



BUSINESS PLAN

**Approval of Business Plan for MYT Control Period from FY 2022-23
to FY 2024-25**

Petition No. 74/2022

For

Lakshadweep Electricity Department (LED)

31st March 2022

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories,

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Table of Contents

1. Chapter 1: Introduction	11
1.1. About Joint Electricity Regulatory Commission (JERC)	11
1.2. Lakshadweep Islands	11
1.3. About Lakshadweep Electricity Department (LED)	12
1.4. Electricity Regulatory Process in Lakshadweep Islands	13
1.5. Multi Year Tariff Regulations, 2021	13
1.6. Filing and Admission of the Present Petition	14
1.7. Interaction with the Petitioner	14
1.8. Notice for Public Hearing	15
1.9. Public Hearing	15
2. Chapter 2: Stakeholders' Comments	16
2.1. Regulatory Process	16
2.2. Suggestions/ Comments of the Stakeholders, Petitioner's Response and Commission's Views	16
2.2.1. Infrastructure for Solar Energy	16
2.2.2. Electricity generation by using OTEC plant	17
2.2.3. Electricity generation through LNG	17
2.2.4. Solar Power Production	17
2.2.5. RPO Compliance	18
2.2.6. Implementation of Solar Roof top	18
3. Chapter 3: Approval of the various components of the Multi-Year business plan petition for the Control Period FY 2022-23 to FY 2024-25	20
3.1. Introduction	20
3.2. Forecast of Number of Consumers, Connected Load and Sales for the Control Period	20
3.2.1. Overall Approach	20
3.2.2. Category-Wise Analysis	23
3.2.3. Projections of Number of Consumers approved by the Commission	28
3.2.4. Projections of Connected Load approved by the Commission	29
3.2.5. Projections of Sales approved by the Commission	29
3.3. Transmission and Distribution (T&D) losses	29
3.4. Power Procurement Plan	30
3.4.1. Energy Requirement	30
3.4.2. Power Generation Quantum	31
3.4.3. Energy Balance	32
3.4.4. Renewable Purchase Obligation (RPO)	33
3.5. Capital Investment Plan	35
3.5.1. Details of capital expenditure and capitalisation	35
3.5.2. Funding Plan	51
3.6. Other Expenditure	52
3.6.1. Expenses related to Training of manpower	52

3.6.2. Expenses related to Safety of manpower	52
<hr/>	
3.7. Capital Expenditure Scheme for Customer Relationship Management	53
3.8. Manpower Plan	53
3.9. Other Initiatives	53
3.9.1. Technological Initiatives	53
3.9.2. Capital Expenditure for Customer Relationship Management	54
3.9.3. Promotion of Renewable Energy	55
3.9.4. Energy Audit	55
3.9.5. CGRF Expenses Details	55
<hr/>	
Annexures	57
<hr/>	
Annexure 1: List of Stakeholders who attended the Public hearing on 17 th February 2022 through Video Conference	57

List of Tables

Table 1: Electricity Department at a glance (FY 2020-21)	13
Table 2: List of interactions with the Petitioner	14
Table 3: Details of Public Notice published by the Petitioner	15
Table 4: Summary of category-wise No. of Consumers and Growth Rate considered by the Petitioner for Projections	20
Table 5: Summary of category-wise Connected Load and Growth Rate considered by the Petitioner for Projections	21
Table 6: Summary of category-wise Sales (MU) and Growth Rate considered by the Petitioner for Projections	21
Table 7: Petitioner's submission on projection of Number of Consumers for upcoming Multi-Year Control Period	22
Table 8: Petitioner's submission on projection of Connected Load for upcoming Multi-Year Control Period ..	22
Table 9: Petitioner's submission on projection of Sales for upcoming Multi-Year Control Period.....	22
Table 10: Historical Year-on-Year Growth and CAGR for number of consumers	23
Table 11: Historical Year-on-Year Growth and CAGR for Connected Load	23
Table 12: Historical Year-on-Year Growth and CAGR for Sales	24
Table 13: Growth rates approved by the Commission for Domestic Category	25
Table 14: Growth rates approved by the Commission for Commercial Category	25
Table 15: Growth rates approved by the Commission for Govt. Connection Category	26
Table 16: Growth rates approved by the Commission for Industrial Category	26
Table 17: Growth rates approved by the Commission for HT Consumer Category	27
Table 18: Growth rates approved by the Commission for Public Lighting Category	27
Table 19: Growth rates approved by the Commission for Temporary Connection Category	28
Table 20: Consumer Growth Projections approved by the Commission for upcoming Multi-Year Control Period	28
Table 21: Connected Load Growth Projections approved by the Commission for upcoming Multi-Year Control Period	29
Table 22: Sales Growth Projections approved by the Commission for upcoming Multi-Year Control Period ..	29
Table 23: Actual T&D losses (%)	29
Table 24: T&D loss (%) trajectory proposed by the Petitioner for the upcoming Control Period.....	30
Table 25: T&D losses approved by the Commission in the existing Control Period vis-à-vis T&D losses achieved by the Petitioner	30
Table 26: T&D losses trajectory approved by the Commission in the upcoming Control Period	30
Table 27: Energy requirement as estimated by the Petitioner for the upcoming Control Period	31
Table 28: Energy requirement of LED as approved by the Commission.....	31
Table 29: Details of the power generation for control period FY 2022-23 to FY 2024-25	32
Table 30: Energy Balance as estimated by the Petitioner for the upcoming Control Period	32
Table 31: Energy Balance projections approved by the Commission for the upcoming Control Period.....	33
Table 32: Renewable Purchase Obligation approved by the Commission.....	34
Table 33: RPO Obligation approved by the Commission	34
Table 34: Capital expenditure plan proposed by the Petitioner for the upcoming Control Period	35
Table 35: Year-Wise Capital Expenditure and Capitalisation as proposed by the Petitioner.....	36
Table 36: Capital expenditure achieved by the Petitioner vis-à-vis approved by the Commission.....	37
Table 37: Installation/Augmentation/Replacement of 750 kW DG Sets	37
Table 38: Capital Expenditure Approved for Installation/Augmentation/Replacement of 750 kW DG Sets ...	38
Table 39: DG set major components of Coil Cooler, Radiator and Essy GEN.....	38
Table 40: Capital Expenditure Approved for DG set major components of Coil Cooler, Radiator and Essy GEN	38
Table 41: Step up Transformer at 11 KV existing sub-station	39
Table 42: Capital Expenditure Approved for Step up Transformer at 11 KV existing sub-station.....	39
Table 43: Step down Transformer at 11KV existing system.....	39

Table 44: Capital Expenditure Approved for Step down Transformer at 11KV existing system	40
Table 45: Ring main Unit in distribution transformer	40
Table 46: Capital Expenditure Approved for Installation of Ring main Unit in distribution transformer	40
Table 47: Installation of Energy Meters/ smart meters	41
Table 48: Capital Expenditure Approved for Installation of Energy Meters/ smart meters	41
Table 49: Laying of HT Cable Line	41
Table 50: Capital Expenditure Approved for Laying of HT Cable Line	42
Table 51: Supply of LT Cable	42
Table 52: Capital Expenditure Approved for Supply of LT Cable	42
Table 53: Supply of consumer cable/ Street light Cable	43
Table 54: Capital Expenditure approved for Supply of consumer cable/ Street light Cable	43
Table 55: Supply of streetlight set	43
Table 56: Capital Expenditure Approved for Supply of streetlight set	44
Table 57: Supply of street light poles	44
Table 58: Capital Expenditure Approved for Supply of street light poles	44
Table 59: Supply of Pole Mounting Street boxes	45
Table 60: Capital Expenditure Approved for Supply of Pole Mounting Street boxes	45
Table 61: Improvement and Augmentation of Power house/Line Tools	45
Table 62: Capital Expenditure Approved for Improvement and Augmentation of Power house/Line Tools ...	46
Table 63: VCB Panel for powerhouse at Kavaratti and Androth	46
Table 64: Capital Expenditure Approved for VCB Panel for powerhouse at Kavaratti and Androth	46
Table 65: Modernisation and Augmentation of control Panel at Power Houses	47
Table 66: Capital Expenditure Approved for Modernisation and Augmentation of control Panel at Power Houses	47
Table 67: Multipurpose vehicle for Line at Electrical Sub-Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini	47
Table 68: Capital Expenditure Approved for Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini	48
Table 69: Construction of Office Building and Power house	48
Table 70: Capital Expenditure Approved for Cconstruction of Office Building and Power house	48
Table 71: Summary of Capital expenditure plan approved by the Commission for the upcoming Control Period	49
Table 72: Summary of Capitalisation approved by the Commission for the upcoming Control Period	50
Table 73: Proposed funding details for the upcoming Control Period	51
Table 74: Approved funding plan for the upcoming Control Period	52
Table 75: Safety Measure Expenditure as proposed by the Petitioner for the upcoming Control Period	53
Table 76: Projections of number of employees as proposed by the Petitioner for the upcoming Control Period	53
Table 77: CGFR Expense details	56
Table 78: List of Stakeholders	57

List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
Cr	Crores
DG	Diesel Generator
Discom	Distribution Company
FY	Financial Year
GoI	Government of India
HT	High Tension
HSD	High Speed Diesel
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
kVA	Kilo Volt Ampere
kWh	Kilo Watt Hour
LED	Lakshadweep Electricity Department
LEDA	Lakshadweep Energy Development Agency
LNG	Liquefied Natural Gas
LT	Low Tension
MoP	Ministry of Power
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NIOT	National Institute of Ocean Technology
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
OTEC	Ocean Thermal Energy Conversion
PLF	Plant Load Factor
PPA	Power Purchase Agreement
REC	Renewable Energy Certificate
RPO	Renewable Purchase Obligation
SECI	Solar Energy Corporation of India Limited
SERC	State Electricity Regulatory Commission

Abbreviation	Full Form
SPV	Solar Photovoltaic
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
YoY	Year on Year

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

QUORUM

Smt. Jyoti Prasad, Member (Law)

Petition No. 74/2022

In the matter of

Approval for the Business Plan for 3rd MYT Control Period from FY 2022-23 to FY 2024-25.

And in the matter of

Lakshadweep Electricity Department (LED).....Petitioner

ORDER

Dated: 31st March 2022

- 1) This Order is passed in respect of a Petition filed by the Lakshadweep Electricity Department (LED) (herein after referred to as “The Petitioner” or “LED” or “The Licensee”) for approval of Business Plan for 3rd MYT Control Period from FY 2022-23 to FY 2024-25 before the Joint Electricity Regulatory Commission (herein after referred to as “The Commission” or “JERC”).
- 2) In exercise of the powers conferred on it by sub-Section (2) of Section 181 read with Section 36, Section 39, Section 40, Section 41, Section 51, Section 61, Section 62, Section 63, Section 64, Section 65 and Section 86 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi), after previous publication, issued the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 on 22 March 2021.
- 3) In terms of Regulation 8.1 and 17 of the aforesaid Regulations, the Petitioner has filed a Petition for approval of its Business Plan for the three years Control Period i.e. from FY 2022-23 to FY 2024-25 with details for each year of the Control Period before the Commission.
- 4) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 17th January 2022. The Commission thereafter requisitioned further information/clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually.
- 5) The suggestions/ comments/ views and objections were invited from the Stakeholders and Electricity Consumers. The virtual Public Hearing was held on 17th February 2022, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

-
- 6) The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the Business Plan for 3rd MYT Control Period from FY 2022-23 to FY 2024-25, which covers the sales forecast, capital investment plan, power procurement plan, fixation of T&D loss trajectory etc.
 - 7) The Petitioner has also submitted the Multi Year Tariff Petition for 3rd Control Period on January 12, 2022, in terms of Regulation 9 of the aforesaid Regulation. The Petitioner has claimed average Tariff increase of 1.68% while submitting the Tariff Proposal for FY 2022-23.
 - 8) Ordered as above, read with attached document giving detailed reasons, grounds and conditions.

Sd/-
Smt. Jyoti Prasad
Member (Law)

Place: Gurugram
Date: 31st March 2022

Certified Copy



Rakesh Kumar
(Secretary)

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

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

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

1.2. Lakshadweep Islands

Lakshadweep Islands is a group of islands in the Laccadive Sea, 200 to 440 km off the southwestern coast of India. The Union Territory (UT) of Lakshadweep is an archipelago consisting of 12 atolls, three reefs and five submerged banks, with a total of about thirty-nine islands and islets. 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 and Minicoy. As per the 2011 Indian census, the population of the Union Territory was 64,473. The main occupation of the people is fishing and coconut cultivation with tuna being the main item of export.

Electrification of Lakshadweep Islands was initiated during the second Five Year Plan. Minicoy was the first island electrified in 1962 followed by Kavaratti Island in 1964, then Amini and Andrott in 1965 and 1966 respectively. Bitra was the last island electrified in 1982. Initially power supply was limited to 6-12 hours till 1982 to 1983 except in Kavaratti where 24 hours power supply was provided from 1964 itself. Round the clock power supply is provided in all islands since 1983.

Lakshadweep islands comprises of an area of 32 sq. kms. For operational purpose the area has been divided into 1 division and 10 sub-divisions. Pictorial view of the Islands is given below:



1.3. About Lakshadweep Electricity Department (LED)

Lakshadweep Electricity Department (hereinafter referred to as “LED” or “Utility” or “Petitioner”) is solely responsible for power supply in the Union territory. Power requirement of LED is met by own generating stations only.

Starting with a modest capacity of 51.6 kW in 1962 from two Diesel Generating Sets, the generating capacity of Lakshadweep Electricity Department has grown over the years to meet the demand of the people in the Islands. Since, the diesel generating sets were the only source of power, diesel has to be transported from Calicut (Kerala) in barrels. These barrels are transported in cargo barges to the Islands and stored for use. To alleviate this problem of transportation, oil storage facilities at Kavaratti and Minicoy Islands are under installation.

Due to geographical & topographical peculiarities of these islands including separation by sea over great distances there is no single power grid for the entire electrified Islands and instead separate generating units caters independently to power requirements of individual Islands.

The Petitioner is operating and maintaining power generation, transmission & distribution system network in these islands for providing electric power supply to general public. It implements various Planned & Non-Planned schemes for augmentation of DG Generating Capacity, establishment of new power houses and Transmission & Distribution infrastructure. LED is also functioning as a Nodal Agency for implementing renewable energy program of the Ministry of New & Renewable Energy (MNRE) on these islands. Presently, LED is headed by an Executive Engineer.

The key duties being discharged by LED are:

- Laying and operating of such electric lines and sub-stations that are primarily maintained for the purpose of distributing electricity in the area of Lakshadweep Islands, notwithstanding that such lines and sub-station are high tension cables or overhead lines or associated with such high-tension cables or overhead lines; or used incidentally for the purpose of transmitting electricity for others, in accordance with Electricity Act, 2003 or the Rules framed there under.
- Operating and maintaining sub-stations and dedicated transmission lines connected there with as per the provisions of the Act and the rules framed there under.
- Generation of electricity for the supply of electricity required within the boundary of the UT and for the distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Preparation and implementation of schemes for distribution and generally for promoting the use of electricity within the UT.

The table below gives an overview of present generation, transmission and distribution infrastructure of LED.

Table 1: Electricity Department at a glance (FY 2020-21)

S. No.	Particulars	Details
1	Total Installed Capacity	27.606 MW
1(a)	Diesel Generation	26.566 MW
1 (b)	Solar Generation	1.040 MW
2	No. of Power Houses	17 Nos (11 Nos of Diesel power plant, 6 Nos of solar power plant)
3	Total Staff Strength	336
4	HT Line	112 kms
5	LT Line	351 kms
6	Distribution Transformer	109 Nos.
7	No. of consumers	25,422
8	Units Sold	53.10 MUs
9	T&D Loss	11.63 %
10	Street Light Points	8,321
11	11 kV Sub-station	9

1.4. Electricity Regulatory Process in Lakshadweep Islands

The Commission had issued the first Business Plan Order for “Approval of Business Plan for Multi-Year Control Period FY 2016-17 to FY 2018-19” on 31st March 2016 in respect of LED. Subsequently, the Commission had issued the first Business Plan Order for “Approval of Business Plan for Multi-Year Control Period FY 2019-20 to FY 2020-21” on 21st December 2018 in respect of LED.

1.5. Multi Year Tariff Regulations, 2021

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 on 22nd March 2021. The said Regulations have been hereinafter referred to as the “JERC MYT Regulations”. As per Clause 2.1(18) of these

Regulations, the “Control Period” is defined as the multi-year period comprising of three financial years from FY 2022-23 to FY 2024-25.

These Regulations are applicable to all the generation companies and transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.6. Filing and Admission of the Present Petition

As per Clause 8.1 of the JERC MYT Regulations, the Petitioner is required to file Business Plan Petition for the Control Period (FY 2022-23 to FY 2024-25) with details for each year of the Control Period for the approval of the Commission.

LED submitted the current Petition via email for approval of ‘Business Plan for MYT Control Period from FY 2022-23 to FY 2024-25’ on 12th January, 2022.

After initial scrutiny/analysis, the Petition on Business Plan for the Control Period FY 2022-23 to FY 2024-25 was admitted on 17th January 2022 and was marked as Petition no. 74/2022.

1.7. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petitions was conducted, and certain deficiencies were observed. Accordingly, discrepancy notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalization, tariff proposal etc. The Petitioner submitted its response to the issues through various letters/emails.

The Commission conducted Technical Validation Session (TVS) with the Petitioner at the Commission’s office in Gurugram, during which discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in this session and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides list of interactions with the Petitioner along with the dates:

Table 2: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of First Discrepancy Note	07.02.2022
2	Public hearing	17.02.2022
3	Reply received from the Petitioner with regard to first discrepancy Note	23.02.2022
4	Technical Validation Session	04.03.2022
5	Issue of Second Discrepancy Note	07.03.2022
6	Reply received from the Petitioner with regard to second discrepancy Note	09.03.2022
7	Petitioner’s reply to the Stakeholders’ comments sought by the Commission	14.03.2022
8	Issue of Third Discrepancy Note	15.03.2022
9	Reply received from the Petitioner with regard to third discrepancy Note	16.03.2022

1.8. Notice for Public Hearing

The Petitioner published the Public Notice for inviting suggestions/ comments from stakeholders on the Tariff Petition in the following table:

Table 3: Details of Public Notice published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of circulation
1	January 31, 2022	The Lakshadweep Times	English	Lakshadweep islands, Kavaratti

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 to the Public Hearing mentioning the date and time.

The Petitioner uploaded the Petition on its website (<http://lakpower.nic.in>) for inviting objections and suggestions on the Petitions. The Commission also uploaded the Tariff 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 February 17, 2022 through Video Conferencing due to ongoing COVID 19 pandemic.

1.9. Public Hearing

The COVID-19 pandemic has adversely impacted the movement of people as per the guidelines of GoI. These guidelines have also suggested avoiding of travel and gathering of people as far as possible. In view of above, the physical conduct of proceedings by the Commission was not possible. So, the Commission deemed it is necessary to provide an access to all the stakeholders by conducting proceedings remotely, by the use of audio and video enabled hearings in the matters of Petition submitted by Lakshadweep Electricity Department. Therefore, the Commission has decided that the comments/suggestions of the stakeholders need to be heard virtually through video conferencing for seeking their opinion.

Accordingly, the Virtual Public Hearing was held on February 17, 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

2. Chapter 2: Stakeholders' Comments

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting suggestions/ comments from the public as per the provisions of the MYT Regulations, 2014, MYT Regulations, 2018 and MYT Regulations 2021.

The Public Hearing was held on 17th February 2022 through Video Conferencing on the Petition for Business Plan for MYT Control Period from FY 2022-23 to FY 2024-25 and Approval of True-up for FY 2017-18 and FY 2018-29, Annual Performance Revenue for FY 2021-22, Aggregate Revenue Requirement for 3rd MYT Control Period (FY 2022-23 to FY 2024-25) & Determination of Retail Supply Tariff for the FY 2022-23. During the Public Hearing, a few stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written suggestions/ comments earlier, were also given an equal opportunity to present their views/ suggestions in respect to the Petition.

The list of the Stakeholders is attached as **Annexure 1** of this Order.

2.2. Suggestions/ Comments of the Stakeholders, Petitioner's Response and Commission's Views

The Commission appreciates of the efforts of various stakeholders in providing their suggestions/ comments/ observations to make the Electricity Distribution Sector responsive and efficient. The Commission has noted the concerns of all the stakeholders and has tried to address them to the extent possible in the Chapters on tariff design and Directives. The Commission while finalizing the Tariff Order has suitably considered relevant observations. Submissions of the stakeholders, Petitioner's response and views of the Commission are summarized below:

2.2.1. Infrastructure for Solar Energy

Stakeholders' Comments

The stakeholder submitted that since some years the Central government is giving priority to create more infrastructures to take benefit of Solar Energy source. But the Lakshadweep Administration has not taken necessary steps to use the support provided by the Central govt for this. The proposal to introduce Roof Top solar power units in association with people has not been implemented by the UTL Administration.

Petitioner's Response

It is submitted that projects under M/S SECI include the installation of Roof Top Solar on all Govt Buildings and they had done the assessment of all the Govt buildings as well. The Department had initiated the proposal for implementation of Roof Top Solar plants under domestic category, however due to the ongoing privatization process, it was kept aside for the time being.

Commission's View

The Commission appreciates the suggestion of the stakeholders and agrees that there is a need to increase the share of the electricity generation from the renewable sources owing to the very high cost of diesel energy generation. The Commission directs the Petitioner to explore alternate source of energy generation and submit an action plan for utilizing the renewable generation sources for reducing the dependency on diesel-based generation within 6 months of issuance of this Order.

2.2.2. Electricity generation by using OTEC plant

Stakeholders' Comments

The stakeholder submitted that the scientific community is well aware of the potential of the deep sea around islands to generate electricity by using OTEC. A plant sanctioned for Kavaratti has not been implemented

Petitioner's Response

It is submitted that the Desalination plant using OTEC technology is being implemented by NIOT. The Nodal agency is Lakshadweep Public Works Department. Department of Electricity has no role in it.

Commission's View

The Commission has noted the suggestion of the stakeholders and requests them to consider the Petitioner response in this regard.

2.2.3. Electricity generation through LNG

Stakeholders' Comments

The stakeholder submitted that it is a fact that the LNG is environmentally an eco-friendly fuel now used all over the world. Large quantity of LNG is arriving at Kochi Port and is distributed to the South Indian States. If the Power generation of Lakshadweep is changed from Diesel based to LNG, the cost of production can be brought down by 2/3 of the present expenditure.

Petitioner's Response

It is submitted that the UT of Lakshadweep Administration has decided to privatize the entire power generation and distribution functions of the Department of Electricity. One of the important terms and conditions of this tender is to shift from Diesel based Generation to Clean Energy sources within a period of 2 years.

Commission's View

The Commission appreciates the suggestion of the stakeholders and agrees that there is a need to increase the share of the electricity generation from the renewable sources owing to the very high cost of diesel energy generation. The Commission directs the petitioner to explore alternate source of energy generation and submit an action plan for utilizing the renewable generation sources for reducing the dependency on diesel-based generation within 6 months of issuance of this Order.

2.2.4. Solar Power Production

Stakeholders' Comments

The stakeholder submitted that there was proposal and repeated direction from Central Govt to augment the Solar Power production, Whereas UT Administration did not take timely action to implement more units of Renewable Energy in last 3 years even though sufficient fund was provided.

Petitioner's Response

It is submitted that projects under M/S SECIs project include the installation of Roof Top Solar's on all Govt Buildings and they had done the assessment of all the Govt buildings as well. The Department had initiated the proposal for implementation of Roof Top Solar plants under domestic category, however due to the ongoing privatization process, it was kept on aside for the time being.

Commission's View

The Commission appreciates the suggestion of the stakeholders and agrees that there is a need to increase the share of the electricity generation from the renewable sources owing to the very high cost of diesel energy

generation. The Commission directs the petitioner to explore alternate source of energy generation and submit an action plan for utilizing the renewable generation sources for reducing the dependency on diesel-based generation within 6 months of issuance of this Order.

2.2.5. RPO Compliance

Stakeholders' Comments

The stakeholder submitted that as per the proposed Tariff, Department is expecting an additional revenue of around 7-8 Cr. The Department is having huge RPO compliance pending for the past years. However, it is embarrassing to see that no development has taken place in the field of Solar Energy. Earlier Department had signed an MOU with SECI for 29 MW project out of which 1.9 MW was land based Phase I project (Kavaratti, Agatti, Bangaram and Thinnakara). If the Administration had implemented at least the Phase I project, Department would have been able to meet at least 3 MU per annum which would have led to savings of more than 8 Cr (Considering present ACOS of Rs.36 and SECI's PPA rate of Rs 10). From this it is very much clear that, if the Administration would have implemented the Solar project (Which can be easily possible in one year before i.e. 2020 itself), they would have been able to meet some of the RPO targets as well as saved more than 8 Cr per annum.

Petitioner's Response

It is submitted that the Department had signed a MOU with M/S SECI during the year 2018 for implementation of Floating Solar Projects and Ground mounted Solar Plants. As part of this M/S SECI has to deploy the following ground mounted SPV plants under Phase—I of the project.

Kavaratti - 1.4 MW with BESS,
Agatti - 0.3 MW
Bangaram - 0.1 MW
Thinnakara - 0.1 MW

However, due to various reasons, the projects are not implemented till date. The work for Phase—I projects has been awarded to M/S Sun source India and the installation works at Kavaratti and Agatti is going on. Meanwhile UT of Lakshadweep Administration had decided to privatize entire generation and distribution functions of Department of Electricity wherein it is mandated that the newly selected company has to establish 80% of power generation from RE sources within a period of 3 years. Hence all the projects of M/S SECI except Kavaratti and Agatti (where work order had already been issued) has been put on hold. Department is anticipated that, after the privatization the consumers shall get clean and green energy at lower cost (ARR) and better services.

Commission's View

The Commission appreciates the suggestion of the stakeholders and agrees that there is a need to increase the share of the electricity generation from the renewable sources owing to the very high cost of diesel energy generation. The Commission directs the petitioner to explore alternate source of energy generation and submit an action plan for utilizing the renewable generation sources for reducing the dependency on diesel-based generation within 6 months of issuance of this Order.

Further, the Petitioner is directed to provide the Action Plan to comply with the pending RPO within 3 months of the issue of this Order.

2.2.6. Implementation of Solar Roof top

Stakeholders' Comments

The stakeholder submitted that the UT Administration is even not interested to implement Roof Top Solar Projects under MNRE subsidy whereby they will get cheap electricity.

Petitioner's Response

It is submitted that the implementation of Roof Top Solar Projects, it is submitted that, M/S SECI project include the installation of Roof Top Solar's on all Govt Buildings and they had done the assessment of all the Govt buildings. Department had initiated the proposal for implementation of Roof Top Solar plants under domestic category, however due to the ongoing privatization process, it was kept aside for the time being.

Commission's View

The Commission appreciates the suggestion of the stakeholders and accordingly, directs the Petitioner to provide the details such as the implemented solar rooftop capacity, initiatives already taken by the Department and action plan to increase the capacity within 3 months of issuance of this Order.

3. Chapter 3: Approval of the various components of the Multi-Year business plan petition for the Control Period FY 2022-23 to FY 2024-25

3.1. Introduction

This chapter deals with the key aspects of the Business Plan Petition submitted by the Petitioner and is structured as below.

- Forecast of Number of Consumers, Connected Load and Sales for the Control Period
- Intra-State Transmission and Distribution (T&D) loss
- Power Procurement Plan
- Capital Investment Plan
- Manpower Plan

In the subsequent sections, the Commission has recorded Petitioner's submissions and analysed the same. The Commission has subsequently recorded its reasoning while approving each of the components.

3.2. Forecast of Number of Consumers, Connected Load and Sales for the Control Period

3.2.1. Overall Approach

Petitioner's Submission

The Petitioner has considered past years' CAGRs to forecast the number of consumers, connected load and sales for FY 2021-22 and the upcoming Control Period. Due to abnormal trends in some categories, the Petitioner has resorted to using normalized CAGR rates or assuming a subjective rate for projections. The Petitioner has also considered impact of external factors like increase in energy efficient LED lighting etc. while projecting sales for some consumer categories. Summary of the past data and the CAGR considered by the Petitioner for each category for projecting number of consumers, connected load and sales and historical Year on Year growth and CAGR is as given in the tables below:

Table 4: Summary of category-wise No. of Consumers and Growth Rate considered by the Petitioner for Projections

Number of Consumer	Actuals						CAGR			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	3 year	1 year	Considered
Domestic	18,670	19,316	19,729	19,683	20,003	20,254	101.64%	100.88%	101.25%	101.64%
Commercial	2,207	2,313	2,402	2,766	2,885	3,422	109.17%	112.52%	118.61%	112.52%
Govt. Connection	1,184	1,197	1,218	1,178	1,296	1,173	99.81%	103.06%	90.51%	103.06%
Industrial	334	345	356	349	345	352	101.06%	99.62%	102.03%	101.06%

Number of Consumer	Actuals						CAGR			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	3 year	1 year	Considered
HT Consumers	4	5	6	6	8	9	117.61%	114.47%	112.50%	117.61%
Public Lighting	75	75	76	75	75	76	100.27%	100.00%	101.33%	100.00%
Temporary	234	274	160	246	225	136	89.71%	94.73%	60.44%	-
Total	22,708	23,525	23,947	24,303	24,837	25,422				

Table 5: Summary of category-wise Connected Load and Growth Rate considered by the Petitioner for Projections

Connected Load	Actuals						CAGR			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	3 year	1 year	Considered
Domestic	81,502	83,647	85,601	87,669	90,294	92,032	102.46%	102.44%	101.93%	102.46%
Commercial	14,482	15,158	15,817	15,975	12,240	8,213	89.28%	101.76%	67.09%	101.76%
Govt. Connection	7,769	7,845	8,021	8,101	7,503	12,026	109.13%	101.08%	160.28%	101.08%
Industrial	3,452	3,581	3,708	3,786	3,723	3,658	101.17%	99.55%	98.24%	101.17%
HT Consumers	452	452	520	520	728	923	115.37%	104.82%	126.81%	104.82%
Public Lighting	285	285	296	308	277	284	99.92%	98.61%	102.50%	-
Temporary	0	37	66	147	275	273	405.09%	102.44%	101.93%	-
Total	1,07,942	1,11,005	1,14,029	1,16,506	1,15,040	1,17,409				

Table 6: Summary of category-wise Sales (MU) and Growth Rate considered by the Petitioner for Projections

Sales (MU)	Actuals						CAGR			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	3 year	1 year	Considered
Domestic	34.09	35.02	35.90	35.97	35.59	40.35	103.43%	103.97%	113.37%	103.43%
Commercial	2.54	2.73	2.87	3.09	3.12	3.31	105.41%	104.90%	106.15%	105.41%
Govt. Connection	12.59	10.74	8.01	8.00	7.60	7.28	89.62%	96.86%	95.71%	105.00%
Industrial	0.40	0.42	0.43	0.38	0.36	0.37	98.69%	95.49%	104.25%	105.00%
HT Consumers	0.26	0.41	0.53	0.69	0.81	0.88	128.04%	118.57%	109.10%	105.00%
Public Lighting	0.61	0.61	0.64	0.67	0.81	0.82	105.97%	108.30%	101.42%	-
Temporary	0.13	0.14	0.09	0.11	0.14	0.09	93.64%	100.46%	66.08%	-
Total	50.62	50.08	48.46	48.90	48.42	53.10				

The Petitioner's projection of number of consumers, connected load and sales for the FY 2021-22 and the upcoming Multi-Year Control Period, are as given in the tables below:

Table 7: Petitioner's submission on projection of Number of Consumers for upcoming Multi-Year Control Period

Number of Consumer	Base Year (Estimated)	Projections		
Consumer Category	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	20,587	20,925	21,268	21,617
Commercial	3,850	4,333	4,875	5,486
Govt. Connection	1,209	1,246	1,284	1,323
Industrial	364	368	372	376
HT Consumers	11	12	15	17
Public Lighting	76	76	76	76
Temporary	136	136	136	136
Total	26,235	27,095	28,026	29,031

Table 8: Petitioner's submission on projection of Connected Load for upcoming Multi-Year Control Period

Connected Load	Base Year (Estimated)	Projections		
Consumer Category	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	94,297	96,616	98,993	1,01,429
Commercial	8,726	8,880	9,037	9,196
Govt. Connection	12,156	12,287	12,419	12,553
Industrial	3,730	3,773	3,817	3,862
HT Consumers	967	1,014	1,063	1,114
Public Lighting	284	284	284	284
Temporary	273	273	273	273
Total	1,20,432	1,23,127	1,25,886	1,28,711

Table 9: Petitioner's submission on projection of Sales for upcoming Multi-Year Control Period

Number of Consumer	Base Year (Estimated)	Projections		
Consumer Category	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	41.73	43.16	44.64	46.17
Commercial	3.49	3.68	3.88	4.09
Govt. Connection	7.64	8.02	8.42	8.85
Industrial	0.39	0.41	0.43	0.45
HT Consumers	0.93	0.97	1.02	1.07
Public Lighting	0.82	0.82	0.82	0.82
Temporary	0.09	0.09	0.09	0.09
Total	55.09	57.16	59.31	61.54

Commission's Analysis

The Commission in its Tariff Order dated March 31, 2021 for FY 2021-22 had directed the Petitioner to provide the island-wise, month-wise and slab-wise detailed breakup of number of consumers, connected load and energy sales under each consumer category for the last five years. Further the Petitioner was directed to maintain and submit monthly island-wise information for category-wise sales, number of consumers, connected load, T&D losses, plant -wise generation, fuel cost on quarterly basis. The Petitioner has only submitted the Island-wise

generation capacity available to meet the demand and has not submitted the other details. **The Commission again directs the Petitioner to submit the island-wise information for category wise sales, number of consumers, connected load, peak load, T&D losses, plant-wise generation on monthly basis and fuel cost in each Plant for all the years within 3 months from the issuance of this Order.**

The overall approach of the Commission for projecting the number of consumers, connected load and sales for FY 2021-22 and the upcoming Multi-Year Control Period is described below:

- The Base Year considered by the Petitioner is FY 2021-22 and the same is in line with the JERC MYT Regulations. The Commission has also considered FY 2021-22 as the Base Year for carrying out projections. The values for FY 2021-22 have been arrived at by considering relevant growth rates approved by the Commission for respective categories and applying the same to FY 2020-21 values.
- The Growth rates considered by the Petitioner for projecting number of consumers, load and sales are based primarily on historical CAGRs. The Commission has determined growth rates separately for each consumer category based on past trends and other relevant parameters given below:
 - Year on Year (YoY) growth
 - CAGR (multiple periods)
 - Specific (per-consumer) consumption
 - Energy efficiency measures

3.2.2. Category-Wise Analysis

The historical Year on Year growth and CAGR for number of consumers is as shown in the following Table:

Table 10: Historical Year-on-Year Growth and CAGR for number of consumers

Number of Consumers	Y-o-Y Growth for number of Consumers					CAGR				
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	4 year	3 year	2 year	1 years
Domestic	3.46%	2.14%	-0.23%	1.63%	1.25%	1.64%	1.19%	0.88%	1.44%	1.25%
Commercial	4.80%	3.85%	15.15%	4.30%	18.61%	9.17%	10.29%	12.52%	11.23%	18.61%
Govt. Connection	1.10%	1.75%	-3.28%	10.02%	-9.49%	-0.19%	-0.51%	-1.25%	-0.21%	-9.49%
Industrial	3.29%	3.19%	-1.97%	-1.15%	2.03%	1.06%	0.50%	-0.38%	0.43%	2.03%
HT Consumers	25.00%	20.00%	0.00%	33.33%	12.50%	17.61%	15.83%	14.47%	22.47%	12.50%
Public Lighting	0.00%	1.33%	-1.32%	0.00%	1.33%	0.27%	0.33%	0.00%	0.66%	1.33%
Temporary	17.09%	-41.61%	53.75%	-8.54%	-39.56%	-10.29%	-16.06%	-5.27%	-25.65%	-39.56%

The historical Year on Year growth and CAGR for number of consumers is as shown in the following Table:

Table 11: Historical Year-on-Year Growth and CAGR for Connected Load

Connected Load	Y-o-Y Growth for Connected Load					CAGR				
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	4 year	3 year	2 year	1 years
Domestic	2.63%	2.34%	2.42%	2.99%	1.92%	2.46%	2.42%	2.44%	2.46%	1.92%
Commercial	4.67%	4.35%	1.00%	-23.38%	-32.90%	-10.72%	-14.20%	-19.62%	-28.30%	-32.90%
Govt. Connection	0.98%	2.24%	1.00%	-7.38%	60.28%	9.13%	11.27%	14.45%	21.84%	60.28%
Industrial	3.74%	3.55%	2.10%	-1.66%	-1.75%	1.17%	0.53%	-0.45%	-1.70%	-1.75%
HT Consumers	0.00%	15.04%	0.00%	40.00%	26.79%	15.35%	19.54%	21.08%	33.23%	26.79%
Public Lighting	0.00%	3.86%	4.05%	-10.06%	2.53%	-0.07%	-0.09%	-1.37%	-3.98%	2.53%

Connected Load	Y-o-Y Growth for Connected Load					CAGR				
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	4 year	3 year	2 year	1 years
Temporary	0.00%	78.38%	122.73%	87.07%	-0.73%	0.00%	64.81%	60.52%	36.28%	-0.73%

The historical Year on Year growth and CAGR for number of consumers is as shown in the following Table:

Table 12: Historical Year-on-Year Growth and CAGR for Sales

Sales (MU)	Y-o-Y Growth for Sales					CAGR				
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5 year	4 year	3 year	2 year	1 year
Domestic	2.73%	2.51%	0.19%	-1.06%	13.37%	3.43%	3.60%	3.97%	5.91%	13.37%
Commercial	39.84%	-19.26%	7.60%	1.08%	6.15%	5.44%	-1.74%	4.90%	3.58%	6.15%
Govt. Connection	-20.90%	-19.26%	-0.46%	-4.99%	-4.29%	-10.38%	-7.54%	-3.26%	-4.64%	-4.29%
Industrial	5.00%	2.38%	-9.30%	-8.71%	4.25%	-1.49%	-3.04%	-4.79%	-2.45%	4.25%
HT Consumers	57.69%	29.27%	30.19%	17.22%	9.10%	27.69%	21.12%	18.52%	13.09%	9.10%
Public Lighting	1.64%	4.84%	3.08%	20.25%	1.42%	6.02%	7.15%	7.93%	10.43%	1.42%
Temporary	7.69%	-35.71%	22.22%	29.63%	-33.92%	-6.23%	-9.43%	1.54%	-7.45%	-33.92%

The historical data given above, along with other parameters, as applicable, have been used for category wise analysis as described below.

Domestic

Petitioner's submission

The Petitioner has considered the CAGR of last 5 years for projecting the number of consumers, connected load and sales for domestic category. Accordingly, the Petitioner has used a growth rate of 101.64% (Refer Table 7), 102.46% (Refer Table 8) and 103.43% (Refer Table 9) for number of consumers, connected load and sales respectively.

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that there is a slight increase in the connection year-on year. Hence, the Commission has approved the 5-year CAGR of 1.64% to project the number of consumers for the control period.

For load growth, the Commission observes that the YoY growth rate has been stable since FY 2015-16. Therefore, in view of historical trends, the Commission approves the 5-year CAGR of 2.46% for projecting the connected load for the control period.

For sales, the Commission observes that the YoY growth rate has been stable since FY 2015-16 but has increased drastically in the recent years. Therefore, in view of historical trends, the Commission approves the 3-year CAGR of 3.97% for sales growth for the control period.

The growth rates approved by the Commission are as below:

Table 13: Growth rates approved by the Commission for Domestic Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Domestic	101.64%	1.64%	102.46%	2.46%	103.43%	3.97%

Commercial**Petitioner's submission**

The Petitioner has considered the CAGR of last 3 years for projecting the number of consumers, connected load and CAGR of last 5 years for projecting sales for commercial category. Accordingly, the Petitioner has used a growth rate of 112.52% (Refer Table 7), 101.76% (Refer Table 8) and 105.41% (Refer Table 9) for number of consumers, connected load and sales respectively.

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that there is an erratic change in the growth of number of consumers year-on year. Hence, the Commission has approved the 2-year CAGR of 11.23% to project the number of consumers for the control period.

For load growth, the Commission observes that the YoY growth rate has decreased consistently from FY 2015-16. Therefore, in view of historical trends, the Commission approves the y-o-y growth of 0.00% for the control period.

For sales, the Commission observes that the YoY growth rate has been stable since FY 2017-18. Therefore, in view of historical trends, the Commission approves the 5-year CAGR of 5.44 % for projecting the sales for the control period.

The growth rates approved by the Commission are as below:

Table 14: Growth rates approved by the Commission for Commercial Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Commercial	112.52%	11.23%	101.76%	0.00%	105.41%	5.44%

Govt. Connection**Petitioner's submission**

The Petitioner has considered the CAGR of last 3 years for projecting the number of consumers, connected load and growth rate of 5% for projecting sales for govt. connection category. Accordingly, the Petitioner has used a growth rate of 103.06% (Refer Table 7), 101.08% (Refer Table 8) and 105.00% (Refer Table 9) for number of consumers, connected load and sales respectively.

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that there is an erratic growth pattern year-on year over the past 5 years. Hence, the Commission has approved 0.00% to project the number of consumers for the control period.

For load growth, the Commission observes that the YoY growth rate has been positive during the last 5 years. Therefore, in view of historical trends, the Commission approves the 4-year CAGR of 11.27% for projecting the connected load for the control period.

For sales, the Commission observes that the sales quantum has been decreasing consistently since FY 2015-16. Therefore, in view of historical trends, the Commission approves 0.00% YoY growth for the control period.

The growth rates approved by the Commission are as below:

Table 15: Growth rates approved by the Commission for Govt. Connection Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Govt. Connection	103.06%	0.00%	101.08%	11.27%	105.00%	0.00%

Industrial

Petitioner's submission

The Petitioner has considered the CAGR of last 5 years for projecting the number of consumers, connected load and growth rate of 5% for projecting sales for industrial category. Accordingly, the Petitioner has used a growth rate of 101.06% (Refer Table 7), 101.17% (Refer Table 8) and 105.00% (Refer Table 9) for number of consumers, connected load and sales respectively.

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that the number of connections has been steady since FY 2015-16. Hence, the Commission has approved 5-year CAGR of 1.06% to propose the number of consumers for the control period.

For load growth, the Commission observes that the connected load has been varied slightly in the last 5 years. Therefore, in view of historical trends and growth considered in number of consumers, the Commission approves the 5-year CAGR of 1.17% for projecting the connected load for the control period.

For sales, the Commission observes that the sales quantum has varied in a range during the past 5 years and the YoY growth rate has been erratic. Therefore, in view of historical trends, the Commission approves the 1-year CAGR of 4.25% for projecting the sales for the control period.

The growth rates approved by the Commission are as below:

Table 16: Growth rates approved by the Commission for Industrial Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Industrial	101.06%	1.06%	101.17%	1.17%	105.00%	4.25%

HT Consumer

Petitioner's submission

The Petitioner has considered the CAGR of last 5 years and last 3 years for projecting the number of consumers and connected load respectively and growth rate of 5% for projecting sales for HT consumer category. Accordingly, the Petitioner has used a growth rate of 117.61% (Refer Table 7), 104.82% (Refer Table 8) and 105.00% (Refer Table 9) for number of consumers, connected load and sales respectively

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that there has been a consistent YoY growth in the number of consumers since FY 2015-16. Hence, the Commission has approved 3-year CAGR of 14.47% to project the number of consumers for the control period.

Similarly, for connected load, the Commission observes that the it has increased consistently in the last 5 years. Therefore, in view of historical trends, the Commission approves the 5-year CAGR of 15.35% for projecting the connected load for the control period.

For sales, the Commission observes that there has been a consistent decline in YoY growth since FY 2015-16. Therefore, in view of historical trends, the Commission approves the 1-year CAGR of 9.10% for projecting the sales for the control period.

The growth rates approved by the Commission are as below:

Table 17: Growth rates approved by the Commission for HT Consumer Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
HT Consumer	117.61%	14.47%	104.82%	15.35%	105.00%	9.10%

Public Lighting

Petitioner's submission

The Petitioner has considered the CAGR of last 3 years for projecting the number of consumers the connected load and sales for Public lighting consumer category has been kept same as FY 2020-21. Accordingly, the Petitioner has used a growth rate of 100.00% (Refer Table 7), 100.00% (Refer Table 8) and 100.00% (Refer Table 9) for number of consumers, connected load and sales respectively

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that the number of connections have been consistently same since FY 2015-16. Hence, the Commission has approved 4-year CAGR of 0.33% thus projecting minimal growth in the number of consumers.

For load growth, the Commission observes that the YoY growth in connected load has been erratic during the last 5 years. Therefore, in view of historical trends, the Commission approves 0.00% as YoY growth for projecting the connected load for the control period.

For sales, the Commission observes that there has been a consistent YoY growth since FY 2016-17. Therefore, in view of historical trends, the Commission approves the 5-year CAGR of 6.02% for projecting the sales for the control period.

The growth rates approved by the Commission are as below:

Table 18: Growth rates approved by the Commission for Public Lighting Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Public Lighting	100.00%	0.33%	100.00%	0.00%	100.00%	6.02%

Temporary Connection

Petitioner's submission

The Petitioner has considered the number of consumers the connected load and sales for temporary consumer category same as FY 2020-21. Accordingly, the Petitioner has used a growth rate of 100.00% (Refer Table 7), 100.00% (Refer Table 8) and 100.00% (Refer Table 9) for number of consumers, connected load and sales respectively

Commission's analysis

The Commission observes that the Petitioner has erroneously computed the CAGR for the number of consumers, connected load and sales. The Commission has analysed the connections data for previous years and observed that the connections have decreases significantly in the last 5 years. Hence, the Commission has approved 0.00% as the growth in number of consumers for the control period.

For load growth, the Commission observes that the connected load has been varied significantly during the last 5 years. Therefore, in view of historical trends, the Commission approves the YoY growth of 0.00% for the control period.

For sales, the Commission observes that the sales have decreased YoY since FY 2015-16. Therefore, in view of historical trends, the Commission approves the YoY growth of 0.00% for the control period.

The growth rates approved by the Commission are as below:

Table 19: Growth rates approved by the Commission for Temporary Connection Category

Consumer Category	Growth in number of consumers		Load Growth		Sales Growth	
	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved	Growth Rate Submitted	CAGR Approved
Temporary Connection	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%

3.2.3. Projections of Number of Consumers approved by the Commission

The summary of the projections of number of consumers approved by the Commission for the upcoming Control Period based on approved CAGRs is given in the following table:

Table 20: Consumer Growth Projections approved by the Commission for upcoming Multi-Year Control Period

Number of Consumer	CAGR Approved	Base Year (Estimated)	Projections		
Consumer Category		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	1.64%	20587	20925	21269	21618
Commercial	11.23%	3806	4233	4708	5237
Govt. Connection	0.00%	1173	1173	1173	1173
Industrial	1.06%	356	360	364	368
HT Consumers	14.47%	10	11	13	15
Public Lighting	0.33%	76	76	76	76
Temporary	0.00%	136	136	136	136
Total		26144	26914	27739	28623

3.2.4. Projections of Connected Load approved by the Commission

The summary of the projections of connected load approved by the Commission for the upcoming Control Period based on approved CAGRs is given in the following table:

Table 21: Connected Load Growth Projections approved by the Commission for upcoming Multi-Year Control Period

Connected Load	CAGR Approved	Base Year (Estimated)	Projections		
Consumer Category		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	2.46%	94296	96616	98993	101428
Commercial	0.00%	8213	8213	8213	8213
Govt. Connection	11.27%	13381	14889	16567	18434
Industrial	1.17%	3701	3744	3788	3832
HT Consumers	15.35%	1065	1228	1416	1633
Public Lighting	0.00%	284	284	284	284
Temporary	0.00%	273	273	273	273
Total		121213	125247	129534	134097

3.2.5. Projections of Sales approved by the Commission

The summary of the projections of sales approved by the Commission for the upcoming Control Period based on approved CAGRs is given in the following table:

Table 22: Sales Growth Projections approved by the Commission for upcoming Multi-Year Control Period

Sales	CAGR Approved	Base Year (Estimated)	Projections		
Consumer Category		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Domestic	3.97%	41.95	43.61	45.35	47.15
Commercial	4.90%	3.47	3.64	3.82	4.01
Govt. Connection	0.00%	7.28	7.28	7.28	7.28
Industrial	4.25%	0.39	0.40	0.42	0.44
HT Consumers	9.10%	0.96	1.05	1.15	1.25
Public Lighting	6.02%	0.87	0.92	0.97	1.03
Temporary	0.00%	0.09	0.09	0.09	0.09
Total		55.01	57.00	59.08	61.25

3.3. Transmission and Distribution (T&D) losses

Petitioner's submission

The Petitioner has submitted that it has been constantly endeavoring to reduce its T&D losses. Further the Petitioner submitted that it has been able to reduce the loss level from 13.75% in FY 2015-16 to 11.63% in FY 2020-21.

The actual distribution losses incurred by the Petitioner in the past years is given below:

Table 23: Actual T&D losses (%)

FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
13.40	13.03	13.01	13.55	11.63

The Petitioner submitted that in future it shall make efforts to achieve the loss targets set by the Commission and also requested the Commission to set realistic targets in view of the fact that the current loss level is very low and reduction of loss below the current level shall be difficult. Accordingly, the Petitioner proposed 11.50% T&D loss target for the Control Period. The T&D loss trajectory proposed by the Petitioner for FY 2021-22 and the upcoming Control Period is as given below:

Table 24: T&D loss (%) trajectory proposed by the Petitioner for the upcoming Control Period

Base Year	Projections		
FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
11.50%	11.50%	11.50%	11.50%

Commission's Analysis

The T&D losses approved by the Commission for the existing Control Period (FY 2019-20 to FY 2021-22) vis-à-vis T&D losses achieved by the Petitioner during the same period is given in the following table:

Table 25: T&D losses approved by the Commission in the existing Control Period vis-à-vis T&D losses achieved by the Petitioner

	T&D loss (%)	
	Approved	Actuals (A)/Estimate (E)
FY 2019-20	12.75	13.55 (A)
FY 2020-21	12.50	11.63 (A)
FY 2021-22	12.25	11.50 (E)

The Commission is of the view that the Petitioner has been gradually putting in efforts for reduction of T&D Loss and for underachievement vis-a-vis the normative loss it has already been penalised during the Control period from FY 2019-20 to FY 2021-22. In view of the Capital expenditure proposed by the Petitioner the Commission is approving T&D loss trajectory for the 3rd Control period as given in the table below:

Table 26: T&D losses trajectory approved by the Commission in the upcoming Control Period

	FY 2022-23		FY 2023-24		FY 2024-25	
	Petitioner's submission	Approved by Commission	Petitioner's submission	Approved by Commission	Petitioner's submission	Approved by Commission
T&D loss trajectory (%)	11.50	11.25	11.50	10.25	11.50	9.25

3.4. Power Procurement Plan

3.4.1. Energy Requirement

Petitioner's submission

The Petitioner has submitted the projection of energy requirement at the periphery by grossing up the retail sales projections with T&D loss trajectory proposed by the Petitioner. The summary of the energy requirement as estimated by the Petitioner is as given below:

Table 27: Energy requirement as estimated by the Petitioner for the upcoming Control Period

Energy Balance	FY 2020-2021	FY 2021-2022	FY 2022-2023	FY 2023-24	FY 2024-25
	(Actuals)	(Estimated)	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's	MU's	MU's
ENERGY REQUIREMENT					
Energy Sales					
LT Supply	52.22	54.16	56.18	58.28	60.47
HT Supply	0.88	0.93	0.97	1.02	1.07
Total Energy Sales	53.10	55.09	57.16	59.31	61.54
Overall T & D Losses %	11.63	11.50	11.50	11.50	11.50
Overall T & D Losses (MUs)	6.99	7.16	7.43	7.70	7.99
Total Energy Requirement	60.09	62.25	64.59	67.01	69.53

Commission's analysis

Based on the sales projections approved by the Commission and the T&D losses approved by the Commission, the energy requirement of LED estimated by the Commission for the upcoming Control is given in table below:

Table 28: Energy requirement of LED as approved by the Commission

Energy Requirement	FY 2021-2022	FY 2022-2023	FY 2023-24	FY 2024-25
	(Estimated)	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's	MU's
Energy Sales	55.01	57.00	59.08	61.25
Overall T & D Losses %	12.25%	11.25%	10.25%	9.25%
Overall T & D Losses (MUs)	7.68	7.23	6.75	6.24
Total Energy Requirement	62.69	64.23	65.83	67.49

3.4.2. Power Generation Quantum

Petitioner's submission

The Petitioner has submitted that the energy requirement of LED is met from own generation. There is no availability of power from CGS or from other sources/ open market/ power exchanges etc. The present scenario is likely to continue and is projected that energy requirement for FY 2022- 23, FY 2023-24 and FY 2024-25 shall be met by own generation.

The Petitioner has projected the total power generation for the control period as given below.

Table 29: Details of the power generation for control period FY 2022-23 to FY 2024-25

Energy Balance	FY 2021-2022	FY 2022-2023	FY 2023-24	FY 2024-25
	(Estimated)	(Projected)	(Projected)	(Projected)
Power Purchase (MU)	-	-	-	-
Own Generation (MU)	62.25	64.59	67.01	69.53
Total (MU)	62.25	64.59	67.01	69.53

Commission's Analysis

As per Regulation 13.1 of the MYT Regulations, 2021, power purchase is an uncontrollable parameter. Thus, the power purchase has to be revisited every year by the Commission based on the audited accounts.

3.4.3. Energy Balance

Petitioner's submission

The energy balance for FY 2020-21 and FY 2021-22 and the upcoming Control Period as estimated by the Petitioner is as given below:

Table 30: Energy Balance as estimated by the Petitioner for the upcoming Control Period

Energy Balance	FY 2020-2021	FY 2021-2022	FY 2022-2023	FY 2023-24	FY 2024-25
	(Actuals)	(Estimated)	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's	MU's	MU's
Energy Sales					
LT Supply	52.22	54.16	56.18	58.28	60.47
HT Supply	0.88	0.93	0.97	1.02	1.07
Total Energy Sales	53.10	55.09	57.16	59.31	61.54
Overall T & D Losses %	11.63	11.50	11.50	11.50	11.50
Overall T & D Losses (MUs)	6.99	7.16	7.43	7.70	7.99
Total Energy Requirement	60.09	62.25	64.59	67.01	69.53
ENERGY AVAILABILITY AT PERIPHERY					
Power Purchase	0.00	0.00	0.00	0.00	0.00
Own Generation	60.09	62.25	64.59	67.01	69.53
Total Energy Availability	60.09	62.25	64.59	67.01	69.53
ENERGY SURPLUS/(GAP)	0.00	0.00	0.00	0.00	0.00

Commission's analysis

The energy balance for the upcoming Control Period based on the Commission's analysis is given below:

Table 31: Energy Balance projections approved by the Commission for the upcoming Control Period

Energy Balance	FY 2021-2022	FY 2022-2023	FY 2023-24	FY 2024-25
	(Estimated)	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's	MU's
Total Energy Sales	55.01	57.00	59.08	61.25
Overall T & D Losses %	12.25%	11.25%	10.25%	9.25%
Overall T & D Losses (MUs)	7.68	7.23	6.75	6.24
Total Energy Requirement	62.69	64.23	65.83	67.49
Power Purchase	-	-	-	-
Own Generation	62.69	64.23	65.83	67.49
Total Energy Availability	62.69	64.23	65.83	67.49
ENERGY SURPLUS/(GAP)	-	-	-	-

3.4.4. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Renewable Purchase Obligation (RPO) for the Utilities has been specified by the Commission vide JERC for State of Goa & Union Territories (Procurement of Renewable Energy), 2010, First Amendment Regulations, 2014, Second Amendment Regulations, 2015, and Third Amendment Regulations, 2016.

The Petitioner submitted that it intends to meet RPO as per the directions of the Commission in the MYT Control Period and has planned to meet the Solar RPO from the generation of own solar power plants. Further it submits that in absence of any non-solar power plants, the Petitioner shall not be able to meet the RPO towards non-solar.

Further the Petitioner submitted that to promote the use of renewable power in Lakshadweep, LED plans to purchase solar power from SECI. LEDA has initiated a study to make a road map for sourcing 100% energy requirement of LED through Renewable Energy sources for all the Islands to mitigate the diesel consumption. As per the discussion with SECI, they will take all the existing projects and then will start work. Based on the preliminary inputs, the Petitioner has submitted that to meet RPO it has initiated the following actions as mentioned below:

- Development of Floating Solar Power Projects
- Repowering of existing ground mounted solar projects
- Development of roof top solar power projects
- Development of small scale wind turbines
- Employing Battery energy storage to manage the renewable power generated in tandem with load requirements and DG sets.

The Petitioner has further submitted that UT of Lakshadweep Administration had decided to privatize entire Generation and Distribution functions of Department of Electricity. Hence all the existing projects of SECI except Kavaratti and Agatti SPV plants, has been put on hold for the time being.

The summary of projected Solar and Non-Solar RPO for the Control Period as submitted by the Petitioner is as given below.

Table 32: Renewable Purchase Obligation approved by the Commission

Energy Balance	FY 2022-2023	FY 2023-24	FY 2024-25
	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's
Solar Obligation			
Solar RPO (%)	8.00	8.00	8.00
Projected Sales (MU)	57.16	59.31	61.54
Total power to be procured to meet solar obligation (MU)	4.57	4.74	4.92
Non-Solar Obligation			
Non- Solar RPO (%)	9.00	9.00	9.00
Total power to be procured to meet non- solar obligation (MU)	5.14	5.34	5.54
Total power to be procured to meet solar and non-solar RPO	9.72	10.08	10.46

Commission's Analysis

The Commission has made note of the submission of the Petitioner and expects the Petitioner to comply with regard to RPO. The Commission directs the Petitioner to comply with the entire RPO target irrespective of Solar or Non-Solar Sources. Actual compliance in respect of the pending RPO obligations would be reviewed at the time of true-up of the respective years and supporting details such as purchase of RECs, bills from solar/non-solar plants for the respective years must be submitted alongside during the MYT filing.

In view of the sales projections approved by the Commission in Section 3.2.5 , the Commission approves the RPO obligation for each year of the Control Period based on the JERC (Procurement of Renewable Energy) Regulations, 2010 and subsequent amendments thereof, as shown below:

Table 33: RPO Obligation approved by the Commission

Energy Balance	FY 2022-2023	FY 2023-24	FY 2024-25
	(Projected)	(Projected)	(Projected)
	MU's	MU's	MU's
Solar Obligation			
Solar RPO (%)	9.00%	10.00%	11.00%
Projected Sales (MU)	57.00	59.08	61.25
Total power to be procured to meet solar obligation (MU)	5.13	5.91	6.74
Non-Solar Obligation			
Non- Solar RPO (%)	9.35%	9.91%	10.58%
Total power to be procured to meet non- solar obligation (MU)	5.33	5.85	6.48
Total power to be procured to meet solar and non-solar RPO	10.46	11.76	13.22

3.5. Capital Investment Plan

3.5.1. Details of capital expenditure and capitalisation

Ongoing scheme(s)

Petitioner's Submission

The Petitioner has submitted that all the capital expenditures will be completed within a year and hence there are no such ongoing schemes in the upcoming Control Period.

New scheme(s)

Petitioner's Submission

The Petitioner has submitted that it plans to carry out capital expenditure during the Control Period for augmentation and expansion of its capacity and to reduce the transmission and distribution losses in the system.

LED has undertaken significant capital expenditure during previous control period FY 2019-20 to FY 2021-22 and has plans to implement schemes for development of infrastructure during the upcoming control period of FY 2022-23 to FY 2024-25. 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 FY 2022-23 to FY 2024-25.

The capital expenditure plan envisaged will also assist in reducing system losses. The Petitioner has planned for 17 new 11kV schemes in view of system upgradation requirement and improvement of reliability. The Capex plan has been formulated keeping in view of various parameters that come into play to ensure better supply of power to end consumers.

A Summary of capital expenditure projections and capitalisation schedule of new schemes for the upcoming Control Period is given below.

Table 34: Capital expenditure plan proposed by the Petitioner for the upcoming Control Period

Sr. No.	Name of Scheme	Proposed Expenditure (INR lakh)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
1	Supply of DG sets at Kavaratti (2x1500KVA), Amini & Agatti (2 x 750) and Kiltan Chetlat and Kalpeni	300	200	250	750
2	DG set major components of Coil Cooler, Radiator and Essy GEN etc.	400	150	150	700
3	Supply and Installation of step-up transformers at Agatti, Kadmath, Chetlat & Kalpeni Island (Continuing), Kalpeni & Kiltan and Chetlat & Androth	100	50	50	200
4	Supply and Installation of Step-down Transformers in all Islands except Bitra	500	100	100	700
5	Supply of Ring Main Unit at Androth -2, Kadmath - 2 and Kavaratti-2 (Continuing)	50	50	50	150

Sr. No.	Name of Scheme	Proposed Expenditure (INR lakh)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
6	Supply of Energy Meters/ smart meters	100	100	100	300
7	Supply of HT cables	75	75	75	225
8	Supply of LT cables	150	100	100	350
9	Supply of consumer cable / Street Light cable (Continuing)	150	100	100	350
10	Supply of Street light set	50	50	50	150
11	Supply of street light poles	150	100	100	350
12	Supply of Pole Mounting Street boxes (Continuing)	200	100	100	400
13	Power House Tools and Line Tools (Supply of Flow meters)	25	25	25	75
14	VCB Pannel for power house at Kavaratti and Androth	100			100
15	Modernisation and Augmentation of control Pannel at Power Houses	100			100
16	Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti., Androth and kalpeni. And Minicoy and Amini	50	50	50	150
17	Construction of office building and Power House building at Islands.	300	200	200	700
	Total	2800	1450	1500	5750

The overview of the capital expenditure and capitalisation plan proposed by the Petitioner for the upcoming Control Period is as given in the table below:

Table 35: Year-Wise Capital Expenditure and Capitalisation as proposed by the Petitioner

Particulars (INR Crore)	FY 2022-2023	FY 2023-24	FY 2024-25
	(Projected)	(Projected)	(Projected)
Capital Expenditure	28.00	14.50	15.00
Capitalisation	28.00	14.50	15.00

Commission's Analysis

The Commission has analysed the actual achievement of capital expenditure and capitalisation of the Petitioner vis-à-vis that approved by the Commission in the previous Business plan of MYT control period from FY 2019-20 to FY 2021-22 as given in table below:

Table 36: Capital expenditure achieved by the Petitioner vis-à-vis approved by the Commission

Particulars (INR Crore)	FY 2019-20		FY 2020-21		FY 2021-22		Total		
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	% Achievement
Capital Expenditure	10.00	12.00	10.35	1.68	7.75	9.50	28.00	23.18	82.49%

The Commission observes that the Petitioner has achieved only 82.49% of approved capital expenditure and approved capitalisation for MYT control period of FY 2019-20 to FY 2021-22.

The Commission vide deficiency note sought detailed justification and cost benefit analysis of various proposed scheme. However, the Petitioner has failed to submit the same.

Overall approach of the Commission

For the upcoming Control Period, the Commission has compared capital expenditure and capitalisation proposed by the Petitioner with the details submitted by the Petitioner along with the Business Plan Petition and replies to Deficiency Notes. Based on the Petitioner's submissions and the overall approach discussed herein, the scheme wise analysis of proposed capital expenditure plan by the Commission is as given in subsequent sections.

1. Installation/Augmentation/Replacement of DG generating Capacity

Petitioner's Submission

The Petitioner submitted that it has planned installation of 2 no's of 1500 KVA New DG generating Capacity at Kavaratti(2) Island and augmentation/replacement of 5 no's of 750 KVA DG generating capacity at Amini(1), Agatti(1), Kiltan(1), Chetlat(1) and Kalpeni(1).

The Petitioner submitted that the proposed scheme will help to meet future load demand due to growth of consumer and is also required due to derating of DG sets on account of ageing for cost effectiveness. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 37: Installation/Augmentation/Replacement of 750 kW DG Sets

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Installation/Augmentation/ Replacement of 750 kW DG Sets	7.50	3.00	2.00	2.50

Commission's Analysis

The Commission observes that the energy requirement of LED is met from its own generation as there is no availability of power from CGS or from other sources.

Considering the expected growth across the islands and for maintaining smooth and reliable supply of electricity across the islands, the Commission opines that proposed capital expenditure against the proposed scheme is appropriate. The Commission thus approves the capital expenditure as proposed by the Petitioner for the upcoming Control Period. The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 38: Capital Expenditure Approved for Installation/Augmentation/Replacement of 750 kW DG Sets

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Installation/Augmentation/ Replacement of 750 kW DG Sets	7.50	3.00	2.00	2.50

Therefore, the Commission approves a total capital expenditure of Rs. 7.50 Cr and total capitalisation of Rs. 7.50 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

2. DG set major components of Coil Cooler ,Radiator and Essy GEN

Petitioner's Submission

The Petitioner submitted that it has planned installation of DG set major components of Coil Cooler, Radiator and Essy GEN. The Petitioner submitted that the proposed scheme will help in continuous and reliable supply of electricity. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 39: DG set major components of Coil Cooler, Radiator and Essy GEN

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
DG set major components of Coil Cooler, Radiator and Essy GEN	7.00	4.00	1.50	1.50

Commission's Analysis

The Commission observes that the installation of DG sets major components of Coil Cooler, Radiator and Essy GEN will be essential for continuous and reliable supply of electricity. Therefore, the Commission thus approves the capital expenditure as proposed by the Petitioner for the upcoming Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 40: Capital Expenditure Approved for DG set major components of Coil Cooler, Radiator and Essy GEN

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
DG set major components of Coil Cooler, Radiator and Essy GEN	7.00	4.00	1.50	1.50

Therefore, the Commission approves a total capital expenditure of Rs. 7.00 Cr and total capitalisation of Rs. 7.00 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

3. Step up Transformer at 11 KV existing sub-station

Petitioner's Submission

The Petitioner submitted that it has proposed Improvement and augmentation of step up transformers at Agatti, Kadmath, Chetlat & Kalpeni Island (Continuing), Kalpeni & Kiltan and Chetlat & Androth.

The Petitioner submitted that the proposed scheme will help to meet the increasing load demand due to growth of consumers and also for replacement of defective transformer so as to reduce T&D loss. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 41: Step up Transformer at 11 KV existing sub-station

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Step up Transformer at 11 KV existing sub-station	2.00	1.00	0.50	0.50

Commission's Analysis

The Commission is of view that improvement and augmentation of transformers is an ongoing and essential activity for catering the 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.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 42: Capital Expenditure Approved for Step up Transformer at 11 KV existing sub-station

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Step up Transformer at 11 KV existing sub-station	2.00	1.00	0.50	0.50

Therefore, the Commission approves a total capital expenditure of Rs. 2.00 Cr and total capitalisation of Rs. 2.00 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

4. Step down Transformer at 11KV existing system

Petitioner's Submission

The Petitioner submitted that it has proposed the scheme for improvement and augmentation of Step down Transformers at Amini, Androth, Kavaratti, Minicoy, Agatti, Chetlat, Kalpeni, Kadmath and Kiltan.

The Petitioner submitted that the proposed scheme will help to meet the increasing load demand due to growth of consumers and also for replacement of defective transformer so as to reduce T&D loss. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 43: Step down Transformer at 11KV existing system

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Step down Transformer at 11KV existing system	7.00	5.00	1.00	1.00

Commission's Analysis

The Commission is of view that improvement and augmentation 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.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 44: Capital Expenditure Approved for Step down Transformer at 11KV existing system

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Step down Transformer at 11KV existing system	7.00	5.00	1.00	1.00

Therefore, the Commission approves a total capital expenditure of Rs. 7.00 Cr and total capitalisation of Rs. 7.00 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

5. Ring main Unit in distribution transformer

Petitioner's Submission

The Petitioner submitted that it has planned installation of Ring Main Unit at Androth -2, Kadmath - 2 and Kavaratti-2(Continuing).

The Petitioner submitted that the proposed scheme will help to provide redundancy of electricity supply, so that availability of supply will be increased to meet JERC recommendation. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 45: Ring main Unit in distribution transformer

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Ring main Unit in distribution transformer	1.50	0.50	0.50	0.50

Commission's Analysis

The Commission is of view that installation of ring main unit in distribution transformer will improve the distribution system reliability and availability. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 46: Capital Expenditure Approved for Installation of Ring main Unit in distribution transformer

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Ring main Unit in distribution transformer	1.50	0.50	0.50	0.50

Therefore, the Commission approves a total capital expenditure of Rs. 1.50 Cr and total capitalisation of Rs. 1.50 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

6. Installation of Energy Meters/ smart meters

Petitioner's Submission

The Petitioner submitted that it has planned installation of Smart Meters/Energy meters. The Petitioner submitted that the proposed scheme will help to improve the collection and billing efficiency. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 47: Installation of Energy Meters/ smart meters

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Installation of Energy Meters/ smart meters	3.00	1.00	1.00	1.00

Commission's Analysis

The Commission is of the view that installation of smart meters/ energy meters will support in smooth functioning and proper energy accounting. Further, it will support in enhancing the billing and collection efficiency. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 48: Capital Expenditure Approved for Installation of Energy Meters/ smart meters

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Installation of Energy Meters/ smart meters	3.00	1.00	1.00	1.00

Therefore, the Commission approves a total capital expenditure of Rs. 3.00 Cr and total capitalisation of Rs. 3.00 Cr for the upcoming Control Period in this regard. The Commission directs the Petitioner to submit Detailed Project Report (DPR) along with the justification and cost benefit analysis of the proposed scheme within 30 days from the issuance of this Order.

7. Laying of HT Cable Line

Petitioner's Submission

The Petitioner submitted that it has planned laying of HT cable line in the phased manner in all the island.

The Petitioner submitted that the proposed scheme will help to provide transmission of power from power house (Step up Transformer) to distribution transformers (Step down Transformer) installed in new places. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 49: Laying of HT Cable Line

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Laying of HT Cable Line	2.25	0.75	0.75	0.75

Commission's Analysis

The Commission is of view that being an HT network, laying of HT cable for consumers is an ongoing and essential activity which helps in reducing the losses and also increases the reliability of power supply. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 50: Capital Expenditure Approved for Laying of HT Cable Line

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Laying of HT Cable Line	2.25	0.75	0.75	0.75

Therefore, the Commission approves a total capital expenditure of Rs. 2.25 Cr and total capitalisation of Rs. 2.25 Cr for the upcoming Control Period in this regard.

8. Supply of LT Cable

Petitioner's Submission

The Petitioner has proposed the scheme for supply of LT cable throughout the Island in a phased manner. The proposed scheme will help to provide new service connections and also for replacement of defective cables. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 51: Supply of LT Cable

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of LT Cable	3.50	1.50	1.00	1.00

Commission's Analysis

The Commission is of the view that the scheme for supply of LT cable through-out the Island is an ongoing activity to cater to the 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.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 52: Capital Expenditure Approved for Supply of LT Cable

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of LT Cable	3.50	1.50	1.00	1.00

Therefore, the Commission approves a total capital expenditure of Rs. 3.50 Cr and total capitalisation of Rs. 3.50 Cr for the upcoming Control Period in this regard.

9. Supply of consumer cable/ Street light Cable

Petitioner's Submission

The Petitioner has proposed the scheme for supply of consumer cable/ Street light Cable throughout the Island in a phased manner. The proposed scheme will help to provide new service connections to domestic and

commercial consumers and also for replacement of defective cables. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 53: Supply of consumer cable/ Street light Cable

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of consumer cable/ Street light Cable	3.50	1.50	1.00	1.00

Commission's Analysis

The Commission is of the view that the scheme for supply of consumer/street light cable through-out the Island will smoothen the consumer on-boarding process and replacement of defective cables will enhance the quality and reliability of the electricity service. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 54: Capital Expenditure approved for Supply of consumer cable/ Street light Cable

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of consumer cable/ Street light Cable	3.50	1.50	1.00	1.00

Therefore, the Commission approves a total capital expenditure of Rs. 3.50 Cr and total capitalisation of Rs. 3.50 Cr for the upcoming Control Period in this regard.

10. Supply of streetlight set

Petitioner's Submission

The Petitioner submitted that it has proposed the scheme for supply of streetlight set. The Petitioner submitted that the proposed scheme will help in saving of energy by replacing with LED type street lights. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 55: Supply of streetlight set

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of streetlight set	1.50	0.50	0.50	0.50

Commission's Analysis

The Commission is of the view that the scheme to supply streetlight sets by replacing with LED type streetlights shall have potential energy saving and efficient use of energy. The savings will help in bringing down the costly generation in the islands. The Commission, thus, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 56: Capital Expenditure Approved for Supply of streetlight set

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of streetlight set	1.50	0.50	0.50	0.50

Therefore, the Commission approves a total capital expenditure of Rs. 1.50 Cr and total capitalisation of Rs. 1.50 Cr for the upcoming Control Period in this regard.

11. Supply of street light poles

Petitioner's Submission

The Petitioner submitted that it has proposed the scheme for supply of street light poles.

The Petitioner submitted that the proposed scheme will help to smoothen the installation and repairing of cables to minimise the cable fault due to improper digging by water authorities and telephone authorities. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 57: Supply of street light poles

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of street light poles	3.50	1.50	1.00	1.00

Commission's Analysis

The Commission is of the view that the scheme to supply of street light pole shall help to smoothen the installation and repairing of cables to minimise the cable fault due to improper digging by water authorities and telephone authorities which in turn will improve the quality and reliability of the electricity supply

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

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 58: Capital Expenditure Approved for Supply of street light poles

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of street light poles	3.50	1.50	1.00	1.00

Therefore, the Commission approves a total capital expenditure of Rs. 3.50 Cr and total capitalisation of Rs. 3.50 Cr for the upcoming Control Period in this regard.

12. Supply of Pole Mounting Street boxes

Petitioner's Submission

The Petitioner submitted that it has proposed the scheme for supply of pole mounting street boxes. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 59: Supply of Pole Mounting Street boxes

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of Pole Mounting Street boxes	4.00	2.00	1.00	1.00

Commission's Analysis

The Commission observes that the Petitioner has provided no rationale and prospective benefits of the supply of pole mounting street boxes. In absence of any proper justification and details regarding the proposed capital expenditure, the Commission is not inclined to allow the capital expenditure in this regard as part of Business Plan. The Petitioner may file the details of proposed capital expenditure in the next tariff and the Commission may allow the same after the prudence check.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 60: Capital Expenditure Approved for Supply of Pole Mounting Street boxes

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Supply of Pole Mounting Street boxes	0.00	0.00	0.00	0.00

Therefore, the Commission approves a total capital expenditure of NIL and total capitalisation of NIL for the upcoming Control Period in this regard.

13. Improvement and Augmentation of Power house/Line Tools

Petitioner's Submission

The Petitioner has proposed the scheme for improvement and augmentation of powerhouse/line tools in all islands. The proposed scheme will help in minimising the maintenance of power system and maximising the running efficiency. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 61: Improvement and Augmentation of Power house/Line Tools

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Improvement and Augmentation of Power house/Line Tools	0.75	0.25	0.25	0.25

Commission's Analysis

The Commission is of the view that improvement and augmentation of powerhouse/line tools in all islands will improve the overall operational efficiency and therefore, approves the capital expenditure as proposed by the Petitioner for the Control Period.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 62: Capital Expenditure Approved for Improvement and Augmentation of Power house/Line Tools

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Improvement and Augmentation of Power house/Line Tools	0.75	0.25	0.25	0.25

Therefore, the Commission approves a total capital expenditure of Rs. 0.75 Cr and total capitalisation of Rs. 0.75 Cr for the upcoming Control Period in this regard.

14. VCB Panel for power House at Kavaratti and Androth

Petitioner's Submission

The Petitioner has submitted that it has planned installation of VCB Panel for power House at Kavaratti and Androth. The Petitioner has provided no rationale behind proposing the Capital expenditure for the installation of VCB Panel for power house at Kavaratti and Androth. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 63: VCB Panel for powerhouse at Kavaratti and Androth

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
VCB Panel for power House at Kavaratti and Androth	1.00	1.00	-	-

Commission's Analysis

The Commission observes that the Petitioner has provided no rationale and prospective benefits of the installation of VCB Panel for powerhouse at Kavaratti and Androth. In absence of any proper justification and details regarding the proposed capital expenditure, the Commission is not inclined to allow the capital expenditure in this regard as part of Business Plan. The Petitioner may file the details of proposed capital expenditure in the next tariff and the Commission may allow the same after the prudence check.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 64: Capital Expenditure Approved for VCB Panel for powerhouse at Kavaratti and Androth

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
VCB Panel for power House at Kavaratti and Androth	0.00	0.00	-	-

Therefore, the Commission approves a total capital expenditure of NIL and total capitalisation of NIL for the upcoming Control Period in this regard.

15. Modernisation and Augmentation of control Panel at Power Houses

Petitioner's Submission

The Petitioner submitted that it has proposed the scheme of modernisation and Augmentation of control Panel at Power Houses.

The Petitioner has provided no rationale behind proposing the Capital expenditure for modernisation and Augmentation of control Panel at Power Houses. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 65: Modernisation and Augmentation of control Panel at Power Houses

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Modernisation and Augmentation of control Panel at Power Houses	1.00	1.00	-	-

Commission's Analysis

The Commission observes that the Petitioner has provided no rationale and prospective benefits of proposing the Capital expenditure for modernisation and Augmentation of control Panel at Power Houses. In absence of any proper justification and details regarding the proposed capital expenditure, the Commission is not inclined to allow the capital expenditure in this regard as part of Business Plan. The Petitioner may file the details of proposed capital expenditure in the next tariff and the Commission may allow the same after the prudence check.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 66: Capital Expenditure Approved for Modernisation and Augmentation of control Panel at Power Houses

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Modernisation and Augmentation of control Panel at Power Houses	0.00	0.00	-	-

Therefore, the Commission approves a total capital expenditure of NIL and total capitalisation of NIL for the upcoming Control Period in this regard.

16. Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini.

Petitioner's Submission

The Petitioner submitted that it has planned expenditure for Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini.

The Petitioner has provided no rationale behind proposing the Capital expenditure for Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 67: Multipurpose vehicle for Line at Electrical Sub-Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini	1.50	0.50	0.50	0.50

Commission's Analysis

The Commission observes that the Petitioner has provided no rationale and prospective benefits of proposing the Capital expenditure for Multipurpose vehicle for Line at Electrical Sub-Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini. In absence of any proper justification and details regarding the proposed capital expenditure, the Commission is not inclined to allow the capital expenditure in this regard as part of Business Plan. The Petitioner may file the details of proposed capital expenditure in the next tariff and the Commission may allow the same after the prudence check.

The Summary of capital expenditure and capitalisation approved for this scheme in the following table:

Table 68: Capital Expenditure Approved for Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti, Androth, Kalpeni, Minicoy and Amini	0.00	0.00	0.00	0.00

Therefore, the Commission approves a total capital expenditure of NIL and total capitalisation of NIL for the upcoming Control Period in this regard.

17. Construction of Office Building and Power house

Petitioner's Submission

The Petitioner submitted that it has planned construction of Office Building and Power house. The capital expenditure and capitalisation proposed by the Petitioner for the above scheme is as given below.

Table 69: Construction of Office Building and Power house

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Construction of Office Building and Power house	7.00	3.00	2.00	2.00

Commission's Analysis

The Commission observes that the Petitioner has provided no rationale and prospective benefits of proposing the Capital expenditure for construction of Office Building and Power house. In absence of any proper justification and details regarding the proposed capital expenditure, the Commission is not inclined to allow the capital expenditure in this regard as part of Business Plan. The Petitioner may file the details of proposed capital expenditure in the next tariff and the Commission may allow the same after the prudence check.

The Summary of capital expenditure and capitalisation approved for this scheme is given below.

Table 70: Capital Expenditure Approved for Cconstruction of Office Building and Power house

Name of Scheme	Total Estimated Amount (INR Crore)	Proposed		
		FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Construction of Office Building and Power House	0.00	0.00	0.00	0.00

Therefore, the Commission approves a total capital expenditure of NIL and total capitalisation of NIL for the upcoming Control Period in this regard.

SUMMARY OF CAPITAL EXPENDITURE APPROVED BY THE COMMISSION

The Commission observes that the Petitioner has incurred actual capital expenditure of Rs. 23.18 Crore in the previous Control Period (FY 2019-20 to FY 2021-22) against the approved capital expenditure of Rs. 28.00 Crore. The Petitioner, for the upcoming control period (FY 2022-23 to FY 2024-25) has proposed capital expenditure of Rs. 57.50 Crore which is higher than the actual capital expenditure incurred in the previous Control Period. Hence, the Commission has partially approved capital expenditure of the 17 new schemes as proposed by the Petitioner for the upcoming Control Period.

A Summary of capital expenditure approved by the Commission for the upcoming Control Period is given below.

Table 71: Summary of Capital expenditure plan approved by the Commission for the upcoming Control Period

Sr. No.	Name of Scheme	Approved Expenditure (INR Crore)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
1	Supply of DG sets at Kavaratti (2x1500KVA), Amini & Agatti (2 x 750) and Kiltan Chetlat and Kalpeni	3.00	2.00	2.50	7.50
2	DG set major components of Coil Cooler, Radiator and Essy GEN etc.	4.00	1.50	1.50	7.00
3	Supply and Installation of step up transformers at Agatti ,Kadmath, Chetlat & Kalpeni Island (Continuing), Kalpeni & Kiltan and Chetlat & Androth	1.00	0.50	0.50	2.00
4	Supply and Installation of Step-down Transformers in all Islands except Bitra	5.00	1.00	1.00	7.00
5	Supply of Ring Main Unit at Androth -2, Kadmath - 2 and Kavaratti-2 (Continuing)	0.50	0.50	0.50	1.50
6	Supply of Energy Meters/ smart meters	1.00	1.00	1.00	3.00
7	Supply of HT cables	0.75	0.75	0.75	2.25
8	Supply of LT cables	1.50	1.00	1.00	3.50
9	Supply of consumer cable / Street Light cable (Continuing)	1.50	1.00	1.00	3.50
10	Supply of Street light set	0.50	0.50	0.50	1.50
11	Supply of street light poles	1.50	1.00	1.00	3.50
12	Supply of Pole Mounting Street boxes (Continuing)	0.00	0.00	0.00	0.00
13	Power House Tools and Line Tools (Supply of Flow meters)	0.25	0.25	0.25	0.75
14	VCB Pannel for power House at Kavaratti and Androth	0.00	0.00	0.00	0.00
15	Modernisation and Augmentation of control Pannel at Power Houses	0.00	0.00	0.00	0.00
16	Multipurpose vehicle for Line at Electrical Sub Division,	0.00	0.00	0.00	0.00

Sr. No.	Name of Scheme	Approved Expenditure (INR Crore)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
	Kavaratti., Androth and kalpeni. And Minicoy and Amini				
17	Construction of office building and Power House building at Islands.	0.00	0.00	0.00	0.00
	Total	20.50	11.00	11.50	43.00

Therefore, the Commission approves a total capital expenditure of Rs. 43.00 Cr for the upcoming Control Period.

Regulation 8.5 (f) of the JERC MYT Regulations, 2021 in this regard stipulates as follows:

“The Licensee shall submit a report for every quarter detailing the progress of the capital expenditure and capitalisation undertaken against that proposed in the Capital Investment Plan, on or before the last Day of the month succeeding the respective quarter for review by the Commission.”

The Commission directs the Petitioner to submit a quarterly report for every quarter on actual capital expenditure and capitalisation starting from first quarter of FY 2022-23. Further, the Petitioner is directed to submit Detailed Project Report (DPR) for scheme nos. 1 to 6 along with the justification and cost benefit analysis of all the approved schemes within 30 days from the issuance of this Order.

Table 72: Summary of Capitalisation approved by the Commission for the upcoming Control Period

Sr. No.	Name of Scheme	Approved Capitalisation (INR Crore)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
1	Supply of DG sets at Kavaratti (2x1500KVA), Amini & Agatti (2 x 750) and Kiltan Chetlat and Kalpeni	3.00	2.00	2.50	7.50
2	DG set major components of Coil Cooler ,Radiator and Essy GEN etc.	4.00	1.50	1.50	7.00
3	Supply and Installation of step up transformers at Agatti ,Kadmath, Chetlat & Kalpeni Island (Continuing), Kalpeni & Kiltan and Chetlat & Androth	1.00	0.50	0.50	2.00
4	Supply and Installation of Step down Transformers in all Islands except Bitra	5.00	1.00	1.00	7.00
5	Supply of Ring Main Unit at Androth -2 , Kadmath - 2 and Kavaratti-2 (Continuing)	0.50	0.50	0.50	1.50
6	Supply of Energy Meters/ smart meters	1.00	1.00	1.00	3.00
7	Supply of HT cables	0.75	0.75	0.75	2.25
8	Supply of LT cables	1.50	1.00	1.00	3.50
9	Supply of consumer cable / Street Light cable (Continuing)	1.50	1.00	1.00	3.50
10	Supply of Street light set	0.50	0.50	0.50	1.50

Sr. No.	Name of Scheme	Approved Capitalisation (INR Crore)			
		FY 2022-2023	FY 2023-24	FY 2024-25	Total
11	Supply of street light poles	1.50	1.00	1.00	3.50
12	Supply of Pole Mounting Street boxes (Continuing)	0.00	0.00	0.00	0.00
13	Power House Tools and Line Tools (Supply of Flow meters)	0.25	0.25	0.25	0.75
14	VCB Pannel for power House at Kavaratti and Androth	0.00	0.00	0.00	0.00
15	Modernisation and Augmentation of control Pannel at Power Houses	0.00	0.00	0.00	0.00
16	Multipurpose vehicle for Line at Electrical Sub Division, Kavaratti., Androth and kalpeni. And Minicoy and Amini	0.00	0.00	0.00	0.00
17	Construction of office building and Power House building at Islands.	0.00	0.00	0.00	0.00
	Total	20.50	11.00	11.50	43.00

Therefore, the Commission approves a total capitalisation of Rs. 43.00 Cr for the upcoming control period.

3.5.2. Funding Plan

Petitioner's submission

The Petitioner has submitted that the entire capital expenditure incurred has been funded through equity infusion by Government of India (GoI) through budgetary support without any external borrowings. There are no loan borrowings by the Petitioner for the capital expenditure.

Further, the Petitioner submitted that as per Regulation 25 of MYT Regulations, 2021, any equity deployed in excess of 30% of the capital cost of the project, is required to be treated as normative loan. Since the entire capital expenditure in various schemes shall be infused by the GoI, the Petitioner requested the Commission to consider the funding of various schemes in accordance with Regulation 25 of MYT Regulations, 2021 and approve the same. The breakup of the financing of the capital expenditure during the upcoming Control period is as given in the table below:

Table 73: Proposed funding details for the upcoming Control Period

Particulars	FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Proposed Capital Expenditure	28.00	14.50	15.00
Actual Funding			
100% Equity from Central Govt.	28.00	14.50	15.00
Proposed Funding in line with Regulation of JERC MYT Regulations			
Equity (30%)	8.40	4.35	4.50
Debt (Normative Debt in excess of 30% equity)	19.60	10.15	10.50

Particulars	FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Total Funding	28.00	14.50	15.00

Commission's analysis

Based on the capital expenditure approved by the Commission, the approved funding details is given in the table below:

Table 74: Approved funding plan for the upcoming Control Period

Particulars	FY 2022-23 (INR Crore)	FY 2023-24 (INR Crore)	FY 2024-25 (INR Crore)
Actual Capitalisation	20.50	11.00	11.50
Actual Funding			
Equity from Central Govt.	20.50	11.00	11.50

The Commission has approved the funding as Equity from GoI as proposed by the Petitioner. However, for computing the various components of ARR in MYT Order, the Commission will consider the Debt and Equity percentage as per Regulation 25 of MYT Regulations, 2021 and any equity deployed in excess of 30% of the capital cost of the project will be treated as normative loan.

3.6. Other Expenditure

3.6.1. Expenses related to Training of manpower

Petitioner's Submission

The Petitioner plans to conduct/arrange training programs every year of the upcoming Control Period for different categories of employees to develop the skill set of the employees of the transmission and distribution utility.

Commission's Analysis

The Commission appreciates the Petitioner for taking the initiative of training the department employees to enhance their skill set. The Commission directs the Petitioner to submit the details such as the scope of training, days of training, number of employees covered under the training and the overall expenditure on the same along with the details of expenses incurred in past control period on trainings within 3 three months of issuance of this order.

3.6.2. Expenses related to Safety of manpower

Petitioner's Submission

The Petitioner, in order to ensure safety of its manpower has proposed expenditure towards procurement of safety materials such as firefighting equipment's and cap shoes gloom etc., for its manpower. The Petitioner has estimated the cost with respect to the safety measures as given in the table below:

Table 75: Safety Measure Expenditure as proposed by the Petitioner for the upcoming Control Period

Particulars	FY 2022-23 (INR Lakh)	FY 2023-24 (INR Lakh)	FY 2024-25 (INR Lakh)
Safety Measures	10.00	8.00	8.00

Commission's Analysis

The Commission directs the Petitioner to submit the complete details of proposed expenditure under this head, including the basis for arriving at the amount and the initiatives planned, in the MYT Petition. Further, the Petitioner should also submit the details of actual expenditure under this head in last three years.

3.7. Capital Expenditure Scheme for Customer Relationship Management

The Commission has observed that the Petitioner has not specifically proposed any expenditure towards the implementation of Customer Relationship Management (CRM) system the UT to improve the customer convenience, improved customer retentions, centralised information management, etc. in light of Electricity (Rights of Consumers) Rules, 2020 issued by the Central Government. Though the Petitioner has planned to establish 24X7 centralized complaint centre where consumers can lodge complaints and remedial action can be taken accordingly.

In view of the above, **the Commission directs the Petitioner to submit the Detailed Project Report with estimated capital expenditure towards implementation of CRM system within 90 days of the release of this order.**

3.8. Manpower Plan

Petitioner's Submission

The Petitioner has forecasted the number of employees based on the retirements and recruitments for the Control Period from FY 2022-23 to FY 2024-25. The forecasted number of employees submitted by the Petitioner is as given in the table below:

Table 76: Projections of number of employees as proposed by the Petitioner for the upcoming Control Period

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
No. of employees as on 1 st April	336	336	336	344
No. of employees added during the year	13	24	17	15
Total number of employees	349	360	353	359
Number of employees retired/retiring during the year	13	24	9	15
Number of employees at the end of the year	336	336	344	344

Commission's Analysis

The Commission approves the Petitioner's additional manpower requirements. However, the Commission directs the Petitioner to furnish the Government approvals at the time of petition filing for the next year.

3.9. Other Initiatives

3.9.1. Technological Initiatives

Petitioner's Submission

The Petitioner has submitted that the Ministry of Non-Conventional Energy Sources has identified Lakshadweep Electricity Department as one of the beneficiaries to their scheme "TIFAD" (Technology Information Forecasting Assessment and Databank) during 1998-99. Under the scheme, the Department received financial assistance from the Ministry to set up Renewable Energy NET (RENET) by installing a VSAT (FTDMA), Server and a Client Computer along with one 2 KVA UPS. The VSAT system has installed in the Electricity Division Office, Kavaratti during 04/2000. Later, VSAT connection has been extended to all the offices in the Lakshadweep Islands by Lakshadweep Administration.

The department has switched over to web-based applications from the year 2007 for extending various online facilities to its consumers and to have a real time monitoring of the activities of the Department.

The CSI-Nihilent e-Governance award 2006-07 for the best e-Governed Department category was jointly awarded to Department of Electricity, Lakshadweep and Department of Health and family welfare, Government of Gujarat for the achievements they had in implementing e-Governance applications in their respective Departments.

The Web Portal & EBCMS thoroughly revamped and POWERLAK launched introducing online services like online applications and subsequent workflow for all services during 2014 March. SMS services and e-mail services were integrated

The E-Payment services of Bill collections started in February 2015

The POWERLAK Services' mobile app for consumer fraternity launched on 15 August 2017.

The POWERLAK Reader App introduced for surprise check readings in Feb 2018. The app reads the readings from consumer premises and sync the same with server.

The POWERLAK Reader APP introduced for 100% consumer readings in Aug 2018. The app reads the readings from consumer premises and sync the same with server with geo-tagging.

The POWERLAK Workflow is changed from 'self-reading' mechanism to 'Department Reading/SPOT Reading' w.e.f 1st Oct 2018. Accordingly billing services are also changed from current-month billing to pre-prepared previous-month billing.

The BBPS integrated Electricity Billing system for payments apps like BHIM, Google Pay, PayTM etc. started in March 2021.

Commission's Analysis

The Commission appreciates the Petitioner for taking the technological advancement initiatives.

3.9.2. Capital Expenditure for Customer Relationship Management

Petitioner's Submission

The Petitioner has submitted that it has taken several initiatives for improvement of customer service. The steps already taken and those proposed to be taken are provided below.

- Centralized Complaint Centre: LED plans to establish 24X7 centralized complaint centre where consumers can lodge complaints and remedial action can be taken accordingly.
- Introduced the facility of online payment whereby consumers can pay by internet banking system.

Commission's Analysis

The Commission has observed that the Petitioner has not specifically proposed any expenditure towards the implementation of Customer Relationship Management (CRM) system the UT to improve the customer convenience, improved customer retentions, centralised information management, etc. in light of Electricity (Rights of Consumers) Rules, 2020 issued by the Central Government. Though the Petitioner has planned to establish 24X7 centralized complaint centre where consumers can lodge complaints and remedial action can be taken accordingly, but the Petitioner has not submitted the DPR and Technical Sanction for this Capital expenditure.

In view of the above, **the Commission directs the Petitioner to submit the Detailed Project Report with estimated capital expenditure towards implementation of CRM system within 90 days of the release of this order.**

3.9.3. Promotion of Renewable Energy

The Petitioner has submitted that to promote the use of renewable power in Lakshadweep, LED plans to purchase of solar power from SECI. LED has initiated a study to make a road map for sourcing 100% energy requirement of LED through Renewable Energy sources for all the Islands to mitigate the diesel consumption. As per the discussion with SECI, they will take all the existing projects and then will start work. Based on the preliminary inputs, the solution would comprise of the following:

- Development of Floating Solar Power Projects
- Repowering of existing ground mounted solar projects
- Development of roof top solar power projects
- Development of small scale wind turbines
- Employing Battery energy storage to manage the renewable power generated in tandem with load requirements and DG sets.

The UT of Lakshadweep Administration had decided to privatize entire Generation and Distribution functions of Department of Electricity. Hence, all the existing projects of SECI except Kavaratti and Agatti SPV plants, has been put on hold for the time being. One of the prime objectives of privatization is the transition from Diesel based generation to clean energy generation within a short period. It is anticipated that 80-100% RE generation shall be complied within 3-4 years after the privatization.

In view of the above, **the Commission directs the petitioner to submit an action plan for utilizing the renewable generation sources for reducing the dependency on diesel-based generation.**

3.9.4. Energy Audit

The Petitioner has submitted that it has conducted energy audit for FY 2018-19 and submitted the report to the Commission. The Petitioner has submitted that it plans to conduct energy audit of its Transmission & Distribution system every year henceforth to identify energy loses and implement steps to reduce the same.

In view of the above, **the Commission directs the petitioner to submit the energy audit report till FY 2021-22 within 90 days of the release of this order.**

3.9.5. CGRF Expenses Details

Petitioner's Submission

The Petitioner has submitted the details of the expense incurred over CGRF for the FY 2020-21 as provided in the table below:

Table 77: CGFR Expense details

Particulars	FY 2020-21 (INR)
Salary	8,36,422
Petty Expenditure i-e Newspaper bill and Stationary	13,939
Others	57,536
Total	9,07,897

Commission's Analysis

The Commission observes that these expenses form part of the ARR and shall be considered by the Commission subsequently at the time of approval of the MYT Petition.

Annexures

Annexure 1: List of Stakeholders who attended the Public hearing on 17th February 2022 through Video Conference

Table 78: List of Stakeholders

S.No.	Name of Person (Mr/Ms)
1	Mohammad Noufal K C (K Cheriadam House, Androth Island)
2	Ajmeer Kalam K C (President NYC, Androth Unit, Androth Island)
3	Anwer Husain AB (VDP Member, Androth Island)
4	Mohammed Kasim UP (Ummathabiyapura House, Androth Island)
5	A.K Abdul Gafoor (General Secretary, National Congress Party)
6	Dehlan C L (Chemmachery Lavanakkal, Androth Island)
7	Dr. Basheer PP (Puthiyaveed House, Secretary, NCP Androth unit, Androth Island)
8	Fathaudeen M (Mathail House, Androth Island)
9	Husain K (VDP Member, Androth Island)
10	Husain T (Thailath House, President, NCP, Androth Unit, Androth Island)
11	Koya P (Puthiyadam House, Androth Island)
12	Sayyid Liyaudeen P (Pattakal House, Androth Island)
13	Sayed Madani (Secretary NYC, Androth Unit, Androth Island)
14	Jalaludheen M L (District Pachayat Member, Androth Island)
15	Mukhtar A I (Aliyathammada Ishayyapura House, Androth Island)
16	Musthafa U P (Madani House, Androth Island)
17	A.Misbah (Ex- Member Home Ministers Advisory Committee for Lakshadweep, Kavaratti)
18	Shaams Shumoos PVP (PVP House, Androth Island)
19	Noorul Hakeem T P (Thattampokkada House, Androth Island)
20	K.N.Kasmikoya (District Panchayat, Member & State President, Bharathiya Janatha Party)
21	Abdul Kader. T (Chairperson, Village Panchayat, Kavaratti)
22	Abdul Razak. M (District Panchayat Member, Kavaratti)
23	Thaha Malika (District Panchayat Member, Kavaratti)