No.ED/EE/ARR(17-18)/2016-17/ 8444 Administration of Daman & Diu (U.T.) Electricity Department, Vidyut Bhavan, Somnath-Kachigam Road Daman- 396210. e-mail: elec-dmn-dd@nic.in

Web: www.dded.gov.in

Dated: 0 5 -12/2016.

To, The Secretary, Joint Electricity Regulatory Commission, 'Vanijya Nikunj' 2<sup>nd</sup> Floor, Udyog Vihar, Phase-V, Gurgaon – 122016 Haryana.

Sub: Petition for Approval of True up for FY 2015-16, Review of FY 2016-17 and Annual Revenue Requirement (ARR) and Tariff Revision Proposal for FY 2017-18 for Union Territory of Daman & Diu under section 61, 62 and 64 of the Electricity Act 2003.

Madam,

With reference to the above cited subject, please find enclosed herewith the Petition for Approval of True up for FY 2015-16, Review of FY 2016-17 and Annual Revenue Requirement (ARR) and Tariff Revision Proposal for FY 2017-18 for Union Territory of Daman & Diu under section 61, 62 and 64 of the Electricity Act, 2003. The petition fees of Rs.18,25,510/- (Rupees Eighteen Lakh Twenty Five Thousand Five Hundred Ten Only) is enclosed herewith vide DD No.669377 dated: 18/11/2016.

Thanking you.

Yours Faithfully,

(M.R.Ingle) Executive Engineer (Elect.) Daman

#### List of Enclosures:

- 1. Six Copies of ARR & Tariff Petition for FY2017-18 (Vol.1)
- 2. Six Copies of Annual Accounts for FY 2015-16 (Annexure-I, Vol-II)
- 3. Six Copies of Power Purchase Bills (Annexure-II, Vol-II)
- 4. Six Copies of Energy Audit Report for FY 2015-16 (Annexure-III, Vol-II)
- 5. Six Copies of RIMS Format (Annexure-IV, Vol-II)

True up for FY 2015-16,

Review of FY 2016-17,

AND

ARR and Tariff Revision Proposal for FY 2017-18

Main Text & Formats (Volume I)

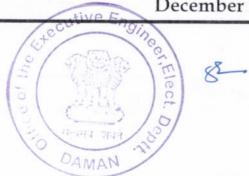
Submitted to

Joint Electricity Regulatory Commission Gurgaon

By:

Electricity Department of Daman & Diu (Daman)

December 2016



# BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA & UNIION TERRITORIES

Filing No	
Case No	

IN THE MATTER OF:

Filing of Aggregate Revenue Requirement (ARR) for the

FY 2017-18 under Section 62 and 86 of the Electricity Act,

2003

AND

IN THE MATTER OF

Electricity Department of Daman & Diu

(hereinafter referred to as "EDDD" or "The Petitioner")

Daman - Applicant

The Applicant respectfully submits as under: -

- 1. The Electricity Department of Daman & Diu ("EDDD") is a statutory body engaged in the electricity transmission and distribution in the Union Territory of Daman & Diu. Consequent to the enactment of the Electricity Act, 2003 (hereinafter referred to as the "Act"), the process of approval of proposed tariffs is vested with the State Commission. Based on the provisions of Section 62 of the Act, EDDD is filing the current petition, in order to meet its financial requirements.
- This is a Petition indicating the True up Petition for FY 15-16, Review for the FY 2016-17 and the Aggregate Revenue Requirement (ARR) for and Tariff Revision Proposal of EDDD for the FY 17-18 (Financial Year 2017-18).





દમણ અને દીવ दमण और दीव DAMAN AND DIU

169806

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA AND UNION TERRITORIES

FILE NO.

IN THE MATTER OF:

Filing of True up for FY 2015-16, Review of FY 2016-17 and Aggregate Revenue Requirement (ARR) and Tariff Revision Proposal for FY 2017-18 for Union Territory of Daman and Diu under Section 61, 62 and 64 of the Electricity Act, 2003.

AND
IN THE MATTER OF:

Electricity Department of Daman and Diu (Hereinaster referred to as "ED-DD" or "The Petitioner" of "The Department")

.....Petitioner

# AFFIDAVIT

I, Shri M.R Ingle, S/o Shri Rambhau Z. Ingle, aged 53 years, Service residing at Aparna, Opp. Govt. College, Dunetha, Daman-396210, the deponent named above do hereby solemnly affirm and state on oath as under:-

- That the deponent is the Executive Engineer, Electricity Department, UT of Daman & Diu is authorized and acquainted with the facts deposed as below:
- 2. I, the deponent name above do hereby verify that the contents of the accompanying petition are based on the records of the Electricity Department, Daman and Diu maintained in the ordinary course of business and believed them to be true and I believe that no part of it is false and no material facts have been concealed there from.

5

Serial No. 62279 Daman Treasury, dated 18-Nov-2016	3
Value of Stamps Papers Rupees ONE HUNDRED	
Name of the Purchaser M. R. Ingle	
Residing at Daman Son/Wife of	
Agent Thapa Purpose Affidavits	
Name of Parties to the Transaction Sought	_
There	V

Signature of Treasurer

Signature of Purchaser

Details of enclosure:

108691

Proposal for True up for FY 2015-16, Review of FY 2016-17 and Aggregate Revenue Requirement (ARR) and Tariff Revision Proposal for FY 2017-18. (Vol-I and Vol-II)

Petition Fees Rs.18,25,510/- (Rupees Eighteen Lakh Twenty Five Hundred Five Hundred Ten Only) vide DD No.669377 Dated: 18/11/2016

[The energy sales of the territory is proposed at 1825.51 MUs and accordingly fees payable is Rs.18,25,510/- (@Rs.1 (Rupees One) per 1000 units)].

Executive Engineer Electricity Department, DAMAN.

For Electricity Department, Daman & Diu
Petitioner

Place: Daman

I, <u>Rajnikant B. Tandel</u> Advocate and Notary, do hereby declare that the person making this affidavit is known to me through the perusal of records and I am satisfied that he is the same person alleging to be deponent himself.

#### Advocate

NOTARIAL

Solemnly affirmed before me on this ....... day of November 2016 at ...... a.m. / p.m. by the deponent who has been identified by the aforesaid Advocate.

I have satisfied myself by examining the deponent that he understood the contents of the affidavit which has been read over and explained to him. He has also been explained about section 193 of Indian Penal Code that whoever intentionally gives false evidence in any of the proceedings of the Commission or fabricates evidence for purpose of being used in any of the proceedings shall be firstle for punishment as per law.

by M. R. Ingle
of Roman who is identified
by of vhom I personally know.



RAJNIKANT B TANDEL Advocate & Notary

# TABLE OF CONTENTS

CHAI	PTER I: INTRODUCTION	. 10
1.1	EDDD PROFILE	. 10
1.2	MULTI YEAR TARIFF DISTRIBUTION TARIFF REGULATIONS, 2014	. 11
1.2.		
1.3	CONTENTS OF THIS PETITION	
CHAI	PTER 2: TRUE UP FOR FY 2015-16	
2.1	PRINCIPLES FOR TRUE UP FOR FY 2015-16	
2.2	ENERGY SALES FOR FY 2015-16	
2.3	DISTRIBUTION LOSS FOR FY 2015-16	
2.4	ENERGY REQUIREMENT AND ENERGY BALANCE	
2.5	POWER PURCHASE COST	
2.6	OPERATION AND MAINTENANCE EXPENSES	
2.7	CAPITAL EXPENDITURE & CAPITALIZATION	
2.8	DEPRECIATION	
2.9	INTEREST AND FINANCE CHARGES	
2.10	INTEREST ON WORKING CAPITAL	. 20
2.11	RETURN ON CAPITAL EMPLOYED	. 21
2.12	NON TARIFF INCOME	. 21
2.13	AGGREGATE REVENUE REQUIREMENT FOR FY 15-16	. 22
2.14	REVENUE FOR FY 15-16	
2.15	REVENUE (GAP) / SURPLUS FOR FY 15-16	. 23
CHAI	PTER 3: REVIEW FOR THE FY 2016-17	
3.1	ENERGY SALES	. 25
3.2	DISTRIBUTION LOSS FOR FY 16-17	. 26
3.3	ENERGY REQUIREMENT OF THE SYSTEM	26
3.4	ENERGY AVAILABILITY AND POWER PURCHASE COST	. 27
3.5	OPERATION & MAINTENANCE COSTS	31
3.6	CAPITAL EXPENDITURE PLAN	32
3.7	GROSS FIXED ASSETS	32
3.8	DEPRECIATION	33
3.9	INTEREST & FINANCIAL COSTS	34
3.9.1	INTEREST ON LONG-TERM / CAPITAL LOANS	34
3.9.2	INTEREST ON WORKING CAPITAL BORROWINGS	
3.10	RETURN ON EQUITY	36

Page 3



मत्यमय जयते

DAMAN

3.11	INTEREST ON CONSUMER SECURITY DEPOSITS	36
3.12	NON-TARIFF & OTHER INCOME	36
3.13	AGGREGATE REVENUE REQUIREMENT	37
3.14	REVENUE FROM EXISTING TARIFF	37
3.15	COVERAGE OF REVENUE GAP	38
CHA	PTER 4: ARR FOR THE FY 2017-18	40
4.1	LOAD GROWTH	40
4.2	CONSUMER GROWTH	42
4.3	ENERGY SALES GROWTH	43
4.4	T&D LOSS REDUCTION	44
4.5	ENERGY REQUIREMENT OF THE SYSTEM	45
4.6	ENERGY AVAILABILITY	46
4.6	1 POWER PURCHASE	46
4.6		
4.6		
4.7		
4.7		
4.7		
4.7		
3.7.		
4.8	CAPITAL EXPENDITURE PLAN	
3.9	GROSS FIXED ASSETS	
3.10	DEPRECIATION	
3.11	INTEREST & FINANCE COSTS	
3.1		59
3.1	III IIII OI III OI III OO OO OO OO OO OO	
3.12	RETURN ON CAPITAL EMPLOYED	
3.13	NON-TARIFF & OTHER INCOME	
3.14	AGGREGATE REVENUE REQUIREMENT	62
3.15	REVENUE AT EXISTING TARIFF	63
3.16	COVERAGE OF REVENUE GAP	64
3.17	AVERAGE COST OF SUPPLY	65
3.18	TARIFF PROPOSAL FOR FY 17-18	65
CHA	PTER 5: DETERMINATION OF OPEN ACCESS CHARGES	68
4.1	ALLOCATION MATRIX	68
4.2	VOLTAGE WISE WHEELING CHARGES	68
Wtive	CROSS SUBSIDY SURCHARGE	69
505		
7 6	133 6	

4.4	APPLICATION AND AGREEMENT FEES	71
CHA	PTER 6: COMPLIANCE OF DIRECTIVES	72
TAR	IFF SCHEDULE	85
PRA	YER	99
FOR	MATS	100



यत्यमेव जयते

DAMAN

## LIST OF TABLES

TABLE 1: CONSUMER CATEGORY WISE ENERGY SALES FOR FY 2015-16	
TABLE 2: DISTRIBUTION LOSS	
TABLE 3: ENERGY BALANCE FOR FY 2015-16.	
TABLE 4: POWER PURCHASE COST FOR FY 2015-16	
TABLE 5: OPERATION & MAINTENANCE EXPENSES FOR FY 2015-16	
TABLE 6: CAPITAL EXPENDITURE AND CAPITALIZATION FOR FY 15-16	
TABLE 7: DEPRECIATION FOR FY 2015-16.	
TABLE 8: INTEREST ON LOAN FOR FY 15-16	
TABLE 9: INTEREST ON WORKING CAPITAL FOR FY 2015-16	
TABLE 10: RETURN ON EQUITY FOR FY 15-16	
TABLE 11: NON TARIFF INCOME FOR FY 15-16	
TABLE 12: AGGREGATE REVENUE REQUIREMENT FOR FY 15-16	
TABLE 13: REVENUE FOR FY 15-16	23
TABLE 14: REVENUE (GAP)/SURPLUS FOR FY 15-16.	23
TABLE 15: CATEGORY WISE SALES FOR FY 16-17 (REVISED ESTIMATE)	
TABLE 16: DISTRIBUTION LOSSES FOR FY 16-17.	
TABLE 17: ENERGY REQUIREMENT OF THE SYSTEM	
TABLE 18: ENERGY ALLOCATION FROM CENTRAL GENERATING STATIONS	
TABLE 19: REVISED ESTIMATED POWER PURCHASE COST FOR FY 16-17	
TABLE 20: O&M EXPENSE FOR FY 16-17	31
TABLE 21: CAPITAL EXPENDITURE & CAPITALIZATION FOR FY 16-17	
TABLE 22: OPENING AND CLOSING GFA FOR FY 16-17	
TABLE 23: DEPRECIATION RATE SPECIFIED BY CERC	
TABLE 24: DEPRECIATION FOR FY 16-17	
TABLE 25: INTEREST ON LONG-TERM/CAPITAL LOANS FOR FY 16-17	
TABLE 26: INTEREST ON WORKING CAPITAL FOR FY 16-17	
TABLE 27: RETURN ON EQUITY FOR FY 16-17	
TABLE 28: NON-TARIFF INCOME FOR FY 16-17	
Table 29: Aggregate Revenue Requirement for FY 16-17	37
TABLE 30: REVENUE FROM SALE OF POWER AT EXISTING TARIFF FOR FY 16-17	
TABLE 31: REVENUE GAP/SURPLUS FOR FY 16-17	
TABLE 32: PAST YEAR'S LOAD GROWTH	
TABLE 33: PROJECTED LOAD GROWTH DURING FY 2016-17 AND FY 2017-18	
TABLE 34: PAST YEAR'S CONSUMER GROWTH	
Table 35: Projected consumer growth during the FY 2016-17 and FY 2017-18.	
TABLE 36: PAST YEARS' ENERGY SALES GROWTH	43
TABLE 37: PROJECTED CATEGORY WISE ENERGY SALES FOR MYT CONTROL PERIOD	
TABLE 38: PROPOSED T&D LOSS FOR FY 2017-18.	45
TABLE 39: ENERGY REQUIREMENT OF THE SYSTEM	
TABLE 40: ENERGY ALLOCATION FROM CENTRAL GENERATING STATIONS	
TABLE 41: POWER PURCHASE QUANTUM	49
TABLE 42: ENERGY BALANCE	
TABLE 43: POWER PURCHASE COST	
TABLE 44: TOTAL POWER PURCHASE COST FOR FY 2017-18	
TABLE 45: EMPLOYEE EXPENSES	
TABLE 46: REPAIRS & MAINTENANCE EXPENSE	
TABLE 47-A&G EXPENSE	
TABLE 48: TOTALO&M EXPENSE	57
Page 6	
25/8 / 218-	

TABLE 49: CAPITAL EXPENDITURE & CAPITALIZATION FOR FY 17-18	57
TABLE 50: OPENING AND CLOSING GFA FOR THE FY 2017-18.	58
TABLE 51: DEPRECIATION	
TABLE 52: TOTAL INTEREST ON LONG-TERM LOANS	60
TABLE 53: INTEREST ON WORKING CAPITAL FOR THE FY 2017-18	61
TABLE 54: PROPOSED RETURN ON EQUITY	61
TABLE 55: NON-TARIFF INCOME	
TABLE 56: AGGREGATE REVENUE REQUIREMENT	62
TABLE 57: REVENUE FROM SALE OF POWER AT EXISTING TARIFF	
TABLE 58: REVENUE GAP FOR FY 2017-18	64
TABLE 59: AVERAGE COST OF SUPPLY & REVENUE REALIZATION	65
TABLE 60: PROPOSED TARIFF STRUCTURE FOR FY 17-18	65
TABLE 61: ALLOCATION OF ARR BETWEEN WHEELING AND RETAIL SUPPLY	68
TABLE 62: DETERMINATION OF INPUT ENERGY FOR NETWORK USAGE PERCENTAGE	69
TABLE 63: WHEELING CHARGES PROPOSED FOR FY 2017-18	69
TABLE 64: CALCULATION OF "T"	
TABLE 65: CALCULATION OF "C"	70
TABLE 66: PROPOSED CROSS SUBSIDY SURCHARGE FOR FY 2017-18	70



ACRONYM	DEFINITION
A&G Expenses	Administrative & General Expenses
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
Ckt. Km / ckm	Circuit Kilometres
EA 2003	Electricity Act 2003
G,T and D	Generation, Transmission and Distribution
GFA	Gross Fixed Assets
GoI	Government of India
IPPs	Independent Power Producers
JERC	Joint Electricity Regulatory Commission
EDDD	Electricity Department of Daman & Diu
MU	Million Units
MYT	Multi-Year Tariff
O&M	Operations and Maintenance
PGCIL	Power Grid Corporation of India Limited
R&M Expenses	Repair & Maintenance Expenses
RoE	Return on Equity
T&D	Transmission and Distribution
S/S	Sub Station



Notes:

In this Petition:

All currency figures used in this Petition, unless specifically stated otherwise, are in Rs. Crore and Million Units.

This petition contains the Main Text of the Petition and Format (Volume I) and Annexure (Volume II).



Page 9

# Chapter I: Introduction

#### 1.1 EDDD Profile

Daman and Diu is a union territory in India. Daman District comprises of an area of 72 sq. km whereas Diu District comprises of an area of 40 sq. km. The total population of Daman & Diu as per 2011 census was 242,911 with population density being 2400 persons per sq. km.

The Electricity Department of Daman & Diu (EDDD) is responsible for supply of uninterrupted & quality power to all categories of consumers in Daman & Diu at the most economical rates. The (EDDD) is engaged in the procurement, transmission and distribution of electricity to the various consumer categories in the Union Territory of Daman and Diu. The EDDD mainly relies on the Central Sector Generating Stations (CSGS) in Western Region to meet its energy demand. EDDD also has some allocation from Eastern Region Central Generating Stations.

The present transmission and distribution system of EDDD consists of 26 circuit kms of 220 kV Double Circuit (D/C) lines, 85.30 kms of 66kV lines, 420 circuit kms of 11kV O/H as well as U/G lines, 773.71 circuit kms of LT OH & U/G lines along with 875 transformers. Presently, there are 107 no. 11 kV feeders and 5 no. 66 kV feeders in the network of Daman & Diu.

The key duties being discharged by Daman & Diu Electricity Department are:

- Laying and operating of such electric line, sub-station and electrical plant that
  is primarily maintained for the purpose of distributing electricity in the area of
  supply of 'Daman & Diu Electricity Department', notwithstanding that such
  line, sub-station or electrical plant are high pressure cables or overhead lines or
  associated with such high pressure cables or overhead lines; or used
  incidentally for the purpose of transmitting electricity for others, in accordance
  with Electricity Act. 2003 or the Rules framed there under.
- Operating and maintaining sub-stations and dedicated transmission lines connected there with as per the provisions of the Act and the Rules framed there under.





- Arranging, in-coordination with the Generating Company(ies) operating in or
  outside the State, for the supply of electricity required within the State and for
  the distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Preparing and carrying out schemes for distribution and generally for promoting the use of electricity within the State.

The present power allocation of Daman & Diu is approximately 352 MW from various generating stations including 70 MW from NTPC-SAIL plant located at Bhilai and 38 MW from Ratnagiri Gas and Power Private Limited (RGPPL). At present, Daman gets power at 220/66 KV Magarwada substation from two sources. First source is 220 KV (D/C) Ambethi-Magarwada line and second source is from 220 KV (D/C) Magarwada (PGCIL) Magarawada, Daman and Diu gets power from 66 kV Una substation through 66 kV double circuit line emanating from 220 /66 kV Kansari substation of GETCO.

Earlier in FY 12-13, electricity drawl of EDDD was approximately 220 to 250 MW against the daily scheduled availability of 280 to 290 MW resulting in a surplus of 30 to 40 MW during FY 12-13. The current demand is primarily dependent on the HT and LT Industrial consumers contributing approx. 94% of the total sales in FY 13-14. The demand from the industrial consumers is primarily due to tax holiday benefit extended by the Govt of India in UT of Daman & Diu which has attracted a large number of industries to set up base in this area.

Considering the increase in demand from the large industries, the demand is likely to reach to 300-310 MW by FY 2016-17. In view of the huge power demand in future, EDDD had proposed a number of schemes to be implemented during the coming years for strengthening and augmentation of the transmission and distribution system in the territory. EDDD is also undertaking efforts to get higher allocation from the Central Generating Stations. The EDDD is undertaking all necessary actions to tie-up for long-term power purchase for meeting the deficit in the UT of Daman and Diu.

#### 1.2 Multi Year Tariff Distribution Tariff Regulations, 2014

EDDD's tariff determination is now governed by "The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014" (referred to as "MYT Regulations, 2014"). The MYT Regulations, 2014 provide a framework for calculating tariffs on a cost-plus basis initially for a period of three years and allow the licensee to recover operational expenses including





depreciation, interest on working capital and debt, and return on equity amongst others. The MYT Regulations, 2014 segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are uncontrollable are passed through to the consumers. Further, the MYT Regulations, 2014 identifies the uncontrollable and controllable parameters as follows:

#### 1.2.1 Uncontrollable Parameters include

- 1 Force Majeure events, such as acts of war, fire, natural calamities, etc.
- 2 Change in law;
- 3 Taxes and Duties;
- 4 Variation in sales; and
- 5 Variation in the cost of power generation and/or power purchase due to the circumstances, as specified in the MYT Regulations, 2014

#### 1.2.2 Controllable Parameters include

- 1 Variations in CAPEX due to time and/or cost overruns/efficiencies;
- 2 Variations in transmission and distribution losses;
- 3 Variations in depreciation and working capital requirements;
- 4 Failure to meet the standards specified in the Joint Electricity Regulatory Commission (Standards of Performance) Regulations, 2009 except where exempted;
- 5 Variation in operation & maintenance expenses, except those attributable to directions of the Commission:
- 6 Variation in Wires Availability and Supply Availability; and
- 7 Variation on account of inflation.

#### 1.3 Contents of this Petition

This Petition covers the truing up for FY 15-16, revised estimates for FY 16-17 and the basis, assumptions and projections of individual elements constituting the determination of ARR for the FY 17-18. The Joint Electricity Regulatory Commission for the state of Goa and union territories (JERC) had issued the first Tariff Order for Electricity Department of Daman & Diu (EDDD) on 1st November 2010 and subsequently the second, third, fourth, fifth, sixth and seventh Tariff order for FY 11-12, FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16 and the MYT



of the

पन्यमेच जबते

DAMAN

Control Period FY 2016-17 to FY 2018-19 for EDDD were issued on 3rd October, 2011, 25th August, 2012, 22nd March, 2013, 1st May, 201, 31st March, 2015 and 6th April, 2016 respectively. The Commission in its Tariff Order for the MYT Control Period FY 2016-17 to FY 2018-19 has approved the ARR for the MYT Control Period FY 2016-17 to FY 2018-19 based on the actual cost for FY 14-15 and estimated expenses for FY 15-16.



# Chapter 2: True Up for FY 2015-16

## 2.1 Principles for True Up for FY 2015-16

As per JERC Terms and Conditions for determination of Tariff Regulations, 2009, the Hon'ble Commission shall undertake the True Up of licensee for FY 2015-16 based on the comparison of the actual performance of the past year with the approved estimates for such year.

In line with the provisions of JERC Regulations, EDDD is filing its True Up for the year FY 2015-16. Information provided in the True Up for FY 2015-16 is based on the Annual Accounts and principles adopted by the Hon'ble Commission in its previous orders on Interest on Term Loan, Return on Equity, Interest on Working Capital and Depreciation. This actual performance has been compared with the approved parameters as per the order dated 31st March, 2015 and 6th April, 2016 for the FY 15-16.

Accordingly, revised Aggregate Revenue Requirement, revenue and gap for FY 2015-16 are given in the following paragraphs of this chapter.

### 2.2 Energy Sales for FY 2015-16

The actual energy sale for FY 2015-16 has been shown below along with approved sales by Hon'ble Commission vide Tariff Order dated 31st March, 2015 and 6th April, 2016. The actual energy sales for FY 2015-16 are as under:

Table 1: Consumer category wise energy sales for FY 2015-16

(MU) FY 15-16 **Particulars** FY 15-16 FY 15-16 Approved (31st Approved (6th Actual March, 2015) April, 2016) 90.99 88.20 Domestic 99.65 0.09 0.09 LIG/ Kutir Jyoti 54.80 44.53 49.93 Commercial 2.46 Agriculture 2.44 2.41 LT Industry 161.95 159.83 160.54 1,379.41 HT/EHT Industry 1410.47 1373.39 10.29 9.89 7.43 Public Lighting Public Water Works 3.54 2.68 4.15 0.99 0.00 1.23 Temp. Supply 1,684.67 **Total Sales** 1,691.98 1,744.74 tecutive Engine



It can be observed from the above that there is a slight variation in the actual energy sold as compared to the energy sales approved by the Commission vide the Tariff Order dated 6th April, 2016. The reasons attributable for the same are:

- The actual sales of the HT category for the FY 2015-16 was 1379.41 MUs as compared to 1373.39 MUs approved by the Hon'ble Commission in its Tariff Order dated 6th April, 2016.
- The actual sold to the Commercial category was 49.93 MUs as compared to 44.53 MUs approved by the Hon'ble Commission in its Tariff Order dated 6<sup>th</sup> April, 2016.
- The actual sold to the Domestic category was 88.20 MUs as compared to 90.99
   MUs approved by the Hon'ble Commission in its Tariff Order dated 6th April,
   2016.
- The actual sold to the Public Lighting category was 7.43 MUs as compared to 9.89 MUs approved by the Hon'ble Commission in its Tariff Order dated 6<sup>th</sup> April, 2016.
- Overall the actual sales has increased by around 7.00 MUs in comparison to the sales approved by the Hon'ble Commission vide its Tariff Order dated 6<sup>th</sup> April, 2016.

The EDDD requests the Hon'ble Commission to approve the actual sales for FY 15-16.

#### 2.3 Distribution Loss for FY 2015-16

EDDD is making all efforts to reduce the distribution losses in the UT of Daman & Diu. In FY 2015-16, the actual distribution losses were 8.87% as against the approved level of 8.60%.

In the Tariff Order dated 31st March, 2015 and 6th April, 2016 the Hon'ble Commission had approved the distribution losses at 8.60% for the FY 2016-16. However, now EDDD has computed the distribution loss based on the actual sales data for FY 15-16. Based on that the distribution loss for FY 15-16 has been worked out at 8.87%. The table below highlights the comparison of actual distribution losses of the EDDD against that approved by the Hon'ble Commission vide its Tariff Order dated 31st March, 2015 and 6th April, 2016.



Table 2: Distribution Loss

			(%)
Particulars	FY 15-16	FY 15-16	FY 15-16
	Approved (31st March, 2015)	Approved (6th April, 2016)	Actual
Distribution Loss	8.60%	8.60%	8.87%

The EDDD requests the Hon'ble Commission to approve the actual T&D losses for FY 15-16.

## 2.4 Energy Requirement and Energy Balance

Based on the actual energy sales and the transmission & distribution loss units, the actual energy requirement for FY 15-16 has been furnished below. The energy requirement had been met through various sources as described in the subsequent sections.

Table 3: Energy Balance for FY 2015-16

		(	MU)
Particulars	FY 15-16 Approved (31st March, 2015)	FY 15-16 Approved (6th April, 2016)	FY 15-16 Actual
Sales	1,744.74	1,684.67	1,691.98
Open Access Sales	0.00	391.51	416.06
Total Sales	1,744.74	2,076.18	2,108.04
Add: Losses	164.17	195.35	205.13
T&D Losses	8.60%	8.60%	8.87%
Energy Required at Periphery	1,908.91	2,271.53	2,313.17
Add: Sales to common pool consumer	0.00	37.03	11.03
Total Energy Required at Periphery	1,908.91	2,308.56	2,324.20
Transmission loss	73.55	72.09	88.30
Transmission loss(%)	3.71%	3.66%	3.66%
Total Energy to be purchased	1,982.45	2,380.55	2,412.50
Power Purchase from other sources	1,982.45	1,969.72	1989.51
Open Access Purchase	0.00	410.83	422.99

The net energy requirement for sale during FY 2015-16 was 2324.20 MUs.

#### 2.5 Power Purchase Cost

the

DAMAN

EDDD sources power from Central Generating Stations like Korba, Vindyachal, Kahalgaon, Kawas of National Thermal Power Corporation (NTPC) and Tarapur and Kakrapar atomic power stations of Nuclear Power Corporation of India Limited

8\_

(NPCIL) etc. The actual power purchase for the FY 15-16 is provided in the table below and compared with the power purchase approved by the Hon'ble Commission.

Table 4: Power purchase cost for FY 2015-16

<b>在外面的大型是一个工作。</b>	MUs		Cost (Rs. Crore)	
Particulars	FY 15-16	FY 15-16	FY 15-16	FY 15-16
	Approved	Actual	Approved	Actual
Power Purchase	1,969.73	1,989.51	838.03	699.71

The power purchase depends on various parameters such as the energy sales, distribution loss, energy requirement and the energy availability. The variation in the power purchase cost from the Tariff Order is on account of variation in sales and variation in actual cost with respect to the base rate along with purchase of power from short-term sources to meet the shortfall during the year.

The Hon'ble Commission had approved the power purchase at Rs. 838.03 Crore in the Tariff Order dated 6th April, 2016. Now, the EDDD has claimed a power purchase cost of Rs. 699.71 Crore based on the Annual accounts for FY 15-16 and there is a decrease in the power purchase cost as compared to the power purchase cost approved by the Hon'ble Commission.

The EDDD also requests the JERC to allow the UI purchase during FY 15-16 without any penalty as the EDDD has already incurred that amount. Therefore, the EDDD has included that total UI amount paid in the total power purchase cost for FY 15-16.

The EDDD purchased 63.67 MU during FY15-16 through UI at the cost of Rs. 18.33 Crore to meet the energy shortfall during the year.

The EDDD, therefore, requests the Hon'ble Commission to approve the actual power purchase cost for FY 15-16 without any deduction.

### 2.6 Operation and Maintenance Expenses

Operations and Maintenance (O&M) Expenses of the department consists of the following elements:

- Employee Expenses
- Repairs and Maintenance Costs
- Administrative and General Expenses

Employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.

Repairs and Maintenance Expenses go towards the day to day upkeep of the transmission and distribution network of the department and form an integral part of its effort towards reliable and quality power supply as also in the reduction of losses in the system.

Administration expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits.

The Hon'ble Commission had approved the O&M cost at Rs. 25.30 Crore and Rs. 28.83 Crore vide Tariff Orders dated 31st March, 2015 and 6th April, 2016 respectively. During FY 15-16, EDDD incurred actual O&M expense of Rs. 31.08 Crore which was inclusive of employee cost of Rs. 12.45 Crore, Repair & Maintenance Charges of Rs. 12.60 Crore and Administration & General Expenses of Rs. 6.03 Crore as shown in the table below:

Table 5: Operation & Maintenance Expenses for FY 2015-16

(Rs Crore) **Particulars** FY 15-16 FY 15-16 FY 15-16 Approved (31st Approved (6th Actual March, 2015) April, 2016) 12.45 **Employee Cost** 10.50 10.51 R&M 9.67 11.55 12.60 A&G 6.03 5.13 6.77 31.08 25.30 28.83 **O&M** Expenses

The O&M cost has increased due to the increase in the actual cost incurred by the EDDD during the FY 2015-16 as against the O&M cost approved by the Hon'ble Commission. The revised estimates submitted by the EDDD for FY 2015-16 were based on the half yearly actual cost incurred by the department. However, the O&M cost as submitted for the truing up purpose is based on the actual cost incurred by the EDDD during the FY 2015-16. The EDDD, therefore, requests the Hon'ble Commission to approve the O&M expenses for FY 15-16 as submitted in herewith.



8-

## 2.7 Capital Expenditure & Capitalization

The actual capital expenditure incurred by EDDD during the FY 15-16 was Rs. 32.28 Crore, which is higher than that of approved by the Hon'ble Commission in its Tariff Orders dated 6th April, 2016 respectively. The capital expenditure incurred and actual capitalization made by the department for FY 15-16 against that approved by the Hon'ble Commission is as shown below:

Table 6: Capital expenditure and capitalization for FY 15-16

			(Rs. Crore.)
Particulars	FY 15-16	FY 15-16	FY 15-16
	Approved (31st March, 2015)	Approved (6th April, 2016)	Actual
Capital Expenditure	129.12	28.78	32.28
Capitalisation	94.69	17.27	61.90

The EDDD, therefore, requests the Hon'ble Commission to approve the capital expenditure and capitalization for FY 15-16.

## 2.8 Depreciation

The depreciation has been worked out after applying the Depreciation rates as per the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009. Accordingly, the depreciation so arrived and approved depreciation for FY 2015-16 is shown in the table below:

Table 7: Depreciation for FY 2015-16

	•		(Rs. Crore.)
Particulars	FY 15-16 Approved (31st March, 2015)	FY 15-16 Approved (6th April, 2016)	FY 15-16 Actual
Opening GFA	394.59	387.14	387.13
Addition during the year	94.59	17.27	62.08
Closing GFA	489.18	404.41	449.21
Average GFA	441.89	395.78	418.17
Depreciation during the year	21.88	19.79	19.28

The EDDD, requests the Hon'ble Commission to approve the actual depreciation for FY 15-16 without any deduction.

#### 2.9 Interest and Finance Charges

DAMAN

For assessing interest on Loans in FY 15-16, EDDD has considered the opening balance of loans for FY 15-16 as approved by the Hon'ble Commission vide its Tariff Order dated 6th April, 2016 for the Review of the ARR for FY 15-16. The normative loan

Page 19

addition in FY 15-16 has been computed as 70% of the capitalization for FY 2015-16 which works out to Rs. 43.33 Crore. The capitalization for FY 15-16 was Rs. 62.08 Crore as per the audited annual accounts for FY 15-16.

In line with the approach adopted by the Hon'ble Commission in its Tariff Order dated  $6^{th}$  April, 2016, 10% of the opening loans have been considered as the repayment during the year. Further the rate of interest has been considered as equal to the SBI PLR of 14.75%.

The following table depicts the total Interest & Financial charges for FY 15-16 computed by EDDD and compared the same with the approved Interest and Financial charges amount for the consideration of the Hon'ble Commission:

Table 8: Interest on Loan for FY 15-16

(Rs. Crore.)

Particulars	FY 15-16 Approved (31st	FY 15-16 Approved (6th	FY 15-16 Actual
等等等 的复数多数性的	March, 2015)	April, 2016)	CALL STATE
Opening Loan	93.91	83.31	83.30
Loan for additional Capex (70:30 debt-equity)	66.28	12.09	43.33
Loan Repayment (10% of Opening Balance)	21.88	8.33	8.33
Closing Loan	98.24	87.07	118.30
Interest Cost on Avg. Loans	14.49	12.17	14.87

The EDDD, requests the Hon'ble Commission to approve the interest on loan computed for FY 15-16.

## 2.10 Interest on Working Capital

The interest on working capital has been calculated based on the normative principles outlined by the Hon'ble Commission in the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009.

EDDD has computed interest on working capital at 14.75% as equal to the SBI PLR rate. The following table shows the interest on working capital for FY 2015-16 incurred by EDDD against the approved amount for the consideration of the Hon'ble Commission:



Table 9: Interest on Working Capital for FY 2015-16

(Rs. Crore.) Particulars FY 15-16 FY 15-16 FY 15-16 Approved (6th Approved (31st Actual March, 2015) April, 2016) 2.40 O&M expense for 1 month 2.12 2.59 64.16 69.84 58.31 Power Purchase Cost for 1 month 0.00 0.00 Fuel cost for two months 0.00 Total Working Capital 66.28 72.24 60.90 requirement 46.83 39.34 53.99 Security Deposit Net Working Capital required after deduction of Security 19.45 32.90 6.91 Deposit 4.85 1.02 2.87 Interest on Working Capital

The EDDD, requests the Hon'ble Commission to approve the interested on working capital computed for FY 15-16.

## 2.11 Return on Capital Employed

As per the Regulation 23 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, EDDD is entitled to a return on capital base of 3% on net block of approved assets. Accordingly, EDDD has computed the Return on capital base at 3% of the net block at the beginning of FY 2015-16.

The return on capital base as computed for FY 2015-16 is as shown below:

Table 10: Return on Equity for FY 15-16

			(Rs. Crore.)
Particulars	FY 15-16	FY 15-16	FY 15-16
	Approved (31st March, 2015)	Approved (6th April, 2016)	Actual
Return on Capital Base	7.65	7.46	7.46

The EDDD, requests the Hon'ble Commission to approve the return on capital base computed for FY 15-16.

#### 2.12 Non Tariff Income

0

मन्यमव जयते

DAMAN

The actual Non-Tariff Income of EDDD for FY 15-16 was Rs. 18.28 Crore as against Rs. 19.02 Crore approved by the Hon'ble Commission. The non tariff income includes meter rent of Rs. 10.09 Crores; Delayed Payment Charges of Rs. 11.19 Crores and Miscellaneous income of Rs. 5.99 Crores (including interest income of Rs. 2.57 Crores).

Page 21

The following table presents and approved and actual Non Tariff Income of EDDD for the approval of the Hon'ble Commission.

Table 11: Non Tariff Income for FY 15-16

			(Rs. Crore.)
Particulars	FY 15-16	FY 15-16	FY 15-16
	Approved (31st March, 2015)	Approved (6th April, 2016)	Actual
Non tariff Income	12.16	19.02	18.28

The EDDD, requests the Hon'ble Commission to approve the actual Non Tariff Income for FY 15-16.

### 2.13 Aggregate Revenue Requirement for FY 15-16

Based on above expenses, table below summarizes actual Aggregate Revenue Requirement for FY 15-16 for EDDD vis-à-vis the ARR approved by the Hon'ble Commission in the previous two Tariff Orders.

Table 12: Aggregate Revenue Requirement for FY 15-16

	FV4F 46	FV4F 4C	(Rs. Crore.)
Particulars	FY 15-16 Approved (31st March, 2015)	FY 15-16 Approved (6th April, 2016)	FY 15-16 Actual
Power Purchase Cost	769.90	838.03	699.71
O&M Expense	25.30	28.83	31.08
Depreciation	21.88	19.79	19.28
Interest Cost on Long-term Capital Loans	14.49	12.17	14.87
Interest on Working Capital Loans	2.87	4.85	1.02
Return on Equity	7.65	7.46	7.46
Provision for Bad Debt	0.00	0.00	0.00
Interest on security deposit	0.00	3.34	3.45
Less:			
Non-Tariff Income	12.16	19.02	18.28
Annual Revenue Requirement	829.93	895.45	758.59

The EDDD, requests the Hon'ble Commission to approve the ARR computed for FY 15-16





#### 2.14 Revenue for FY 15-16

During the FY 15-16, EDDD's actual revenue amounted to Rs. 782.51 Crore (including, FPPCA of Rs. -8.94 Crore, Open Access charges of Rs. 24.49 Crore, UI charges of Rs. 3.13 Crore) as against Rs. 826.36 Crore and Rs. 847.41 Crore as approved vide its Tariff Order dated 31st March, 2015 and 6th April, 2016 respectively by the Hon'ble Commission.

Table 13: Revenue for FY 15-16

		(R	s. Crore.)
Particulars i	FY 15-16 Approved (31st March, 2015)	FY 15-16 Approved (6th April, 2016)	FY 15-16 Actual
Revenue from sale of power	826.36	847.41	779.39
Revenue from Surplus Power Sale	0.00	9.77	3.13
Total revenue	826.36	857.18	782.51

### 2.15 Revenue (Gap) / Surplus for FY 15-16

The Hon'ble Commission in Order dated 31st March, 2015 has approved a total Aggregate Revenue Requirement (ARR) of Rs. 829.93 Crore for FY 15-16. Further, the Commission has computed the revised ARR for FY 15-16 in the Order dated and 6th April, 2016 of Rs. 895.45 Crore. Based on the annual accounts for FY 15-16 and the actual expenses incurred by the EDDD, the revised ARR for FY 2015-16 has been arrived at Rs. 758.59 Crore.

This revised ARR is compared against the actual income highlighted in the previous section under various heads. Revenue realized from the existing tariff of Rs. 779.39 Crore and revenue from sale of surplus energy of Rs. 3.13 Crore is summing up to Rs. 782.51 Crore. Accordingly, total revenue surplus of EDDD for FY 15-16 is computed at Rs. 23.92 Crore as depicted in the Table below:

Table 14: Revenue (Gap)/surplus for FY 15-16

		(Rs. Crore.)
Particulars	FY 15-16 Approved (6th April, 2016)	FY 15-16 Actual
Annual Revenue Requirement	895.45	758.59
Revenue from sale of power	847.41	779.39
Revenue from Surplus Power Sale	9.77	3.13
Revenue (Gap)/Surplus	(38.27)	23.92
Previous Years' (Gap)/Surplus Carried Over	134.92	134.92
Carrying Cost	19.90	0.00

Page 23

Particulars	FY 15-16	FY 15-16
	Approved (6th April, 2016)	Actual
Net Revenue (Gap)/surplus	116.55	158.84

EDDD requests the Hon'ble Commission to approve afore-mentioned revenue surplus for FY 15-16.



# Chapter 3: Review for the FY 2016-17

The review of aggregate revenue requirement for FY 16-17 is based on 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 actual data for six months and revised estimates for the remaining six months of FY 16-17. EDDD analysis in respect of items given below is discussed in the following paras:

- a. Category wise Energy Sales & Revenues at existing tariffs;
- b. T&D Losses:
- c. Energy Requirement;
- d. Determination of Aggregate Revenue Requirement (ARR) by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Admin & General Cost
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
    - ix. Provision for bad & doubtful debts
    - x. Return on Equity
    - xi. Income Tax
  - xii. Non-Tariff Income
- e. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap.

## 3.1 Energy Sales

Based on the actual retail sales to various consumers for the first six months an revised estimates for the remaining six months, EDDD has estimated the total retail energy sold for FY 16-17 as shown in the Table below:



Page 25

Table 15: Category wise sales for FY 16-17 (Revised Estimate)

Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Domestic	99.49	103.12
LIG/ Kutir Jyoti	0.10	0.10
Commercial	47.69	47.80
Agriculture	2.53	2.59
LT Industry	166.19	164.83
HT/EHT Industry	1469.52	1,423.20
Public Lighting	11.11	6.72
Public Water Works	3.83	2.86
Temp. Supply	0.00	1.56
Total Sales	1,800.46	1,752.78

As can be seen, EDDD's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 81%. The revised estimates of energy sales for the FY 2016-17 is 1752.78 MUs as against 1800.46 MUs approved by the Hon'ble Commission in the Tariff Order dated 6th April, 2016.

### 3.2 Distribution loss for FY 16-17

EDDD has considered the distribution losses of 8.50% for FY 16-17, the same as approved by the Hon'ble Commission in its last Tariff Order.

Table 16: Distribution losses for FY 16-17

Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Distribution Loss	8.50%	8.50%

## 3.3 Energy Requirement of the System

The following Table depicts the energy requirement of the EDDD for FY 16-17.

Table 17: Energy Requirement of the System

Particulars	FY 16-17 Approved (6th	(MU) FY 16-17 RE
Sales	April, 2016) 1,800.46	1,752.78
Page 26		
मन्त्रमय जयतं हो		

Particulars	FY 16-17	FY 16-17	
	Approved (6th April, 2016)	RE	
Open Access Sales	411.09	436.86	
Less: Energy Savings	(0.35)	(0.35)	
Total Sales	2,211.20	2,189.29	
Add: Losses	205.41	203.38	
T&D Losses	8.50%	8.50%	
Energy Required at Periphery	2,416.61	2,392.67	
Add: Sales to common pool consumer	103.24	3.99	
Total Energy Required at Periphery	2,519.85	2,396.66	
Transmission loss	79.34	91.05	
Transmission loss(%)	3.66%	3.66%	
Total Energy to be purchased	2,599.19	2,487.71	
Power Purchase from other sources	2,167.82	2,043.57	
Open Access Purchase	431.37	444.14	

## 3.4 Energy Availability and power purchase cost

EDDD has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The EDDD for the purpose of estimation of the power availability during FY 16-17 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Renewable energy sources Solar and Non-Solar
- Other market sources



Page 27

The Petitioner has allocation from Western as well as Eastern region from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawal from the Grid (UI).

For projecting of the energy availability for FY 16-17, six months actual power purchase has been considered. For projection of remaining six months of power purchase for FY 16-17, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no's. WRPC/Comml-I/6/Alloc/2016/1615 dated 10.10.2016 of Western Regional Power Committee. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

Table 18: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	(%)
NTPC Stations			
KSTPP	2,100	49	2.31%
KSTPP-III	500	6	1.20%
VSTPP-I	1,260	13	1.06%
VSTPP-II	1,000	9	0.93%
VSTPP- III	1,000	11	1.13%
VSTPP- IV	500	13	2.54%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC)	500	70	14.00%
Sipat-I	1,980	25	1.29%
Sipat-II	1,000	10	1.00%
MSTPS-I	500	13	2.54%
VSTPS Vive Engin	500	8	1.66%
Subtotal	11654		

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	Allocation (%)  0.13%  1.89%  1.18%
		291	
Eastern Region			
KHSTPP-II	1000	1.30	0.13%
Subtotal	1000	1.30	
NPCIL			11112
KAPPS	440	9.17	1.89%
TAPP 3&4	1080	12.77	1.18%
Subtotal	1520	22.94	
Others			
Ratnagiri	1967	38	1.93%
Subtotal	1967	38	
Grand Total	16141	352.18	

Based on the actual power purchase cost of the first six months of FY 16-17 and the remaining six months projection, the revised estimated power purchase cost for FY 16-17 is presented in the following Table:

Table 19: Revised estimated Power Purchase cost for FY 16-17

(Rs. Crore)

					(	
Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
NTPC Stations	400000000000000000000000000000000000000		STORES AND AND LINE OF THE OWNER.			
KSTPP	358.44	17.59	56.85	-0.84	73.60	2.05
KSTPP-III	45.79	6.29	7.40	0.86	14.55	3.18
VSTPP-I	93.31	5.62	17.10	0.58	23.29	2.50
VSTPP-II	59.45	3.72	10.48	0.48	14.68	2.47
VSTPP- III	83.49	8.45	14.50	4.30	27.25	3.26
VSTPP- IV	94.89	13.28	16.61	-0.06	29.83	3.14
VSTPS-V	61.31	8.36	10.60	0.58	19.55	3.19
KAWAS	101.10	16.46	27.08	-0.55	42.99	4.25
IGPP	140.97	20.79	50.88	-1.04	70.63	5.01
Bhilai Unit-I &II(NTPC)	495.94	89.16	77.25	-8.96	157.46	3.17
Sipat-I	9/, 171.48	23.90	23.86	1.99	49.76	2.90
Sipat-II	67,38	8.60	9.63	2.95	21.17	3.14



Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
MSTPS-I	34.96	16.50	9.08	-0.99	24.59	7.03
Subtotal	1808.49	238.73	331.31	(0.69)	569.35	3.15
Eastern Region						
KHSTPP-II	11.05	1.55	2.47	-0.01	4.00	3.62
Subtotal	11.05	1.55	2.47	(0.01)	4.00	3.62
NPCIL						
KAPPS	0.00	0.00	0.00	0.00	0.00	0.00
TAPP 3&4	83.15	0.00	25.22	0.00	25.22	3.03
Subtotal	83.15	0.00	25.22	0.00	25.22	3.03
Others						
Ratnagiti	9.03	26.30	1.72	0.11	28.14	31.14
Subtotal	9.03	26.30	1.72	0.11	28.14	31.14
Power purchase from Other Sources						
Power purchase from						
Indian E. Exchange	70.00	0.00	17.50	0.00	17.50	2.50
UI	0.00	0.00	0.00	0.00	0.00	0.00
Solar	6.56	4.20	0.00	0.00	4.20	6.40
Non Solar (Exchange)	55.28	2.00	25.98	0.00	27.98	5.06
Subtotal	131.84	6.20	43.48	0.00	49.68	3.77
Misc. Arrears						
NTPC Rebate						
Gross Power Purchase	2043.57	272.78	404.20	(0.58)	676.40	3.31
External Losses	70.28					
Total Power Purchase	1973.29	272.78	404.20	(0.58)	676.40	3.43
PGCIL CHARGES					68.41	
WRLDC					0.47	
MSTCL					3.93	
REC					4.06	
Grand Total of Charges - Net	1973.29				753.27	3.82

Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2016.

Power purchase arrear for the remaining six months has been considered as nil as EDDD has no prior information of arrear bills from the generators and transmission companies.

The EDDD has considered Rs. 25.00 Crore fixed charges received from RGGPL in the power purchase cost for the FY 2016-17 as the same was billed to EDDD



पत्यमय जयते

DAMAN

during the FY 2015-16 but was not paid to the RGGPL as the matter is sub judice. The EDDD has considered a provision for the same in the power purchase cost of the FY 2016-17.

For FY 16-17, till September, 2016 the EDDD has procured 3.28 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 3.28 MU of solar power from its own generation and will purchase a further 12 MUs as solar certificates to meet its solar obligation till FY 2016-17. EDDD purchased 57.15 MU of solar certificates and procured 4.42 MUs of solar energy from own generation during the FY 2015-16 as part of its obligation to meet the total backlog of solar RPO till FY 2015-16.

During the first six months of FY 2016-17, the EDDD purchased 5.28 MUs of non solar energy from HPSEBL and purchased 13.33 MUs through non solar certificates. To meet its non solar obligation for the FY 2016-17, the EDDD will purchase 50 MUs of non solar energy during the remaining six months of FY 2016-17. During the FY 2015-16 the EDDD purchased 108.23 MUs through Renewable Energy Certificates and 7.13 MUs of non solar energy from HPSEBL to meet its RPO target.

### 3.5 Operation & Maintenance Costs

The approved and revised estimated O&M cost for FY 16-17 is shown in the following Table:

Table 20: O&M Expense for FY 16-17

(Rs. Crore)

Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Employee Cost	11.19	12.59
R&M	11.98	13.01
A&G	4.99	6.34
O&M Expenses	28.16	31.93



The revision on the O&M cost for FY 15-16 is mainly on escalation in R&M and A&G expenses.

## 3.6 Capital Expenditure Plan

EDDD has considered the capital expenditure and capitalization at the same level as approved by the Hon'ble Commission for the FY 2016-17 in its MYT Order dated 6<sup>th</sup> April, 2016. The EDDD requests the Hon'ble Commission to approve the capital expenditure against the scheme as submitted herewith.

A summary of the capital expenditure and capitalization for FY 16-17 vis-à-vis approved by the Commission is summarized in Table below:

Table 21: Capital Expenditure & Capitalization for FY 16-17

(Rs. Crore)

Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Capital Expenditure	71.98	71.98
Capitalisation	54.70	54.70

#### 3.7 Gross Fixed Assets

The Commission in its last Tariff Order has approved the opening GFA, addition of assets and closing GFA for FY 16-17 at Rs. 404.41 Crore, Rs. 54.70 Crore and Rs. 459.11 Crore respectively.

EDDD had Opening Gross Fixed Assets (GFA) of Rs. 387.13 Crore in FY 15-16. EDDD has further added assets worth Rs. 62.08 Crore during FY 15-16. The closing GFA by the end of FY 15-16 stands at Rs.449.21 Crore.

Based on the capital expenditure and capitalization estimated above, assets amounting to Rs. 54.70 Crore have been estimated to be capitalized during FY 16-17.

A summary of the Opening and Closing GFA and capitalization for FY 16-17 vis-à-vis approved by the Commission has been summarized in Table below:



Table 22: Opening and Closing GFA for FY 16-17

(Rs. Crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2016-17(Approved)	404.41	54.70	459.11
FY 2016-17(RE)	449.21	54.70	503.91

### 3.8 Depreciation

Depreciation is charged on the basis of straight-line method, on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.

Based on the CERC norms, EDDD has applied the following depreciation rates as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014.

Table 23: Depreciation rate specified by CERC

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 16-17 is 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 16-17. The Table below summarizes the asset-wise depreciation vis-à-vis approved by the Commission and computed by EDDD:

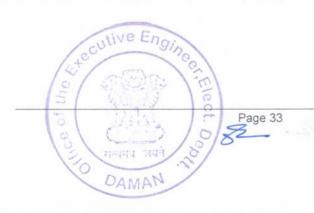


Table 24: Depreciation for FY 16-17

(Rs. Crore)

Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Opening GFA	404.41	449.21
Addition during the year	54.70	54.70
Closing GFA	459.11	503.91
Average GFA	431.76	476.56
Depreciation during the year	21.69	23.73

#### 3.9 Interest & Financial Costs

# 3.9.1 Interest on Long-term / Capital Loans

Assets capitalized during the FY 2016-17 have been considered based on normative debt-equity ratio of 70:30 as per the as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.

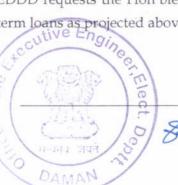
Interest rate of 14.45% has been considered for computation of interest cost for long-term loans which is similar to the prevailing SBI Prime Lending Rate. The normative interest on long-term/capital loans against approved by the Commission in the Tariff Order dated 6<sup>th</sup> April, 2016 as against the revised estimates is shown in the Table below:

Table 25: Interest on Long-term/Capital Loans for FY 16-17

(Rs. Crore)

Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Opening Loan	87.07	118.30
Loan for additional Capex (70:30 debt-equity)	38.29	38.29
Loan Repayment (equal to depreciation)	21.69	23.73
Closing Loan	103.67	132.86
Interest Cost on Avg. Loans	13.40	18.52

EDDD requests the Hon'ble Commission to approve the interest cost on long-term loans as projected above.



## 3.9.2 Interest on Working Capital Borrowings

EDDD has computed the Interest on Working Capital for the Control Period based on normative basis as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.

The working capital requirement for the Control Period has been computed considering the following parameters:

- a. Receivables of two months of billing
- b. Less power purchase cost of one month
- c. Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit
- d. Inventory for two months based on annual requirement for previous year

A rate of interest of 14.45% has been considered on the working capital requirement, being the SBI Prime Lending Rate as on 1st April of the year. This is in line with the JERC (Multi Year Distribution Tariff) Regulations, 2014 which states that "The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year."

The rate of interest of 14.45% has been considered for FY 16-17 on the working capital requirement as approved by the Hon'ble Commission in its last Tariff Order.

The normative interest on working capital for FY 16-17 considering the above methodology is summarized in the Table below:

Table 26: Interest on Working Capital for FY 16-17

(Rs Crore)

Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Receivables of two months of billing	150.07	135.14
Less power purchase cost of one month	80.35	62.77
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.34	53.99



Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Inventory for two months based on annual requirement for previous year	0.69	0.96
Total Working Capital requirement	31.07	19.33
Interest on Working Capital	2.89	2.85

### 3.10 Return on Equity

As per the JERC (Multi Year Distribution Tariff) Regulations, 2014, EDDD is entitled for a Return on Equity (RoE).

Return on equity has been computed on the actual paid up equity. The rate of return has been taken as 16% as per the MYT Regulations. Accordingly, the 16% post tax return on equity computed for FY 2016-17 is given in the Table below:

Table 27: Return on Equity for FY 16-17

(Rs. Crore)

Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Return on Equity	8.00	7.17

The EDDD, requests the Hon'ble Commission to approve the return on capital base computed for FY 16-17.

### 3.11 Interest on consumer security deposits

The Hon'ble Commission in its last Tariff Order has approved Rs. 3.05 Crore as interest payable on consumer security deposits. EDDD has made a provision to pay Rs. 3.45 Crore as interest on consumer security deposits in FY 16-17.

#### 3.12 Non-Tariff & Other Income

For estimating the non-tariff income for FY 16-17, an increase of 5% p.a. has been considered over the actual non-tariff income of FY 15-16 apart from the



Interest on Fixed Deposits & Others. Details of the non-tariff income is provided in table below:

Table 28: Non-tariff Income for FY 16-17

Rs. Crore)

Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Non tariff Income	19.97	19.14

### 3.13 Aggregate Revenue Requirement

The following Table summarizes EDDD's Aggregate Revenue Requirement for FY 16-17 against approved by the Hon'ble Commission in the Tariff Order  $6^{th}$  April, 2016.

Table 29: Aggregate Revenue Requirement for FY 16-17

(Rs. Crore)

		(
Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Power Purchase Cost	964.22	753.27
O&M Expense	28.16	31.93
Depreciation	21.69	23.73
Interest Cost on Long-term Capital Loans	13.40	18.52
Interest on Working Capital Loans	2.89	2.85
Return on Equity	8.00	7.17
Provision for Bad Debt	0.00	0.00
Interest on security deposit	3.05	3.45
Total	1,041.41	840.93
Less:		
Non-Tariff Income	19.97	19.14
Annual Revenue Requirement	1,021.44	821.79

### 3.14 Revenue from Existing Tariff

DAMAN

Revenue from sale of power for FY 16-17 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Daman and Diu.



Revenue from sale of power at existing tariff is estimated to be Rs. 810.81 Crore in FY 16-17, as shown in the following Table. The estimated revenue for FY 16-17 is based on the six month actual revenue at the exiting tariff (including FPPCA). The revenue for remaining six months of FY 16-17 has been computed based on the retail tariff notified by the Commission in the Tariff Order for FY 16-17 dated 6th April, 2016. The fuel purchase adjustment surcharge approved by the Hon'ble Commission is being levied to all the consumer categories except Domestic, LIG and Agriculture consumers.

The Table below summarizes the revenue from sale of power at existing tariff for FY 16-17:

Table 30: Revenue from Sale of Power at Existing Tariff for FY 16-17

(Rs. Crore

Particulars	FY 16-17	FY 16-17	
	Approved (6th April, 2016)	RE	
Revenue from sale of power	900.54	810.81	
Revenue from Open access	13.15	13.15	
Revenue from Surplus Power Sale	30.97	0.40	
Total revenue	944.66	824.36	

### 3.15 Coverage of Revenue Gap

Revenue from sale of power within EDDD is determined in the previous Table.

The following Table summarizes the Revenue surplus at existing tariff at Rs. 2.57 Crore for FY 16-17.

Table 31: Revenue Gap/Surplus for FY 16-17

(Rs. Crore)

Particulars	FY 16-17 Approved (6th April, 2016)	FY 16-17 RE
Annual Revenue Requirement	1021.44	821.79
Revenue from sale of power	900.54	810.81
Revenue from Open Access	13.15	13.15
Revenue from Surplus Power Sale	30.97	0.40
Revenue (Gap)/surplus	(76.78)	2.57
Previous Years (Gap)/Surplus Carried Over	116.55	158.84
Carrying Cost	10.84	0.00



Particulars	FY 16-17	FY 16-17
	Approved (6th April, 2016)	RE
Net Revenue (Gap)/surplus	50.61	161.42



# Chapter 4: ARR for the FY 2017-18

EDDD is submitting its ARR for the FY 2017-18 broadly on the basis of the principles outlined in MYT Tariff Regulations notified by JERC. EDDD has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for the FY 2017-18.

The following sections explain in detail the basis and forecasts of the following elements for the FY 2017-18.

- f. Category wise Energy Sales & Revenues at existing tariffs
- g. T&D Losses and Energy Requirement
- h. Determination of Aggregate Revenue Requirement by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Administration & General Expenses
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
  - ix. Provision for bad & doubtful debts
  - x. Return on Equity
  - xi. Non-Tariff Income
- Determination of Gap between Revenue & Costs and the arrangements to cover the revenue gap for the FY 2017-18.

#### 4.1 Load Growth

1. The Table given below summarizes the growth in sanctioned load over the past 4 years. The HT Industrial category has registered a load growth of 7.12% over this period. Overall growth for the UT has been 6.85%.



795

729,544

795

28

758,295

664

664,745

Works

Total

Temporary

Table 32: Past Year's Load Growth

(kVA) FY 14-15 FY 15-16 Consumer FY 11-12 FY 12-13 FY 13-14 Category kVA Actual Actual Actual Actual Actual Domestic 55,080 55,991 1,17,161 119557 55,440 19,322 Commercial 35,214 18.180 17,654 19761 Agriculture 2,252 3,617 3672 2,065 2,512 1,00,284 LT Industry 97,780 107471 94,901 96,818 HT/EHT 4,84,208 369,685 483,024 488,495 505321 Industry Public 1.624 1.919 1.649 1,657 1690 Lighting Public Water

2. As can be seen in the table given above the commercial is showing a negative load growth. In the commercial category, earlier separate connections were released for the factory lighting till FY 2011-12. However, due to problems faced by the department during billing of such connections from FY 2013-14 such connections were disconnected and presently only one connection is released for one premises.

654

657,927

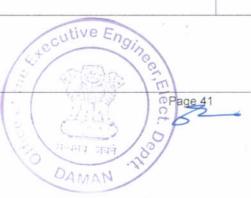
675

559,604

3. The projected load for the FY 2016-17 and FY 2017-18 for all the categories has been given in the table below:

Table 33: Projected load growth during FY 2016-17 and FY 2017-18

(kVA) FY 17-18 **Consumer Category** FY 16-17 RE Projected Domestic 1,31,472 1,32,124 21,984 21,811 Commercial 4,887 5,391 Agriculture 1,14,808 1,16,537 LT Industry 6,51,717 7,49,158 HT/EHT Industry 1,869 1,884 Public Lighting 898 905 Public Water Works 9,27,464 10,27,983 Total



 The same is in line with the connected load approved by the Hon'ble Commission for the various categories in the Tariff Order for the MYT Control Period FY 2016-17 to FY 2018-19 dated 6th April, 2016.

#### 4.2 Consumer Growth

 The Table 35 below summarizes the category wise growth in consumers over the past 4 years.

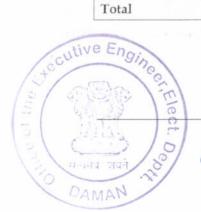
Table 34: Past Year's Consumer Growth

Consumer Category	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
	Actual	Actual	Actual	Actual	Actual
Domestic	46023	42,507.0	43,962	45,298	46,420
Commercial	9236	8,158.0	7,972	8,037	8,209
Agriculture	1,157	1,173.0	1,191	1,195	1,243
LT Industry	1,765	1,926.0	1,799	1,755	1,817
HT/EHT Industry	827	801.0	798	786	784
Public Lighting	188	369.0	339	524	529
Public Water Works	77	77.0	71	109	125
Temporary	-	-	_	-	11
Total	59,273.0	55,011.0	56,132	57,704	59,138

2. The projected consumer growth for the FY 2016-17 and FY 2017-18 has been given in the table below:

Table 35: Projected consumer growth during the FY 2016-17 and FY 2017-18

Consumer Category	FY 16-17	FY 17-18
	RE	Projected
Domestic	47,693	48,937
Commercial	8,452	8,668
Agriculture	1,246	1,272
LT Industry	1,789	1,806
HT/EHT Industry	798	804
Public Lighting	544	555
Public Water Works	109	109
Total	60,631	62,151



 The same is in line with the no. of consumers approved by the Hon'ble Commission for the various categories in the Tariff Order for the MYT Control Period FY 2016-17 to FY 2018-19 dated 6th April, 2016.

### 4.3 Energy Sales Growth

- 1. EDDD has forecasted the energy sales taking into account the past trends in the number of consumers, connected load and energy sales customer category-wise. Actual data available for the period from FY 2010-11 to FY 2015-16 has been considered to arrive at the Compound Annual Growth Rate (CAGR) for each of the customer categories. As the data available for FY 2016-17 pertains only to the first 6 months of the year, the figures for FY 2016-17 were not considered for arriving at the growth rates. However, the figures available for 6 months of FY 2016-17 have been annualized, in line with the past trends to arrive at sales estimates for FY 2016-17. The figures for FY 2016-17 have been further used as the base for forecasting the values for the FY 2017-18.
- 2. Table 36 below presents the category-wise energy sales for the past 6 years.

Table 36: Past Years' Energy Sales Growth

					(N	(U)
Consumer Category	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
0 2	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	64.20	73.85	77.79	84.16	83.06	88.20
LIG/ Kutir Jyoti	0.10	0.10	0.04	0.08	0.08	0.09
Commercial	29.30	33.83	38.74	46.75	41.57	49.93
Agriculture	2.60	2.70	4.22	3.05	2.30	2.46
LT Industry	151.00	156.84	161.21	169.59	153.70	160.54
HT/EHT Industry	1,402.00	1,496.83	1,572.81	1,441.53	1,327.84	1,379.41
Public Lighting	4.40	5.59	6.51	7.06	8.80	7.43
Public Water Works	0.90	0.92	1.12	1.20	3.28	2.68
Temp. Supply	0.70	0.51	0.51	0.67	1.09	1.23
Total Sales	1,655.20	1,771.17	1,862.95	1,754.08	1,621.72	1,691.98

The EDDD is of the view 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. EDDD, therefore for projecting the

Page 43

सम्ब ज्ञान

AMAN

category-wise consumption for the FY 2017-18 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

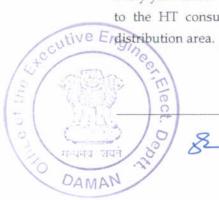
- 4. The sales for the FY 2016-17 has been projected by considering the actual sales for the first six months of FY 2016-17 and estimating the sales of the remaining six months on the basis of the four year CAGR for the different consumer categories. EDDD would like to highlight that for estimating energy sales to various consumer categories for FY 16-17, previous years CAGRs have been considered as well as the new connections that are likely to be released by the EDDD in the remaining period of FY 16-17.
- The table given below summarizes the projections of category wise increase in energy sales over the FY 2017-18. As can be observed, the overall energy sales in UT of Daman & Diu are significantly dependent upon HT industrial consumption.
- EDDD submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 37: Projected Category wise Energy Sales for MYT Control Period

(MU) FY 16-17 FY 17-18 FY 17-18 Consumer Category RE Approved Projected MUs 108.89 110.34 103.12 Domestic LIG/ Kutir Jyoti 0.10 0.10 0.10 51.62 47.80 51.08 Commercial 2.59 2.72 Agriculture 2.65 168.95 164.83 172.82 LT Industry 1,480.13 HT/EHT Industry 1,423.20 1572.39 7.19 Public Lighting 6.72 12.49 4.14 2.89 Public Water Works 2.86 Temp. Supply 1.56 0.00 1.56 Total Sales 1,752.78 1,924.56 1,825.51

#### 4.4 T&D Loss Reduction

 The EDDD would like to submit that the system improvement works executed every year under the planned schemes as well as increase in energy sales quantum to the HT consumers have resulted in the reduction of T & D losses in its



2. EDDD has achieved T&D loss level of 8.87% for the FY 2015-16. Reduction of T&D below 10% involves significant amount of capital expenditure and it is EDDD's endeavor to bring the T&D loss level further down in the subsequent years. Further, the Hon'ble Commission had set a T&D loss level target of 8.40% for the FY 2017-18 in the Tariff Order dated 6th April, 2016. The EDDD proposes to reduce the T&D losses to 8.40% for FY 17-18. The loss reduction trajectory for the Control Period is as given in the table below:

Table 38: Proposed T&D Loss for FY 2017-18

Particulars	FY 17-18	FY 17-18
	Approved (6th April, 2016)	RE
Distribution Loss	8.40%	8.40%

3. The EDDD submits to the Commission to approve the T&D losses submitted herein.

### 4.5 Energy Requirement of the System

1. Based on the proposed loss levels and projected energy requirement and availability within the state, the Energy Balance is presented in the following table:

Table 39: Energy Requirement of the System

(MU) **Particulars** FY 17-18 FY 17-18 Approved (6th RE April, 2016) Sales 1,924.56 1,825.51 Open Access Sales 431.64 458.71 Less: Energy Savings (0.35)(0.35)Total Sales 2,355.85 2,283.86 Add: Losses 216.04 209.44 T&D Losses 8.40% 8.40% Energy Required at Periphery 2,571.89 2,493.30 Add: Sales to common pool consumer 142.18 19.57 Total Energy Required at Periphery 2,714.07 2,512.87 Transmission loss 85.90 95.47 Transmission loss(%) 3.66% 3.66% Total Energy to be purchased 2,799.98 2,608.34 Power Purchase from other sources 2,347.04 2,141.99 Open Access Purchase 452.94 466.35



### 4.6 Energy Availability

- Daman & Diu being a Union Territory with no generating stations of its own, mainly relies on the firm and infirm allocations of power from Central Generating Stations like Korba, Vindyachal, Kahalgaon, Kawas, Tarapur and Kakrapar atomic power stations of NPCIL etc. to meet its energy requirement.
- The EDDD for the purpose of estimation of the power availability during FY 17-18 has considered the following sources of power:
  - NTPC Western Region Generating Stations;
  - NTPC Eastern Region Generating Stations;
  - NSPCL (NTPC-SAIL Power Company Ltd);
  - Nuclear Power Corporation of India Limited;
  - Private sector power generating entities;
  - Renewable energy sources (solar and non-solar); and
  - · Other Arrangements, in case of un-scheduled deficit of power
- 3. The Petitioner has allocation from Western as well as Eastern region power generating stations including coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on the short term arrangement of power.
- 4. For projecting the energy availability for FY 16-17, actual power purchase for the first six months of FY 16-17 has been considered. For projection of energy availability for the FY 2017-18, firm and infirm allocation from various generating stations has been considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

#### 4.6.1 Power Purchase

DAMAN

 Daman & Diu has firm and infirm allocations in Central Sector Generating Stations of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), NTPC Sail Power Company Ltd (NSPCL) and Ratnagiri Gas and Power Private Limited (RGPPL).

Since first six months of FY 16-17 have already elapsed, the actual power purchase data for the same is available with the department. Therefore, the power



availability for remaining six months i.e. October 2016 to March 2017 has been estimated based on the revised allocation specified in the notification no's. WRPC/Comml-I/6/Alloc/2016/1615 dated 10.10.2016 of Western Regional Power Committee. The energy allocation from various generating stations is summarized in table below:

Table 40: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation	
	MW	MW	(%)	
NTPC Stations				
KSTPP	2,100	49	2.31%	
KSTPP-III	500	6	1.20%	
VSTPP-I	1,260	13	1.06%	
VSTPP-II	1,000	9	0.93%	
VSTPP- III	1,000	11	1.13%	
VSTPP- IV	500	13	2.54%	
KAWAS	656	31	4.73%	
JGPP	657	31	4.77%	
Bhilai Unit-I &II(NTPC)	500	70	14.00%	
Sipat-I	1,980	25	1.29%	
Sipat-II	1,000	10	1.00%	
MSTPS-I	500	13	2.54%	
VSTPS-V	500	8	1.66%	
Subtotal	11654	291		
Eastern Region				
KHSTPP-II	1000	1.30	0.13%	
Subtotal	1000	1.30		
NPCIL				
KAPPS	440	9.17	1.89%	
TAPP 3&4	tive Engine 1080	12.77	1.18%	

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	(%)
Subtotal	1520	22.94	
Others			
Ratnagiri	1967	38	1.93%
Subtotal	1967	38	
Grand Total	16141	352.18	

- Actual power purchase in first six months of FY 16-17 and power allocation of 70 MW from NTPC-SAIL Bhilai power plant has been considered while estimating the power availability from this plant during FY 16-17.
- 4. Actual power purchase in first six months of FY 16-17 from Ratnagiri Gas Power Plant has been considered. Further, it is expected that EDDD will be getting power from Ratnagiri for the rest of the FY 2016-17 and therefore power purchase from the plant has been considered for the remaining six months of FY 2016-17.
- 5. For projecting the power availability for FY 2017-18, EDDD has considered average allocation of firm and infirm power from the western region generation stations (NTPC and NPCIL) of Western Regional Power Committee. For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account.
- Additionally, EDDD has 70 MW allocations from NSPCL Bhilai power stations.
   Energy availability from NSPCL Bhilai power stations for FY 17-18 has been considered by taking 70 MW allocation from the plant.
- 7. Power purchase quantum from the NTPC stations of the current year and FY 2017-18 has been calculated based on the installed capacity of each plant and by applying the average of previous four years (FY 12 to FY 15) PLF to calculate the plant-wise gross generation. For NSPCL, an average PLF of 90% has been considered.
- 8. For gas based generating stations i.e. Kawas (KGPP) and Gandhar (GGPP) weighted average PLF of FY 12-13, FY 2013-14 and FY 2014-15 have been taken into account.
- 9. Auxiliary consumption of 9% and 3% has been considered for estimating the gross generation from coal and gas based generating stations respectively.

- 10. Merit Order Dispatch: Further, the NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost has been projected. However the fixed charges have been approved for full allocation.
- 11. As per the RPO obligations the EDDD shall have to purchase 45.64 MUs of solar power and 76.67 MUs of non solar power during the FY 2017-18. The EDDD will try to meet the RPO targets by purchasing solar and non solar power through the exchange, procuring solar energy through own generation and by purchasing Renewable Energy Certificates.
- 12. For computing the power availability at the periphery, 3.66% weighted average external transmission losses have been applied on the gross power purchase for FY 2016-17 and FY 2017-18.
- 13. Table 41 below depicts the station wise power purchase for FY 2016-17 and FY 2017-18.

Table 41: Power Purchase Quantum

(MU)

		(MU)	
Source	FY 2016-17	FY 2017-18	
NTPC Stations	all the second of the second	在2000年被1900年的1900年 1900年	
KSTPP	358.44	344.37	
KSTPP-III	45.79	41.98	
VSTPP-I	93.31	93.30	
VSTPP-II	59.45	65.06	
VSTPP- III	83.49	79.05	
VSTPP- IV	94.89	88.96	
VSTPS-V	61.31	56.15	
KAWAS	101.10	159.68	
IGPP	140.97	177.72	
Bhilai Unit-I &II(NTPC)	495.94	494.41	
Sipat-I	171.48	149.04	
Sipat-II	67.38	58.42	
MSTPS-I	34.96	50.71	
Subtotal	1808.49	1858.86	
Eastern Region			
KHSTPP-II	11.05	7.24	
Subtotal	11.05	7.24	
NPCIL	THE REPORT OF A	detail and	
KAPPS	0.00	66.47	
TAPP 3&4	83.15	78.08	
KAPPS (III & IV)	0.00	0.00	
Subtotal	83.15	144.55	
Others utive Epo			
Romagio	9.03	9.03	
Subtotal	9.03	9.03	

Page 49

AMAN

Source	FY 2016-17	FY 2017-18
Power purchase from Other Sources		
Power purchase from Indian E. Exchange	70.00	31.64
UI	0.00	0.00
Solar	6.56	14.00
Non Solar (Exchange)	55.28	76.67
Subtotal	131.84	122.31
Misc. Arrears		
NTPC Rebate		
Gross Power Purchase	2043.57	2141.99
External Losses	70.28	73.92
Total Power Purchase	1973.29	2068.07

14. The Petitioner submits to the Commission to approve the Power Purchase level estimated in table above.

# 4.6.2 Energy Requirement & Availability

 Based on the data on estimated & projected sales and power purchase, an Energy Balance has been prepared to assess the T&D losses in FY 2017-18.

Table 42: Energy Balance

(MU)

Particulars	FY 17-18	FY 17-18
	Approved (6th April, 2016)	RE
Sales	1,924.56	1,825.51
Open Access Sales	431.64	458.71
Less: Energy Savings	(0.35)	(0.35)
Total Sales	2,355.85	2,283.86
Add: Losses	216.04	209.44
T&D Losses	8.40%	8.40%
Energy Required at Periphery	2,571.89	2,493.30
Add: Sales to common pool consumer	142.18	19.57
Total Energy Required at Periphery	2,714.07	2,512.87
Transmission loss	85.90	95.47
Transmission loss (%)	3.66%	3.66%
Total Energy to be purchased	2,799.98	2,608.34
Power Purchase from other sources	2,347.04	2,141.99
Open Access Purchase	452.94	466.35



DAMAN

#### 4.6.3 Power Purchase Cost

- 1. The cost of purchase from the central generating stations for FY 17-18 is estimated based on the following assumptions:
  - Fixed cost for the FY 2017-18 has been projected considering a 5% escalation over the estimated fixed cost for various stations for FY 16-17.
  - Variable cost for each NTPC generating stations for the FY 2017-18 has been projected considering the increase in the actual average variable cost per unit during FY 2016-17 over FY 2015-16.
  - The EDDD has projected other charges (tax, incentives, etc) for the FY 2017-18 at similar level as estimated for full year of FY 16-17.
  - For nuclear plants i.e. KAPP and TAPP single part tariff increase in the actual average variable cost per unit have been considered for projecting the power purchase cost for the FY 2017-18.
  - For power purchase from renewable energy sources, for the FY 2017-18, the EDDD has outsourced the maintenance cost of the solar plants to BHEL. For the purchase of solar and non solar power, the rate of Rs. 3.5/unit and Rs. 1.5/unit has been considered for the FY 2017-18.
- The Total Power Purchase cost from various sources for FY 17-18 is summarized in the Table below:

Table 43: Power Purchase Cost

(Rs. Crore.) All Per Units Fixed Variable Other Source Unit Charges Purchased Charges Charges Charges Total Cost NTPC Stations KSTPP 344.37 18.47 0.00 139.92 121.45 4.06 KSTPP-III 41.98 14.30 6.61 0.86 21.77 5.19 VSTPP-I 93.30 5.90 26.37 0.58 32.85 3.52 VSTPP-II 65.06 3.91 15.71 0.48 20.10 3.09 VSTPP-III 22.59 4.30 35.76 4.52 79.05 8.87 VSTPP-IV 88.96 13.94 26.63 0.00 40.57 4.56 VSTPS-V 56.15 8.78 13.19 0.58 22.55 4.02 17.28 KAWAS 38.88 0.00 56.16 3.52 159.68 **IGPP** 177.72 21.83 75.04 0.00 96.87 5.45 Bhilai Unit-I &II(NTPC) 2.77 494.41 93.62 43.43 0.00 137.06 Sipat-I 149.04 25.10 22.31 1.99 49.41 3.31 Sipat-II 58.42 9.03 9.35 2.95 21.32 3.65 17.32 MSTPS-I 50.71 25.37 5.00 8.05 0.00 Subtotal 1858.86 250.67 437.30 11.74 699.71 3.76 Eastern Region

Page 51

वमव जयन

DAMAN

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
KHSTPP-II	7.24	1.62	3.42	0.00	5.04	6.96
Subtotal	7.24	1.62	3.42	0.00	5.04	6.96
NPCIL						
KAPPS	66.47	0.00	12.62	0.00	12.62	1.90
TAPP 3&4	78.08	0.00	22.54	0.00	22.54	2.89
KAPPS (III & IV)	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	144.55	0.00	35.16	0.00	35.16	2.43
Others						
Ratnagiri	9.03	1.37	1.72	0.11	3.20	3.55
Subtotal	9.03	1.37	1.72	0.11	3.20	3.55
Power purchase from Other Sources						
Power purchase from Indian E. Exchange	31.64	0.00	7.91	0.00	7.91	2.50
UI	0.00	0.00		0.00	0.00	0.00
Solar	14.00	0.00	11.07	0.00	11.07	7.91
Non Solar (Exchange)	76.67	0.00	11.50	0.00	11.50	1.50
Subtotal	122.31	0.00	30.48	0.00	30.48	2.49
Misc. Arrears						
NTPC Rebate	FF HILL MEET			CS TO SEC		4-14-14
Gross Power Purchase	2141.99	253.66	508.08	11.85	773.60	3.61
External Losses	73.92					
Total Power Purchase	2068.07	253.66	508.08	11.85	773.60	3.74

#### 4.6.4 Transmission and Other Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. EDDD has a mix of firm and infirm capacity allocations from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Therefore, considering the changing capacity allocation, EDDD has estimated the transmission charges for FY 16-17 based on, an escalation of 5% over the actual transmission charges of FY 15-16. Further, EDDD has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission charges for ensuing year.

For projecting the PGCIL transmission charges for the FY 2017-18, an escalation of 10% over the estimated FY 16-17 transmission charges has been considered in view of the increase in transmission charges. Further, EDDD has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission til charges for ensuing year.

Table 44: Total Power Purchase Cost for FY 2017-18

(Rs. Crore.) **Particulars** FY 2017-18 Projected Gross Power Purchase Cost 773,60 PGCIL charges 75.25 WRLDC 0.47 MSTCL 4.12 REC 4.06 Total Power Purchase Cost (including Transmission Cost) 857.51

#### 4.7 Operation & Maintenance Costs

- 1. Operation and Maintenance expenses comprise of the following heads:
  - Employees Expenses which includes the basic pay, dearness pay, dearness allowances, house rent allowances, and other allowances paid to the staff;
  - Repair and Maintenance (R&M) Expenses, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
  - Administrative and General Expenses, which include all expenditure incurred in operating a business such as telephone charges, consultancy and regulatory fee etc.
- The methodology adopted by EDDD for projecting the values of each component of the O&M expense for FY 2017-18 has been explained in the following section.

#### 4.7.1 Employee Expense

1. The Employee expense estimated by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, medical expenses, leave travel allowances, honorarium, etc. But the Petitioner does not maintain cost related to leave salary contribution, pension and terminal benefits of the employee in the employee cost. Therefore, the Petitioner will claim these expenses relating to the employee cost at an appropriate time when the respective cost items become payable.

Page 53

मन्यमव जयन

DAMAN

- Based on the various expense head related to employee booked during six months of FY 16-17, EDDD has estimated the total employee cost for full year of FY 16-17 as Rs. 12.59 Crore. Salary expenses for the FY 2017-18 is estimated based on the average increase in the Wholesale Price Index (WPI) for immediately preceding three years. The average WPI for the last three years is 5.11%.
- 2. As per the MYT Regulations, 2014, the employees' expenses have been calculated as per the following formulae:

EMPn = (EMPb \* WPI inflation) + Provision

where:

EMPn: Employee expense for the year n

EMPb; including yearly increments of employees, bonus, promotion. VRS.

Employee expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Provision for expenses as necessitated by the licensee due to expansion of the consumer base, yearly increments of Employees, and any expected one-time expenses as such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief.

3. The average growth in the WPI for the last three years is 5.11%. Total employee cost of EDDD for the FY 2017-18 is as given in the table below:

Table 45: Employee Expenses

Employee Expenses FY 2017-18 FY 2017-18

Approved Projected

Employee Expenses 12.05 12.73

4. EDDD submits to the Hon'ble Commission to approve the employee costs as projected by the Petitioner.

#### 4.7.2 Repairs & Maintenance Expense

1. Repairs and maintenance expense comprise of expenses incurred by the Petitioner with regard to maintenance and upkeep of the transmission and distribution



system. Adequate R&M activities help in reduction of transmission and distribution losses and breakdowns in the system.

- 2. The actual R&M expense for FY 2015-16 is Rs. 12.60 Crore.
- 3. As per the JERC Tariff Regulations the R&M expenses shall be calculated as percentage (as per the norm defined) of Opening Gross Fixed Assets for the year governed by following formula:

R&Mn = Kb\* GFAn\* Inflation Index

where:

R&Mn: Repairs & Maintenance expense for nth year

GFAn: Opening Gross Fixed Assets for nth year

Kb: Percentage point as per the norm

GFA: Gross Fixed Assets at the beginning of the Financial Year

Inflation Index is CPI: WPI:: 60:40

CPI is Consumer Price Index issued by Govt. of India & these indices are for immediately preceding three years

WPI is whole sale price Index issued by Govt. of India & these indices are for immediately preceding three years

4. For projecting the R&M expense for the Control Period, the EDDD has considered the inflation index as 7.33% (CPI: WPI :: 60 : 40). Total & maintenance cost of EDDD for FY 17-18 is summarized in the table below:

Table 46: Repairs & Maintenance Expense

Repair & Maintenance Expense FY 2017-18 FY 2017-18

Approved Projected R&M Expenses 13.60 13.01

5. EDDD requests the Commission to approve the R&M expense without any disallowances as the same is necessary for proper maintenance and strengthening of the system and quality of supply in the region in order to ensure consumer satisfaction. Further, Commission should considered the fact that price of most of the basic commodities like iron, copper, zinc and cement used in the repairs and maintenance has increased tremendously over the last 5 years.



### 4.7.3 Administration & General Expense

- Administrative and General (A&G) expenses comprise of various expenses as given below:
  - Rent
  - Rates and taxes
  - Travel and conveyance expenses
  - · Consultancy and regulatory fees
  - Energy auditing fee and consumer indexing
  - Insurance and other administration expenses
- 2. The actual A&G expense for FY 15-16 is Rs. 6.03 Crore.
- 3. For projecting the A&G expenses for the Control Period the following formula has been used as given in the MYT Regulations:

A&Gn = (A&Gb \* WPI inflation) + Provision

where:

A&Gn: A&G expense for the year n A&Gb:

A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.

The A&G expenses projected for the FY 2017-18 have been given in the table below:

Table 47: A&G Expense

		(Rs. Crore)
A&G Expense	FY 2017-18	FY 2017-18
	Approved	Projected
A&G Expenses	5.38	6.66

4. The Regulatory & Consultancy expenses for the Control Period has been projected as per the existing agreements, contracts with the consultants and the best estimates for the future regulatory and consultancy works.

A&G costs without any disallowance.



### 3.7.4 Total Operation and Maintenance Expense

Based on the employee cost, R&M and A&G expense projected above, the total O&M expenditure for FY 17-18 is summarized in table below.

Table 48: Total O&M Expense

(Rs. Crore.)

Particulars	FY 17-18 Approved (6th April, 2016)	FY 17-18 Projected
Employee Cost	12.05	12.73
R&M	13.60	13.53
A&G	5.38	6.66
O&M Expenses	31.03	32.92

The EDDD requests the Hon'ble Commission to approve the O&M expense as projected above.

### 4.8 Capital Expenditure Plan

- As has been discussed above, the (EDDD) is engaged in the procurement, transmission and distribution of electricity to the various consumer categories in the Union Territory of Daman and Diu. Apart from the upcoming solar plants, it does not have its own power generation station and completely rely on the Central Sector Generating Stations (CSGS) in Western Region to meet its energy demand.
- 2. EDDD has considered the capital expenditure and capitalization at the same level as approved by the Hon'ble Commission for the FY 2017-18 in its MYT Order dated 6th April, 2016. The EDDD requests the Hon'ble Commission to approve the capital expenditure against the scheme as submitted herewith.
- A summary of the capital expenditure and capitalization for FY 17-18 vis-à-vis approved by the Commission is summarized in Table below:

Table 49: Capital Expenditure & Capitalization for FY 17-18

(Rs. Crore)

Particulars	FY 17-18	FY 17-18
	Approved (6th April, 2016)	Projected
Capital Expenditure	121.82	121.82
Capitalisation	101.88	101.88

#### 3.9 Gross Fixed Assets

- EDDD had Rs. 387.13 Crore of Opening Gross Fixed Assets (GFA) in FY 15-16. Assets amounting to Rs. 62.08 Crore have been added to the GFA during the FY 2015-16.
- Assets amounting to Rs. 54.70 Crore have been estimated to be added in the GFA during FY 16-17.
- 3. Similarly, based on the capital expenditure plan as detailed above, Rs. 101.88 Crore, is proposed to be capitalized during the FY 2017-18.
- 4. A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

Table 50: Opening and Closing GFA for the FY 2017-18

(Rs. Crore)

Particulars	KE UNIVERSE TO SEE STATE OF SECURITY OF SE	Additions during	Closing GFA	
Tarriculars	Opening GFA	the Year		
FY 2017-18(Approved)	459.11	101.88	560.99	
FY 2017-18(Projected)	503.91	101.88	605.80	

#### 3.10 Depreciation

DAMAN

- Depreciation is charged on the basis of straight-line method, on the GFA in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.
- Based on the CERC norms, EDDD has applied the following depreciation rates as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014.

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

Asset Category	Depreciation Rate %
Land	0.00%

- 3. Depreciation for the FY 17-18 is 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 2017-18. The EDDD would like to submit to the Hon'ble Commission that it has computed the depreciation based on the closing value of GFA for FY 2015-16 as given in the fixed asset register and the estimated capitalization for FY 16-17 and FY 2017-18.
- 4. Therefore the EDDD requests the Hon'ble Commission to approve the depreciation as given in the table below:

Table 51: Depreciation

(Rs. Crore)

Particulars	FY 17-18	FY 17-18	
	Approved (6th April, 2016)	Projected	
Opening GFA	459.11	503.91	
Addition during the year	101.88	101.88	
Closing GFA	560.99	605.80	
Average GFA	510.05	554.86	
Depreciation during the year	25.82	27.87	

#### 3.11 Interest & Finance Costs

### 3.11.1 Interest on Long-term / Capital Loans

- The entire capital expenditure of EDDD since its inception has been funded by the Central Government through budgetary support each year. Therefore, the department does not have any loan liabilities.
- 2. However, EDDD is now migrating from a Government owned utility to a commercial utility under the Electricity Act, 2003, it has come under the direction of the Joint Electricity Regulatory Commission. It has been assumed that EDDD would work as a separate commercial utility and therefore would be utilizing the debt facilities in the coming years.
- 3. Assets capitalized during the FY 2017-18 have been considered based on normative debt-equity ratio of 7030 as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.

4. 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. Details of the loan amounts and interest cost computed for FY 2017-18 is summarized in Table below:

Table 52: Total Interest on Long-term Loans

(Rs. Crore)

Particulars	FY 17-18	FY 17-18	
	Approved (6th April, 2016)	Projected	
Opening Loan	103.67	132.86	
Loan for additional Capex (70:30 debt-equity)	71.32	71.32	
Loan Repayment (equal to depreciation)	25.82	27.87	
Closing Loan	149.17	176.31	
Interest Cost on Avg. Loans	17.76	22.80	

5. The EDDD requests the Hon'ble Commission to approve the depreciation as given in the table above.

### 3.11.2 Interest on Working Capital Borrowings

- EDDD has computed the Interest on Working Capital for the FY 2017-18 based on normative basis as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.
- 2. The working capital requirement for the FY 2017-18 has been computed considering the following parameters:
  - a. Receivables of two months of billing
  - b. Less power purchase cost of one month
  - c. Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit
  - d. Inventory for two months based on annual requirement for previous year
- 3. A rate of interest of 14.75% has been considered on the working capital requirement, being the SBI Prime Lending Rate as on 1st April of the year.

  This is in line with the JERC (Multi Year Distribution Tariff) Regulations, 2014 which states that "The rate of interest on working capital shall be



न्यमंच जवनं

DAMAN

equal to the base rate for the State Bank of India on the 1st April of the relevant financial year."

4. The normative interest on working capital for the FY 2017-18 considering the above methodology is summarized in the Table below:

Table 53: Interest on Working Capital for the FY 2017-18

(Rs. Crore)

Particulars	FY 17-18 Approved (6th April, 2016)	FY 17-18 Projected
Receivables of two months of billing	161.80	140.60
Less power purchase cost of one month	87.25	71.46
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.34	53.99
Inventory for two months based on annual requirement for previous year	0.69	1.00
Total Working Capital requirement	35.90	16.16
Interest on Working Capital	3.34	2.38

5. The EDDD requests the Hon'ble Commission to approve the interest on working capital as given above.

### 3.12 Return on Capital Employed

- As per the JERC (Multi Year Distribution Tariff) Regulations, 2014, EDDD is entitled for a Return on Equity (RoE).
- 2. Return on equity has been computed on the actual paid up equity. The rate of return has been taken as 16% as per the MYT Regulations. Accordingly, the 16% post tax return on equity is given in the Table below:

Table 54: Proposed Return on Equity

(Rs. Crore)

Particulars	FY 17-18	FY 17-18
	Approved (6th April, 2016)	Projected
Return on Equity	12.89	12.06



#### 3.13 Non-Tariff & Other Income

- Non-tariff income includes meter rent/service line rentals, recovery for theft of power/malpractices, miscellaneous charges from consumers. Other income includes Interest on Staff loans & advances, Delayed payment charges from consumers, Interest on advances to suppliers/contractors, and Miscellaneous receipts.
- 2. For projecting the non-tariff income for the FY 2017-18, an increase of 5% p.a. has been considered over the estimated non-tariff income for FY 17-18. Details of the year wise non-tariff income is provided in table below:

Table 55: Non-tariff Income

Particulars

FY 17-18
Approved (6th
April, 2016)

Non tariff Income

(Rs. Crore)

FY 17-18
Projected

20.97
20.05

### 3.14 Aggregate Revenue Requirement

1. Table 56 summarizes EDDD's Aggregate Revenue Requirement for FY 17-18.

Table 56: Aggregate Revenue Requirement

(Rs. Crore) Particulars FY 17-18 FY 17-18 Approved (6th Projected April, 2016) 1,046.99 857.51 Power Purchase Cost 31.03 32.92 O&M Expense 25.82 27.87 Depreciation Interest Cost on Long-term Capital Loans 17.76 22.80 2.38 Interest on Working Capital Loans 3.34 Return on Equity 12.89 12.06 0.00 0.00 Provision for Bad Debt Interest on security deposit 3.05 3.45 1,140.88 958.99 Total Less: e F 20.97 20.05



DAMAN

Particulars	FY 17-18	FY 17-18
	Approved (6th April, 2016)	Projected
Annual Revenue Requirement	1,119.91	938.95

### 3.15 Revenue at Existing Tariff

- Revenue from sale of power for FY 17-18 is determined based on the energy sales estimated in Table 37 and category wise tariff prevalent in the UT of Daman & Diu.
- EDDD has computed the revenue for the Control Period based on the tariff notified by the Hon'ble Commission in the Tariff Order for the MYT Control Period FY 2016-17 to FY 2018-19 dated 6th April, 2016.
- The fuel purchase adjustment surcharge approved by the Hon'ble Commission is also being levied to all the consumer categories except the Domestic and Agriculture consumers.
- 4. The table below summarizes the revenue from sale of power at existing tariff for FY 2017-18:

Table 57: Revenue from Sale of Power at Existing Tariff

(Rs. Crore.) Revenue @ Existing Tariff FY 17-18 FY 17-18 Projected Approved (Rs Crore) 21.580 Domestic 25.95 0.001 LIG 0.01 16.60 18.053 Commercial 0.21 0.221 Agriculture 65.70 64.970 LT Industry 733,769 855.53 HT/EHT Industry 5.25 3.052 Public Lighting 1.57 1.107 Public Water Works 0.00 0.838 Temp. Supply Total

Revenue from Open access 191/10 970.80 843.59 13.81 13.81

Revenue @ Existing Tariff	FY 17-18	FY 17-18	
(Rs Crore)	Approved	Projected	
Revenue from surplus power	42.65	1.96	
Total Revenue	1027.26	859.36	

### 3.16 Coverage of Revenue Gap

- Revenue from sale of power with-in the UT (category-wise) is determined in Table 57.
- Table 58 summarizes the ARR for EDDD for FY 2015-16, FY 2016-17 and FY 2017-18 along with the revenue and the resulting revenue (gap)/surplus. The cumulative surplus for the three years is Rs. 81.83 Crores as given in the table below.

Table 58: Revenue Gap for FY 2017-18

(Rs. Crore.)

Sr.	Particulars	FY15-16	FY16-17	FY17-18 Projected	
No.		Actual	Revised Estimates		
1	Total ARR	758.59	821.79	938.95	
2	Revenue @ Existing Tariff (including open access)	779.39	823.96	857.40	
3	Revenue from Surplus Power Sale	3.13	0.40	1.96	
4	Total Revenue(2+3)	782.51	824.36	859.36	
5	Revenue (Gap) /Surplus(4- 1)	23.92	2.57	(79.59)	
	Covered By				
6	Previous Years' (Gap)/Surplus Carried Over	134.92	158.84	161.42	
7	Total (Gap)/Surplus for three years(5+6)	158.84	161.42	81.83	

3. It is evident from Table 58 that there is a cumulative surplus of Rs. 81.83 Crore for the three years. The estimated gap has been computed by deducting the ARR from Revenue at Existing Tariff.



4. Thus, the EDDD does not propose any tariff hike for the FY 2017-18. It is prayed to the Hon'ble Commission that considering the above submissions the proposal of EDDD for keeping the tariff unchanged for the FY 2017-18 may kindly be approved.

### 3.17 Average Cost of Supply

 Table 59 summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

Table 59: Average Cost of Supply & Revenue Realization

Average Realization & Cost of Supply	FY15-16	FY16-17	FY17-18
(Rs/Unit)	Actual	Revised Estimate	Projected
Average Cost of Supply of EDDD	4.45	4.68	5.09
Average Realization	4.59	4.69	4.66
Revenue Gap at Existing Tariff	0.14	0.01	(0.43)
Net Revenue (Gap)/Surplus(Includes gap of previous year)	0.93	0.92	0.44
Additional revenue at Proposed Tariff	-		

### 3.18 Tariff Proposal for FY 17-18

 As there is a cumulative surplus of Rs. 81.83 Crore for FY 2015-16, FY 2016-17 an FY 2017-18 the EDDD does not propose any tariff hike for the FY 2017-18. The table below summarizes the existing and proposed tariff structure for various consumer categories for FY 2017-18.

Table 60: Proposed Tariff Structure for FY 17-18

Tariff Structure	Existing (FY 2016-17)			Proposed (FY 2017-18)
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
LT-D/Domestic	HIVE ED			
Ist 50 Units	1.20	Rs./Consumer/Month	1.20	Rs./Consumer/Month

Tariff Structure		Existing (FY 2016-17)		Proposed (FY 2017-18)	
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges	
51 to 200 Units	1.80	Single Phase: Rs. 20 Three Phase: Rs. 45	1.80	Single Phase: Rs. 20	
201 to 400 Units	2.20		2.20	Three Phase: Rs. 45	
Beyond 401 Units	2.55		2.55	to provide the contract of	
Low Income Group		Rs. 10/connection /month		Rs. 10/connection /month	
LT- C/Commercial			41-1-		
1st 100 Units	2.65	Rs./Consumer/Month	2.65	Rs./Consumer/Month	
Beyond 100 Units	3.65	Single Phase: Rs. 25 Three Phase: Rs. 50	3.65	Single Phase: Rs. 25 Three Phase: Rs. 50	
LT- Ag/ Agriculture					
Upto 10 HP per unit	0.70		0.70		
Beyond 10 HP per unit	1.00		1.00		
LTP Motive Power(Including Public Water Work)					
For the category	3.50	Rs. 25/HP/month	3.50	Rs. 25/HP/month	
LT-PL/Public Lighting					
Public Lighting	4.20		4.20		
LT-Public Water Works					
For the	3.70	Rs. 25/HP/month	3.70	Rs. 25/HP/month	
category HT					
HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA				T. pt. p. mg	
For all units	4.70	Rs. 105/kva/month	4.70	Rs. 105/kva/month	
HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power					

82

गत्यमेव जयते

DAMAN

Tariff Structure	Existing (FY 2016-17)		Proposed <b>(FY 2017-18)</b>	
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
For all units	4.55	Rs. 275/kva/month	4.55	Rs. 275/kva/month
Hoardings/Sign Boards				
For all units	7.00	Rs. 100/kva/month	7.00	Rs. 100/kva/month

2. EDDD, requests the Hon'ble Commission to approve the fuel purchase adjustment formula including the "k" factor for FY 17-18 as well, which can take care of any variation in the ARR over and above the approved level by the Commission for FY 17-18.



# Chapter 5: Determination of Open access charges

### 4.1 Allocation Matrix

The allocation between wheeling and retail supply business for FY 2017-18 as per the ARR proposed for FY 2017-18 is provided in the table below:

Table 61: Allocation of ARR between Wheeling and Retail Supply

Annual Revenue Requirement	Allocation (%)			FY 2017-18
Rs. Crs	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	857.51
Employee	70%	30%	8.91	3.82
R&M	50%	50%	6.76	6.76
A&G	90%	10%	6.00	0.67
Depreciation	90%	10%	25.08	2.79
Interest Cost on Long-term Capital Loans	90%	10%	20.52	2.28
Interest on Working Capital Loans	22%	78%	0.52	1.86
Interest on Security Deposit	0%	100%	-	3.45
Return on Equity	90%	10%	10.86	1.21
Provision for Bad Debt	0%	100%	-	-
Annual Revenue Requirement			78.65	880.34
Less: Non-Tariff Income	0%	100%	-	20.05
Less: Revenue from Surplus Power Sale	0%	100%	-	1.96
Less Revenue from OA consumer	0%	100%	-	-
Net Revenue Requirement			78.65	858.33

# 4.2 Voltage wise Wheeling Charges

The EDDD has considered the voltage wise losses for FY 2017-18 as considered by the Hon'ble Commission in its Tariff Order for the MYT Control Period FY 2016-17 to FY  $\frac{1}{2}$ 



82

The total loss for FY 2017-18 has been considered as 8.40%. The balancing loss has been considered as the loss at the LT level.

To arrive at the network usage, the input energy at each level has been arrived and shown in the table below.

Table 62: Determination of input energy for network usage percentage

Particulars	UoM	FY 2017-18
Sales at 11 kV and above (HT/EHT)	MU	1,480.13
Losses in % for HT/EHT network	%	2.86%
Input required for sales at 11 kV and above	MU	1523.71
Projected total Input	MU	1992.53
Projection of HT/EHT network usage	%	76.47%
Balance proportion of LT network usage	MU	23.53%

Accordingly the wheeling cost has been considered in the ratio of 76.47:23.53 and the wheeling charge so arrived has been shown in the table below.

Table 63: Wheeling charges proposed for FY 2017-18

Particulars	UoM	S.No.	FY 2017-18
Wheeling Cost	Rs. Crore	A	78.65
Wheeling Cost at HT/EHT network	Rs. Crore	B=A*76.47%	60.15
Input required for sales at 11 kV and above	MU	С	1,523.71
Wheeling Charges for HT/EHT network usage	Rs. per unit	D=B/C*10	0.39
Wheeling Cost for LT network	Rs. Crore	Е	18.51
Input required for sales at LT level	MU	F	468.82
Wheeling Charges for HT/EHT network usage	Rs. per unit	G=E/F*10	0.39

### 4.3 Cross Subsidy Surcharge

The cross-subsidy surcharge is based on the following formula as given in the Tariff Policy dated 28.01.2016:

cutive Engineer Elec

DAMAN

S = T-[C/(1-L/100) + D+R]

Where,

S is the surcharge



T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation;

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

R is the per unit cost of carrying regulatory assets.

The computation of each item is as below.

Table 64: Calculation of "T"

Particular	Sale (MU)	Revenue from approved tariff (Rs. Crore)	Average Tariff (Rs./kwh)
Т	1,469.52	782.17	5.32

Table 65: Calculation of "C"

Station	Energy Procured (MU)	Average Rate (Rs./kwh)	Total Power Purchase Cost (Rs. Crore)
С	2068.07	4.15	857.51

The cross subsidy surcharge based on the above formula is worked out in the table below:

Table 66: Proposed Cross Subsidy Surcharge for FY 2017-18

Cross Subsidy Surcharge	UoM	HT & EHT Industry
T	Rs. per kwh	5.32
С	Rs. per kwh	4.15
D	Rs. per kwh	0.39
L	%	2.86%
R	Rs. per kwh	0.00
191 Surcharge	Rs. per kwh	0.78



82.

# 4.4 Application and Agreement Fees

The application and agreement fees are proposed as Rs 50,000/- and Rs 1,00,000/- per MW respectively.



## Chapter 6: Compliance of Directives

The Hon'ble Commission vide Tariff Order dated 6th April, 2016 had issued a set of directives to be followed by EDDD to comply with the "The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014."

In line with the directives, EDDD has been taken several steps to comply with the directives. The purpose of this section is to appraise the Hon'ble Commission on progress made by EDDD on this matter since the issuance of the aforesaid tariff order.

#### A. Old Directives

### 1. Directive 1: Management Information System

Directive: The Petitioner is directed to submit the quarterly reports in the RIMS formats specified by CERC from the implemented computerized system.

a. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated March 22nd 2013

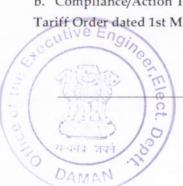
### Petitioner's Submission

ED-DD had submitted that RACE (Revenue Administration through Computerized Energy Billing System) is running and is being upgraded for all consumers and necessary changes in report generation are also in progress. Simultaneously, the study of preparation of report in the format of RIMS is under progress and is expected to be completed in this financial year.

### Commission's Comments

Action taken is noted and the Petitioner is directed to submit the status report and progress of the said facility. The submission should be ensured before the next ARR filing.

b. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 1st May, 2014



Page 72

#### Petitioner's Submission

ED-DD has submitted that integration and validation of the reports in the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) is under progress and the report would be submitted to the Commission by the end of FY 2013-14.

#### Commission's Comments

The pending submission should be ensured as per the date committed by the Petitioner.

c. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 31st March, 2015

### Petitioner's Submission

The ED-DD would like to submit that the integration and validation of the reports in the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) has been done and the said facility is running online.

#### Commission's Comments

Acton taken is noted. A copy of the latest report prepared the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) may be submitted for perusal of the Commission.

d.Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 6th April, 2016

#### Petitioner's Submission

A copy of the latest report prepared the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) is being enclosed along with this petition as **Annexure I**.

#### Commission's Comments

The Petitioner hasn't submitted the Annexure. A copy of the latest report prepared in the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) shall be submitted by 30 June 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

Page 73

### Compliance/Action Taken as submitted in the present petition

### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that the RIMS format were submitted along with the MYT Petition. The formats were again re-submitted on 15.07.2016 to the Hon'ble Commission. The same are again being submitted along with the present Tariff Petition.

### 2. Directive 2: Demand Side Management and Energy Conservation

Directive: Even after 8 months as directed earlier by the Commission, the utility is still in the process of sharing the scope of work and not the result of the study. The Commission directs that the process of completion of the study be expedited and the same shall be submitted to the Commission by November 30′ 2012.

a. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated March 22' 2013

#### Petitioner's Submission

ED-DD had submitted that studies are being carried out for implementation of the various Demand Side Management (DSM) activities in the UT of Daman & Diu. The final study report of the consultant on DSM implementation shall be submitted to the Commission in this financial year.

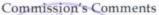
### Commission's Comments

Action taken is noted. The pending submission should be made before the next ARR filing.

b. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 1st May, 2014

#### Petitioner's Submission

The final study report of the consultant on DSM implementation has been enclosed along with this submission as Annexure I.





The Commission has noted the compliance of the directive by the Petitioner. The Commission finds that no concrete proposal as regards to the DSM implementation has been given in the report. The Commission directs the Petitioner to submit concrete proposals with specific schemes along with timeline and funding sources by September 30′ 2014.

c. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 31st March, 2015

The EDDD would like to submit that a comprehensive scheme for DSM is under preparation and will be submitted shortly to the Hon'ble Commission.

#### Commission's Comments

The comprehensive scheme for DSM shall cover the LED lighting, demand response and peak load shavings etc. and the same should be submitted positively by 30th June, 2015.

d. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 6th April, 2016

#### Petitioner's Submission

The EDDD would like to submit that a comprehensive scheme for DSM shall cover the LED lighting, demand response and peak load shavings etc. is under preparation and shall be submitted to the Hon'ble Commission shortly.

#### Commission's Comments

The Petitioner is directed to submit the details by 30 September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

## Compliance/Action Taken as submitted in the present petition

The EDDD would like to submit that the document containing a comprehensive scheme for DSM covering the LED lighting, demand response and peak load shavings etc. is being submitted along with this petition as Annexure II.



#### 3. Directive 3: Enforcement Cell

The Petitioner is directed to submit the status of the functioning of enforcement cell and quarterly progress report detailing number of cases, amount involved sub-judice cases, and reduction in losses as a consequence. The 1st status report for FY 2011-12, first half of FY 2012-13 i.e. April to September 2012 is to be submitted in the ARR filing for FY 2013-14.

Compliance / Action Taken by the Petitioner and the Commission's comments as per Tariff Order dated March 22<sup>nd</sup> 2013

#### Petitioner's Submission

It is submitted that the Electricity Department Daman & Diu has a separate section headed by Assistant Engineer for Vigilance to conduct vigilance check on all category of consumers. The 1st status report for first half of FY 2012-13 i.e. April to September 2012 will be submitted to the Hon'ble Commission shortly.

### **Commission Analysis**

Action taken is noted. The Commission directs that the process of completion of the study be expedited and the same be submitted to the Commission by September 2013.

Compliance/Action taken by the Petitioner and the Commission's comments as per Tariff Order dated 1st May, 2014

#### Petitioner's Submission

ED-DD has submitted that the report is still with the vigilance department and is being compiled by them. Once it is finalized by the vigilance department and submitted to ED - DD, it will be validated and submitted to the Commission by the end of FY 2013-14.

### **Commission Analysis**

The submission of the Petitioner is noted. The submission of the report should be ensured as per the time-line committed by the Petitioner.

Compliance/Action taken by the Petitioner and the Commission's comments as per Tariff Order dated 31st March, 2015





The 1st quarter progress report from vigilance department is submitted.

### Commission Analysis

The Compliance of the Petitioner is noted. The Petitioner is directed to ensure submission of the reports on half yearly basis as already directed.

Compliance/Action taken by the Petitioner and the Commission's comments as per Tariff Order dated 6th April, 2016

Petitioner's Submission

No Response Submitted

### Commission Analysis

The Petitioner is directed to ensure submission of the reports on half yearly basis as already directed by 30 September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

### Compliance/Action Taken as submitted in the present petition

The EDDD would like to submit to the Hon'ble Commission that the report on the enforcement cell is being submitted along with this petition as **Annexure III**.

### 4. Directive 4: Roadmap for reduction in Cross-Subsidy

Directive: The Petitioner is directed to propose a road map for an increase in the tariff rate which progressively reduces to bring the gap between per unit tariff and the average cost of supply over a period of 5 years in two phases i.e. first 3 years from FY 2013-14, FY 2014-15 and FY 2015-16, a review thereafter and further reduction during FY 2016-17 and FY 2017-18.

a. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated March 22' 2013

Petitioner's submission tive Engine Page 77

DAMAN

DAMAN

'The EDDD is pursuing the matter with the Administration of the UT of Daman & Diu and a letter written to the Administration for the same is being enclosed along with this petition as Annexure  $V^\prime$ 

#### Commission's Comments

Action taken is noted. Persistent efforts should be made by the Petitioner to formulate the proposed road map for reduction of cross-subsidy and submit the same to the Commission keeping in view the demographics and the consumer-mix of the licensee.

 b. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 1st May, 2014

Petitioner's Submission Not submitted.

#### Commission's Comments

The Petitioner has not submitted the road-map for reduction of cross-subsidy. The Commission views it seriously; and directs the Petitioner to submit the report along with the next ARR & tariff filing failing which the Commission shall initiate action as per the Act/Regulation.

c. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated 31st July, 2015

It is submitted that road-map for reduction of cross-subsidy is under preparation and the report will be submitted to the Commission shortly.

#### Commission's Comments

The report on the road map for reduction of cross subsidy should be submitted positively by 31st July, 2015.

d. Compliance/Action Taken by the Petitioner and Commission's comments as per Tariff Order dated  $6^{th}$  April, 2016



82.

The EDDD would like to submit that report on the road map for reduction of cross subsidy is under preparation and shall be submitted to the Hon'ble Commission shortly.

#### Commission's Comments

The Petitioner is directed to submit the report by 30 September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

## Compliance/Action Taken as submitted in the present petition

The EDDD would like to submit that almost 90% of the sales in the UT of Daman and Diu is HT and EHT sales. In such a scenario it would not be feasible to reduce the cross subsidy and bring the tariff of the domestic consumers at par the HT consumers.

### B. Directives continued in this Tariff Order

 Directive 1: Unbundling and Corporatization of Electricity Department as per Electricity Act 2003

Reforms in the Energy sector are absolutely necessary to overhaul the energy sector to make it more vibrant and commercially, viable. As part of the reforms envisaged, the state government will have to consider seriously, the huge monopolistic role of government departments in the generation, transmission and distribution of electricity in the state.

The Electricity Department, Daman and Diu, in consultation with the Government of Daman and Diu, should initiate action for unbundling of the Electricity Department into separate Generation, Transmission and Distribution Departments duly Corporatizing the same.

The action plan for the same may be submitted to the Commission by 31st December, 2015.

#### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that the area of the UT and Daman and Diu is very small and the transmission network of the EDDD is also very small. The key function of the EDDD is distribution of electricity in the union

Page 79

DAMAN

territory and hence there is very limited scope and usefulness of unbundling the ED-Daman and Diu.

#### Commission's Comments

The Commission directs the Petitioner that reforms in the Energy sector are absolutely necessary to overhaul the energy sector to make it more vibrant and commercially, viable. It should initiate action for unbundling of the Electricity Department into separate Generation, Transmission and Distribution Departments duly Corporatizing the same.

#### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that key function of the EDDD is distribution of electricity in the union territory and hence there is very limited scope and usefulness of unbundling the ED-Daman and Diu.

### 2. Directive 2: Safety Measures undertaken

The ED-DD is directed to submit a report on the safety measures initiated by it to prevent fatal/ non fatal accidents for the departmental persons and general public, by 31st July, 2015.

The Petitioner is also directed to submit quarterly reports on departmental/ non departmental, fatal/ non fatal accidents occurred in the U.T and steps taken to prevent recurrence of the same. The first quarterly report should be submitted by 31st July, 2015.

#### Petitioner's Submission

पन्यमय जयन

The EDDD would like to submit to the Hon'ble Commission that the department has undertaken the following measures to prevent the fatal/non fatal accidents:

- Conversion of existing Overhead lines into underground distribution system.
- ii) Proper guarding of existing overhead lines and proper earthing is provided.
- Electronic relay are provided at sub-stations for instant tripping of line in case of any fault.
- iv) Safety belts, hand gloves, earthing rods, helmets etc are provided to the department persons working on distribution lines.



 All the linemen of the Department are being given regular training on the safety aspects to prevent fatal/non-fatal accidents.

The quarterly reports on departmental/ non departmental, fatal/ non fatal accidents occurred in the U.T shall be submitted to the Hon'ble Commission shortly.

#### Commission's Comments

Action taken is noted. Quarterly reports should be submitted to the Commission periodically.

#### Petitioner's Submission

The EDDD shall ensure quarterly submission of the report on safety measures undertaken by the Department to the Hon'ble Commission.

## 3. Directive 3: Renewable Purchase Obligation (RPO)

The Commission has taken note of the submission of the Petitioner regarding steps being taken to fulfil the RPO obligation and appreciates efforts being made to fulfil the RPO obligation. The Commission expects that the Petitioner would give priority to obtaining the physical solar and non-solar power. Further, actual compliance would be reviewed at the time of true-up of the respective years and all pending RPOs up-to FY 2014-15 (based on actual) must be accounted for while submitting the data for FY 2015-16. Supporting details such as purchase of RECs, bills from solar/non-solar plants for the respective years must be duly submitted along with the MYT filing.

The Commission, directs, that all pending RPO obligations up-to FY 2015-16 must be fulfilled by 31st March 2016 and no backlog would be allowed to be carried forward to the control period FY 2016-17 to FY 2018-19.

#### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that the 1MW plant at Daman and 3MW plant in Diu have been commissioned. The 6 MW plant at Diu will be commissioned by March, 2016 and the 4 MW plant at Daman is likely to be commissioned by the end of FY 2016-17. The quarterly report of solar power generation of roof top and ground mounted is being submitted to Hon'ble Commission regularly.

Page 81

मन्यमव जवन

#### Commission's Comments

Action taken is noted. The Petitioner is directed to submit the further compliance this directive i.e. fulfillment of RPO up to FY 2015-16 by 30th June 2016.

#### Petitioner's Submission

The details of RPO purchased by the EDDD till FY 2015-16 are being enclosed along with this petition as Annexure IV.

### 4. Directive 4: Billing and Collection Efficiency

The Commission has noted in the submission of the Petitioner that the actual collection efficiency for FY 2012-13 is 88.56% and for FY 2013-14 is 92.68%. Such collection figures are very low and Commission does not find such low levels of collection as acceptable. Further, the collection efficiency considered by the Petitioner for the control period is in the range of 95-97% which needs improvement as it directly impacts the revenue stream (on cash basis) of the Petitioner.

The Commission gives strict directions to the Petitioner to improve the collection efficiency and recover timely dues from the consumers. Quarterly status-report in this regard should be submitted to the Commission.

The Commission reiterates that its earlier directive on the collection of arrears must be adhered to. The Petitioner must submit quarterly progress report on the status of the collection of arrears along with an action plan for liquidating the same.

#### Petitioner's Submission

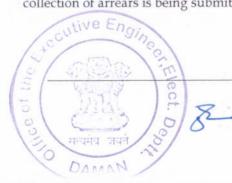
The EDDD would like to submit that the department will submit the quarterly progress report on the status of the collection of arrears along with an action plan for liquidating the same to the Hon'ble Commission shortly.

#### Commission's Comments

Action taken is noted. Quarterly reports should be submitted to the Commission periodically. Annexure IV.

### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that the report on the collection of arrears is being submitted along with this petition as  $Annexure\ V$ .



#### C. New Directives

### 1. Directive 1: Implementation of Smart Grid

The Petitioner is directed to submit a detailed action plan by 30 September 2016 for roll out of smart grid in Daman and Diu within this MYT Control Period.

#### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that meters under the Energy Management System (EMS) have been installed at the substation and the Distribution Transformers throughout the territory of the UT of Daman and Diu to monitor the loading of the distribution system and also for energy accounting purposes. Further, all the consumers having connected load till 20 HP have also been covered under the EMS to monitor their energy consumption and loading pattern. The EDDD is now in the process of covering the consumers below 20 HP including the domestic and commercial consumers under the EMS.

### 2. Directive 2: Promotion of Solar Generation

The Petitioner is directed to take-up with the Government for formulation of a comprehensive policy for promotion of solar energy in its licensee area especially among the industrial consumers.

### Petitioner's Submission

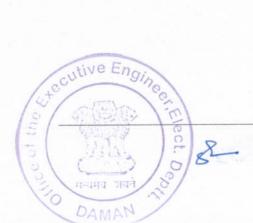
The EDDD would like to submit to the Hon'ble Commission that the draft Solar Policy for the UT of Daman and Diu has been prepared and is under the consideration of the Administration. As soon as the Solar Policy is finalized, the same shall be submitted to the Hon'ble Commission.

## 3. Directive 3: Information for determination of Voltage-wise Wheeling Charges

The Petitioner is directed to provide the details of voltage wise assets and expenses along with the allocation methodology if any for the determination of voltage wise wheeling charges in the next tariff petition.

Petitioner's Submission tive Engine Page 83

The EDDD would like to submit that the details of voltage wise assets and expenses along with the allocation methodology shall be submitted to the Hon'ble Commission shortly.



Page 84

#### Tariff Schedule

### General Terms and Conditions:

- 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.
- Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 3. Supply to consumers having contracted load between 100 KVA to 1900 KVA shall be given through common feeders, supply to consumers having contracted load more than 1900 KVA to 4000 KVA shall be given through express feeders/dedicated feeders generally at 11 KV and for more than 4000 KVA up to 25000 KVA at 66 KV. The consumer who requires load more than 25000 KVA load, the supply voltage shall be at 220 KV level.
- 4. 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.

5. If connected load of a domestic category is found to be at variance from the

मान सब

DAMAN

Page 85

sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.

- 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 provision of the Act & Supply Code Regulation.
- 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. The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulation. If such over-drawl is more than 20% of the contract demand then the connections shall be disconnected immediately.

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 immediately.

- 9. Unless specifically stated to the contrary, the figures of energy charges relates to paisa per unit (kWh) charge for energy consumed during the month.
- 10. 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 paisa shall be ignored and amount of 50



मन्यमंत्र जवते

DAMAN

paisa 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.

- 11. 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.
- 12. 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.

#### 13. TOD Tariff:

For the purpose of TOD tariff, the peak/off-peak/normal hours and charges for the corresponding period shall be as under.

Time of use	Demand Charges	Energy Charges
Normal period (6:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy Charges
Evening peak load period (6:00 p.m to 10.00 p.m)	Normal Rate	130% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	85% of normal rate of energy charges

- 14. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.
- 15. The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order for FY 2016-17.

16. Schedule of 'Other Charges' would be as approved in this tariff order.

Page 87

2

### DETAILED TARIFF SCHEDULE

### I. (A) Domestic Category

Applicable to private houses, hostels, hospitals run on Non-commercial lines, Charitable, Educational and Religious Institutions for light, Fans, Radios, domestic heating and other household appliances including water pumps up to 2 HP.

### 1. Energy Charges

Usage(Units/Month)	Energy Charge (Ps./Unit)
0-50 units	120
51-200 units	180
201-400 units	220
401 and above	255

### 2. Fixed Charges

Usage (Rs./Consumer/month)	Fixed Charges
For category as defined above	Single Phase: Rs. 20 Three Phase: Rs. 45

## (B) Power Supply to Low Income Group (Up to 2x40 W bulbs only)

Power supply to low income group connections will be charged at Rs. 10 per service connection per month upto 30 units. For consumption more than 30 units per month energy charges as defined for domestic category shall be levied. For any unauthorized increase in the load beyond 2x40 watts, penal charges at the rate of Rs. 20 per month per point will be levied and the installation will be liable for disconnection.

### II. Non-Domestic Category/Commercial

This includes all categories which are not covered by other tariff categories including Domestic Category, Low Income Group, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.

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



### 1. Energy Charges

Usage(Units/Month)	Energy Charge (Ps./Unit)
1-100 units	265
101 units and above	365

### 2. Fixed Charges

Usage(Rs./Consumer/month)	Fixed Charge
For category as defined above	Single Phase: Rs. 20 Three Phase: Rs. 45

### III. LT Industrial Category

Applicable to all Low Tension Industrial Motive Power Connections including water works/pumps with sanctioned load upto 99 HP.

#### 1. LTP Motive Power

### i. Energy Charges

Usage(Units/month)	Energy Charge (Ps./Unit)-
For all units	350

#### ii. Fixed Charges

	Fixed charge (Rs./HP/month) or part thereof
For category as defined above	Rs 25.00/- per HP or part thereof

### iii. Power Factor Charges

Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.95 as per the Commission's regulation 11/2010 shall be charged extra 2.5 % of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In



case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. If the average power factor is 0.70 (lagging) or below the consumer shall be billed as per the kVAH billing. In case the monthly average power factor is 0.70 (lagging) or below, the installation is liable for disconnection after due notice.

### iv. Penalty Charges: Twice the applicable charges.

- a) Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis co-relating the total consumption of the month with billing demand.
- b) If Industries are overdrawing power by more than 20% of the Contract Demand, their electricity connection will be disconnected immediately.

#### 2. LT Public Water Works

### i. Energy Charges

Usage(Units/month)	Energy Charge (Ps./Unit)-
For all units	370

#### ii. Fixed Charges

	Fixed charge (Rs./HP/month) or part thereof
For category as defined above	Rs 25.00/- per HP or part thereof

### iii. Power Factor Charges

Any connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.95 as per the Commission's regulation 11/2010 shall be charged extra 2.5 % of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power



factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. If the average power factor is 0.70 (lagging) or below the consumer shall be billed as per the kVAH billing. In case the monthly average power factor is 0.70 (lagging) or below, the installation is liable for disconnection after due notice.

### iv. Penalty Charges: Twice the applicable charges.

- c) Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis co-relating the total consumption of the month with billing demand.
- d) If consumers are overdrawing power by more than 20% of the Contract Demand, their electricity connection will be disconnected immediately.

### IV. HT/EHT Category

### A. High Tension Consumer

Applicable to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.

#### 1. Fixed Charges(Demand Charges)

For Billing Demand	Charges (Rs./KVA/month) or part thereof
Up to Contract Demand	Rs 105/kVA/month or part thereof

#### 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./Unit)
For all units	470

3. Penalty Charges: Twice the applicable charges.



- a) Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis co-relating the total consumption of the month with billing demand.
- b) If Industries are overdrawing power by more than 20% of the Contract Demand, their electricity connection will be disconnected immediately.

### 4. Power Factor Charges

- (a) The monthly average power factor of the supply shall be maintained by the consumer not less than 0.93 (lagging). If the monthly average power factor of a consumer falls below 93% (0.93 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 98% (0.98 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 0.98 (lagging)
- (c) If the average power factor is 0.70 (lagging) or below the consumer shall be billed as per the kVAH billing.
- (d) If the average power factor is 0.70 (lagging) or below consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
- (e) 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

### 5. Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 85% of the Contract demand
- (c) Actual Demand Established
- B. HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive)

1. Fixed Charges (Demand Charges)



For Billing Demand	Tariff (Rs./KVA/month) or part thereof
Up to Contract Demand	Rs 275.00/- per kVA per month

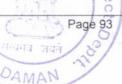
### 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./Unit)
For all units	455

- 3. Penalty Charges: Twice the applicable Charges
- a) Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis co-relating the total consumption of the month with billing demand.
- b) If Industries are overdrawing power by more than 20% of the contract demand, their electricity connection will be disconnected immediately.

### 4. Power Factor Charges

- (a)The monthly average power factor of the supply shall be maintained by the consumer not less than 0.93 (lagging). If the monthly average power factor of a consumer falls below 93% (0.93 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 98% (0.98 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 0.98 (lagging)
- (c) If the average power factor is 0.70 (lagging) or below the consumer shall be billed as per the kVAH billing.
- (d) If the average power factor is 0.70 (lagging) or below consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
- (e) 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





### 5. Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 85% of the Contract demand
- (c) Actual Demand Established

## V. Agriculture

Agriculture or poultry loads upto 99 HP sanctioned load will be considered in this category.

### 1. Energy Charges

Usage	Tariff (Ps./Unit)
For connected load upto 20 HP	70
Beyond 10 HP and upto 99 HP connected load	100

### 2. Power Factor Charges

Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.90 as per the Commission's regulation 11/2010 shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

#### VI. Public Lighting

### 3. Energy Charges

Usage	Tariff (Ps/Unit)
For all units in	420
the second	
	Page 94
15/2	

### VII. Hoardings /Signboards

Electricity for lighting external advertisements, external hoardings and displays at departments stores, malls , multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.

Energy Charges Paise/kWH	Fixed Charge
700	Rs 100 per kVA per Month or part Thereof

VIII. Temporary Supply: Tariff for Temporary Connection shall be Fixed / Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.

For multi activity pursuit, applicable tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.

The Temporary Tariff are applicable for temporary period of supply up to 1 (one) month, which can be extended for another period of supply up to a maximum period of 2 years.

#### VIII. Schedule of Other Charges

### a. Meter Rent

S.No.	Meter type	Tariff (in Rs.)/Month or part thereof
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

Page 95

22

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

### b. Reconnection Charges

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase LT	Rs 100
2	Three Phase LT	Rs 500
3	HT	Rs 1500

### c. Service Connection Charges

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase LT	Rs 250
2	Three Phase LT	Rs 1000
3	HT (First 500 KVA)	Rs 10000
4	HT (Beyond 500 KVA)	Rs 1000 per 100 KVA or part thereof

## d. Extra Length Charge

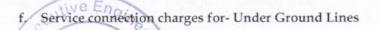
S.No.	Connection type	Tariff/Meter(in Rs.)		
1	Single Phase	Rs 25/meter		
2	Three Phase	Rs 50/meter		

Extra length Chargeable will be beyond permissible 30 meters free length from existing network for new connection for all categories except Agriculture. Free length in respect of New Agriculture consumer is 300 meters.

#### e. Cost of HT connection

मन्यमय जयते

Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by ED-DD.





- (a) Single phase consumers
- (i) Area outside municipal limit Full cost plus 15% supervision charges
- (ii) Area within municipal limit Rs. 250/- plus Rs. 50/- per meter beyond 30 meters
- (b) Three phase consumers
- (i) Area outside municipal limit Full cost plus 15 % supervision charges
- (ii) Area within municipal limit Rs. 1000/- plus Rs. 100 /- per meter beyond 30 meters
- (a) In case of all the connections (both industrial and non-industrial) U/G service cable and metering system approved by the Department will have to be provided by the consumer at his own cost.

### g. Testing Fee for various Metering Equipment

S.No.	Types of Metering Equipment	Fee per unit (in Rs.)		
1	Single Phase	200		
2	Three Phase	500		
3	Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer  1000			
4	Three Phase Tri-vector Meter (0.5 Class) 11 KV HT Consumer	1000		
5	Three Phase Tri-vector Meter (0.2 Class) 66KV EHT Consumers	1500		
6	ABT meter 0.2 class-66 kV/11kV Consumer	3000		
7	Combined CTPT Unit for 11 KV Consumer	1000		
8	66 KV CT / PT Unit	1000		
9	Three Phase CT Block	500		
10	CT Coil	500		

## h. 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	20
2	Three Phase Lighting / Domestic	50
3	Single Phase Lighting / Non Domestic	100

Page 97

मध् अयत 👸

S.No.	Types of Connection	Fee per test report (in Rs.)
4	Three Phase Lighting / Non Domestic	200
5	Three Phase LT Industries	500
6	Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	100
7	HT Industries upto 500 KVA	2000
8	HT Industries upto 2500 KVA	8000
9	HT Industries above 2500 KVA	15000



### Prayer

- 1. EDDD requests the Hon'ble Commission to:
  - Admit the Aggregate Revenue Requirement for the FY 2017-18 as submitted herewith as well as the revised estimates for FY 16-17.
  - · Admit and approve the Trued up ARR for FY 2015-16.
  - 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.

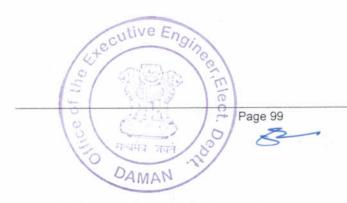
#### BY THE APPLICANT THROUGH

### **PETITIONER**

Electricity Department Daman and Diu

Daman

Dated:



**FORMATS** 





#### Format -1

## Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 ENERGY DEMAND

FY 2015-16

		F1 2013-16		
Sr.No.	Category of Consumer	No. of Consumers at the end of FY 15- 16 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic	46,420	119,557.00	88.20
2	LIG/ Kutir Jyoti	40,420	115,557.00	0.09
3	Commercial	8,209	19,761.00	49.93
4	Agriculture	1,243	3,672.00	2.46
5	LT Industry	1,817	107,471.00	160.54
6	HT/EHT Industry	784	505,321.00	1,379.41
7	Public Lighting	529	1,690.00	7.43
8	Public Water Works	125	795.00	2.68
9	Temp. Supply	11	28.00	1.23
10	Total	59,138	758,295.00	1,691.98



# Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 ENERGY DEMAND

FY 2016-17

Sr.No.	Category of Consumer	No. of Consumers at the end of FY 16- 17 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic	47.004	424 470 20	103.12
2	LIG/ Kutir Jyoti	47,631	131,472.32	0.10
3	Commercial	8,419	21,810.79	47.80
4	Agriculture	1,269	4,887.49	2.59
5	LT Industry	1,834	114,808.15	164.83
6	HT/EHT Industry	790	651,717.36	1,423.20
7	Public Lighting	539	1,869.45	6.72
8	Public Water Works	125	897.97	2.86
9	Temp. Supply tive Fn	0	0.00	1.56
10	Total CUIT	60,607	927,463.51	1,752.78
	Hearta made	60.607	5	

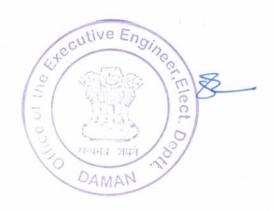
DAMAN



### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 ENERGY DEMAND

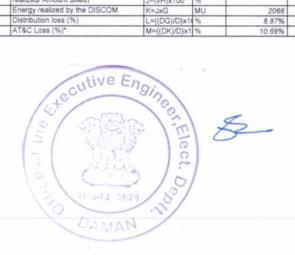
FY 2017-18

Sr.No.	Category of Consumer	No. of Consumers at the end of FY 17- 18 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic	48.938	132,124.40	110.34
2	LIG/ Kutir Jyoti	40,330		0.10
3	Commercial	8,633	21,983.77	51.62
4	Agriculture	1,296	5,390.58	2.72
5	LT Industry	1,852	116,536.60	168.95
6	HT/EHT Industry	796	749,158.02	1,480.13
7	Public Lighting	549	1,883.79	7.19
8	Public Water Works	125	905.37	2.89
9	Temp. Supply	0	0.00	1.56
10	Total	62,189	1,027,982.53	1,825.51



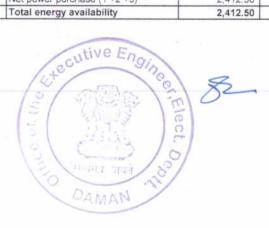
#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding AT&C Loss OF Licensee

S. No.	Particulars	Calculation	Unit	Ensuing year FY 15-16 (Actual)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM.	A	MU	0	0	0
2	Input energy (metered import) received at interface points of DISCOM network.	В	MU			
3	Input energy (metered Export) by the DISCOM at interface points of DISCOM network.	С	MU	2313	2393	2493
4	Total energy available for sale within the licensed area to the consumers of the DISCOM	D=A+BC	MU	2313	2393	2493
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU		2108 2189	2284
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU	2108		
7	Total energy billed	G=E+F	MU	2108	2189	2284
8	Amount billed to consumer within the licensed area of DISCOM.	н	Rs.	779.39	810.81	843.59
9	Amount realized by the DISCOM out of the amount Billed at H#	1	Rs.	763.80	794.60	835.16
10	Collection efficiency (%) (= Revenue realized/ Amount billed)	J=(I/H)x100	%	98.00%	98.00%	99.00%
11	Energy realized by the DISCOM	K=JxG	MU	2066	2146	2261
12	Distribution loss (%)	L={(DG)/D}x1		8.87%	8.50%	8.40%
13	AT&C Loss (%)*	M={(DK)/D}x1	%	10.69%	10.33%	9.32%



## Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE MYT CONTROL PERIOD FY 17-18 ENERGY BALANCE

Sr.No.	Category of Consumer	Ensuing year FY 15-16 (RE)	Ensuing Year 2016-17 (Projections)	Ensuing Year 2017 18 (Projections)
1	2	4	5	6
A)	ENERGY REQUIREMENT			
1	Energy sales to metered category within the State/UT	1,989.51	2,043.57	2,141.99
2	Energy sales to Agriculture consumers			
3	Open Access Sales	416.06	436.86	458.71
4	Total sales within the State/UT	2,405.57	2,480.43	2,600.70
5	Sales to common pool consumers/ UI	11.03	3.99	19.57
6	Sales outside state/UT			
7	Sales to electricity traders & through PX			
8	Sales to other distribution licensees a) Bilateral Trade b) Banking Arrangement			
9	Total sales	2,416.60	2,484.42	2,620.27
10	T&D losses			
(i)	%	8.87%	8.50%	8.40%
(ii)	MU	205.13	203.38	209.44
11	Total energy requirement	2,621.73	2,687.80	2,829.71
B)	ENERGY AVAILABILITY			
1	Net own generation	0.00	0.00	0.00
2	Net Purchase	1,989.51	2,043.57	2,141.99
3	Injection through Open access	422.99	444.14	466.35
4	Net power purchase (1 +2 +3)	2,412.50	2,487.71	2,608.34
12	Total energy availability	2,412.50	2,487.71	2,608.34



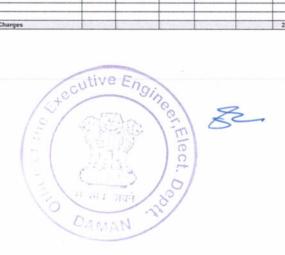
# Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 POWER PURCHASE COST FY 16-17(RE)

Sr.No.	Source	Capacity (MW)	Firm allocation to Licensee (in MW)	Gen. (MU)	Availability/ PLF( in %)	Licensee share (%)	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Cr)	VC (Rs. Cr)	Others (Rs. Cr)	Total (Rs. Cr)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	NTPC Stations											
1	KSTPP	2,100	49.35	14,654	38%	2.35%	358	159	17.59	56.85	(0.84)	73.60
2	KSTPP-III	500	6.02	3,489	38%	1.20%	46	162	6.29	7.40	0.86	14.55
3	VSTPP-I	1,260	13.34	8,811	88%	1.06%	93	183	5.62	17.10	0.58	23.29
4	VSTPP-II	1,000	9.30	6,993	88%	0.93%	59	176	3.72	10.48	0.48	14.6
5	VSTPP- III	1,000	11,30	6,993	88%	1.13%	83	174	8.45	14.50	4,30	27.25
6	VSTPP-IV	500	12.72	3,497	88%	2.54%	95	175	13.28	16.61	(0.06)	29.83
7	KAWAS	656	31.04	3,375	61%	4.73%	61	173	8.36	10.60	0.58	19.5
8	JGPP	657	31,37	3,724	67%	4.77%	101	268	16.46	27.08	(0.55)	42.9
9	Bhilai Unit-I &II(NTPC )	500	70.00	3,532	89%	14.00%	141	361	20.79	50.88	(1.04)	70.63
10	Sipat-I	1,980	25.49	11,579	73%	1.29%	496	156	89.16	77.25	(8.96)	157.46
11	Sipat-II	1,000	9.99	5,848	73%	1.00%	171	139	23.90	23.86	1.99	49.7
12	MSTPS-I	500	12.72	1,993	50%	2.54%	67	143	8.60	9.63	2.95	21.1
13	VSTPS-V	500	8.29	3,388	85%	1.66%	35	260	16.50	9.08	(0.99)	24.5
14	LARA	4,000	0.00	27,103	85%	0.00%	0	0	0.00	0.00	0.00	0.0
15	MOUDA-II	1,000	0.00	6,776	85%	0.00%	0	0	0.00	0.00	0.00	0.0
16	SOLAPUR	1,920	0.00	13,010	85%	0.00%	0	0	0.00	0.00	0.00	0.0
17	GADARWARA	2,640	0.00	17,888	85%	0.00%	0	0	0.00	0.00	0.00	0.0
18	Subtotal	21,714	291	142,652			1,808	183	239	331	(0.69)	569.3
11	Eastern Region											
1	KHSTPP-II	1,000	1.30	5,570	70%	0.13%	11	223	1.55	2.47	(0.01)	4.0
2	Subtotal	1,000	1.30	5,570			11	223	1.55	2.47	(0.01)	4.0
(III	NPCIL									-		
1	KAPPS	440	9.17	3,188	91%	2.08%	0	#D(V/01	0.00	0.00	0.00	0.0
2	TAPP 384	1,080	12.77	6,605	77%	1,18%	83	303	0.00	25.22	0.00	25.2
3	KAPPS (III & IV)	100	0.00	674	85%	0.00%	0	0	0.00	0.00	0.00	0.0
4	Subtotal	1,620	22	10,467			83	303	0.00	25.22	0.00	25.2
IV	Others											
1	Ratnagiri	1,967	38.00	12,544	80%	1,93%	9	0	26.30	1.72	0.11	28,1
2	Subtotal	1,967	38	12,544			9	0	26	2	0.11	28.1
V	Power purchase from Other Sources											
1	Power purchase from Indian E. Exchange						70	0.00	0.00	17,50	0.00	17.5
2	UI						0	0.00	0.00	0.00	0.00	0.0
3	Solar						7	0	4.20	0.00	0.00	4.2
4	Non Solar						55	470	2.00	25.98	0.00	27.9
5	Subtotal	26,301	352	171,233			132	330	6.20	43.48	0.00	49.6
VI	Misc. Arrears											0.0
VII	NTPC Rebate											0.0
	Gross Power Purchase Cost						2,043.57		272.78	404.20	(0.58)	676.4
	External Losses	-					70					
VIII	Total Power Purchase		2.19			1800	1,973.29		272.78	404.20	(0.58)	676.4
1	PGCIL CHARGES											68.4
2	WRLDC											0.4
3	MSTCL											3.9
4	Others											4.0



# Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 POWER PURCHASE COST FY 17-18(P)

Sr.No. Source		Capacity (MW)	Firm allocation to Licensee (in MW)	Gen. (MU)	Availability/ PLF( in %)	Licensee share (%)	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Cr)	VC (Rs. Cr)	Others (Rs. Cr)	Total (Rs. Cr)
1	2	3	4	5	6	7	8	9	10	11	12	13
I NTPC St	ations											
1 KSTPP		2,100	49.35	14,654	88%	2,35%	344	353	18.47	121.45	0.00	139.92
2 KSTPP-II	1	500	6.02	3,489	88%	1.20%	42	341	6.61	14.30	0.86	21,77
3 VSTPP-I		1,260	13.34	8,811	88%	1.06%	93	283	5.90	26.37	0.58	32.85
4 VSTPP-II		1,000	9.30	5,993	88%	0.93%	65	242	3.91	15.71	0.48	20.10
5 VSTPP-1	II .	1,000	11.30	6,993	88%	1.13%	79	286	8.87	22.59	4.30	35.76
6 VSTPP-1	V	500	12.72	3,497	88%	2.54%	89	299	13,94	26.63	0.00	40.57
7 KAWAS		656	31.04	3,375	61%	4.73%	56	235	8.78	13.19	0.58	22.55
8 JGPP		657	31.37	3,724	67%	4.77%	160	243	17.28	38.88	0.00	56.16
9 Bhilai Uni	t-i ⅈ(NTPC )	500	70.00	3,532	89%	14.00%	178	422	21,83	75.04	0.00	96.87
10 Sipat-i		1,980	25.49	11,579	73%	1.29%	494	88	93.62	43.43	0.00	137.06
11 Sipat-ii		1,000	9.99	5,848	73%	1.00%	149	150	25.10	22.31	1.99	49.41
12 MSTPS-I		500	12.72	1,993	50%	2.54%	58	160	9.03	9.35	2.95	21.32
13 VSTPS-V	1	500	8.29	3,388	85%	1.66%	51	159	17.32	8.05	0.00	25.37
14 LARA		4,000	0.00	27,103	85%	0.00%	0	0	0.00	0.00	0.00	0.00
15 MOUDA-	1	1,000	0.00	6,776	85%	0.00%	0	0	0.00	0.00	0.00	0.00
16 SOLAPU		1,920	0.00	13,010	85%	0.00%	0	0	0.00	0.00	0.00	0,00
17 GADARY	VARA	2.640	0.00	17,888	85%	0.00%	0	0	0.00	0.00	0.00	0.00
18 Subtotal		21,714	291	142,652	-		1,358.36	235	251	437	12	699.71
II Eastern I	Region			230,450					-			
1 KHSTPP		1,000	1.30	5,570	70%	0.13%	7	472	1.62	3.42	0.00	5.04
2 Subtotal		1,000	1,30	5,570			7	472	1.62	3.42	0.00	5.04
III NPCIL		1,000						77.5				
1 KAPPS		440	9.17	3,188	91%	2.08%	66	190	0.00	12.62	0.00	12.62
2 TAPP 3&	4	1,080	12.77	6,605	77%	1.18%	78	289	0.00	22.54	0.00	22.54
3 KAPPS (I	II & IV)	100	0.00	674	85%	0.00%	0	0	0.00	0.00	0.00	0.00
4 Subtotal		1,620	22	10,467			145	243	0.00	35.16	0.00	35.16
IV Others		1									1.00	
1 Ratnagiri		1,967	38,00	12,544	80%	1.93%	9	0	1.37	1.72	0.11	3.20
2 Subtotal		1,967	38	12,544			9	0	1	2	0.11	3.20
V Power pu	irchase from Other Sources											
1 Power pu	rchase from Indian E. Exchange						32	0.00	0.00	7.91	0.00	7.9
2 UI							0	0.00	0.00	0.00	0.00	0.00
3 Solar							14	791	0.00	11.07	0.00	11.07
4 Non Solar							77	150	0.00	11.50	0.00	11.50
5 Subtotal		26,301	352	171,233			122	249	0.00	30.48	0.00	30.48
VI Misc. Arr	ears											0.00
VII NTPC Re	bate											0.00
Gross Po	ower Purchase Cost						2,141.99		253.66	508.08	11.85	773.60
External L	osses						74					
	ver Purchase			1990 10			2,068.07		253.66	508.08	11,85	773,60
1 PGCIL C	HARGES											75.25
2 WRLDC												0.47
3 MSTCL												4.12
4 Others												4.06
Grand To	tal of Charges	No. of the last		H794 AV. 15			2,068.07	Charles of	Kathay It.	Para la	-	857.51



Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Investment Plan (year-wise)

			Actual	Expen	diture	12					
CHEME	Consumer	Contributi	no	compone	ıt	11					
ANCING FOR S	Subsidi	es/	grants	compon	ent	10					
SOURCE OF FINANCING FOR SCHEME	mponent				Equity infused**	6					
	Equity component	Internal Accrual	(from free	reserves and	surplus)	80					
		Total capital	expenditure		JERC (Rs. Cr.)	7					
			Project	Date (DD-MM- Completion date	(DD-MMYY)	9					
			Project Start	Date (DD-MM-	۲۷)	5		<			
IIs			Approved by the	Commission*	(YES/NO)	4		SZ	Z		
Project Details	Nature of	Project (Select	appropriate	code from	below)	3					
					Year of Start	2					
				Name of	scheme	1					

\* Support with appropriate paper work i.e. Detailed Project Reports and other documents, as necessary

\*\* Provide break up of Government and Licensee/Private share Codes for selecting Nature of work a. EHV Schemes

b. Distribution schemes

System augmentation
 System improvement

III. Schemes for loss reduction

c. Metering schemes

d. Capacitor e. SCADA / DMS etc

f. Miscellaneous



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Capital Base and Return

(all figures in Crs)

Sr.No.	Category of Consumer	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	4	5	6
1	Gross block at beginning of the year	387.13	449.21	503.91
2	Less accumulated depreciation	138.42	157.70	181.43
3	Net block at beginning of the year	248.72	291.52	322.48
4	Less accumulated consumer contribution	0.00	0.00	0.00
5	Net fixed assets at beginning of the year	248.72	291.52	322.48
6	Reasonable return @3% of NFA	7.46	8.75	9.67



Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Original Cost of Fixed Assets

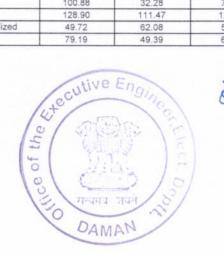
										(var. Cioles)
Sr.No.	Particulars Name of the Assets	Value of assets at the beginning of the year	Addition during the FY2014-15	Closing balance at Addition balance at the the end of FY2014- during FY2015- end of FY2015.	Addition during FY2015- 16	Closing balance at the end of FY2015- 16	Addition during the FY2016-17	Closing balance at the end of FY2016-17	Addition during FY2017-18	Closing balance at the end of FY2017-18
-	2	3	4	2	9	7	8	6	10	11
-	Plant & Machinery	299.11	48.63	347.74	61.90	409.65	54.70	464.35	101.88	566.23
2	Buildings	06.6	00.00	06'6	00.00	9.90	00.00	9.90	00.00	9.90
3	Vehicles	0.57	0.10	29.0	00.00	0.67	00.00	0.67	00.00	0.67
4	Furniture & Fixtures	0.38	00.00	0.38	0.18	99'0	00.00	0.56	00.00	0.56
5	Computers & Others	2.66	0.99	3.65	00.00	3.65	00.00	3,65	00.00	3.65
9	Land	24.79	00.00	24.79	00.00	24.79	00.00	24.79	00.00	24.79
7	Total	337.42	49.72	387.13	62.08	449.21	54.70	503.91	101.88	605.80

200



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Works-in-Progress

Sr.No.	Particulars	Current year FY 14-15 (Actuals)	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016- 17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6
1	Opening balance	28.02	79.19	49.39	66.67
2	Add: New investments	100.88	32.28	71.98	121.82
3	Total	128.90	111.47	121.37	188.49
4	Less investment capitalized	49.72	62.08	54.70	101.88
5	Closing balance	79.19	49.39	66.67	86.60



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Interest Capitalized

Sr.No.	Particulars	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5
1	WIP*			
2	GFA* at the end of the year			
3	WIP+GFA at the end of the year		NA	
4	Interest(excluding interest on WCL*)			
5	Interest Capitalized			





Format -10

# Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Details of loans for the year

(Rs. Crores) Amount of interest paid Ensuing year Closing Balance Current year during the year Repayment N/A Rate of Interest Addition during the year Opening Balance Total interest and finance Particulars (Source) Working capital loan Commercial Banks Less capitalization Finance charges Non SLR Bonds Bills discounting Add prior period Add Govt. loan -State Govt. -Central Govt. Fotal interest Total (13+14) Lease rental Net interest SLR Bonds Others Total Total PFC GPF Sr.No. 12 1 2 1 2 6 15 15 17 19 20 20 2 9 8

charges

21



Format -11

Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18

Information regarding restructuring of outstanding loans during the year

(Rs. Crores)

New rate of 10 interest being restructured Amount now (Rs. in crores) 6 Revised rate of interest 80 Amount already restructured (Rs. in crores) Old rate of interest Amount of original loan (Rs. in crores) Source of Loan

Sr.No.

N/A



Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Value of Assets and Depreciation Charges

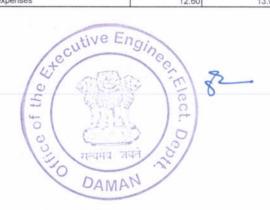
										(Rs. Crores)
			Previor	Previous Year	Current Year	t Year		Ensuing Year	Year	
		Rate of	Assets value at the		Assets value at the		Assets value at the		Assets value at the	
	Particulars Name of the	depreciati	beginning of	Depreciation	beginning of	Depreciation	beginning of	Depreciation	beginning of	Depreciation
Sr.No.	Assets	ou,	FY 2014-15	charges	FY 2015-16	charges	FY 2016-17	charges	FY 2017-18	charges
-	Plant & Machinery	5.28%	299.11	16.06	347.74	18.36	409.65	23.07	464.35	27.21
2	Buildings	3.34%	9.90	0.33	06.6	0.33	06.6	0.33	06.6	0.33
3	Vehicles	9.20%	0.57	0.01	19.0	0.02	0.67	90.0	0.67	90.0
4	Furniture & Fixtures	6.33%	0.38	0.02	0.38	0.02	0.56	0.04	0.56	0.04
. 2	Computers & Others	6.33%	2.66	0.40	3.65	0.55	3.65	0.23	3.65	0.23
9	Land	%00.0	24.79	00.00	24.79	00:00	24.79	00.00	24.79	00.00
7	Total		337.42	16.82	387.13	19.28	449.21	23.73	503.91	27.87

2



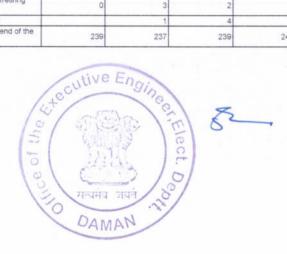
#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Repair and Maintenance Expenses

Sr.No.	Particulars	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016- 17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	4	5	6
1	Plant & machinery			
	-Plant & Apparatus	1		
	-EHV substations			
	- 33kV substation			
	- 11kV substation			
	- Switchgear and cable connections			
	- Others	1		
	Total	1		
2	Building	1		
3	Hydraulic works & civil works	1		
4	Line cable & network	1		
	-EHV Lines	1		
	- 33kV lines	1		
	- 11kV lines	1		
	- LT Lines	1	Breakup not available	
	- Meters and metering equipment	1		
	- Others	1		
	Total	1		
5	Vehicles	1		
6	Furniture & fixtures	1		
7	Office equipments	1		
8	Operating expenses	1		
9	Total	1		
10	Add/Deduct share of others (To be specified)			
11	Total expenses	1		
12	Less capitalized	1		
13	Net expenses	1		
14	Add prior period *	1		
15	Total expenses charged to revenue as R&M expenses	12.60	13.01	13.5



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Total Number of Employees

Sr.No.	Particulars	Previous year FY 13-14 (actuals)	Current year FY 14-15 (A)	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6	7
1	Number of employees as on 1st April	239	239	237	239	240
2	Employees on deputation/ foreign service as on 1st April	0	0	0	0	0
3	Total number of employees (1+2)	239	239	237	239	240
4	Number of employees retired/retiring during the year	0	3	2	1	1
5	Number of employees added		1	4	2	3
6	Number of employees at the end of the year (4-5)	239	237	239	240	242



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Employee Cost

Sr.No.	Particulars	Previous year FY 13-14 (actuals)	Current year FY 14-15 (A)	Ensuing year FY 15-16 (A)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
		Total	Total	Total	Total	Total
1	2	3	4	5	6	7
	Salaries & Allowances					
1	Basic Pay	4.59	4.90	6.11	6.17	6.24
2	Dearness Pay	1.18	1.26	1,57	1.58	1.60
3	Dearness Allowance	2.39	2.56	3.19	3.22	3.26
4	House Rent Allowance	0.50	0.53	0.66	0.67	0.68
5	Fixed medical allowance	0.00	0.00	0.00	0.00	0.00
6	Medical reimbursement charges	0.00	0.00	0.00	0.00	0.00
7	Over time payment	0.00	0.00	0.00	0.00	0.00
	Other allowances (detailed list to be					
8	attached)	0.00	0.00	0.00	0.00	0.00
a,	Washing allowance	0.00	0.00	0.00	0.00	0.00
b.	Transport allowance	0.50	0.53	0.66	0.67	0.68
С	L.T.C.	0.00	0.00	0.00	0.00	0.00
d.	Children Education All.	0.08	0.09	0.11	0.11	0.11
e.	Family Pfanning Allow.	0.02	0.02	0.03	0.03	0.03
9	Generation incentive	0.00	0.00	0.00	0.00	0.00
10	Bonus	0.10	0.11	0.13	0.13	0.14
11	Total	9.35	10.00	12.45	12.59	12.73
	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	Deamess Allowance		-	-	-	-
21	Any other expenses	-		-	-	-
22	Total	-	-	-	-	-
23	Total (11+17+22)	9.35	10.00	12.45	12.59	12.73
24	Amount capitalized		-	-		-
25	Net amount	-	-			- 2
26	Add prior period expeses					-
27	Grand total	9.35	10.00	12.45	12.59	12.73



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Administration and General Expenses

Sr.No.	Particulars	Current year FY 14-15 (A)	Ensuing year FY 15-16 (RE)	Ensuing Year 2016-17 (Projections)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6
1	Telephone Expenses	0.07	0.08	0.08	0.0
2	New Papers Expenses	0.00	0.00	0.00	0.0
3	Electricity Expenses	0.04	0.08	0.08	0.0
4	Water Charges Expenses	0.00	0.01	0.01	0.0
5	Printing & Staionery Expenses	0.11	0.25	0.26	0.2
6	Rental Expenses	0.14	0.11	0.12	0.1
7	AMC Expenses	0.22	0.15	0.16	0.1
8	Court Fees Expenses	0.00	0.00	0.00	0.0
9	Advertisement Expenses	0.32	0.23	0.24	0.2
10	CGRF Expenses	0.00	0.00	0.00	0.1
11	Postage Expenses	0,00	0.00	0.00	0.
12	Public meeting Expenses	0.00	0.00	0.00	0.
13	Data Download Charges	0.26	0.22	0.24	0.3
14	Diesel Expenses	0.28	0.16	0.17	0.
15	E-tendering Expenses	0.04	0.13	0.14	0.
16	JERC Fees	0.00	0,00	0.00	0.
17	Office Expenses Daman & Diu	0.64	0.00	0.00	0.
18	Professional Fees & consulting charges	0.64	0.33	0.35	0.
19	Vehicle Expenses	0.03	0.04	0.04	0.
20	Vehicle Rental Expenses	0.91	0.90	0.94	0.
21	Security Service Charges	0.31	0.31	0.32	0.
22	Bank Charges	0.00	0.00	0.00	0.
23	Celebration Expenses	0.77	0.29	0.30	0.
24	Exam Fees	0.10	0.00	0.00	0.
25	Garden Expenses	0.04	0.21	0.22	0.
26	Internet Expense	0.14	0.25	0.26	0.
27	License fees	0.97	0.19	0.20	0.
28	Meter Reading Expense	0.42	0.25	0.26	0.
29	Staff uniform expenses	0.00	0.00	0.00	0.
30	66kV substation amc expenses	0.00	1.31	1.38	1.
31	Cleaning expenses	0.00	0.11	0.11	0.
32	Digital document and data entry charge	0.00	0.16	0.17	0.
33	News paper and magazine expense	0.00	0.00	0.00	0.
34	Office cleaning expense	0.00	0.03	0.03	0.
35	Office expense Daman (fvc)	0.00	0.09	0.09	0.
36	Office expense Daman (fvc)	0.00	0.16	0.17	0.
37	Postage stamp	0.00	0.00	0.00	0.
38	Total	6.44	6.03	6.34	6.
39	Add/Deduct share of others (to be specified)				
40	Total expenses	6.44	6.03	6.34	6.6
41	Less capitalized	0.00	0.00	0.00	0.
42	Net expenses	6.44	6.03	6.34	6,6
43	Add prior period	0.00	0.00	0.00	0.
44	Total expenses charges to revenue	6.44	6.03	6.34	6.6



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding Bad and Doubtful Debts

Rs. Crors

Sr.No.	Particulars	Current year FY 14-15 (Actuals)	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016-17 (Projections)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6
1	Amount of receivable	785.95	779,39	810.81	843.59
1	Provision made for debts in ARR	0.79	0.00	0.00	0.00





## Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding Working Capital for the current and ensuing year

		Amount (in Crores Rs.)		
Sr.No.	Particulars	Previous year FY 15-16 (Actuals)		
1	2	3		
1	Power Purchase Cost for 1 month	58.31		
2	One Month Employee Cost	1.04		
3	One Month R&M Cost	1.05		
4	One Month A&G Cost	0.50		
5	Two Month Fuel Cost	0.00		
6	Total	60.90		

		Amount (in	Crores Rs.)
Sr.No.	Particulars	Ensuing Year 2016- 17 (RE)	Ensuing Year 2017 18 (Projections)
1	2	5	6
1	Receivables of two months of billing	135.14	140.60
2	Less power purchase cost of one month	62.77	71.46
3	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	53.99	53.99
4	Inventory for two months based on annual requirement for previous year	0.96	1.00
5	Total Working Capital requirement	19.33	16.16



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding Foreign Exchange Rate Variation (FERV)

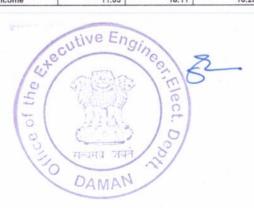
Sr.No.	Particulars	Previous year FY 13-14 (actuals)	Current year FY 14-15 (Actuals)	Ensuing year FY 15-16 (Actuals)	Ensuing Year 2016-17 (RE)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6	7
1	Amount of liability provided					
2	Amount recovered			N/A		
3	Amount adjusted					



Format -20

#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Non Tariff Income

Sr.No.	Particulars	Previous year FY 13-14 (actuals)	Current year FY 14-15 (RE)	Ensuing year FY 15-16 (Projections)	Ensuing Year 2016-17 (Projections)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6	7
1	Meter/service rent	0.95	0.99	1.10	1.10	1.10
2	Late payment surcharge	6.78	9.38	11.20	11.75	12.34
3	Theft/pilferage of energy	0.00	0.00	0.00	0.00	0.00
4	Wheeling charges under	0.00	0.00	0.00	0.00	0.00
5	open access	0.00	0.00	0.00	0.00	0.00
6	Interest on staff loans &	0.00	0.00	0.00	0.00	0.00
7	advance	0.00	0.00	0.00	0.00	0.00
8	Income from trading	0.00	0.00	0.00	0.00	0.00
9	Income staff welfare activities	0.00	0.00	0.00	0.00	0.00
10	Investment & bank	0.00	0.00	0.00	0.00	0.00
11	balances	0.00	0.00	0.00	0.00	0.00
12	Misc. Receipts/income	3.29	7.74	5.99	6.29	6.61
13	Total income	11.03	18.11	18.28	19.14	20.05
14	Add prior period income*	0.00	0.00	0.00	0.00	0.00
15	Total non tariff income	11.03	18.11	18.28	19.14	20.05



Format -21

#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding Revenue from Other Business

(Rs. in crores)

Sr.No.	Particulars	Previous year FY 13-14 (actuals)	Current year FY 14-15 (RE)	Ensuing year FY 15-16 (Projections)	Ensuing Year 2016-17 (Projections)	Ensuing Year 2017-18 (Projections)
1	2	3	4	5	6	7
1	Total revenue from other business					
2	Income from other business to be considered for licensed business as per regulations			Not Applicable		



3-

## Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Lease Details

Sr.No.	Name of Lesser	Gross Assets (Rs.in crores)	Lease entered on	Lease Rentals	Primary period ended/ ending by	
1	2	3	4	5	6	7

Not Applicable



82

#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding Wholesale Price Index (All Commodities)

Sr.No.	Period	WPI/CPI	Increase over previous year
1	2	3	4
1	As on April 1 of Previous Year		•
2	As on April 1 of Current Year		
3	As on April 1 of Ensuing Year		



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Information regarding amount of equity and loan

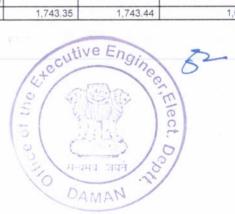
Sr.No.	Period	Amount of equity (Rs. In crore)	Amount of loan (Rs. in crore)	Ratio of equity &
1	2	3	4	5
1	As on March 31 of Previous Year			
2	As on March31 of Current Year		NA	
3	As on March 31 of Ensuing Year			





### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18

Sr No	Particular	FY 2015-16 Proposed by the Licensee	FY 2015-16 Revised by the Licensee	FY 2015-16 Approved by the Commission (Tariff Order dated 6th May, 2016)	FY 2015-16 Actuals
1	Cost of power purchase	867.57	837.22	838.03	699.71
2	Employee costs	10.79	10.60	10.51	12.45
3	R&M expenses	10.79	12.42	11.55	12.60
4	Administration and General expenses	5.27	6.83	6.77	6.03
5	Depreciation	21.89	19.47	19.79	19.28
6	Interest charges (including interest on working capital	20.88	15.86	17.02	15.89
7	Return on NFA / Equity	7.65	7.46	7.46	7,46
8	Provision for Bad Debt	4.13	0.84	0.00	0.00
9	Interest on security deposit	2.21	3.50	3.34	3.45
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0.00	0.00	0.00
11	Total revenue requirement	951.20	914.20	914.47	776.87
12	Less: non tariff income	12.06	18.96	19.02	18.28
13	Net revenue requirement (10-11)	939.14	895.24	895.45	758.59
14	Revenue from tariff	826.36	835.94	847.41	779.39
15	Revenue from UI	43.65	0.71	9.77	3.13
16	(Gap)/surplus (12-13)	(69.13)	(58.59)	(38.27)	23.92
17	(Gap)/surplus for previous year	61.65	115.67	134.92	134.92
18	Carrying cost	0.00	0.00	19.90	0.00
19	Total gap (14+15)	(7.48)	57.08	116.55	158.84
20	Revenue surplus carried over	0.00	0.00	0.00	0.00
21	Carrying Cost	0.00	0.00	0.00	0.00
22	Additional revenue from proposed tariff				
23	Energy sales (MU)	1,743.35	1,743.44	1,684.67	1,691.98



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18

(Rs. in crores)

Sr.No.	Particular	FY 2016-17 Proposed by the Licensee	FY 2016-17 Revised by the Licensee
1	Cost of power purchase	851.98	753.27
2	Employee costs	11.23	12.59
3	R&M expenses	12.98	13.01
4	Administration and General expenses	7.24	6.34
5	Depreciation	21.37	23.73
6	Interest charges (including interest on working capital	21.67	21.37
7	Return on NFA / Equity	7.40	7.17
8	Provision for Bad Debt	0.86	0.00
9	Interest on security deposit	3.50	3.45
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0.00
11	Total revenue requirement	938.23	840.93
12	Less: non tariff income	19.86	19.14
13	Net revenue requirement (10-11)	918.37	821.79
14	Revenue from tariff	862.32	823.96
15	Revenue from UI	1.06	0.40
16	(Gap)/surplus (12-13)	(54.99)	2.57
17	Gap for previous year	57.09	158.84
18	Carrying cost	0.00	0.00
19	Total gap (14+15)	2.10	161.42
20	Revenue surplus carried over	0.00	0.00
21	Carrying Cost	0.00	0.00
22	Additional revenue from proposed tariff		
23	Energy sales (MU)	1,800.46	1,752.78

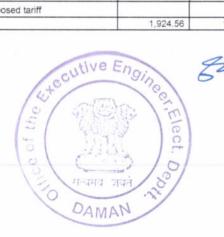


82

#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18

(Rs. in crores)

Sr.No.	Particular	FY 2017-18 Proposed by the Licensee	FY 2017-18 Revised by the Licensee
1	Cost of power purchase	929.06	857.51
2.	Employee costs	11.90	12.73
3	R&M expenses	14.73	13.53
4	Administration and General expenses	7.67	6.66
5	Depreciation	25.50	27.87
6	Interest charges (including interest on working capital	28.92	25.18
7	Return on NFA / Equity	8.40	12.06
8	Provision for Bad Debt	0.92	0.00
9	Interest on security deposit	3.50	3.45
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0.00
11	Total revenue requirement	1,030.60	958.99
12	Less: non tariff income	20.81	20.05
13	Net revenue requirement (10-11)	1,009.79	938.95
14	Revenue from tariff	921.44	857.40
15	Revenue from UI	1.84	1.96
16	(Gap)/surplus (12-13)	(86.51)	(79.59)
17	Gap for previous year	2.11	161.42
18	Carrying cost	0.00	0.00
19	Total gap (14+15)	(84.40)	81.83
20	Revenue surplus carried over	0.00	0.00
21	Carrying Cost	0.00	0.00
22	Additional revenue from proposed tariff		
23	Energy sales (MU)	1,924.56	1,825.51



Page 130

#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Revenue from Existing Tariff

S.No.	Category of Consumers	No. of Consumers	Energy Sales (MU)	Contracted Max Demand KVA	Demand Charges (Rs/KVA)	Tariff Rates (Pfunit)	Demand Charges (Rs. in Crore)	Energy Charges (Rs. in Crore)	Total Revenues (Rs. in Crore)
- 1	Domestic					-X			
	Up to 50 units		0.15		0	1.20		0.02	0.02
	51-200 units		11.72		01	1.80		2.11	2.11
	201-400 units		17.64		0	2.20		3.88	3.88
	401 units and above		58.69			2.55		14,97	14.97
	Total Domestic	46,420	88.20	119557	0			20.97	20.97
2	LIGH								
	All units		0.09		10		0.01		0.01
2	NRS/Commercial								
	0-100 units		19.97		0:	2.65		5.29	5.29
	above 100 units		29.96		0	3.55		10.94	10.94
	Total Commercial	8,209	49.93	19761	0			16.23	16.23
3	Public Lighting	529	7.43	1690	0	4.20	0.00	3.12	3.12
4	Public Water Work	125	2.68	795	0		0.02	0.99	1.01
	Above 20 HP Connected Load		2.68	795	25	3.70	0.02	0.99	
.5	Industrial								
a)	HT								
1)	HT (A) General	762	965.59	445821	105		25.33	453.83	479.16
	For all units		965.59		105	4.70		453.83	
(i)	HT (B) Furnace	22	413.82	58500	375		11.85	188.29	200.14
	For all units		413.82		375	4,55		188 29	
	Total HT Industrial	784	1379.41	505321			37.18	642,12	679.30
b)	LT	1,817	160.54	107471			2.42	56,19	58.61
	For all units		160.54	107471	25	3.50	2.42	56.19	58.61
100	Total HT+LT Industrial	2601	1539.95	612792			39.60	698,31	737.90
6	Agriculture Consumption	1,243	2.46	3672	0			0.20	0.20
	Upto 10 HP		1,71			0.70		0.12	
	Beyond 10 HP		0.75			1.00		0.08	
7	Temporary								
	All units		1.23					0.42	0.42
7		59127	1691.98	758267.00		MEDIAN ED	39.63	740	779.8
	FPPCA								0.00
9	Other Charges								0.00
10	REC charges								0.00

<sup>1.</sup> Figures of HT Industrial for Connected load are in KVA





#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Revenue from Existing Tariff

S.No.	Category of Consumers	No. of Consumers	Energy Sales (MU)	Contracted Max Demand KVA	Demand Charges (Rs/KVA)	Tariff Rates (P/unit)	Demand Charges (Rs. in Crore)	Energy Charges (Rs. In Crore)	Total Revenues (Rs. in Crore)		
1	Domestic					100					
-	Up to 50 units		0.18		0	1.20		0.02	0.02		
	51-200 units		13.70		.01	1.80		2.47	2.47		
	201-400 units		20.62		0	2.20		4.54			
	401 units and above		68.61		-	2.55		17.50	17.50		
	Total Domestic	47,631		131472	0	2.00		24.52	24.52		
-	LIGH	41,001	199.12	101412	-						
- 4	All units		0.10		10		0.01		0.01		
-	NRS/Commercial		9.70				0.01				
- 4	0-100 units		19.12		0	2.66		5.07	5.07		
	above 100 units		28.68		0	3.65		10.47	10.47		
_	Total Commercial	8,419			0			15.53	15.53		
_	Total Commercial	0,418	47.00	21011	-			10.00	10.00		
3	Public Lighting	539	6.72	1869	- 0	4.20	0.00	2.82	2.82		
4	Public Water Work	125	2.86	898	0		0.02	1.06	1.08		
	Above 20 HP Connected Load		2.86	898	25	3.70	0.02	1.06			
. 5	Industrial				100						
- 3	нт										
	HT (A) General	764	996.24	593217	105		33.64	468.23	501.87		
-	For all units		996.24		105	4.70		488.23			
10	HT (B) Furnace	26			275		3.69	194.27	202.96		
-11	For all units	-	426.96		375	4.55		194.27			
	Total HT Industrial	790			313	1,90	42.32	662,50	704.82		
		1,834	164.83	114808			2,58	57.69	60.27		
b	LT	1,834	164.83		25	3.50	2.58	57.69			
	For all units	2024			20	3.30	44.91	720.19			
	Total HT+LT Industrial	2624	1000.04	/56025			44.51	720.13	790.10		
	Agriculture Consumption	1,269	2.59	4887	0			0.20			
	Upto 10 HP		1,80			0.70		0.13			
	Beyond 10 HP		0.79			1.00		0.08			
7	Temporary										
	All units		1.56					0.84			
	Total Revenue Billed	60607	1752,78	927463.51			44,94	764			
8	FPPCA			Property of					0.00		
	Other Charges								0.00		
10	REC charges								0.00		
11	UI								0.40		
12	Grand Total	60607	1752.78	927463,5106			44.94	764	810.51		

<sup>1.</sup> Figures of HT Industrial for Connected load are in KVA



#### Electricity Department of Daman & Diu ANNUAL REVENUE REQUIREMENT FOR THE FY 17-18 Revenue from Existing Tariff

S.No.	Gategory of Consumers	No. of Consumers	Energy Sales (MU)	Contracted Max Demand KVA	Demand Charges (Rs/KVA)	Tariff Rates (P/unit)	Demand Charges (Rs. In Crore)	Energy Charges (Rs. Is Crore)	Total Revenues (Rs. In Crore)
-	Domestic								
-	Up to 50 units		11.03		0	1.20		1,32	1,32
	51-200 units		33.10		0	1,80		5.96	5.96
	201-400 units		44,14		. 0	2.20		9.71	9.71
	401 units and above		22.07			2.55		5.63	
_	Total Domestic	48,938	110.34	132124	0			22.62	22.62
	LIGH								
	All units		0.10		10		0.01		0.01
- 1	NRS/Commercial								
- 4	0-100 units		20.65		0	2,65		5.47	5.47
_	above 100 units		30.97		0	3.65		11:31	11.31
	Total Commercial	8,633	51.62	21984	0			16.78	16.78
_	Total Commercial	-							
	Public Lighting	549	7.19	1884	0	4.20	0.00	3.02	3.02
- 4	Public Lighting								
-	Public Water Work	125	2.89	905	0		0.02	1.07	
- 4	Above 20 HP Connected Load		2.89	905	25	3.70	0.02	1.07	
	i Industrial								
	HI	766	1036.09	690658	105		39.16	486,96	526.1
- 1	HT (A) General	700	1036.09		105	4.70		486.96	3
	For all units	30	_				8.69	202.04	210.7
-11	HT (B) Furnace	36	444.0		375	4.55		202.04	4
	For all units	-					47.65	589.00	736.8
	Total HT Industrial	798	1400.1	34 (49)00			77.12.0		
			400.0	5 116537		-	2.62	59.13	3 61.7
b	LT	1,852				3.50	711111	59.11	3 61.7
	For all units	-	168.9			2.00	50.47	748.13	3 798.6
	Total HT+LT Industrial	2648	1649.0	9 000091	1		40.11		
		1		2 5391	0			0.2	2 0.2
1	6 Agriculture Consumption	1,296		-	-	0.70		0.13	
	Upto 10 HP		1.8			1.00		0.0	
	Beyond 10 HP		0.6	3		1.00	-	0.0	
	7 Temporary		-	-	-			0.8	4 0.8
	All units		1.5				50.50		_
	7 Total Revenue Billed	6218	9 1825.5	102/982.5	-		30,00		0.0
	8 FPPCA		-		-				0.0
	9 Other Charges				-				0.0
- 1	0 REC charges				-	-			1.9
1	1 UI		9 1825.5	1 1027962.53	-	-	50.50	79	

<sup>1.</sup> Figures of HT Industrial for Connected load are in KVA

