/HT-AGP (Pump Sets/Irrigation)					
	All Units	Rs 35/kVA/Month	1.40	Rs 35/kVA/Month	1.50	
D	High Tension-AG/HT-AG (Allied Activities)					
	All Units	Rs 50/kVA/Month	1.80	Rs 60/kVA/Month	1.90	
	Military Engineering					
5	Services/defense					
	Establishments					
	All Units	Rs 175/kVA/Month	5.00	Rs 175/kVA/Month	5.00	
6	Public Lighting					
	All Units	Rs 40/kW/Month	3.90	Rs 50/kW/Month	4.10	
7	Hoardings/Signboards					
	All Units	Rs 60/kVA/Month	9.90	Rs 60/kVA/Month	9.90	
8	Temporary Supply					
		Rs60 per kW per		Rs 60 per kW per		
		month or part		month or part		
		thereof subject to a		thereof subject to a		
Α	LT Temporary Domestic	minimum of Rs	7.00	minimum of Rs	7.20	
		300/- per connection		300/- per connection		
		per month or part thereof		per month or part thereof		
В	LT Temporary Commercial	Rs100 per kVA per month or part	9.90	Rs 120 per kVA per month or part	9.90	
		thereof subject to a	9.90	thereof subject to a	9.90	
		more of subject to a		and cor subject to u		

		Existing Ta	riff	Approved Ta	riff
	Category	Category Fixed Charges Charges (Rs/kWh)		Fixed Charges	Energy Charges (Rs/kWh)
		minimum of Rs 500/- per connection per month or part thereof		minimum of Rs 600/- per connection per month or part thereof	
С	HT Temporary	Rs 120 per kVA per month or part thereof	9.90	Rs 120 per kVA per month or part thereof	9.90
9	Single Point Supply				
A	Residential Complexes	Rs 100 per kVA per month or part thereof	3.10	Rs 100 per kVA per month or part thereof	3.45
В	Commercial Complexes	Rs 200 per kVA per month or part thereof	4.30	Rs 200 per kVA per month or part thereof	4.60
С	Industrial Complexes	Rs 200 per kVA per month or part thereof	3.90	Rs 200 per kVA per month or part thereof	4.20

Further, the Petitioner has submitted a proposal for recovery of service charge from consumers availing power from MSEDCL. The Commission is of the view that schedule of miscellaneous charges have already been approved by the Commission for various services. The Petitioner is directed to submit a separate proposal along with citations of relevant regulations/judgements for determination of charges and information on the consumer number, connected load and energy sales for these type of consumers.

# 7.4.3. Revenue from Approved Retail Tariff for FY 2018-19

Based on the retail tariff approved above, the Revenue from approved tariff is shown in the table below. The revenue from LT- AG- Allied Activities, HT-AG- Allied activities, HT Temporary and Single Point Supply has been not been computed due to non-availability of data on energy sales, connected load and number of consumers for these categories.

	Table 58: Revenue from approved retail tariff (in RS Cr)						
S. No.	Category	Sales (MUs)	Demand Charges (Rs Cr)	Energy charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs/kWh)	K Factor
1	DOMESTIC	1000.73	19.92	252.21	272.13	2.72	0.61
(i)	LT-D Domestic	999.35	19.75	252.12	271.87	2.72	0.61
	0-100 units	276.28	7.60	38.68	46.28	1.68	0.37
	101-200 units	251.76	3.81	52.87	56.68	2.25	0.50
	201-300 units	164.13	4.22	43.50	47.71	2.91	0.65
	301-400 units	105.43	1.90	36.37	38.27	3.63	0.81
	Above 400 units	201.75	2.22	80.70	82.92	4.11	0.92
(ii)	Low Income Group	1.10	0.15	-	0.15	1.33	-
(iii)	HT-D Domestic	0.28	0.02	0.10	0.12	4.28	0.95
2	COMMERCIAL	404.47	28.39	193.44	221.83	5.48	
(i)	LT-C Commercial	325.42	15.62	149.97	165.58	5.09	1.13
	0-100 units	49.14	3.33	16.71	20.04	4.08	0.91
	101-200 units	31.05	0.81	12.73	13.54	4.36	0.97
	201-400 units	52.14	1.98	23.99	25.97	4.98	1.11

### Table 58: Revenue from approved retail tariff (In Rs Cr)

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S. No.	Category	Sales (MUs)	Demand Charges (Rs Cr)	Energy charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs/kWh)	K Factor
	Above 400 units	193.08	9.50	96.54	106.04	5.49	1.22
(ii)	HT-C Commercial	79.05	12.77	43.48	56.25	7.12	1.59
3	INDUSTRIAL	2123.52	140.71	942.75	1083.46	5.10	
(i)	LT-I Industrial	137.42	4.85	51.22	56.08	4.08	0.91
	0-500 units	19.96	2.28	6.59	8.87	4.44	0.99
	Above 500 units	117.46	2.58	44.63	47.21	4.02	0.90
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	5.31	0.21	2.50	2.70	5.09	1.13
(iii)	High Tension-I/HT-I	1398.09	106.39	626.81	733.21	5.24	1.17
	Connected at 11/33 kV	1165.47	96.54	524.46	621.01	5.33	1.19
	Connected at 110 kV	232.62	9.85	102.35	112.20	4.82	1.08
(iv)	High Tension- Ferro/SM/PI/SR	582.70	29.26	262.22	291.48	5.00	1.12
4	AGRICULTURE	29.94	0.97	4.25	5.22	1.75	-
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	23.86	0.62	3.34	3.96	1.66	-
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	-	-	-	-	-	-
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	6.08	0.35	0.91	1.26	2.08	-
(iv)	High Tension-AG/HT-AG (Allied Activities)	-	-	-	-	-	-
5	Military Engineering Services/defense Establishments	26.89	1.49	13.45	14.93	5.55	1.24
6	PUBLIC LIGHTING	36.95	0.58	15.15	15.73	4.26	0.95
7	HOARDINGS/SIGNBOARDS	0.35	0.00	0.35	0.35	9.97	2.22
8	TEMPORARY	22.08	0.15	21.12	21.27	9.63	2.15
(i)	LT	22.08	0.15	21.12	21.27	9.63	2.15
. /	LT Domestic	2.74	0.01	1.97	1.98	7.23	1.61
	LT Commercial	19.34	0.14	19.14	19.28	9.97	2.22
	TOTAL	3644.93	192.21	1442.72	1634.92	4.49	1

### The Commission approves revenue from approved Retail Tariff of Rs 1634.92 Cr for the FY 2018-19.

The average increase in the retail tariff now approved by the Commission vis-à-vis the prevailing tariff is 6.37%. The table below provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the existing and approved recovery vis-à-vis the (ACoS).

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)		
Domestic	5.36	2.44	2.72	11.48%		
Commercial	5.36	5.28	5.48	3.85%		
Industrial	5.36	4.82	5.10	5.90%		
Agriculture	5.36	1.60	1.75	8.82%		

### Table 59: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)
Military Engineering Services	5.36	5.55	5.55	0.00%
Public Lighting	5.36	4.02	4.26	5.74%
Hoardings/ Signboards	5.36	9.97	9.97	0.00%
Temporary	5.36	9.60	9.63	0.37%
Total	5.36	4.22	4.49	6.37%

# 7.4.4. Revised Revenue Gap/ Surplus

The Govt. of Goa through its letter No. 1/14/2017-Fin/(Bud)/ dated  $14^{\text{th}}$  December 2017 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission.

In view of above the Commission approves the revenue gap as follows:

		-
S. No.	Particulars	FY 2018-19
1	Net Revenue Requirement	1952.54
2	Revenue from Retail Sales at Existing Tariff	1536.97
3	Revenue from Retail Sales at Approved Tariff	1634.92
4	Revenue Gap/ (Surplus) at Existing Tariff	415.27
5	Revenue Gap/ (Surplus) at Approved Tariff	317.61
6	Gap/(Surplus) for the previous year	0.00
7	Total Gap/ (Surplus)	317.61
8	Budgetary support from Govt. of Goa	317.61
9	Final Gap/ (Surplus) for FY 2018-19	0.00

### Table 60: Revised Revenue Gap/ Surplus approved by Commission (In Rs Cr)

The Commission approves Final Revenue gap for the FY 2018-19 as nil.

# 7.4.5. Government Budgetary Support

The Commission has approved an overall revenue gap of Rs 415.27 Cr at existing tariff in FY 2018-19. This gap is recovered partly by increase in retail tariff and partly by budgetary support from Govt. of Goa. In case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an overall average increase of 27.04%. The Commission, in FY 2018-19, has approved an average tariff increase of 6.37%. In case the Govt. had not provided the budgetary support, then an average increase of 19.43% over and above the approved tariff increase would have been required which would have led to a tariff shock to consumers.

It is observed that the Govt. of Goa has been providing budgetary assistance to the Petitioner during the past few years. The Commission in this matter would like to point out the over reliance of the Petitioner on Govt.'s budgetary support. The Petitioner should prepare itself of the repercussions in case the Govt. withdraws the support in the future.

The table below provides the average tariff increase and ABR with and without Govt. budgetary support. The ABR without the Government Budgetary support has been calculated considering the same per unit Gap of Rs 0.87/kWh (Difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support) is loaded equally among all consumer categories.

Category	ACoS (Rs/kwh)	ABR at Approved Tariff with Govt. Budgetary Support (Rs/kwh)	Increase with Budgetary Support (%)	ABR without Govt. Budgetary Support (Rs/kwh)	Additional Increase without Budgetary Support (%)
Domestic	5.36	2.72	11.48%	3.59	32.04%
Commercial	5.36	5.48	3.85%	6.36	15.89%
Industrial	5.36	5.10	5.90%	5.97	17.08%
Agriculture	5.36	1.75	8.82%	2.62	49.93%
Military Engineering Services	5.36	5.55	0.00%	6.42	15.69%
Public Lighting	5.36	4.26	5.74%	5.13	20.48%
Hoardings/ Signboards	5.36	9.97	0.00%	10.84	8.74%
Temporary	5.36	9.63	0.37%	10.50	9.05%
Total	5.36	4.49	6.37%	5.36	19.43%

### Table 61: Cost of Supply and tariff increase with and without Govt. Budgetary support

# 8. Chapter 8. Open Access Charges for the FY 2018-19

# 8.1. Wheeling Charges

### 8.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

### Petitioner's submission:

The Petitioner has bifurcated the ARR into Wheeling and Retail Supply Charges based on the methodology adopted by the Commission in the Tariff Order of FY 2017-18. The Petitioner has submitted the Wheeling Charges as shown in the table below:

Particulars	Unit	Formula	FY 2018-19
Wheeling Cost	Rs Cr	A	477.21
Wheeling Cost at HT/EHT network	Rs Cr	B=A*54.36%	259.40
Input required for sales at 11 kV and above	MU	C	2172.07
Wheeling Charges for HT/EHT network usage	Rs/kWh	D=B/C*10	1.19
Wheeling Cost for LT network	Rs Cr	E=A*45.64%	217.81
Input required for sales at LT level	MU	F	1757.50
Wheeling Charges for LT network usage	Rs/ kWh	G=E/F*10	1.24

### Table 62: Wheeling Charge calculation as submitted by Petitioner

### **Commission's analysis:**

The Commission feels that there has to be a proper bifurcation of all expenses between the functions of the wheeling business (wire business) and the retail supply business. The Commission for the purpose of bifurcation of wheeling and retail ARR, is guided by the Staff Paper on "Operationalisation of Open Access in the State of Goa and UT's". The allocation between wheeling and retail supply business for the FY 2018-19 as per the ARR approved in this Order is provided in the table below:

Deathanlana	Allocat	ion (%)		FY 2018-19		
Particulars	Wheeling	Supply	Wheeling	Supply	Total	
Cost of power purchase for full year	0%	100%	0.00	1329.68	1329.68	
Employee costs	70%	30%	189.29	81.12	270.41	
Administration and General Expenses	50%	50%	6.92	6.92	13.84	
Repair and Maintenance Expenses	90%	10%	41.04	4.56	45.60	
Depreciation	90%	10%	82.43	9.16	91.59	
Interest and Finance charges	90%	10%	96.47	10.72	107.19	
Interest on Working Capital	22%	78%	2.35	8.33	10.68	
Interest on consumer security deposit	22%	78%	1.54	5.48	7.02	
Return on NFA /Equity	90%	10%	74.94	8.33	83.27	
Provision of Bad & Doubtful Debt	0%	100%	0.00	0.00	0.00	
Income Tax	90%	10%	0.00	0.00	0.00	
Total Revenue Requirement			494.99	1464.29	1959.28	
Less: Non-Tariff Income	0%	100%	0.00	6.74	6.74	
Net Revenue Requirement			494.99	1457.55	1952.54	

### Table 63: Allocation matrix approved by Commission

To determine the wheeling charges, the wheeling costs are allocated on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by the Open Access consumers and primarily comprises of O&M Expenses and other costs as provided in the table above.

The methodology adopted for allocating the derived wheeling costs at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers
- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.
- The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.

The energy input has been determined assuming the cumulative loss level of HT/EHT voltage as 3.64%, which is the same as approved in the Tariff Order of FY 2017-18. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 10.75% as approved in the ARR of FY 2018-19.

Category	Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)
Low Tension (LT) Level	619987	60.00%	1551.84	18.83%
High Tension (HT)/ Extra High Tension(EHT) Level	860	40.00%	2093.09	3.64%
Total	620847	100.00%	3644.93	10.75%

### Table 64: Parameters assumed for voltage wise allocation of wheeling costs

Accordingly, the Commission approves the Wheeling Charges as shown in the table below:

### Table 65: Wheeling Charges approved by Commission

Category	O&M	Others	Total	Sales (MU)	Wheeling Charges (Rs/kWh)
Low Tension (LT) Level	237.07	202.90	439.98	1551.84	2.84
High Tension (HT)/ Extra High Tension(EHT) Level	0.17	54.83	55.01	2093.09	0.26
Total	237.25	<b>257.74</b>	494.99	3644.93	

The Commission approves wheeling charge of Rs 2.84/ kWh at LT voltage level and Rs 0.26/kWh at HT/EHT voltage level

# 8.2. Additional Surcharge

### **Petitioner's submission:**

The Petitioner has not proposed any additional surcharge in the Petition for approval.

### Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa And Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. The Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.

Further, Regulation 5.2 (1) (b) states the following:

The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Particulars	FY 2018-19			
Total Power Purchase cost approved	1329.68			
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	320.43			
Energy Sales (MU)	3644.93			
Additional Surcharge (Rs/kWh)	0.88			

### Table 66: Additional Surcharge approved by Commission

Earlier, a consumer availing Open Access was required to pay fixed charges on the contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. As per the Open Access Regulations, 2017, a consumer now is only required to pay fixed charges on Admissible Drawal rather than on the total contracted load.

### The Commission approves an Additional Surcharge of Rs 0.88/kwh for FY 2018-19.

The Commission directs the Petitioner to submit quarterly details of the power stranded on account of consumers opting for open access alongwith the Additional Surcharge recovered from these consumers The Commission will analyse the information and change the applicable Additional Surcharge, if required.

# 8.3. Cross-Subsidy Surcharge

### **Petitioner's submission:**

As per the National Electricity Policy, a surcharge is to be levied by the respective State Commission on consumers switching to alternate supplies under the open access. This is to compensate the host distribution licensee serving such consumers who are permitted Open Access under Section 42 (2) of the Electricity Act, for loss of cross-subsidy element built into the tariff of such consumers An additional surcharge may also be levied under sub-section (4) of Section 42 of the said Act for meeting the fixed cost of the distribution licensee arising out of its obligation to supply in cases where consumers are allowed open access.

Cross-subsidy surcharge (CSS) has been determined in accordance with the formula specified in the Tariff Policy, 2016.

The category-wise CSS applicable arrived on consideration of the components ABR, C, L & D as proposed by the Petitioner is as follows:

Particulars	Unit	HT/EHT
T (Tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation)	Rs/kWh	5.37
C (per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligations)	Rs/kWh	3.58
D (aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level)	Rs/kWh	1.19
L (aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level)	%	3.64%
Surcharge	Rs/kWh	0.59

### Table 67: Cross-Subsidy Surcharge as proposed by the Petitioner

### **Commission's analysis:**

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

• Voltage Wise losses are assumed for HT/EHT voltage level. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 10.75%, as approved in the ARR for FY 2018-19. Voltage wise losses assumed at each level have been shown in the table below:

### Table 68: Voltage wise losses assumed by Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	15.76%	18.83%
High Tension (HT)/ Extra High Tension(EHT) Level	3.64%	3.64%
Total	10.75%	10.75%

Using these losses the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1551.84	18.83%	1911.80
High Tension (HT)/ Extra High Tension(EHT) Level	2093.09	3.64%	2172.16
Total	3644.93	10.75%	4083.96

### Table 69: Energy Input at each voltage level (MU)

Now the overall ARR approved for FY 2018-19 is divided into variable and fixed ARR with variable ARR comprising of variable component of the power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated between HT/EHT and LT level on the basis of input energy, as the HT/EHT network is utilized by both LT and HT/EHT network consumers.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
Low Tension (LT) Level	1911.80	60.00%	619987
High Tension (HT)/ Extra High Tension(EHT) Level	2172.16	40.00%	860
Total	4083.96	100.00%	620847

### Table 70: Parameters used for allocation of fixed costs

The Variable component of the Power purchase cost is allocated on the basis of energy input.

The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the table below:

### Table 71: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (Rs Cr)	Allocated Variable Cost (Rs Cr)	Total Cost (Rs Cr)	Energy Sales (MU)	VCoS (Rs/kwh)
Low Tension (LT) Level	796.34	386.39	1182.73	1551.84	7.62
High Tension (HT)/ Extra High Tension(EHT) Level	330.79	439.02	769.81	2093.09	3.68
Total	1127.13	825.41	1952.54	3644.93	

This, VCoS is then used to determine the Cross-Subsidy Surcharge at each voltage level.

### Table 72: Cross-Subsidy Surcharge approved by Commission (Rs/kWh)

Category	VCoS (Rs/kWh)	ABR (Rs/kWh)	Cross- Subsidy (Rs/kWh)
Low Tension (LT) Level	7.62	3.46	(4.16)
High Tension (HT)/ Extra High Tension(EHT) Level	3.68	5.24	1.56

The Commission approves nil Cross-Subsidy Surcharge at LT Voltage level and Rs 1.56/kWh at HT/EHT Voltage level, in FY 2018-19.

# 9. Chapter 9: Tariff Schedule

# 9.1. Tariff Schedule

### Table 73: Tariff Schedule

		Approved Tariff			
S. No.	Category	Fixed Charges	Energy Charges (Rs/kWh)		
1	DOMESTIC				
Α	Low Tension-D/LT-D				
	0-100 units	Single Phase Rs	1.40		
	101-200 units	25/Con/Month	2.10		
	201 to 300 units		2.65		
	301 to 400 units	Three Phase Rs	3.45		
	Above 400 units	60/Con/Month	4.00		
В	Low Tension-LIG/LT-LIG	Rs 40/Con/Month			
С	High Tension-D/HT-D				
	All Units	Rs 100/kVA/Month	3.45		
2	COMMERCIAL				
Α	Low Tension-C/LT-C				
	0-100 units	For consumers with Load	3.40		
	101-200 units	upto – Rs 50/Con/Month	4.10		
	201 units- 400 units		4.60		
		For consumers with Load	-		
	Above 400 units	more than 20 kW and upto	5.00		
		90 kW- Rs 55/kW/Month			
B	High Tension-C/HT-C				
	All Units	Rs 250/kVA/month	5.50		
3	INDUSTRIAL				
Α	Low Tension-I/LT-I				
	0-500 units	Rs 35/HP/Month	3.30		
	Above 500 units	Rs 35/HP/Month	3.80		
В	Low Tension-Mixed/LT-P (Hotel Industries)				
	All Units	Rs 40/kW/Month	4.70		
С	High Tension-I/HT-I				
	Connected at 11/33 kV	Rs 250/kVA/Month	4.50		
	Connected at 110 kV	Rs 250/kVA/Month	4.40		
D	High Tension-Ferro/SM/PI/SR				
	All Units	Rs 250/kVA/Month	4.50		
4	AGRICULTURAL				
A	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)				
	All Units	Rs 15/HP/Month	1.40		
В	Low Tension-AG/LT-AGA (Allied Activities)				
	All Units	Rs 20/HP/Month	1.70		

		Approved Tariff			
S. No.	Category	Fixed Charges	Energy Charges (Rs/kWh)		
С	High Tension-AG/HT-AGP (Pump Sets/Irrigation)				
	All Units	Rs 35/kVA/Month	1.50		
D	High Tension-AG/HT-AG (Allied Activities)				
	All Units	Rs 60/kVA/Month	1.90		
5	MILITARY ENGINEERING SERVICES/DEFENSE ESTABLISHMENTS				
	All Units	Rs 175/kVA/Month	5.00		
6	PUBLIC LIGHTING				
	All Units	Rs 50/kW/Month	4.10		
7	HOARDINGS/SIGNBOARDS				
	All Units	Rs 60/kVA/Month	9.90		
8	TEMPORARY SUPPLY				
А	LT Temporary Domestic	Rs 60 per kW per month or part thereof subject to a minimum of Rs300/- per connection per month or part thereof	7.20		
В	LT Temporary Commercial	Rs 120 per kVA per month or part thereof subject to a minimum of Rs 600/- per connection per month or part thereof	9.90		
C	HT Temporary	Rs 120 per kVA per month or part thereof	9.90		
9	SINGLE POINT SUPPLY				
Α	Residential Complexes	Rs 100 per kVA per month or part thereof	3.45		
В	Commercial Complexes	Rs 200 per kVA per month or part thereof	4.60		
C	Industrial Complexes	Rs 200 per kVA per month or part thereof	4.20		

## 9.2. Applicability

**Low Tension Category** - Applicable to Power Supply of Voltages at 230V and 440V Voltages when the Sanctioned Load is below 100 KVA/90 KW / 120 HP and power is supplied at single/ three phase.

**High Tension / Extra High Tension Category** - Applicable to Power Supply of Voltages at 11KV/ 33KV/ 110KV and above i.e. High/Extra High Voltages when the Contracted Demand is above 100 KVA/ 90 KW / 120 HP and power is supplied at three phase.

Category	Applicability	Point of Supply/Notes
1. LT Domestic	This schedule shall apply to private residential houses, government residential quarters, charitable institutions or	a. For the premises or flats which are closed or locked for a continuous period of more than
	educational institutions aided by State / Central Board, colleges aided by Goa	three months and having sanctioned / connected load more

### Table 74: Applicability of Tariff Schedule

Category	Applicability	Point of Supply/Notes
Category	University and religious institutions etc for	than 10 kW, the monthly
	consumption of energy using normal	minimum charges would be
	domestic appliances.	Rs1000/
	The Professionals i.e. individuals engaged in	, .
	those activities involving services based on	
	professional skills, like Lawyers, Doctors	
	{only those using OPD/consultancy},	
	Professional Engineers, Chartered	
	Accountants, etc. may utilize the domestic	
	connection at their residence for carrying out	
	their professional work in the nature of	
	consultancy without attracting commercial	
	tariff for the electricity consumed, provided	
	the area used for professional activity does	
	not exceed the area permitted to be used for	
	such activity in residential area as per the	
	prevailing laws/notifications issued by Town and Country Planning Department/other	
	concerned departments of Government of	
	Goa in this regard.	
	This schedule shall apply to individual	
	residential consumers of Bungalows, Villas,	
2. HT Domestic	Cottages, etc. using normal domestic	
	appliances and whose contract demand falls	
	within the threshold limit of HT category.	
		The applicability of the Low
		Income Group category will be
	This schedule shall apply to consumers of Low	assessed at the end of each month
3. Low Income	Income Group who have a sanctioned load of up to 0.1 kW (primarily 2 points with 2 x 40	and in case the consumption exceeds 30 units per month, the
Group	watts) and who consume up to 30 units per	entire consumption would be
	month only.	billed at the rate of LTD-
		/Domestic for that particular
		month.
	This tariff is applicable to any activity not	
	specifically covered in any other consumer	
	categories, or although covered in another	
	activity, the use is made for a commercial	
	category. It would include electricity used in	
	all non- residential, non-industrial premises	
	and/or commercial premises for commercial	
	consumption meant for operating various	
	appliances. It would include the following	Cold Storages which are solely
	categories but not limited to:	attached to Agriculture and its
	Houses with rent back facilities	allied activities shall be charged
4. Commercial –	Government hospitals	tariff of Agriculture Allied activities. All other cold storages
LT and HT	Professionals not covered in domestic	which are partly or not attached
	category.	with Agriculture and Allied
	Commercial Complexes and Business	activities shall be charged
	premises, including Shopping malls/show	commercial tariff.
	rooms, offices / shops;	
	Combined lighting and power services for     Entertainment in dualing films studies	
	Entertainment including film studios,	
	cinemas and theatres, including	
	multiplexes, Race Course, Meeting/Town Halls, Clubs, all types of Guest houses;	
	<ul> <li>Offices including Government Offices,</li> </ul>	
	<ul> <li>Offices including Government Offices, Commercial Establishments;</li> </ul>	
	Commerciar Establishments,	

Category	Applicability	Point of Supply/Notes
	<ul> <li>Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private educational institutions, private hospitals, private messes, Internet / Cyber Cafes, Mobile Towers, Microwave Towers, Satellite Antennas used for telecommunication activity, Telephone Booths, Fax / Xerox Shops, X-ray installations, bars and cold drink houses, Tailoring Shops, Computer Training Schools, Typing Institutes, Photo Laboratories, Photo Studios, Laundries, Beauty Parlours and Saloons, dry cleaners etc</li> <li>Automobile and any other type of repair centers, Retail Gas Filling stations, Petrol Pumps and Service Stations including Garages, Tyre Vulcanizing units, Battery Charging Units, Tyre vulcanizing centres etc;</li> <li>Banks, Telephone Exchanges, TV Station, Micro Wave Stations, All India Radio (AIR) Stations, ATM Centres etc;</li> <li>For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes;</li> <li>Sports Clubs, Health Clubs, Gymnasium, Swimming Pools;</li> <li>Research and Development units situated outside Industrial premises;</li> <li>Airports, Railways, Railway Stations, Bus stands of KTC etc;</li> </ul>	Point of Supply/Notes
5. LT Industrial	<ul> <li>This tariff shall apply to industrial units engaged in industrial activities, manufacturing process etc. It would include the following categories but not limited to:</li> <li>Flour Mills, wet grinding, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills, Power looms including other allied activities like Warping, Doubling, Twisting, etc.</li> <li>Ice Factories, Ice Cream Manufacturing units/ Plants, Dairy Testing Process, Milk Dairies, Milk Processing/ Chilling Plants (Dairy) etc;</li> <li>Engineering workshops, Engineering Goods Manufacturing units, Printing Presses, Transformer repairing Workshops, Tyre retreading units, Motive Power Loads etc;</li> <li>Mining, Quarry and Stone Crushing units etc;</li> <li>Garment Manufacturing units, LPG/ CNG Bottling plants etc;</li> <li>Sewage Water Treatment Plants/ Common Effluent Treatment Plants</li> </ul>	The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

	Category	Applicability	Point of Supply/Notes
	Cutcgory	<ul> <li>owned, operated and managed by Industrial Associations and situated within industrial area.</li> <li>Pumping of water for public water supply, Sewage Treatment Plants, activities related with public water Supply Schemes and Sewage Pumping Stations.</li> <li>Use of electricity / power supply for activities/ facilities exclusively meant for employees of the industry within the premises of the Industry.</li> <li>IT Industry, IT parks etc.</li> </ul>	
6.	LT Mixed – Hotel Industries	This schedule shall apply to Hotels/ restaurants with lodging and boarding facilities.	Hotel Industry consumers intending to avail the facility of this tariff should produce a certificate from the Tourism Department stating that the intending applicant is registered under Goa Registration of Tourist Trade Act, 1982 and in the Hotel business on a regular basis. On receipt of the certificate, such tariff shall be made effective from the date of original validity of the certificate. In case of failure to produce the certificate, the same shall be considered under Commercial category.
7.	HT Industrial	<ul> <li>This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories:</li> <li>Bulk Supply of power at 11 KV, 33 kV /110 KV and above for industries, factories and other industrial purposes.</li> <li>Bulk supply of power at 11 KV and above for educational institutions owned or aided by Government, non-industrial establishments,</li> <li>Industrial units engaged in Ice Manufacturing Units;</li> <li>Hotels with lodging and boarding facilities etc</li> <li>Use of electricity / power supply by an establishment such as IT Industries, IT Parks, IT Units</li> <li>Pumping of water, public water supply, public water treatment plant, activities related with Supply Schemes and Sewage Treatment Plants, Sewage Pumping Stations etc</li> </ul>	
8.	HT Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive	This schedule shall apply to supply of power having a Contract Demand from 100 KVA up to 1000 KVA at 11 KV and above 1000 KVA at 33 KV for Steel rolling industry and Metal Alloy, Steel Melting, Ferro Alloy, and Ferro metallurgical industries where melting is involved using electric power.	

Category	Applicability	Point of Supply/Notes
9. LT and HT Agriculture Pump sets	This schedule shall apply to establishments for Irrigation pumping, De-watering and Lift Irrigation for cultivation of food crops such as cereals, pulses, vegetables and fruits etc and Cane crusher and/or fodder cutter for self-use for Agricultural purposes.	This tariff shall be applicable from the date of production of a certificate from the Directorate of Animal Husbandry or Agriculture Department of Government of
10. LT and HT Agriculture Allied Activities	<ul> <li>This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to:</li> <li>Poultry farms, Livestock farms, Combination of livestock farms with dairy, Piggery etc</li> <li>Horticulture, Green Houses, Plantations, all types of nurseries etc.</li> <li>Fish farms including ornamental fish farms, prawn farms, other aqua farms etc</li> <li>Tissue culture, Mushroom activities, Aquaculture, Floriculture, Fisheries, Sericulture, Floricultural nurseries, hatcheries etc</li> <li>Any other agricultural activity not falling under HT-Agriculture (A) shall be covered under this category</li> </ul>	Goa to the effect that the consumer carried on the said activity on regular basis. In case of failure to produce the certificate, the same shall be considered under Commercial category. Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged Commercial Tariff.
11. MES/Defense Establishments	This schedule shall apply to supply of power for defense installation establishments, having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load.	
12. LT Public Lighting	<ul> <li>This schedule shall apply to public lighting systems. It would include the following categories but not limited to:</li> <li>Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/Panchayats/Government;</li> <li>Lighting in Public Gardens;</li> <li>Traffic Signals and Traffic Islands;</li> <li>State Transport Bus Shelters;</li> <li>Public Sanitary Conveniences; and</li> <li>Public Water Fountains and such other Public Places open for general public free of charge.</li> <li>Street lighting in the colony of a factory which is situated separately from the main factory.</li> <li>This shall also be applicable to public lighting of Government/Semi Government Establishments but shall not be applicable in case of private establishments</li> </ul>	
13. LT Hoardings/ Sign Boards	This schedule shall apply to lighting advertisements, hoardings and displays at departmental stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations etc. and shall be separately metered and charged at the tariff applicable for	

Category	Applicability	Point of Supply/Notes
	"Hoardings / Sign Board" category. However use of electricity for displays for the purpose of indicating / displaying the name and other details of the shop, on commercial premises itself, shall be covered under the prevailing tariff for such shops or commercial premises.	
14. LT Temporary Supply	<ul> <li>a) LT Temporary Domestic: This schedule shall apply to usage of electricity for all religious purposes or public functions for non-commercial purposes. It shall also apply for construction of own house by an individual with single tenement</li> <li>b) LT Temporary Commercial: This schedule shall apply to usage of electricity for any of the activities not covered under LT Temporary Domestic.</li> <li>It would include but not be limited to:</li> <li>All other Constructions including renovation, of all type of structures/ infrastructure, including buildings, bridges, flyovers, dams, power stations, roads, aerodromes, tunnels for laying of pipe lines for all purposes</li> </ul>	<ul> <li>i. The temporary connection shall be released through a proper meter</li> <li>ii. These temporary tariffs are applicable for temporary supply for a period not exceeding three months which may be extended beyond that period only with the prior permission of the Chief Electrical Engineer, up to a maximum period of six months for general purpose and two years for construction activities.</li> <li>iii. Security deposit shall be collected in advance for an assessed 3 months billing.</li> </ul>
15. HT Temporary Supply	This schedule shall apply to usage of electricity for all temporary purposes.	
16. HT SPS Single Point Supply	This schedule shall apply to a group of consumers who desire to take a HT connection at single point for consumption of energy within a Residential Complex – Group Housing Societies, Residential Housing Colonies, Cooperative Group Housing Societies, Township Areas; Commercial Complexes, including Malls; Industrial Complexes, including IT Parks, Bio-Parks or other entities classified as industries by the Government of Goa.	<ul> <li>In case of a dispute on whether the complex can be classified as an industrial complex, a certificate from Industries Department, Government of Goa will be required.</li> <li>The following shall be the different combinations for SPS in a defined area: <ol> <li>All LT consumer mix area</li> <li>All HT consumer mix area</li> <li>HT+LT consumer mix area</li> <li>HT+LT consumer mix area</li> <li>The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories.</li> </ol> </li> <li>Based on technical and administrative feasibility, the ED-Goa may consider providing SPS power supply at HV/ EHV level to a complex at a mutually agreed injection point.</li> <li>The SPS arrangement would be applicable for the application received from a Residential complex / Association of Persons (AOP) / Developer of the complex or any other such similar person.</li> </ul>

Category	Applicability		Point of Supply/Notes
Category	тррисарину		
			if the minimum sanctioned
			cumulative contracted
			demand of the complex
			(group of consumers) is 1.15
			MVA/ 1 MW.
		e.	The complete cost of erection
			and O&M for the sub-
			transmission and distribution
			infrastructure within such
			complex would need to be
			borne by the said SPS
			applicant.
		f.	The SPS applicant would be
			required to develop and
			maintain an efficient,
			coordinated and quality sub-
			transmission and distribution
			system in its area of electricity
			supply. Further, the applicant
			would be responsible to
			comply with Standards of
			Performance and Supply Code
			Regulation as laid down under
			JERC Regulations and
			guidelines of Goa Electricity
			Department, if any. The
			network within the complex
			will need to be certified by the
		~	Chief Electrical Inspector.
		g.	For Residential Complexes,
			SPS application shall be
			entertained for groups of LT
			consumers only. The loads of
			common amenities for such
			group may include pumps for
			pumping water supply, lifts
			and lighting of common area.
			However, the consumption of
			energy for common services
			shall be separately metered
			with meters installed by the
			consumer and tested and
			sealed by licensee. The
			consumption of such energy
			over and above 10% of the
			total consumption of energy
			shall be billed at LT
			Commercial Tariff. The user
			shall inform the details of
			every non-domestic activity
			within the residential
			complex, such as commercial
			complex, industrial activity,
			and recreation club, along
			with the connected load to the
			licensee at the time of seeking
			the connection or at the time
			of enhancement in contract
			demand, and shall seek a
			separate connection for the
			separate connection for the

Category	Applicability	1	Point of Supply/Notes
			same in case the common load
		1	is more than 10%.
		h.	Individual Domestic HT
			consumers in a residential
			complex that opt for SPS shall
			need to apply separately
			under HT Domestic category.
		i.	The SPS applicant shall not charge tariff to the
			downstream consumers
			higher than stipulated.
		j.	The applicant shall be obliged
		J.	to pay the total tariff (total
			billed amount) due to ED-
			Goa, as measured at HT end
			of SPS. However, to cover
			energy transformation losses
			and other O&M expenses,
			such applicant would be
			eligible to get rebates from
			ED-Goa on full bill payment,
			within the due time:
			i. 5% on the overall billed
			amount in all cases of LT
			and HT consumers
			ii. Any other loss would be to
			the account of the
			applicant.
		k.	For CC and IC applicant, any
			LT / HT Consumer in the area
			should have minimum 80%
			pre-dominant load of their
			appropriate category i.e. mix load is allowed only upto 20%.
			For e.g. If a HT/ LT Industry
			Consumer has Factory,
			Residential Colony for its
			workers and also some
			Commercial facilities for his
			staff and the total of
			Residential and Commercial
			load is say around 30%, then
			separate Individual SPD
			connection may be taken for
			each such group as per
		<b>,</b>	activity.
		1.	The implementation of SPS
			arrangement should be in accordance with the
			Electricity Act, 2003 and
			APTEL judgement dated 11th
			July 2011 in appeal no. 155
			and 156 of 2010 in this regard.
		L	and 130 01 2010 III tills regald.

# 9.3. General Terms and Conditions

1) These tariffs are proposed to be made applicable from 1<sup>st</sup> April 2018 and shall remain valid till further Orders of the Commission.

Tariffs are subject to revision and/or surcharge that may be levied by ED-Goa from time to time as per the directives of the Commission.

- 2) The tariffs are exclusive of electricity duty and taxes levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 3) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 4) Unless specifically stated to the contrary the figures of energy charges relate to rupee per unit (kWh) charge for energy consumed and fixed charge relates to a month.
- 5) If the energy supplied for a specific purpose under a particular tariff is used for a different purpose not contemplated in the contract for supply and / or for which a higher tariff is applicable, it shall be deemed as unauthorized use of electricity and shall be assessed under the provisions of section 126 of the Electricity Act, 2003 and Supply Code Regulation 2010 notified by the JERC.
- 6) If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.
- 7) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. These shall be double in case bi-monthly billing is carried out and shall be proportionately calculated as per the number of days of billing, Similarly slabs of energy consumption shall also be considered accordingly in case of bi-monthly or periodic billing.
- 8) The consumption for factory lighting/pump house lighting shall be billed as per respective main tariff category. A separate energy meter for recording energy consumed towards factory lighting for new installation need not be provided. For the existing installations, till the factory lighting meter's mains are shifted to main meter, the total energy consumption shall be arrived at by adding the energy consumption of the main energy meter and the factory lighting meter.
- 9) Supply of power in all cases shall be subject to the execution of Agreement between the Electricity Department, Goa and consumers and as per the JERC (Electricity Supply Code) Regulation 2010. The other conditions, definitions etc. shall be applicable as per the Electricity Act 2003 and various JERC Regulations, such as Standards of Performance, Supply Code, Conditions of Supply, Distribution Code etc., issued from time to time

### 10) Billing of Demand in excess of Contracted Demand

The billing shall be on the maximum demand recorded during the month or 85% of contracted demand whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal energy rate.

The definition of the maximum demand would be in accordance with the provisions of the JERC (Electricity Supply Code) Regulations, 2010. If such over-drawal is more than 20% of the contracted demand then the connection shall be disconnected immediately.

### **Explanation:**

Assuming the contract demand as 100 kVA, maximum demand at 120 kVA and total energy consumption as 12000 units, then the consumption corresponding to the contract demand will be 10,000 units (12000 X 100/ 120) and consumption corresponding to the excess demand will be 2000 units. This excess demand of 20 kVA and excess consumption of 2000 units will be billed at twice the respective normal rate. E.g. in case of HTI/Industrial category, excess demand and consumption will be billed at the rate of Rs 500 per kVA per month and Rs 9.00/kWh respectively. Connections drawing more than 120 kVA shall be disconnected immediately.

11) The adjustment because of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.

12) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in Section 7.4.3 of this Tariff Order.

### 13) Power Factor Charges for HT and EHT

- a) **'Power Factor'** means, the average monthly power factor and shall be the ratio expressed as a percentage of the total kilowatt hours to the total kilovolt ampere hours supplied during the month; the ratio being rounded off to two decimal figures.
- b) The consumer shall maintain the monthly average power factor of the supply not less than 90% (lagging). If the monthly average power factor of (a) consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 1% in power factor upto 70%(lagging).
- c) In case the monthly average power factor of the consumer is more than 95% (95% lagging), a power factor incentive @ 1% on demand and energy charges shall be given for each increase of 1% in power factor above 95% (lagging)
- d) If the average power factor falls below 70% (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
- 14) For staff quarters, rest/guest houses, street lighting in the colony of a factory which is situated separately from the main factory and for distribution lines, service lines, etc. permitted to be owned and maintained by the HT consumer owning the factory, there shall be a separate connection and such energy consumed shall be charged under Single Point Supply.
- 15) **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit, taxes and duties) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

If payment is made in advance along with prior declaration of premises to be closed for a certain period of time, a rebate of 1% per month shall be given on the amount (excluding security deposit, taxes and duties) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

- 16) **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount (excluding taxes and duties) shall be given. Those consumers having arrears shall not be entitled for such rebate and the amount paid will first be used to set off past liabilities.
- 17) **Delayed Payment Charges (DPC)**: In case the electricity bills are not paid within the due date mentioned on the bill, delayed payment charges of two percent (2%) (computed on a daily basis on the outstanding bill from the due date till the date of payment) shall be levied on the bill amount. However, if a consumer makes part payment of a bill (in exceptional circumstances, with prior approval of the Chief Electrical Engineer), within the due date, then the delayed payment charges shall be applicable only on the amount which was not paid within the due date.

Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to the next rupee.

If the consumer fails to pay the energy bill presented to him by the due date the department shall have the right to disconnect the supply after giving 15 days' notice as per provision of the Electricity Act 2003 and Supply Code Regulations 2010 of JERC as amended from time to time.

In case of non-realization of payment through Cheque, a penalty of 5% of the cheque amount in addition to the Delayed Payment Charges (DPC) will be levied on the consumers

### 18) Time of Day Tariff (ToD ):

- i. Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off peak load period, shall be recorded by installing a ToD meter.
- ii. The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Time of use	Demand Charges	Energy Charges
Normal period (7:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 11.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (11:00 p.m to 7:00 a.m)	Normal Rate	90% of normal rate of energy charges

### Table 75: Applicability of ToD Tariff

- iii. Applicability and Terms and Conditions of TOD tariff:
  - a) TOD tariff is mandatory for HT/EHT consumers and shall be optional for LT industrial and commercial consumers
  - b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from sources other than ED-Goa through wheeling of power.
  - c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff
  - d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

## 9.4. Schedule of Miscellaneous Charges

### Table 76: Schedule of Miscellaneous Charges

Description	Approved Charges	
Monthly Meter Rental Charges(as per provisions of Regula Supply Code) Regulations 2010)	tion 7.3 (1) of JERC (Electricity	
Single Phase LT meter	Rs 10/month	
Three Phase LT meter	Rs 20/month	
Three Phase LT meter with CTs	Rs 50/month	
LT Meter with MD Indicator	Rs 30/month	
Tri-vector Meter	Rs 1000/month	
Temporary Supply	Shall be twice as applicable in above meter types	
Changing or moving a Meter board	Actual Cost + 15%	
<ul> <li>Note:</li> <li>a. For all domestic and other LT loads less than 50 kW loads in Urban and Rural areas - Static single phase / three phase meters</li> <li>b. For LT (contracted load ≥ 50 KW) / HT / EHT consumer - Static, 3 Phase Tri-vector meters with MDI (MD Display)</li> <li>Reconnection Charges(as per provisions of Regulation 9.3 (c) of JERC (Electricity Supply Code)</li> </ul>		
Regulations 2010		
LT Services – At Cut outs		
Single Phase	Rs 25/-	
• Three Phase	Rs 50/-	

Description	Approved Charges
LT Services – At Overhead Mains	
Single Phase	Rs 30/-
Three Phase	Rs 50/-
LT Services – At Underground Mains	
Single Phase	Rs 75/-
Three Phase	Rs 125/-
HT Services	Rs 200/-
<b>Note:</b> If the same consumer seeks reconnection within 12 month disconnection, 50% will be added to above charges	s from the date of reconnection
Re-Rating of Installations	
Lighting Installation	Rs25/-
Motive Power Installation	Rs50/-
Testing Fee for Various Metering Equipments (as per provi (Electricity Supply Code) Regulations 2010	sions of Regulation 7.4 of JE
Single phase LT	Rs 25/energy meter
Poly Phase LT without CT	Rs 50/energy meter
L.T. meter with CTs/Demand or Special Type Meters	Rs 150/energy meter
H.T and E.H.T. metering equipment	Rs 10000/- at site
Transformer Oil	Rs 200/- per sample
3 – Ø Phase Tri-vector Meter Industrial LT Consumer	Rs 1000/- for laboratory testing
$3 - \emptyset$ Phase Tri-vector Meter 11 KV and 33kV HT Consumer	Rs 5000/- at site
Three Phase Tri-Vector Meter 110 KV EHT Consumers	Rs 1000/-at site
Combined CTPT Unit for 11kV and 33kV Consumer	Rs 2500/-
110KV CT / PT Unit	Rs 10000/-
Single Phase CT	Rs 150/ unit
Three Phase TT Block	Rs 500/unit
Distribution Transformer Testing (HT con.)	Rs 6000
Power Transformer Testing ( EHT consumer)	Rs 20000
Service Connection Charges(as per provisions of Regulation 3 Code) Regulations 2010	.3 (3) of JERC (Electricity Supp
Single Phase 1 φ	Rs 250
Three Phase 3 φ	Rs 500 to Rs 1200
HT (First 500 KVA)	Rs 10000
HT (Beyond 500 KVA)	Rs 20000
Extra Length for 1 φ (beyond 30 meters)	Rs 50 /meter
Extra Length for 1 $\phi$ for agricultural consumers (beyond 300 meters)	Rs 25 /meter

Description	Approved Charges			
Extra Length for 3 φ (beyond 30 meters)	Rs 100 /meter			
Extra Length for 3 $\phi$ for agricultural consumers (beyond 300 meters)	Rs 50 /meter			
Testing Consumer's installation(as per provisions of Regulati Supply Code) Regulations 2010	on 4.10 (6) of JERC (Electricity			
For first test of the new installation or off an extension to an existing installation if the installation is found to be defective. For Subsequent test of the new installation or of an existing	NIL			
installation if the installation is found to be defective				
Single phase LT	Rs 100/-			
• Three phase	Rs 200/-			
MS/BS loads upto70kW	Rs 4000 + ST			
LS/BS/RT (loads Above 70kW)	Rs 8000 + ST			
Changing the Meter or its position in the same premises at the request of the consumer when no additional material is required (as per provisions of Regulation 6.3 c) of JERC (Electricity Supply Code) Regulations 2010				
Single phase	Rs 100/-			
3-phase without C.Ts	Rs 200/-			
L.T. meter with C.T.s	Rs 500/-			
H.T and E.H.T. metering equipment	Rs 8000 + ST			
Re-sealing charges irrespective of the number of seals involv where seals found to have been broken by the consumer	ed against each item below and			
Meter cupboard / Meter Cubical / Box	Rs 50/-			
Where cut-out is independently sealed	Rs 50/-			
Meter cover or Meter Terminal cover	Rs 50/-			
Meter cover of Meter Terminal cover (3 phase).	Rs 50/-			
Maximum demand Indicator or C.T.s chamber	Rs 50/-			
Service Charges				
General Supply				
Single Phase	Rs 10/-			
Three phase below 70kW	Rs 20/-			
Three phase above 70kW	Rs 50/-			
Industrial/bulk/ agriculture /Street Lightning Supply				
• Upto70kW	Rs 25/-			
Above 70kW	Rs 50/-			
Replacement of broken glass				
Replacement of broken glass of meter cupboard (When there is default on Consumer Side)	Rs 50/-			
Replacement of broken Glass of single phase meter if the consumer has broken or tamper and with meter.	Rs 50/-			

Γ

Description	Approved Charges	
Replacement of broken Glass of three phase meter if the consumer has broken or tamper and with meter	Rs 50/-	
Supply of duplicate copies of electricity bills		
Domestic Consumers	Rs 5 per bill or Rs 10 per statement	
Non Domestic consumers	-	
LT Industrial upto 20kW and AP Consumer	-	
H.T Industrial and Bulk supply consumer	Rs 5 per bill or Rs 10 per statement	

# 10. Chapter 10. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short-term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Despatch Center (SLDC)/ Regional Load Despatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long-term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within the region (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawal/Under-drawal from the Grid and the Inter-State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market-determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of FY 2016-17 will be undertaken by the Commission once the audited accounts of FY 2016-17 are available. If the audited accounts for FY 2016-17 are prepared timely, the impact of true-up of various cost and revenue items is allowed in the tariff of FY 2018-19, along with the carrying cost for 2 years As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

## 10.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

### (a) Indian Electricity Act, 2003- Section 62 (4)

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

### (b) Tariff Policy, 2016, clause 5.11 – sub-clause (h-4)

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

### (c) Tariff Policy, 2016, clause 8.2– sub-clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs

Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

### (d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

### 10.2. Existing formula

The Commission first introduced the provision for adjustment of fuel surcharge in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) Regulations, 2009 notified on 08 February 2010. The relevant Clause 7 of the Regulations is provided below:

### *<sup>•</sup>7. Fuel Surcharge Formula*

(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.

(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto."

The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 on 27 June, 2012 prescribing the methodology for determination and the recovery mechanism of Fuel & Power Purchase Cost Adjustment (FPPCA) formula. Subsequently on 18 January, 2013, the Commission issued a Corrigendum correcting the calculations of the FPPCA for certain consumer categories.

On 30 June, 2014 the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 wherein the Commission proposed to adopt the same methodology as prescribed in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 in the MYT Period. Clause 19 of the Regulations is shown as follows

*"19. Treatment of Incremental Power procurement cost* 

The Distribution Licensee shall recover the incremental cost on account of fuel & power purchase adjustment in accordance with FPPCA formula provided in JERC Terms & Condition for determination of Tariff (first amendment) Regulations, 2009."

On 19 October, 2016 JERC notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Multi-Year Distribution Tariff) (Second Amendment) Regulations, 2016 according to which the Fuel and Power Purchase cost adjustment charge shall be levied by distribution licensees on consumer electricity bills on account of the incremental power purchase cost incurred by the licensees and the Transmission charge recovery was also added to the formula. The relevant amendment to the Regulation has been shown as follows:

### "1. Recovery Periodicity (Cycle)

The licensee shall compute fuel and power procurement cost variations on quarterly basis and adjustment shall be made in consumers bills starting after a month following the end of the quarter on units billed in the month under consideration. For example, Fuel & Power Purchase Cost Adjustment (FPPCA) for the quarter April-May-June shall be made in the month of July and shall be reflected in the consumer bills raised in the months of August-September and October on the units billed for the respective months. The formula shall be applicable prospectively for the purpose of consideration of Fuel and Power Purchase Cost Adjustment. FPPCA shall be done for all consumer categories except Below Poverty Line (BPL) and Agriculture consumers

### 2. Formula

The formula for determination of per unit Fuel & Power Purchase Cost Adjustment ("FPPCA") is as under:

*Per Unit FPPCA (Paisa/ unit) = Per Unit Actual cost of Power Purchase- Per Unit Approved Cost of Power Purchase in Tariff Order* 

$$Per Unit FPPCA \left(\frac{Paisa}{Unit}\right) = \left[\frac{Pactual - Sbulk}{\left[\left\{(X - c) - Xs\right\} * b\right] - Z}\right] * 1000 - Rapproved$$

Where

$$c = \{(X - A) * \frac{Tapproved}{100}$$
$$b = (1 - \frac{Yapproved}{100})$$

Where:

- Pactual : Actual cost of power purchased during the quarter (excluding purchase from unapproved bilateral and other unapproved sources) includes transmission charges of PGCIL but excludes SLDC charges, RLDC charges and reactive energy charges (Rs crores).
- Sbulk : Actual Revenue recognized from Sale of power to persons other than consumers of the licensee during the quarter (Rs crores).
- Rapproved : Approved per unit cost of power purchase for use in the FPPCA formula as given in the Tariff Order of the Licensee (Paisa per unit).
- X : Actual Energy units (kWh) procured during the quarter in consideration excluding unapproved sources (million units).
- A : Actual Energy Units (kWh) procured during the quarter in consideration (million units) from power exchanges, power generation within the periphery of the licensee & used by licensee and units overdrawn from the grid.
- Tapproved : Approved inter-state transmission losses for the year in consideration as provided in the Tariff Order (%).

- Yapproved : Approved T&D losses for the year in consideration as provided in the Tariff Order (%).
- *Xs* : *Actual Sale of power to persons other than the utility consumers (million units) during the quarter.*
- Z : Actual energy units billed for BPL and Agriculture category consumers (million units).

### 3. Other Terms and conditions

- a) For the purpose of Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain shall be considered. However, the bills or credits of earlier period received by the distribution licensee earlier than the period under consideration will not be considered for the purpose of FPPCA.
- b) The variation in fuel and power purchase cost adjustment with respect to the approved per unit power purchase cost, as per the formula specified above shall be recoverable/payable based on units billed for each category of consumers except BPL & Agriculture.
- c) Per unit rate of FPPCA to be billed to consumers is worked out in Paisa after rounding off to the next lower integer in case of fraction less than 0.5 and to the next higher integer in case of fraction equal to or greater than 0.5.
- d) The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers The determination of differential per unit FPPCA is mentioned below:
- Step 1: Determination of Value of K

Approved Retail Tariff for a category or sub category Weighted Average Retail Tariff (WART)

The value of K for different consumer category or sub category for the year in consideration is considered as per the respective Tariff Order.

• Step 2: Determination of proportionate FPPCA (Paisa/unit) consumer category/sub-category wise

FPPCA to be billed for the consumers category or sub-category (Paisa/unit) =

Average FPPCA  $\left(\frac{Paisa}{uni}\right) * K$  for that consumer category or sub – category

### 4. Duties of the licensees and Designated officer

- a) Every distribution licensee shall appoint a designated officer not below the rank of Executive Engineer with Name, Designation, Telephone no. & Fax and Place of Posting, who shall compute, certify and post the PPCA calculations, PPCA chargeable & related data summary on the licensees website and clarify to consumers query, if any.
- b) The Designated Officer shall send certified copy of FPPCA calculations immediately to Joint Electricity Regulatory Commission."

### 10.3. Need to review the existing mechanism

JERC has been amongst the first few Electricity Regulatory Commission's in India to introduce the concept of adjustment of variation in the power purchase cost in the end consumer tariffs through Fuel and Power Purchase Cost Adjustment (FPPCA) mechanism in 2012.

The Indian Power Sector is very dynamic and has changed a lot since 2012. Further, there have been changes in the methodology for determination and recovery of generation and transmission tariff, transmission pricing mechanism, fuel mix with emergence of renewable energy etc. Other State Electricity Regulatory Commissions (SERCs) have also introduced the concept of the FPPCA wherein the Fuel and Power Purchase cost variations are passed through to the consumer either monthly, bi-monthly or quarterly. In between, the Commission has also received representation from various consumer groups and the distribution licensees seeking clarity and simplicity in the FPPCA mechanism adopted by the Commission. In light of the above and the experiences gained during these years, the Commission has decided to examine the FPPCA mechanism followed in other States vis-à-vis the FPPCA mechanism adopted by the Commission and identify the best practices.

A detailed examination of the methodology followed across other States for calculation of variations in the Fuel and Power Purchase Cost Adjustment revealed the following observations:

- Every State has a different formula for determination of the FPPCA charges. However the fundamental objective of all of them remains the same i.e. to pass on the incremental cost of power procurement to the consumers
- FPPCA charges are composed of different elements in different States with power purchase cost from approved and long term sources being the only element common across all States
- FPPCA charges are mostly determined on the Discom Periphery across all the States
- Power purchase cost considered as base for calculation of FPPCA charges is determined in the Tariff Order.
- For States, procuring power from own generation plants, the Station Heat Rate and other components such as Auxiliary consumption, losses etc. are considered as base as approved in the Tariff Order for calculating the variations in the power purchase costs.

The key takeaways with respect to certain parameters of the formula are provided in the table below:

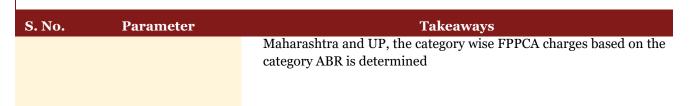
S. No.	Parameter	Takeaways
1.	Time Period	• Time period for levy of the FPPCA is quarterly in most of the States except in Chhattisgarh and Bihar where recovery is on bi-monthly and monthly basis respectively.
2.	Approval Process	• Some of the SERC's allow the Discoms to recover FPPCA charges upto a certain limit via automatic route (without approval of the Commission) thereby reducing the administrative burden. However, in most of the States like Maharashtra, Kerala, Madhya Pradesh etc. prior approval from the Commission is required.
3.	Elements included while determining FPPCA charges	<ul> <li>In all the States, power purchase cost from long term approved sources is considered while calculating the FPPCA charges</li> <li>Central Transmission charges are considered in the States of Gujarat, Maharashtra, Delhi and Uttar Pradesh;</li> </ul>

### Table 77: Key Takeaways

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S. No.	Parameter	Takeaways
		• Adjustments (Under-recovery/ Over-recovery) due to previous FPPCA period is considered in the States like Bihar, Karnataka , Kerala and Maharashtra;
		• Power Purchase cost from short term sale/ purchase, bilateral exchange, IEX etc. is considered in the States of Gujarat, Maharashtra and Uttar Pradesh;
		• In States like Karnataka and Madhya Pradesh, only variable cost of power purchase is considered while calculating the FPPCA charges;
		• In Uttar Pradesh (UP) any kind of arrears/refunds etc. in the period are also considered
4.	Elements excluded while determining FPPCA charges	• Short term power procurement cost is excluded while calculating FPPCA in most of the States except Gujarat, Maharashtra and Uttar Pradesh
		• In UP, power purchase cost from unapproved plants is excluded
		DSM charges are excluded in most of the States
		• In Bihar, the Regulations categorically define exclusion of any kind of penalties due to delayed payment, while calculating FPPCA charges
		• In Chhattisgarh power purchase cost from renewable sources is excluded.
		• In the NCT of Delhi, past arrear/ credits are not considered unlike UP where they are considered.
5.	Categories excluded	• Almost all categories are covered under the ambit of the FPPCA charges except in the State of Kerala where the domestic consumers upto a certain consumption limit are not levied FPPCA charges.
		• In Gujarat State, the FPPCA charges for the Agriculture category are subsidized by the State Government.
6.	T&D losses considered for determination	• In most of the States, the T&D losses approved in the Tariff Order are considered for calculation of gross units; however, in Gujarat and Bihar, the approved or actual losses whichever are lower are considered
		• In Maharashtra, the actual T&D losses are considered.
7.	Notification via Regulations/ Tariff Order	• In most of the States like Delhi, Maharashtra, Madhya Pradesh etc., the FPPCA methodology is defined in the Tariff regulations except in Karnataka and Kerala where individual regulations are notified.
8.	Ceiling within a month (%) for recovery	• In States like Maharashtra, Gujarat, Bihar and Karnataka, the upper ceiling of the FPPCA charges is provided which is applicable to all categories.
9.	Ceiling within a month for a category	• Ceiling of the FPPCA charges in a quarter for categories such as Domestic and Agriculture in Chhattisgarh State.
10.	Recovery Mechanism	• FPPCA charges are recovered from the consumers and are part of their electricity bills
		• In some States like Gujarat and Madhya Pradesh, a uniform FPPCA charge is recovered depending on the billed units while in States like



The existing FPPCA mechanism notified by the Commission is in the form of an amendment in the existing Regulation - *Joint Electricity Regulatory Commission for the State of Goa and UT's (Multi-Year Distribution Tariff) (Second Amendment) Regulations, 2016.* These Regulations are sub-legislations and making any changes in the Regulation involves legal process which is cumbersome and time consuming. The Commission, therefore, proposes to repeal the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (Second Amendment) Regulations, 2016 and going forward provide formula for the FPPCA mechanism in the Tariff Order issued by the Commission.

In the section below, the Commission has discussed the proposed FPPCA formula for inclusion in the Tariff Order for the FY 2018-19.

## 10.4. New formula

Based on the review of the existing formula and examination of the formulas and the best practices adopted by the various SERC's, the Commission proposes the following mechanism for calculation and passing on of variations in the Fuel and Power Purchase Cost Adjustment (FPPCA) in the end consumer tariff, which shall come into force w.e.f. 1<sup>st</sup> April 2018 (i.e. Power Purchased by the Licensee from 1<sup>st</sup> April 2018 onwards). For power purchased by the Licensee for the period from 1<sup>st</sup> January 2018 till 31<sup>st</sup> March 2018, the FPPCA will be calculated based on the earlier formula.

### 1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

### 2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

### 3. Formula

The FPPCA formula shall contain the following three components:

- 1. Power Purchase Cost adjustments which shall contain the following elements:
  - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
  - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
  - Variation on account of Deviation Settlement Mechanism Shall be allowed, but the incentive/penalty shall be excluded

- 2. Transmission cost adjustments which shall contain the following elements:
  - Variation on account of Central Transmission Charges including arrears/ revisions.
  - Variation on account of State Transmission charges including arrears/revisions
- 3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
  - Any adjustments /reversals due to over recovery of charges
  - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
  - Any other adjustments on account of factors not envisaged at the time of tariff fixation
- 4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$FPPCA\left(\frac{Rs.}{Unit}\right) = \cdot \left(\frac{(Pact + Tact + Oact - ASact) * 10}{\{[PPOact * (1 - TLapp) + PPIact - PSOact] * (1 - DLapp)\} - Zact}\right) - Rapp$$

Where:

- *Pact(in Rs. Cr.)*: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - $\circ$   $\,$  Cost of procurement from sources outside the State,
  - $\circ$   $\,$  Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - $\circ$  Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- *Tact* (*in Rs. Cr.*): Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - o Intra-State transmission cost
- *Oact* (*in Rs. Cr.*): Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- *ASact* (*in Rs. Cr.*): Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- *PPOact (in MU)*: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- *TLapp* (*in* %): Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIact* (*in MU*): Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- PSOact (in MU): Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- *DLapp* (*in* %): Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- Zact (in MU): Actual energy sales for agriculture and BPL category consumers in the quarter

 $Rapp\left(\frac{Rs}{unit}\right) = \left(\frac{(Papp + Tapp) * 10}{\{[PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$ 

- *Papp* (*in Rs. Cr.*): Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - $\circ$   $\,$  Cost of procurement from sources within the State,
  - $\circ$   $\,$  Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power
- *Tapp* (*in Rs. Cr.*): Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- *PPOapp* (*in MU*): Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- *TLapp* (*in* %): Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIapp* (*in MU*): Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- *DLapp* (*in* %): Approved T&D losses for the year in consideration as provided in the Tariff Order
- *PSOapp* (*in MU*): Quantum of sale of surplus power approved in the Tariff Order for a quarter
- *Zapp* (*in MU*): Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

### 4. Other Terms and conditions

- 1. For the purpose of the Fuel and Power Purchase Cost Adjustment, the Commission suggests that all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.
- 2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers
- 3. The FPPCA charges for a quarter shall be limited to **10%** of the ABR for a consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission atleast one week before levying the same on the consumers
- 4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers The determination of differential per unit FPPCA is mentioned below:
  - Step 1: Determination of Value of K

 $\frac{Approved Retail Tariff for a category or sub category (\frac{Rs.}{unit})}{Weighted Average Retail Tariff (WART)(\frac{Rs.}{unit})}$ 

The value of K for different consumer category or sub-category for the year in consideration is considered as approved in this Tariff Order.

• Step 2: Determination of proportionate FPPCA (Rs/unit) consumer category/sub-category wise

$$FPPCA\left(\frac{Rs.}{Unit}\right) = Average \ FPPCA * K \ for \ that \ consumer \ category \ or \ sub - category$$

5. The Petitioner shall compute the fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the FPPCA formula as approved by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase (Rapproved) shall be taken as Rs 3.76/kWh for the FY 2018-19.

Particulars	Amount
Total Power Purchase Cost (Rs Cr ), P <sub>app</sub>	1,145.84
Transmission Charges (Rs Cr), T <sub>app</sub>	183.84
Power Purchase Quantum from CGS Stations at Generator Periphery (NTPC, NPCIL,NEEPCO) (MU), PPO <sub>app</sub>	3,713.55
Approved Weighted Average Inter-State Transmission Loss (%), TL <sub>app</sub>	4.41%
Power Purchase Quantum from sources within State/ Open Market (Co-Gen and Open Market) (MU), PPI <sub>app</sub>	446.09
Quantum of Sale of Surplus Power (MU), PSO <sub>app</sub>	-
Approved Intra-State T&D Loss (%), DL <sub>app</sub>	10.75%
Energy Sales for LIG and Agriculture consumer category (MU), Z <sub>app</sub> (MU)	31.04
R <sub>app</sub> (Rs/kWh)	3.76

### Table 78: Rapproved determined by Commission for FY 2018-19

# 11. Chapter 11: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now submit:

- The detailed action plan for compliance of all the directives <u>within 1 month of the</u> <u>issuance of this Order</u>.
- The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 10 days of the end of each quarter of the calendar year.

# 11.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate necessary action under Section 142 of the Electricity Act 2003 read with other provisions of the Act, and Regulations made there under.

### 11.1.1. Annual Statement of Accounts

### Originally Issued in Tariff Order dated 27th June 2012

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission appreciates the effort undertaken by the Petitioner for the preparation of audited accounts on commercial principles. However, the Commission is of the view that while the Commission has undertaken the True-up for the FY 2011-12 and FY 2012-13 in this Order, in normal course and as per the provisions of Tariff Regulations 2009, the True-up upto FY 2015-16 should have been done in this Order.

The Commission has taken a serious note of this and directs the Petitioner to undertake necessary actions on priority so as to ensure that all the True-ups of FY 2013-14 to FY 2016-17 (along with audited accounts) are submitted with the Tariff Petition of FY 2018-19.

The Commission shall be constrained to take appropriate action against the Petitioner in case of further noncompliance.

### Petitioner's Response in the Present Tariff Petition

The status of Audited reports for the previous years is as follows:

- Financial statements for FY 2013-14 are completed and audit has been undertaken. Awaiting for CAG Certificate.
- Financial statements for FY 2014-15 are completed and submitted to CAG for conducting Audit.
- Preparation of Financial Statements for FY 2015-16 and 2016-17, are under process.

### **Commission's Response**

The Commission has undertaken the True-up for the FY 2013-14 in this Order, even though in normal course and as per the provisions of Tariff Regulations 2009 and MYT Regulations, 2014, the True-up upto FY 2016-17 should have been done in this Order.

The Commission has taken a serious note of this and directs the Petitioner to undertake necessary action on priority so as to ensure that all the True-ups of FY 2014-15 to FY 2017-18 (along with audited accounts) are filed along with the next Tariff Petition submitted to the Commission.

The Commission shall be constrained to take appropriate action against the Petitioner in case of further noncompliance.

### 11.1.2. Preparation of Fixed Asset Register

### Originally Issued in Tariff Order dated 27th June 2012

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission has noted with serious concern that the Petitioner is yet to submit the Fixed Asset and Depreciation Register. In previous year's submission also, the Petitioner had communicated the following:

"GIS mapping of the assets will be completed as the part of RAPDRP Part A by 31st March 2016".

*Further, the Petitioner has not given any reason for delay in completion of GIS Mapping. The Commission would like the Petitioner to take note of the fact that such submissions without any justifications are not appreciated by the Commission.* 

The Commission now direct the Petitioner to submit action plan along with timelines for preparation of Fixed Assets and Depreciation Register for previous years within 1 month of issuance of this Order. The Commission will be constrained to take appropriate action in case of further non-compliance by the Petitioner.

### Petitioner's Response in the Present Tariff Petition

The status of FAR for the previous years is as follows:

- FAR for FY 2013-14 and 2014-15 have been completed.
- FAR for FY 2015-16 and FY 2016-17, are under process.

### **Commission's Response**

The Commission has noted with serious concern that the Petitioner is yet to submit the Fixed Asset Register. The Petitioner is directed to submit the FAR upto FY 2017-18 along with the next tariff petition.

### 11.1.3. Energy Audit Reports

### Originally Issued in Tariff Order dated 27th June 2012

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission has noted with serious concern that the Petitioner is yet to submit the Energy Audit Reports for previous years

The Commission now direct the Petitioner to submit action plan along with timelines for preparation of Energy Audit Report within 1 month of issuance of this Order. The Commission will be constrained to take appropriate action in case of further non-compliance by the Petitioner

### Petitioner's Response in the Present Tariff Petition

*DT* metering is not yet completed and still in progress. Only on completion of the same, the Energy Audit Report will be initiated.

### **Commission's Response**

The Commission has noted with serious concern that the Petitioner is yet to submit the Energy Audit Reports for previous years

The Commission directs the Petitioner to expedite the process of DT and Feeder metering and complete the Energy Audit of the State on priority.

### 11.1.4. Employee Cost / Manpower study

### Originally Issued in Tariff Order dated 27th June 2012

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission has noted with serious concern that the Petitioner is yet to submit a systematic manpower study report with a specific focus on manpower rationalization.

The Commission now direct the Petitioner to submit action plan along with timelines for preparation of a systematic manpower study report with a specific focus on manpower rationalization within 2 months of issuance of this Order. The Commission will be constrained to take appropriate action in case of further non-compliance by the Petitioner.

### Petitioner's Response in the Present Tariff Petition

The report has been furnished by the consultant. However EDG is required to scrutinise further and subsequently will be submitted to State Government for decision. Post decision from State Government, the report will be submitted to the Hon'ble Commission.

### **Commission's Response**

The Commission has noted with serious concern that the Petitioner is yet to submit a systematic manpower study report with a specific focus on manpower rationalization.

The Commission directs the Petitioner to finalise the report prepared by the appointed consultant and submit the same for the decision of the State Govt.

### 11.1.5. Interest on Consumer Security Deposit

### Originally Issued in Tariff Order dated 31st March 2013

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

*The Commission directs the Petitioner to pay the interest on consumer security deposit in the bills of as per the provisions of JERC supply code regulations 2009.* 

The Commission observes that while the Petitioner has undertaken some efforts towards compliance of this directive, still substantial payment is yet to be done by the Petitioner. The Commission is of the view that substantial time has already been given to the Petitioner. The Commission now directs the Petitioner to compute the quantum of backlog and ensure payment of balance security deposit pertaining to previous years before 31<sup>st</sup> August 2017. No further extension will be entertained by the Commission in this matter and in case of further non-compliance, the Commission will be constrained to take appropriate action under Section 142 of the Electricity Act 2003.

### Petitioner's Response in the Present Tariff Petition

- As on date an amount of Rs 14.79 Cr was allotted for payment of interest on consumer security deposit, out of which an amount of Rs8.58 Cr has been credited to consumer account and the balance amount will be credited before the end of the financial year.
- Further, for FY 2018-19 an amount of Rs 6.47 Cr has been proposed for allotment.

### **Commission's Response**

The Commission observes that while the Petitioner has undertaken some efforts towards compliance of this directive, a substantial payment is yet to be credited to the consumers The Commission is of the view that substantial time has already been given to the Petitioner. The Commission now directs the Petitioner to compute the quantum of backlog and ensure payment of balance interest on security deposit pertaining to previous years before 31<sup>st</sup> August 2018.

### 11.1.6. Sub Divisions as Strategic Business Units

### Originally Issued in Tariff Order dated 06th April 2015

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission directs the Petitioner to submit the sub-division wise status report of readiness of all the sub-divisions towards introduction of the system of Cost-Revenue Centre Oriented Sub Divisions within 2 months of issuance of this Order.

### Petitioner's Response in the Present Tariff Petition

As a pilot project, one of the sub division under division VI Mapusa has been taken for that purpose.

### **Commission's Response**

The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to submit the report of this pilot project along with the sub-division wise status report of readiness of all the subdivisions towards introduction of the system of Cost-Revenue Centre Oriented Sub Divisions within 1 month of issuance of this Order.

### 11.1.7. Installation of Pre Paid Meters

### Originally Issued in Tariff Order dated 06th April 2015

### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission would like to highlight the Petitioner has long history of issues related to billing and collection. The pre-paid meters, though being costly as compared to conventional meters, will be cost effective in longer run. Further, GoI is already focusing on installation of smart meters.

*Thus, the Commission now directs the Petitioner to finalize and submit a proposal for installation of smart meters for following consumers:* 

1. All HT and EHT Consumers

2. LT Industries and Hotel Industries

3. All Government Connections

4. All connections whose premises remain locked for 3 or more months in a year.

The Petitioner is directed to submit this proposal within 4 months of issuance of this Order failing which the Commission will be constrained to take appropriate action against the Petitioner.

### Petitioner's Response in the Present Tariff Petition

As a pilot project under smart city mission, Government has considered installation of Smart Meters for Panaji and surrounding areas at a cost of Rs70 Crores.

Thereafter as directed, the Smart meters will be taken up for

(1) All HT and EHT Consumers

(2) LT Industries and hotel Industries

(3) All Government connections

(4) All Connections whose premise remain locked for 3 or more months in a year.

### **Commission's Response**

The Commission directs the Petitioner to expedite the process of installation of prepaid meters and submit a compliance report along with the filing of the next tariff petition.

## 11.1.8. Unbundling of Electricity Department

#### Originally Issued in Tariff Order dated 06th April 2015

#### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to actively pursue the unbundling of the Department with the Government of Goa and submit quarterly progress reports in this regard.

#### Petitioner's Response in the Present Tariff Petition

It is requested to the Hon'ble Commission that there is no specific directive for unbundling of EDG from the State Government and therefore the said directive may be dropped.

#### **Commission's Response**

The Commission directs the Petitioner to submit the proposal to the State Govt. by June 30<sup>th</sup> 2018. Till such time a decision is taken by the State Govt. ring fencing of the transmission functions should be initiated. Further, it is directed that the Petitioner should increase its efforts towards making the State Load Dispatch Center (SLDC) fully operational.

## 11.1.9. Renewable Energy Obligation

#### Originally Issued in Tariff Order dated 06th April 2015

#### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission directs the Petitioner to submit the status of finalization of Solar Policy within 1 month of issuance of this Order.

#### Petitioner's Response in the Present Tariff Petition

Solar Policy has been approved by Government of Goa and the same is being put in Public domain.

#### **Commission's Response**

The Commission has noted the submission of the Petitioner. The Solar policy may be utilized for increasing the solar installations in the State. Efforts should be made to purchase physical power instead of REC's.

## 11.1.10. Billing and Collection Efficiency

#### Originally Issued in Tariff Order dated 06th April 2015

#### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission notes with serious concern the state of affairs of operation of the department. The Commission directs the Petitioner to take all necessary actions on priority so as to resolve all the issues pertaining to billing and collection and report the status along with next Tariff Filing.

#### Petitioner's Response in the Present Tariff Petition

Presently billing and collection efficiency is above 80%.

#### **Commission's Response**

The Commission notes with serious concern that the billing and collection efficiency in the State is very low The Commission in the MYT Order had approved the collection efficiency of 100% for FY 2018-19 and AT&C loss level of 10.75%. The Commission directs the Petitioner to take all necessary actions on priority so as to resolve all the issues pertaining to billing and collection and report the status along with next Tariff Filing.

## 11.2. New Directives issued in this Order

## 11.2.1. Creation of SLDC

Currently, the functions of scheduling of power is being performed by the EDG itself. The Commission directs the Petitioner to fully operationalize a separate SLDC which is ring fenced from the EDG. The Petitioner is directed to deploy suitable employees dedicated for the SLDC functions.

## 11.2.2. kVAh based tariff

The Petitioner in the proceedings of this Tariff Order failed to submit the requisite data such as Power factor, kVAh readings etc. to implement kVAh based energy charges for HT/EHT consumers The Petitioner is hereby directed to submit the status of technological readiness of these high voltage consumers and the requisite information of incentive/disincentive on account of power factor rebate/ penalty, power factor for different categories and kVAh based readings of FY 2017-18 along with the filing of the next tariff petition.

## 11.3. Directives dropped in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it has been observed that some of the directives issued in previous Tariff Orders are no longer required.

The Commission is of the view that since these directions have been complied with satisfactorily, these directions are no longer required in the present context and are required to be dropped or replaced with new directions. No further compliance/status is required to be submitted by the Petitioner for the following directives:

# 11.3.1. Management Information System (MIS) and Database Management System DBMS)

#### Originally Issued in Tariff Order dated 06th April 2015

#### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission now directs the Petitioner to submit action plan along with timelines for implementation of MIS and DBMS within 2 months of issuance of this Order.

#### Petitioner's Response in the Present Tariff Petition

Management Information System (MIS) and Database Management System DBMS has been implemented under APDRP part A Project.

#### **Commission's Response**

The Commission observes that the objectives of implementation of MIS and DBMS have been achieved therefore the Commission decides to drop this directive.

### 11.3.2. Street Lights switching 'on' and 'off'

#### Originally Issued in Tariff Order dated 06th April 2015

#### Commission's Latest Directive in Tariff Order dated 23rd May 2017

The Commission has noted the submission of the Petitioner and directs it to submit quarterly progress reports to the Commission.

#### Petitioner's Response in the Present Tariff Petition

*The Centralised Control and Monitoring system is in process of installation and is expected to be completed by end of FY 2017-18.* 

#### **Commission's Response**

The Commission observes that the Petitioner is submitting quarterly progress reports and is in process of installation of CCMS. The Commission, therefore, in accordance with the Petitioner's submission decides to drop this directive.

# Annexures

## Annexure 1: Public Notices published by the Commission



#### Annexures







10.00

#### दाँ, हेद्दगेवार विद्यालयात ग्रकार यहाँ

## स्वच्छतागृह, पथदीप, पाणी समस्वेवर चर्चा

शितील जामजमा

चौगुले खाण कंपनीच्या

....

मलनिस्सारण प्रकल्पाला बिलेला बाखला मामे घेण्याचा निर्णय

आकारण्याचा ठराव





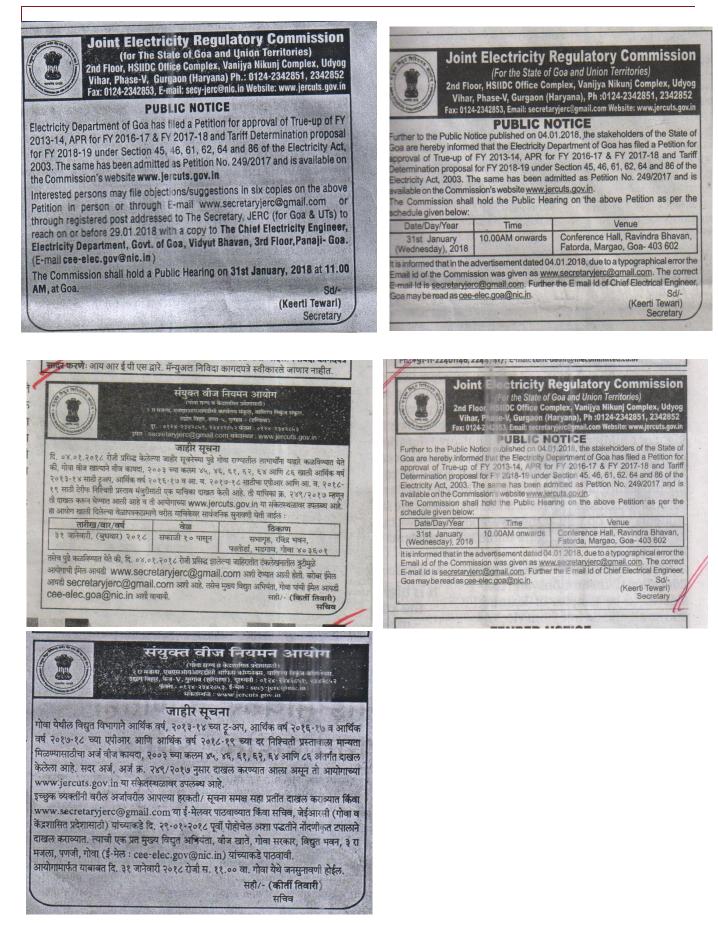


तेने ज

वीजजोडणीस लोकांची हरकत

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# घर खरेदी, विक्रीवर कर



## Annexure 2: Public Notices published by the Petitioner

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$\frac{1}{12} = \frac{1}{12} + \frac{1}{12} $	म्झ सम्ब	वर्ष २०१	गण केंद्रशासित प्रदेशांसाठाच्या संयुक्त वीज निय १६-१७ आणि आर्थिक वर्ष २०१७-१८ चा व रे सर्व ग्राहक आणि जण्णींग गण्ण रेज	मन आयोगासमोर मुख्य विद्युत र्षिक कार्य आढावा (एपीआर	न अभियंता, वीज खाते, ) आणि आर्थिक वर्ष ;	गोवा सरकार यांनी साव ०१८-१९ साठी हर नि	र केलेल्या आर्थि <b>क वर्ष २</b> जिल्लीच्या संदर्शनामी	०१३-१४ साठी टू अपची मंजुरी,	आर्थिक
	315	82 83	त / ६ गांगच्य जीन जिल्ला को दिव्यात यत का	, विजन्म किरकोळ विक्री आणि ह	वितरणाच्या कामात गंतलेल	या पावानाध्यक गोमा जी	म जाते रहे के जे ने के	याचिकच्या संबधा	The second second
		मा. आयोग	गाने याचिका क २४९/२०१७ शास्त्री २००२			वर्ष २०१८-१९ साठी।	दर निश्चितीच्या मंजुरीसाठी व	ण्डः खाला आयिक वर्ष २०१३-१ गेवा आणि केंद्रशासित प्रदेशांसाठीच्य	१४ साठी 11 संयुक्त
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$\frac{1}{12} = \frac{1}{12} + \frac{1}{12} $		24	अधिकः आरपाओं अब्लिगिणनमानी नग		6.36	AND THE REAL	CONTRACTOR DESCRIPTION OF TAXABLE PARTY.		
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Max     Max     Harging     Max     Harging       111     14.8.7.1     Harging     Max		३. সাহিত্ৰ ক	रिंग्स्ट-१७ आणि अस्त्रिक को २०११ मध्य ज	वार्षिक कार्य आढावा (एपीआर)	<u>१३९.१२</u> आणि आर्थिक वर्ष २०१	(.10 mi	393.20	E MARKER A	
Hite       मंत्रप्रीय प्रदर्भ (3)       आंधक वर्ष २०१७-१८       आंधक वर्ष २०१७-१८         अंताजित       मंत्रप्रीत       भंत्रप्रीत       भंत्रप्रीत       भंत्रप्रीत       भंत्रप्रीत         अक्षा       २. आर्पोजो पाठनामाठी तराद्द       २. २४५,०३       १.३२८,०८       १.२१६.३१       १.४९७,९२         १. अग्रिक वर्ष २०१८-१९       २. ३४८,२४       १.२९,३२       १.२९,३२       १.२९,३२       १.२९,३२         १. अग्रिक वर्ष व्यक्ष्रप्री प्रदेशमाठ खर्च       २.३२,२२       १.३२,२८       १.२९,३२       १.२९,३२         १. प्रयाप्त आणि महस्रात्माग्य खर्च       २.३९,२२       २.५४,३४       २.९६,२८       २७,०६       १.२९,३२         १. प्रयाप्त आणि महस्रात्माग्य खर्च       २.३८,२८       २.९२,२२       २.९४,३४       २.९८       २.७८,४         १. प्रयाप्त आणि महस्रात्माग्य खर्च       २.९४,८       २.९२       २.९२       २.९२       २.९२       २.९२         १. प्रयाप्त आणि महस्रात्माग्य खर्च       २.९४       २.९२		अ.क्र. त	आधिक वर्ष २०१६-१७ आणि आर्थिक व पशील	1 00 1	11 10 11 610	म पालक काय आढाव	। (एपाआर) आणि फरक	कोष्टकात दिला आहे. (रुपये कोटींमध्ये)	
1000000     2     अगरपीजो पाठनसाती तरत्द     1,426,03     1,336,06     1,336,06     1,336,92     1,726,32     1,726,32     1,726,32       10     1     कर्मवान्यावरील खर्च     2,34,25     2,32,22     2,42,03     1,420,92       1     1     कर्मवान्यावरील खर्च     2,32,22     2,42,23     2,42,03     1,420,92       1     1     कर्मवान्यावरील खर्च     2,32,22     2,42,23     2,42,23     2,42,03       1     1     1     कर्मवान्यावरील खर्च     2,32,22     2,42,23     2,42,23     2,42,24       1     1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1     1		१ वी		मंजुरीत	Inid-la	आाथक वर्ष २	28-090	आर्थिक वर्ष २०१८-१९	
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TEN       X1144 300 सर्वसाग-य खर्च       9,82       10,02       20,04       20,05       20,05         Billing        साराग       Y9,82       96,22       9,82       21,42       X1,45         Billing        कतें व आर्थिक गुल्कांवरील व्याज       Y9,82       96,22       6,82       84,82       93,92       32,44         Billing        कतें व आर्थिक गुल्कांवरील व्याज       40,83       X9,92       98,92       21,42       21,42         Billing        कतें व आर्थिक गुल्कांवरील व्याज       40,83       X9,90       98,93       89,93       21,42       93,92       21,42         Billing           11       11       11       11       11       11       11       20,02       14,92	ty or for should	४ दुरू	स्ती व देखभाल खर्च			248.28			
3400       9       कती व आर्थिक मुल्कोवरीत व्याज प्रति मंदर भावदार्गतीत ब्याज 40.6.5       04.7.2       04.7.2       64.7.2       64.7.2         1 and a and a will a will	failing	६ घस	ारा	9.82	26.20	90.97	Andrew Street Andrew Street Street		
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१०         समगावतीक प्रतावा         २०२२         १२         १४.२२         १४.२६           ११         अपलकारीन कजांसाठी तरतृद           ६०.६२         ८३.२७           ११         अपलकारीन कजांसाठी तरतृद           5.४१         ३.२७           १२         डी प्रसप्स खनांसाठी तरतृद           5.४१         ३.४१         ३.०३           १३         प्रिसप्स खनांसाठी तरतृद                १३         प्रिसप्स खनांसाठी तरतृद                १३         प्रिसप्स खनांसाठी तरतृद                १३         प्रिसप्स देगी तरात         १.७००         १.७००         १.८५२.०६         १.७६२.०६         २.७६४           १४         प्रकाग संस्राठी तरात         १.७०४         २.८५४         २.७४         २.७४         २.७४           १४         प्रकाग संस्राठी तरात         १.७४९.१२         १.७४९.२२         १.७४९.२२         २.७४९.२२           १४         २.७४९         २.४४९.२२         १.७४९.२२         १.७९९.५८         १.५९३.७४           १७         निववळ फात (१.५९९)         १.४९.२२	ce will	CONCEPTION AND ADDRESS			9.30	A DECK STREET, THE REAL PROPERTY AND ADDRESS OF THE REAL PROPERTY A			
(오. 의사(फ)(ਨ))         (1)		१० समा	मागावरील परतावा						
23.06         23.07         3.92         9.92         9.92         9.92         9.92         9.92         9.92		१२ डीपर	प्भालान कजासाठी तरतुद अएम खर्चांसाठी तरतुद				<u> </u>		
१४         वजा : नीन टेरिफ उरपत्र         १,000/22         १,204,30         १,042,05         १,062,05         २०६ , ३७           १५         एकुएग महमूली गरज (१३-१४)         १,8%,7%         २,35         ६,0%         २८.१%         ६,0%           १९         ऐकुएग महमूली गरज (१३-१४)         १,8%,7%         १,002,90         १,2%,4%         २,2%,8%         २८.१%         ६,0%           १९         नेरिकळ फरक (१५-१६)         १,48,5,9%         १,002,00         १,48,5,9%         १,008,9%         २,008,9%         2,008,9%         २,008,9%	cade	१३ एक	ग महसूली गरज			3.88	3.88	3.03	
Visit         Visit <th< td=""><td></td><td>१४ वजा</td><td>ः नॉन टेरिफ उत्पन्न</td><td></td><td></td><td></td><td>8,086.08</td><td>C AND INCOME AND INCOME AND AND AND AND AND AND AND AND AND AND</td><td></td></th<>		१४ वजा	ः नॉन टेरिफ उत्पन्न				8,086.08	C AND INCOME AND INCOME AND	
१७         निव्वलय फाक (१५-१६)         १९४३.०८         १,४४३.०८         १,५६३.६७         १,७०४.१८         १५९३.७५           ४ मा आणोगो प्राणित प्राप्त के स्वर्ध के स्वर के स्वर्ध के स्वर्ध के स्वर स्वर्ध के स्वर के स्वर स्वर स्वर स्व		१६ टेरिफ	नमधून महस्ल		P. 929.95	The second se	School Street St		
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भ, आपके के दर २८ ८२ साठे था, आयोगने दि. २८ एप्रिंस २०१६ रोगी लिरेस्पा ठेरिंग आपके भागाल के बाय आवाजक सामये (परिआस) एप्रे कर दिला जाईल. इ. आपकि की दर २९ साठेवा भरक रू. ४७३ कोठी आहे (सुरसा तेलेस्पा ठेरिक आरोगजनक वार्षक कार्य आवाज (परीआस) विचारत चेतल की जा		. मा. आयोगाने मं	बिधित एआरआर आदेशामध्ये दिलेल्या टीटपेटप्रपण		्राइइट.६७	268.84	AN AN	853.66	1 373

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ve bergy kvA (Rs/) onth/	Existing Tariff for FY 2017-18	11	1.90	310	3.60			3.25	4.30	14 10 100		very 3.90			3.1	3.50	45(	1.30	1.60	3.90	100 000 000	4.40	5.50	4.30	4.20	NC #	1.40	1.80	5.00	7.00	. 9.90	No.	3,10	4.30	the Head Of	or of the second	s. courty ca		or, VidyutBhu	-lielectricity	Allocation .	ents / sugges og submitted	with the Secnimplex, Vanig
Rs/RW, Rs/KVA Rs/BHP Rs/Month/ Connection)	Existing Te	20	20	45	45	R	5	50	50	50	Rs.50/Conn/Month	+ Additional Rs.55/kW for every	kW increase at 20kW	a la la la	30	8	8	12	50	40 60	and and a	150	250	250	250	A Statement	35	50	175	60	100		100	200	reminest from			Rs. 50/-)	Office, 3rd Flo thereof durin	s website httr		is and comme	nay be filed w w, HSIIDC Co
Fixed charge basi		Rs/Com/ Month - Sindle Phase	Rs/ContrAtorth -	Three Phase	Build and Mission	ANY STATES ANY	Reifformi Month		1. A FRANCIAN CONTRACT	Contractor in	Rs/Conn/ Month	and the second second			Rs/HP/ Month	Rs/HP/Month	Rs/kW/ Month	Rs/HP/ Month	Rs/HP/ Month	RS/KW/ Month RS/KVA/ Month	Internet Accession	Rs/kVA/ Month	Rs/kva/ Month	Rs/kVA/ Month	RS/KVA/ Month		Rs/kV/V Month	RackVAV Month	HS/KVA/ MORT	Rs/AW/ Month	Rs/kW/ Month Rs/kVA/ Month	Molity-Min	Rs/kVA/ Month	REAVAY MONTH	obtained on written	O lin Endloh) (on	ad to the second of the	lish) (on payment of	tion and take note	allable on ED-Goal		objections, if any, or	Internitories, 2nd Floc
Sr. Category of Consumer	Low Tension Supply Soft (TDD,Dornautic and Ionocommenced	1(a) 0-100 units 1(h) 101 200 units	1(c) 201 to 300 units	1(d) 301 to 400 units	Tariff LID.5 ow hecene Gound		0-20 KW/Commercial Consumers 1-100 Units	101-200 units	201-400 Units	>20-90Kw Commercial Consumers	1-100 Units	101-200 units	Above 400 units	UT-Industry	0-500 Units	Above 500 units	Harm-Litymacu (hours inquisties)	Tariff-LTAG'Agriculture (Pump Sets/Irrigation) (A)	TartH-LTAG/Agricuiture Allied (B)	Tartit-LT Hoarding and SigniBoard	High Tension Supply	Tariff HTD/Domestic	Tartit HTMndustrial	Connected at 11/33 kV	Connected at 110 kV H.T.Industrial (Ferro Methalturpical' Steel Mehino' Provise		Pump Sets/Irriga	HartHHIAG/Agriculture (Alled Activities) (8)		Tartit-LT/Temporary Domestic	tam-Li/remporary commercia	Single Point Supply	Residential Complexes	Non-minimum von preudos Industrial Complexes	Copies of the following documents can be o	from 08-01-2018. a Detailed bettion droaments about with CD 4/e Exceletation command of CD 2004 it entities and	Electrical Engineer. b Detailed tertificar choraments (in English Jon comments for 2004)	<ul> <li>CD of detailed petition document (in English) (on payment of Rs. 50/-).</li> </ul>	ment of the address. United of Chief Electrical Engineer, Head Office, 3rd Floor, VidyutBhayan, Panaji, Goa -403 001, Intermisted parties may inspect the said petition and take note thereof during office working hours at head office free of	arges. e detailed petitic	format (free of cost), 12. The Honble Commission has directed ED Co	petition through this notice suggestions or objections and comments/suggestions from the public on the above petition through this notice. Suggestions or objections, if any on the ARR filing submitted by the Chief Electrical Engineer.	Commission for the State of Soa and Union Territories. 21
	4 - 20					<b>n</b>				+			1	4	123000	A A A A A A A A A A A A A A A A A A A			F	- 90		5	2 2		12	13		11	1	#	11	-	1	20					01 1 OI	.u .	12.	IN ALLON OF BE	000000
	F FY 2016-17	A AND UNIC	leerned licens vission (for St.	sion (Terms n	ion (Multi Ye					9		States -				2 1313Y				-			0	6	3	juirement of FY	FY 18-19	Approved	1417,92	15.17	270.41	45.6	91.59	107.19	7.02	12.36	83.27	3.03	2064.37	6.74	2057.63	1593.75	463.88
	IEW (APR) C	ON FOR GO	oa (EDG), a ( ulatory Comr	imation propo	ory Commis-	0/12/2017.	Contraction (	FY 13-14	d Actual		21.45	18.54	39.57	23.84	13.04	Pres and	32.60	2.96	0.33		10.34	A State State	100	1,060.29	02.515	Navi antiavar	10-19 (KS. CIS FY 17-18	Approved Estimated	1,216.31	ALLA ALLA	296.88	11.84	73.46	49.44	11.62	14.42	60.62	3.41	1,768.06	28.14	1,739.92	1,704.98	34.94
10	MANCE REV	COMMISSI	partment of G	d Tarift Determ ctricity Regula	icity Regulat	249/2017 on 2	14 (Rs. Crs	La la	Approved	933.41	19.61	9.08	16.00	16.70	3.84	5.42.	5.86		0.56	22.55	8.38	29.42	1,153.17	1,014.05	R and Annual		FY 1	Approved	1,330.98	9,38	254.24	10.12	64.16	74.04	9.90	6:93	58.33	3.41	1,852.06	6.74	1,845.32	1,563.67	281.65
Goa - 403 0 1CE	OF AL PERFOR D BY CHIFF	EGULATOR	Electricity De ore the Joint F	Y 2017-18 an 003, Joint Ele	i Joint Electi	e petition No 2	for FY 13-	State of State				and the second		an in the	「「「「「					2411 12 12 12 12 12 12 12 12 12 12 12 12 1	A STATE		5)	Constanting	& FV 2017-1	V 47 40	5-17 ar	Actual	1.328.08	A majorie	230.92	18.20	76.88	49.90	9.38	0.37	55.28	90.90	1,805.38	23.63	1,781.76	1,443.08	183.02 338.67 281.65 34.94 463.88
havan, Panaji Goa PUBLIC NOTICE	IN RESPECT OF 2013-14, ANNUAL 7 2018-19 FILED I	ECTRICITY R	blders that the by has filed bel	f 2016-17 & F ectricity Act. 2	ns, 2009 and	ound of the form	and Gap	Contraction of the second		and the second		S - Salar		COL STOR	14 K.N	The Party of the	ALCONT OF				UI Pool	SALAR IN THE	(12-13-14 + 1	12 11 11 10 10 10 10 10 10 10 10 10 10 10	of EV 2016-1	V 16.17	FY 16-17	Approved	1,245.03	8.55	12.862 AR 7C	9.48	49.22	57.63	8.36	6.82	44.74	3.98	1,700.88	6.74	1,694.14	1511.12	20.081
Vidyut Bhavan, Panaji Goa - 403 001 PUBLIC NOTICE	IN RESPECT OF PETITON FOR APPROVAL OF TRUE UP FOR PZ 2014, ANNULL PERFORMANCE REVIEW (APR) OF PZ 2016,17 & PY 2017-18 AND TARIFF DETERMINATION FOR PZ 2018-19 FLED BY CHINE FILE FLECTION AT RECEIVED A FORMATION FOR PZ 2018-19 FLED BY CHINE FILE FLECTION AT	OF GOA BEFORE THE JOINT ELL	oy given to all consumers and stakeho distribution and retail sale of electrici	of use and U(s), inverse of EV 2013-14, APR for EV 2016-17 & EV 2017-18 and Tarif Determination proposal for EV 2018, 19 under Section 45, 46, 61, 62, 64 and 66 of the Electricity Act, 2003, Joint Electricity Regulatory Commission (Terms and	Untermination of Tariff) Regulation (1) Regulations, 2014,	The filling has been taken on record by the Hon ble Commission vide petition No 249/2017 on 20/1/2/2017. 2. The summaries Transmitter EV 2014 £14 is noticed to be been as the petition.	Summary of True-up and Gap for FY 13-14 (Rs. Crs)	Particulare		Cost of power purchase Employee coete	R&M expenses	Administration and general expenses	Depreciation	Interest and Finance Charges	Interest on Working Capital	Interest on Security Deposit	Return on NFA	Provision for Bad Debts	Currer Expenses Total Revenue Requirement		Less: Revenue from Sale of Power - UI Pool	Add : Provision for RPO Obligation	Aggregate Revenue Requirement (12-13-14 + 15)	18 Net Gan (16-17)	(Annual Performance Review (APR)	2018-19/s given in the table below. Summary of ARR and Gan far EV 46-11 EV 47-40 and EV 46-01		and the solution traces and the days	Cost of power purchase	Provision for RPO Compliance	Set of the	Administration and General expenses	ALTERNATION CONTRACTOR	Interest on Loan & Finance charges	Interest on Working Capital	Interest on Security Deposit	guity Bad Dobi	Provision for DSM Expenses	13 Total Revenue Requirement		Aggregate Revenue Requirement (13-14)	m Tariff Digital Section 1	4. The pap for previous user APPs will be active and as a
	TITION FOR A	PARTMENT (	Notice is here engaged in the	of Goa and U 19 under Sect	Distribution Ta	The filing has I		Sr.	No.	- ~	E.	4	5	9	Sec. 1		953100	01	226 322		All the second	15	16	18	he summary o	018-19 is give			10000	25 27	R&M expenses	Administrati	10-30	Conce 1	1000		Provision for Bad Debt	Provision to	Total Reven	14 Less: Non-Tariff Income	Aggregate	16 Revenue from Tariff 17 Not Gao (14, 18)	e can for orev
	EPE -	TER	-	- THE		2										( harr									F	2	Sr.	ó	mart .	NC	4	10	9	2	8	6	1	12	m	-	15		- F

<section-header></section-header>	Vidyut Bhavan, Panaji PUBLIC NO IN RESPEC		ULINICAL ENGINEEN 50a - 403 001 1CE 10F	5		8. No. A Low Tension Supply.	Coosumer	Fixed charge basis	Existing Tariff for FY 2017-18 Existing Tariff for FY 2017-18	Charge (Rs/kWh) 017-18	Proposed Tarrill for FY 2018-19	Energy Charge (Rs/kWh) 2018-19
	PETTION FOR APPROVAL OF TRUE UP FOR FY 2013-1 17 & FY 2017-18 and Tariff determination for Ectertiscity Department of Goa before the Joh	4, ANNUAL PERFORM FY 2018-19 FILED B NT ELECTRICITY REGU	ANCE REVIEW Y CHIEF ELEI JLATORY COM	( (APR) OF FY CTRICAL ENG AMISSION FO	Y 2016- SINEER, OR GOA	Tarift LTD/Domestic and Non-Comm           1(a)         0-100 units           1(b)         101-200 units	nercial hereita 2015	Rs/Conn/ Month -Single Phase		1.30	25	97
	<ol> <li>Notice is hereby given to all consumers and stakehold, licensee engaged in the distribution and retail sale of</li> </ol>	ers that the Electricity D electricity has filed bef	epartment of (	Boa (EDG), a c Electricity Reg	deemed	1(c)         201 to 300 units           1(d)         301 to 400 units           1(e)         Above 400 units		Rs/Conn/ Month -Three Phase	100 10 10 10 10 10 10 10 10 10 10 10 10	2.40 3.10 3.60	80	2.60
	Deterministon (not scate or loa and UIs), frue-up or h Determination proposal for FY 2018-19 under Section - Electricity Regulatory Commission (Terms and Conditio Electricity Regulatory Commission (Multi Yeer Discriptio	Y 2013-14, APR for FY 45, 46, 61, 62, 64 and 8 ons for Determination of ion Tariff) Reoritations	2016-17 & F 36 of the Elect 1 Tariff) Regula	Y 2017-18 an hictly Act, 200 tions, 2009 an	nd Tariff 33, Joint nd Joint			Rs/Conn/ Month	30	-	8 4	
	The filing has been taken on record by the Hor/ble Con 2. The summary of True-up for FY 2013-14 is given in the Summary of True-up and	nmission vide petition N e table below:	0 249/2017 0	n 20/12/2017	1	1-100 Units 101-200 units			50	3.25	09	3.30
			FY 13-1		Π	201-400 Units Above 400 units		Hs/Conn/ Month	50	4.70	8 8 8	4.80
	1 Cost of power purchase	933.4		1,078.46		20-90Kw Commercial Consume 1-100 Lines	2		De EDIFeenditeeth - Add	A OF		236
■ ■ ■ 1 1 1 1 1 1 1 1 1 1 1 1 1		144.2		170.07		101-200 units			tional Rs.55/kW for every kW	3.90	HS.60/Conn/Month+ Additional Rs.65/kW for	22
A         (6)         (8)         (8)         (1) <th(1)< th=""> <th(1)< th=""> <th(1)< th=""></th(1)<></th(1)<></th(1)<>		908		18.54		201-400 Units Above 400 units			Increase adove curw	4.30	every kW increase above 20kW	
■ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		16.01	0	39.57		4 LTI-Industry						0.60
■ 1710 ■ ■ 1717 1717 1717 1 1 1 1 1 1 1 1 1 1		3.84		13.04	T	Above 500 units	A STATE OF A	Rs/HP/Month Rs/HP/ Month	30	3.10	35	3.30
0         1         1         1         1         1         0         0         1         0		5.42		1000		5 Taritt-LTP/Mixed (Hotel Industries		Rs/kW/ Month	30	4.50	35	3.80
		5.86		32.60		6 LT-Agriculture		+		and the second se		
8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				2.96		(Pump Sets/Imgation) (A)		Hs/HP/Month	12	1.30	15	1.50
<u>18 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</u>		1,154.	68	1.400.86		Tariff-LTAG/Agnculture Allied (B)	「「「「「「「「」」」」	Rs/HP/Month	20	1.60	20	1.80
<b>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </b>		22.55	5	17.02		8 Tariff-LT Hoarding and SignBoard		RS/KW/ Month Re/W/A/ Month	40	3.90	40	3.90
8 5 33 5336 <b>13 14 10 17 17 10 10</b> 10 10 10 10 10 10 10 10 10 10 10 10 10		8.38		10.34				INIDIAI AVAU SIT	3	סמימ	8	9.90
1         1 <th1< th=""> <th1< th=""> <th1< th=""> <th1< th=""></th1<></th1<></th1<></th1<>			17	1.373.50		9 Taritt HTD/Domestic		Rs/kVA/ Month	150	4 4 N	160	1 CV
	1.00	No. of the second	05	1,060.29		1.5	State of the second	Rs/kVA/Month	250	5.50	250	5.50
	18 Net Gap (16-17)		2	313.20		120						
	<ul> <li>The summary of Annual Performance Heview (APR) of F of FY 2018-19 is given in the table below:</li> </ul>		8 and Annual F	levenue Requir	irement	Connected at 11/33 KV	A STATE OF	HS/KVA/MORT	25U	4.30	250	4.50
	Service and	17, FY 17-18 and FY	/ 18-19 (Rs.	Crs)		US.	Steel Melting/ Power Intensive	1223	250	4.30	250	4.50
	Particulars	16-17	FY 17-18	FY1	18-19	13 HT-Agriculture	ALL DESCRIPTION OF ALL DESCRIPTI		all break and the second	and the second	Strate of the second se	Service and
	Cost of nower nurchase	Actual	Proved Estin	nated Appr	Toved	Pump Sets/Imgation) (A)	and the second second	RS/KVA/Month	35	1.40	35	1.50
	Provision for RPO Compliance	1,328.08	1	1200	1.92	Tartif-HTAG/Agriculture (Allied Activ	rities) (B)	RS/NVA/ Month	50	1.80	60	2.00
Da 4 23 22110 28 44 46 0 11 11 11 11 11 11 11 11 11 11 11 11 1	The second s	230.92	100		0.41	14 H.T. MES/Defence Establishments		RS/KVA/Month	175	5.00	175	5.00
	and the state of the	26.98	1070		.81	C Temperary Supply	State State State State	Contraction of the second				The second second
Dai 1 3 110 110	Administration and General expenses	18.20			5.6	1229		Rs/kW/ Month	60	7.00	09	7.20
Dat 1 33 12110 13114 10		10.88			- 10	8 8		Rs/KW/ Month	100	9.90	120	8.90
2011 12 13 13 12 14 14 12 12 12	Interest on Working Caribal	0.26			RIV	100		TINOM/AVA/MONIT	120	6.60	120	9.90
Dat 13 121	Interest on Security Deposit	0.37			36			Rs/KVA/Month	100	3.10	100	3.30
11         Provision for Ead Debt.         -         9.38         -<		55.28			27			Rs/kVA/ Month	200	4.30	200	4.30
12 13 12 Dat		9.38			1	Conjes of the following documents car	the obtained on written regise	HS/KVA/ Month st from the Lead Office	of ED. Cos mentioned holour to	3.90	200	4.10
13 13 13 13 13 13 13 13 13 13 13 13 13 1			2223		03	a. Detailed petition documents along w	ith CD (in English) (on payme	nt of Rs. 250/-by cash	/ DD / Cheque drawn on "Chief	f Electrical Engl	8. Ineer".	
11111111111111111111111111111111111111		1,805.38	1	601	4.37	<ul> <li>D. Uetailed petition documents (in Englishing of the competition of the comp</li></ul>	ISN) (on payment of Rs. 200/- English) (on payment of Rs. 5	50/-)				
11 12 14, 13 Dat	2015	1.781.76	100		7 83	10. Interested parties may inspect the said	lectrical Engineer, Head Office, netition and take note thereof	. 3rd Floor, Vidyut Bhave during office working h	an, Panaji, Goa -403 001,	mae		
13 14, Dat	Revenue from Tariff	1,443.08	2012/07/		3.75	11. The detailed petition document is alrea	dy available on ED-Goa's web	site http://electricity.goz	a.gov.in in downloadable PDF fc	ormat (free of c	cost).	
13 14	17 Net Gap (15-16) 183.	.02 338.67 28	1.65 34	94 463	888	If any, on the ARR filing submitted by	cur-upa to invite objections an the Chief Electrical Engineer, E	d comments / suggestic electricity Department, (	Goa together with supporting m	e petition through the may be	gh this notice. Suggestions a filed with the Secretary. Jo	or objection
13 14, Dat	The gap for previous year ARRs will be addressed at the Commission in resonantive ARR orders	he time of true-up and	as per treatme	ant given by H	Hon'ble	Regulatory Commission for the State person or through registered post to re	of Goa and Union Territories, ach him on or before 20-01-2	2nd Floor, HSIIDC Com 018.	plex, Vanijya Nikuni Complex,	Udyog Vihar, P	hase V, Gurgaon - 122016	(Haryana)
14. Dat	AHR considered for FY 2018-19 is as approved by the Ho.	n'ble Commission vide	Tariff Order da	ted 18th April,	2016.	13. The objections / suggestions as above affidavit. If the objection is filed on beh	should be filed in six copies alf of any organization or any	and carry full name and class of consumers. It	d postal address of the person should be so mentioned It ma	sending the ot	bjections and should be sur	poported by
Dat	It is submitted that the total proposed cumulative Revenu through hiddenary supmort of Bs 394 Crs to he provided to	the Gap of Rs. 473 Crs fi by the State Covernment	or FY 2018-19	will be major	rdy met	objections / comments also wants to b 14. The JERC, after perusing the written ob	le heard in person.	to this notice may invite	e such objections as it consider	rs appropriate fi	or a hearing on the specifie	d dates wh
	Crs (Rs.473 Crs - Rs.394) to be met from the additional	revenue by way of nomi	inal average 5	& hike in retail	I tariffs	Will be notified by the Hon bie Commis Date: 02-01-2018	sion in due course.					
	proposed for T10-13.				Contraction of the second						「日本でしたいないので、「日本の」	

## Annexure 3: List of Stakeholders

The following is the list of the stakeholders who have submitted objections/ suggestions:

Ta	able 79: List of Stakeholders
S. No.	List of Stakeholder
1.	Sh. Owen Braganza
2.	Ms. Nancy Fernandes
3.	Sh. Martin Rodrigues
4.	Sh. Porfiro Fernandes
5.	Ms Mamta Srivastava
6.	Sh. Prashant K Anvekar
7.	Dr. Kurade
8.	Sh. Agnelo D'Silva
9.	Ramona Almeida
10.	Lorna Fernandes
11.	Jose M Miranda
12.	Sh. Mayur Chaudhari
13.	Olga Netto
14.	Nicladina F.D'Mello
15.	George Gravier
16.	Vivian Alheida
17.	Roland Martins
18.	Gerand D'Mello
19.	John Diniz
20.	Porfiro Fernandes
21.	Cipriana Fernandes
22.	Ashish Gaundalhan
23.	Silvestre Niassso
24.	B.L. Biyani
25.	Dishant Parab
26.	Atish Tulaskan
27.	Pratik Parab
28.	Xavier Fernandes
29.	Hector Colaco
30.	Vasu R.Patel
31.	Rajesh Shet
32.	Abhay Keny
33.	S.V.Purohit
34.	P.K. Umadathan
35.	Anthony Fernandes
36.	Lira Matu
37.	Aditya Bidre
38.	Lorna Fernandes
39.	Neet De Soya
40.	Camil Pinto
40.	Josephine Pinto
42.	Prakash Lotlikar
43.	Raghee Billava
43.	Maria Magdalena Almeida
44.	Ashley Vales
45.	Nilesh Panehwadkor
40.	Rolance Coutinho
47.	Ratika Naik
	Uttam Gaonkar
49.	Rupesh
<u>50.</u>	Confederation of Indian Industries, Goa
51.	Alloys and Steels
52.	Zuary Foods and Tropical Mushroom
53.	Zuary roous and rropical musinoolli

#### Table 70. List of Stakahold

S. No.	List of Stakeholder
54.	Verna Industries Association
55.	Gram Sabha
56.	Aldona Civic and consumer forum
57.	Charao civic and consumer forum
58.	Raia Civic and Consumer forum