Order in Petition No. 194/2016

APPROVAL OF BUSINESS PLAN FOR MYT CONTROL PERIOD FY 2016-17 to FY 2018-19

For

Electricity Department, Lakshadweep Administration

31st March 2016

संयुक्त विद्युत विनियामक आयोग (गोवा राज्य और संघ शासित प्रदेशों के लिए)

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories,

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Before the
Joint Electricity Regulatory Commission
For the State of Goa and Union Territories, Gurgaon

QUORUM
Shri S.K. Chaturvedi (Chairperson)
Ms. Neerja Mathur (Member)

Petition No. 194/2016

In the matter of

Approval of Business Plan for MYT Control Period from FY 2016-17 to FY 2018-19 for Electricity Department, Lakshadweep Administration

And in the matter of

Electricity Department, Lakshadweep Administration…………………………..**Petitioner**

ORDER

Passed On: 31st March 2016

a. This order is passed in respect of the petition filed by the Electricity Department, Lakshadweep Administration for approval of its Business Plan for the MYT Control Period of three years commencing from 01st April 2016.

b. In exercise of powers conferred by sub-section (1) of Section 181 and clauses (zd), (ze) and (zf) of sub-section (2) of section 181, read with Sections 61, 62, 83 and 86, of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, after previous publication the Joint Electricity Regulatory Commission issued Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2014 on 30th June 2014. The Commission has subsequently issued the first amendment to the said Regulations on 10th August 2015. The amendments to the Regulations have been considered appropriately.

c. As per clause 3.1.6 of the JERC Multi-year Distribution Tariff Regulations 2014 dated 30th June 2014, the "**Control Period**" was defined as multi-year period comprising of three financial years from FY 2015-16 to FY 2017-18.

d. However, as detailed in the last Tariff Order issued in petition no. 162/2015 dated 17th April 2015, the Commission in new directive no. 4, had ordered for deferment of the Control Period by one year and had directed the Petitioner to submit the revised Business Plan for the period FY 2016-17 to FY 2018-19, along with requisite details as provided in

JERC (Multiyear Distribution Tariff Regulations) Regulations 2014, latest by 31st July, 2015. The Commission in the last tariff order had noted that the supporting data such as scheme-wise cost benefit analysis, financing plan and the loss trajectory had not been adequately submitted and therefore, had ordered for deferment of the Control Period by one year.

e. As per provisions in clause 5.1 (as per amendment dated 10th August 2015) and 12.1 of the Multi-year Distribution Tariff Regulations, 2014, the Petitioner has filed for approval of its Business Plan for three years Control Period i.e. from FY 2016-17 to FY 2018-19 with details for each year of the Control Period before the Commission on 15th January 2016.

f. As per provision in clause 5.1, 5.3 and 7.1 of the Multi-year Distribution Tariff Regulations, 2014, the Business Plan shall comprise but not be limited to detailed category-wise sales and physical targets, power procurement plan, capital investment plan, financing plan. The Distribution Licensees shall project the power purchase requirement after considering effect on the sales projections of target set for Energy Efficiency (EE) and Demand Side Management (DSM) schemes. The Business Plan shall also specify the operational norms and trajectories of performance parameters for each year of the Control Period.

g. The primary focus of the Business Plan is on identification of the various schemes/works related to meeting the power requirement of the State, improvement in performance efficiency by way of reduction in losses and improvement in quality of supply to the consumers.

h. Since detailed Business Plan has been submitted for the first time under MYT regime, lot of scrutiny, discussions, collection of additional information and data were done with regard to the petition before finalization and approval of the Business Plan.

i. This order is passed by the Commission, after detailed scrutiny of the information and documents filed with the petition, filed subsequently during the course of the technical validation session and also other information as available with the Commission.

j. After receiving the petition, the Commission scrutinized the contents of the petition and called for further information/data so as to take a prudent view of the petition. The Commission also held a technical validation session of the Business Plan to determine the sufficiency of the petition. Comments/objections/suggestions were also invited from the public/stakeholders. Public hearing was held and parties/people present were heard. The schedule of activities performed under this quasi-judicial process was as below:

Particulars	Details
Date of Admission	22nd January 2016
Petition No.	194/2016
Technical Validation Session	24th February 2016 at Kavaratti
Public Hearing	25th February 2016 at Kavaratti

k. After being satisfied reasonably regarding the availability of data, the Commission is issuing this order mainly approving the Business Plan proposed by the Petitioner and as per observations/directives mentioned in the attached document. The Commission will further scrutinize the multi-year tariff petition when submitted, for assessing the other aspects of the business and issuance of multi-year tariff orders.

l. The Commission has approved the Business Plan for three years Control Period FY 2016-17 to FY 2018-19 based on the information submitted by the Petitioner. Further, as per Regulation 22 of Multi-year Distribution Tariff Regulations 2014, if the capital expenditure is required for emergency work, the licensee shall submit an application, containing all relevant information along with reasons justifying the emergent nature of the proposed work, seeking post facto approval by the Commission. The Distribution Licensee shall take up the work prior to receiving the approval from the Commission provided that the emergent nature of the scheme has been certified by its competent authority.

m. As approved in last tariff order, the Commission approves clubbing of RPO of solar & non-solar energy to meet the targets set by the Commission for the MYT Control Period. The Commission directs the Petitioner to undertake necessary efforts to fulfill the Renewable Purchase Obligations on yearly basis. The Commission further directs the Petitioner to submit the Action Plan by 30th September 2016 to achieve the Renewable Energy Generation targets set by MNRE, Government of India.

n. Ordered as above, read with attached document giving detailed reasons, grounds and conditions.

o. Copy of this order may be sent to Petitioner, CEA and Administration of UT of Lakshadweep. It shall be placed on the website of the Commission.

नीरजा माथुर **सुधीर चतुर्वेदी**

सदस्य **अध्यक्ष**

संयुक्त विद्युत विनियामक आयोग

(गोवा और केंद्र शासित प्रदेशों के लिए)

स्थान:गुडगाँव

दिनांक: 31 मार्च 2016

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List of Abbreviations

Abbreviation		Full Form
A&G	:	Administration & General
Act	:	The Electricity Act, 2003
ARR	:	Aggregate Revenue Requirement
BNP	:	Bharat Nirman Programme
CAGR	:	Compound Annualized Growth rate
Capex	:	Capital Expenditure
CC	:	Current Consumption
CEA	:	Central Electricity Authority
CERC	:	Central Electricity Regulatory Commission
CGS	:	Central Generating Station
COD	:	Commercial Operation Date
Commission/JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
CKt. Km	:	Circuit Kilometer
DDUGJY	:	Deendayal Upadhyaya Gram Jyoti Yojana
DISCOM	:	Electricity Department of Lakshadweep Islands
CPSU	:	Central Public Sector Undertaking
EA 2003	:	The Electricity Act, 2003
FC	:	Fixed Charges
FPPCA	:	Fuel & Power Purchase Cost Adjustment
FY	:	Financial Year
GFA	:	Gross Fixed Assets
HP	:	Horse Power
HT	:	High Tension
IPDS	:	Integrated Power Development Scheme
JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
KVA	:	Kilo Volt Ampere
KWh	:	Kilo Watt Hour
LPS	:	Late Payment Surcharge
LT	:	Low Tension
MU	:	Million Unit
MW	:	Mega Watt
MYT	:	Multi Year Tariff
NDS	:	Non-Domestic Supply
NFA	:	Net Fixed Assets
O&M	:	Operation & Maintenance
PGCIL	:	Power Grid Corporation of India Ltd.
PLF	:	Plant Load Factor
PX	:	Power Exchange
R-APDRP	:	Restructured Accelerated Power Development and Reforms Programme

Abbreviation		Full Form
REC	:	Renewable Energy Certificate
RoE	:	Return on Equity
RPO	:	Renewable Purchase Obligation
R&M	:	Repair & Maintenance
SLDC	:	State Load Dispatch Centre
SBI CAPS	:	SBI Capital Market Limited
SBI PLR/SBAR	:	SBI Prime Lending Rate/State Bank Advance Rate
SCC	:	System Control Centre
T&D	:	Transmission & Distribution
UI	:	Unscheduled Interchange
VC	:	Variable Charges

1. Introduction

1.1.JERC Formation

In exercise of the powers conferred by Section 83 of the Electricity Act 2003, the Central Government constituted a two member (including Chairperson) Joint Electricity Regulatory Commission for all Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories'' with headquarters at Delhi as notified vide notification no. 23/52/2003 – R&R dated 02nd 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" as notified on 30th May 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from September 2008. Office of the Commission is presently located in Gurgaon, Haryana.

1.2.Electricity Department of Lakshadweep

The Electricity Department, UT of Lakshadweep herein called LED, is responsible for power supply in the Union Territory of Lakshadweep. The Electricity Department of Lakshadweep (LED) is engaged in generation, transmission and distribution of electricity to the various consumer categories in the UT of Lakshadweep. As submitted by the Petitioner –

Quote

"The Union Territory (UT) of Lakshadweep is an archipelago consisting of 12 atolls, three reefs and five submerged banks. It is a uni-district Union Territory with an area of 32 Sq. Kms and is comprised of ten inhabited islands, 17 uninhabited islands attached islets, four newly formed islets and 5 submerged reefs. The inhabited islands are Kavaratti, Agatti, Amini, Kadmat, Kiltan, Chetlat, Bitra, Andrott, Kalpeni, Bangaram and Minicoy."

Unquote

The Electricity Department of Lakshadweep (LED) is engaged in generation, transmission and distribution of electricity to the various consumer categories in the UT of Lakshadweep. As the UT is an archipelago consisting of 10 inhabited islands and located far from the mainland of India, Lakshadweep is entirely dependent on its own generation for supply of power. The power in the UT of Lakshadweep is generated mainly from its Diesel Generating (DG) sets."

1.3.Electricity Regulatory Process in Lakshadweep Islands

The Electricity Department of Lakshadweep Administration had submitted their petitions for Determination of Aggregate Revenue Requirement and Tariff before the Commission and the Commission subsequently issued the following tariff orders.

Table 1.1: Details of Tariff Petitions so far submitted by the Petitioner & Tariff Order Issued by JERC

Sr. No.	For FY	Filing date	Date of Tariff Order
1.	2012-13	01st August 2012	31st October 2012
2.	2013-14	09th April 2013	22nd May 2013
3.	2014-15	10th January 2014	11th April 2014
4.	2015-16	10th February 2015	17th April 2015

1.4.Multiyear Distribution Tariff Regulations, 2014

In exercise of powers conferred by sub-section (1) of Section 181 and clauses (zd), (ze) and (zf) of sub-section (2) of Section 181, read with Sections 61, 62, 83 and 86, of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, after previous publication the Joint Electricity Regulatory Commission issued Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2014 on 30th June 2014.

As per clause 3.1.6 of these regulations, the **"Control Period"** was defined as Multi Year period comprising of three financial years from FY 2015-16 to FY 2017-18.

However, as detailed in the last Tariff Order issued in petition no. 162/2015 dated 17th April 2015, the Commission in new directive no. 4, had ordered for deferment of the Control Period by one year and had directed the Petitioner to submit the revised Business Plan for the period FY 2016-17 to FY 2018-19, along with requisite details as provided in JERC (Multiyear Distribution Tariff Regulations) Regulations 2014, latest by 31st July, 2015. The Commission in the last tariff order had noted that the supporting data such as scheme-wise cost benefit analysis, financing plan and the loss trajectory had not been adequately submitted and therefore, had ordered for deferment of the Control Period by one year.

The Commission has issued the first amendment to the JERC Multi-year Distribution Tariff Regulations 2014 vide notification dated 10th August 2015. As per clause 5.1 of the amendment to the said regulations, the Control Period for Multi-Year Tariff implementation, is from FY 2016-17 to FY 2018-19.

1.5.Filing of Petition for approval of MYT Business Plan from FY 2016-17 to FY 2018-19

As per provisions in clause 5.1 and 12.1 of the MYT Regulations, 2014 and amendments thereon, the Petitioner is required to file for approval of the Commission its Business Plan for three years Control Period i.e. from FY 2016-17 to FY 2018-19 with details for each year of the Control Period. The Commission, in previous tariff order, had directed the Petitioner to submit the revised Business Plan for the period FY 2016-17 to FY 2018-19, along with requisite details as provided in MYT Regulations 2014, latest by 31st July 2015.

LED had not submitted the Business Plan Petition till 31st July 2015. However, vide email dated 10th August 2015, LED has requested the extension of the time for submission of the Business Plan for the MYT Control Period from FY 2016-17 to FY 2018-19 till first week of September 2015. The Department subsequently submitted the Business Plan to the Commission on 02nd November 2015.

The Commission noted that the Business Plan Petition was not properly prepared as per the MYT Regulations 2014 and amendment thereon. Hence the Commission directed LED to:

1. Resubmit the Business Plan in line with the said Regulations: and
2. Submit the MYT Petition along with the Business Plan Petition together considering the time constraint to hold the Public Hearing and issuance of the Business Plan and the MYT Orders.

LED resubmitted the Business Plan Petition for the MYT Control Period from FY 2016-17 to FY 2018-19 along with the MYT Petition to the Commission on 15th January 2016.

1.6.Admission of Petition

The Petition on Business Plan for the Control Period FY 2016-17 to FY 2018-19 was admitted on 22nd January 2016 and was marked as Petition no. 194/2016.

1.7.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 Secretariat of the Commission for carrying out the technical due diligence and validation of data of the petitions filed by the utilities, obtaining and analyzing information/clarifications received from the utilities and submitting relevant issues for consideration of the Commission.

For purpose of analysis of the petition, the Commission's staff held discussions with the Petitioner/Petitioner's representative, obtained information/clarifications wherever required and carried out technical validation with regard to the information provided by the Petitioner. The Commission's staff interacted regularly with the Petitioner to seek clarifications and justification on various issues essential for the analysis of the Business Plan. The Commission's staff conducted Technical validation session (TVS) with the Petitioner during which discrepancies in the Business Plan petition were pointed out and additional information as required by the Commission was indicated. The technical validation session was held at the Office of LED at Kavaratti on 24th February 2016. The Petitioner submitted its replies, as shown below, in response to the various queries raised by the Commission during the course of analysis of the petition, which were taken into account for finalization of the Business Plan petition.

Table 1.2: List of Interactions with the Petitioner

S .No.	Date	Subject
1.	15th January 2016	Receipt of the Petition
2.	22nd January 2016	Admission of the Petition
3	03rd February 2016	Request for clarification/ additional information by the Commission
4.	04th February 2016	Request for clarification/ additional information by the Commission
5.	08th March 2016	Submission of Response of Data Gaps by the Petitioner
6.	08th March 2016	Submission of Response of Data Gaps by the Petitioner (HSD Invoices)

1.8.Public Hearing Process

In the absence of publication of regular newspapers in the UT of Lakshadweep, the Commission directed the Petitioner to make public announcements and to advertise in the local cable network giving wide publicity of the Public Hearing mentioning the date, time and venue.

The Petitioner also uploaded the petition on its website http://lakpower.nic.in/ for inviting objections and suggestions on the petition. Interested parties/stakeholders were requested to file their objections/ suggestions on the petition to the Commission with a copy to the Petitioner on or before 16th February 2016. The Commission has not received objections/suggestions on the petition.

1.9.Notice for Public Hearing

The Commission also uploaded the Business Plan Petition and the Public Notice on its website www.jercuts.gov.in giving due intimation to stakeholders, consumers, objectors and the public at large about the Public Hearing to be conducted by the Commission on 25th February 2016 at Kavaratti. The schedule of public hearing conducted by the Commission was as below.

Table 1.3: Schedule of public hearing at Kavaratti

Sr. No.	Date & Time	Venue of Hearing	Subject
1.	25th February 2016 at 10:00 AM onwards	Seminar Hall, DIET, Kavaratti	Approval of Business Plan for LED for the Control Period FY 2016-17 to FY 2018-19

During the public hearing, each objector was provided with an opportunity to present his views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given an equal opportunity to express their views. The list of objectors is attached at **Annexure 1** to this order. The list includes the objectors who gave their written objections; those who gave their written objections and presented before the Commission; and other stakeholders who did not give their written objection or prior intimation but presented before the Commission orally. The Commission has examined the issues and concerns expressed by stakeholders. The major issues raised/indicated during the public hearing, along with the comments/replies of the utility and the views of the Commission, thereon, have been summarized in **Chapter 4** of this order.

1.10. Organization of the Order

This Order is organized in the following chapters:

- **Chapter 1** of the Order provides the background and brief description of the regulatory process undertaken by the Commission.

- **Chapter 2** of the Order lists out the approach of the Commission in finalization of this order.

- **Chapter 3** of the Order summarizes the salient features of the Business Plan Petition filed by LED.

- **Chapter 4** of the Order lists out various suggestions and objections raised by the objectors in writing as well as during the public hearing before the Commission. Various suggestions and objections have been summarized, followed by the response of the Petitioner and the rulings of the Commission on the various issues.

- **Chapter 5** discusses the Capital Investment Plan for the MYT Control Period FY 2016-17 to FY 2018-19, key issues and Commission's ruling on the same.

- **Chapter 6** discusses the views of the Commission on the approval of various other ARR components for purposes of Business Plan approval.

- **Chapter 7** of the Order provides necessary directions of the Commission to LED.

2. Approach of the Order

2.1. Various Provisions of Multi Year Distribution Tariff Regulations, 2014

Regulation 5 of the Multi Year Distribution Tariff Regulations 2014 and the subsequent amendment to the said regulations dated 10th August 2015 states that:

5.1 The Distribution Licensee shall file Business Plan, for Control Period of three financial years from 1st April 2016 to 31st March 2019, which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financial plan and the physical targets.

Provided that in case the Commission issues guidelines and formats, from time to time, the same shall be adhered to by the Distribution Licensees.

5.2 The capital investment plan shall show separately, on-going projects that will spill into the financial year 2016-17 and new projects (along with justification) that will commence and scheduled to be completed within or beyond the tariff period i.e. by or beyond 31st March 2019. The Commission shall consider and approve the capital investment plan for which the Distribution Licensee shall provide relevant technical and commercial details.

5.3 The Distribution Licensees shall project the power purchase requirement after considering effect of target set for Energy Efficiency (EE) and Demand Side Management (DSM) schemes.

Provided that the power purchase cost of the respective Distribution Licensee shall be allowed after considering the target set by the Commission for Energy Efficiency (EE) and Demand Side Management (DSM) schemes, if any, and any shortfall in meeting the target shall be disallowed by the Commission at marginal cost of power purchase of that Distribution Licensee for determination of tariff.

In view of the above, LED is required to submit the following details in the Business Plan:

1. Category-wise sales projections
2. Power Procurement Plan (including purchase of RE power and REC in compliance of RPO targets)
3. Scheme-wise capital investment plan and financing plan
4. Target for Energy Efficiency and Demand Side Management schemes

As per provision 4.2 (ii) of the Multi Year Distribution Tariff Regulations 2014, wherein it is stated:

A detailed Business Plan based on the Operational Norms and trajectories of performance parameters specified in these Regulations, for each year of the Control Period, shall be submitted by the applicant for the Commission's approval;

Provision 7 of the first amendment to the Multi Year Distribution Tariff Regulations 2014 dated 10th August 2015 states that:

The Commission shall stipulate a trajectory while approving the Business Plan for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State:

Provided that the variables for which a trajectory may be stipulated include, but are not limited to, Operation & Maintenance expense norms, supply availability and wires availability and distribution losses and collection efficiency;

In view of the above LED is required to submit the following operational norms and performance parameters:

1. Status/Action plan for reorganization, restructuring and development of the electricity industry in the state (*in line with the provision 7 of the Multi Year Distribution Tariff Regulations, 2014*)
2. Norms for Employee Costs (*in line with the provision 7 and 21 of the Multi Year Distribution Tariff Regulations, 2014*)
3. Norms for R&M Expenses (*in line with the provision 7 and 21 of the Multi Year Distribution Tariff Regulations, 2014*).
4. Norms for A&G Expenses (*in line with the provision 7 and 21 of the Multi Year Distribution Tariff Regulations, 2014*).
5. Normative levels of Availability for Wires and Supply Business of the Distribution Licensee on the basis of past performance (*in line with the provision 7 and 34 (c) of the Multi Year Distribution Tariff Regulations, 2014*).
6. Trajectory of Distribution Losses (*in line with the provision 7 and 17 of the Multi Year Distribution Tariff Regulations, 2014*).
7. Trajectory of Collection Efficiency (*in line with the provision 7 of the first amendment to the Multi Year Distribution Tariff Regulations 2014 dated 10th August 2015*)

2.2. Commission's approach for approval of Capital Expenditure Schemes

The primary focus of the Business Plan is on identification of the various schemes/works related to meeting out the power requirement in the state, improvement in operational efficiency of the utility by way of reduction in losses and improvement in quality of supply to the consumers, along with associated capex of the schemes, as these key parameters are the most important driver for development of the utility. However, it is vital to carry out a prudent assessment of the capex of various schemes as it invariably affects the tariff of the utility and subsequent pass-through of the same to the retail consumers.

The Commission has, thus, reviewed the capital expenditure schemes in detail along with their financing pattern and accordingly accorded approval of schemes along with justification as detailed in **Chapter 5** of this order.

Further, as per Regulation 22 of MYT Regulations 2014, if the capital expenditure is required for emergency work, the licensee shall submit an application, containing all relevant information along with reasons justifying the emergent nature of the proposed work, seeking post facto approval by the Commission. The Distribution Licensee shall take up the work prior to receiving the approval from the Commission provided that the emergent nature of the scheme has been certified by its competent authority.

2.3.Commission's approach for approval of various other ARR components

The Commission, while approving the various other ARR components, as mandated by regulations to be furnished along with the Business Plan, has laid emphasis on the consideration of nature of the individual components along with the fact that the Commission's efforts should not be duplicated while approving these components at the time of finalization of the MYT tariff order.

Accordingly, while dealing with these various other components of ARR in **Chapter 6**, the Commission has detailed the rationale for approving these components. The Commission has also detailed the reasons for not considering some of these components for purposes of approval of Business Plan.

3. Salient Features of MYT Business Plan Petition filed by ED-Lakshadweep

3.1. MYT Business Plan Petition filed by the Petitioner for FY 2016-17 to FY 2018-19

In line with the MYT Regulations 2014, LED submitted the petition for Business Plan for the period from FY 2015-16 to FY 2017-18 last year; however as per the Tariff Order dated 17th April 2015, the Commission deferred the implementation of MYT Regulations 2014 by one year due to insufficiency of details provided in the Business Plan. Supporting data such as scheme-wise cost benefit analysis, financing plan, loss trajectory etc. was not adequately submitted. The Commission carried out the approval of ARR & tariff for FY 2015-16 as per the JERC (Terms & Conditions for Determination of Tariff) Regulations 2009. The Commission, as per order dated 17th April 2015, directed the Petitioner to submit the revised Business Plan for the Control Period FY 2016-17 to FY 2018-19 along with the requisite details as per the JERC Multiyear Distribution Tariff Regulations 2014 latest by 31st July 2015.

LED had not submitted the Business Plan Petition till 31st July 2015. However, vide email dated 10th August 2015, LED has requested the extension of the time for submission of the Business Plan for the MYT Control Period from FY 2016-17 to FY 2018-19 till first week of September 2015. The Department subsequently submitted the Business Plan to the Commission on 02nd November 2015.

The Commission noted that the Business Plan Petition was not properly prepared as per the MYT Regulations 2014 and amendment thereon. Hence the Commission directed LED to:

1. Resubmit the Business Plan in line with the said Regulations: and
2. Submit the MYT Petition along with the Business Plan Petition together considering the time constraint to hold the Public Hearing and issuance of the Business Plan and the MYT Orders.

LED resubmitted the Business Plan Petition for the MYT Control Period from FY 2016-17 to FY 2018-19 along with the MYT Petition to the Commission on 15th January 2016.

The Petitioner has submitted the category-wise sales and demand projections, power procurement plan, capital investment plan, O&M Norms and targets of distribution loss for the Control Period from FY 2016-17 to FY 2018-19. The Petitioner has submitted that it has developed the Business Plan considering the strengths and weaknesses of the department and after evaluating its business environment and past performance of the utility.

The projections are based on the actual performance in FY 2013-14 & FY 2014-15 and estimated performance in FY 2015-16 and principles outlined in Tariff Regulations of JERC.

3.2.Summary of the MYT Business Plan Petition

The Petitioner has submitted that the consumer base of LED consists of Domestic, Commercial and Industrial consumers. Sales mix is primarily dominated by Domestic consumers, followed by Commercial consumers. The total consumption of Domestic consumers is approximately 75.85 percent and Commercial consumers contribute to around 21.10 percent of total sales. Thus, the sales forecast would completely depend on the sales expected in the Domestic & Commercial Category.

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth etc. that would affect consumption across various categories of consumers. The CAGR (%) for 1-3 years has been adopted for different categories for estimating the energy sales for the FY 2015-16 & for projecting the energy sales for the control period i.e. FY 2016-17, FY 2017-18 and FY 2018-19. In addition to this, the growth trend in number of consumers and connected load have been taken as guiding factors in arriving at the requirement of demand and energy.

The sales, consumers and connected load as projected by the Petitioner for the Control Period are as follows.

Table 3.1: Sales (MUs) submitted by the Petitioner for Control Period

Categories	CAGR Considered	FY 16	FY 17	FY 18	FY 19
		R.E.	Projected		
Domestic	10.53%	37.10	41.01	45.33	50.10
Commercial	6.00%	9.90	10.49	11.12	11.79
Industrial	0.48%	0.42	0.42	0.43	0.43
Public Lighting	-9.58%	0.73	0.66	0.60	0.54
Temporary		0.12	0.12	0.12	0.12
Grand Total		**48.27**	**52.70**	**57.60**	**62.98**

Table 3.2: No of Consumers as submitted by the Petitioner for Control Period

Categories	CAGR Considered	FY 16	FY 17	FY 18	FY 19
		R.E.	Projected		
Domestic	2.90%	18276	18806	19351	19911
Commercial	2.18%	3259	3330	3402	3477
Industrial	0.00%	321	321	321	321
Public Lighting	0.00%	73	73	73	73
Temporary	0.00%	0	0	0	0
Grand Total		**21929**	**22530**	**23147**	**23782**

The Petitioner has submitted that it has been trying to reduce the distribution losses during recent years and that the system improvement works executed every year under the plan schemes have also contributed to the reduction of distribution losses. However, it may also be noted that reduction of distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitations.

Quote

The losses has reduced from 26.85% in the FY 2010-11 to 13.75% in FY 2014-15. The Hon'ble Commission has approved T&D loss of 14% for the FY 2015-16. However, it is expected that the losses for the FY 2015-16 would be in the range of 13.75%.

As can be seen from the above, LED has been successfully reducing the T&D loss y-o-y in-spite of having consumer profile where majority of the consumers are LT category consumers.

While in future LED shall make all efforts to achieve the loss targets set up by the Hon'ble Commission, it is requested that Commission may set realistic targets in view of the fact that the current loss level are very low and reduction of loss below the current levels shall be difficult.

Unquote

Accordingly, the energy requirement for LED is estimated based on the retail sales projections, grossed up by estimated loss levels.

The energy requirement of LED is met from own generation. There is no availability of power from Central Generating Stations or from other sources/ open market/ power exchanges etc. The present scenario is likely to continue and is projected that energy requirement for FY 2016-17, FY 2017-18 and FY 2018-19 shall be met by own generation.

The energy requirement as projected by the Petitioner for the Control Period is as below.

Table 3.3: Energy Requirement as submitted by the Petitioner for Control Period (MUs)

Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
	Actuals	R.E.	Projected		
Energy Sales	44.26	48.28	52.71	57.60	62.98
T&D Losses	13.75%	13.75%	13.50%	13.25%	13.00%
Energy Requirement	**51.32**	**55.98**	**60.94**	**66.40**	**72.39**

The LED has submitted that it intended to meet the RPO as per the directions of the Commission in the MYT Control period as well. LED has planned to meet the Solar RPO from the generation of solar power from own power plants. Further, it is submitted that in absence of any non-solar power plants, LED shall not be able meet the RPO towards non-solar. However, the Hon'ble Commission in the tariff order for the FY 2015-16 had approved clubbing of RPO of solar & non-solar energy to meet the targets set by the Commission.

Table 3.4: RPO obligation for each year Submitted by the Petitioner for the Control Period

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	**Sales (MU)**	**52.70**	**57.60**	**62.98**
2	**Percentage (%)**	**3.95%**	**4.30%**	**4.65%**
	Solar	1.15%	1.50%	1.85%
	Non-Solar	2.80%	2.80%	2.80%
3	**Million Units (MU)**	**2.08**	**2.48**	**2.93**
	Solar	0.61	0.86	1.17
	Non-solar	1.48	1.61	1.76
	Total Solar Availability	4.83	7.46	9.82

LED has undertaken significant capital expenditure during FY 2014-15 and the current FY 2015-16 and has plans to implement schemes for development of infrastructure during FY 2016-17, FY 2017-18 and FY 2018-19. The infrastructure inherited by LED is insufficient to cater to the present load and hence to meet the increasing demand, capital expenditure is absolutely necessary. Based upon the mandate of the regulation the CAPEX Plan proposals (scheme wise) for FY 2016-17 to FY 2018-19 under the MYT Control Period have been formulated by LED in order to enable better planning, budgeting and monitoring at macro & micro levels.

LED has prepared the capital expenditure plan taking into consideration all the factors which would affect its operations. The capital expenditure plan includes the details of various capital expenditure schemes in the identified areas and their respective estimates for each year of the MYT control period from FY16-17 to FY18-19 and can be categorized in following areas:

i. Investments in New Transmission & Distribution infrastructure to support the demand requirements or power evacuation from generation projects.
ii. System augmentation and strengthening including renovation and modernization to maintain the performance of the existing system.

The summary of the proposed capital expenditure and capitalization is outlined below:

Table 3.5: Summary of Proposed Year-wise Capital Expenditure and Capitalization (Rs Crores)

S. No.	Particulars	FY 17	FY 18	FY 19
1	Augmentation of DG set (Old)	4.55	4.55	4.55
2	Augmentation of DG Generating Capacity (New)	3.10	4.35	0.00
3	Augmentation of Solar Generating Capacity (New)	1.50	1.20	1.08
4	Setting up of Installation of transformers	0.70	0.70	0.70
5	Construction of HT Lines / RMU	1.10	1.10	1.10
6	Service connections /LT Line	0.30	0.30	0.30
7	Street Lights	0.30	0.30	0.30
8	Distribution Box	0.30	0.30	0.30
9	Energy Meter	0.75	0.75	0.75

S. No.	Particulars	FY 17	FY 18	FY 19
10	Underground cable for consumers	0.20	0.20	0.20
11	Energy Conservation	0.05	0.05	0.05
12	e-Governance	0.15	0.15	0.15
13	Special Tools and Plants	0.20	0.20	0.20
14	Administrative set up	0.30	0.30	0.30
15	Oil Storage facilities	2.95	2.95	2.95
16	Civil works	2.75	2.75	2.75
17	Skill up gradation	0.40	0.40	0.40
Total		**19.60**	**20.55**	**16.08**

The Petitioner has submitted that in the past, the entire capital expenditure incurred by LED has been funded by GOI through budgetary support without any external borrowings. There is no loan borrowings by the LED for the capital expenditure. During the interaction with the representatives of LED, it was confirmed by them that the same funding pattern is proposed for the investments proposed for the MYT Control Period.

JERC Multiyear Distribution Tariff Regulations 2014 have stipulated that a separate trajectory of norms for each of the components of O&M expenses would be specified. **Accordingly, the Petitioner has submitted O&M norms as below.**

As per the regulations, employee expense norms are to be determined based on number of personnel per 1000 consumers and number of personnel per substation. Accordingly, the following norms for employee expenses have been proposed.

Table 3.6: Employee parameters submitted by Petitioner

Sr. No.	Particulars	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
		Actuals			R.E.	Projections		
1	Number of employees at the end of the year	399	399	399	399	401	401	401
2	Number of consumers	19685	20699	21344	21928	22529	23147	23782
3	No. of employees per '000 consumers	20.26	19.27	18.69	18.19	17.79	17.32	16.86
4	No. of substations	106	106	106	106	124	124	124
5	Number of employees per sub-station	3.76	3.76	3.76	3.76	3.23	3.23	3.23

Administrative and General Expenses (A&G) expenses norms are to be determined based on combination of A&G expense per personnel and A&G expense per 1000 consumers. A&G norms as submitted by the Petitioner as below.

Table 3.7: A&G parameters submitted by Petitioner

S. No.	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
1	A&G expense (Rs lakh)	135.98	138.70	141.47	144.30	147.19
2	A&G expense per '000 consumers (Rs Lakh)	6.91	6.70	6.63	6.58	6.53
3	A&G expense per employee (Rs lakh)	0.34	0.35	0.35	0,36	0.37

LED has been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The R&M expenses for FY 2014-15 are escalated by 2% i.e. (WPI from 2013-14 to 2014-15) YOY to project the expenses for FY 2016-17, FY 2017-18 and FY 2018-19 to capture the inflationary increases in the costs.

As per the regulations, Repairs and Maintenance expenses (R&M) are to be calculated as percentage (as per norm defined) of opening GFA for the year. The Petitioner has submitted the following actual R&M expenses as below.

Table 3.8: R&M expense submitted by Petitioner

S. No.	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
1	R&M Expenses (Rs. Crores)	11.020	11.240	11.465	11.695	11.928
2	R&M Expense as %age of GFA	7.55%	6.98%	6.35%	5.81%	5.49%

3.3.Prayer to the Commission

The Electricity Department, Lakshadweep Administration (LED) respectfully prays to the Hon'ble Commission to:

1. Approve the Business Plan for Control Period of three financial years from April 1, 2016 to March 31, 2019 for LED formulated in accordance with the guidelines outlined as per the regulation of Joint Electricity Regulatory Commission relating to Distribution Licensee and the principles contained in Tariff Regulations ;
2. Condone any inadvertent delay/ omissions/ errors/ rounding off differences/shortcomings and LED may please be permitted to add/ change/ modify/ alter the petition;
3. Permit LED to file additional data/ information as may be necessary;
4. Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

4. Summary of Objections received, Response from the Petitioner and Commission's Views

4.1. Regulatory Process

On admitting the Business Plan for Control Period FY 2016-17 to FY 2018-19, the Commission directed the Petitioner to make copies of the petition available to the public, upload the petition on the website and also give wide publicity through public announcements and telecast in the local TV Channels duly inviting comments/objections from the public as per provisions of the JERC (Multiyear Distribution Tariff) Regulations 2014 as amended.

4.2. Public Hearing

The Public Hearing was held on 25th February 2016 at Kavaratti. During the public hearing, some persons who had submitted the objections in writing presented their objections/suggestions in person before the Commission. Other participants from the general public, who did not submit written objections earlier, were also given an equal opportunity to offer their views/suggestions in respect of the Business Plan proposal of LED for the Control Period from FY 2016-17 to FY 2018-19. The list of objectors is attached as **Annexure 1** to this order.

At the beginning of the hearing, the Commission ascertained from the stakeholders that those who had filed the written objection before the date of the public hearing, had received the replies to their written objections. All stakeholders were provided the opportunity to present their suggestions. Those stakeholders who did not give prior written objections/suggestions and expressed their views, objections, suggestions during the hearing were replied to by the Petitioner after the hearing.

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

The Commission is appreciative of the efforts of various stakeholders for providing suggestions / comments / observations to make the Electricity Distribution Sector responsive and efficient.

However, there was no specific objection pertaining to the proposals of the Business Plan Order from any stakeholder.

5. Capital Investment Plan for the MYT Control Period FY 2016-17 to FY 2018-19

5.1. Details of Capital Expenditure

Petitioner View:

The Petitioner has submitted that it has undertaken significant capital expenditure during FY 2014-15 and the current FY 2015-16 and has plans to implement schemes for development of infrastructure during FY 2016-17, FY 2017-18 and FY 2018-19. The infrastructure inherited by LED is insufficient to cater to the present load and hence to meet the increasing demand, capital expenditure is absolutely necessary. Based upon the mandate of the regulation the CAPEX Plan proposals (scheme wise) for FY 2016-17 to FY 2018-19 under the MYT Control Period FY 2016-19 have been formulated by LED in order to enable better planning, budgeting and monitoring at macro & micro levels. The Petitioner has prepared the cap-ex plan taking into consideration all the factors which would affect its operations. The cap-ex plan includes the details of various capital expenditure schemes in the identified areas and their respective estimates for each year of the MYT control period from FY 2016-17 to FY 2018-19.

Capital investments of the Electricity Department can largely be categorized in following areas:

1) Investments in New Transmission & Distribution infrastructure to support the demand requirements or power evacuation from generation projects.
2) System augmentation and strengthening including renovation and modernization to maintain the performance of the existing system.

The details of proposed schemes including requirement/benefits under both On-going schemes and new schemes has been furnished below:

Table 5.1: Summary of Proposed Capital Expenditure and Capitalization (Rs Crores)

Consumer Category	Projections		
	FY 2016-17	FY 2017-18	FY 2018-19
Opening balance	9.46	9.46	9.46
Add: New investments	19.60	20.55	16.08
Total	**29.06**	**30.01**	**25.54**
Less investment capitalized	19.60	20.55	16.08
Closing balance	**9.46**	**9.46**	**9.46**

The summary of the proposed capital expenditure and capitalization is outlined below:

Table 5.2: Summary of Proposed Capital Expenditure (Rs Crores)

S. No.	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	Augmentation of DG set (Old)	4.55	4.55	4.55
2	Augmentation of DG Generating Capacity (New)	3.10	4.35	
3	Augmentation of Solar Generating Capacity (New)	1.50	1.20	1.08
4	Setting up of Installation of transformers	0.70	0.70	0.70
5	Construction of HT Lines / RMU	1.10	1.10	1.10
6	Service connections /LT Line	0.30	0.30	0.30
7	Street Lights	0.30	0.30	0.30
8	Distribution Box	0.30	0.30	0.30
9	Energy Meter	0.75	0.75	0.75
10	Underground cable for consumers	0.20	0.20	0.20
11	Energy Conservation	0.05	0.05	0.05
12	e-Governance	0.15	0.15	0.15
13	Special Tools and Plants	0.20	0.20	0.20
14	Administrative set up	0.30	0.30	0.30
15	Oil Storage facilities	2.95	2.95	2.95
16	Civil works	2.75	2.75	2.75
17	Skill up gradation	0.40	0.40	0.40
Total		**19.60**	**20.55**	**16.08**

The entire capital expenditure incurred by LED has been funded by GOI through budgetary support without any external borrowings. There is no loan borrowings by the LED for the capital expenditure.

Commission View:

The Petitioner has not submitted the details of the capital expenditure proposed during the Control Period from FY 2016-17 to FY 2018-19 along with cost benefit analysis and past capex schemes status. The Petitioner has broadly categorized their revised capital expenditure broadly into 17 categories as follows:

- Augmentation of DG set (Old)
- Augmentation of DG Generating Capacity (New)
- Augmentation of Solar Generating Capacity (New)
- Setting up of Installation of transformers
- Construction of HT Lines / RMU
- Service connections /LT Line
- Street Lights
- Distribution Box
- Energy Meter
- Underground cable for consumers

- Energy Conservation
- e-Governance
- Special Tools and Plants
- Administrative set up
- Oil Storage facilities
- Civil works
- Skill up gradation

The scheme-wise details are as below.

A. Augmentation of DG set (Old)

Petitioner Submission:

LED proposes the capex for refurbishment of existing DG sets. LED is primarily dependent on the generation through the DG sets only, the capital expenditure towards refurbishment of existing capacity is essential for ensuring the availability of reliable supply. The refurbishment would improve the specific fuel consumption and generation performance of the DG sets.

Commission View:

The Commission is of view that augmentation of existing DG Sets is critical for maintaining of smooth and reliable supply of electricity across the islands.

The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.3: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Augmentation of DG set (Old)	Capital Expenditure	4.55	4.55	4.55	4.55	4.55	4.55
	Capitalization	4.55	4.55	4.55	4.55	4.55	4.55

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

B. Augmentation of DG Generating Capacity (New)

Petitioner Submission:

LED is planning to set up new DG plants. The plant wise details of installed capacity, capital expenditure and year of implementation is provided below:

Sl. No.	Source of Power	Location	Installed Capacity (MW)	Date of Commissioning	Capital Cost (Rs Crores)
1	DG Set	MINICOY	0.40	Dec-17	0.70
2	DG Set	KAVARATTI	1.00	Aug-16	1.10
3	DG Set	AMINI	0.75	Dec-17	0.95
4	DG Set	ANDROTH	1.00	Dec-16	1.10
5	DG Set	KALPENI	0.50	Dec-17	0.80
6	DG Set	AGATTI	0.75	Dec-17	0.95
7	DG Set	KADMATH	0.75	Dec-17	0.95
8	DG Set	KILTAN	0.65	Dec-16	0.90
Grand Total			**5.80**		**7.45**

Commission View:

The Commission is of view that considerable growth is expected across the islands keeping in view the increased access of electricity and promotion of tourism across various islands. Accordingly, the Commission is view that installation of new DG sets is inevitable so as to ensure enhanced availability of power to meet the enhanced requirement of power across various islands.

The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.4: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Augmentation of DG Generating Capacity (New)	Capital Expenditure	3.10	4.35	0.00	3.10	4.35	0.00
	Capitalization	3.10	4.35	0.00	3.10	4.35	0.00

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

C. Augmentation of Solar Generating Capacity (New)

Petitioner Submission:

The maximum generation of Lakshadweep Islands is from HSD DG sets. The cost of generation is very high. Further, there are efforts to increase the proportion of the clean & renewable energy sources. Therefore, LED is planning to set up new solar power plants. Further, the cost per unit generation from solar power station is lower than that of HSD based DG sets. The plant wise details of installed capacity, capital expenditure and year of implementation is provided below:

Sl. No.	Source of Power	Location	Installed Capacity (MW)	Date of Commissioning	Capital Cost (Rs Crores)
1	Solar	KAVARATTI	1.00	Dec-16	0.60
2	Solar	MINICOY	1.50	FY 17	0.90
3	Solar	AMINI	1.00	FY 18	0.60
4	Solar	KADMATH	1.00	FY 18	0.60
5	Solar	AGATTI	1.00	FY 19	0.60
6	Solar	KALPENI	0.80	FY 19	0.48
Grand Total			**6.30**		**3.78**

Commission View:

The Commission notes that the tariff for solar generation plants is to be determined as per the JERC Solar Regulations and amendments thereof. The Petitioner will recover tariff as per the JERC Solar Regulations for the capex incurred for such scheme and tariff for same will be determined through separate petitions to be filed for these sources considering these sources as separate generating business and not as expense towards distribution business.

Accordingly, the Commission finds it appropriate not to include the capital expenditure of Rs 3.78 Crores in the Business Plan as per the provisions of JERC Solar Regulations.

Accordingly the Commission, is not approving the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.5: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Augmentation of Solar Generating Capacity (New)	Capital Expenditure	1.50	1.20	1.08	0.00	0.00	0.00
	Capitalization	1.50	1.20	1.08	0.00	0.00	0.00

The Commission directs the Petitioner to file separate Petition for approval of tariff for solar generating stations being installed by the Petitioner.

D. Setting up of Installation of transformers

Petitioner Submission:

This relates to the installation of new transformers & replacement of old ones. This will help in meeting the current and future load growth of the area apart from improving service reliability to the consumers of the area and to meet the Standards of Performance of JERC.

The Petitioner has submitted the requirement of Rs 0.70 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that installation of transformers is an ongoing and essential activity for catering to future load growth as well as improvement of reliability of supply. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.6: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Setting up of Installation of transformers	Capital Expenditure	0.70	0.70	0.70	0.70	0.70	0.70
	Capitalization	0.70	0.70	0.70	0.70	0.70	0.70

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

E. <u>Construction of HT Lines / RMU</u>

Petitioner Submission:

The scheme intends to augment transmission network of LED to help it meet peak demand. Also laying of new line will be helpful in providing better service to the consumers of LED.

The Petitioner has submitted the requirement of Rs 1.10 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that construction of HT Lines/RMU is an ongoing and essential activity for catering to future load growth as well as improvement of reliability of supply. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.7: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Construction of HT Lines / RMU	Capital Expenditure	1.10	1.10	1.10	1.10	1.10	1.10
	Capitalization	1.10	1.10	1.10	1.10	1.10	1.10

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

F. Service connections /LT Line

Petitioner Submission:

The scheme intends to augment transmission network of LED to help it meet peak demand. Also laying of new line will be helpful in providing better service to the consumers of LED.

The Petitioner has submitted the requirement of Rs 0.30 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that Service connections /LT Line is an ongoing and essential activity for catering to future load growth as well as improvement of reliability of supply. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.8: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Service connections /LT Line	Capital Expenditure	0.30	0.30	0.30	0.30	0.30	0.30
	Capitalization	0.30	0.30	0.30	0.30	0.30	0.30

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

G. Street Lights

Petitioner Submission:

This includes providing new street lights and replacement of old ones. This is essential to provide reliable lighting on the streets and public places.

The Petitioner has submitted the requirement of Rs 0.30 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that providing new street lights and replacement of old ones is an ongoing and essential activity. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.9: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Street Lights	Capital Expenditure	0.30	0.30	0.30	0.30	0.30	0.30
	Capitalization	0.30	0.30	0.30	0.30	0.30	0.30

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

H. Distribution Box

Petitioner Submission:

This relates to expenditures incurred for improving the power supply to the consumers and for meeting the Standard of Performance strengthening the distribution.

The Petitioner has submitted the requirement of Rs 0.30 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that installation of distribution boxes is an ongoing and essential activity. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.10: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Distribution Box	Capital Expenditure	0.30	0.30	0.30	0.30	0.30	0.30
	Capitalization	0.30	0.30	0.30	0.30	0.30	0.30

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

I. Energy Meter

Petitioner Submission:

This is planned to be incurred for ensuring 100% metering and replacement of defective meters.

The Petitioner has submitted the requirement of Rs 0.75 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that installation of new meters/replacement of faulty meters is an ongoing and essential activity for smooth functioning and proper energy accounting. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.11: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Energy Meter	Capital Expenditure	0.75	0.75	0.75	0.75	0.75	0.75
	Capitalization	0.75	0.75	0.75	0.75	0.75	0.75

However, as the Petitioner is primarily reliant on self-meter reading by the consumers, the Commission directs the Petitioner to explore the possibility of 100% prepaid metering across the islands. The Petitioner should submit the plan for 100% prepaid metering within 2 years by 30th June 2016.

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

J. Underground cable for consumers

Petitioner Submission:

The scheme intends to augment distribution network of LED to help it meet peak demand. Also laying of new line will be helpful in providing better service to the consumers of LED.

The Petitioner has submitted the requirement of Rs 0.20 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that being an underground network, installation of underground cable for consumers is an ongoing and essential activity. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.12: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Underground cable for consumers	Capital Expenditure	0.20	0.20	0.20	0.20	0.20	0.20
	Capitalization	0.20	0.20	0.20	0.20	0.20	0.20

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

K. Energy Conservation

Petitioner Submission:

This includes expenditure incurred for measures taken for energy conservation, replacement of energy efficient lights etc.

The Petitioner has submitted the requirement of Rs 0.05 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that since the cost of generation is very high in the islands, the energy efficiency measures are of utmost importance. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.13: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Energy Conservation	Capital Expenditure	0.05	0.05	0.05	0.05	0.05	0.05
	Capitalization	0.05	0.05	0.05	0.05	0.05	0.05

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

L. e-Governance

Petitioner Submission:

This relates to expenditure planned to be incurred for computerization, online portals & facilities for consumers.

The Petitioner has submitted the requirement of Rs 0.15 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that technological upgradation, adoption of new technologies and augmentation of related infrastructure is required on periodic basis so as to enable the department to meet with the national as well as international standards/benchmarks in services. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.14: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
e-Governance	Capital Expenditure	0.15	0.15	0.15	0.15	0.15	0.15
	Capitalization	0.15	0.15	0.15	0.15	0.15	0.15

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

M. <u>Special Tools and Plants</u>

Petitioner Submission:

This relates to the expenditure planned to be incurred for procurement of special tools and plants, communications system etc.

The Petitioner has submitted the requirement of Rs 0.20 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that procurement of special tools and plants, communications system etc is an essential activity. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.15: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Special Tools and Plants	Capital Expenditure	0.20	0.20	0.20	0.20	0.20	0.20
	Capitalization	0.20	0.20	0.20	0.20	0.20	0.20

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

N. <u>Administrative set up</u>

Petitioner Submission:

This includes expenditures for modernization/up gradation, conducting various studies like system improvement, energy auditing, energy management studies, EIA studies etc.

The Petitioner has submitted the requirement of Rs 0.30 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that the said capital expenditure is necessary for normal functioning of the utility. However, the Commission would like to highlight that the some of the works like studies and training are a part of normal Administrative and General Expenses. In absence of further detailing by the Petitioner, the Commission provisionally approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.16: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Administrative set up	Capital Expenditure	0.30	0.30	0.30	0.30	0.30	0.30
	Capitalization	0.30	0.30	0.30	0.30	0.30	0.30

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

O. Oil Storage facilities

Petitioner Submission:

Construction of new oil storage facilities and renovation of old facilities would enable proper storage and ensure adequate availability of HSD.

The Petitioner has submitted the requirement of Rs 2.95 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that as the utility is primarily dependent on the generation through the DG sets only, the capital expenditure towards oil storage facilities is essential for ensuring the availability of continuous HSD supply with less transportation cost and less transit losses. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.17: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Oil Storage facilities	Capital Expenditure	2.95	2.95	2.95	2.95	2.95	2.95
	Capitalization	2.95	2.95	2.95	2.95	2.95	2.95

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

P. Civil works

Petitioner Submission:

These includes expenditure incurred or construction/renovation/ repairing of power house buildings, site offices, store building, & accommodation for the staff of department working in various islands/ locations.

The Petitioner has submitted the requirement of Rs 2.75 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that as construction and maintenance of Civil Infrastructure is an ongoing and essential activity. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.18: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Civil works	Capital Expenditure	2.75	2.75	2.75	2.75	2.75	2.75
	Capitalization	2.75	2.75	2.75	2.75	2.75	2.75

The Commission expects full capitalization of proposed capital expenditure within the same year only and approves 100% capitalization during same year.

Q. Skill up gradation

Petitioner Submission:

This relates to the expenditure planned to be incurred for imparting training to its employees. Various training program is planned to be organized at different locations.

The Petitioner has submitted the requirement of Rs 0.40 Crores for each year of the MYT Control Period.

Commission View:

The Commission is of view that training of employees is not a capital expense. This expense is a part of Administrative and General Expenses. The Commission, thus, does not approve the capital expenditure as proposed by the Petitioner for the Control Period.

Table 5.19: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Skill up gradation	Capital Expenditure	0.40	0.40	0.40	0.00	0.00	0.00
	Capitalization	0.40	0.40	0.40	0.00	0.00	0.00

The Commission will approve same as part of A&G Expenses at the time of approval of MYT Order.

The total capital expenditure and capitalization as proposed by the Petitioner and approved by the Commission is as follows:

Table 5.20: Capital Expenditure and Capitalization as proposed by the Petitioner and approved by the Commission (Rs. Crores)

Name of scheme	Particulars	Proposed			Approved		
		FY 17	FY 18	FY 19	FY 17	FY 18	FY 19
Total	Capital Expenditure	19.60	20.55	16.08	17.70	18.95	14.60
	Capitalization	19.60	20.55	16.08	17.70	18.95	14.60

The Commission further approves the funding of complete capital expenditure through Budgetary Support as proposed by the Petitioner.

6. Approval of the various ARR components for the MYT Control Period FY 2016-17 to FY 2018-19

The Petitioner has submitted energy sales and no of consumers with growth projections, power procurement plan, T&D losses trajectory and energy balance for the Control Period. The following sub-sections of this chapter provide details of the submission made by the Petitioner and approval of the Commission for the above ARR components.

6.1. Category-wise Energy Sales for the MYT Control Period FY 2016-17 to FY 2018-19

Petitioner Submission:

The sales forecast is based on the trends observed in the sales pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth etc. that would affect consumption across various categories of consumers. The CAGR (%) for 1-3 years has been adopted for different categories for estimating the energy sales for the FY 2015-16 & for projecting the energy sales for the control period i.e. FY 2016-17, FY 2017-18 & FY 2018-19. In addition to this, the growth trend in number of consumers and connected load have been taken as guiding factors in arriving at the requirement of demand and energy.

Table 6.1: Historical Sales submitted by the Petitioner (in MU)

Categories	FY 11	FY 12	FY 13	FY 14	FY 15
	Actuals				
Domestic	20.35	23.75	27.23	29.65	33.57
Commercial	6.98	7.28	9.26	10.08	9.34
Industrial	0.41	0.42	0.39	0.42	0.42
Public Lighting	1.34	1.52	1.07	1.17	0.81
Temporary	0.01	0.02	0.05	0.05	0.12
Grand Total	**29.09**	**32.99**	**38.00**	**41.37**	**44.26**

Table 6.2: Projected Sales submitted by the Petitioner (in MU)

Categories	CAGR Considered	FY 16	FY 17	FY 18	FY 19
		R.E.	Projected		
Domestic	10.53%	37.10	41.01	45.33	50.10
Commercial	6.00%	9.90	10.49	11.12	11.79
Industrial	0.48%	0.42	0.42	0.43	0.43
Public Lighting	-9.58%	0.73	0.66	0.60	0.54
Temporary		0.12	0.12	0.12	0.12
Grand Total		**48.27**	**52.70**	**57.60**	**62.98**

Commission Analysis:

The Petitioner has projected sales, based on the last five year CAGR and also on estimate basis wherever any particular consumer category is indicating an abnormal growth pattern. The Commission, in Regulation 15 and 16 of MYT Regulations, 2014 has specified the methodology for projecting the metered and un-metered sales. The relevant extract of the MYT Regulations, 2014 is as follows:

"***15.1 Forecasting Methodology***

Metered sales shall be treated as an uncontrollable parameter:

Provided that open access transactions shall not form part of the sales:

Provided further that sales forecast shall be based on past trends in each of the slabs of consumer categories. The compounded annual growth rate (CAGR) of past 2 to 3 years of sales within each of the slabs of a consumer category as per audited books of account shall be used to forecast up to short and medium (5 years) time range.

Provided also that in cases where slab-wise sales to each consumer category are not available in audited books of accounts and only consolidated sales are available, the Distribution Licensee shall include the slab-wise sales in annexure to its Annual Report from next year onwards:

Provided also that if Audited books of accounts are not available, the Distribution Licensee shall get the accounts audited within a year of roll out of these tariff regulations so as to ensure that audited sales figures, by slab by consumer category, for last three preceding years are available for sales estimation from next year onwards

16 Un-metered Sales Forecast

Methodology for determination of un-metered sales

16.2 The Central Electricity Authority issued CEA (installation and operation of meters), Regulations 2006. However in some utilities under the jurisdiction of JERC 100% metering has not yet taken place. Till such time 100% metering is achieved, the energy sales to unmetered consumers shall be considered on normative and it will be a controllable parameter."

It is very clear from the above provisions of the MYT Regulations, 2014 that the CAGR of past 2 to 3 years of sales within each of the slabs of a consumer category as per audited books of account shall be used to forecast up to short and medium (5 years) time range.

The Commission has adopted the same methodology for calculation of the CAGR and applied the CAGR of 2-3 year whichever is higher. The Commission has pointed out various aberrations in the Petition by way of a deficiency note, which were further discussed in detail during the Technical Validation Session (TVS) with the Petitioner.

The Commission have adopted the same methodology and applied the CAGR of 2-3 year whichever is on higher side. Further, if there is any kind of aberration i.e. a high decline or increase the Commission has allowed a normative increase or zero percent increase in the consumer category. The Commission is of the view that the sales in the temporary category cannot be projected beforehand and has accordingly considered Nil sales under Temporary Category:

Table 6.3: Category-wise growth rate for energy sales as considered by the Commission

Sr. No.	Category of Consumer	CAGR					
		3 Years FY 12 to FY 15	2 Years FY 13 to FY 15	3 Years FY 11 to FY 14	2 Years FY 12 to FY 14	Proposed	Approved
1	Domestic	12.23%	11.03%	13.37%	11.73%	10.53%	12.23%
2	Commercial	8.66%	0.43%	13.03%	17.67%	6.00%	8.66%
3	Industrial	0.00%	3.77%	0.81%	0.00%	0.48%	0.00%
4	Public Lighting	-18.93%	-12.99%	-4.42%	-12.27%	-9.58%	0.00%

The Commission is of view that the with the increased availability of the power, especially renewable power, clubbed with the growth in the tourism in various islands of Lakshadweep, the sales in various categories will grow higher than the growth anticipated by the Petitioner.

The Commission has observed that in past 2-3 years there is promotion of tourism in other islands also. As the tourism is fast becoming prime revenue earning industry in the Lakshadweep Islands, the Commission finds it appropriate to approve the 3 years CAGR for the MYT Control Period as the sales in domestic category is also expected to follow similar trend.

However, as public lighting category and industrial category is not directly linked to the growth in tourism industry, the Commission finds it appropriate to approve nil growth considering past trends of growth for this category.

Keeping in view the above submissions made by the Petitioner and views of the Commission, the Commission approves the sales for the MYT Control Period as follows:

Table 6.4: Category-wise Energy Sales as approved by the Commission for MYT Control Period (In MU)

Sr. No.	Category of Consumer	CAGR	FY 16	FY 17	FY 18	FY 19
		Approved	Base Year	MYT Control Period		
1	Domestic	12.23%	37.67	42.28	47.45	53.25
2	Commercial	8.66%	10.15	11.03	11.98	13.02
3	Industrial	0.00%	0.42	0.42	0.42	0.42
4	Public Lighting	0.00%	0.81	0.81	0.81	0.81
Total Sales			**49.05**	**54.54**	**60.66**	**67.50**

The Commission accordingly finds it appropriate to approve the sales as above. The Commission also directs the Petitioner to maintain island-wise information henceforth and submit same along with the future petitions.

6.2.Consumer profile

Petitioner Submission:

The forecast of number of consumers is based on the trends observed in the connections pattern of various categories over the past years, new developments on account of Government Policies, Socio economic changes, industrial growth, etc. that would affect consumption across various categories of consumers. The CAGR (%) for 1-3 years has been adopted for different categories for estimating the number of consumers for the FY 2015-16 & for projection for the control period i.e. FY 2016-17, 2017-18 and 2018-19. However, normalization has been undertaken for certain categories where an abnormal rise or reduction has been observed. The number of consumers estimated for the FY 2016-17, FY 2017-18 and FY 2018-19 are tabulated below.

Table 6.5: Historical No. of Consumers submitted by the Petitioner

Categories	FY 13	FY 14	FY 15
	Actuals		
Domestic	16302	17169	17761
Commercial	2989	3140	3189
Industrial	321	317	321
Public Lighting	73	73	73
Grand Total	**19685**	**20699**	**21344**

Table 6.6: Projected No. of Consumers submitted by the Petitioner

Categories	CAGR Considered	FY 16	FY 17	FY 18	FY 19
		R.E.	Projected		
Domestic	2.90%	18276	18806	19351	19911
Commercial	2.18%	3259	3330	3402	3477
Industrial	0.00%	321	321	321	321
Public Lighting	0.00%	73	73	73	73
Grand Total		**21929**	**22530**	**23147**	**23782**

Commission Analysis:

The Commission has considered same approach and methodology for approval of number of consumers as considered for approval of energy sales above. The Category wise growth in number of consumers as considered by the Commission is tabulated below:

Table 6.7: Category-wise growth rate for Number of Consumers as considered by the Commission

Categories	CAGR			
	3 Years FY 12 to FY 15*	2 Years FY 13 to FY 15	Proposed	Approved
Domestic	0.00%	4.38%	2.90%	4.38%
Commercial	0.00%	3.29%	2.18%	3.29%
Industrial	0.00%	0.00%	0.00%	0.00%
Public Lighting	0.00%	0.00%	0.00%	0.00%

**** No figures provided by the Petitioner for FY 2011-12***

The Commission is of view that with the increased availability of the power, especially renewable power, clubbed with the growth in the tourism in various islands of Lakshadweep, the sales in various categories will grow higher than the growth anticipated by the Petitioner.

The Commission has observed that in around past 2-3 years there is promotion of tourism in other islands also. As the tourism is fast becoming the prime revenue earning source in the Lakshadweep Islands, the Commission finds it appropriate to approve the 2 years CAGR for the MYT Control Period as the growth in other categories are also expected to follow similar trend.

The Commission approves the number of consumers for the MYT Control Period as follows:

Table 6.8: Category-wise number of consumers as approved by the Commission for MYT Control Period

Categories	FY 16	FY 17	FY 18	FY 19
	R.E.	Projected		
Domestic	18539	19351	20198	21082
Commercial	3294	3402	3514	3630
Industrial	321	321	321	321
Public Lighting	73	73	73	73
Grand Total	**22227**	**23147**	**24106**	**25106**

The Commission directs the Petitioner to maintain Category-Wise and Island wise information for future years and submit same along with the future petitions.

6.3.Connected Load Growth

Petitioner's Submission

The Petitioner has not submitted the category wise connected load for the past 5 FYs.

Commission's View

The Petitioner has not submitted the details of the connected load proposed during the Control Period from FY 2016-17 to FY 2018-19 along with past actual connected load. The Commission raised the issue during the TVS. The Petitioner submitted the actual island-wise information for FY 15 upto February 2015.

Categories	FY 15
	Actuals upto Feb'15 (in KW)
Domestic	66606.426
Commercial	18125.230
Industrial	3238.639
Public Lighting	223.749
Temporary	109.197
Grand Total	**88313.241**

The Commission has observed that the Petitioner did not furnish the past trend of the connected load of the various consumer categories, in the absence of which the Commission has considered the actual connected load for FY 2014-15 (upto Feb-15) for FY 2016-17 also. **The Commission directs the Petitioner to submit complete information as per the regulatory formats of the ARR & Tariff approval process of the Commission along with island-wise details of the connected load in each category in the next ARR filing. Further, the past trends of at least the last 3 years based on actual should be submitted to enable the Commission to analyze the data and arrive at realistic projections. Pending these details, the connected load for FY 2016-17 is approved at the level of the actual connected load for FY 2014-15 (upto Feb-15)**.

6.4.Transmission and Distribution Losses

Petitioner Submission:

The Petitioner had submitted that it has been trying to reduce the distribution losses during recent years and that the system improvement works executed every year under the plan schemes have also contributed to the reduction of distribution losses and further reduction of distribution losses may not be possible beyond a certain level due to topographical conditions and technical limitations.

The losses have been reduced from 26.85% in the FY 2010-11 to 13.75% in FY 2014-15. While the T&D loss of 14% has been approved for the FY 2015-16, it is expected that the losses for the FY 2015-16 would be in the range of 13.75%.

As can be seen from the above, LED has been successfully reducing the T&D loss y-o-y in-spite of having consumer profile where majority of the consumers are LT category consumers.

The Petitioner has submitted the T&D losses trajectory of 13.50%, 13.25% and 13.00% for FY 2016-17, FY 2017-18 and FY 2018-19 respectively.

Commission Analysis:

As per the Regulation 17, Treatment of Distribution Loss

"Distribution loss shall be considered as a controllable parameter. Based on the assessment of metered and un-metered sales as per Regulations 15 and 16 of these regulations, the Commission shall prepare the baseline of distribution losses."

The Commission has approved losses of 13.75% for FY 2015-16 as per order dated 17th April 2015. The Commission is of view that while achieving the higher reduction in T&D losses is difficult keeping in view of the fact that the network in various islands is not interconnected, the overall reduction is still possible by improving the infrastructure within the islands.

The Commission expects that with such huge capex being undertaken, the Petitioner should be able to achieve the T&D loss trajectory as set out in this Business Plan order for the Control Period FY 2016-17 to FY 2018-19.

The Commission has accordingly considered a reduction of 0.50% for the T&D loss trajectory for the Control Period to be reasonable.

In view of the above, the Commission approves the below mentioned T&D loss trajectory for the Control Period:

Table 6.9: T&D Loss Trajectory approved by the Commission for the Control Period

Particulars	FY 17		FY 18		FY 19	
	Submitted	Approved	Submitted	Approved	Submitted	Approved
T&D Loss	13.50%	13.25%	13.25%	12.75%	13.00%	12.25%

The gain/loss would be computed as per the approved trajectory of the T&D losses to be done in accordance with the Regulation 10 and 11 of the MYT Regulations 2014.

6.5.Aggregate Technical & Commercial (AT&C) Losses

Petitioner's Submission

The Petitioner has not submitted the AT&C losses for previous years as well as the MYT Control Period.

Commission's Analysis

The Commission is extremely concerned about the accuracy of the data being maintained. The Commission, while fixing the collection efficiency for the Control Period, expects the Petitioner to achieve 100% collection efficiency by the end of the Control Period i.e. FY 2018-19.

Based on the approved T&D loss levels as above and taking into consideration, the collection efficiency of 98%, 99% and 100% respectively for the FY 2016-17 to FY 2018-19, the Commission approves the AT&C loss of 14.99%, 13.62% & 12.25% for the FY 2016-17, FY 2017-18 and FY 2018-19 respectively.

The Petitioner is expected to initiate efforts to improve the collection efficiency and submit the quarterly status report before the Commission.

Table 6.10: AT&C Losses approved by the Commission for the Control Period

Particulars	FY 17		FY 18		FY 19	
	Submitted	Approved	Submitted	Approved	Submitted	Approved
T&D Loss	13.50%	13.25%	13.25%	12.75%	13.00%	12.25%
Collection Efficiency		98.00%		99.00%		100.00%
AT&C Losses		**14.99%**		**13.62%**		**12.25%**

6.6.Energy Efficiency

Petitioner Submission

A program has been undertaken for replacement of incandescent lamps with 9 watts LED bulb through EESL - under national LED program termed as Domestic Efficient Lighting Program (DELP) & Street Light National Program (SLNP). The proposal for the same is under process.

Commission Analysis

The Commission has noted the submissions of the Petitioner and directs it to submit the details of roll out plan along with year-wise potential savings within 2 months of issuance of this order.

6.7.Energy Requirement

Petitioner Submission:

The Petitioner has estimated the energy requirement for LED by grossing up the retail sales projections by estimated loss levels.

The energy requirement projected by the Petitioner for the MYT Control Period is summarized in table below:

Table 6.11: Energy Requirement submitted by the Petitioner (in MU)

Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
	Actuals	R.E.	Projected		
Energy Sales	44.26	48.28	52.71	57.60	62.98
T&D Losses	13.75%	13.75%	13.50%	13.25%	13.00%
Energy Requirement	**51.32**	**55.98**	**60.94**	**66.40**	**72.39**

Commission Analysis:

The Commission has reviewed the information being made available by the Petitioner. Based on the sales and losses approved by the Commission in previous sections, the Commission approves the energy requirement for the MYT Control Period as follows:

Table 6.12: Energy Requirement approved by the Commission (in MU)

S. No.	Particulars	FY 2016-17		FY 2017-18		FY 2018-19	
		Submitted	Approved	Submitted	Approved	Submitted	Approved
1	Sales within State (MU)	52.70	54.54	57.60	60.66	62.98	67.50
2	Savings under DELP (MU)	-	-	-	-	-	-
3	**Total Sales**	**52.70**	**54.54**	**57.60**	**60.66**	**62.98**	**67.50**
4	**Loss (%)**	13.50%	13.25%	13.25%	12.75%	13.00%	12.25%
	Loss (MU)	8.22	8.33	8.80	8.86	9.41	9.42
5	**Energy Requirement at periphery (MU)**	**60.92**	**62.87**	**66.40**	**69.53**	**72.39**	**76.93**

6.8.Power Procurement Plan & Transmission Losses

Petitioner Submission:

The energy requirement of LED is met from own generation. There is no availability of power from Central Generating Stations or from other sources/ open market/ power exchanges etc. The present scenario is likely to continue and is projected that energy requirement for FY 2016-17, FY 2017-18 and FY 2018-19 shall be met by own generation. The expected power generation for FY 2016-17, FY 2017-18 and FY 2018-19 from existing and upcoming stations are provided in the table below:

Table 6.13: Projected Generation submitted by the Petitioner (in MU)

Particulars	FY 17	FY 18	FY 19
	Projected		
Units Generated	62.01	67.56	73.66
Auxiliary Consumption	1.07	1.16	1.27
Units Sent Out	**60.94**	**66.40**	**72.39**

Out of total own generation, approximately 96%-97% is generated from Diesel power houses and generation from Solar Power Station accounts for only 3% -4%.

Commission Analysis:

As per the Regulation 9.1 of the MYT Regulations, 2014, power purchase is an uncontrollable parameter. Thus, the power purchase has to be revisited every year by the Commission based on the audited accounts and latest prevailing fuel rates. The Commission finds it appropriate to review and approve the power purchase quantum and cost at the time of finalization of MYT Order/APR Orders only.

Accordingly, the Commission, for the purposes of the Business Plan finds it appropriate only to approve the sources and quantum of power purchase for the utility. The Petitioner has submitted the details of various generating sources in the Business Plan.

Based on the information submitted by the Petitioner, the Solar Generating Sources approved by the Commission is as follows:

Table 6.14: Solar Generating Stations approved by the Commission for MYT Control Period (in MW)

Island	Source	Capacity (MW)	Installed Capacity (in MW)		
			FY 17	FY 18	FY 19
Agatti	Solar Old	0.10	0.10	0.10	0.10
	Solar New (FY 19)	1.00	0.00	0.00	1.00
Amini	Solar Old	0.10	0.10	0.10	0.10
	Solar New (FY 18)	1.00	0.00	1.00	1.00
Androth	Solar Old	0.32	0.32	0.32	0.32
	Solar New	0.00	0.00	0.00	0.00
Bangaram	Solar Old	0.05	0.05	0.05	0.05
	Solar New	0.00	0.00	0.00	0.00
Bitra	Solar Old	0.10	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00	0.00
Chetlat	Solar Old	0.10	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00	0.00
Kadmat	Solar Old	0.15	0.15	0.15	0.15

Island	Source	Capacity (MW)	Installed Capacity (in MW)		
			FY 17	FY 18	FY 19
	Solar New (FY 18)	1.00	0.00	1.00	1.00
Kalpeni	Solar Old	0.10	0.10	0.10	0.10
	Solar New (FY 19)	0.80	0.00	0.00	0.80
Kavaratti	Solar Old	0.76	0.76	0.76	0.76
	Solar New (FY 17)	1.00	1.00	1.00	1.00
Kiltan	Solar Old	0.10	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00	0.00
Minicoy	Solar Old	0.32	0.32	0.32	0.32
	Solar New (FY 17)	1.50	1.50	1.50	1.50
Total	**Solar Old**	**2.20**	**2.20**	**2.20**	**2.20**
	Solar New	**6.30**	**2.50**	**4.50**	**6.30**

As no other information regarding CUF etc. has been made available by the Petitioner, the Commission has considered following approach for the determination of energy availability from various existing and upcoming solar generating sources:

1) The actual audited figure of full year Capacity Utilization Factor (CUF) for each location/plant for FY 2014-15 has not been submitted by the Petitioner.
2) Petitioner has provided the O&M contract of solar plants with BHEL where it is required to pay BHEL yearly O&M fee for maintaining the solar plants last year. Therefore, it is expected from Petitioner to have all its solar plants running. As per the O&M contract with BHEL, 100,000 kWh/year will be generated from 100 kWp of equivalent capacity and the same has been considered for projecting the solar generation.
3) The new solar plants are expected to run at an average 19% CUF in initial years.
4) The generation from the existing and upcoming solar plants is considered to meet the energy requirement first. The balance requirement is to be met from the DG sets located in the various islands.
5) Auxiliary consumption has been considered at the level of 1 %.

Accordingly, the generation considered by the Commission from the approved solar generating sources is as follows:

Table 6.15: Generation Approved by the Commission from Solar Generating Stations for MYT Control Period (in MU)

Island	Source	Generation (In MU)		
		FY 17	FY 18	FY 19
Agatti	Solar Old	0.10	0.10	0.10
	Solar New (FY 19)	0.00	0.00	0.82
Amini	Solar Old	0.10	0.10	0.10
	Solar New (FY 18)	0.00	0.82	1.65
Androth	Solar Old	0.32	0.32	0.32

Island	Source	Generation (In MU)		
		FY 17	FY 18	FY 19
	Solar New	0.00	0.00	0.00
Bangaram	Solar Old	0.05	0.05	0.05
	Solar New	0.00	0.00	0.00
Bitra	Solar Old	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00
Chetlat	Solar Old	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00
Kadmat	Solar Old	0.15	0.15	0.15
	Solar New (FY 18)	0.00	0.82	1.65
Kalpeni	Solar Old	0.10	0.10	0.10
	Solar New (FY 19)	0.00	0.00	0.66
Kavaratti	Solar Old	0.76	0.76	0.76
	Solar New (FY 17)	0.41	1.65	1.65
Kiltan	Solar Old	0.10	0.10	0.10
	Solar New	0.00	0.00	0.00
Minicoy	Solar Old	0.32	0.32	0.32
	Solar New (FY 17)	1.24	2.47	2.47
Total	Solar Old	**2.20**	**2.20**	**2.20**
	Solar New	**1.65**	**5.77**	**8.90**
	Total Solar Generation	**3.85**	**7.97**	**11.10**

As no other information regarding PLF, Auxiliary Consumption etc. has been made available by the Petitioner, the Commission has considered following approach for the determination of energy availability from various existing and upcoming sources of DG based power sources across various islands.

1) The old existing plants are expected to run at 20% PLF whereas the relatively new generating stations at higher PLF of 35%. The newly commissioned DG sets are expected to run at a higher PLF of 50% PLF in initial years.
2) The generation from the existing and upcoming solar plants is considered to meet the energy requirement first. The balance requirement is to be met from the DG sets located in the various islands.
3) The actual generation from the DG sets is restricted to the requirement.
4) Auxiliary consumption has been considered at the level of 1.71% as approved in last tariff order.

Based on the information submitted by the Petitioner, the DG based sources approved by the Commission is as follows:

Table 6.16: DG based Generating Stations approved by the Commission for MYT Control Period (in MW)

Island	Source	Capacity (MW)	Installed Capacity (in MW)		
			FY 17	FY 18	FY 19
Agatti	DG Set (Old) - Existing	0.40	0.40	0.40	0.40
	DG Set (New) - Existing	1.95	1.95	1.95	1.95
	DG Set (New) - Upcoming (FY 18)	0.75	0.00	0.75	0.75
Amini	DG Set (Old) - Existing	0.40	0.40	0.40	0.40
	DG Set (New) - Existing	2.25	2.25	2.25	2.25
	DG Set (New) - Upcoming (FY 18)	0.75	0.00	0.75	0.75
Androth	DG Set (Old) - Existing	0.00	0.00	0.00	0.00
	DG Set (New) - Existing	2.25	2.25	2.25	2.25
	DG Set (New) - Upcoming (FY 17)	1.00	1.00	1.00	1.00
Bangaram	DG Set (Old) - Existing	0.06	0.06	0.06	0.06
	DG Set (New) - Existing	0.12	0.12	0.12	0.12
	DG Set (New) - Upcoming	0.00	0.00	0.00	0.00
Bitra	DG Set (Old) - Existing	0.42	0.42	0.42	0.42
	DG Set (New) - Existing	0.10	0.10	0.10	0.10
	DG Set (New) - Upcoming	0.00	0.00	0.00	0.00
Chetlat	DG Set (Old) - Existing	0.00	0.00	0.00	0.00
	DG Set (New) - Existing	1.00	1.00	1.00	1.00
	DG Set (New) - Upcoming	0.00	0.00	0.00	0.00
Kadmat	DG Set (Old) - Existing	0.75	0.75	0.75	0.75
	DG Set (New) - Existing	1.55	1.55	1.55	1.55
	DG Set (New) - Upcoming (FY 18)	0.75	0.00	0.75	0.75
Kalpeni	DG Set (Old) - Existing	0.75	0.75	0.75	0.75
	DG Set (New) - Existing	0.50	0.50	0.50	0.50
	DG Set (New) - Upcoming (FY 18)	0.50	0.00	0.50	0.50
Kavaratti	DG Set (Old) - Existing	0.00	0.00	0.00	0.00
	DG Set (New) - Existing	3.20	3.20	3.20	3.20
	DG Set (New) - Upcoming (FY 17)	1.00	1.00	1.00	1.00
Kiltan	DG Set (Old) - Existing	0.20	0.20	0.20	0.20
	DG Set (New) - Existing	0.80	0.80	0.80	0.80
	DG Set (New) - Upcoming (FY 17)	0.65	0.65	0.65	0.65
Minicoy	DG Set (Old) - Existing	0.80	0.80	0.80	0.80
	DG Set (New) - Existing	3.60	3.60	3.60	3.60
	DG Set (New) - Upcoming (FY 18)	0.40	0.00	0.40	0.40
Total	DG Set (Old) - Existing	3.78	3.78	3.78	3.78
	DG Set (New) - Existing	17.32	17.32	17.32	17.32
	DG Set (New) - Upcoming	5.80	2.65	5.80	5.80
	Total DG Sets	**26.90**	**23.75**	**26.90**	**26.90**

Table 6.17: DG Based Generation Approved by the Commission for MYT Control Period (in MU)

Island	Source	Generation (In MU)		
		FY 17	FY 18	FY 19
Agatti	DG Set (Old) - Existing	0.69	0.69	0.69
	DG Set (New) - Existing	5.88	5.88	5.88
	DG Set (New) - Upcoming (FY 18)	0.00	1.61	3.23
Amini	DG Set (Old) - Existing	0.69	0.69	0.69
	DG Set (New) - Existing	6.78	6.78	6.78
	DG Set (New) - Upcoming (FY 18)	0.00	1.61	3.23
Androth	DG Set (Old) - Existing	0.00	0.00	0.00
	DG Set (New) - Existing	6.78	6.78	6.78
	DG Set (New) - Upcoming (FY 17)	2.15	4.31	4.31
Bangaram	DG Set (Old) - Existing	0.10	0.10	0.10
	DG Set (New) - Existing	0.36	0.36	0.36
	DG Set (New) - Upcoming	0.00	0.00	0.00
Bitra	DG Set (Old) - Existing	0.72	0.72	0.72
	DG Set (New) - Existing	0.30	0.30	0.30
	DG Set (New) - Upcoming	0.00	0.00	0.00
Chetlat	DG Set (Old) - Existing	0.00	0.00	0.00
	DG Set (New) - Existing	3.01	3.01	3.01
	DG Set (New) - Upcoming	0.00	0.00	0.00
Kadmat	DG Set (Old) - Existing	1.29	1.29	1.29
	DG Set (New) - Existing	4.67	4.67	4.67
	DG Set (New) - Upcoming (FY 18)	0.00	1.61	3.23
Kalpeni	DG Set (Old) - Existing	1.29	1.29	1.29
	DG Set (New) - Existing	1.51	1.51	1.51
	DG Set (New) - Upcoming (FY 18)	0.00	1.08	2.15
Kavaratti	DG Set (Old) - Existing	0.00	0.00	0.00
	DG Set (New) - Existing	9.64	9.64	9.64
	DG Set (New) - Upcoming (FY 17)	2.15	4.31	4.31
Kiltan	DG Set (Old) - Existing	0.34	0.34	0.34
	DG Set (New) - Existing	2.41	2.41	2.41
	DG Set (New) - Upcoming (FY 17)	1.40	2.80	2.80
Minicoy	DG Set (Old) - Existing	1.38	1.38	1.38
	DG Set (New) - Existing	10.85	10.85	10.85
	DG Set (New) - Upcoming (FY 18)	0.00	0.86	1.72
Total	DG Set (Old) - Existing	6.51	6.51	6.51
	DG Set (New) - Existing	52.20	52.20	52.20
	DG Set (New) - Upcoming	5.70	18.19	24.97
	Total DG Sets	**64.41**	**76.89**	**83.67**

As seen from above, the projected availability from existing and upcoming sources is adequate to meet the projected demand across all islands. The Commission would also like to highlight that the projected requirement may actually decrease once the Petitioner undertakes energy efficiency measures.

The total generation approved from various sources is summarized below:

Table 6.18: Generation Approved by the Commission for Lakshadweep Islands (in MU)

Source	Energy Generation (in MU)		
	FY 17	FY 18	FY 19
Energy Requirement	**62.87**	**69.53**	**76.93**
Met through			
Existing SPV Plants	2.20	2.20	2.20
Upcoming SPV Plants	1.65	5.77	8.90
Requirement Met through Solar	**3.85**	**7.97**	**11.10**
Maximum DG Based Generation	64.41	76.89	83.67
Balance Requirement to be met through DG sets	**59.02**	**61.56**	**65.83**

6.9.Renewable Purchase Obligation (RPO)

Petitioner Submission

LED submits that it intends to meet the RPO as per the directions of the Hon'ble Commission in the MYT Control period as well. LED has planned to meet the Solar RPO from the generation of solar power from own power plants. Further, it is submitted that in absence of any non-solar power plants, LED shall not be able meet the RPO towards non-solar. However, the Hon'ble Commission in the tariff order for the FY 2015-16 had approved clubbing of RPO of solar & non-solar energy to meet the targets set by the Commission.

Commission Analysis

The Commission has made note of the submission of the Petitioner and expects the Petitioner to comply with the same. Actual compliance in respect of the pending RPO obligations would be reviewed at the time of true-up of the respective years and all pending RPOs up-to FY 2014-15 (balance based on actual compliance) must be accounted for while submitting the data for FY 2015-16. Supporting details such as purchase of RECs, bills from solar/non-solar plants for the respective years must be submitted alongside during the filing of true-up petitions.

The Commission approves the RPO obligation for each year of the Control Period based on the JERC (Procurement of Renewable Energy) First Amendment Regulations 2014 as below.

Table 6.19: RPO obligation for each year approved by the Commission for the Control Period

S. No.	Particulars	FY 2016-17		FY 2017-18		FY 2018-19	
		Submitted	Approved	Submitted	Approved	Submitted	Approved
1	**Sales (MU)**	**52.70**	**54.54**	**57.60**	**60.66**	**62.98**	**67.50**
2	**Percentage (%)**	**3.95%**	**3.95%**	**4.30%**	**4.30%**	**4.65%**	**4.65%**
	Solar	1.15%	1.15%	1.50%	1.50%	1.85%	1.85%
	Non-Solar	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
3	**Million Units (MU)**	**2.08**	**2.15**	**2.48**	**2.61**	**2.93**	**3.14**
	Solar	0.61	0.63	0.86	0.91	1.17	1.25
	Non-solar	1.48	1.53	1.61	1.70	1.76	1.89
	Total Solar Availability	4.83	3.85	7.46	7.97	9.82	11.10

As approved in last tariff order, the Commission approves clubbing of RPO of solar & non-solar energy to meet the targets set by the Commission for the MYT Control Period. The Commission directs the Petitioner to undertake necessary efforts to fulfill the Renewable Purchase Obligations on yearly basis. The Commission further directs the Petitioner to submit the Action Plan by 30th September 2016 to achieve the Renewable Energy Generation targets set by MNRE, Government of India.

6.10. Norms for Employee Costs

Petitioner Submission

As per the regulations, employee expense norms are to be determined based on number of personnel per 1000 consumers and number of personnel per substation. Accordingly, the following norms for employee expenses have been proposed.

Table 6.20: Employee parameters submitted by Petitioner

Sr. No.	Particulars	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
		Actuals			R.E.	Projections		
1	Number of employees at the end of the year	399	399	399	399	401	401	401
2	Number of consumers	19685	20699	21344	21928	22529	23147	23782
3	No. of employees per ‘000 consumers	20.26	19.27	18.69	18.19	17.79	17.32	16.86
4	No. of substations	106	106	106	106	124	124	124
5	Number of employees per sub-station	3.76	3.76	3.76	3.76	3.23	3.23	3.23

Commission’s Analysis

As per the provision 21 (b) of the MYT Regulations 2014, norm for Employee Expenses shall be defined in terms of combination of number of personnel per 1000 consumers and number of personnel per substation along with annual expenses per personnel.

The Commission has observed various discrepancies in the information submitted by the Petitioner in the Business Plan and information submitted subsequently during the TVS.

Further, the Petitioner has not yet prepared the accounts on commercial principles as previously directed by the Commission and only has submitted the proforma accounts up to FY 2012-13.

In absence of authentic and complete information, the Commission is constrained to approve the norms for Employees Expenses on provisional basis.

Table 6.21: Norms for Employee Expense approved by the Commission

Particulars	FY 13	FY 14	FY 15	3 Years Average
Number of employees at the end of the year (in Nos.)	399	399	399	
No. of consumers in '000	20	21	21	
No. of Employees per 1000 consumers	20.27	19.28	18.69	**19.41**
No. of substations	106.00	106.00	106.00	
Number of employees per sub-station	3.76	3.76	3.76	**3.76**
Employee Cost (In Rs. Crores)	10.58	11.78	11.96	
Annual employee expenses per personnel	2,65,163	2,95,238	2,99,749	**2,86,717**

The Commission has considered the employee costs of FY 2012-13 and FY 2013-14 from the previous filings by the Petitioner. Commission has also compared the information submitted by LED viz a viz the information provided by other Union Territories. The Commission has observed that while ED-Puducherry and ED Chandigarh have managed with almost 5~6 employees per 1000 consumers, ED-Daman and Diu with 4~5 employees per 1000 consumers, ED-DNH with 1~2 employees per 1000 consumers, LED has submitted almost three to four time manpower requirement per 1000 consumers which is not comparable.

While the Commission acknowledges the fact that there is limited consumer base and the topography is also very different from other Union Territories, the number of employees per 1000 consumers is still very high.

Further, the accounts prepared on commercial principles are also not available to validate the information submitted by the Petitioner.

In view of above the Commission is constrained to approve the norms for Employee Expenses provisionally.

The Commission provisionally approves the norm of 19.41 employees per 1000 consumers and 3.76 employees per substation on the basis of last 3 years average. The Commission also approves the weightage of these two factors in overall employee expense computation as 50:50 and same should be considered by the Petitioner while arriving at the employee expenses for the Control Period during the MYT filing.

The Commission also considers the employee expense of Rs 2,86,717 per personnel on the basis of last 3 years average as reasonable for the Control Period FY 2016-17 to FY 2018-19 and approves the same provisionally. The same shall be considered as the base employee expense as at the end of the FY 2014-15 suitably escalated by the Wholesale Price Index (WPI) for immediately preceding three years, as per the Regulation 21.1 of the MYT Regulations 2014 to arrive at the employee expenses for the Control Period.

The treatment of the employee expenses during the true-up would be in accordance with the provisions of provision 9.2, 10 and 11 of the MYT Regulations 2014.

6.11. Norms for A&G Expenses

Petitioner Submission

Administrative and General Expenses (A&G) expenses norms are to be determined based on combination of A&G expense per personnel and A&G expense per 1000 consumers. A&G norms as submitted by the Petitioner as below.

Table 6.22: A&G parameters submitted by Petitioner

S. No.	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
		Actuals	R.E.	Projections		
1	A&G expense (Rs lakh)	135.98	138.70	141.47	144.30	147.19
2	A&G expense per '000 consumers (Rs Lakh)	6.91	6.70	6.63	6.58	6.53
3	A&G expense per employee (Rs lakh)	0.34	0.35	0.35	0,36	0.37

Commission Analysis

As per the provision 21 (b) of the MYT Regulations 2014, norm for A&G Expenses shall be defined in terms of combination of A&G expense per personnel and A&G expense per 1000 consumers.

Table 6.23: A&G Expense Parameters approved by the Commission

Particulars	FY 13	FY 14	FY 15	3 Years Average
	Actuals			
A&G Cost (In Rs. Crores)*	0.91	1.13	1.36	
Number of employees at the end of the year (in Nos.)	399	399	399	
No. of consumers in '000	20	21	21	
A&G expense per personnel	22,807	28,321	34,085	**28,404**
A&G expense per 1000 consumers	4,62,281	5,45,920	6,37,181	**5,48,461**

** As per the details submitted in the current and previous petitions*

Further, as the accounts prepared on commercial principles are also not available to validate the information submitted by the Petitioner, the Commission is constrained to approve the norms for A&G Expenses provisionally.

For purposes of arriving at the A&G expenses trajectory, the Commission has computed the A&G expenses per personnel and A&G expenses per 1000 consumers based on the average employee expenses of last three years. Based on the average employee expenses so arrived, the Commission has worked out the A&G expenses per employee of Rs. 28,404 and A&G expense per '000 consumers of Rs. 5,48,461, which are considered reasonable for the Control Period and approved provisionally by the Petitioner.

The Petitioner approves the weightage of these two factors in overall A&G computation as 50:50 and same should be considered by the Petitioner while arriving at the A&G expenses for the Control Period during the MYT filing.

The A&G expenses for the Control Period would be determined in accordance with Regulation 21.3 of the MYT Regulations 2014. The treatment of the A&G expenses during the true-up would be in accordance with the provisions of Regulation 9.2, 10 and 11 of the MYT Regulations 2014.

6.12. Norms for R&M Expenses

Petitioner Submission

As per the regulations, Repairs and Maintenance expenses (R&M) are to be calculated as percentage (as per norm defined) of opening GFA for the year. The Petitioner has submitted the following actual R&M expenses as below.

Table 6.24: R&M expense submitted by Petitioner

S. No.	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
		Actuals	R.E.	Projections		
1	R&M Expenses (Rs. Crores)	11.020	11.240	11.465	11.695	11.928
2	R&M Expense as %age of GFA	7.55%	6.98%	6.35%	5.81%	5.49%

Commission Analysis

As per the Regulation 21 (b) and 21.2 of the Multiyear Distribution Tariff Regulations 2014, norm for R&M Expenses shall be defined in terms of percentage of opening gross fixed assets for estimation of R&M expenses.

The Commission has computed the value of R&M as percentage of Gross Fixed Assets for FY 2012-13, FY 2013-14 and FY 2014-15 as follows:

Table 6.25: R&M Expense parameters approved by the Commission

Particulars	FY 13	FY 14	FY 15	3 Years Average
	Actuals			
R&M Expenses (Rs. Crores)	2.57*	2.20*	11.02	
Opening GFA (Rs. Crores)	109.81	125.04	139.29	
R&M expense as percentage of gross fixed assets	2.34%	1.76%	7.91%	**4.00%**

As submitted by the Petitioner in last year's filing.

The Commission observes that while the R&M Expenses of other UTs is in range of 2~3%, the R&M Expenses for LED is at very high range for FY 2014-15. Further, as the accounts prepared on commercial principles are also not available to validate the information submitted by the Petitioner, the Commission is constrained to approve the norms for R&M Expenses provisionally.

The Commission has worked out the K-factor as 4% on the basis of the average for last three years i.e. FY 2012-13 to FY 2014-15. The K-factor of 4% is considered reasonable by the Commission and hence approved for the MYT Control Period. The above norms are subject to revision if there is considerable variation in the figures available in audited accounts.

The above norm should be considered while arriving at the R&M expenses for the Control Period at the time of filing of the MYT Tariff Petition in accordance with provision 21.2 of the MYT Regulations 2014.

The treatment of the R&M expenses during the true-up would be in accordance with the provisions of provision 9.2, 10 and 11 of the MYT Regulations 2014.

6.13. Normative levels of Availability for Wires and Supply Business

Petitioner's Submission

The Petitioner has not submitted the availability for wires and supply business for the Control Period from FY 2016-17 to FY 2018-19 based on the last three FY average data for the Lakshadweep Administration.

Commission's Analysis

As per the provision 34 of the Multiyear Distribution Tariff Regulations, 2014

a) *The availability index of wheeling business & supply business shall be maintained separately by the Licensee and informed to the Commission. The Distribution Licensee shall maintain data on planned maintenance outages, load shedding, force majeure outages and tripping.*

b) *The incentive/disincentive shall exclude the circumstances when the actual supply differs from the contracted supply due to force majeure situations, weather conditions, extreme monsoon failure, station outages, etc. which are beyond the control of the Distribution Licensee.*
c) *The Commission shall specify progressively increasing normative levels of Availability for Wires and Supply Business of the Distribution Licensee on the basis of past performance over the Control Period. Provided that the Availability of Supply Business shall not be lower than 90% and shall gradually increase to 95% or 98% in no less than three years.*

During the Technical Validation Session, it was observed that the utilities are not clear on the approach for computation of Wires and supply availability as JERC Regulations does not give details on the approach for computation of same.

The Commission notes the constraints faced by the utilities as the regulations do not detail about the methodology for computation of the same. Further, there is also an issue of availability of reliable information regarding the base load data, which can make the whole exercise of computation of the availability indices futile. The Commission, for the purposes of this Business Plan order is not fixing any wires and supply availability index, however, the Commission is setting out the guidelines for determination of the same as below.

The wires availability shall be computed as below.

Wires Availability = (1- (SAIDI / 8760)) x 100

The SAIDI shall be computed in line with the provisions of JERC (Standards of Performance) Regulations, 2009.

The Supply Availability shall comprise of the following parameters in the proportion as mentioned below:

(a)	Base load Supply Availability	75 percent
(b)	Peak load Supply Availability	25 percent

Base load Supply Availability shall be computed in accordance with the following formula: = (Actual Contracted Base Load Supply in MW) ÷ (Base load in MW)

Provided that the base load shall be calculated based on unrestricted demand of a Distribution Licensee for the retail supply of electricity.

Peak load Supply Availability shall be computed in accordance with the following formula: = (Actual Contracted Peak Load Supply in MW) ÷ (Peak load in MW).

Provided that the peak load shall be calculated based on unrestricted demand of a Distribution Licensee for the retail supply of electricity

The incentive/disincentive for wires and supply availability shall be laid out separately.

The Commission is of the view that the since the network of Lakshadweep Islands is neither connected with the national grid nor it is connected within itself across various islands, it is practically difficult for the Petitioner to achieve very high supply reliability. Therefore, the Commission finds it appropriate to exempt the Petitioner for submission of information pertaining to supply availability and expects that it shall endeavor to maintain high supply availability within the operational constraints.

However, the Petitioner is directed to start maintaining the data for wires availability in accordance with the above guidelines so that data reliability issues are not faced next time when the Commission comes out with the amendments to the Regulations in this regard.

7. Directives based on the Business Plan Analysis

The Commission, herein, below is listing out the directives based on the analysis of the Business Plan carried out by the Commission. The directives as spelt out in the last tariff order dated 17th April 2015 stand as it is and the compliance of the same should be submitted to the Commission alongside the MYT tariff petition for FY 2016-17 to FY 2018-19.

7.1.Island-wise Information

The Commission directs the Petitioner to maintain island-wise information of sales, connected load, no. of consumers, generation, AT&C and T&D losses henceforth and submit same along with the future petitions.

7.2.Exploration of possibility of Biomass based generation

The Commission directs the Petitioner to explore the possibility of generation of electricity from biomass across all inhabited islands and submit the status report by 30th November 2016.

7.3.Prepaid Metering and Meter Reading

While the Commission appreciates the practice of “self-meter reading” by the consumers of the UT, the Commission directs the Petitioner to undertake periodic meter reading by the department also so that the actual loss level of the islands can be ascertained in more authentic manner.

Further, as the Petitioner is primarily reliant on self-meter reading by the consumers, the Commission directs the Petitioner to explore the possibility of 100% prepaid metering across the islands. The Petitioner should submit the plan for 100% prepaid metering within 2 years by 30th June 2016.

7.4.Energy Efficiency Measures

The Commission directs the Petitioner to submit the details of roll out plan along with year-wise potential savings within 2 months of issuance of this order.

7.5. Renewable Purchase Obligation (RPO)

As approved in last tariff order, the Commission approves clubbing of RPO of solar & non-solar energy to meet the targets set by the Commission for the MYT Control Period. The Commission directs the Petitioner to undertake necessary efforts to fulfill the Renewable Purchase Obligations on yearly basis. The Commission further directs the Petitioner to submit the Action Plan by 30th September 2016 to achieve the Renewable Energy Generation targets set by MNRE, Government of India.

Annexure 1: List of Objectors/Stakeholders present during the public hearing

No stakeholders, who were present in the public hearing at 25th February 2016 at Kavaratti, presented their views on the Business Plan Petition.