TARIFF ORDER

Review of ARR of FY 2013-14
and
Determination of Aggregate Revenue Requirement
&
Retail Tariff for FY 2014-15,
For
Electricity Department Lakshadweep

(Petition no. 123/2014)

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories

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11th April 2014

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List of Abbreviations

Abbreviation		Full Form
A&G	:	Administration & General Expenses
Act	:	The Electricity Act, 2003
ARR	:	Aggregate Revenue Requirement
CAGR	:	Compound Annualized Growth rate
Capex	:	Capital Expenditure
CEA	:	Central Electricity Authority
CERC	:	Central Electricity Regulatory Commission
COD	:	Commercial Operation Date
Commission/JERC	:	Joint Electricity Regulatory Commission for the state of Goa and union territories
CKt. Km	:	Circuit Kilometer
D/C	:	Double Circuit
DS	:	Domestic Supply
EA 2003	:	The Electricity Act, 2003
FC	:	Fixed Charges
FY	:	Financial Year
GFA	:	Gross Fixed Assets
HP	:	Horse Power
HSD	:	High Speed Diesel Engines
HT	:	High Tension
LED	:	Electricity Department, Lakshadweep
JERC	:	Joint Electricity Regulatory Commission for the state of Goa and union territories
KVA	:	Kilo Volt Ampere
KWh	:	Kilo Watt Hour
LPS	:	Late Payment Surcharge
LT	:	Low Tension
MU	:	Million Unit
MW	:	Mega Watt
MYT	:	Multi Year Tariff
NDS	:	Non Domestic Supply
O/H	:	Over head

Abbreviation		Full Form
O&M	:	Operation & Maintenance
PLF	:	Plant Load Factor
RoE	:	Return on Equity
RPO	:	Renewable Purchase Obligation
R&M	:	Repair& Maintenance
S/C	:	Single Circuit
SBI PLR	:	SBI Prime Lending Rate
T&D	:	Transmission & Distribution
UoM	:	Unit of Measurement
VAR	:	Volt Ampere Reactive
VC	:	Variable Charges

Before the

Joint Electricity Regulatory Commission for the State of Goa and Union Territories

Gurgaon

CORAM

Sh. S.K. Chaturvedi, Chairperson

Petition No. 123/2014

In the matter of

Review of ARR of FY 2013-14 and Aggregate Revenue Requirement (ARR) & Retail Tariff for the Financial Year 2014-15, of the Electricity Department of Lakshadweep

And in the matter of

Electricity Department of Lakshadweep -------**Petitioner**

ORDER

Date: 11.04.2014

1. INTRODUCTION

1.1 JERC Formation

In exercise of the powers conferred by Section 83 of the Electricity Act, 2003 the Central Government constituted a two member (including Chairperson) Joint Electricity Regulatory Commission for all Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories'' with headquarters at Delhi as notified vide notification no. 23/52/2003 – R&R dated May 2' 2005. Later on with the joining of the state of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" as notified on May 30' 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from September 2008. Office of the Commission is presently located in the district town of Gurgaon, Haryana.

1.2 Electricity Department, UT of Lakshadweep

The Electricity Department, UT of Lakshadweep herein called LED, is responsible for power supply in the Union Territory of Lakshadweep.

The Electricity Department of Lakshadweep (LED) is engaged in generation, transmission and distribution of electricity to the various consumer categories in the UT of Lakshadweep.

As submitted by the Petitioner –

Quote*"The Union Territory (UT) of Lakshadweep is an archipelago consisting of 12 atolls, three reefs and five submerged banks. It is a uni-district Union Territory with an area of 32 Sq. Kms and is comprised of eleven inhabited islands, 17 uninhabited islands attached islets, four newly formed islets and 5 submerged reefs. The inhabited islands are Kavaratti, Agatti, Amini, Kadmat, Kiltan, Chetlat, Bitra, Andrott, Kalpeni, Bangaram and Minicoy. The Electricity Department of Lakshadweep (LED) is engaged in generation, transmission and distribution of electricity to the various consumer categories in the UT of Lakshadweep. As the UT is an archipelago consisting of 11 inhabited islands and located far from the mainland of India, Lakshadweep is entirely dependent on its own generation for supply of power. The power in the UT of Lakshadweep is generated mainly from its Diesel Generating (DG) sets."* **Unquote**

1.3 Filing of Petition

The Commission in this regard would like to place reference to the Section 64 of the Electricity Act, 2003 which requires the licensee to file the Tariff petition as per the regulations notified under the Act. The relevant section is reproduced below:

Quote*"64. (1) An application for determination of tariff under section 62 shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations."* **Unquote**

Also based on the Clause 12 of Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 licensee is required to file its petition before 30th November each year. The extracts of the same is provided below:

Quote*"12. Filing* *(1) Each generating company and the licensee shall file Tariff Application on or before* ***30th November*** *each year with the Commission, in the format as may be laid down by the Commission which shall include statements containing calculation of the expected aggregate revenue from charges under its currently approved tariff and the expected cost of providing services i.e. Aggregate Revenue Requirement (ARR) during the Previous Year, Current Year and Ensuing Year. The information for the Previous Year should be based on audited accounts, if available"* **Unquote**

The Electricity Department of Lakshadweep filed its petition on 15th January 2014 which was admitted by the Commission on 16th January 2014. As the data contained in the petition would be used for the analysis of this order the Commission has considered the Petition.

1.4 Admission of Petition

After initial scrutiny and analysis of the petition, the Commission as per its letter dated 27th and 28th January 2014 sent the initial data gaps for approval of Aggregate Revenue Requirement (ARR) and Tariff for FY 2014-15. The Petitioner was directed to submit the data gaps before 5th February 2014 and their presence was required on 12th February 2014 for technical validation.

1.5 Interaction with the petitioner

This Order has referred at numerous places to various actions taken by the "Commission". It is pertinent to mention for the sake of clarity, that the term "Commission" unless otherwise specified in most of the cases refers to the Staff of the Commission for carrying out the technical due diligence & validation of data of the petitions filed by the utilities, obtaining and analyzing information and clarifications received from the utilities and submitting relevant issues for consideration of the 'Commission'.

The Commission's Staff held discussions with the Petitioner/Petitioner's representative on reply given by the LED on the initial data gaps. In consequent to the discussion held, additional information and clarification was sought from ED.

The Commission's staff interacted regularly with the Petitioner to seek clarifications and justification on various issues essential for the analysis of the tariff petition. The Commission's staff and the Petitioner also covered key issues related to the petition, which included Power purchase cost, estimated sales and revenue submitted to the Commission, etc.

Table 1: Formal Interactions with the Petitioner

SNo.	Date	Action by	Subject
1.	16th December 2013	LED	Extension sought till 31th January 2014
2.	23th December 2013	JERC	Extension granted upto 15th January 2014
3.	10th January 2014	LED	Submission of Petition
4.	14th January 2014	JERC	Fee acceptance, received through RTGS
5.	27th /28th January 2014	JERC	Data gaps
6.	28th January 2014	JERC	Arrangements for the Public hearing on 25th February 2014
7.	17th February	JERC	Additional data gaps on petition
8.	20th February 2014	JERC	Public notice issued in the press
9.	25th February 2014	LED	Public hearing
10.	5th March 2014	JERC	Budgetary support letter received

1.6 Quality of Filing

Absence of Audited Data

The LED has not provided audited information for FY 2012-13 or FY 2011-12, which was sought by the Commission for analysis purpose. Further, most of the calculations done by the Petitioner for the purpose of projecting ARR for FY 2014-15 are not based on any audited historical data as per the tariff regulation of 2009.

The extract of the same is provided below:

" (2) The data should be provided for three years.

(i) Audited figures for the previous year; Information for the previous year shall be based on the audited accounts; in the absence thereof, the audited accounts for the immediately preceding year shall be filed along with the un-audited accounts for the previous year.

(ii) Estimated figures for the current financial year should be based on actual figures for the first six months and the estimated figures for the second six-months of the year. The estimated figures for the second half year of the current financial year should be based on the actual audited figures for the second half of the previous year with adjustments that reflect known and measurable changes

expected to occur between them. These adjustments must be specifically documented and justified.
(iii) Forecasted figures for the ensuing year should be based on the current year figures with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified."

As per the above regulation (Tariff Regulation 2009) the Utility is required to present its audited figures for the previous year and in the absence of such data the audited figures of immediately preceding year along with the petition.

1.7 Public hearing process

The Commission specified to the Petitioner, to publish the summary of the ARR and Tariff proposal in the abridged form and manner as approved in accordance with section 64 of the Electricity Act, 2003 to ensure public participation.

The Notice for Public hearing was read out on Public address system and run on the local TV during 3 days prior to the Public hearing. This was in addition to the insertion of Notice by the Commission in the following newspaper:

Table 2: Details of public notice published by the Petitioner

S.No.	Action Taken
1.	Public was informed through local news channels and PA system

The Petitioner uploaded the petition on the U.T. of Lakshadweep website (http://www.lakshadweep.gov.in) and on the Electricity Department, Lakshadweep website – http://powerlak.gov.in for inviting objections and suggestions on their petition.

Interested parties / stakeholders were requested to file their objections / suggestions on the petition.

1.8 Notice for public hearing

The Commission also published public notices in the leading newspapers giving due intimation to stake holders, consumers, objectors and the public at large about the public hearing to be conducted by the Commission on 25th February 2014 as under:

Table 3: Schedule of public hearing at Lakshadweep

S.No.	Date & Time	Venue of Hearing	Subject & Category of Consumers
1.	25th February 2014	Seminar Hall of District Institute of Educational Training (near Stadium Ground) **at Kavaratti**	All Categories of Consumers. Petition no. 123/2013 ARR & Tariff for FY 2013-14 , i. Annual Performance Review FY 2013-14 ii. ARR for FY 2014-15 iii. Tariff for FY 2014-15

Table 4: Details of public notice published by Commission

S.No.	Date	Language	Name of Newspaper
1.	23th February 2014	Malayalam	Mathrubhumi – Kannur Edition
2.	23th February 2014	Malayalam	Manorama - Kannur Edition

The copies of public notice published by the Commission for intimation of public hearing are attached as **Annexure 1** to this order. The public notice was also published on the website of the Commission (www.jercuts.gov.in).

During the public hearing, each person filling objection/ suggestion was provided an opportunity to present his/ her views on the petition filed by the Petitioner. All those present in the hearing, irrespective of whether they had given a written objection or not, were given opportunity to express their views. The list of objectors is attached as **Annexure 2** to this order. The issues and concerns expressed by stakeholders have been examined by the Commission. The major issues discussed during the public hearing, the comments/replies of the Utility and the views of the Commission thereon, have been summarized in Chapter 4 of this order.

The list includes the stakeholders:

1. Those who gave their written Suggestions/objections & did not intend to present orally during the public hearing

2. Those who gave their written Suggestions/ objections & expressed to present orally also during the public hearing

3. Those who gave their written Suggestions/ objections but had not desired to express orally, but later chose to present orally also. They were also given an opportunity to present orally before the Commission during the public hearing;

4. Stakeholders who did not give their written Suggestion/objection or prior intimation, but participated in the hearing on the spot
5. Stakeholders who did not give their written Suggestion/ objection or prior intimation, but participated in the hearing on the spot and also gave written submissions after expressing their views

All these objections / suggestions were responded to by the Licensee in addition to prior written replies, during the hearing itself. Licensee submitted written reply to all written objections / suggestions of the stakeholders.

1.9 Adherence to Moral Code of Conduct

In view of General Elections 2014, the Model Code of Conduct has been imposed since 05th March 2014. In this context, the Principal Secretary, Secretariat of the Election Commission of India, vide its letter no. 437/6/1//2014/-CC&BE/235 Dated 29th March 2014 clarified to the CERC as follows:

Quote:
"The Commission has no objection to the continuance of the process required for the decision on the power tariff. However, tariff award shall be made only on the completion of poll in the relevant State, i.e. after the poll date/dates in that State'
Unquote

The FOR (Forum of Regulators) communicated the above mentioned clarifications as received from Election Commission to all SERCs vide its letter no.15/2 (39)/2013-FOR/CERC Dated 04.04. 2014.
The poll date in Lakashdweep, which was on 10th April, 2014, is over. Hence, in view of the consent and instructions received from the Election Commission of India as above, the Commission has finalized the tariff order and issued the current Tariff Order.

2. BRIEF SUMMARY OF ARR & TARIFF PETITION FOR FY 2014-15

2.1 Introduction

In exercise of powers conferred on Joint Electricity Regulatory Commission for the Goa and Union Territories under Section 61 read with Section 181 of the Electricity Act, 2003 and all other powers enabling it on this behalf, the Joint State Electricity Regulatory Commission for the State of Goa and Union Territories notified the (Terms and Conditions for Determination of Tariff) Regulations, 2009. These regulations came into force from the date of their publication in the official Gazette i.e. February 9' 2010.These Regulations were applicable to the State of Goa and the Union Territories of Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep and Pondicherry.

As covered in para no. 1.3 and 1.4 of Chapter no. 1, Electricity Department, UT of Lakshadweep filed its petition for determination of Aggregate Revenue Requirement and Tariff for FY 2014-15 to the Commission on 15th January 2014 under 61, 62 & 64 of the Electricity Act 2003 and relevant provisions mentioned in JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009. In accordance with the directions given by the Commission, the LED had also submitted its revised estimates of FY 2013-14 along with actuals of FY 2012-13. The data was not supported by any audited figures.

After initial scrutiny & analysis of the information submitted with ARR and Tariff Petition filed by LED; the petition was admitted subject to removal of infirmities to the extent possible. The Commission has taken the aforesaid petition on record as 'petition no. 123/2014 dated 16th January 2014.

2.2 Summary of the Petition for Aggregate Revenue Requirement for FY 2014-15

The Petitioner has submitted the ARR & tariff petition for FY 2014-15 based on the actual of FY 2012-13 and revised estimates of FY 2013-14. The Petitioner has submitted that it has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 2014-15. Based on the estimates and projections for FY 2014-15, the ARR for LED for FY 2014-15 has been proposed at Rs. 133.10 Crores. The summary of the proposal is presented below.

Table 5 : Aggregate Revenue Requirement submitted by the Petitioner for FY 2014-15 (Rs Crores)

S. No.	Particulars	Petitioner Submission 2014-15
1	Cost of fuel	97.70
2	Cost of power purchase for full year	-
3	Employee costs	12.56
4	Repair & Maintenance Expenses	3.58
5	Administration and general expenses	1.08
6	Depreciation	6.46
7	Interest and finance charges	5.78
8	Interest on working capital	2.61
9	Interest on Security Deposit	-
10	Return on NFA /Equity	3.53

S. No.	Particulars	Petitioner Submission 2014-15
11	Provision for Bad Debt	0.13
12	Advance Against Depreciation	-
13	Total Revenue Requirement	**133.43**
14	Less: Non-Tariff Income	0.33
15	**Net Revenue Requirement (FY2013-14)**	**133.10**

Further, the Petitioner has submitted the Average Cost of Supply (ACOS) and the average revenue realization per unit as below.

Table 6 : Average Cost of Supply and Average Revenue Realization submitted by the Petitioner (Rs/kWh)

Average Realization & Cost of Supply (Rs/Unit)	FY 2013-14	FY 2014-15
Average Cost of Supply of the LED	**28.69**	**29.56**
Average Realization	**2.93**	**2.93**
Revenue Gap at Existing Tariff	25.76	26.63

2.3 Summary of the Tariff Proposal for FY 2014-15

The Petitioner has not proposed any tariff revision for the FY 2014-15. The below table shows the existing tariff:

Table 7 : Existing and Proposed Tariff for FY 2014-15 submitted by the Petitioner

Tariff Structure	Existing FY 2013-14		Proposed FY 2014-15	
	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges ((Rs/kWh)	Fixed Charges
BPL/Kutir Jyoti		Rs. 25.00/ connection/month		Rs. 25.00/ connection/month
Domestic				
0- 50 units	1.00	Rs. 10 / connection/per month, Rs. 50/connection/per month for 3 phase connections	1.00	Rs. 10 / connection/per month, Rs. 50/connection/per month for 3 phase connections
51 to 100 units	1.25		1.25	
101 to 200 units	2.50		2.50	
201 units and above	4.00		4.00	

Tariff Structure	Existing FY 2013-14		Proposed FY 2014-15	
	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges ((Rs/kWh)	Fixed Charges
Commercial				
0 - 100 kWh	4.25	Rs. 25 / connection/per month, Rs. 100/connection/per month for 3 phase connections	4.25	Rs. 25 / connection/per month, Rs. 100/connection/per month for 3 phase connections
101-200kWh	5.00		5.00	
201 and above	6.00		6.00	
HT Consumers	6.00	Rs. 100/KVA	6.00	Rs. 100/KVA
Industrial	4.50	Rs. 30/KVA/month	4.50	Rs. 30/KVA
Street Lighting	4.00		4.00	
Temporary Connections	7.00		7.00	

2.4 Prayer to the Commission

The Petitioner has respectfully prayed to the Commission as follows:

Quote

"

- *Admit and approve the Aggregate Revenue Requirement of FY 2014-15 as submitted herewith.*
- *Condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.*
- *Submit necessary additional information required by the Commission during the processing of this petition*
- *And pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case*

"

Unquote

3. APPROACH OF THE ORDER FOR DETERMINATION OF ARR & TARIFF FOR FY 2014-15

3.1 Introduction

As covered in an earlier section of this order, Electricity Department of UT Lakshadweep has filed its petition for determination of Aggregate Revenue Requirement and Tariff for FY 2014-15 to the Commission vide affidavit submitted on 15th January 2014 in accordance with section 61, 62 & 64 of the Electricity Act, 2003 and relevant provisions mentioned in JERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2009.

3.2 Approach for Review for FY 2014-15

The Commission has considered the submission of the Petitioner dated 15thJanuary 2014, which was admitted on 16th January 2014. Commission based on first petition filed by the LED determined the ARR and tariff for FY 2012-13 in the order dated 31st October 2012 and ARR and tariff for FY 2013-14 was done on 22nd May 2013. Further to this the Review of ARR for FY 2013-14 is to be carried out as per the provisions of regulation 8 of JERC Tariff Regulations, 2009:

Quote

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

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

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

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

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

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

In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.
The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category"
Unquote

The Petitioner has not filed the true up petition for the FY 2012-13 due to the lack of audited accounts. The Commission in its previous order had stressed upon the requirement of the audited accounts to bring in more accuracy in the estimates of the Commission. The JERC Tariff regulation also requires the licensee to file the true up along with the audited accounts in the filing. However, in the interest of the consumers and the Utility the Commission has proceeded with the Review of ARR for FY 2013-14 and ARR for FY 2014-15. Also, it has been informed by the Electricity Department of Lakshadweep, that an audit firm has been appointed by them for the FY 2010-11, FY 2011-12 and FY 2012-13.

Therefore, Commission directs the Petitioner to file the true up petition separately along with the audited accounts latest by 30thJuly 2014, failing which appropriate action would be taken under the provisions of the Electricity Act 2003 and the JERC Tariff regulations.

In view of the above, the Commission has reviewed the variations between approvals and revised estimates of sale of electricity, income and expenditure for FY 2013-14.

The detailed analysis & treatment of each component based on the revised estimates is provided in **Chapter 5 (Review of ARR for FY 2013-14)** of this Order.

3.3 Approach for Determination of ARR & Retail Tariff for FY 2014-15

In this regard various provisions of the JERC's Tariff Regulations 2009 pertaining to business of the integrated Utility are relevant and Commission is guided by the principles contained in Section 61 of the Act among other things to examine the Sales forecast, Power purchase quantum, Self-generation and other income & expenditure.

The Commission, while determining the tariff is guided by the principles contained in Section 61 of the Act, namely

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

b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;

c) The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;

d) Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

e) The principles rewarding efficiency in performance;

f) That the tariff progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;

g) The promotion of co-generation and generation of electricity from renewable sources of energy;

h) The National Electricity Policy and tariff policy;

i) In addition to above the Commission is bound by the Renewable Energy purchase obligations, as specified in JERC (Procurement of Renewable Energy) Regulations, 2010.

j) Relevant directions given by the Hon'ble APTEL in the judgment in O.P. no. 1 of 2011.

The Commission has considered the actual unaudited figures of income & expenditure submitted by the Petitioner for FY 2012-13 and revised estimates for FY 2013-14 to form the basis of projection of income and expenditure for FY 2014-15. The detailed analysis & treatment of each component is provided in **Chapter 6 (Aggregate Revenue Requirement of FY 2014-15) of this order.**

4. SUMMARY OF OBJECTIONS RAISED, RESPONSE FROM THE PETITIONER AND COMMISSION'S VIEWS

4.1 Objections/Suggestions and response of Electricity Department, Lakshadweep

4.1.1 Tariff Related Objections

Stakeholders Objections/Comments:

Mr. Abu Bakkar Koya requested commission to limit the tariff as most of the consumers in the Islands of the UT are poor and the only source of income in the region is copra trade.

Mr. Mohammed Koya (Kawarati Island) requested Commission to remove the fixed charges towards air conditioner.

Mr. Muttu Koya requested not to raise tariff as most of the people on these Islands of the UT are poor and has no source of income. Further, there is very limited benefit which is gained by kopra sale as coconut trees are owned by 30% of the people and poor people get limited benefit out of it.

Mr Sameer raised concern that the Security deposit has increased from Rs. 75/- to Rs. 3000/- which is unjustifiable.

Petitioner's Reponses

The following are the replies provided by the Petitioner during the hearing:
Quote
"

- *The LED would like to submit that the department has not proposed any tariff hike for any of the consumer categories in its tariff petition for FY 2014-15.*
- *The LED would like to submit that initial security deposit is calculated based on the connected load of the consumer as per the JERC guidelines*
- *The LED would like to submit that the Hon'ble Kerala High Court and the CGRF have put a stay in the levy of the AC surcharge. The department has also requested the Hon'ble Commission to withdraw the AC surcharge from the Tariff Schedule"* ***Unquote***

Commission's View

The Commission has considered the view and suggestions provided by consumers in the Islands of the UT. Most of the consumers are against any increase in tariff due to low income and very low economic development as pointed. The above problems and limitations are UT's specific which is not under the purview of the Commission. The Commission would like to point out some of the facts which are specific to tariff formulation. Every year LED has to file its petition with its actual expenditure along with the projected expenses based on the historical trend of audited numbers, so that the Commission can rationalize its expenses of LED based on facts and fix tariff for recovery of all the cost. This practice followed is in line with Electricity Act 2003. Therefore, it's the right of Utility to recover all its cost from the consumer based on approved Annual Revenue Requirement. But, due to very high cost of service in the UT, Commission does not appropriate to approve the entire cost to be recovered from tariff as projected by the LED. The Petitioner has indicated that the gap would be met by the budgetary support by the Government, which has been acknowledged by the Commission and the tariff has been retained at the levels of FY 2013-14.

Security deposit is based on the two months average consumption requirement and it is charged based on the actual basis. In case of new connection security deport is collected on adhoc basis as per the JERC guidelines subject to review annually.

4.1.2 Rationalization of power purchase and Solar Power Related

Mr. Abu Bakkar Koya suggested for use of solar power to a greater extent rather than diesel in the islands of the UT. In addition to this, he suggested LED to power all the street lights through solar power and provide concession to consumers who are installing solar heaters/solar panels on rooftop. This way, tariff won't be required to be increased in the U.T.

Mr. Abu Bakkar Koya had also requested LED to curb the wastage of diesel (HSD) while transporting it to the Islands of the UT. He suggested filling the fuel from the barges rather than in the barrel which can help in saving some amount of fuel spillage.

Mr. Abu Bakkar Koya also suggested procuring fuel directly from IOC/B.P and delivery at different Islands of the UTs to reduce the overall cost. Further, he raised doubts towards the sanctity of data provided towards fuel consumption of LED, which should be audited by third party agency.

Mr Najeemuddeen has raised his concern on higher fuel cost which is leading to higher cost of power supply.

Mr. Misbah has suggested for training of department employees on O&M activities for maintaining SPV in different Islands of the UTs of the UT. SPV plants in most of the Islands of the UTs are not in good condition and needs proper maintenance.

Petitioner's Reponses

The following is the response provided by the Petitioner for the above objections

Quote

"

- *The LED would like to submit that it is coming up with solar roof top SPV system and biomass plants to lessen its dependency on diesel. The department has already installed street lights with solar panels throughout the Islands of the UTs in various locations wherever sufficient sunlight available.*
- *Solar based streetlights have been provided in the unshaded area*
- *The LED would like to submit that the Administration is in consultation with the IOC for direct supply of diesel to the Islands of the UTs and it is also coming up with oil storage facilities in Kavaratti and Minicoy Islands of the UTs.*
- *The LED would like to submit that it will conduct awareness campaigns about the functioning of the Commission and its concern towards consumer's interest.*
- *The LED is coming up with biomass generation which can generate power throughout the year and also reduce the dependency on diesel thus bringing down the cost of supply.*
- *The LED would like to submit that, it has distributed two CFL lamps to each consumer as a measure of energy efficiency.*

Unquote

Commission's View

Commission appreciates the suggestions of stakeholders. It is a fact that huge dependency on diesel not only increases the average cost of supply for the consumers but also impacts the Utility's financial health. The Commission has noticed that the Petitioner has taken some initiatives in this regard but actions are required to speed up the process of the construction and achievement of commercial operation of renewable generation plants. It is inevitable for the distribution licensee to explore alternative sources of power like installation of roof top solar, wind or hybrid of wind and solar equipment etc. and also to take initiatives towards energy efficiency to reduce the load on the existing DG power stations of the Utility. Also, wind power cannot be used as power generation source as technically it not feasible in the Lakshwadeep due to sandy earth.

The Petitioner is directed to submit a quarterly progress report on the initiatives taken in this regard and submit the first report by 30th July 2014. The report should also contain the monthly consumption of fuel, fuel purchased, fuel used and fuel wasted station wise.

The Petitioner is directed to arrange for training for its employees regarding O&M activity of SPV for better operational efficiency.

5. Review of Annual Revenue Requirements (ARR) FOR FY 2013-14

The review of aggregate revenue requirement involves assessment of quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. This has been done based on the submissions made by the Petitioner. As regards to various components of ARR, the Commission's analysis thereon and decision in respect of items given below is detailed in the following Paras:

- Review of Energy Requirement
    - i. Sales Projections
    - ii. Loss Trajectory
    - iii. Energy Balance
    - iv. Power Purchase Sources
- Review of the Aggregate Revenue Requirement
    - i. Power Purchase Costs & Transmission Charges;
    - ii. Operation and Maintenance Expenses;
        - Employee Expenses
        - Administration & General expenses
        - Repairs & Maintenance Expenses
    - iii. Capital Expenditure and Asset Capitalisation
    - iv. Gross Fixed Assets;
    - v. Depreciation;
    - vi. Interest on Long Term Loans;
    - vii. Interest on Working Capital & Security Deposits;
    - viii. Return on Capital Base/ Net Fixed Assets;
    - ix. Provision for Bad and Doubtful Debts
    - x. Other expenses.
    - xi. Non-Tariff Income

5.1 Consumers, Connected load and Energy Sales

Petitioner's Submission

Energy Sales

The Petitioner has submitted that Electricity Department - Lakshadweep has a consumer mix constituting of domestic, commercial, Industrial, HT-Industrial and Public Lighting. The HT Consumer category has been added after the creation of the same in Tariff order dated 31st October 2012.

The below table summarizes the category wise actual energy sales from FY 2008-09 to FY 2012-13 for all the consumer segments. LED's overall energy sales are significantly dependent on the domestic consumers to the extent of ~70%. Energy sold to various consumer categories over the past 5 years has grown at approximately 12.91% p.a., mainly contributed by increase in the sales to the domestic categories.

Table 8 Actual sales for LED (MUs)- Petitioner's Submission

S. No.	Category	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
		Actual	Actual	Actual	Actual	Actual
1	Domestic	15.85	17.78	20.35	23.75	27.23
2	Commercial	5.96	6.16	6.98	7.28	9.26
3	Industrial	0.27	0.33	0.41	0.42	0.39
4	Public (Street Light)	1.29	1.28	1.34	1.52	1.07
5	Temporary Connections	0.02	0.02	0.01	0.02	0.05
6	**Total**	**23.38**	**25.56**	**29.09**	**32.99**	**38.00**

The Petitioner has submitted that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the Utility/ Licensee including factors that Utility has faced such as Government policy, economic climate, weather conditions and force majeure events like natural disasters, etc. Therefore, energy sales for FY 2013-14 has been determined based on the actual energy sales during the first six months of FY 2013-14 and the CAGR for past three to four-year actual energy sales in various consumer categories (calculated separately).

The Petitioner has considered the adjusted CAGR of various consumer categories for growth rate (%) for projecting the Energy Sales (MUs) as mentioned in the following table:

Table 9 : Growth rate considered for FY 2013-14 (in %age) by the Petitioner

S. No.	Category	CAGR (Three years)	CAGR (Four years)	CAGR (Considered)
1	Domestic	15.27%	14.49%	10%
2	Commercial	14.53%	11.62%	11.62%
3	Industrial	6.08%	10.24%	6.08%
4	Public (Street Light)	-5.80%	-4.60%	0%
5	Temporary Connections	45.97%	35.69%	0%
	Total	**14.13%**	**12.91%**	**-**

The Petitioner has submitted that actual energy sales in the LED periphery in FY 2012-13 were 38.00 MU. The table below summarizes category wise energy sales estimated for FY 2013-14 for the LED. As can be observed, the overall energy sales in UT of Lakshadweep are significantly dependent upon the domestic and commercial consumption.

Table 10 : Projected category wise sales for FY 2013-14 (Sales in Million Units) by the Petitioner

S. No.	Category	FY 2012-13	FY 2013-14
		Actual	Revised estimates
1	Domestic	27.23	30.37
2	Commercial	9.26	9.27
3	HT Industrial		
4	Industrial	0.39	0.38
5	Public (Street Light)	1.07	0.82
6	Temporary Connections	0.05	0.05
	Total	**38.00**	**40.89**

Number of Consumers

The Petitioner has submitted that the department has a consumer mix of domestic, commercial, industrial, HT-Industrial and public lighting. The number of consumers as on January 2014 submitted by the Petitioner is summarized below. Petitioner has further submitted number of temporary consumers separately in its additional submissions.

Table 11 : Number of consumers as on January 2014- Petitioner's Submission

S. No.	Category	No. of consumers
1	Domestic	16,984
2	Commercial	3,157
3	HT- Industrial	18
4	Industrial	317
5	Public (Street Light)	74
6	Temporary Connections	59
7	**TOTAL**	**20,609**

The Petitioner as per the regulatory formats submitted number of estimated consumers for the FY 2012-13 and FY 2013-14.

Table 12 Number of consumers - Petitioner's Submission

S. No.	Category	FY 2012-13 Actual	FY 2013-14 Estimated
1	Domestic	16,302	16,984
2	Commercial	2,989	3,157
3	HT Consumer	18	18
4	Industrial	303	317
5	Public Lighting	73	74
6	Temporary	107	59
7	**Total**	**19,792**	**20,609**

Connected Load

The Petitioner has not submitted the past trends of the connected load of the various consumer categories. However, as per the regulatory formats, submitted along with the petition, the actual connected load for FY 2012-13 has been submitted by the Petitioner. The below table summarizes the same:

Table 13 : Connected Load as submitted by the Petitioner (in kVA)- Petitioner's Submission

S. No.	Category	FY 2012-13 Estimated
1	Domestic	6528
2	Commercial	1526
3	HT- Industrial	0
4	Industrial	348
5	Public (Street Light)	21
6	Temporary Connections	1
7	**TOTAL**	**8424**

Commission's analysis

Energy Sales

In order to make a realistic estimate for the FY 2013-14 the Commission in addition to the submission made by the Petitioner requires actual sales for first half of the FY 2013-14 and half yearly sales data of FY 2012-13 for estimating the total sales. The Commission had directed the Petitioner to submit the aforesaid details. **However, it is noticed that the Petitioner failed to submit any such details.** The additional data submitted by the Petitioner on 11th February 2014, containing island wise and monthly sales for different consumers for FY 2010-11 and FY 2011-12 had no data on sales to HT consumers. In the absence of the data the commission is constraint to consider the year on year growth only projecting FY 2013-14. However, the Commission has invariably projected the sales for FY 2013-14 based on actual figures of FY 2012-13 and historic sales figures as recorded in its previous orders.

The category wise sales approved for FY 2013-14 has been provided in the table below:

Table 14 : Energy Sales approved by the Commission for FY 2013-14(in Million Units)

S. No.	Category	FY 2012-13	FY 2013-14			
		Actual	Proposed in Tariff Petition for FY 13-14	Approved in T.O. dated 22nd May 2013	Proposed Revised Estimates	Approved Estimates
1	Domestic	27.23	29.07	28.71	30.37	31.17
2	Commercial	9.26	8.46	7.93	9.27	10.34
3	HT Consumer	-	0.71	0.34	-	-
4	Industrial	0.39	0.30	0.50	0.38	0.39
5	Public (Street Light)	1.07	1.35	1.66	0.82	1.07
6	Temporary Connections	0.05	0.05	0.02	0.05	0.07
	Total	**38.00**	**39.93**	**39.16**	**40.89**	**43.04**

<u>Number of Consumers</u>

The Commission has observed that the Petitioner did not furnish the past trend of the number of consumers besides actual figures for FY 2012-13, in the absence of which the Commission has considered the actual of FY 2012-13 submitted by the Petitioner.

The Petitioner has also submitted the total number of consumers as on January 2014 as 20,609. In the absence of audited figures along with the historical data, the Commission has considered the number of consumers as submitted by the Petitioner for January 2014 for FY 2013-14.

The Commission directs the Petitioner to submit complete information as per the regulatory formats of the ARR & tariff approval process of the Commission along with audited slab-wise details of the number of consumers, load and sales in each category in the next ARR filing.

Table 15 : Number of Consumers approved by the Commission for FY 2013-14

S. No.	Category	FY 2012-13	FY 2013-14	FY 2013-14	FY 2013-14	FY 2013-14
		Actual	Proposed in Tariff Petition for FY 13-14	Approved in T.O. dated 22nd May 2013	Revised estimates	Approved
1	Domestic	16302	16302	16302	16984	16984
2	Commercial	2989	2987	2987	3157	3157
3	HT Consumers	18	20	20	18	18
4	Industrial	303	303	303	317	317
5	Public (Street Light)	73	73	73	74	74
6	Temporary Connections	107	107	107	-	59
	Total	**19792.00**	**19792.00**	**19792.00**	**20550.00**	**20609.00**

Connected Load

The Commission has observed that the Petitioner did not furnish the past trend of the connected load of the various consumer categories. In addition to this, the Petitioner has submitted the unaudited actual data of connected load for FY 2012-13 which is in large variation from that submitted in the Tariff Petition for FY 2012-13. The Commission, keeping in view of the data inconsistency, has considered the actual connected load as submitted by the Petitioner for FY 2012-13. Also, Petitioner has not projected any connected load for FY 2013-14, therefore, Commission approves the connected load as per the actuals of FY 2012-13.

Table 16 : Connected Load approved by the Commission for FY 2013-14 (in kVA) - Petitioner's Submission

Category	FY 2012-13	FY 2013-14	FY 2013-14	FY 2013-14	FY 2013-14
	Approved Actuals	Proposed in Tariff Petition for FY 13-14	Approved in T.O. dated 22nd May 2013	Revised estimates	Approved
Domestic	6528	51620	49381		6528
Commercial	1526	11474	8431		1526
HT Consumer	0	1227	1200		0
Industrial	348	4272	3386		348
Public (Street Light)	21	167	162		21
Temporary Connections	1	0	0		1
Total	**8424**	**68761**	**62560**	**0.00**	**8424**

5.2 Transmission & Distribution Loss

Petitioner's Submission

The Petitioner has submitted the actual T&D loss level for FY 2012-13 at 15.93% compared to the approved T&D loss of 21.40%. LED has proposed to reduce the T&D losses to 15.00% for FY 2013-14. Further, LED as has considered collection efficiency of 98% and 99% for the FY 2012-13 and FY 2013-14 provided in the format 2 submitted along with the petition. The AT&C losses computed based on the above information is shown in the table below:

Table 17 : T&D losses for FY 2013-14 submitted by the Petitioner

S. No.	T&D Losses	FY 2012-13	FY 2013-14
		Actual	Revised Estimate
1	T&D losses (%age)	15.93%	15.00%
2	Collection Efficiency	98.00%	99.00%
3	**AT&C losses**	**17.62%**	**15.85%**

Commission's Analysis

As per the regulation 15 of JERC Tariff regulations, 2009

"15. AT& C Losses

1. *The licensee shall give information of total AT&C losses in Previous Year and Current Year and the basis on which such losses have been worked out.*

2. *The licensee shall also propose a loss reduction programme for the Ensuing Year as well as for the next three years giving details of the measures proposed to be taken for achieving the same.*

3. *Based on the information furnished and field studies carried out and the loss reduction program proposed by the licensee, the Commission shall fix separate targets for reduction of Transmission and Distribution losses and for commercial efficiency for the period specified by the Commission:*

   Provided further that in the event of unbundling of the integrated Utility, the Commission may fix separate transmission and distribution loss targets and commercial efficiency targets, as the case may be, for each successor licensee taking into account its area of operation, its consumer mix, state of the network, level of metering, metering initiatives planned, etc.

4. *The licensee shall conduct regular energy audit to substantiate its estimation of T&D losses. The licensee shall also furnish six monthly energy audit reports to the Commission.*

The energy audit report for the first six months of the year shall be provided by November end of the same year. Similarly energy audit report for the last six months of the year shall be provided by May end of the next year.

5. *In the absence of energy audit, the Commission may not accept the claim of the licensee and may proceed to fix the loss levels on the basis of any other information available and its own judgment.''*

The Petitioner has not provided the energy audit report and neither any basis for reduction of T&D loss level from 21.00% as approved in the tariff order to 15.00% for FY 2013-14. Further, Petitioner has not provided any justification on the proposed collection efficiency for FY 2013-14 at 99% and any basis for such computation.

However for the purpose of review of power purchase quantum and power purchase cost for FY 2013-14 in this order, the Commission has considered the loss level at 15.00% while keeping the approved loss for FY 2013-14 same as originally approved in T.O. dated 22nd May 2013. The Commission shall allow gain/loss based on actual losses at the time of truing up of ARR for FY 2013-14. The Commission has not considered collection efficiency as submitted by the LED considering the fact that the Commission allows bad debt separately based on the actual write off debts subject to a maximum of 1% as per the JERC (Terms and Conditions for Determination of Tariff) Regulations 2009. Therefore, Commission retains the T&D losses for the FY 2013-14 at 21.00% as approved earlier and considers 15.00% for the sake of review of power purchase quantum and cost.

The Commission directs LED to conduct energy audit of the system for calculating the actual T&D losses in the region. In addition to the above, calculation of category wise revenue billed and revenue realized needs to be submitted to the Commission for the purpose of calculating collection efficiency of the Utility.

5.3 Energy Balance

Petitioner's Submission

Petitioner has submitted the T&D losses at 15.93% based on which energy requirement for the sale within the Islands of the UTs was 45.21 Million Units for FY 2012-13. The Petitioner has also submitted the overall energy sales to various consumer categories based on actual half yearly data for FY 2013-14 and estimated the overall energy requirement at 48.11 MU in FY 2013-14 with a T&D loss of 15.00%.

Commission's Analysis

Based on the approved energy sales of 43.04 million units and T&D losses of 15.00%, the energy requirement for sale within the islands of the U.T is approved at 50.63 million units before T&D losses for FY 2013-14.

Based on the data available, the Commission has projected the net energy availability of 50.63 million units for FY 2013-14. This includes the units of Power generated from solar plants also. The table below captures the values as submitted by the Petitioner and that considered for FY 2013-14.

Table 18 : Energy Balance approved by the Commission for FY 2013-14

S. No.	Category	FY 2012-13 Actual	Revised Submission (FY 2013-14)	Considered FY 2013-14
A)	**ENERGY REQUIREMENT** (MU)			
1	**Total sales within the UT**	38.00	40.89	43.04
I	AT&C losses %	16.78%	15.85%	15.85%
II	T&D Loss %	15.94%	15.00%	15.00%
	MU	7.21	7.22	7.59
2	**Energy required for Sale to Retail Consumers (MU)**	**45.21**	**48.11**	**50.63**
3	**Total Energy Requirement for UT (MU)**	**45.21**	**48.11**	**50.63**
B)	**ENERGY AVAILABILITY / PURCHASED**			
1	**Net Generation after auxiliary consumption (MUs)**			
I	Own Generation	**45.21**	**48.11**	**50.63**
2	**Energy Surplus/(Gap) (MU)**	**0.00**	**0.00**	**0.00**

5.4 Power Quantum and Cost

Petitioner's Submission

Sources of Power and Power Generation Quantum

The Petitioner has submitted that it sources its power entirely from its own power generating stations mainly diesel generation set and SPV plants. It is submitted that out of the total capacity of 21760 kW, the department utilizes around half of its total installed capacity. The remaining installed capacity is utilized as back-up source of power.

The Petitioner has submitted that the source-wise gross generation, auxiliary consumption and net generation of power in UT of Lakshadweep from FY 2007-08 and FY 2012-13 is as shown in the table below:

Table 19 : Generation Quantum from FY 2007-08 to FY 2012-13 as submitted by the Petitioner

Year	Gross generation	Auxiliary consumption	Auxiliary consumption	Net generation
	MU	MU	%age	MU
FY 2007-08 (Actual)	28.82	0.40	1.39%	28.42
FY 2008-09 (Actual)	31.14	0.42	1.36%	30.72
FY 2009-10 (Actual)	35.14	0.44	1.27%	34.70
FY 2010-11 (Actual)	40.33	0.56	1.39%	39.77
FY 2011-12 (Actual)	42.70	0.95	2.21%	41.75
FY 2012-13 (Actual)	44.65	0.86	1.92%	43.80

For projection of the generation quantum for FY 2013-14, the LED has considered 350 days of operation for all the DG sets. The remaining 15 days would be required for repair and maintenance for the DG sets.

In FY 2013-14 it is estimated that the solar plants in Minicoy, Kavaratti, Andrott, Agatti, kiltan, kalpeni and Kadmat will generate1.585 MUs of power. Generation from Amini, chetlath, Bitra and Bangaram has not been considered.

The table below shows the estimated island wise gross power generation quantum, auxiliary consumption and net power generation quantum of the LED for FY 2013-14 as submitted by the Petitioner.

Table 20 : Power generation quantum as submitted by the Petitioner for FY 2013-14

Island	Gross generation	Auxiliary Consumption	Net generation
DG sets			
Minicoy	7.63	0.07	7.56
Kavaratti	10.34	0.12	10.22
Amini	4.96	0.05	4.91
Andrott	6.39	0.22	6.17
Kalpeni	3.46	0.05	3.41
Agatti	5.56	0.12	5.44
Kadmat	4.31	0.20	4.11
Kiltan	2.43	0.02	2.41
Chetlat	1.96	0.04	1.92
Bitra	0.334	0.006	0.328
Bangaram	0.063	0.008	0.056
Subtotal	**47.44**	**0.92**	**46.53**
Solar generation			
210 kWp Minicoy SPV			0.178
760 kWp Kavaratti SPV			0.716
100 kWp Amini SPV			0.000
320 kWp Andrott SPV			0.245

Island	Gross generation	Auxiliary Consumption	Net generation
100 kWp Kalpeni SPV			0.178
100 kWp Agatti SPV			0.105
260 kWp Kadmat SPV			0.159
100 kWp Kiltan SPV			0.004
Subtotal 2			**1.585**
Total Net Generation			**48.11**

Fuel Purchase Cost

The Petitioner has submitted that it procures its fuel (HSD oil) from Indian Oil Corporation's (IOC) Beypore depot (Kerala). The fuel procured from the Beypore depot is then transported to various islands by ships. During FY 2012-13, the LED has paid Rs. 42.89 per liter of HSD to IOC. In FY 2012-13, the Petitioner has incurred Rs. 66.25 Crore for procurement of13.65 thousand KL of HSD.

In addition to the HSD fuel, LED utilized 39,610 liters of Lube oil at a cost of Rs.0.90 Crore for the generation of power during FY 2012-13. The Petitioner has considered the price of Lube oil at Rs. 226.00 per liter inclusive of the transportation cost.

Similarly, the Petitioner has to pay additional charges towards transportation of fuel from the Beypore depot to the Islands of the UTs such as filling and sealing charges of the barrels, transportation charges for Beypore depot to the port, freight charge, port duties and crane charges at port, local transportation charges at the Islands of the UT etc. The average fuel cost, inclusive of all charges incurred by the LED for FY 2012-13 is as presented in the table below.

Table 21 : Average Fuel Purchase Cost for FY 2012-13- Petitioner's Submission

S. No.	Particulars	Amount (in Rs.)
1	Cost of HSD oil/per barrel including local transportation, Service Tax @ 4% and SSC @1%	8577.33
2	Cost of filling and sealing of the barrels	9.00
3	Transportation charge/per barrel from KSCC yard to wharf including loading on Ships	59.00
4	Freight charge/barrel	160.00
5	Port duties and crane charges/barrel	17.71
6	Average cost of empty barrel	530.49
7	Transportation charge/per barrel from wharf to KSCC yard at Beypore	24.80
8	Restaking of empty barrel -Cost per barrel	5.00
9	Cost of cap seal (big and small)-cost per barrel	5.40
10	Leak testing charge/barrel	13.00
11	Welding and reconditioning charge/barrel	3.00
12	Scrapping, cleaning, painting and marking charge/ barrel	65.00
13	Cost of Bunk washer (big and small)/barrel	2.58
14	**Total cost/barrel**	**9472.31**
15	Average cost of Oil (14/200) per litre	47.36
16	Add: Local transportation cost at the Islands of the UTs @2% of HSD price / litre	1.17
17	**Average cost of HSD (15+16) per litre** * 1 barrel = 200 litres	**48.53**

During FY 2013-14, the LED has paid an average of Rs. 55.06 per liter of HSD to IOC from April 2013 to December 2013. The same has been considered for the period January 2014 to March 2014 to compute the cost of HSD oil for the FY 2013-14. The average fuel cost, inclusive of all charges incurred by the LED for FY 2013-14 is presented in the table below.

Table 22 : Average Fuel Purchase Cost for FY 2013-14- Petitioner's Submission

Sl. No.	Particulars	Amount (in Rs.)
1	Cost of HSD oil/per barrel including transportation, Service Tax @ 4% and SSC @1%(Rs.55.06/litre*200litre/ drum)	11011.94
2	Cost of filing and sealing of the barrels	9.00
3	Transportation charge/per barrel from KSCC yard to wharf including loading to the ships	59.00
4	Freight charge/barrel	160.00
5	Port duties and crane charges/barrel	17.71
6	Average cost of empty barrel	530.49
7	Transportation charge/per barrel from wharf to KSCC yard at Beypore	24.80
8	Restaking of empty barrel- cost per barrel	5.00
9	Cost of cap seal (big and small)- Cost per barrel	5.40
10	Leak testing charge/barrel	13.00
11	Welding and reconditioning charge/barrel	3.00
12	Scrapping, cleaning, painting and marking charge/ barrel	65.00
13	Cost of Bunk washer (big and small)/barrel	2.58
14	**Total cost/barrel**	**11906.92**
15	Average cost of Oil (14/200) per litre	59.53
16	Add: Local transportation cost at the Islands of the UTs @2% of HSD price / litre	1.17
17	**Average cost of HSD (15+16) per litre**	**60.70**

The actual fuel purchase cost for FY 2012-13 and fuel expenses estimated for FY 2013-14 is summarized in the table below:

Table 23 : Fuel Purchase Cost for FY 2012-13 and FY 2013-14- Petitioner's Submission

Particulars	FY 2012-13 (Actual)			FY 2013-14 (Revised Estimate)		
	Quantity procured (KL)	Total Cost (Rs. Cr)	Per Unit Cost (Rs/Lit)	Quantity procured (KL)	Total Cost (Rs. Cr)	Per Unit Cost (Rs/Lit)
Total HSD Purchase Cost*	13,651	66.25	48.53	14,516	88.12	60.70
Lube oil	39,610	0.90	0.24	41,869	0.95	0.22

* Inclusive of other charges

Note: The quantity and cost of Oil shown in the above table for FY 2012-13 and FY 2013-14 are exclusive of the quantity and cost of the HSD maintained in the stock by the LED.

The per unit generation cost for FY 2012-13 and FY 2013-14 is presented in the table below.

Table 24 : Per unit generation cost submitted - Petitioner's Submission

Particulars	Unit	FY 2012-13	FY 2013-14
		Actual	(Revised Estimate)
Gross Generation	MUs	44.65	47.44
Net Generation	MUs	43.80	46.53
Fuel cost/Gross unit	Rs./kWh	15.04	18.77
Fuel cost/Net unit	Rs./kWh	15.33	19.14

Commission's Analysis

Power Generation Quantum and Cost

Own Generation

Petitioner submitted additional data during public hearing containing fuel consumption, auxiliary consumption, except for Bangaram Island, and energy generated from DG sets & solar plants. Based on the above submission, the Commission has taken actual generation and auxiliary consumption for the purpose of calculating the net energy generated.

While estimating the energy availability and cost for FY 2013-14, the following has been considered:

- Commission has projected availability based on the approved sales and keeping in view the standby requirement of the Islands of the UTs. Therefore, Plant Load Factor for each plant has been increased to match the sales with approved T&D losses for calculating gross generation available with same auxiliary consumption as seen in FY 2012-13.

- The Commission has considered the following parameters of the HSD fuel oil for estimating the consumption on the basis of units generated by each of the generating unit:

    - Commission has analyzed the specific fuel consumption i.e. the quantity of fuel required to generate one unit of electricity for FY 2012-13 based on the actual submitted and sample invoices scrutinized for calorific value. The Commission has considered the specific fuel consumption based on actual for FY 2013-14.

    - The Commission has taken calorific value of oil based on the actual submitted by the Petitioner for FY 2013-14.

- Cost of HSD including transportation and other charges has been calculated based on the actual cost incurred for 8 months and latest rates submitted by Petitioner during technical validation session for 4 months, which comes out to be RS.60.95 /liter.
- The average cost of lube oil as submitted by the Petitioner for FY 2013-14 at Rs 226/litre has been found to be reasonable.
- Consumption of lube oil has been based on the specific consumption at 1.1 gm per unit and density at 0.889.

Renewable Energy

As per JERC (Procurement of Renewable Energy) First Amendment Regulations 2014, amendment in table 1 of sub Regulation (1.1) in the principle Regulations the Petitioner has to purchase 3% of total consumption of all the consumers in its area as power purchase from renewable sources for FY 2013-14 which includes 0.40% for Solar and 2.60% for Non-Solar.

On the basis of submission made by the Petitioner, it is evident that RPO targets of 0.40% Solar Power for FY 2013-14 will be met. However, it is observed that the Petitioner is not meeting its RPO target of 2.60% from non-solar sources of renewable power generation. However, the Petitioner is meeting its overall target of 3% to be met from renewable sources of generation. **In view of this, the Commission directs the Petitioner to encourage generation from renewable sources to meet its non-solar RPO targets. Also, to meet its non-solar RPO by purchase of the Renewable Energy Certificates immediately, failing which Commission shall take appropriate action.**

The Commission has observed that the Utility has not been able to meet its RPO targets for the previous year. In the interest of the stakeholders, the Commission provisions the amount for RPO obligations in FY 2013-14.

The RPO obligations can be met either through the purchase of energy from renewable sources or through REC certificates. The Commission has observed that in the past, the Utility has not been able to meet its RPO through purchase of energy; hence Commission has provisioned the amount assuming the fulfillment through the purchase of REC certificates. The Commission has allowed the amount corresponding to the prevailing floor price of REC certificates, as per the latest CERC order dated August 23’ 2011.

The computation of the pending RPO obligation of the Utility from FY 2012-13 and FY 2013-14 is as:

Table 25 : Summary of RPO obligation from FY 2012-13 to FY 2013-14-Commission's Approval

S. No.	Description	FY 2012-13	FY 2013-14
1	**Sales**	38.00	43.04
2	**RPO Obligation (in %)**	**3.00%**	**3.00%**
	- Solar	0.40%	0.40%
	-Non Solar	2.60%	2.60%
3	**RPO Obligation (in MU)**		
	- Solar	0.15	0.17
	-Non Solar	0.99	1.12
4	**RPO Compliance (Actual Purchase)**		
	- Solar	1.41	2.20
	-Non Solar	0	0
5	**RPO Compliance (REC Certificate Purchase)**		
	- Solar	0	0
	-Non Solar	0	0
6	**Total RPO Compliance**		
	- Solar	1.41	2.20
	-Non Solar	0	0
7	**Shortfall in RPO Compliance**		
	- Solar	0	0
	-Non Solar	0.99	1.12
8	**Cumulative Shortfall in RPO Compliance (MU)**		
	- Solar	0	0
	-Non Solar	0.99	2.11
9	**Floor Price of REC Certificates /MWH**		
	- Solar		**9300**
	-Non Solar		**1500**
10	**Provision for RPO Compliance**		
	- Solar (Rs Crores)		**-**
	-Non Solar (Rs Crores)		**0.32**
	-Total (Rs Crores)		**0.32**

The Commission has considered generation from all its solar plants for FY 2013-14. The Commission also directs Petitioner to operationalize its closed SPV plants as it is one of the most cost effective generating source. As per the additional submission during public hearing, Petitioner has provided the O&M contract of SPV plants with BHEL where it is required to pay BHEL a yearly O&M fee for maintaining the SPV plant. Therefore, it is expected from Petitioner to have all its SPV plants running.

Summary of Total Approved Power Purchase Cost for FY 2013-14

The Commission approves the total cost of generation including fuel cost of Rs. 92.01 Crores for procuring 50.63 million units of energy for FY 2013-14 and REC as per the RPO obligation. The summary of total cost of generation is as mentioned below.

Table 26 : Summary of own generation cost for FY 2013-14-Commission's Approval

	Plant Load Factor	Gross Generation	Auxiliary Consumption	Net Generation	Actual Oil Consumption	Cost of Oil	Lube oil consumption	Cost of Lube Oil	Total Fuel Cost
	%	**Mus**	**Mus**	**Mus**	**Kltr**	**Rs Crores**	**Liters**	**Rs. Crores**	**Rs Crores**
Minicoy	21.9%	8.10	0.08	8.02	2,251	13.72	10,010.25	0.23	13.95
Kavaratti	41.2%	11.07	0.13	10.94	3,017	18.39	12,173.04	0.31	18.70
Amini	23.0%	5.12	0.06	5.06	1,604	9.78	6,325.37	0.14	9.92
Andrott	26.0%	7.09	0.24	6.84	2,145	13.07	8,761.69	0.20	13.27
Kalpeni	33.5%	3.52	0.04	3.47	1,134	6.91	4,344.38	0.10	7.01
Agatti	28.1%	5.54	0.11	5.43	1,705	10.39	6,849.91	0.15	10.55
Kadmat	23.8%	4.29	0.21	4.08	1,373	8.37	5,303.73	0.12	8.49
Kiltan	31.5%	2.64	0.03	2.61	931	5.67	3,265.39	0.07	5.75
Chetlat	20.9%	1.76	0.04	1.72	544	3.32	2,172.81	0.05	3.37
Bitra	5.6%	0.20	0.00	0.20	78	0.48	252.13	0.01	0.48
Bangaram	3.5%	0.05	0.01	0.05	35	0.21	65.51	0.00	0.22
				48.43					
Solar Generation									
210 kWp Minicoy				0.21					
760 kWp Kavaratti				0.76					
100 kWp Amini				0.10					
320 kWp Andrott				0.32					
100 kWp Kalpeni				0.10					
100 kWp Agatti				0.10					
260 kWp Kadmat				0.26					
100 kWp Kiltan				0.10					
100 kWp				0.10					

	Plant Load Factor	Gross Generation	Auxiliary Consumption	Net Generation	Actual Oil Consumption	Cost of Oil	Lube oil consumption	Cost of Lube Oil	Total Fuel Cost
Chetlath									
100 kWp Bitra				0.10					
50 kWp Bangaram				0.05					
Sub total				**2.20**					
RPO Obligation (Through REC)									**0.32**
Total				**50.63**					**92.01**

FPPCA formula has been separately notified under the Regulation. It is seen that in the case of LED, majority of the generation is diesel based, making per unit cost of generation very high compared to other utilities. In view of this, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of LED, with budgetary support.

Keeping the above fact in view, the Commission opines that any variation in cost of their own generation (including variation in cost of power purchase, if any) should, for the time being, be borne by the Utility through budgetary support. Further, the Utility is directed to propose a scheme for sharing of the increase in cost of power with the consumers for Commission's consideration and approval.

5.5 Operation and Maintenance Expenses

Petitioner's Submission

The Petitioner has submitted that the Operation and Maintenance (O&M) expenses comprise of three components namely:

a) Employee cost
b) Repairs & Maintenance expenses and
c) Administrative and General Expenses

The Petitioner has submitted that in the past, it has not maintained segregation between the three cost elements for the purpose of accounting and had booked all cost including salaries, medical expenses, office expenses, domestic traveling expenses, and other charges towards repairs and supply of materials under the operation and maintenance expense head. However, efforts are being made by LED to segregate the O&M expenses under different accounting heads.

5.5.1 Employee Expenses

Petitioner's submission

The Employee expenses submitted by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, medical cost, leave travel allowances, honorarium, etc. Based on the various expense head related to employee booked during six months of FY 2013-14, LED has estimated the total employee cost for full year of FY 2013-14 as Rs. 11.53Crore.

Commission's Analysis

As per the regulation 27 of JERC tariff regulations 2009 -

"

27. Operation and Maintenance Expenses

1) *'Operation & Maintenance expenses' or 'O&M expenses' shall mean repair and maintenance (R&M) expenses, employee expenses and administrative & general (A&G) expenses including insurance.*

While determining the O&M expenses for generation functions within the State, the Commission shall be guided, as far as feasible, by the principles and methodologies of CERC on the manner, as amended from time to time.

2) *While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodologies specified by CERC on the matter, as amended from time to time:*

Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated Utility, treat its transmission system as an integral part of its distribution system itself.

3) *O&M expenses for distribution functions shall be determined by the Commission as follows:*

- *O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*
- *Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*
- *In case of unbundling of the Electricity Department and formation of separate distribution companies, the Commission will make suitable assessment of base O&M expenses of*

individual distribution companies separately and allow O&M expenses for subsequent years for individual companies on the basis of such estimation and above principle.

4) *O&M expenses of assets taken on lease/hire-purchase and those created out of the consumers' contribution shall be considered in case the generating company or the licensee has the responsibility for its operation and maintenance and bear O&M expenses.*

5) *O&M expenses for gross fixed assets added during the year shall be considered from the date of commissioning on pro-rata basis.*

6) *O&M expenses for integrated Utility shall be determined by the Commission on the norms and principles indicated above''*

The Commission has considered the employee expenses for FY 2013-14 at Rs 10.00 Crores as approved in the previous tariff order. The Commission is of the view that employee cost for FY 2013-14, approved in the previous tariff order should not be changed unless LED provides historical audited figures for estimating realistic employee expenses. However, the Commission finds that the no of employees has come down from 385 in FY 2012-13 to 356 in FY 2013-14 and the Petitioner has also proposed the same in his petition. Thus the Commission approves no of employees at 356.

The number of employees and employee expenses as submitted by the Petitioner and approved is given below.

Table 27 : Number of employees approved by the Commission for FY 2013-14

Sr. No.	Particulars	Petitioner Resubmission FY 2012-13	Approved FY 2012-13	Approved in Tariff order(FY 2013-14)	Petitioner Resubmission FY 2013-14	Approved FY 2013-14
1	Number of employees as on 1st April	385.00	385.00	415.00	356	356
2	Employees on deputation/ foreign service as on 1st April					
3	Total number of employees (1+2)	385.00	385.00	415.00	356.00	356
4	Number of employees retired/retiring during the year					
5	Number of employees added					
6	**Number of employees at the end of the year (3-4+5)**	**385.00**	**385.00**	**415.00**	**356.00**	**356**

Table 28 : Employee expenses approved by the Commission for FY 2013-14 (in Rs. Crores)

	Employee Expenses (Rs. in crores)	FY 2012-13		FY 2013-14			
Sr. No.	**Particulars**	**Proposed Actuals**	**Approved Actuals**	**Proposed Estimates**	**Approved Estimates**	**Proposed Revised Estimates**	**Approved Revised Estimates**
	Salaries& Allowances						
1	Basic Pay	4.54		5.65	4.73	4.95	4.73
2	Dearness Pay						
3	Dearness Allowance	3.12		2.97	2.48	3.40	2.48
4	House Rent Allowance	0.36				0.39	
5	Fixed medical allowance						
6	Medical reimbursement charges	0.14		0.21	0.18	0.15	0.18
7	Over time payment						
8	Other allowances (detailed list to be attached)						
a.	Washing allowance	0.02				0.02	
b.	Transport allowance	0.46		0.48	0.41	0.50	0.41
c	L.T.C.	0.01				0.01	
d.	Children Education All.	0.03				0.03	
e.	Family Planning Allow.						
f.	Other allowance	0.02		2.52	2.10	0.02	2.10
g	Island special duty allowance for A&N and Lakshadweep	0.70				0.77	
h	Special Compensatory Allowance	0.76		0.12	0.11	0.83	0.11
i	Hard Area Allowance	0.42				0.46	
9	Generation incentive						
10	Bonus						
11	**Total**	**10.58**	**-**	**11.95**	**10.00**	**11.53**	**10.00**
	Terminal Benefits						
12	Leave encashment						
13	Gratuity						
14	Commutation of Pension						
15	Workmen compensation						
16	Ex-gratia						
17	**Total**	-	-	-	-	-	-
	Pension Payments						
18	Basic Pension						
19	Dearness Pension						
20	Dearness Allowance						

	Employee Expenses (Rs. in crores)	FY 2012-13		FY 2013-14			
Sr. No.	Particulars	Proposed Actuals	Approved Actuals	Proposed Estimates	Approved Estimates	Proposed Revised Estimates	Approved Revised Estimates
21	Any other expenses						
22	**Total**	**-**	**-**	**-**	**-**	**-**	**-**
23	**Total (11+17+22)**	**10.58**	**-**	**11.95**	**10.00**	**11.53**	**10.00**
24	Amount capitalized						
25	Net amount						
26	Add prior period expeses						
27	**Grand total**	**10.58**	**9.30**	**11.95**	**10.00**	**11.53**	**10.00**

5.5.2 Administration and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted that the A&G expenses comprise of the following broad sub-heads of expenditure, viz.

- Telephone, postage & telegrams charges;
- Travel and conveyance expenses;
- Office expenses; and
- Consultancy and regulatory fees

The Petitioner has submitted that the actual A&G expenses for FY 2012-13 were Rs 0.91 Crores. LED has estimated the A&G expense for FY 2013-14 at Rs. 0.99 Crores. The escalation of A&G expenses is on account of inflation and regulatory and consultancy fees payable during FY 2013-14. The LED has requested the Commission to approve the net A&G expenses estimated for FY 2013-14.

Commission's Analysis

The Commission has considered the approved administration & general expenses of Rs 0.97 Crores for FY 2013-14 as per the previous tariff order. Commission is of the view that A&G expenses for FY 2013-14 approved in the previous order should not be changed unless LED provides historical audited figures for estimating realistic expenses.

The detailed breakup of the A&G expenses as per the regulatory formats has not been provided by the Petitioner. The Commission directs the Petitioner to maintain segregation of the O&M

expenses under different accounting heads and maintain the information as desired as per the regulatory formats and submit the same along with the next ARR/tariff filing.

Table 29 : A&G expenses approved by the Commission for FY 2013-14 (in Rs. Crores)

Particulars	Approved in Tariff Order FY 2012-13	Petitioner Resubmission FY 2012-13	Approved FY 2012-13	Approved in Tariff Order FY 2013-14	Revised Estimates FY 2013-14	Approved FY 2013-14
A&G Expenses	**0.90**	**0.91**	**0.90**	**0.97**	**0.99**	**0.97**

Commission considers the Administration & General expense of Rs. 0.97Crores as reasonable and approves the same for FY 2013-14.

5.5.3 Repair and Maintenance Expenses

Petitioner's submission

The Petitioner has submitted that the Repairs and Maintenance expense comprise of expenses with regard to maintenance and upkeep of the generation, transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and reduce the occurrence of breakdowns of the DG sets.

The R&M expense for FY 2012-13 for LED was Rs. 2.57 Crores. The R&M expense for FY 2013-14 is computed at 2.5% of the gross fixed assets of FY 2013-14, which is calculated at Rs. 3.10 Crores.

The Petitioner has therefore requested the Commission to approve R&M expenses of Rs. 3.10 Crores for FY 2013-14 as the same is necessary for proper maintenance and strengthening the generation, transmission and distribution system and improve the quality of supply in the region to ensure consumer satisfaction.

Commission's Analysis

The Commission is of the view that adequate R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standard of Performance of the integrated Utility.

The Commission has considered the approved R&M expenses of Rs 3.38 Crores for FY 2013-14 as per the previous tariff order. The Commission is of the view that R&M expenses for FY 2013-14 approved in the previous order should not be changed unless LED provides historical audited figures for estimating realistic expenses. Further, the detailed breakup of the R&M expenses as per the regulatory formats has not been provided by the Petitioner. **The Commission directs the Petitioner to maintain segregation of the O&M expenses**

under different accounting heads and maintain the information as desired as per the regulatory formats and submit the same along with the next ARR/tariff filing.

Table 30 : R&M expenses approved by the Commission for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	Approved FY 2012-13	Approved in Tariff Order FY 2013-14	Revised Estimates FY 2013-14	Approved FY 2013-14
1	**R&M Expenses**	**3.14**	**3.38**	**3.10**	**3.38**

5.5.4 Summary of O&M Expenses

The overall summary of Operation & Maintenance expenditure as estimated by the Petitioner vis-à-vis approved by the Commission for FY 2013-14 is given below:

Table 31 : Summary of O&M expenses approved by the Commission for FY 2013-14 (in Rs. Crores)

Sr. No.	Particulars	Petitioner Resubmission FY 2012-13	Approved FY 2012-13	Approved in Tariff Order FY 2013-14	Revised Estimates FY 2013-14	Approved FY 2013-14
1	Employee Expenses	10.58	9.30	10.00	11.53	10.00
2	A&G Expenses	0.91	0.90	0.97	0.99	0.97
3	R&M Expenses	2.57	3.14	3.38	3.10	3.38
4	**Total O&M Expenses**	**14.07**	**13.35**	**14.35**	**15.62**	**14.35**

5.6 Capital Expenditure and Capitalization

Petitioner's Submission

The Petitioner has submitted that the present transmission and distribution infrastructure does not have adequate standby source arrangement for restoring the power supply in case of major breakdowns. Further, considering the increase in demand from the consumers, LED would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help LED in handling increased load but would also ensure better quality of supply and network reliability to the consumers. The capital expenditure would help in further reduction of T&D losses.

The capital expenditure and capitalization for FY 2012-13 and FY 2013-14as submitted by the Petitioner is as in the table below:

Table 32 : Capital Expenditure and Capitalization for FY 2012-13 and FY 2013-14 (in Rs. Crores)

S. No.	Particulars	Petitioner Submission (FY 2012-13)	Projected (FY 2013-14)
1	Capital Expenditure	13.00	25.69
2	Asset Capitalization	10.73	21.08
3	Capital Work in Progress	25.69	18.77

Commission's analysis

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for FY 2013-14 is required to maintain reliable supply for the consumers of UT of Lakshadweep.

As per the Regulation 21 of JERC for the State of Goa and UTs (Terms and conditions for determination of Tariff), Regulation 2009 specifies that the Licensee shall propose in their filings, a detailed capital investment plan, showing ongoing projects separately that will spill into the ensuing year and new projects (along with their justification) that will commence in the ensuing year. The Petitioner has not submitted the capital investment plan as per the regulations and has not given the present status of the capital expenditure incurred /capitalized. Further, in its additional data submission, the Petitioner has not provided the amount of capital expenditure incurred on each DG set it has procured and cost incurred for buying other equipment's. Therefore, capital expenditure approved in the tariff order for FY 2013-14 has been considered for the purpose of calculating ARR.

This expenditure is being permitted as a special case this time to ensure the creation of infrastructure for adherence to Standard of Performance and Supply Code Regulations.

5.7 GFA and Depreciation

Petitioner's Submission

The Petitioner has submitted that the value of opening gross fixed assets (GFA) for 2012-13 was Rs 92.21 Crores and addition of Rs 10.73 Crores took place during FY 2012-13. Thereafter, planned additions during FY 2013-14 have been added and accordingly GFA has been computed for FY 2013-14. The closing Work-in-Progress by the end of FY 2012-13 was Rs. 25.69 Crores. For FY 2013-14, LED has estimated to incur Rs. 25.69 Crores capital expenditure and Rs. 21.08 Crores estimated to be capitalized.

A summary of the opening and closing GFA and capitalization has been summarized in the table below.

Table 33 : Opening and closing GFA submitted by the Petitioner (in Rs. Crores)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2012-13 (Actual)	92.21	10.73	102.94
FY 2013-14 (Revised Estimated)	102.94	21.08	124.01

For purposes of depreciation, LED has applied the following depreciation rates as specified by CERC in the Tariff Regulations for FY 2009-14.

Table 34 : Depreciation Rate considered by the Petitioner (in %age)

Asset Category	Depreciation Rate %
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	6.33%
Land	0.00%

Depreciation for the FY 2013-14 has been determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the FY 2012-13 and FY 2013-14. The table below summarizes the depreciation considered by LED.

Table 35 : Depreciation submitted by the Petitioner (in Rs. Crores)

Particulars	FY 2012-13	FY 2013-14
Rs. Crore	Actual	Estimated
Opening GFA	92.21	102.94
Additions	10.73	21.08
Closing GFA	102.94	124.02
Average GFA	**97.58**	113.48
Depreciation Amount	**4.59**	**5.40**

Commission's analysis

The Petitioner has not produced any fixed asset register to support the claim of the Gross Fixed Assets. The Commission is of the view that fixed asset register records the asset wise details and various types of information can be extracted from the same including the aging schedule of the asset, present value and capital works in progress etc. As such in the absence of updated fixed asset registers, the opening value of fixed assets is on an assumption basis. As a standard practice, and as per the Regulation 26 of the JERC (Terms and conditions for determination of Tariff), Regulation 2009, depreciation shall be computed on the average value of assets at the end of the year which is reasonable and appropriate method.

In absence of updated fixed asset registers, the Commission is unable to allow the depreciation as proposed by the Petitioner based on the assumed value of assets. **The Commission therefore directs the Petitioner to maintain the fixed asset register to arrive at the actual historical value of assets and file the same along with the next ARR and tariff petition.** In the absence of updated fixed asset registers to arrive at the historical value of assets, the Commission has considered the addition in GFA as approved by the Commission for FY 2011-12 as the opening value of assets for FY 2012-13 and addition during the period as approved in the previous tariff order. As covered in earlier Para, Commission has considered addition in GFA of Rs. 13.00 Crores and Rs. 15.96 Crores during FY 2012-13 and FY 2013-14 respectively.

Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time. The effective rate of depreciation for assets linked to Plant & Machinery & Vehicles is 5.28%, Buildings is 3.34% and Furniture is 6.33% vide Appendix-III (Depreciation schedule of CERC Terms and Conditions of Tariff Regulations, 2009). The depreciation for FY 2013-4 has been worked out as Rs. 2.66 Crores.

As covered in earlier para, Rs. 15.96 Crores has been considered as addition in GFA for FY 2013-14. In view of above, Commission considers the depreciation of Rs. 2.66 Crores as reasonable considering Rs. 38.50 Crores as the opening value of assets at the beginning of the year.

The depreciation approved by the Commission is as below.

Table 36 : GFA and Depreciation approved by the Commission for FY 2013-14 (in Rs. Crores)

Rate of depreciation	S. No.	Particulars	Opening GFA	Additions	Closing GFA	Average Assets	Depreciation
	1	**2**	**3**	**4**	**5**	**6**	**7**
5.28%	1	Plant & Machinery	34.42	14.27	48.69	41.55	2.19
3.34%	2	Buildings	-	-	-	-	-
9.50%	3	Vehicles	4.08	1.69	5.77	4.93	0.47
6.33%	4	Furniture and Fixtures	-	-	-	-	-
6.33%	5	Computers & others	-	-	-	-	-
0.00%	6	Land	-	-	-	-	-
		Total	**38.50**	**15.96**	**54.46**	**46.48**	**2.66**

The Commission therefore considers the depreciation of Rs. 2.66 Crores as reasonable and approves the same for FY 2013-14.

5.8 Interest and Finance Charges

5.8.1 Interest on Loan

Petitioner's Submission

The Petitioner has submitted that the entire capital employed till date has been funded by the Central Government through Budgetary support without any external borrowings. LED is now migrating to regulatory regime under the aegis of the Commission and would begin to function as a commercial Utility under the Electricity Act, 2003 and would therefore be utilizing the debt facilities from FY 2012-13 onwards.

Assets capitalized during FY 2013-14 have been considered based on normative debt-equity ratio of 70:30 as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. Interest rate of 14.75% has been considered for computation of interest cost for long-term loans which is similar to the prevailing SBI Prime Lending Rate. The Petitioner has claimed an amount of Rs 4.12 Crores as interest cost on long term loans and requests the Commission to approve the same.

Commission's analysis

As per the JERC tariff regulations 2009:

"25. Interest and Finance Charges on Loan

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

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

(3) The interest rate on the amount of equity above 30% treated as loan shall be the weighted average rate of interest on loan capital of the generating company / licensee:

Provided that interest and finance charges of renegotiated loan agreements shall not be considered, if they result in higher charges:

Provided further that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost.

(4) Interest charges on security deposits, if any, made by the consumers with a generating company/licensee, shall be equivalent to the bank rate or at the rate, if any, specified by the Commission whichever is higher.

(5) In case any moratorium period is availed of, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(6) The Commission shall allow obligatory taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, as finance cost.

(7) Any saving in costs on account of subsequent restructuring of debt shall be passed on to the consumers."

Further, the Commission would like to place reliance on Section 23 of the JERC Tariff regulations which is reproduced below:

"23. Debt-Equity Ratio

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

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

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

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

The basic requirement for consideration of interest on loans is adequate information of the value of fixed assets of the Utility in service (net fixed assets) at the beginning of such year and funding pattern as well as terms & conditions of funding of capital assets.

In the instant case, the Licensee has not provided the actual value of fixed assets, hence the servicing of assets in the form of interest on loan and return on assets is indeterminate at this stage on the opening GFA submitted by the Petitioner. Hence the same has not been considered on the assumed value of assets. The same shall be considered at true-up stage if full details are made available.

However, the Commission has considered an opening normative loan of Rs. 23.20 Crores for FY 2013-14 (being 70% of Rs. 13.00 Crores considered to be addition in GFA during FY 2012-13) and added normative loan for FY 2013-14 of Rs. 11.17 Crores being 70% of addition in GFA considered for FY 2013-14 to calculate the interest on normative loan amount. The Commission has considered the SBI PLR rate at 14.45% for FY 2013-14. The Commission approves the total interest charges for the year at Rs. 3.98 Crores as given below:

Table 37 : Interest on Loans approved by the Commission for FY 2013-14 (in Rs. Crores)

S. No.	Particulars	Approved in Tariff Order FY 2013-14	Petitioner Resubmission FY 2013-14	Approved (FY 2013-14)
1	Opening Normative Loan/WIP	25.17	21.61	23.20
2	Add: Normative Loan during the year/GFA during the year	11.17	14.75	11.17
3	Less: Normative Repayment	2.70	2.16	2.48
4	**Closing Normative Loan/GFA**	33.64	34.20	31.90
5	Average Normative Loan	29.40	27.91	27.55
6	Rate of Interest (@SBI SBAR rate)	14.45%	14.75%	14.45%
7	**Interest on Normative Loan**	**4.25**	**4.12**	**3.98**

The Commission considers the interest on normative loan of Rs. 3.98 Crores as reasonable and approves the same for FY 2013-14.

5.8.2 Interest on Working Capital

Petitioner's Submission

The Petitioner has submitted the Interest on Working Capital for FY 2013-14computed on normative basis. As per the JERC Tariff Regulations, for the purpose of computation of normative working capital and interest on working capital, the components of working capital are as follows:

- Sum of two month requirement for meeting the fuel cost
- One month employee costs
- One month Administration & General expenses

- One month R&M Cost

A rate of interest of 14.75% has been considered for FY 2012-13 and FY 2013-14 on the working capital requirement, being the SBI Prime Lending Rate as on 1st April of the year. The interest on normative working capital for FY 2013-14 has been claimed at Rs. 2.38 Crores.

Commission's analysis

As per the regulation 29 of JERC tariff regulations

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29. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

1) For generation and transmission business, the working capital shall be as per CERC norms.

2) Subject to prudence check, the working capital for distribution business shall be the sum of one month requirement for meeting:

a. Power purchase cost.

b. Employees cost.

c. Administration & general expenses and

d. Repair & Maintenance expenses.

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

a. Power purchase cost

b. Employees cost

c. Administration & general expenses

d. Repair & Maintenance expenses.

e. Sum of two month requirement for meeting Fuel cost.

4) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

The Commission has considered the approved fuel cost expenses of FY 2013-14 and approved O&M expenses to work out the normative working capital required for FY 2013-14. In accordance with Section 47(4) of the Electricity Act 2003, the distribution licensee is required to pay interest on security deposit collected from the consumers. If this security deposit is invested in the form of interest earning fixed deposits or other similar instruments, the interest earned from such investment could be utilized to pay the interest to the consumers under section 47(4) of the Electricity Act 2003, alternatively, the funds could be retained by the Licensee to meet its working capital needs. It is noted that the Petitioner has not invested any of the security deposit held and the said amount is available to the Petitioner. Accordingly, the Commission has allowed the interest payable to the consumer as an expense in this order. The Commission has considered the security deposit available with the Petitioner as a source to meet working capital requirements and has deducted this amount from the working capital requirement considered for interest on working capital for FY 2013-14.

Further, Commission considered the SBI PLR rate at 14.75% for FY 2013-14. The Commission has computed the requirement of working capital based on the provisions of the regulations. Working capital has been reduced by the amount of Consumer Security Deposit/Misc. deposit available with the Petitioner considering its usage for meeting part of working capital requirements

Table 38 : Interest on Working Capital approved by the Commission for FY 2013-14 (in Rs. Crores)

S. No.	Particulars	Petitioner Resubmission(FY 2013-14)	Approved (FY 2013-14)
1	Fuel Cost for 2 months	14.84	15.21
2	Power Purchase Cost for one month	-	-
3	Employee Cost for one month	0.96	0.83
4	A&G Expenses for one month	0.08	0.08
5	R&M Expenses for one month	0.26	0.28
6	**Total Working Capital for one month**	**16.15**	**16.40**
7	**Net Working Capital for one month after deducting security deposit**	**16.15**	**16.33**
8	SBI PLR Rate	14.75%	14.45%
9	**Interest on Working Capital**	**2.38**	**2.36**

The Commission considers Rs. 2.36 Crores as Interest on Working Capital as reasonable and approves the same for ARR for FY 2013-14.

5.8.3 Interest on Security Deposit

Petitioner's Submission

The Petitioner has not claimed any interest on security deposit as part of the Aggregate Revenue Requirement (ARR) for FY 2012-13.

Commission's analysis

The Commission has assessed the need and availability of funds to the Licensee. Consumer's security deposit is the quantum of consumer's funds available to the Licensee and hence deducted from the funds available to meet working capital requirements and the interest on working capital is allowed on the balance amount. The cost of available security deposit of the consumer is allowed as an interest on security deposit to be paid to the consumer as per section 47(4) and regulation 25 of the JERC Tariff Regulations 2009 and the same is allowed as expenditure in the ARR.

Further, based on the additional information submitted by the Petitioner, the opening and closing amount of consumer deposit has been taken as Rs. 0.06 Crores for the FY 2012-13 and Rs 0.07 Crores for FY 2013-14.

Table 39 : Interest on Security Deposit approved by the Commission for FY 2013-14 (in Rs. Crores)

S. No.	Particulars	Proposed (FY 2013-14)	Approved (FY 2013-14)
1	Opening Security Deposit/Misc. Deposit	0.07	0.07
2	Add: Deposits during the Year		
3	Less: Deposits refunded		
4	Closing Security Deposit	**0.07**	**0.07**
5	Bank Rate	**9.50%**	**8.50%**
6	**Interest on Security Deposit**	**-**	**0.01**

The Commission allows Rs 0.01 Crores as the interest on security deposit and considered as expenditure in the ARR for FY 2013-14.

5.9 Return on Capital Base/Equity

Petitioner's Submission

As submitted by the Petitioner LED is an integrated Utility in its present form as defined in Regulation 2(9) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and it is entitlement to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

The LED has considered return on capital base as per the Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and has considered Rs. 2.63 Crores and

Rs. 2.93 Crores as a 3% return on net block of assets/capitalization at the beginning of the FY 2012-13 and FY 2013-14of 87.62 Crores and Rs 97.53 Crores respectively.

Commission's analysis

LED is an integrated Utility in its present form as defined in Regulation 2(9) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and is not restructured and corporatized till date. As of now, it is an integrated Utility and is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity for historical assets is information in the form of audited annual accounts and assets & depreciation registers. The Petitioner has not been maintaining the adequate information.

As covered in earlier sections; the Commission has considered Rs. 38.50 Crores as the gross block at the beginning of FY 2013-14 and accumulated depreciation of Rs. 2.66 Crores. The Commission has therefore considered the reasonable return of Rs 1.08 Crores at the rate of 3% on net fixed asset of Rs. 35.84 Crores at the beginning of FY 2013-14.

Table 40 : Return on capital base approved by the Commission for FY 2013-14(in Rs. Crores)

Sr. No.	Particulars	Revised Estimates FY 2013-14	Approved (FY 2013-14)
1	Gross block at beginning of the year	102.94	38.50
2	Less accumulated depreciation	5.40	2.66
3	Net block at beginning of the year	97.54	35.84
4	Less accumulated consumer contribution		
5	**Net fixed assets at beginning of the year**	**97.54**	**35.84**
6	**Reasonable return @3% of NFA**	**2.93**	**1.08**

The Commission considers the Return on Net Fixed Assets of Rs. 1.08 Crores as reasonable and approves the same for FY 2013-14.

5.10 Provision for bad & doubtful debts

Petitioner's Submission

The Petitioner has submitted that it has considered the provision for Bad and Doubtful Debts at 1% of the receivables for FY 2013-14. The Petitioner has submitted the provision for bad debts at Rs. 0.12 Crores for FY 2013-14.

Table 41 : Provision for bad and doubtful debts submitted by the Petitioner for FY 2013-14(in Rs. Crores)

Provision for Bad& Doubtful Debts	FY 2013-14 Revised Estimates
Receivables	11.97
Provision for Bad &Doubtful Debts as % of Receivables	1%
Provision for Bad & Doubtful Debts	**0.12**

Commission's analysis

As specified in the regulation no. 28 of JERC Tariff regulations, read with the format -

"28. Bad and Doubtful Debts

The Commission may, after the generating company/Licensee gets the receivables audited, allow a provision for bad debts up to 1% of receivables in the revenue requirement of the generating company/Licensee. (Information to be furnished in format 18)"

Format -18

S.No.	*Particulars*	*Amount (Rs. in Crores)*
1.	*2.*	*3.*
1.	*Amount of receivable bad and doubtful debts (audited)*	
2.	*Provision made for debts in ARR*	

In the absence of audited accounts showing the trend of the actual write-off of the bad/doubtful debts for the past year(s), the Commission in the previous tariff order had considered the provision of 0.5% (against up to 1% in the regulation) of the receivables towards bad and doubtful debts subject to availability (at the time of true up) of audited accounts & auditor's certificate of actual write off of bad & doubtful debts. The Commission observes that the Petitioner has not been submitting the details of written off debts and as FY 2013-14 is coming to end, the Commission is of the view of not considering at this stage, any bad and doubtful debt for FY 2013-14. The same shall be considered at the time of truing up based on the actual data subject to limitation up to 1% of the receivables.

The Commission has, therefore, not considered bad and doubtful debt for FY 2013-14. The submission of the Petitioner vis-à-vis the approved value for FY 2013-14 is as shown below:

Table 42: Provision for bad and doubtful debts approved by the Commission for FY 2013-14(in Rs. Crores)

S. No.	Particulars	Approved In tariff Order FY 2013-14	Revised Estimates FY 2013-14	Approved FY 2013-14
1	Receivables	11.99	11.97	11.93
2	Provision for Bad &Doubtful Debts as % of Receivables	0.50%	1%	0.00%
3	**Provision for Bad & Doubtful Debts**	**0.06**	**0.12**	**0.00**

5.11 N
on-Tariff Income

Petitioner's Submission

The Petitioner has estimated Rs. 0.32 Crores for FY 2013-14 based on the actuals of FY 2012-13 as the non-tariff income in the form of meter rent, late payment charges & misc. charges from various categories of consumers. The Petitioner has submitted that the actual non-tariff income for FY 2012-13 was Rs 0.21 Crores and has considered an increase of 5% over the actual non-tariff income of FY 2012-13 for projecting the non-tariff income of FY 2013-14.

Commission's analysis

The Commission finds the estimates to be reasonable and approves the non-tariff income as estimated by the Petitioner. The details of approved and estimated non-tariff income are shown in the below table:

Table 43: Non-Tariff Income (Rs Crores)- Commission's Approval

S. No.	Particulars	Petitioner Revised estimates(FY 2013-14)	Approved(FY 2013-14)
	Total non-tariff income	**0.32**	**0.32**

5.12 Revenue at existing tariff for FY 2013-14

Petitioner's Submission

The LED has computed the revenue for FY 2013-14 based on the tariff rate approved by the Commission in its Order dated 22nd May, 2013.

Revenue from sale of power for FY 2013-14 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Lakshadweep.

The Revenue from sale of power at existing tariff has been estimated to be Rs. 11.97 Crores for FY 2013-14, as shown in the table below.

Table 44 : Revenue at existing tariff projected by the Petitioner for FY 2013-14 (Rs Crores)

Sr. No.	Particulars	FY 2013-14 Revise Estimates
1	Domestic	6.38
2	Commercial	5.06
3	HT Industrial	-
4	Industrial	0.16
5	Public (Street Light)	0.33
6	Temporary connections	0.04
	Total revenue from existing tariff	**11.97**

Commission's analysis

The Commission has estimated the revenue on the basis of approved sales for FY 2013-14. The Commission has considered the slab wise sales as provided in the latter submissions by the Utility for computing the revenue.

Further, In case of HT Industrial category revenue has not been computed as relevant data for the same has not been submitted. Currently LED is billing HT consumers under commercial category, therefore, Commission would like to have the historical actual sales figures for HT industrial category for calculating revenue.

Table 45 : Revenue at existing tariff approved by the Commission for FY 2013-14

S. No.	Particulars	Sales (MU) FY 2013-14	Average Revenue Realization (Rs/kWh) FY 2013-14 (Existing tariff)	Revenue at existing tariff (Rs Crores) FY 2013-14
1	Domestic	31.17	1.97	6.15
2	Commercial	10.34	4.94	5.11
3	HT Industrial			
4	Industrial	0.39	4.82	0.19
5	Public (Street Light)	1.07	4.00	0.43
6	Temporary Connections	0.07	7.00	0.05
	Total	**43.04**	**2.77**	**11.93**

5.13 Aggregate Revenue Requirement and Revenue Surplus/Deficit for FY 2013-14

Petitioner's Submission

The Petitioner has submitted Rs. 119.31 Crores as the Aggregate Revenue Requirement for FY 2013-14 in the ARR & tariff petition on the basis of the revised estimates of the various components of the ARR as covered above.

Commission's analysis

The Commission has considered and approved the ARR for FY 2013-14 based on the items of expenditure covered in the preceding sections and the same has been summarized in the table below.

Table 46 : Aggregate Revenue Requirement approved by the Commission for FY 2013-14 (Rs. Crores)

Rs. Crores		FY 2013-14	
Sr. No.	**Particulars**	**Proposed Estimates**	**Approved Estimates**
1	Cost of fuel	89.07	92.01
2	Cost of power purchase for full year	-	-
3	Employee costs	11.53	10.00
4	Administration and general expenses	0.99	0.97
5	Repair and Maintenance	3.10	3.38
6	Depreciation	5.40	2.66
7	Interest and finance charges	4.12	3.98
8	Interest on working capital	2.38	2.36
9	Interest on Security Deposit to be paid to consumers	-	0.01
10	Return on NFA /Equity	2.93	1.08
11	Provision for Bad Debt	0.12	0.00
12	Advance Against Depreciation		
13	**Total Revenue Requirement**	**119.63**	**116.52**
14	Less: Non-Tariff Income	0.32	0.32
15	Less: Revenue from Sale through UI		
16	Less: Revenue from Sale of Power-Exchanges		
17	**Net Revenue Requirement (13-14-15-16)**	**119.31**	**116.20**

The estimated revenue deficit at existing tariff as approved for FY 2013-14 is given below.

Table 47 : Revenue Gap approved by the Commission for FY 2013-14 (Rs. Crores)

Rs. Crores		FY 2013-14	
Sr. No.	**Particulars**	**Proposed Estimates**	**Approved Estimates**
1.	**Total Revenue Requirement**	**119.63**	**116.52**
2.	Less: Non-Tariff Income	0.32	0.32
3.	Less: Revenue from Sale through UI		
4.	Less: Revenue from Sale of Power-Exchanges		
5.	**Net Revenue Requirement**	**119.31**	**116.20**
6.	Revenue from Retail Sales at Existing Tariff	11.97	11.93
7.	**Net Gap**	**107.34**	**104.27**

As seen from the table above, there is a revenue gap of Rs 104.27 Crores at the end of FY 2013-14 at existing tariff as estimated by the Commission against the gap of Rs. 107.34 Crores estimated by the Petitioner at the existing tariff for FY 2013-14. The major reason for the reduction in gap for FY 2013-14 as assessed by the Commission is the reduction in the O&M cost and non-consideration of full amount of depreciation as well as bad and doubtful debt as claimed by the Petitioner. It is expected that in future ARRs and True-ups, when the Petitioner submits the audited figures of revenue for FY 2013-14, fixed asset registers, separate accounts of the cost of the generation from diesel generating sets; the gap assessed (as of now) in the revenue requirement as above shall be appropriately considered.

6. AGGREGATE REVENUE REQUIREMENT OF FY 2014-15

6.1 Background

The Petitioner has submitted the ARR & Tariff Petition for FY 2014-15 broadly on the basis of the principles outlined in the Tariff Regulations notified by JERC. The Petitioner in its petition has considered the past trends and taken cognizance of other internal and external developments to project the likely performance for FY 2014-15. In this chapter, the Commission has analyzed the petition of LED based on the provisions mentioned in the regulations and performance in the FY 2012-13 and revised estimates of FY 2013-14.

The Commission has taken into consideration the following for ARR and tariff determination for FY 2014-15:

i. Actual Performance in FY 2012-13 (Actual Un-audited Figures)

ii. Revised estimates approved by the commission for FY 2013-14

6.2 Analysis of Aggregate Revenue Requirement of FY 2014-15

The determination of Aggregate Revenue Requirement requires assessment of quantum of energy sales, loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. Revised estimates/actual submitted by the petitioner as regards to various components of ARR of previous year, the Commission's analysis thereon and decision in respect of items given below is as covered in the following paras:

- Assessment of Energy Requirement
  - i. Sales Projections
  - ii. Loss Trajectory
  - iii. Energy Balance
  - iv. Power Purchase Sources
- Assessment of the Aggregate Revenue Requirement
  - i. Power Purchase Costs & Transmission Charges;
  - ii. Operation and Maintenance Expenses;
    - Employee Expenses
    - Administration & General expenses
    - Repairs & Maintenance Expenses

iii. Capital Expenditure and Asset Capitalization

iv. Gross Fixed Assets;

v. Depreciation;

vi. Interest on Long Term Loans;

vii. Interest on Working Capital & Security Deposits;

viii. Return on Capital Base/ Net Fixed Assets;

ix. Provision for Bad and Doubtful Debts

x. Other expenses.

xi. Non-Tariff Income

As per the regulation no. 13 of JERC Tariff regulations 2009,
"

1) The Aggregate Revenue Requirement of the generating company or the licensee shall comprise of the following:

i. Fuel Cost for own generation, if applicable.

ii. Cost of Power Purchase, if any

iii. Operation and Maintenance Expenses,

iv. Depreciation, including Advance Against Depreciation,

v. Interest and Cost of Finance,

vi. Return on Equity,

vii. Income Tax

viii. Provision for Bad & Doubtful Debts

ix. Other Expenses.

2) The data should be provided for three years

i. Audited figures for the previous year; Information for the previous year shall be based on the audited accounts; in the absence thereof, the audited accounts for the immediately preceding year shall be filed along with the un-audited accounts for the previous year.

ii. Estimated figures for the current financial year should be based on actual figures for the first six months and the estimated figures for the second six-months of the year. The estimated figures for the second half year of the current financial year should be based on the actual audited figures for the second half of the previous year with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified.

iii. Forecasted figures for the ensuing year should be based on the current year figures with adjustments that reflect known and measurable changes expected to occur between them. These adjustments must be specifically documented and justified."

4) The Aggregate Revenue Requirement of the generating company or the licensee shall be worked out by adjusting the following in the revenue requirement computed under Clause (1) above:

i. Necessary adjustments under Regulation 9 'Review and Truing Up'.

ii. Income from surcharge and additional surcharge from Open Access Consumers, if any ;

iii. Transmission and/or Wheeling Charges recovered from the Open Access Customers, if any ;

iv. Authorized portion of Income/revenue from Other Business engaged in by the licensee for optimum utilization of assets, if any, in accordance. "

6.3 Consumers, Connected load and Energy Sales

Petitioner's Submission

<u>Energy Sales</u>

The Petitioner has submitted that Electricity Department - Lakshadweep has a consumer mix constituting of domestic, commercial, Industrial and Public Lighting.

LED's overall energy sales are significantly dependent on the domestic consumers to the extent of around 70%. Energy sold to various consumer categories over the past 5 years has grown at approximately 12.91% p.a., mainly contributed by increase in the sales to the domestic categories.

The Petitioner has submitted that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the Utility including factors such as Government policy, economic climate, weather conditions and force majeure events like natural disasters, etc. LED, therefore for projecting the category-wise consumption for FY 2014-15 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

The Petitioner has considered the past trend for projecting the Energy Sales (MUs) as mentioned in the following table:

Table 48 : Details of Energy Sales during past years (Sales in Million Units)- Petitioner's Submission

S. No.	Category	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13
		Actual	Actual	Actual	Actual	Actual
1	Domestic	15.85	17.78	20.35	23.75	27.23
2	Commercial	5.96	6.16	6.98	7.28	9.26
3	Industrial	0.27	0.33	0.41	0.42	0.39
4	Public (Street Light)	1.29	1.28	1.34	1.52	1.07
5	Temporary Connections	0.02	0.02	0.01	0.02	0.05
6	**Total**	**23.38**	**25.56**	**29.09**	**32.99**	**38.00**

The energy sales for FY 2014-15 have been determined based on CAGR for past three to four-year actual energy sales in various consumer categories. Since the energy sales in each category depend upon a number of factors like growth in economy, climate, Government policies etc, normalization in sales has been undertaken in order to remove any wide fluctuations.

The Petitioner has considered the adjusted CAGR of various consumer categories for growth rate (%) for projecting the Energy Sales (MUs) as mentioned in the following table:

Table 49 : Growth rate considered for FY 2014-15 (in %age) by the Petitioner

S. No.	Category	Assumed growth rate for FY 2014-15
1	Domestic	10.00%
2	Commercial	11.62%
3	Industrial	6.08%
4	Public (Street Light)	-
5	Temporary Connections	-

The table below summarizes category wise energy sales projection for FY 2014-15 for the LED. As can be observed, the overall energy sales in UT of Lakshadweep are significantly dependent upon the domestic and commercial consumption.

Table 50 : Projected category wise sales by the Petitioner for FY 2014-15 (Sales in Million Units)

S. No.	Category	FY 2014-15 Petitioner's Submission
1	Domestic	33.40
2	Commercial	10.34
3	HT Industrial	-
4	Industrial	0.41
5	Public (Street Light)	0.82
6	Temporary Connections	0.05
	Total	**45.03**

Number of Consumers

The Petitioner has submitted that the department has a consumer mix of domestic, commercial, industrial, HT-Industrial and public lighting. The number of consumers as on January 2014 submitted by the Petitioner is summarized below. The number of consumers for Temporary connections was provided by the Petitioner in its additional submissions after Commissions scrutiny.

Table 51 : Number of consumers as on January 2014- Petitioner's Submission

S. No.	Category	No. of consumers
1	Domestic	16,984
2	Commercial	3,157
3	HT Industrial	18
4	Industrial	317
5	Public (Street Light)	74
6	Temporary Connections	59
	Total	**20,609**

The Petitioner as per the regulatory formats submitted along with the petition for FY 2014-15 has submitted the number of consumers for FY 2014-15 as 20,609. The past trend of the number of consumers has however not been provided by the Petitioner.

Connected Load

The Petitioner has not submitted the past trends of the connected load of the various consumer categories for FY 2014-15.

Commission's analysis

Energy Sales

The Commission has considered the actual figures of past 5 years and the actual for FY 2012-13 (submitted by the Petitioner) for estimating the category wise energy sales for FY 2014-15. The modified CAGR (%) for a period of four years (FY 2012-13 over FY 2008-09) for different consumer categories has been considered and the growth rate so determined has been applied on the approved sales of FY 2013-14to assess the Energy Sales for FY 2014-15. In case last two years CAGR was negative as seen in industrial and public lighting, the Commission has assumed zero growth rate in that case (modified CAGR). The details are given in the table below.

Table 52 : CAGR (%) considered by the Commission for estimation of Sales for FY 2014-15(in percentage)

S. No.	Category	Assumed growth rate for FY 2014-15
1	Domestic	14%
2	Commercial	12%
3	HT Industrial	-
4	Industrial	0%
5	Public (Street Light)	0%
6	Temporary Connections	27%

Table 53 : Energy Sales approved by the Commission for FY 2014-15 (in Million Units)

S.No.	Category	FY 2014-15	FY 2014-15
		Petitioner's Submission	Approved
1	Domestic	33.40	35.69
2	Commercial	10.34	11.54
3	HT Industrial	-	-
4	Industrial	0.41	0.39
5	Public (Street Light)	0.82	1.07
6	Temporary Connections	0.05	0.09
	Total	**45.03**	**48.77**

Number of Consumers

The Commission, in the absence of any significant historical data for projection, based on the submission made by the Petitioner has approved the actual number of consumers seen in the month of January 2014 for FY 2014-15. Further, in case of temporary connection the number of consumers has not been submitted, therefore, Commission has taken 107 number of consumers as approved for FY 2013-14. The same is shown below:

Table 54 : Number of Consumers approved by the Commission for FY 2014-15

S. No.	Category	FY 2014-15 Petitioner's Submission	FY 2014-15 Approved
1	Domestic	16984	16984
2	Commercial	3157	3157
3	HT Industries	18	18
4	Industrial	317	317
5	Public (Street Light)	74	74
6	Temporary Connections		107
	Total	**20550**	**20657**

Connected Load

The Commission has observed that the Petitioner did not furnish the past trend of the connected load of the various consumer categories, in the absence of which the Commission has considered the approved connected load for FY 2012-13 based on the actuals.

The Commission directs the Petitioner to submit complete information as per the regulatory formats of the ARR & tariff approval process of the Commission along with slab-wise details of the connected load in each category in the next ARR filing. Further, the past trends of atleast the last 3 years based on actual should be submitted to enable the Commission to analyze the data and arrive at realistic projections.

Table 55 : Connected Load approved by the Commission for FY 2014-15 (in kVA)

S. No.	Category	Petitioner's Submission FY 2014-15	Approved FY 2014-15
1	Domestic		6528
2	Commercial		1526
3	HT Industries		0
4	Industrial		348
5	Public (Street Light)		21
6	Temporary Connections		1
	TOTAL	**-**	**8424**

6.4 Transmission &Distribution Loss

Petitioner's Submission

The Petitioner has submitted that it has achieved significant reduction in transmission & distribution losses in the recent years. The LED has further submitted that the system improvement works executed every year under the plan schemes have resulted in the reduction of T&D losses. However, it may also be noted that reduction of distribution losses may not be possible beyond a certain level due to geographical conditions of the UT of Lakshadweep and technical limitations in the distribution system.

The actual T&D loss level of the LED during FY 2012-13 was 15.93%. The estimated T&D losses for FY 2013-14 were around 15.00%. LED has proposed to reduce the T&D losses to 14.00% for FY 2014-15. The Petitioner has submitted that considering the proposed capital expenditure in transmission and distribution network during FY 2014-15, it has proposed to reduce the losses by 1% in FY 2014-15, as summarized in the table below:

Table 56 : T&D losses submitted by the Petitioner for FY 2014-15

S. No.	T&D Losses	FY 2012-13	FY 2013-14	FY 2014-15
		Actual	Revised Estimate	Projected
1	T&D losses (%age)	15.93%	15%	14%

Commission's Analysis

As per the regulation 15 of JERC Tariff regulations, 2009

"15. AT& C Losses

1. *The licensee shall give information of total AT&C losses in Previous Year and Current Year and the basis on which such losses have been worked out.*

2. *The licensee shall also propose a loss reduction programme for the Ensuing Year as well as for the next three years giving details of the measures proposed to be taken for achieving the same.*

3. *Based on the information furnished and field studies carried out and the loss reduction program proposed by the licensee, the Commission shall fix separate targets for reduction of Transmission and Distribution losses and for commercial efficiency for the period specified by the Commission:*

   Provided further that in the event of unbundling of the integrated Utility, the Commission may fix separate transmission and distribution loss targets and commercial efficiency targets, as the case may be, for each successor licensee taking into account its area of operation, its consumer mix, state of the network, level of metering, metering initiatives planned, etc.

4. *The licensee shall conduct regular energy audit to substantiate its estimation of T&D losses. The licensee shall also furnish six monthly energy audit reports to the Commission.*

   The energy audit report for the first six months of the year shall be provided by November end of the same year. Similarly energy audit report for the last six months of the year shall be provided by May end of the next year.

5. *In the absence of energy audit, the Commission may not accept the claim of the licensee and may proceed to fix the loss levels on the basis of any other information available and its own judgment.''*

The Petitioner has not provided any energy audit report and neither any basis for reduction of T&D loss level from 15.00% in FY 2013-14 to 14.00% in FY 2014-15.

However for the purpose of this order the Commission has considered the loss level at 14% for FY 2014-15. As the Commission has separately considered bad and doubtful debt for FY 2014-15 in foregoing paras, the collection efficiency of 99% submitted by the Petitioner has not considered.

6.5 Energy Balance

Petitioner's Submission

The Petitioner has submitted that considering the T&D losses of 14.00%, the energy requirement for the sale within the Islands of the UTs is 52.36 MUs for FY 2014-15. The Petitioner has submitted that overall energy sales to various consumer categories are estimated to grow at approximately 10% during FY 2014-15 and the overall energy requirement has been projected at 52.36 MU in FY 2014-15.

Commission's Analysis

Based on the approved energy sales of 48.77 MUs and based on the approved T&D loss, the total energy requirement has been approved. The LED sources power entirely from its own power generating stations. The detailed analysis of own generation has been covered in Para 6.6.

Based on the data available, the Commission has projected the net energy availability of 56.72 MUs for FY 2014-15. This is inclusive of the units generated from solar plants.

The table below captures the values as submitted by the Petitioner and that approved for FY 2014-15.

Table 57 : Energy Balance approved by the Commission for FY 2014-15

S. No.	Category	Petitioner's Submission FY 2014-15	Approved FY 2014-15
A)	**ENERGY REQUIREMENT (MU)**		
1	**Total sales within the UT**	45.03	48.77
I	AT&C Losses (%)	14.86%	
Ii	T&D losses (%)	14.00%	14%
Iii	MU	7.33	7.95

S. No.	Category	Petitioner's Submission FY 2014-15	Approved FY 2014-15
2	**Energy required for Sale to Retail Consumers (MU)**	**52.36**	**56.72**
3	**Total Energy Requirement for UT (MU)**	**52.36**	**56.72**
B)	**ENERGY AVAILABILITY / PURCHASED**		
1	**Net Generation after auxiliary consumption (MUs)**		
I	Own Generation	**52.36**	**56.72**
2	**Energy Surplus/(Gap) (MU)**	**-**	**-**

6.6 Power Quantum and Cost

Petitioner's Submission

Sources of Power and Power Generation Quantum

The Petitioner has submitted that it sources its power entirely from its own power generating stations. It is submitted that out of the total capacity of 18890 kW, the department utilizes around half of its total installed capacity. The remaining installed capacity is utilized as back-up.

The Petitioner has submitted that the source-wise gross generation, auxiliary consumption and net generation of power in UT of Lakshadweep from FY 2007-08 and FY 2012-13 is as shown in the table below:

Table 58: Generation Quantum from FY 2007-08 to FY 2012-13 as submitted by the Petitioner

Year	Gross generation	Auxiliary consumption	Auxiliary consumption	Net generation
	MU	MU	%age	MU
FY 2007-08 (Actual)	28.82	0.40	1.39%	28.42
FY 2008-09 (Actual)	31.14	0.42	1.36%	30.72
FY 2009-10 (Actual)	35.14	0.44	1.27%	34.70
FY 2010-11 (Actual)	40.33	0.56	1.39%	39.77
FY 2011-12 (Actual)	42.70	0.95	2.21%	41.75
FY 2012-13 (Actual)	44.65	0.86	1,92%	43.80

Further, the Petitioner has submitted that out of the total installed capacity of 21760 kW, around 1400 kW of the existing installed capacity has become old and is proposed to be phased out by the LED. Around 1900 kW of capacity is likely to be added to replace the old plants as well as increase the generation capacity. The existing status of DG sets (i.e. new and old plants) and proposed capacity addition of the LED is shown in the table below:

Table 59 : Existing installed capacity and capacity addition for FY 2014-15- Petitioner's Submission

S. No.	Name of Island	Existing installed capacity			
		New		Old	Total
1.	Minicoy	2X1000 1X1600	2000 1600	800	4400
2.	Kavaratti	2X1000	2000	0	3200
		2X600	1200	0	
3.	Amini	3x750	2250	400	2650
4.	Andrott	3X750			3250
		1X1000			
5.	Kalpeni	2X250	500	750	1250
6.	Agatti	3X400	1200	400	2350
		1X750	750		
7.	Kadmat	1X400	1900	250	2150
		3X250			
8.	Kiltan	2X400	800	200	1000
9.	Chetlat	2X250 1X400	900	0	900
10.	Bitra	1 X 100	100	330	430
11.	Bangaram	1X60	60	120	180
12.	**Total**		**18510**	**3250**	**21760**

For projection of the generation quantum for FY 2014-15, the LED has considered 350 days of operation for all the DG sets. The remaining 15 days would be required for repair and maintenance for the DG sets.

Further, the Petitioner has considered that 50% of the new DG sets would be utilized as back-up to provide continuous power supply to the important military installations located in the Islands of the UTs and to meet the other consumer demand during break down of the DG sets.

The existing level of auxiliary consumption i.e. 2.21% has been considered for projecting the quantum of auxiliary consumption for FY 2014-15.

For FY 2014-15, solar generation has been considered from the solar plants in Minicoy, Kavaratti, Andrott, Kalpeni, Agatti, Kadmat and Kiltan. The solar plants in Amini, bitra, bangaram and Chetlat will not be operational in FY2014-15. A total of 1.585 MUs of power generation has been projected by the petitioner for FY2014-15.

The table below shows the projected Islands of the UT wise gross power generation quantum, auxiliary consumption and net power generation quantum of the LED for FY 2013-14 as submitted by the Petitioner.

Table 60 : Power generation quantum as submitted by the Petitioner for FY 2014-15

Islands of the UT	Gross generation	Auxiliary Consumption	Net generation
DG sets			
Minicoy	8.45	0.08	8.37
Kavaratti	10.90	0.13	10.77
Amini	5.52	0.06	5.45
Andrott	7.46	0.26	7.20
Kalpeni	3.80	0.05	3.75
Agatti	6.06	0.13	5.94
Kadmat	4.53	0.22	4.31
Kiltan	2.63	0.03	2.60
Chetlat	1.96	0.04	1.92
Bitra	0.392	0.006	0.386
Bangaram	0.079	0.010	0.069
Subtotal 1	**51.78**	**1.00**	**50.77**
Solar generation			
210 kWp Minicoy SPV			0.178
760 kWp Kavaratti SPV			0.716
100 kWp Amini SPV			0.000
320 kWp Andrott SPV			0.245
100 kWp Kalpeni SPV			0.178
100 kWp Agatti SPV			0.105
260 kWp Kadmat SPV			0.159
100 kWp Kiltan SPV			0.004
100 kWp Chetlath SPV			0.000
50 kWp Bitra SPV			0
50 kWp Bangaram SPV			0
Subtotal 2			**1.585**
Total Net Generation			**52.36**

The Petitioner requests the Commission to approve the generation quantum of 52.36 MU as estimated by the Petitioner.

<u>Fuel Purchase Cost</u>

The Petitioner has submitted that it procures its fuel (HSD oil) from the the Indian Oil Corporation's (IOC) Beypore depot (Kerala). The fuel procured from the Beypore depot is then transported to various Islands of the UTs by ships. In addition to this cost, the Petitioner has to pay additional charges towards transportation of fuel from the Beypore depot to the Islands of the UTs such as filing and sealing charges of the barrels, transportation charges for Beypore depot to the port, freight charge, port duties and crane charges at port, local transportation charges at the Islands of the UT etc. For FY 2014-15, the fuel purchase cost as estimated for FY 2013-14 has been considered for the full year to project the cost of HSD. Other costs such as bottling and transportation costs have been assumed to be increased by 5%. The escalation is to absorb the normal inflationary increases in the cost of purchase

Table 61 : Average Fuel Purchase Cost FY 2014-15 Petitioner's Submission

Sl. No.	Particulars	Amount (in Rs.)
1	Cost of HSD oil/per barrel including transportation, Service Tax @ 4% and SSC @1%	11011.94
2	Cost of filing and sealing of the barrels	9.45
3	Transportation charge/per barrel from KSCC yard to wharf including loading to the ships	61.95
4	Freight charge/barrel	168.00
5	Port duties and crane charges/barrel	18.60
6	Average cost of empty barrel	557.01
7	Transportation charge/per barrel from wharf to KSCC yard at Beypore	26.04
8	Restaking of empty barrel	5.25
9	Cost of cap seal (big and small)	5.67
10	Leak testing charge/barrel	13.65
11	Welding and reconditioning charge/barrel	3.15
12	Scrapping, cleaning, painting and marking charge/ barrel	68.25
13	Cost of Bunk washer (big and small)/barrel	2.71
14	**Total cost/barrel**	**11951.67**
15	Average cost of Oil (14/200) per litre	59.76
16	Add: Local transportation cost at the Islands of the UTs @2% of HSD price	1.23
17	**Average cost of HSD (15+16) per litre**	**60.99**

In addition to the HSD fuel, LED has projected 45,737 liters of Lube oil at a cost of Rs.1.03 Crore for the generation of power during FY 2014-15. The price of Lube oils considered as Rs. 225.00 per liter inclusive of the transportation cost.

The actual fuel purchase cost for FY 2014-15 is summarized in the table below:

Table 62 : Fuel Purchase Cost for FY 2014-15

Particulars	FY 2014-15 (Projected)		
	Quantity of HSD procured (KL)	Total Cost (Rs. Cr)	Per Unit Cost (Rs/Lit)
Total HSD Purchase Cost	15851	96.67	60.987
Lube oil	45737	1.03	225

* Inclusive of other charges

Note: The quantity and cost of Oil shown in the above table for FY 2014-15 are exclusive of the quantity and cost of the HSD maintained in the stock by the LED.

The per unit generation cost for FY 2014-15 is presented in the table below.

Table 63 : Per unit generation cost submitted by the Petitioner

Particulars	Unit	FY 2014-15
		Projected
Gross Generation	MU	51.78
Net Generation	MU	50.77
Fuel cost/Gross unit	Rs./kWh	18.87
Fuel cost/Net unit	Rs./kWh	17.24

Commission's Analysis

Power Generation Quantum and Cost

Own Generation

The Commission has projected availability based on the approved sales and keeping in view the standby requirement of the Islands of the UTs. Therefore, Plant Load Factor for each plant has been increased to match the sales with approved T&D losses for calculating gross generation available with same auxiliary consumption as seen in FY 2012-13.

The Commission has analyzed the past trend of auxiliary consumption and plant load factor(%) submitted by the Petitioner in its additional data submission. The Commission has also noted the growth rate considered by the Petitioner in the petition for own generating power plants for estimating the energy availability for FY 2014-15.

While estimating the energy availability and cost for FY 2014-15, the following has been considered:

- The generation availability has been computed based on the energy sales and T&D losses approved in the previous section while keeping the PLF under 50% as per the requirement for each DG set in the FY 2014-15.
- Average auxiliary consumption of the previous years (FY 2012-13 and FY 2013-14) has been considered for FY 2014-15 for each power station.
- The Commission has considered the following parameters of the HSD fuel oil for estimating the consumption on the basis of units generated by each of the generating unit:
    - For consumption & cost of HSD
        - The Commission has analyzed the specific fuel consumption i.e. the quantity of fuel required to generate one unit of electricity for FY 2012-13 and FY 2013-14. Commission based on the analysis considered the specific fuel consumption seen in FY 2012-13
        - Cost of HSD as per the latest rate seen in last three month has been considered as submitted by the Petitioner on 11th February 2014.
        - The average cost of lube oil has been considered to be Rs 226 /lit

Renewable Purchase Obligations

As per JERC (Procurement of Renewable Energy) First Amendment Regulations 2014, amendment in table 1 of sub Regulation (1.1) in the principle Regulations. The Petitioner has to purchase 3.3% of total consumption of all the consumers in its area as power purchase from renewable sources for FY 2014-15 including 0.60% for Solar and 2.70% for Non-Solar.

The Petitioner would be able to meet its RPO targets of Solar Power for FY 2014-15 based on the capacity addition proposed. It is observed that the Petitioner is not meeting its RPO target of 2.70% to be met from non-solar sources of renewable power generation, however, the Petitioner is meeting its overall target of 3.30% to be met from renewable sources of generation. **In view of this, the Commission directs the Petitioner to encourage and incentivize generation from renewable sources to meet its overall non-solar RPO targets.**

The Commission has considered generation from all its solar plants for FY 2014-15. The Commission also directs Petitioner to operationalize its closed SPV plants as it is one of the most cost effective generating source. As per the additional submission during public hearing, Petitioner has provided the O&M contract of SPV plants with BHEL where it is required to pay BHEL yearly O&M fee for maintaining the SPV plant. Therefore, it is expected from Petitioner to have all its SPV plants running.

As per the O&M contract with BHEL, 100,000 kWh/year will be generated from 100 kWp of equivalent capacity and the same has been considered for projecting the solar generation.

Summary of Total Approved Power Purchase Cost for FY 2014-15

While estimating the total cost of generation, station wise energy availability and fuel cost as covered in earlier Para has been considered. The summary of total cost of generation is as mentioned below.

Table 64 : Summary of own generation cost for FY 2014-15- Commission's Approval

	Plant Load Factor	Gross Generation	Auxiliary Consumption	Net Generation	Actual Oil Consumption	Lube oil consumption	Total Fuel Cost
	%	Mus	Mus	Mus	Kltr	Liters	Rs Crores
Minicoy	25.41%	9.39	0.09	9.30	2,611	11,609.08	16.92
Kavaratti	44.67%	12.01	0.14	11.87	3,273	14,840.36	21.22
Amini	26.49%	5.90	0.07	5.83	1,849	7,288.30	11.96
Andrott	29.47%	8.04	0.28	7.77	2,434	9,942.64	15.76
Kalpeni	36.98%	3.88	0.05	3.84	1,252	4,798.60	8.10
Agatti	31.08%	6.13	0.13	6.01	1,887	7,581.84	12.21
Kadmat	27.26%	4.92	0.24	4.69	1,576	6,084.98	10.19
Kiltan	34.45%	2.89	0.03	2.86	1,020	3,576.85	6.59
Chetlat	23.93%	2.01	0.04	1.97	623	2,484.27	4.03
Bitra	8.65%	0.31	0.01	0.31	120	386.06	0.78
Bangaram	6.51%	0.10	0.01	0.09	65	121.57	0.42
				54.52			
Solar Generation							
210 kWp Minicoy				0.21			
760kWp Kavaratti				0.76			
100 kWp Amini				0.1			
320 kWp Andrott				0.32			
100 kWp Kalpeni				0.1			
100 kWp Agatti				0.1			
260 kWp Kadmat				0.26			
100 kWp Kiltan				0.1			
100 kWp Chetlath				0.1			
50 kWp Bitra				0.1			
50kWp Bangaram				0.05			
Sub total				**2.20**			
Total				**56.72**			**108.19**

FPPCA formula has been separately notified under the Regulation. It is seen that in the case of LED, majority of the generation is diesel based, making per unit cost of generation very high compared to other utilities. In view of this, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the administration of LED, with budgetary support from the Government of India.

Keeping the above fact in view, the Commission opines that any variation in cost of their own generation (including variation in cost of power purchase, if any) should, for the time being, be borne by the Utility. Further, the Utility is directed to propose a scheme for sharing of the increase in cost of power with the consumers for Commission's consideration and approval.

6.7 Operation and Maintenance Expenses

Petitioner's Submission

The Petitioner has submitted that the Operation and Maintenance (O&M) expenses comprise of three along with the components for DG Sets and Solar Plant separately namely:

a) Employee cost
b) Repairs & Maintenance expenses and
c) Administrative and General Expenses

The Petitioner has submitted that in the past, it has not maintained segregation between the above cost elements for the purpose of accounting and had booked all cost including salaries, medical expenses, office expenses, domestic traveling expenses, and other charges towards repairs and supply of materials under the operation and maintenance expense head. However, efforts are being made by LED to segregate the O&M expenses under different accounting heads.

6.7.1 Employee Expenses

Petitioner's submission

The Employee expenses submitted by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, medical cost, leave travel allowances, honorarium, etc.

Employee cost for FY 2014-15 has been estimated based on the variation in the rate of WPI Index per annum published by the Office of Economic Adviser, Government of India. For projecting the employee cost for FY 2014-15, the Petitioner has considered 8.94% escalation over the estimated employee cost for FY 2013-14. Based on the above factors Petitioner has projected employee expense of Rs 12.56Crores for the FY 2014-15.

Further, LED has prayed to the Commission that salaries/employee cost increase should be considered as uncontrollable factor specially factors like DA/Basic hike through Government etc. Therefore, LED has requested the Commission to approve the employee costs as projected by it.

Commission's Analysis

As per the regulation 27 of JERC tariff regulations 2009 -

"

27. Operation and Maintenance Expenses

7) *'Operation & Maintenance expenses' or 'O&M expenses' shall mean repair and maintenance (R&M) expenses, employee expenses and administrative & general (A&G) expenses including insurance.*

While determining the O&M expenses for generation functions within the State, the Commission shall be guided, as far as feasible, by the principles and methodologies of CERC on the manner, as amended from time to time.

8) *While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodologies specified by CERC on the matter, as amended from time to time:*

Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated Utility, treat its transmission system as an integral part of its distribution system itself.

9) *O&M expenses for distribution functions shall be determined by the Commission as follows:*

- *O&M expenses as approved by the Commission for the first time for a year shall be considered as base O&M expenses for determination of O&M expenses for subsequent years;*
- *Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year;*
- *In case of unbundling of the Electricity Department and formation of separate distribution companies, the Commission will make suitable assessment of base O&M expenses of individual distribution companies separately and allow O&M expenses for subsequent years for individual companies on the basis of such estimation and above principle.*

10) O&M expenses of assets taken on lease/hire-purchase and those created out of the consumers' contribution shall be considered in case the generating company or the licensee has the responsibility for its operation and maintenance and bear O&M expenses.

11) O&M expenses for gross fixed assets added during the year shall be considered from the date of commissioning on pro-rata basis.

12) O&M expenses for integrated Utility shall be determined by the Commission on the norms and principles indicated above''

The Commission has considered the approved employee expenses of Rs. 10.00 Crores for FY 2013-14 as a base for estimating the employee expenses for FY 2014-15 after applying escalation of 5.69% being the actual WPI increase for FY 2013-14 over FY 2012-13. The latest WPI index till January 2014 has been used as available on the website of Economic Advisor, Ministry of Commerce and Industry for estimation of the increase in the average of WPI index from FY 2012-13 to FY 2013-14. The calculation for WPI index is given below:

Table 65 : Calculation for WPI index considered by the Commission

Year	Average WPI index	%increase
FY 11-12	195	
FY 12-13	215	7.52%
FY 13-14	235	5.69%
Actual WPI increase for FY 2013-14 over FY 2012-13		**5.69%**

The number of employees and employee expenses as submitted by the Petitioner and approved is given below.

Table 66 : Number of employees approved by the Commission for FY 2014-15

Sr. No.	Particulars	Petitioner Submission FY 2013-14	Commission's estimates FY 2013-14	Petitioner Submission FY 2014-15	Approved FY 2014-15
1	Number of employees as on 1st April	356	415.00	356.00	356
2	Employees on deputation/ foreign service as on 1st April				
3	**Total number of employees (1+2)**	356.00	415.00	356.00	356
4	Number of employees retired/retiring during the year				
5	Number of employees added				
6	**Number of employees at the end of the year (3-4+5)**	356.00	415.00	356.00	356

Table 67 : Employee expenses approved by the Commission for FY 2014-15(in Rs. Crores)

		FY 2013-14		FY 2014-15	
Sr. No.	**Particulars**	**Proposed Revised Estimates**	**Approved Revised Estimates**	**Proposed**	**Approved**
	Salaries& Allowances				
1	Basic Pay	4.95		5.39	
2	Dearness Pay				
3	Dearness Allowance	3.40		3.70	
4	House Rent Allowance	0.39		0.43	
5	Fixed medical allowance				
6	Medical reimbursement charges	0.15		0.16	
7	Over time payment				
8	Other allowances (detailed list to be attached)				
a.	Washing allowance	0.02		0.02	
b.	Transport allowance	0.50		0.54	
c	L.T.C.	0.01		0.01	
d.	Children Education All.	0.03		0.03	
e.	Family Planning Allow.				
f.	Other allowance	0.02		0.02	
g	Island special duty allowance for A&N and Lakshadweep	0.77		0.84	
h	Special Compensatory Allowance	0.83		0.90	
i	Hard Area Allowance	0.46		0.50	
9	Generation incentive				
10	Bonus				
11	**Total**	**11.53**	**-**	**12.56**	**-**
	Terminal Benefits				
12	Leave encashment				
13	Gratuity				
14	Commutation of Pension				
15	Workmen compensation				
16	Ex-gratia				
17	**Total**	-	-	-	-
	Pension Payments				
18	Basic Pension				

		FY 2013-14		FY 2014-15	
Sr. No.	Particulars	Proposed Revised Estimates	Approved Revised Estimates	Proposed	Approved
19	Dearness Pension				
20	Dearness Allowance				
21	Any other expenses				
22	**Total**	-	-	-	-
23	**Total (11+17+22)**	**11.53**	**10.00**	**12.56**	**10.57**
24	Amount capitalized				
25	Net amount				
26	Add prior period expeses				
27	**Grand total**	**11.53**	**10.00**	**12.56**	**10.57**

The Commission considers the employee cost of Rs 10.57 Crores as reasonable and approves the same for FY 2014-15.

6.7.2 Administration and General Expenses

Petitioner's submission

The Petitioner has submitted that the A&G expenses comprise of the following broad sub-heads of expenditure, viz.

- Telephone, postage & telegrams charges;
- Travel and conveyance expenses;
- Office expenses; and
- Consultancy and regulatory fees

The Petitioner has submitted that the revised estimates of A&G expenses for FY 2013-14 as Rs 0.99 Crores. LED has projected the A&G expense for FY 2014-15 at Rs. 1.08 Crores. The escalation of A&G expenses is on account of inflation and regulatory and consultancy fees payable during FY 2014-15.

The LED has requested the Commission to approve the net A&G expenses projected for FY 2014-15.

Commission's Analysis

The Commission has considered the administration & general expenses of Rs 0.97 Crores for FY 2013-14 as a base, as approved in the tariff order for the FY 2013-14, for estimating the administration & general expenses for FY 2014-15 after applying escalation equivalent to the increase in the WPI for FY 2013-14 over FY 2012-13 which works out to 5.69%. The latest WPI index till January 2014 has been used as available on the website of Economic Advisor, Ministry of Commerce and Industry for estimation of the increase in the average of WPI index from FY 2012-13 to FY 2013-14.

The detailed breakup of the A&G expenses as per the regulatory formats has not been provided by the Petitioner. **The Commission directs the Petitioner to maintain segregation of the O&M expenses under different accounting heads and maintain the information as desired as per the regulatory formats and submit the same along with the next ARR/tariff filing.**

Table 68 : A&G expenses approved by the Commission for FY 2014-15 (in Rs. Crores)

A&G Expenses (Rs. in Crores)	FY 2013-14		FY 2014-15	
Particulars	Proposed Revised Estimates	Approved Revised Estimates	Proposed	Approved
Total expenses charges to revenue	**0.99**	**0.97**	**1.08**	**1.03**

Commission considers the Administration & General expense of Rs. 1.03 Crores as reasonable and approves the same for FY 2014-15.

6.7.3 Repair and Maintenance Expenses

Petitioner's submission

The Petitioner has submitted that the Repairs and Maintenance expense comprise of expenses with regard to maintenance and upkeep of the generation, transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and reduce the occurrence of breakdowns of the DG sets.

The revise estimates of R&M expenses for FY 2013-14 for LED were Rs. 3.10 Crores. The R&M expense for FY 2014-15 is computed at 2.5%[1] of the gross fixed assets of FY 2014-15, which is calculated at Rs. 3.58 Crores.

The Petitioner has therefore requested the Commission to approve R&M expenses of Rs. 3.58 Crores for FY 2014-15 as the same is necessary for proper maintenance and strengthening the generation, transmission and distribution system and improve the quality of supply in the region to ensure consumer satisfaction.

[1]As per theCERC norms

Commission's Analysis

The Commission is of the view that adequate R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standard of Performance of the integrated Utility.

The Commission has considered the repair & maintenance expenses of Rs 3.38 Crores for FY 2013-14, as approved in the tariff order for the FY 2013-14, as a base for estimating the repair & maintenance expenses for FY 2014-15 after applying escalation equivalent to the increase in the WPI for FY 2013-14 over FY 2012-13 which works out to 5.69%. The latest WPI index till January 2014 has been used as available on the website of Economic Advisor, Ministry of Commerce and Industry for estimation of the increase in the average of WPI index from FY 2012-13 to FY 2013-14.

The detailed breakup of the R&M expenses as per the regulatory formats has not been provided by the Petitioner. **The Commission directs the Petitioner to maintain segregation of the O&M expenses under different accounting heads and maintain the information as desired as per the regulatory formats and submit the same along with the next ARR/tariff filing.**

Table 69 : R&M expenses approved by the Commission for FY 2014-15 (in Rs. Crores)

Repair & Maintenance Expenses (Rs. in Crores)	FY 2013-14		FY 2014-15	
Particulars	Proposed Revised Estimates	Approved Revised Estimates	Proposed	Approved
Total expenses charged to revenue as R&M expenses	**3.10**	**3.38**	**3.58**	**3.57**

The Commission considers the repair & maintenance expense of Rs. 3.57 Crores as reasonable and approves the same for FY 2014-15.

6.7.4 Summary of O&M Expenses

The overall summary of Operation & Maintenance expenditure as estimated by the Petitioner vis-à-vis approved by the Commission for FY 2014-15 is given below:

Table 70 : Summary of O&M expenses approved by the Commission for FY 2014-15 (in Rs. Crores)

	O&M Expenses	FY 2013-14		FY 2014-15	
Sr. No.	Particulars	Proposed Revised Estimates	Approved Revised Estimates	Proposed	Approved
1	Employee Expenses	11.53	10.00	12.56	10.57
2	A&G Expenses	0.99	0.97	1.08	1.03
3	R&M Expenses	3.10	3.38	3.58	3.57
4	**Total O&M Expenses**	**15.62**	**14.35**	**17.22**	**15.17**

6.8 Capital Expenditure and Capitalization

Petitioner's Submission

The Petitioner has submitted that the present transmission and distribution infrastructure does not have adequate standby source arrangement for restoring the power supply in case of major breakdowns. Further, considering the increase in demand from the consumers, LED would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help LED in handling increased load but would also ensure better quality of supply and network reliability to the consumers. The capital expenditure would help in further reduction of T&D losses.

Every year the LED drafts an Annual Plan for the capital investment for new schemes and continuing schemes which it plans to incur in the ensuing year. For FY 2014-15, the LED has proposed a draft Annual Plan for various schemes to be carried out during the year as submitted by the Petitioner.

The capitalization of new schemes has been considered at 40% of the planned capital expenditure in the same year while the balance 60% has been capitalized in subsequent year. The addition in GFA for FY 2014-15has been taken as Rs 19.49 Crores.

The capital expenditure and capitalization for FY 2013-14 and FY 2014-15as submitted by the Petitioner is as in the table below:

Table 71 : Capital Expenditure and Capitalization submitted by the Petitioner (in Rs. Crores)

Particulars	Revised Estimates FY 2013-14	Projected FY 2014-15
Capital Expenditure	14.15	19.49
Asset Capitalization	21.08	19.06
Capital Work in Progress	18.77	19.20

Commission's analysis

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for FY 2014-15 is required to maintain reliable supply for the consumers of UT of Lakshadweep.

The Commission has approved the capitalization for FY 2013-14 based on the tariff order issued on 22nd May 2013, which has been covered while approving the revised ARR of FY 2013-14. On the similar line, the Commission approves the capitalization of Rs.19.06 Crores for FY 2014-15. Further, the Petitioner is directed to submit a detailed statement of the capital expenditure incurred quarterly, the asset capitalized and added in the gross fixed assets upto 31.03.2015 on different dates during the year for review and true-up (Asset book).

This expenditure is being permitted as a special case to ensure the creation of infrastructure for adherence to Standard of Performance and Supply Code Regulations.

6.9 GFA and Depreciation

Petitioner's Submission

The Petitioner has submitted that the value of opening gross fixed assets (GFA) for 2013-14 was Rs 102.94 Crores and addition of Rs 21.08 Crores. Thereafter, planned additions during FY 2014-15 have been added and accordingly GFA has been computed for FY 2014-15.The closing Work-in-Progress by the end of FY 2013-14 was Rs. 18.77 Crores. For FY 2014-15, LED has proposed to incur Rs. 19.49 Crores capital expenditure and Rs. 19.06 Crores estimated to be capitalized.

A summary of the opening and closing GFA and capitalization has been summarized in the table below.

Table 72 : Opening and closing GFA submitted by the Petitioner (in Rs. Crores)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2013-14 (Revised Estimates)	102.93	21.08	124.01
FY 2014-15 (Projected)	124.01	19.06	143.07

For purposes of depreciation, LED has applied the following depreciation rates as specified by CERC in the Tariff Regulations for FY 2009-14.

Table 73 : Depreciation Rate considered by the Petitioner (in %age)

Asset Category	Depreciation Rate %
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	6.33%
Land	0.00%

Depreciation for the FY 2014-15 has been determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the year projected for FY 2014-15.The table below summarizes the depreciation considered by LED.

Table 74 : Depreciation submitted by the Petitioner (in Rs. Crores)

Particulars	FY 2014-15
Rs. Crore	Projected
Opening GFA	124.01
Additions	19.06
Closing GFA	**143.07**
Average GFA	133.54
Depreciation Amount	**6.46**
Average Depreciation Rate	4.52%

Commission's analysis

The Petitioner has not produced any fixed asset register to support the claim of the Gross Fixed Assets. The Commission is of the view that fixed asset register records the asset wise details and various types of information can be extracted from the same including the aging schedule of the asset, present value and capital works in progress etc. As such, in the absence of updated fixed asset registers, the opening value of fixed assets is on an assumption basis. As a standard practice, and as per the Regulation 26 of the JERC (Terms and conditions for determination of Tariff), Regulation 2009, depreciation shall be computed on the average value of assets at the end of the year which is reasonable and appropriate method.

In absence of updated fixed asset registers, the Commission is unable to allow the depreciation as proposed by the Petitioner based on the assumed value of assets. **The Commission therefore directs the Petitioner to maintain the fixed asset register to arrive at the actual historical value of assets and file the same along with the next ARR and tariff petition.** In the absence of updated fixed asset registers to arrive at the historical value of assets, the Commission has considered the addition in GFA as approved in the previous section for FY 2012-13 and FY 2013-14 as the opening value of assets for FY 2014-15. As covered in earlier Para, the Commission has considered addition in GFA of Rs. 13.00 Crores and Rs.15.96 Crores during FY 2012-13 and FY 2013-14 respectively.

Regulation 26 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time. The effective rate of depreciation for assets linked to Plant & Machinery & Vehicles is 5.28%, Buildings is 3.34% and Furniture is 6.33% vide Appendix-III (Depreciation schedule of CERC Terms and Conditions of Tariff Regulations, 2009). The depreciation for FY 2014-15 has been worked out as Rs. 3.66Crores.

As covered in earlier para, Rs. 19.06 Crores has been considered as addition in GFA for FY 2014-15. In view of above, the Commission considers the depreciation of Rs. 3.66 Crores as reasonable considering Rs. 54.46 Crores as the opening value of assets at the beginning of the year as being the addition in GFA approved for FY 2014-15.

The depreciation approved by the Commission is as below.

Table 75: GFA and Depreciation approved by the Commission for FY 2014-15 (in Rs. Crores)

S. No.	Particulars	Opening GFA	Additions	Closing GFA	Average Assets	Depreciation
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Plant & Machinery	48.69	17.04	65.73	57.21	3.02
2	Buildings	-	-	-	-	-
3	Vehicles	5.77	2.02	7.79	6.78	0.64
4	Furniture and Fixtures	-	-	-	-	-
5	Computers & others	-	-	-	-	-
6	Land	-	-	-	-	-
	Total	**54.46**	**19.06**	**73.52**	**63.99**	**3.66**

The Commission therefore considers the depreciation of Rs. 3.66 Crores as reasonable and approves the same for FY 2014-15.

6.10 Interest and Finance Charges

6.10.1 Interest on Loan

Petitioner's Submission

The Petitioner has submitted that the entire capital employed till date has been funded by the Central Government through Budgetary support without any external borrowings. LED is now migrating to regulatory regime under the aegis of the Commission and would begin to function as a commercial Utility under the Electricity Act, 2003 and would therefore be utilizing the debt facilities from FY 2012-13 onwards.

Assets capitalized during FY 2013-14 and FY 2014-15 have been considered based on normative debt-equity ratio of 70:30 as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. Interest rate of 14.75% has been considered for computation of interest cost for long-term loans which is similar to the prevailing SBI Prime Lending Rate. The Petitioner has claimed an amount of Rs 5.78 Crores as interest cost on long term loans and requests the Commission to approve the same for FY 2014-15.

Commission's analysis

As per the JERC tariff regulations 2009:

"25. Interest and Finance Charges on Loan

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

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

(3) The interest rate on the amount of equity above 30% treated as loan shall be the weighted average rate of interest on loan capital of the generating company / licensee:

Provided that interest and finance charges of renegotiated loan agreements shall not be considered, if they result in higher charges:

Provided further that interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost.

(4) Interest charges on security deposits, if any, made by the consumers with a generating company/licensee, shall be equivalent to the bank rate or at the rate, if any, specified by the Commission whichever is higher.

(5) In case any moratorium period is availed of, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(6) The Commission shall allow obligatory taxes on interest, commitment charges, finance charges and any exchange rate difference arising from foreign currency borrowings, as finance cost.

(7) Any saving in costs on account of subsequent restructuring of debt shall be passed on to the consumers."

Further, the Commission would like to place reliance on Section 23 of the JERC Tariff regulations which is reproduced below:

"23. Debt-Equity Ratio

For the purpose of determination of tariff, debt-equity ratio in case of existing, ongoing as well as new projects commencing after the date of notification of these Regulations shall be 70:30.

Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff:
Provided that the Commission may, in appropriate cases, consider equity higher than 30% for the purpose of determination of tariff, where the generating company or the licensee is able to establish to the satisfaction of the Commission that deployment of equity more than 30% is in the interest of the general public: .
(2) The debt and equity amounts arrived at in accordance with sub-regulation (1) above shall be used for all purposes including for determining interest on loan, return on equity, Advance against Depreciation and Foreign Exchange Rate Variation.
Provided that in the case of an Integrated Utility, till the time it remains Integrated Utility, it shall be entitled to return on its capital base as per Schedule VI to the repealed Electricity (Supply) Act, 1948."

The Petitioner has not borrowed any loans in the past and has estimated to utilize the debt facilities from FY 2012-13 onwards.

The basic requirement for consideration of interest on loans is adequate information of the value of fixed assets of the Utility in service (net fixed assets) at the beginning of such year and funding pattern as well as terms & conditions of funding of capital assets.

In the instant case, the Licensee has not provided the actual value of fixed assets, hence the servicing of assets in the form of interest on loan and return on assets is indeterminate at this stage on the opening GFA submitted by the Petitioner, hence has not been considered on the assumed value of assets. The same shall be considered at true-up stage if full audited details are made available.
However, the Commission has considered an opening normative loan of Rs. 31.90 Crores for FY 2014-15 and added normative loan for FY 2014-15 of Rs. 13.34 Crores being 70% of addition in GFA considered for FY 2014-15 to calculate the interest on normative loan amount. The Commission has considered the SBI PLR rate which is now substituted as SBI advance rate, at 14.75% for FY 2014-15. The Commission approves the total interest charges for the year at Rs. 5.44 Crores as given below:

Table 76 : Interest on Loans approved by the Commission for FY 2014-15 (in Rs. Crores)

S. No.	Particulars	Petitioner Submission (FY 2014-15)	Approved (FY 2014-15)
1	Opening Normative Loan/WIP	34.20	31.90
2	Add: Normative Loan during the year/GFA during the year	13.34	13.34
3	Less: Normative Repayment	3.42	3.44
4	**Closing Normative Loan/GFA**	44.12	41.80
5	Average Normative Loan	39.16	36.85
6	Rate of Interest (@SBI SBAR rate)	14.75%	14.75%
7	**Interest on Normative Loan**	**5.78**	**5.44**

The Commission considers the interest on normative loan of Rs. 5.44 Crores as reasonable and approves the same for FY 2014-15.

6.10.2 Interest on Working Capital

Petitioner's Submission

The Petitioner has submitted the Interest on Working Capital for FY 2014-15 computed on normative basis. As per the JERC Tariff Regulations, for the purpose of computation of normative working capital and interest on working capital, the components of working capital are as follows:

- Sum of two month requirement for meeting the fuel cost
- One month employee costs
- One month Administration & General expenses
- One month R&M Cost

The rate of interest on working capital has been considered as per SBI Prime lending rate as on 1st April of the respective year. Interest on normative working capital for FY 2014-15has been claimed at Rs. 2.61 Crores.

Commission's analysis

As per the regulation 29 of JERC tariff regulations

"

29. WORKING CAPITAL AND INTEREST RATE ON WORKING CAPITAL

5) For generation and transmission business, the working capital shall be as per CERC norms.

6) Subject to prudence check, the working capital for distribution business shall be the sum of one month requirement for meeting:

a. Power purchase cost.

b. Employees cost.

c. Administration & general expenses and

d. Repair & Maintenance expenses.

7) Subject to prudence check, the working capital for integrated Utility shall be the sum of one month requirement for meeting :

a. Power purchase cost

b. Employees cost

c. Administration & general expenses

d. Repair & Maintenance expenses.

e. Sum of two month requirement for meeting Fuel cost.

8) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

The Commission has considered the approved fuel cost expenses of FY 2014-15 and approved O&M expenses to work out the normative working capital required for FY 2014-15.

In accordance with Section 47(4) of the Electricity Act 2003, the distribution licensee is required to pay interest on security deposit collected from the consumers. If this security deposit is invested in the form of interest earning fixed deposits or other similar instruments, the interest earned from such investment could be utilized to pay the interest to the consumers under section 47(4) of the Electricity Act 2003, alternatively, the funds could be retained by the Licensee to meet its working capital needs. It is noted that the Petitioner has not invested any of the security deposit held and the said amount is available to the Petitioner. Accordingly, the Commission has allowed the interest payable to the consumer as an expense in this order. The Commission has considered the security deposit available with the Petitioner as a source to meet working capital requirements and has deducted this amount from the working capital requirement considered for interest on working capital for FY 2014-15. Further, the Commission clarifies that SBI PLR rate has now been substituted as SBI Advance Rate at 14.75% for FY 2014-15. The Commission has computed the requirement of working capital based on the provisions of the regulations. Working capital has been reduced by the amount of Consumer Security Deposit/Misc. deposit available with the Petitioner considering its usage for meeting part of working capital requirements.

Table 77 : Interest on Working Capital approved by the Commission for FY 2014-15(in Rs. Crores)

S. No.	Particulars	Petitioner Submission (FY 2014-15)	Approved (FY 2014-15)
1	Fuel Cost for 2 months	16.28	17.95
2	Power Purchase Cost for one month	-	-
3	Employee Cost for one month	1.05	0.88
4	A&G Expenses for one month	0.09	0.09
5	R&M Expenses for one month	0.30	0.30
6	**Total Working Capital for one month**	**17.72**	**19.22**
7	**Net Working Capital for one month after deducting security deposit**	**17.72**	**19.13**
8	SBI PLR Rate	14.75%	14.75%
9	**Interest on Working Capital**	**2.61**	**2.82**

The Commission considers Rs. 2.82 Crores as Interest on Working Capital as reasonable and approves the same for ARR for FY 2014-15.

6.10.3 Interest on Security Deposit

Petitioner's Submission

The Petitioner has not claimed any interest on security deposit as part of the Aggregate Revenue Requirement (ARR) for FY 2014-15.

Commission's analysis

The Commission has assessed the need and availability of funds to the licensee. Consumer's security deposit is the quantum of consumer's funds available to the licensee and hence deducted from the funds available to meet working capital requirements and the interest on working capital is allowed on the balance amount. The cost of available security deposit of the consumer is allowed as an interest on security deposit to be paid to the consumer as per section 47(4) and regulation 25 of the JERC Tariff Regulations 2009 and the same is allowed as expenditure in the ARR.

As per Clause 47(4) of the Electricity Act, 2003 and as specified in regulation 25 of JERC Tariff Regulations 2009, *the distribution licenses shall pay interest on security deposit collected from the consumers, equivalent to the bank rate or more as may be specified by the Commission*. On account of provisions mentioned in the Act and regulation, the **Commission directs the Petitioner to pay the interest on consumer security deposit for FY 2014-15 (at the Bank Rate i.e. 8.75% per annum) to the consumers on their security deposit irrespective of Petitioner's constraints** and should explicitly mention the same as the 'Interest on security deposit for FY 2014-15' on the bills of the consumers. **Any non-compliance in this regard shall be viewed seriously by the Commission.**

An amount of Rs 7.29 lakhs security deposit has been submitted by the Petitioner in its additional data submission with no information on addition in the FY 2014-15, therefore the closing security deposit has been considered at Rs 8.24 Lac on 31^{st} March 2014, based on the addition in the security deposit for the FY 2013-14 considering the opening amount to be Rs 7.29 Lac.

Table 78 : Interest on Security Deposit approved by the Commission for FY 2014-15(in Rs. Crores)

S. No.	Particulars	Petitioner Submission (FY 2014-15)	Approved (FY 2014-15)
1	Opening Security Deposit/Misc. Deposit	Not Claimed	0.08
2	Add: Deposits during the Year		0.00
3	Less: Deposits refunded		-
4	Closing Security Deposit		0.08
5	Bank Rate		8.75%
6	**Interest on Security Deposit**		**0.01**

The Commission allows The Commission has considered Rs 0.01 Crores as the interest on security deposit as expenditure in the ARR for FY 2014-15.

6.11 Return on Capital Base/Equity

Petitioner's Submission

LED is an integrated Utility in its present form as defined in Regulation 2(9) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and it is entitlement to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

The LED has considered return on capital base as per the Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and has considered Rs. 3.53 Crores as a 3% return on net block of assets/capitalization at the beginning of the FY 2014-15 of Rs. 117.55 Crores respectively.

Commission's analysis

LED is an integrated Utility in its present form as defined in Regulation 2(9)of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 and is not restructured and corporatized till date. As of now, it is an integrated Utility and is entitled to return on capital base under the provisions of Schedule VI of the repealed Electricity (Supply) Act, 1948 vide provision under Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009. The basic requirement for consideration of either return on capital base or return on equity for historical assets is information in the form of audited annual accounts and assets & depreciation registers. The Petitioner has not been maintaining the adequate information.

The Commission has considered Rs. 54.46 Crores as the gross block at the beginning of FY 2014-15 and accumulated depreciation of Rs. 3.66 Crores. The Commission has therefore considered the reasonable return of Rs 1.52 Crores at the rate of 3% on net fixed asset of Rs. 50.80 Crores at the beginning of FY 2014-15.

Table 79 : Return on capital base approved by the Commission for FY 2014-15(in Rs. Crores)

Sr. No.	Particulars	Proposed (FY 2014-15)	Approved (FY 2014-15)
1	Gross block at beginning of the year	124.02	54.46
2	Less accumulated depreciation	6.46	3.66
3	Net block at beginning of the year	117.56	50.80
4	Less accumulated consumer contribution		
5	**Net fixed assets at beginning of the year**	**117.56**	**50.80**
6	**Reasonable return @3% of NFA**	**3.53**	**1.52**

The Commission considers the Return on Net Fixed Assets of Rs. 1.52 Crores as reasonable and approves the same for FY 2014-15.

6.12 Provision for bad & doubtful debts

Petitioner's Submission

The Petitioner has submitted that it has considered the provision for Bad and Doubtful Debts at 1% of the receivables for FY 2013-14 and FY 2014-15. The Petitioner has submitted the provision for bad debts at Rs 0.12 Crores and Rs 0.13 Crores respectively for FY 2013-14 and FY 2014-15.

Commission's analysis

As specified in the regulation no. 28 of JERC Tariff regulations, read with the format -

"28. Bad and Doubtful Debts

The Commission may, after the generating company/licensee gets the receivables audited, allow a provision for bad debts up to 1% of receivables in the revenue requirement of the generating company/licensee. (Information to be furnished in format 18)"

Format -18

S.No.	*Particulars*	*Amount (Rs. in Crores)*
1.	*2.*	*3.*
1.	*Amount of receivable bad and doubtful debts (audited)*	
2.	*Provision made for debts in ARR*	

In the absence of audited accounts showing the trend of the actual write-off of the bad/doubtful debts for the past year(s), the Commission has considered the provision of 0.5% (against up to 1% in the regulation) of the receivables towards bad and doubtful debts subject to availability (at the time of true up) of audited accounts & auditor's certificate of actual write off of bad & doubtful debts.

The Commission has considered the provision of 0.5% of the receivables from the retail sales for FY 2014-15 as bad and doubtful debt at Rs 0.07 Crores as reasonable and approves the same as per the regulations for ARR of FY 2014-15 subject to final adjustment in true-up when audited accounts become available and auditor's certificate of write off of bad and doubtful debts is furnished.

The submission of the Petitioner vis-à-vis the approved value for FY 2014-15is as shown below:

Table 80 : Provision for bad and doubtful debts approved by the Commission for FY 2013-14(in Rs. Crores)

S. No.	Particulars	Petitioner Submission FY 2014-15	Approved FY 2014-15
1	Receivables	13.21	13.30
2	Provision for Bad &Doubtful Debts as % of Receivables	1%	0.50%
3	**Provision for Bad & Doubtful Debts**	**0.13**	**0.07**

6.13 Non-Tariff Income

Petitioner's Submission

The Petitioner has estimated Rs. 0.33 Crores for FY 2014-15 based on the revised estimates of FY 2013-14 as the non-tariff income in the form of meter rent, late payment charges & misc. charges from various categories of consumers. The Petitioner has submitted that the actual non-tariff income for FY 2012-13 was Rs 0.21 Crores and has considered an increase of 5% over the revised estimates of non-tariff income of FY 2013-14 for projecting the non-tariff income of FY 2014-15.

Commission's analysis

The Commission has observed the submission made by the Petitioner for FY 2014-15 and **has considered Rs. 0.33 Crores as reasonable and approves the same for FY 2014-15.**

6.14 Revenue at existing tariff for FY 2014-15

Petitioner's Submission

The Petitioner has computed the revenue for FY 2014-15 based on the tariff rate notified by the Administration of the UT of Lakshadweep vide Notification dated 22nd May, 2013.

Revenue from sale of power for FY 2014-15 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Lakshadweep.

The Revenue from sale of power at existing tariff has been estimated to be Rs. 13.21 Crores for FY 2014-15, as shown in the table below.

Table 81 : Revenue at existing tariff projected by the Petitioner for FY 2014-15 (Rs Crores)

S. No.	Category	FY 2014-15
		Petitioner's estimates
1	Domestic	7.01
2	Commercial	5.65
3	HT Consumer	
4	Industrial	0.17
5	Public (Street Light)	0.33
6	Temporary Connections	0.04
	Total	**13.21**

Commission's analysis

The Commission has estimated the revenue on the basis of approved sales and existing tariff for FY 2014-15. The Commission has taken the slab wise sales provided by the Utility for FY 2013-14 for estimating the same for FY 2014-15. Further, in case of HT Industrial category, the Commission has calculated the revenue based on the approved sales and connected load.

Table 82 : Revenue at existing tariff approved by the Commission for FY 2014-15

S. No.	Particulars	Sales (MU) FY 2014-15	Revenue at existing tariff (Rs Crores) FY 2014-15
1	Domestic	35.69	6.95
2	Commercial	11.54	5.67
3	HT Industrial	?	?
4	Industrial	0.39	0.19
5	Public (Street Light)	1.07	0.43
6	Temporary Connections	0.09	0.06
	Total	**48.77**	**13.30**

6.15 Aggregate Revenue Requirement and Revenue Surplus/Deficit for FY 2014-15

Petitioner's Submission

The Petitioner has submitted Rs. 133.1 Crores as the Aggregate Revenue Requirement for FY 2014-15 in the ARR & tariff petition on the basis of the estimates of the various components of the ARR as covered above.

Commission's analysis

The Commission has considered and approved the ARR for FY 2014-15 based on the items of expenditure covered in the preceding sections and the same has been summarized in the table below.

Table 83 : Aggregate Revenue Requirement approved by the Commission for FY 2014-15 (Rs.Crores)

Rs. Crores		FY 2014-15	
Sr. No.	Particulars	Proposed	Approved
1	Cost of fuel	97.70	108.19
2	Cost of power purchase for full year		
3	Employee costs	12.56	10.57
4	Administration and general expenses	1.08	1.03
5	Repair and Maintenance	3.58	3.57
6	Depreciation	6.46	3.66
7	Interest and finance charges	5.78	5.44
8	Interest on working capital	2.61	2.82
9	Interest on Security Deposit to be paid to consumers	-	0.01
10	Return on NFA /Equity	3.53	1.52
11	Provision for Bad Debt	0.13	0.07
12	Advance Against Depreciation		
13	**Total Revenue Requirement**	**133.43**	**136.89**
14	Less: Non-Tariff Income	0.33	0.33
15	Less: Revenue from Sale through UI		
16	Less: Revenue from Sale of Power-Exchanges		
17	**Net Revenue Requirement (13-14-15-16)**	**133.10**	**136.56**

The estimated revenue deficit at existing tariff as approved for FY 2014-15 is given below.

Table 84 : Revenue Gap approved by the Commission for FY 2014-15 (Rs. Crores)

Rs. Crores		FY 2014-15	
Sr. No.	Particulars	Proposed	Approved
1	**Total Revenue Requirement**	**133.43**	**136.89**
2	Less: Non-Tariff Income	0.33	0.33
3	Less: Revenue from Sale through UI		
4	Less: Revenue from Sale of Power-Exchanges		
5	**Net Revenue Requirement**	**133.10**	**136.56**
6	Revenue from Retail Sales at Existing Tariff	13.21	13.30
7	**Net Gap**	**119.89**	**123.26**
8	Gap for the previous year		
9	**Total gap**	**119.89**	**123.26**

As seen from the table above, there is a revenue gap of Rs 123.26 Crores at the end of FY 2014-15 at existing tariff against the gap of Rs. 119.89 Crores estimated by the Petitioner at the existing tariff for FY 2014-15. The major reason for the increase in gap for FY 2014-15 as assessed by the Commission is higher fuel cost compared to what was claimed by the Petitioner. It is expected that in future ARRs and True-ups, when the Petitioner submits the actual figures of revenue for FY 2014-15, fixed asset registers, separate accounts of the cost of the generation from diesel generating sets; the gap assessed (as of now) in the revenue requirement as above shall be appropriately considered.

7. DIRECTIVES

7.1 Background

While examining the information and data submitted by the Petitioner in the proposed ARR and Tariff Petition for FY 2014-15, it has been observed that the distribution licensee has not been maintaining the required information and has used assumptions for computation of several components of ARR.

In spite of directions provided in the previous tariff order, the Utility has not been able to provide any substantial information for supporting its calculations. Data pertaining to fuel consumption provided by the Utility is not clear and which has no supporting analysis. **Therefore, Commission will like to direct the Utility to submit information as listed below before 30th July 2014:**

- **Fuel receipt received from IOC for past two years along with the analysis of fuel cost**
- **Dispatch register of fuel, island wise, for past two years**

Apart from the above information required, the Commission has also provided separate directives based on submissions made by the Petitioner:

1. **Filing of Review and True-up Petition for FY 2012-13**

As per the regulation no. 8 of JERC tariff regulations 2009, the Petitioner is directed to submit the Review of FY 2012-13 along with the ARR and Tariff Petition for FY 2013-14 in line with JERC regulations as modified from time to time. The Commission shall consider variations between approvals and revised estimates/pre-actual of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons for FY 2012-13 during Review.

After audited accounts of FY 2012-13 are made available; the Commission shall undertake similar exercise as mentioned above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up', for which true-up petition should be submitted along with the audited accounts for consideration of the Commission.

Petitioners Response

In the present petition, the LED is filing the review for FY 2012-13 and the ARR and Tariff Petition for FY 2013-14. Further, the LED would file the True up for FY 2012-13 along with the Tariff Petition for FY 2014-15 once the annual accounts for FY 2012-13 are finalized.

Commission's Comments

The Commission further directs the Petitioner to submit audited figures for FY 2011-12 for the purpose of fixing base year data along with the true-up petition for the FY 2012-13 in its next submission.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has engaged a Chartered accountant firm to prepare the financial accounts for the FY 2010-11, FY 2011-12 and FY 2012-13. As soon as the financial accounts are prepared, the LED would submit audited figures for FY 2011-12 for the purpose of fixing base year data along with the true-up petition for the FY 2012-13.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to submit audited figures for, FY 2011-12 and FY 2012-13 by 30th June 2014 for the purpose of true-up failing which appropriate action would be taken under the provisions of the Electricity Act 2003 and the JERC Tariff regulations.

2. **Annual Statement of Accounts**

The Commission has observed that the department of Lakshadweep is not maintaining separate accounts on commercially accepted principles for the electricity business. The Petitioner is directed to segregate the accounts pertaining to electricity business as per the Electricity Act 2003 and get them duly audited as required under JERC (Terms and Conditions for Determination of Tariff) Regulations 2009.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it will engage a Chartered Accountant firm to prepare the Annual Statement of Accounts for FY 2012-13 and will submit the same to the Hon'ble Commission along with the next ARR and Tariff Petition.

Commission's Comments

The Commission directs the Petitioner to submit the audited accounts for FY 2011-12 and FY 2012-13 in the next submission.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it floated the tender twice for engaging a Chartered accountant firm to prepare the financial accounts. The first time there was a single bidder and therefore it had to float the tender again. Presently, the LED has shortlisted a firm to prepare the financial accounts for the FY 2010-11, FY 2011-12 and FY 2012-13 and will submit the same to the Hon'ble Commission once they are finalized.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to maintain separate accounts on commercially accepted principles and submit audited figures for FY 2010-11, FY 2011-12 and FY 2012-13 by 30th June2014 for the purpose of true-up.

3. **Preparation of Asset and Depreciation Register**

The Electricity Department, Lakshadweep is directed to arrange for the preparation of asset and depreciation registers function wise, and asset classification wise. Till such time the above registers are prepared and got audited, the Commission cannot consider the gross fixed assets and accumulated depreciation over the years to arrive at the capital base and allow the return thereon as per JERC (Terms and Conditions of Determination of Tariff) Regulations, 2009.

The Petitioner is directed to submit quarterly progress report and the completion date of the preparation of the asset and depreciation registers, function wise and asset classification wise after getting them audited.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it will engage a Chartered Accountant firm to prepare the asset and depreciation registers function-wise, and asset classification wise and will submit the same to the Hon'ble Commission along with the next ARR and Tariff Petition.

Commission's Comments

The Commission directs the Petitioner to submit the audited asset register for FY 2011-12 and FY 2012-13 in the next submission.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it floated the tender twice for engaging a Chartered accountant firm to prepare the financial accounts along with the audited asset register. The first time there was a single bidder and therefore it had to float the tender again. Presently, the LED has shortlisted a firm to prepare the financial accounts and asset register for the FY 2010-11, FY 2011-12 and FY 2012-13 and will submit the same to the Hon'ble Commission once they are finalized.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to submit the audited asset register for FY 2011-12 and FY 2012-13 by 30th June 2014.

4. Optimization of Fuel Cost

The UT of Lakshadweep is an archipelago consisting of 11 inhabited islands and located far from the mainland of India; it is entirely dependent on its own generation for supply of power. The power in the UT of Lakshadweep is generated mainly from its Diesel Generating (DG) sets besides some production from solar plants.

The diesel is generally received in bulk in big tankers, thereafter it is transported to various islands in drums. Obviously, there are losses in transportation, storage and handling of which no assessment is available. It is understood that presently there is no system through which actual fuel consumption per generating station can be ascertained for generation of one unit of energy. In fact, there should be proper accounting of generating station wise fuel receipts & issues. The LED is directed to evolve a system of accounting of fuel received at port, dispatched island-wise, actual quantity received on the islands and actual quantity consumed island wise for generating electricity; so that actual fuel consumption per unit generation could be worked out. Accordingly, the Petitioner is directed to furnish such details along with the next filing.

Petitioner's Response

The actual island wise fuel consumption of the UT for FY 2011-12 is being submitted as Annexure I along with this petition.

Commission's Comments

In the data submitted by the Petitioner, some of the data is incomplete. The Commission directs the Petitioner to submit the complete actual status before 1st July 2013.

Petitioner's Response

The actual island wise fuel consumption for FY 2012-13 is being submitted as Annexure I along with this petition

Commission's Comments

The information provided by the Petitioner is not sufficient to analyze the island wise fuel received and consumed. The Commission directs the Petitioner to submit the required information by 30th June2014.

5. Renewable Purchase Obligation

The Petitioner is directed to encourage and incentivize generation from renewable sources to meet its overall and individual RPO targets. The Petitioner has to purchase 3% of total consumption of all the consumers in its area as power purchase from renewable sources for FY 2012-13 including 0.40% from Solar and 2.60% from Non-Solar as per the JERC (Procurement of Renewable Energy) Regulations 2010.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that all of the eleven Islands of the UTs have SPV plants and out of that nine will be functional in FY 2013-14. The total solar power generation projected for FY 2013-14 1.57 MU which is 3.03% of the total generation projected for FY 2013-14. Further the LED is also exploring the possibility of generating power from biomass and has already engaged a consultant for preparation of the DPR for the same.

Commission's Comments

The Commission directs the Petitioner to provide the status of the DPR prepared for biomass generation activity and the time lines for such project implementation. Also, for the time being what other options is the Utility considering for fulfilling the non-solar RPO obligation.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that the department has got approval from the Ministry of New & Renewable Energy (MNRE) for setting up biomass plants in the Public Private Partnership (PPP) mode in three Islands of the UTs. The three Islands of the UTs are:

Minicoy-2 MW plant

Kavaratti-2 MW plant,

and Kadmat-1 MW plant

The MNRE has approved to give grant of Rs. 2 crore per plant. The department is in the process of floating the tender for the same.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to operationalize its closed SPV plants as it is one of the most cost effective generating sources. All the Solar PV plants in the UT of Lakshadweep must be made to run and generate Solar Power.

The Petitioner is also required to submit the status report on the above projects on quarterly basis, starting from 30th June 2014.

6. **Segregation of O&M expenses under different accounting heads**

The Commission directs the Petitioner to maintain segregation of the O&M expenses under different accounting heads and maintain the information as desired as per the regulatory formats and submit the same along with the next ARR/tariff filing.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has started the process to maintain segregation of the O&M expenses under different accounting heads and will be submitting the same in the desired regulatory formats along with the next ARR and Tariff Petition.

Commission's Comments

The Commission directs the Petitioner to submit the actual expenses for FY 2011-12 and FY 2012-13 by 1st July 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has engaged a Chartered accountant firm to prepare the financial accounts for the FY 2010-11, FY 2011-12 and FY 2012-13. As soon as the financial accounts are prepared, the LED would submit the actual expenses for FY 2011-12 and FY 2012-13 to the Hon'ble Commission.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to submit the audited data for FY 2011-12 and FY 2012-13 by 30th June 2014.

7. **Bill Payment**

The Petitioner is directed to explore options for multiple payment points/gateways for online collection and status of existing system of bill payment should be submitted within three months.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has already taken action to set up multiple payment points/gateways through Common Service Centre across all the Islands of the UTs. Further the software is being modified to start the online collection system in Lakshadweep.

Commission's Comments

The Commission directs the Petitioner to submit the details of online collection of the bills from the time of implementation in the next petition.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has set up common service centre in Kavaratti to facilitate the payment of bills by the consumers and it is in the process to extend this facility to other islands. Further, the LED is also updating its billing software to facilitate the online payment gateway and the same will start operating shortly.

Commission's Comments

The Commission directs the Petitioner to submit the status report of online collection on quarterly basis.

8. Collection of Arrears

The Petitioner is directed to analyze the outstanding dues; bad debts etc. & construct a data base of such consumers including particulars like amount, aging schedule and category. The Petitioner should identify those consumers having an outstanding of Rs. 50 thousand and above, for more than six months from the due date.

Petitioner's Response

The LED would like to submit that a system to analyze the outstanding dues, bad debts etc. is already in place and further LED would also like to appraise the Hon'ble Commission that none of the consumers is having an outstanding of Rs. 50 thousands and above, for more than six months from the due date.

Commission's Comments

The Petitioner is directed to submit the age wise details of arrears in the region before 1st July 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that none of the consumers is having an outstanding of Rs. 50 thousand and above, for more than six months from the due date.

Commission's Comments

The Petitioner is directed to submit the island-wise, age-wise details of arrears in the region by 30th June 2014.

9. Capital expenditure

The Petitioner is directed to submit the detailed statement of capital expenditure incurred and capitalized for every quarter, within 15 days of the subsequent quarter.

Petitioner's Response

The LED will start submitting the quarterly statement of capital expenditure incurred and capitalization for every quarter to the Hon'ble Commission shortly.

Commission's Comments

The Petitioner is required to submit the status of capital expenditure on quarterly basis before 1st July 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it is about to engage a Chartered Accountant firm for the preparation of the asset register for the FY 2010-11, FY 2011-12 and FY 2012-13. As soon as the asset register is finalized, the LED will start submitting the capital expenditure and capitalization on quarterly basis to the Hon'ble Commission.

Commission's Comments

The petitioner's submission is noted. The Petitioner is directed to submit the audit asset register before 30th June 2014.

10. Metering of consumer installations / replacement of Non-Functional or defective Meters

Under Section 55 (1) of Electricity Act 2003, no licensee shall supply electricity after expiry of 2 years from the appointed date except through installation of correct meter in accordance with the regulation to be made in this behalf by the authority. Accordingly, metering is required to be done in line with CEA (installation and operation of meters) Regulations 2006 for all consumers. ED LED is directed to submit an action plan regarding installation/replacement of meters by 30th December 2012.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that there is 100% metering of all the consumers of electricity in Lakshadweep.

Commission's Comments

The Petitioner is directed to submit category wise details of metering before 1st July 2013.

Petitioner's Response

The LED is compiling the category wise details of metering and will submit the same to the Hon'ble Commission shortly.

Commission's Comments

The Petitioner is directed to submit category wise details of metering before 30th June 2014.

11. Strengthening of the Consumer Grievance Redressal System

The Commission directs the Petitioner to find a way to dispose all pending applications as per the provisions under section 43 of the Electricity Act, and relevant JERC Regulations, other than the cases pending due to lack of documentary evidence of legal heirs after the death of original owner of the premises.

The Commission also directs the Petitioner to follow the Standard of Performance notified by the Commission strictly and the status report on all new/shifting connection applications pending by more than 45 days, with the reason for their pendency be submitted to the Commission by 30th December 2012.

The Petitioner is directed to promote and give publicity to the functioning of the Consumer Grievance Redressal Forum (CGRF), so that consumers can approach CGRF for redressal of their grievances.

The Commission directs to publicize the benefit to consumers, highlighting the steps and necessary documents required for redressal of complaints and to initiate action on the following:

- Complaints against fast meters/defective meters
- Application for shifting of electricity connection
- Application for new Connection
- Complaints regarding no-supply.
- Any other complaints

The Commission further directs to prepare monthly/ quarterly schedule for visit to different islands by officers i.e. S.D.O., Executive Engineers and Superintendent Engineer LED to bring in greater efficiency in the working of LED and also to hear and settle the public grievances and complaints of the consumers at the spot so that no consumer is forced to visit the main office of the LED.

Petitioner's Response

The directive of the Hon'ble Commission in this regard is being complied. The officers of the LED visit different Islands to hear and settle the public grievances and complaints regularly.

Commission's Comments

The Petitioner is required to submit the list of complaint received and action taken in the FY 2011-12 and FY 2012-13 before 1st July 2013.

Petitioner's Response

The Led is compiling the list of complaint received and action taken in the FY 2011-12 and FY 2012-13 and will submit the same to the Hon'ble Commission shortly.

Commission's Comments

The Petitioner is required to submit the list of complaint received and action taken in the FY 2011-12 to FY 2013-14 before 30th June 2014.

12. Exploration of alternative sources of electrical energy

The Commission has observed that there is huge dependency on diesel for generating electricity, which not only increases the average cost of supply but also puts a huge burden on the financial health of the Utility. The Commission has noticed that the Petitioner has taken some initiatives in this regard but firm execution is required so as to speed up the process of the construction and achievement of commercial operation date of renewable generation plants. It is inevitable for the distribution licensee to explore alternative sources of power, and at the same time consumer's contribution in this regard is required in terms of installation of roof top solar, wind or hybrid equipments etc. to reduce the load on the existing power stations of the Utility.

The Petitioner is directed to submit a quarterly progress report for the initiatives taken in this regard and submit the first report by 30th January 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it is exploring the possibility of generating power from biomass and has already engaged a consultant for preparation of the DPR and global tender for all possible renewable energy generation. The LED will submit the progress report of the same to the Hon'ble Commission shortly.

Commission's Comments

Serious efforts are required by the Petitioner in this regard and a status report on the other alternative means be submitted to Commission by 31st September 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that the department has got approval from the Ministry of New & Renewable Energy (MNRE) for setting up biomass plants in the Public Private Partnership (PPP) mode in three islands. The three islands are: Minicoy-2 MW plant Kavaratti-2 MW plant, and Kadmat-1 MW plant. The MNRE has approved to give grant of Rs. 2 crore per plant. The department is in the process of floating the tender for the same. Further, the department has also taken steps to set up a LTTD Micro Hydel Power Plant in of capacity 1x15 kW at Kavaratti. The detailed project report of the same is enclosed with this petition as Annexure II.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to submit the quarterly status report for the above projects by 30th June 2014.

13. Energy Audit

The Petitioner is directed to get an energy audit conducted to assess actual technical and commercial losses. The energy audit of the generating stations is required for an actual assessment of losses. Based on the studies, ED LED shall propose an action plan for the reduction of losses in subsequent years along with the investment required for reduction of such losses and augmentation of transmission and distribution system. Effective technical and administrative measures shall be taken to reduce the commercial losses. The action plan for energy audit and loss reduction measures shall be furnished to the Commission by 30th December 2012.

Petitioner's Response

The LED is taking necessary steps to appoint an agency for the energy audit. Further there is also a proposal for installation of AMR meters across all the islands for the reduction of T&D losses. The action plan for the same will be submitted to the Hon'ble Commission shortly.

Commission's Comments

The Petitioner is required to submit the action plan along with the details of agency appointed for the purpose of energy audit before 1st July 2013.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that it has engaged the Kerala State Productivity Council to conduct the energy audit in all the islands of the UT of Lakshadweep. The energy audit will also include the installations and as soon as the report is finalized it will be submitted to the Hon'ble Commission.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to submit the detailed report by 30th June 2014 prepared by KSPC.

14. Interest on Security Deposit

As per Clause 47(4) of the Electricity Act, 2003 and as specified in regulation 25 of JERC Tariff Regulations 2009, *the distribution licenses shall pay interest on security deposit collected from the consumers, equivalent to the bank rate or more as may be specified by the Commission*. On account of provisions mentioned in the Act and regulation, the Commission directs the Petitioner, that the Petitioner must pay the interest on consumer security deposit for FY 2012-13 (at the Bank Rate) with effect from 1st April 2012 to the consumers on their security deposit irrespective of Petitioner's constraints and should explicitly mention the same as the 'Interest on security deposit for FY 2012-13' on the bills of the consumers. **Any non-compliance in this regard shall be viewed seriously by the Commission.**

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that the present billing system of the department is not having the provision of giving the interest on security deposit to its consumers. The department is presently upgrading its billing software and also updating the security deposit records and as soon as these two processes are complete it will start paying interest on security deposit to its consumers and also appraise the Hon'ble Commission on the same.

Commission's Comments

The Commission directs the Petitioner to submit the details of such payments made by the next submission.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that the process of upgrading the billing software and updating the security deposit records is complete and the department will start giving interest on security deposit to its existing consumers from 1st April, 2014. Further, for its new consumers, the department will deposit the security deposit in the co-operative bank, and the interest on the security deposit will be remitted to the account of the consumers directly from the bank.

Commission's Comments

The Petitioner's submission is noted. The Commission directs the Petitioner to pay the interest on security deposit to the consumers for FY 2012-13 and FY 2013-14 and submit the details of such payments made by 30th June 2014.

15. Improvement in Specific Fuel Consumption

It is observed that the specific fuel consumption in case of LED is much higher at 0.32 litres per unit of electricity based on actual for FY 2011-12 whereas for similarly placed territory of Andaman & Nicobar Islands it is 0.23[2] litres to generate one unit of electricity based on approved

[2] For 266570000 units of gross generation, 60486314 litres of HSD fuel consumption have been approved for FY 2012-13 resulting in 0.23 litres being consumed to generate one unit of electricity in the Andaman & Nicobar Islands

cost for FY 2012-13. Also, the actual specific fuel consumption for the IPP at A&N is 0.24 litres/unit based on actual for FY 2011-12.

So, the Utility needs to take serious steps to economise its use of the HSD fuel and bring its specific fuel consumption at par with other similarly placed utilities.

Petitioner's Response

The LED would like to submit to the Hon'ble Commission that out of the existing installed capacity of 18890 kW, the old DG sets have a capacity of 3750 kW. By the end of the 12th five year plan the old DG sets will be phased out and the specific fuel consumption will come down so that the LED will be able to economize its use of HSD fuel.

Commission's Comments

The Commission directs the Petitioner to submit the action plan with Time lines by 30^{th} Oct 2013.

Petitioner's Response

The LED would like to submit that the action plan with time lines would be submitted to the Hon'ble Commission shortly. Further, the LED would also like to bring to the notice of the Hon'ble Commission that a team of officials of LED paid a visit to the Andaman & Nicobar islands, to study their system of operation and methodologies to improve overall efficiency of the department. Subsequently, a report has been prepared by the department detailing their observations of the working of the Electricity Department of Andaman & Nicobar Islands and suggestions on the practices to be adopted by the LED to bring improvement and more efficiency in their functioning. The report is being enclosed along with this petition as Annexure III.

Commission's Comments

The Commission directs the Petitioner to submit the concrete action plan with Time lines by 30^{th} June 2014.

16. Energy Efficiency measures

The power generation cost in Lakshadweep is the highest compared to any utility under the ambit of JERC. In addition, E.D of Lakshadweep cannot sustain on diesel based power source, which is uneconomical in long run with fuel prices increasing drastically. Therefore, in addition to scout for other source of power generation, LED has to spread energy saving measures including introducing efficient lamps, getting inefficient electrical equipment replaced & other demand side management measures among the consumers.

LED has to overview the practices being adopted presently for the Technical Loss Reduction, matching it with the best practices and has to draw a road map for the same.

The Commission directs LED to provide a detailed action report on these measures by 30th June 2014.

17. Man Power Studies

LED is required to initiate action to get a Study conducted by an accredited agency on manpower requirements, taking into account, gaps for improvements in Standard of Performance, Future Load Requirements, Use of Renewable Power, Demand Side management measures, Skilling and multi skilling of the manpower in view of geographic distance from Mainland Organization set up in view of spread of the Islands, techno-commercial realities and benchmarking with best practices.

The Commission directs the Petitioner to submit a report on action initiated in this regard latest by 31st Dec. 2014.

18. Quarterly Reports:

All the reports that are required to be submitted quarterly shall be submitted in hard & Soft Copy, by the Petitioner without fail, even if there is no change in Status. The Formats for the reports may be developed immediately in the meanwhile.

8. TARIFF PRINCIPLES AND DESIGN

8.1 Preamble

The Commission in determining the revenue requirement and retail supply tariff for the FY 2014-15 has been guided by the provisions of the Electricity Act, 2003, the Tariff Policy, Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions of Tariff notified by the JERC under Section 61 of the Act which lay down the broad principles, which shall guide determination of retail tariff.

8.2 Tariff Proposal

Petitioner's submission

The Petitioner has not proposed any tariff increase. The revenue gap has been proposed to be funded by the administration as submitted by the Petitioner.

Commission's Analysis

The Administration of the Union Territory of Lakshadweep has confirmed budgetary support to meet the revenue deficit for the FY 2014-15 through letter dated 5th March 2014. Therefore, Commission in consideration with the letter received has approved the below tariff for FY 2014-15:

Table 85: Commission's Approved Tariff for FY 2014-15

S. No.	Category/Consumption Slab per month	Approved Tariff (FY 2014-15)	
		Fixed Charges (Rs /per month per connection or Rs/kVA/month)	Energy Charges (Rs/kWh)
1	**BPL/Kutir Jyoti**	Rs. 25.00/connection/month	
2	**Domestic**		
	0- 50 units	Rs 10/connection/month for single phase and Rs 50/connection/per month for 3 phase connections	1.00
	51 to 100 units		1.25
	101 to 200 units		2.50
	201 units and above		4.00
3	**Commercial**		
	0-100 units	Rs. 25/connection/ month for singe phase and Rs. 100/connection/ month for 3 phase connections	4.25
	101 - 200 units		5.00
	201 units and above		6.00
4	**HT Consumers**	Rs. 100/ kVA/month	6.00
5	**Industrial**	Rs. 30 /kVA/month	4.50
6	**Public (Street Light)**	-	4.00
7	**Temporary Connection**		7.00

9. CONCLUSION OF COMMISSION'S ORDER

The Commission has considered the Petition no.123/2014 of Electricity Department of Lakshadweep for approval of Aggregate Revenue Requirement (ARR) and determination of retail tariffs for supply of electricity for FY 2014-15, the Commission approves the Aggregate Revenue Requirement (ARR) and the revised tariff for ED-Lakshadweep for FY 2014-15 as below.

1. The break-up of the Aggregate Revenue Requirement (ARR) approved for ED Lakshadweep for the year 2014-15 is given below.

Table 86: ARR for the FY 2014-15 (Rs Crores)

Rs. Crores		FY 2014-15	
Sr. No.	**Particulars**	**Proposed**	**Approved**
1	Cost of fuel	97.70	108.19
2	Cost of power purchase for full year		
3	Employee costs	12.56	10.57
4	Administration and general expenses	1.08	1.03
5	Repair and Maintenance	3.58	3.57
6	Depreciation	6.46	3.66
7	Interest and finance charges	5.78	5.44
8	Interest on working capital	2.61	2.82
9	Interest on Security Deposit to be paid to consumers	-	0.01
10	Return on NFA /Equity	3.53	1.52
11	Provision for Bad Debt	0.13	0.07
12	Advance Against Depreciation		
13	**Total Revenue Requirement**	**133.43**	**136.89**
14	Less: Non-Tariff Income	0.33	0.33
15	Less: Revenue from Sale through UI		
16	Less: Revenue from Sale of Power-Exchanges		
17	**Net Revenue Requirement (13-14-15-16)**	**133.10**	**136.56**

2. It is important to understand that utility has not been meeting its cost from the approved tariff and the gap is totally being funded by the government as a budgetary support, as per the letter dated 5th March 2014 from Administration of the Union Territory of Lakshadweep. Therefore, Commission for the FY 2014-15 has also not increased the tariff keeping in view the budgetary support provided.

3. The approved retail tariff is given below:

Table 87: Approved Tariff

S. No.	Category/Consumption Slab	Approved (FY 2014-15)	
		Fixed Charges (Rs /per month per connection or Rs/kVA/month)	Energy Charges (Rs/kWh)
1	**BPL/Kutir Jyoti**	Rs 25/connection/month	
2	**Domestic**		
	0- 50 units	Rs 10/connection/month for single phase and Rs 50/connection/per month for 3 phase connections	1.00
	51 to 100 units		1.25
	101 to 200 units		2.50
	201 units and above		4.00
3	**Commercial**		
	0-100 units	Rs. 25/connection/ month for single phase and Rs. 100/connection/ month for 3 phase connections	4.25
	101 - 200 units		5.00
	201 units and above		6.00
4	**HT Consumers**	Rs. 100/ kVA/month	6.00
5	**Industrial**	Rs. 30 /kVA/month	4.50
6	**Public (Street Light)**	-	4.00
7	**Temporary Connection**	**-**	7.00

4. The approved tariff shall come into force with effect from 1st April 2014 and shall remain valid till further order. <u>The licensee shall publish the tariff structure and the salient features of tariff within one week in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply.</u>
5. FPPCA formula has been separately notified under the Regulation. It is seen that in the case of Lakshadweep, majority of the generation is diesel based, making per unit cost of generation very high compared to the other utilities. Thus, the approved tariff is not covering the full cost of supply. Historically, there has been substantial gap between the actual cost of supply and revenue realized. This gap so far has been borne by the

administration of Lakshadweep & is so large that in near future there seems to be no feasibility of recovering average cost of supply from the consumer.

Keeping the above fact in view, the Commission is of the view that any variation in the cost of power generation (including variation in power purchase cost, if any) should for the time being be borne by the Utility. Further, the Utility is directed to propose a scheme for sharing of the increase in the cost of power generation (including power purchase cost, if any) with the consumers for the Commission's consideration and approval.

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

-Sd-
(S. K Chaturvedi)
Chairman

Place: Gurgaon
Date: 11th April 2014

Certified Copy

(Rajeev Amit)
Secretary

10. TARIFF SCHEDULE

General Terms and Conditions:

1) The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.

2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.

3) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.

   Provided that (a) if a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh

   (b) If either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.

4) If connected load of a domestic category is found to be at variance from the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, etc it shall not fall under Section 126 and Section 135 of the EA 2003.

5) The department shall not permit installation of contracted load of 3 HP and above in LT unless they are provided with the capacitors of adequate rating to comply with power factor conditions as specified in the JERC Supply Code Regulations 2010. The consumer has to provide appropriate capacitors for these installations presently running on without capacitors.

6) If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days' notice as per the provision of

the Act & Supply Code Regulation. Notice to this effect shall be printed on the bill of the consumer.

7) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out; similarly slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.

8) Supply to consumers connected at 11kV will be charged as per the HT Consumer category rate.

9) The billing in case of HT shall be on the maximum demand recorded during the month or 75% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the JERC Supply Code Regulation 2010. If such over-drawl is more than 20% of the contract demand then the connections shall be disconnected after due notice to the consumers.

   Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 Kwh, then the consumption corresponding to the contract demand will be 10000 Kwh (12000*100/120) and consumption corresponding to the excess demand will be 2000 Kwh. This excess demand of 20 KVA and excess consumption of 2000 Kwh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected after due notice.

10) In case of exceeding the sanctioned load by the low-tension consumers by adding additional load, the penalty charges shall be charged as per the relevant provisions of the JERC Supply Code Regulations 2010.

11) Unless specifically stated to the contrary, the figures of energy charges relates to paise per unit (kWh) charge for energy consumed during the month.

12) **Delayed payment surcharge** shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only upto the month of permanent disconnection.

13) **Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

14) **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

15) Schedule of other charges would be as approved in this Tariff Order.

16) In case any dispute arises about the applicability of any tariff for any particular class of service or as to the interpretation of any clause of these tariffs, the decision of the Commission shall be final and binding.

The detailed tariff Schedule is outlined as below.

<u>DETAILED TARIFF SCHEDULE</u>

A. Tariff BPL/Kutir Jyoti:

Applicable to consumers of Below Poverty Line (BPL) category with monthly consumption of 30 units and below.

Fixed Charge – Rs 25/- per service connection per month or part thereof

Note: Production of relevant BPL certificate issued by the authority concerned in the Island is a must for considering into this category and their consumption does not exceed 30 kWh per month at any instant.

B. Domestic Category

Applicable to private houses, bungalows, hostels and hospitals run on noncommercial lines, charitable educational and religious institutions etc. for lights, fans, radios, domestic heating and other household appliances.

I. Fixed Charges

Rs. 10 / connection/ month or part thereof for single phase connection

Rs. 50/connection/ month or part thereof for three phase connection

II. Energy Charges

Usage (Units/Month)	Energy Charge (Ps/Unit)
0-50 units	100
51-100 units	125
101-200 units	250
201 units and above	400

C. Commercial

This includes all categories which are not covered by other tariff categories i.e Domestic Category, BPL, Industrial LT, HT Consumers and Public Lighting.

Applicable for Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other commercial installations.

I. Fixed Charges

Rs. 25/ connection/ month or part thereof for single phase connection
Rs. 100/connection/month or part thereof for three phase connection

II. Energy Charges

Usage (Units/Month)	Energy charge (Ps/Unit)
0-100 units	425
101-200 units	500
201 units and above	600

D. Industrial Category

Applicable to all Low Tension Industrial Connections including water works/pumps.

I. Fixed Charges

Rs 30/kVA/month or part thereof

II. Energy Charges

	Energy charge (Ps/Unit)
For all units	450

E. HT Consumers

Applicable for the consumers connected with 11 KV.

i. Fixed Charges (Demand Charges)

For Billing Demand	Charges (Rs/KVA/month) or part thereof
Upto Contract Demand	Rs 100/kVA/month or part thereof

ii. Energy Charges

Usage (Units/Month)	Tariff (Ps/Unit)
For all units	600

iii. Penalty Charges: Shall be in accordance with S.No. 9 of the General Terms and Conditions.

iv. Power Factor Charges

(a) The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (lagging). If the monthly average power factor of a consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 0.01 in power factor upto 0.7 (lagging)

(b) In case the monthly average power factor of the consumer is more than 95% (0.95 lagging),a power factor incentive @ 0.5% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

(c) If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

(d) The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95.

v. Billing Demand

Billing demand in a billing cycle will be the higher of the following:

(a) 75% of the Contract Demand

(b) Actual Demand recorded by the meter

F. Public (Street Lighting)

Applicable for lighting on public roads, footpaths, streets and fares in parks & markets.

i. Energy Charges

Usage	Tariff (Ps/Unit)
For all units	400

G. Temporary Supply:

i. Energy Charges

Usage	Tariff (Ps/Unit)
For all units	700

The supply shall be given for a period of not more than three months. For any extension a fresh connection has to be obtained on proper fresh application. The temporary connection can only be for a maximum period of six months.

Schedule of Other Charges

Meter Rent Charges

S.No.	Meter Type	Charges (in Rs.) / month or part there of
1	Single Phase	Rs 10 per month or part thereof
2	Three Phase	Rs 25 per month or part thereof
3	LT Meter with MD indicator	Rs 200 per month or part thereof
4	Tri- vector Meter	Rs 500 per month or part thereof

Note: The type of meters to be installed in consumer premises will be decided by the department. Generally the LT consumers having connected load above 50 HP will be provided with L.T.M.D.I meters.

Considering the constraints prevailing in Lakshadweep Islands, the energy meters will be provided by the department only.

a. Reconnection Charges after temporary disconnection

S.No.	Connection Type	Charges (in Rs.)
1	Single Phase LT	Rs 50
2	Three Phase LT	Rs 100
3	HT	Rs 500

b. Service Connection Charges

S.No.	Connection Type	Charges (in Rs.)
1	Single Phase LT	Rs 250
2	Three Phase LT	Rs 500
3	HT	Rs 1000

c. Extra Length Charge

S.No.	Connection Type	Charges / Meter (in Rs.)
1	Single Phase	Rs 50/meter
2	Three Phase	Rs 100/meter

Extra length chargeable will be beyond permissible 30 meters free length from existing network for new connection for all categories.

d. Testing Fee for various Metering Equipment

S.No.	Types of Metering Equipment	Fee Per Unit (in Rs.)
1	Single Phase	100
2	Three Phase	300
3	Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	500
4	Three Phase Tri-vector Meter (0.5 Class) 11 KV HT Consumer	500
5	Combined CTPT Unit for 11 KV Consumer	500
6	Three Phase CT Block	300
7	CT Coil	100

e. Fees (Non-refundable) for submission of Test Report of wiring completion

S.No.	Types of Connection	Fee Per Test Report (in Rs.)
1	Single Phase Lighting / Domestic	10
2	Three Phase Lighting /Domestic	25
3	Single Phase Lighting / Commercial	50
4	Three Phase Lighting / Commercial	100
5	Three Phase LT Industries	250
6	Single Phase / Streetlight / Public Lighting & others	50

g. Other charges:

a) Meter shifting charges (within the premises on consumer request) - Rs. 1000/-

b) Shifting of poles on consumer request - Rs. 1500/-

c) Diversion of HT/LT line on consumer request - Rs. 100/- per meter

d) Penalty for tampering/damaging of supplier equipment's – As per the relevant provisions of the JERC Supply Code Regulations 2010.