

**True up for FY 2013-14,
ARR for Multi Year Tariff Determination for
Control Period FY 2015-16 to FY 2017-18**

And

Tariff Revision Proposal for FY 2015-16

Main Text & Formats (Volume I)

Submitted to

**Joint Electricity Regulatory Commission
Gurgaon**

By:

**Electricity Department of Daman & Diu
(Daman)**

November 2014

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

Filing No.....

Case No.....

IN THE MATTER OF: Filing of Aggregate Revenue Requirement (ARR) for
Multi Year Tariff Determination for the Control Period
FY 2015-16 to 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.
2. This is a Petition indicating the True up Petition for FY 13-14 and the Aggregate Revenue Requirement (ARR) for Multi Year Tariff Determination for the Control Period FY 2015-16 to FY 2017-18 and Tariff Revision Proposal of EDDD for the FY 15-16 (Financial Year 2015-16).

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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).

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. 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. EDDD also has some allocation from Eastern Region Central Generating Stations.

The present transmission and distribution system of EDDD consists of 25.71 circuit kms of 220 kV Double Circuit (D/C) lines, 80.7 kms of 66kV lines, 342 circuit kms of 11kV and above lines and 890.89 kms of LT lines along with 617 transformers. Presently, there are 87 no. 11 kV feeders and 4 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 358 MW from various generating stations including 92 MW from NTPC-SAIL plant located at Bhilai and 38 MW from Ratnagiri Gas and Power Private Limited (RGPPL). At present, EDDD gets power at Daman from 220 kV Ambethi - Magarwada Central Sector line, 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 360 MW by FY 2015-16. 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 13-14, revised estimates for FY 14-15 and the basis, assumptions and projections of individual elements constituting the determination of ARR for the Control Period FY 15-16 to 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 and fifth

Tariff order for FY 11-12, FY 2012-13, FY 2013-14 and FY 2014-15 for EDDD were issued on 3rd October, 2011, 25th August, 2012, 22nd March, 2013 and 1st May, 2014 respectively. The Commission in its Tariff Order for FY 14-15 has approved the ARR for FY 14-15 based on the actual cost for FY 12-13 and estimated expenses for FY 13-14. Further, Commission has approved revision in retail tariff to meet the revenue deficit for FY 14-15.

Chapter 2: True Up for FY 2013-14

2.1 Principles for True Up for FY 2013-14

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 2013-14 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 2013-14. Information provided in the True Up for FY 2013-14 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 22nd March 2013 and the revised parameters in the Tariff Order dated 1st May, 2014 for the FY 13-14.

Accordingly, revised Aggregate Revenue Requirement, revenue and gap for FY 2013-14 are given in the following paragraphs of this chapter.

2.2 Energy Sales for FY 2013-14

The actual energy sale for FY 2013-14 has been shown below along with approved sales by Hon'ble Commission vide Tariff Order dated 22nd March 2013 and the revised sales approved in the Tariff Order dated 1st May, 2014. The actual energy sales for FY 2013-14 are as under:

Table 1: Consumer category wise energy sales for FY 2013-14

Particulars	(MU)		
	FY 13-14 Approved (22nd March, 2013)	FY 13-14 Approved (1st May, 2014)	FY 13-14 Actual
Domestic	82.46	85.44	84.16
LIG/ Kutir Jyoti	0.07	0.04	0.08
Commercial	37.61	73.79	46.75
Agriculture	3.70	3.51	3.05
LT Industry	173.40	163.63	169.59
HT/EHT Industry	1707.94	1592.03	1,441.53

Particulars	FY 13-14	FY 13-14	FY 13-14
Public Lighting	4.46	5.42	7.06
Public Water Works	0.96	1.05	1.20
Temp. Supply	0.42	0.01	0.67
Total Sales	2,011.02	1,924.92	1,754.08

It can be observed from the above that there is a variation in the actual energy sold as compared to the energy sales approved by the Commission. The reasons attributable for the same are:

- The sale in the HT industrial category has fallen in the FY 2013-14 as three no. of consumers having cumulative load of 43.5 MVA have shifted to the open access. The actual sales of the HT category for the FY 2013-14 was 1441.53 MUs as compared to 1592.03 MUs approved by the Hon'ble Commission in its Tariff Order dated 1st May, 2014.
- The actual sold to the Commercial category was 46.75 MUs as compared to 73.79 MUs approved by the Hon'ble Commission in its Tariff Order dated 1st May, 2014.
- Overall the actual sales has decreased by around 170.84 MUs in comparison to the sales approved by the Hon'ble Commission vide its Tariff Order dated 1st May, 2014.

The EDDD requests the Hon'ble Commission to approve the actual sales for FY 13-14.

2.3 Distribution Loss for FY 2013-14

EDDD is making all efforts to reduce the distribution losses in the UT of Daman & Diu. In FY 2013-14, the actual distribution losses were 9.06% as against the approved level of 9.25%.

In the Tariff Order dated 22nd March, 2013 and 1st May, 2014 the Hon'ble Commission had approved the distribution losses at 9.25% for the FY 2013-14. However, now EDDD has computed the distribution loss based on the actual sales data for FY 13-14. Based on that the distribution loss for FY 13-14 has been worked out at 9.06%, which is less than the target set by the Hon'ble Commission. 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 22nd March, 2013 and 1st May, 2014.

Table 2: Distribution Loss

Particulars	(%)		
	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Distribution Loss	9.25%	9.25%	9.06%

The EDDD requests the Hon'ble Commission to approve the actual T&D losses for FY 13-14.

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 13-14 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 2013-14

Particulars	(MU)		
	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Sales	2,011.02	1,924.56	1,754.08
Add: Losses	204.98	196.17	174.67
T&D Losses	9.25%	9.25%	9.06%
Energy Required at Periphery	2,216.00	2,120.73	1,928.74
Transmission loss	81.57	68.46	68.85
Transmission loss (%)	3.55%	3.55%	4.06%
Power purchase	2,297.64	2,194.82	2,020.35
Surplus/ (Deficit) Power	0.00	5.62	22.76

The net energy requirement for sale to retail consumers in FY 2013-14 was 1928.74 MU as compared 2120.73 MU approved by the Hon'ble Commission vide its Tariff Order dated 1st May, 2014.

2.5 Power Purchase Cost

EDDD sources power from Central Generating Stations like Korba, Vindychal, Kahalgaon, Kawas of National Thermal Power Corporation (NTPC) and Tarapur and Kakrapar atomic power stations of Nuclear Power Corporation of India Limited (NPCIL) etc. The actual power purchase for the FY 13-14 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 2013-14

Particulars	MUs		Cost	
	FY 13-14	FY 13-14	FY 13-14	FY 13-14
	Approved	Actual	Approved	Actual
Power Purchase	2,194.84	2,020.35	791.51	750.82

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. 791.51 Crore in the Tariff Order dated 1st May, 2014. Now, the EDDD has claimed a power purchase cost of Rs. 750.82 Crore based on the Annual accounts for FY 13-14 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 13-14 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 13-14.

The EDDD purchased 88.57 MU during FY13-14 through UI at the cost of Rs. 16.38 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 13-14 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. 17.57 Crore and Rs. 20.27 Crore vide Tariff Orders dated 22nd March, 2013 and 1st May, 2014 respectively. During FY 13-14, EDDD incurred actual O&M expense of Rs. 22.53 Crore which was inclusive of employee cost of Rs. 9.35 Crore, Repair & Maintenance Charges of Rs. 8.61 Crore and Administration & General Expenses of Rs. 4.57 Crore as shown in the table below:

Table 5: Operation & Maintenance Expenses for FY 2013-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Employee Cost	7.92	8.73	9.35
R&M	6.08	8.00	8.61
A&G	3.57	3.54	4.57
O&M Expenses	17.57	20.27	22.53

The O&M cost has increased due to the increase in the actual cost incurred by the EDDD during the FY 2013-14 as against the O&M cost approved by the Hon'ble Commission. The revised estimates submitted by the EDDD for FY 2013-14 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 2013-14. The EDDD, therefore, requests the Hon'ble Commission to approve the O&M expenses for FY 13-14 as submitted in herewith.

2.7 Capital Expenditure & Capitalization

The actual capital expenditure incurred by EDDD during the FY 13-14 was Rs. 49.99 Crore, which is lower than that of approved by the Hon'ble Commission in its Tariff Orders dated 1st May, 2014. The capital expenditure incurred and actual capitalization made by the department for FY 13-14 against that approved by the Hon'ble Commission is as shown below:

Table 6: Capital expenditure and capitalization for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Capital Expenditure	60.00	50.00	49.99
Capitalization	46.52	22.36	25.91

The EDDD, therefore, requests the Hon'ble Commission to approve the capital expenditure and capitalization for FY 13-14.

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 2013-14 is shown in the table below:

Table 7: Depreciation for FY 2013-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Opening GFA	301.62	311.51	311.45
Addition during the year	46.52	22.36	25.91

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Closing GFA	348.14	333.87	337.42
Average GFA	324.88	322.69	324.44
Depreciation during the year	15.77	15.61	15.40

The EDDD, requests the Hon'ble Commission to approve the actual depreciation for FY 13-14 without any deduction.

2.10 Interest and Finance Charges

For assessing interest on Loans in FY 13-14, EDDD has considered the opening balance of loans for FY 13-14 as approved by the Hon'ble Commission vide its Tariff Order dated 1st May, 2014 for the Review of the ARR for FY 13-14. The normative loan addition in FY 13-14 has been computed as 70% of the capitalization for FY 2013-14 which works out to Rs. 18.13 Crore. The capitalization for FY 12-13 was Rs. 25.91 Crore as per the audited annual accounts for FY 13-14.

In line with the approach adopted by the Hon'ble Commission in its Tariff Order dated 1st May, 2014, 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 13-14 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 13-14

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Opening Loan	32.81	39.73	39.73
Loan for additional Capex (70:30 debt-equity)	32.65	15.65	18.13
Loan Repayment (10% of Opening Balance)	3.51	4.20	2.89

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Closing Loan	61.87	51.19	54.97
Interest Cost on Avg. Loans	6.84	6.57	6.98

The EDDD, requests the Hon'ble Commission to approve the interested on loan computed for FY 13-14.

2.11 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 2013-14 incurred by EDDD against the approved amount for the consideration of the Hon'ble Commission:

Table 9: Interest on Working Capital for FY 2013-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
O&M expense for 1 month	1.47	1.70	1.88
Power Purchase Cost for 1 month	68.93	66.23	62.57
Fuel cost for two months	0.00	0.00	0.00
Total Working Capital requirement	70.40	67.93	64.45
Security Deposit	9.79	9.79	0.00
Net Working Capital required after deduction of Security Deposit	60.61	58.14	64.45
Interest on Working Capital	8.76	8.40	9.51

The EDDD, requests the Hon'ble Commission to approve the interested on working capital computed for FY 13-14.

2.12 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 2013-14.

The return on capital base as computed for FY 2013-14 is as shown below:

Table 10: Return on Equity for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Return on Equity	5.84	6.12	6.16

The EDDD, requests the Hon'ble Commission to approve the return on capital base computed for FY 13-14.

2.13 Non Tariff Income

The actual Non-Tariff Income of EDDD for FY 13-14 was Rs. 11.03 Crore as against Rs. 6.47 Crore approved by the Hon'ble Commission. 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 13-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Non tariff Income	9.19	6.47	11.03

The EDDD, requests the Hon'ble Commission to approve the actual Non Tariff Income for FY 13-14.

2.14 Aggregate Revenue Requirement for FY 13-14

Based on above expenses, table below summarizes actual Aggregate Revenue Requirement for FY 13-14 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 13-14

Particulars	(Rs. Cr.)		
	FY 13-14 Approved (22nd March, 2013)	FY 13-14 Approved (1st May, 2014)	FY 13-14 Actual
Power Purchase Cost	827.17	791.51	750.82
O&M Expense	17.57	20.27	22.53
Depreciation	15.77	15.61	15.40
Interest Cost on Long-term Capital Loans	6.84	6.57	6.98
Interest on Working Capital Loans	8.76	8.40	9.51
Return on Capital Employed	5.84	6.12	6.16
Provision for Bad Debt	4.45	0.00	-
Interest on security deposit	0.86	0.76	2.21
RPO provisioning to cover backlog of the previous years upto current year	0.00	41.84	0.00
Less:			
Non-Tariff Income	9.19	6.47	11.03
Annual Revenue Requirement (ARR)	878.07	884.61	802.58

The EDDD, requests the Hon'ble Commission to approve the ARR computed for FY 13-14.

2.15 Revenue for FY 13-14

During the FY 13-14, EDDD's actual revenue amounted to Rs. 876.68 Crore (including the amount received on account of PPCA charges of Rs. 29.68 Crore) as against Rs. 878.05 Crore and Rs. 978.29 Crore as approved vide its Tariff Order dated 22nd March, 2013 and 1st May, 2014 respectively by the Hon'ble Commission.

Table 13: Revenue for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14	FY 13-14
	Approved (22nd March, 2013)	Approved (1st May, 2014)	Actual
Revenue from sale of power	878.05	980.96	869.28
Revenue from surplus sale of power	0.00	0.50	7.39
Total Revenue	878.05	981.46	876.68

2.16 Revenue (Gap) / Surplus for FY 13-14

The Hon'ble Commission in Order dated 22nd March, 2013 has approved a total Aggregate Revenue Requirement (ARR) of Rs. 878.07 Crore for FY 13-14. Further, the Commission has computed the revised ARR for FY 13-14 in the Order dated and 1st May, 2014 of Rs. 884.61 Crore. Based on the annual accounts for FY 13-14 and the actual expenses incurred by the EDDD, the revised ARR for FY 2013-14 has been arrived at Rs. 802.58 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. 869.28 Crore and revenue from sale of surplus energy of Rs. 7.39 Crore is summing up to Rs. 876.68 Crore. Accordingly, total revenue surplus of EDDD for FY 13-14 is computed at Rs. 74.10 Crore as depicted in the Table below:

Table 14: Revenue (Gap)/surplus for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14	FY 13-14
	Approved (1st May, 2014)	Actual
Annual Revenue Requirement	884.61	802.58
Revenue from sale of power	980.96	869.28
Revenue from Surplus Power Sale	0.50	7.39
Revenue (Gap)/surplus	96.85	74.10

EDDD requests the Hon'ble Commission to approve afore-mentioned revenue surplus for FY 13-14.

Chapter 3: ARR for the MYT Control Period FY 2015-16 to FY 2017-18

EDDD is submitting its ARR for the MYT Control Period FY 2015-16 to 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 MYT Control Period FY 2015-16 to FY 2017-18.

The following sections explain in detail the basis and forecasts of the following elements for the MYT Control Period FY 2015-16 to FY 2017-18:

- a. Category wise Energy Sales & Revenues at existing tariffs
- b. T&D Losses and Energy Requirement
- c. 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
- d. Determination of Gap between Revenue & Costs and the arrangements to cover the revenue gap for the FY 2015-16.

3.1 Load Growth

1. The Table given below summarizes the growth in sanctioned load over the past 3 years. The highest growth of 9.25% has been seen in the HT Industrial category. Overall growth for the UT has been 4.01%.

Table 15: Past Year's Load Growth

Consumer Category	FY 11-12	FY 12-13	FY 13-14
kVA	Actual	Actual	Actual
Domestic	55,440	55,080	55,991
Commercial	35,214	18,180	17,654
Agriculture	2,065	2,252	2,512
LT Industry	94,901	96,818	97,780
HT/EHT Industry	369,685	483,024	488,495
Public Lighting	1,624	1,919	1,649
Public Water Works	675	654	664
Total	559,604	657,927	664,745

- 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.
- To project the load growth for the different consumer categories a two year CAGR has been considered for the domestic, agriculture, LT industry, HT industry, and public lighting. However, for the commercial and public water works category a normalized CAGR has been considered to project the load growth for the control period. The CAGR along with the projected load for the control period has been given in the table below:

Table 16: Projected load growth during Control Period (FY 2015-16 to FY 2017-18)

Consumer Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	CAGR
kVA	R E	Projected	Projected	Projected	
Domestic	56269	56548	56829	57110	1.65%
Commercial	17794	17935	18077	18221	0.79%
Agriculture	2771	3056	3370	3717	10.29%
LT Industry	99252	100746	102263	103803	1.51%
HT/EHT Industry	561532	645488	741998	852937	14.95%
Public Lighting	1662	1674	1687	1700	0.77%
Public Water Works	669	675	681	686	0.82%
Total	739,949	826,123	924,905	1,038,174	

3.2 Consumer Growth

1. The Table 17 below summarizes the category wise growth in consumers over the past 3 years.

Table 17: Past Year's Consumer Growth

Consumer Category	FY 11-12	FY 12-13	FY 13-14
	Actual	Actual	Actual
Domestic	46023	42,507.0	43,962
Commercial	9236	8,158.0	7,972
Agriculture	1,157	1,173.0	1,191
LT Industry	1,765	1,926.0	1,799
HT/EHT Industry	827	801.0	798
Public Lighting	188	369.0	339
Public Water Works	77	77.0	71
Total	59,273.0	55,011.0	56,132

2. Annual Growth in the number of consumers for the MYT Control Period is projected on the basis of the y-o-y growth in the consumers across different categories. The CAGR along with the projected consumer growth for the control period has been given in the table below:

Table 18: Projected consumer growth during Control Period (FY 2015-16 to FY 2017-18)

Consumer Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	CAGR
	R E	Projected	Projected	Projected	
Domestic	45,109	46,286	47,494	48,733	2.61%
Commercial	8,175	8,384	8,598	8,818	2.55%
Agriculture	1,216	1,241	1,267	1,294	2.10%
LT Industry	1,816	1,834	1,851	1,869	0.96%
HT/EHT Industry	804	810	816	823	0.76%
Public Lighting	345	352	359	366	1.92%
Public Water Works	71	71	71	71	0.00%
Total	57,537	58,979	60,457	61,973	

3.3 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 2009-10 to FY 2013-14 has been considered to arrive at the Compound Annual Growth Rate (CAGR) for each of the customer categories. As the data available for FY 2014-15 pertains only to the first 6 months of the year, the figures for FY 2014-15 were not considered for arriving at the growth rates. However, the figures available for 6 months of FY 2014-15 have been annualized, in line with the past trends to arrive at sales estimates for FY 2014-15. The figures for FY 2014-15 have been further used as the base for forecasting the values for the Control Period, viz. FY 2015-16, FY 2016-17 and FY 2017-18.
2. Table 19 below presents the category-wise energy sales for the past 5 years. The overall growth in sales has been 4.10% p.a., mainly contributed by increase in the HT industrial Category.

Table 19: Past Years' Energy Sales Growth

Consumer Category	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
MUs	Actual	Actual	Actual	Actual	Actual
Domestic	57.92	64.20	73.85	77.79	84.16
LIG/ Kutir Jyoti	0.05	0.10	0.10	0.04	0.08
Commercial	27.73	29.30	33.83	38.74	46.75
Agriculture	2.53	2.60	2.70	4.22	3.05
LT Industry	139.12	151.00	156.84	161.21	169.59
HT/EHT Industry	1,236.51	1,402.00	1,496.83	1,572.81	1,441.53
Public Lighting	4.36	4.40	5.59	6.51	7.06
Public Water Works	0.88	0.90	0.92	1.12	1.20
Temp. Supply	0.00	0.70	0.51	0.51	0.67
Total Sales	1,469.10	1,655.20	1,771.17	1,862.95	1,754.08

3. 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 category-wise consumption for the MYT Control Period FY 2015-16 to 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 2014-15 has been projected by considering the actual sales for the first six months of FY 2014-15 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 14-15, 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 14-15.
5. The sales in the HT industrial category has fallen in the FY 2013-14 over the FY 2012-13 as three no. of consumers having cumulative load of 43.5 MVA have shifted to the open access. For projecting the sales for the MYT control period for the HT industrial category a three year CAGR of 8.35% has been considered.
6. For the domestic consumers, the EDDD has projected the energy sales for MYT control period by applying a Compounded Annual Growth Rate (CAGR) of 9.79% on the estimated sales for FY 14-15. Whereas, a CAGR of 13.95% has been considered for estimation of sales in commercial category.
7. For the agriculture and LT industry, the EDDD has projected the energy sales for the MYT control period by applying a CAGR of 4.80% and 5.08% on the estimated sales for FY 14-15.
8. The table given below summarizes the projections of category wise increase in energy sales over the control period (FY 2015-16 to FY 2017-18), comparing them to the approved sales of FY 2014-15. As can be observed, the overall energy sales in UT of Daman & Diu are significantly dependent upon HT industrial consumption.
9. EDDD submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 20: Projected Category wise Energy Sales (MU) for MYT Control Period

Consumer Category	FY 14-15	FY 14-15	FY 15-16	FY 16-17	FY 17-18	CAGR considered for projections
MUs	Approved	RE	Projected	Projected	Projected	
Domestic	94.26	90.69	99.57	109.32	120.02	9.79%
LIG/ Kutir Jyoti	0.04	0.07	0.08	0.09	0.10	11.52%
Commercial	82.49	46.90	53.44	60.89	69.38	13.95%

Consumer Category	FY 14-15	FY 14-15	FY 15-16	FY 16-17	FY 17-18	CAGR considered for projections
MUs	Approved	RE	Projected	Projected	Projected	
Agriculture	3.31	2.33	2.44	2.56	2.68	4.80%
LT Industry	171.87	154.12	161.95	170.17	178.80	5.08%
HT/EHT Industry	1724.95	1,301.77	1,410.46	1,528.22	1,655.82	8.35%
Public Lighting	5.80	9.12	10.28	11.60	13.09	12.80%
Public Water Works	1.14	3.84	4.15	4.48	4.84	8.06%
Temp. Supply	0.01	0.98	0.99	1.00	1.01	1.00%
Total Sales	2083.87	1,609.81	1,743.35	1,888.32	2,045.74	

3.4 T&D Loss Reduction

1. 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 distribution area.
2. EDDD has achieved T&D loss level of 9.06% for the FY 2013-14 as against the target of 9.25% given by the Hon'ble Commission in the Tariff Order for the FY 2013-14. 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 8.70% for the FY 2014-15 in the Tariff Order dated 1st May, 2014. The EDDD proposes to reduce the T&D losses to 8.70% for FY 14-15. The loss reduction trajectory for the Control Period is as given in the table below:

Table 21: Proposed T&D Loss Trajectory

	FY 14	FY 15	FY 16	FY 17	FY 18
	Actual	RE	Projected	Projected	Projected
T&D Losses	9.06 %	8.70%	8.60%	8.50%	8.40%

3. Considering the proposed capital expenditure in transmission and distribution network during FY 14-15, the EDDD expects to reduce the losses by approximately 0.10% during the MYT Control Period.
4. The EDDD submits to the Commission to approve the T&D losses submitted herein.

3.5 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 22: Energy Requirement of the System

Particulars	FY 2013-14 (Actual)	FY 2014-15 (RE)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Energy sales within the state (MUs)	1,754.08	1,609.81	1,743.35	1,888.32	2,045.74
Distribution Losses					
%	9.06%	8.70%	8.60%	8.50%	8.40%
MU	174.66	153.40	164.04	175.42	187.60
Energy required at state periphery(MUs)	1928.74	1,763.21	1,907.39	2,063.74	2,233.34
Surplus power sale(MUs)	22.76	231.53	204.57	207.35	76.75
Transmission losses(MUs)	68.85	85.06	86.63	92.01	93.68
Energy Available	2020.35	2079.81	2198.59	2363.11	2403.76

3.6 Energy Availability

1. 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, Vindychal, Kahalgaon, Kawas, Tarapur and Kakrapar atomic power stations of NPCIL etc. to meet its energy requirement.
2. The EDDD for the purpose of estimation of the power availability during FY 13-14 and FY 14-15 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 14-15, actual power purchase for the first six months of FY 14-15 has been considered. For projection of energy availability for the MYT Control Period, 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.

3.6.1 Power Purchase

1. 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).
2. Since first six months of FY 14-15 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 2014 to March 2015 has been estimated based on the revised allocation issued by the Western Region Power Committee (WRPC) dated August, 2014. The energy allocation from various generating stations is summarized in table below:

Table 23: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	(%)
NTPC Stations			
KSTPP	2,100	49	2.35%
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%

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	(%)
KAWAS	656	32	4.86%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC)	500	92	18.30%
Sipat-I	1,980	25	1.29%
Sipat-II	1,000	10	1.00%
MSTPS-I	500	13	2.54%
Subtotal	11654	305	
Eastern Region			
KHSTPP-II	1000	1.30	0.13%
Subtotal	1000	1.30	
NPCIL			
KAPPS	440	8.30	1.89%
TAPP 3&4	1080	12.77	1.18%
Subtotal	1520	21	
Others			
Ratnagiri	1967	38	1.93%
Subtotal	1967	38	
Grand Total	16141	365	

- Actual power purchase in first six months of FY 14-15 and power allocation of 92 MW from NTPC-SAIL Bhilai power plant has been considered while estimating the power availability from this plant during FY 14-15.
- Actual power purchase in first six months of FY 14-15 from Ratnagiri Gas Power Plant has been considered. However, it is expected that EDDD will not be getting any power from Ratnagiri for the rest of the FY 2014-15 and therefore no power purchase from the plant has been considered for the remaining six months of FY 2014-15.

5. During the control period, it is expected that capacity from the following plants will also be allocated to EDDD. The details of the plants and the capacity to be allocated to EDDD are given in the table below:

Table 24: Energy Allocation from Upcoming Central Generating Stations for the Control Period

Particulars	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	MW	MW	(%)
NTPC Stations			
VSTPS-V	500	2	0.40%
LARA	4,000	4	0.10%
MOUDA-II	1,000	6	0.60%
SOLAPUR	1,920	8	0.42%
GADARWARA	2,640	2	0.08%
Subtotal	10060	22	
NPCIL			
KAPPS (III & IV)	100	5.44	5.44%
Subtotal	100	5.44	
Grand Total	10160	27.44	

6. The EDDD will start getting power from VSTPS-V from FY 2015-16, MOUDA-II, Solapur and KAPPS (III&IV) from FY 2016-17 and from LARA and GADARWARA from FY 2017-18. The power purchase from the plants has been considered accordingly.
7. For projecting the power availability for FY 15-16 to FY 2017-18, EDDD has considered average allocation of firm and infirm power from the western region generation stations (NTPC and NPCIL) as per the allocation specified in the notification no's. WRPC/Comml-I/6/Alloc/2014/7872 dated 22.08.2014 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.

8. Additionally, EDDD has 92 MW allocations from NSPCL Bhilai power stations. Energy availability from NSPCL Bhilai power stations for FY 15-16 to FY 2017-18 has been considered by taking 92 MW allocation from the plant.
9. Power purchase quantum from the NTPC stations for the six months of the current year and FY 15-16 to FY 2017-18 has been calculated based on the installed capacity of each plant and by applying the average of previous three and half years (FY 12 to FY 14, FY 14 first three months) PLF to calculate the plant-wise gross generation. For NSPCL, an average PLF of 90% has been considered in line with the actual PLF for the first six months of FY 14-15.
10. 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 (for the first six months) have been taken into account.
11. Auxiliary consumption of 9% and 3% has been considered for estimating the gross generation from coal and gas based generating stations respectively.
12. For FY 14-15, EDDD has considered power purchase of 12.50 MU and 56.26 MU from solar and non-solar renewable energy sources respectively as per the JERC's Procurement of Renewable Energy Regulations, 2010. The EDDD had filed a petition with the Hon'ble Commission in respect of Request for proposal documents for procurement of renewable energy of 70 MUs on yearly basis as per the case-I RE bidding guidelines for Tariff Based Competitive Bidding Process for grid connected power projects based on renewable energy sources issued by the Government of India. The Hon'ble Commission has approved RFP document for the bidding vide its Order dated 15.09.2014. The EDDD is in the process of inviting bids for the same and it is expected that from FY 2015-16 the department will be able to procure the non solar energy through this process. Therefore, for the Control Period the EDDD has considered purchase of renewable energy of 70 MUs to meet its RPO target through this route.
13. The EDDD is also in the process of installation of 4 MW wind power generators at Daman and Diu. The wind power shall generate approximately 17 MUs per year from FY 2016-17 onwards. Hence, total non solar energy available with the EDDD including purchase through Case - I bidding and own wind generation will be 70 MUs for the FY 15-16 and 87 MUs per year during FY 2016-17 and FY 2017-18.

14. To meet the solar obligation for the control period FY 2015-16 to FY 2017-18, the department is in the process of installing two solar plants, a 1 MW plant in Daman and a 3MW plant in Diu. It is expected that the plants will be commissioned by March, 2015. Two more solar plants will be coming up at Daman & Diu. One 6 MW solar plant in Diu and one 4MW solar plant at Daman. It is expected that the plants will be commissioned by the end of FY 2015-16. Therefore, for the control period the EDDD will meet its solar obligation through these five plants. The per MW unit generation from the solar plants will be approx. 1.6 MUs. A summary of the same is given in the table below:

Table 25: Expected Installed Capacity of Solar Plants for the Control Period

Solar Capacity (MW)	FY 2015-16	FY 2016-17	FY 2017-18
Daman	1	5	5
Diu	3	9	9
Total	4	14	14

Table 26: Expected Generation from Solar Plants for the Control Period

Solar Generation (MUs)	FY 2015-16	FY 2016-17	FY 2017-18
Daman	1.6	8.0	8.0
Diu	4.8	14.4	14.4
Total	6.4	22.4	22.4

15. The department has installed grid interactive roof top solar panels on the government buildings in Daman & Diu. Till now the department has installed 263 kW capacity solar panels all across Daman & Diu and it is proposed to further augment this capacity by 300 kW by the end of FY 2014-15. The existing grid connected roof-top solar plants are expected to generate approximately 4 MUs per year, summing up the total solar generation to 10.4 MUs in FY 2015-16 and 26.4 MUs per year during FY 2016-17 and FY 2017-18.
16. For computing the power availability at the periphery, 4.09% weighted average external transmission losses have been applied on the gross power purchase for FY 14-15 and FY 2015-16 to FY 2017-18.
17. Table 27 below depicts the station wise power purchase for FY 14-15 and FY 2015-16 to FY 2017-18.

Table 27: Power Purchase Quantum

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected
NTPC Stations				
KSTPP	339.92	344.43	344.43	344.43
KSTPP-III	41.27	41.98	41.98	41.98
VSTPP-I	89.73	93.36	93.36	93.36
VSTPP-II	62.52	65.12	65.12	65.12
VSTPP- III	76.16	79.10	79.10	79.10
VSTPP- IV	85.52	88.98	88.98	88.98
KAWAS	114.06	163.96	163.96	163.96
JGPP	117.71	177.72	177.72	177.72
Bhilai Unit-I &II(NTPC)	611.90	646.27	646.27	646.27
Sipat-I	161.80	149.09	149.09	149.09
Sipat-II	67.15	58.47	58.47	58.47
MSTPS-I	32.73	50.71	50.71	50.71
VSTPS-V	0.00	13.55	13.55	13.55
LARA	0.00	0.00	0.00	27.10
MOUDA-II	0.00	0.00	40.66	40.66
SOLAPUR	0.00	0.00	54.21	54.21
GADARWARA	0.00	0.00	0.00	13.55
Subtotal	1800.47	1972.75	2067.61	2108.27
Eastern Region				
KHSTPP-II	10.02	7.24	7.24	7.24
Subtotal	10.02	7.24	7.24	7.24
NPCIL				
KAPPS	56.69	60.12	60.12	60.12
TAPP 3&4	86.91	78.08	78.08	78.08
KAPPS (III & IV)	0.00	0.00	36.66	36.66
Subtotal	143.61	138.20	174.86	174.86
Others				
Ratnagiri	14.42	0.00	0.00	0.00

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected
Subtotal	14.42	0.00	0.00	0.00
<u>Power purchase from Other Sources</u>				
Power purchase from Indian E. Exchange	0.00	0.00	0.00	0.00
Short term arrangement	42.53	0.00	0.00	0.00
Solar	12.50	10.40	26.40	26.40
Non Solar	56.26	70.00	87.00	87.00
Subtotal	111.29	80.40	113.40	113.40
Gross Power Purchase	2079.81	2198.59	2363.11	2403.76
External Losses	85.06	86.63	92.01	93.68
Total Power Purchase	1994.74	2111.95	2271.10	2310.09

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

3.6.2 Energy Requirement & Availability

1. 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 14-15 and the MYT Control Period FY 15-16 to FY 2017-18.

Table 28: Energy Balance

Particulars	FY 2013-14 (Actual)	FY 2014-15 (RE)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Energy sales within the state (MUs)	1,754.08	1,609.81	1,743.35	1,888.32	2,045.74
Distribution Losses					
%	9.06%	8.70%	8.60%	8.50%	8.40%
MU	174.66	153.40	164.04	175.42	187.60
Energy required at state periphery(MUs)	1928.74	1,763.21	1,907.39	2,063.74	2,233.34
Surplus power sale(MUs)	22.76	231.53	204.57	207.35	76.75

Particulars	FY 2013-14 (Actual)	FY 2014-15 (RE)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Transmission losses(MUs)	68.85	85.06	86.63	92.01	93.68
Energy Available	2020.35	2079.81	2198.59	2363.11	2403.76

3.6.3 Power Purchase Cost

1. The cost of purchase from the central generating stations for FY 14-15 and the MYT Control Period is estimated based on the following assumptions:

- The cost of power purchase for FY 14-15 are based on actual power purchase bills, received by the EDDD during the first six months of FY 14-15. Each element of the power purchase cost i.e. fixed, variable and other cost have been estimated for each generating station by considering 6 months (April 14 to September 14) actual cost incurred by the EDDD. The projection for remaining six months has been done on pro-rata basis by considering the actual power purchase cost of the first six months of FY 14-15.
- Fixed cost for the MYT Control Period has been projected considering a 12% escalation over the estimated fixed cost for various stations for FY 14-15.
- Variable cost for each NTPC generating stations for the Control Period has been projected based on the increase in the actual average variable cost per unit for the first six months of FY 14-15.
- The EDDD has projected other charges (tax, incentives, etc) for the Control Period at similar level as estimated for full year of FY 14-15.
- For nuclear plants i.e. KAPP and TAPP single part tariff increase in the actual average variable cost per unit for the first six months of FY 14-15 have been considered for projecting the power purchase cost for the Control Period.
- For NTPC-SAIL Bhilai unit 1 & 2, fixed, variable and other charges have been projected for the entire FY 14-15 based on the actual cost for first six months of FY 14-15. An escalation of 12% has been taken to project the fixed cost for the Control Period and for projecting the variable cost the increase in the actual average variable cost per unit for the first six months of FY 14-15 has been taken into consideration.

- For power purchase from renewable energy sources, Commission's approved tariff for solar and non-solar power in the Tariff Order has been taken into account for FY 14-15. For the Control Period, the EDDD has outsourced the maintenance cost of the solar plants and the wind power generators to BHEL. For the purchase through Case - I bidding, Commission's approved tariff for non-solar power in the Tariff Order for FY 2014-15 has been taken into account for projecting the cost during the Control Period.

2. The Total Power Purchase cost from various sources for FY 14-15 and the MYT Control Period is summarized in Table below:

Table 29: Power Purchase Cost (in Rs. Crore)

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected
NTPC Stations				
KSTPP	53.65	63.70	71.74	80.81
KSTPP-III	11.22	12.60	14.06	15.69
VSTPP-I	19.57	22.50	25.11	28.03
VSTPP-II	14.30	16.53	18.61	20.98
VSTPP- III	19.29	21.68	23.84	26.22
VSTPP- IV	24.49	27.64	30.58	33.84
KAWAS	45.40	61.14	63.94	67.02
JGPP	51.59	69.65	72.90	76.53
Bhilai Unit-I &II(NTPC)	241.73	262.57	277.27	293.66
Sipat-I	51.21	54.66	60.64	67.30
Sipat-II	22.12	22.82	25.00	27.42
MSTPS-I	25.58	42.77	56.89	76.63
VSTPS-V	0.00	4.65	4.17	4.07
LARA	0.00	0.00	0.00	8.86
MOUDA-II	0.00	0.00	12.36	10.98
SOLAPUR	0.00	0.00	21.09	19.03
GADARWAR A	0.00	0.00	0.00	4.92

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected
Subtotal	580.15	682.91	778.21	861.98
Eastern Region				
KHSTPP-II	3.99	3.89	4.58	5.41
Subtotal	3.99	3.89	4.58	5.41
NPCIL				
KAPPS	13.36	14.33	14.50	14.68
TAPP 3&4	24.57	22.28	22.49	22.69
KAPPS (III & IV)	0.00	0.00	8.72	8.72
Subtotal	37.93	36.61	45.72	46.10
Others				
Ratnagiri	28.62	32.03	35.85	40.12
Subtotal	28.62	32.03	35.85	40.12
<u>Power purchase from Other Sources</u>				
Power purchase from Indian E. Exchange	0.00	0.00	0.00	0.00
Short term arrangement	21.91	0.00	0.00	0.00
Solar	11.25	0.00	0.00	0.00
Non Solar	22.50	28.00	28.00	28.00
Subtotal	55.66	28.00	28.00	28.00
Gross Power Purchase	706.36	783.44	892.36	981.61

3.6.4 Transmission and Other Charges

1. 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 14-15 based on the actual transmission charges for six months of FY 14-15 and pro-rata allocation of the same for remaining six months.

2. For projecting the PGCIL transmission charges for the Control Period, an escalation of 12% over the estimated FY 14-15 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 charges for ensuing year.

Table 30: Total Power Purchase Cost for FY 14-15 and the MYT Control Period

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
MUs	RE	Projected	Projected	Projected
Gross Power Purchase Cost	706.36	783.44	892.36	981.61
PGCIL charges	68.89	77.16	86.42	96.79
WRLDC	0.28	0.31	0.35	0.35
MSTCL	3.50	3.92	4.39	4.61
REC	2.44	2.73	3.06	3.06
Total Power Purchase Cost (including Transmission Cost)	781.48	867.57	986.58	1086.43

3.7 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.
2. Summary of the past five year operation and maintenance expense is summarized in table below:

Table 31: Operation & Maintenance Expense (Rs. Crore)

Year	O&M Expense
	Actual
FY 09-10	9.35
FY 10-11	9.46
FY 11-12	14.62
FY 12-13	19.11
FY 13-14	22.53

- The total O&M expense for FY 13-14 is Rs. 22.53 Crore as compared to Rs. 19.11 Crore in FY 2012-13, an increase of over Rs. 3.42 Crore.
- The methodology adopted by EDDD for projecting the values of each component of the O&M expense for FY 13-14 & the MYT Control Period has been explained in the following section.

3.7.1 Employee Expense

- 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.
- Based on the various expense head related to employee booked during six months of FY 14-15, EDDD has estimated the total employee cost for full year of FY 14-15 as Rs. 10.04 Crore. Salary expenses for the MYT Control Period is estimated based on the average increase in the Wholesale Price Index (WPI) for immediately preceding three years. The computation of the same has been shown in the table given below:

Table 32: WPI

Financial Year	WPI Index	Growth (WPI)
FY 2010-11	143.32	
FY 2011-12	156.13	8.94%

Financial Year	WPI Index	Growth (WPI)
FY 2012-13	167.62	7.36%
FY 2013-14	177.64	5.98%
Average		7.43%

2. As per the Tariff regulations, the employees' expenses have been calculated as per the following formulae:

$$\text{EMP}_n = (\text{EMP}_b * \text{WPI inflation}) + \text{Provision}$$

where:

EMP_n: Employee expense for the year n

EMP_b; 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 7.43%. Total employee cost of EDDD for FY 14-15 and the Control Period is as given in the table below:

Table 33: Employee Expenses (Rs. Crore)

Employee Expenses (Rs. Crs)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
	RE	Projected	Projected	Projected
Employee Expenses	10.04	10.79	11.59	12.45

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

3.7.2 Repairs & Maintenance Expense

- 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.
- The actual R&M expense for FY 2013-14 is Rs. 9.25 Crore.

3. For FY 14-15, EDDD has considered the R&M expense of Rs. 10.81 Crore. 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:

$$R\&M_n = K_b * GFA_n * \text{Inflation Index}$$

where:

R&M_n: Repairs & Maintenance expense for nth year

GFA_n: Opening Gross Fixed Assets for nth year

K_b: 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

The computation of the WPI has been given in the table 32. The CPI inflation has been computed as given in the table below:

Table 34: CPI

Financial Year	CPI Index	Growth (CPI)
FY 2010-11	179.75	
FY 2011-12	194.83	8.39%
FY 2012-13	215.17	10.44%
FY 2013-14	236.00	9.68%
Average		9.50%

4. For projecting the R&M expense for the Control Period, the EDDD has considered the inflation index as 8.67% (CPI: WPI :: 60 : 40). Total & maintenance cost of EDDD for FY 14-15 and the Control Period is summarized in the table below:

Table 35: Repairs & Maintenance Expense (Rs. Crore)

Repair & Maintenance Expense (Rs. Crs)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
	RE	Projected	Projected	Projected
R&M Expenses	9.25	10.81	13.41	17.07

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.

3.7.3 Administration & General Expense

1. 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 13-14 is Rs. 4.57 Crore. For FY 14-15, EDDD has considered the A&G expense of Rs. 4.91 Crore.

3. For projecting the A&G expenses for the Control Period the following formula has been used as given in the MYT Regulations:

$$A\&G_n = (A\&G_b * WPI \text{ inflation}) + \text{Provision}$$

where:

A&G_n: A&G expense for the year n A&G_b:

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 computation of the WPI has been given in the table 32. The R&M expenses projected for the Control Period have been given in the table below:

Table 36: A&G Expense (Rs. Crore)

A&G Expense (Rs. Crs)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
	RE	Projected	Projected	Projected
A&G Expenses	4.91	5.27	5.66	6.08

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.
5. In line with the above, the Hon'ble Commission is requested to approve the 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 14-15 and the Control Period is summarized in table below.

Table 37: Total O&M Expense (Rs. Crore)

O&M Expenditure	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
	RE	Projected	Projected	Projected
Employee Cost	10.04	10.79	11.59	12.45
R&M Cost	9.25	10.81	13.41	17.07
A&G Expenditure	4.91	5.27	5.66	6.08
Total O&M Expenditure	24.20	26.87	30.66	35.61

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

3.8 Capital Expenditure Plan

1. 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. Based upon the above mandate the CAPEX Plan proposals (scheme wise) for FY 15-16 to FY 17-18 under the MYT Control Period FY 2015-18 have been formulated by EDDD in order to effect better planning, budgeting and monitoring at macro & micro levels. The schemes are divided under the following two categories:
 - A. Ongoing Schemes

B. New Schemes

A. Ongoing Schemes

The ongoing schemes have been given in the table below:

Table 38: Ongoing Schemes

Sr.No.	Name of Scheme	Total Estimated amount for the Control Period (Rs. Lakh)	Proposed Expenditure in Rs. Lakh.		
			2015-16	2016-17	2017-18
1	Improvement and Renovation of 220 KV Sub-station	500	200	200	100
2	Establishment of 1x160 MVA + 2x50MVA, 220/66 KV Sub-station at Ringanwada, Nani Daman alongwith associated 220KV D/C line from 220 KV lines for Ringanwada Sub-station in Daman	4045	3000	1045	0
3	Normal Development and Release of Service Connection	1350	450	450	450
4	Providing Underground power Distribution system in Daman & Diu city/rural and extension of the scheme to Industrial Estate.	3750	1250	1250	1250
5	Augmentation of 66/11 KV existing Sub-stations at Daman and Diu	2000	600	1000	400
6	Construction of control room and office Building at Daman & Diu	200	100	50	50
7	Providing Off-grid solar PV system and Solar street lights in Daman and Diu	800	400	200	200
8	Installation of Solar PV-Lighting system on places of common use such as Panchayat Building, Community Halls, Schools etc	200	80	60	60
9	Electrification of Tribal area and providing Street Lighting in village road in Daman	50	25	15	10

Sr.No.	Name of Scheme	Total Estimated amount for the Control Period (Rs. Lakh)	Proposed Expenditure in Rs. Lakh.		
			2015-16	2016-17	2017-18
10	Replacement of LT O/H line by LT ABC Bunch conductor in rural areas of Daman and Diu for a distance of 15 Kms	350	150	100	100
11	Replacement of existing ACSR Panther Conductor of 66KV Varkund-Dalwada, Kachigam-Dabhel, Dalwada-Dabhel line HI TASCER - 160 sq.mm Conductor	300	100	100	100
12	Providing improved metering system, Communication, MRT facilities and special tools & Plants/Workshop in Diu	346	100	120	126
13	Scheme for Augmentation of capacity from 1x100+1x50+1x160 MVA to 1x100+1x50+2x160 MVA at 220/66 kV Substation at Magarwada Daman	400	400	0	0
Total		14291	6855	4590	2846

B. New Schemes

The new schemes have been given in the table below:

Table 39: New Schemes

Sr.No.	Name of Scheme	Total Estimated amount for the Control Period (Rs. Lakh)	Proposed Expenditure in Rs. Lakh.		
			2015-16	2016-17	2017-18
1	Establishment of 2 x100 MVA, 220/66 KV Sub-station at Dabhel, Nani Daman	4800	0	2000	2800
2	Establishment of 66/11 KV, 2x20 MVA GIS Sub-station alongwith associated line at Dabhel, Daman	2500	500	1500	500

Sr.No.	Name of Scheme	Total Estimated amount for the Control Period (Rs. Lakh)	Proposed Expenditure in Rs. Lakh.		
			2015-16	2016-17	2017-18
3	Establishment of new hybrid bay in Sub-stations(i.e Dalwada, Bhimpore, Dabhel, Kachigam, Magarwada)	450	0	250	200
4	Scheme for inter connection of 66KV line from Zari Sub-station to Eurocaustic and replacement of Panther conductor from Kachigam Sub-station to EPL	800	300	300	200
5	Scheme for Construction of new Government Quarter for Executive Engineer	6	2	2	2
6	Providing Solar Lighting system and Solar water heater to different classes of consumers of UT of Daman & Diu	165	55	55	55
7	Replacement of electromechanical energy meters in Daman & Diu	530	300	150	80
8	Procurement of Capacitor Bank in Existing Sub-station in Daman & Diu	200	100	50	50
9	Establishment of 66/11 KV GIS Sub-station at Bhimpore, Daman	2500	0	1000	1500
10	Installation of 6 MWp On-grid connected Solar PV Power plant at Malala, Diu	5100	3000	2100	0
11	Strengthening of 11 KV Feeders in Daman and Diu	900	300	300	300
12	Scheme of integrated solution for Electrical Network Modeling & Distribution Analysis Software	1900	500	700	700
13	Installation of grid connected wind energy	10000	1000	4500	4500
	Total	29851	6057	12907	10887

3. The capitalization of new schemes has been considered at 40% of the planned capital expenditure in the same year while the balance 60% has been capitalized in subsequent year. A summary of the capital expenditure and capitalization for FY 14-15 and the Control Period is summarized in Table below:

Table 40: Capital Expenditure & Capitalization for FY 14-15 and the Control Period

Capital Expenditure & Capitalization (Rs. Crore)	FY 14-15 Revised Estimate	FY 15-16 Projected	FY 2016-17 Projected	FY 2017-18 Projected
Capital Expenditure	100.88	129.12	174.97	137.33
Asset Capitalization	57.17	94.69	133.69	143.40
Capital Work in Progress	71.74	106.17	147.45	141.38

3.9 Gross Fixed Assets

1. EDDD had Rs. 337.42 Crore of Opening Gross Fixed Assets (GFA) in FY 14-15. EDDD has further proposed capital expenditure of Rs. 100.88 Crore during FY 14-15.
2. Based on the actual capitalization of the first three months and estimated addition in GFA during the remaining nine months of FY 14-15, assets amounting to Rs. 57.17 Crore have been estimated to be added in the GFA during FY 14-15.
3. Similarly, based on the capital expenditure plan as detailed above, Rs. 94.69 Crore, Rs. 133.69 Crore and Rs. 143.40 Crore is proposed to be capitalized during the FY 2015-16, FY 2016-17 and FY 2017-18.
4. A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

Table 41: Opening and Closing GFA for the Control Period (in Rs. Crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2014-15 (Revised Estimate)	337.42	57.17	394.58
FY 2015-16 (Projected)	394.58	94.69	489.28
FY 2016-17(Projected)	489.28	133.69	622.96
FY 2017-18(Projected)	622.96	143.40	766.36

3.10 Depreciation

1. 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.
2. 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%
Land	0.00%

3. Depreciation for the current year and FY 14-15 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 14-15 and the Control Period. 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 2013-14 as given in the fixed asset register and the estimated capitalization for FY 14-15 and the Control Period.
4. Therefore the EDDD requests the Hon'ble Commission to approve the depreciation as given in the table below:

Table 42: Depreciation (in Rs. Crore)

Particulars	FY 14-15	FY 15-16	FY 16-17	FY 17-18
	Revised Estimate	Projected	Projected	Projected
Opening GFA	337.42	394.58	489.28	622.96
Additions	57.17	94.69	133.69	143.40
Closing GFA	394.58	489.28	622.96	766.36

Particulars	FY 14-15	FY 15-16	FY 16-17	FY 17-18
	Revised Estimate	Projected	Projected	Projected
Average GFA	366.00	441.93	556.12	694.66
Depreciation Amount	17.88	21.89	27.92	35.23
<i>Average Depreciation Rate</i>	4.50%	4.50%	4.50%	4.60%

3.11 Interest & Finance Costs

3.11.1 Interest on Long-term / Capital Loans

1. 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 Control Period have been considered based on normative debt-equity ratio of 70:30 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 14-15 and the Control period is summarized in Table below:

Table 43: Total Interest on Long-term Loans

Interest on Long-term Loans	FY 14-15	FY 15-16	FY 16-17	FY 17-18
Rs Crore	Revised Estimate	Projected	Projected	Projected
Opening Loan	54.97	90.24	148.70	230.16
Addition in Loan (70% of Asset Capitalization)	40.02	66.28	93.58	100.38

Interest on Long-term Loans	FY 14-15	FY 15-16	FY 16-17	FY 17-18
Rs Crore	Revised Estimate	Projected	Projected	Projected
Repayment of Loan (10% of Opening Balance)	4.75	7.83	12.11	16.53
Closing Loan Amount	90.24	148.70	230.16	314.02
Average Loan	72.61	119.47	189.43	272.09
<i>Interest Rate on Loan</i>	14.75%	14.75%	14.75%	14.75%
Total Interest Cost on Long-term Loans	10.71	17.62	27.94	40.13

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

1. 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.
2. 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
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 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 FY 14-15 considering the above methodology is summarized in Table 45 below:

Table 44: Interest on Working Capital for the Control Period

Interest on Working Capital	FY14-15	FY 15-16	FY 16-17	FY 17-18
Rs Crore	Revised Estimates	Projected	Projected	Projected
Receivables of two months of billing	129.41	137.73	149.14	161.52
Less power purchase cost of one month	65.12	72.30	82.22	90.54
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	46.83	46.83	46.83	46.83
Inventory for two months based on annual requirement for previous year	3.36	3.52	3.70	3.88
Total Working Capital requirement	20.81	22.12	23.79	28.04
Rate of Interest on Working Capital	14.75%	14.75%	14.75%	14.75%
Total Interest on Working Capital	3.07	3.26	3.51	4.14

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

3.12 Return on Capital Employed

- Since ED- DD is an integrated utility in its present form it has considered return on capital base as a 3% return on net block of approved assets/capitalization at the beginning of the FY 2014-15 and each year of the Control Period.
- Return on capital employed for EDDD computed for FY 14-15 and the Control Period has been detailed in Table 46 below:

Table 45: Proposed Return on Capital Employed

Return	FY 14-15	FY 15-16	FY 16-17	FY 17-18
Rs Crore	Revised Estimate	Projected	Projected	Projected
Return on Capital Employed	6.47	7.65	9.84	13.01

3.13 Provision for Bad & Doubtful Debts

- EDDD has considered provision for Bad and Doubtful Debts as 0.50% of the revenue for FY 14-15 and the Control Period.
- EDDD requests the Hon'ble Commission to approve the provision for bad & doubtful debts as summarized in the Table below:

Table 46: Provision for Bad & Doubtful debts

Provision for Bad & Doubtful Debts	FY 14-15	FY 15-16	FY 16-17	FY 17-18
Rs Crore	Revised Estimate	Projected	Projected	Projected
Provision for Bad & Doubtful Debts as % of Receivables	0.50%	0.50%	0.50%	0.50%
Provision for Bad & Doubtful Debts	3.82	4.13	4.47	4.85

3.14 Non-Tariff & Other Income

1. 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 estimating the non-tariff income for FY 14-15, an increase of 5% p.a. has been considered over the actual FY 13-14 non-tariff income.
3. For projecting the non-tariff income for the Control Period, an year on year increase of 5% p.a. has been considered over the estimated non-tariff income for FY 14-15. Details of the year wise non-tariff income is provided in table below:

Table 47: Non-tariff Income

Particulars (Rs Crore)	FY 14-15	FY 15-16	FY 16-17	FY 17-18
	Revised Estimate	Projected	Projected	Projected
Non-tariff Income	11.53	12.06	12.62	13.20

3.15 Aggregate Revenue Requirement

1. Table 48 summarizes EDDD's Aggregate Revenue Requirement for FY 14-15 and the MYT Control Period FY 2015-16 to FY 2017-18.

Table 48: Aggregate Revenue Requirement

Annual Revenue Requirement	FY 14-15	FY 15-16	FY 16-17	FY 17-18
Rs. Crs.	Revised Estimate	Projected	Projected	Projected
Power Purchase Cost	781.48	867.57	986.58	1,086.43
O&M Expense	24.20	26.87	30.66	35.61
Depreciation	17.88	21.89	27.92	35.23
Interest Cost on Long-term Capital Loans	10.71	17.62	27.94	40.13
Interest on Working Capital Loans	3.07	3.26	3.51	4.14
Return on Capital Employed	6.47	7.65	9.84	13.01
Provision for Bad Debt	3.82	4.13	4.47	4.85
Interest on Security Deposit	2.21	2.21	2.21	2.21
Less: Non-Tariff Income	11.53	12.06	12.62	13.20
Annual Revenue Requirement	838.31	939.16	1,080.52	1,208.40

3.16 Revenue at Existing Tariff

1. Revenue from sale of power for FY 14-15 and the Control Period is determined based on the energy sales estimated in Table 20 and category wise tariff prevalent in the UT of Daman & Diu.
2. Revenue from sale of power at existing tariff is estimated to be Rs. 776.44 Crore (inclusive of Fuel price surcharge of Rs. 13.21 Crore) for FY 14-15. The estimated revenue for FY 14-15 is based on the first six months actual revenue from sale of power as per the new retail tariff notified by the Commission vide the Tariff Order for FY 14-15 dated 1st May, 2014.
3. 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. Further, EDDD has computed the revenue for the Control Period based on the tariff notified by the Hon'ble Commission in the Tariff Order for FY 14-15 dated 1st May, 2014.
5. The table below summarizes the revenue from sale of power at existing tariff for FY 2014-15 and the Control Period:

Table 49: Revenue from Sale of Power at Existing Tariff (Rs. Crore)

Revenue @ Existing Tariff	FY 14-15	FY 15-16	FY 16-17	FY 17-18
(Rs Crore)	Revised Estimate	Projected	Projected	Projected
Domestic	19.11	20.98	23.03	25.29
LIG	0.01	0.01	0.01	0.01
Commercial	16.22	18.16	20.69	23.57
Agriculture	0.20	0.21	0.22	0.23
LT Industry	60.04	62.06	65.21	68.52
HT/EHT Industry	674.05	717.49	777.40	842.31
Public Lighting	4.86	5.40	6.10	6.88
Public Water Works	1.44	1.53	1.65	1.79
Temp. Supply	0.52	0.52	0.52	0.53
Total	776.44	826.36	894.83	969.12
Revenue from surplus power	49.41	43.65	44.25	16.38
Total Revenue	825.85	870.01	939.08	985.49

3.17 Coverage of Revenue Gap

1. Revenue from sale of power with-in the UT (category-wise) is determined in Table 49.
2. Table 50 summarizes the ARR for EDDD for FY 2013-14, FY 2014-15 and FY 2015-16 along with the revenue and the resulting revenue (gap)/surplus. The cumulative gap for the three years is Rs.7.50 Crore as given in the table below.

Table 50: Revenue Gap for FY 2015-16

(Rs. Cr.)

Sr. No.	Particulars	FY 13-14	FY 14-15	FY15-16
		Actual	Revised Estimates	Projected
1	Total ARR	802.58	838.31	939.16
2	Revenue @ Existing Tariff	869.28	776.44	826.36
3	Revenue from Surplus Power Sale	7.39	49.41	43.65
4	Total Revenue(2+3)	876.68	825.85	870.01
5	Revenue (Gap) /Surplus(4-1)	74.10	(12.45)	(69.15)
	Covered By			
6	Previous Years' (Gap)/Surplus Carried Over	0.00	74.10	61.65
7	Total (Gap)/Surplus for three years(5+6)	74.10	61.65	(7.50)

- It is evident from Table 50 that there is a cumulative gap of Rs. 7.50 Crore for the three years. The estimated gap has been computed by deducting the ARR from Revenue at Existing Tariff.
- Thus the EDDD has proposed a marginal increase in the fixed charges in the HTC General category for the FY 2015-16 to cover the gap. It is prayed to the Hon'ble Commission that considering the above submissions the tariff proposal of EDDD for the FY 2015-16 may kindly be approved.

3.18 Average Cost of Supply

- Table 51 summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

Table 51: Average Cost of Supply & Revenue Realization

Average Realization & Cost of Supply	FY 13-14	FY 14-15	FY 15-16
(Rs/Unit)	Actual	Revised Estimate	Projected
Average Cost of Supply of EDDD	4.52	4.55	4.82
Average Realization	4.93	4.49	4.47

Average Realization & Cost of Supply	FY 13-14	FY 14-15	FY 15-16
(Rs/Unit)	Actual	Revised Estimate	Projected
Revenue Gap at Existing Tariff	0.42	(0.07)	(0.35)
Net Revenue (Gap)/Surplus(Includes gap of previous year)	0.42	0.35	(0.01)
Additional revenue at Proposed Tariff			0.01

3.19 Initiatives

A) Pre-paid metering

- Tariff for Pre-Paid Meters:** The department proposes to reduce the tariff for the domestic, commercial and LTP Motive Power Supply consumer category, using the pre-paid energy meters:

Domestic Supply:

Description	Fixed Charges	Energy Charges (Rs./kWH)
Entire consumption	-	2.10

Commercial Supply:

Description	Fixed Charges	Energy Charges (Rs./kWH)
Entire consumption	-	3.00

LTP Motive Power Supply:

Description	Fixed Charges	Energy Charges (Rs./kWH)
Entire consumption	Rs 25.00/HP/month or part thereof	3.20

The EDDD has proposed the reduction in the pre-paid tariff to incentivise the use of the same among the consumers of the UT of Daman and Diu which will also result in the reduction of operational cost incurred by the EDDD towards billing expenses.

B) Promotion of Solar energy

The department has installed grid interactive roof top solar panels on the government buildings in Daman & Diu. Till now the department has installed 263 kW capacity solar panels all across Daman & Diu and it is proposed to further

augment this capacity by 300 kW by the end of FY 2014-15. At present, the effective generation from these roof top panels is around 370000 kWh per month.

In order to encourage the use of solar power, the department proposes to purchase excess power from all the consumers having grid interactive roof top solar panels at the rate of Rs. 4.06 per unit.

C) TOD Metering

In the Tariff Order dated 1st May, 2014, the Hon'ble Commission had introduced TOD tariff for all the HT consumers of the UT of Daman & Diu. As the TOD metering is an effective means of Demand Side Management measures, the EDDD proposes to extend the TOD tariff to all the LT industrial consumers (above 20 HP) in the UT of Daman & Diu. The EDDD proposes to extend the TOD tariff to the HT and LT industrial consumers (above 20 HP) at the following tariff:

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

3.20 Tariff Proposal for FY 15-16

1. As there is a cumulative surplus of Rs. 7.50 Crore for FY 2013-14, FY 2014-15 and FY 2015-16 the EDDD has proposed a marginal increase in the fixed charges in the HTC General for the FY 2015-16. The table below summarizes the existing and proposed tariff structure for various consumer categories for FY 2015-16.

Table 52: Proposed Tariff Structure for FY 15-16

Tariff Structure	Existing		Proposed	
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
LT-D/Domestic				
Ist 50 Units	1.20		1.20	
51 to 200 Units	1.80		1.80	
201 to 400 Units	2.20		2.20	
Beyond 401 Units	2.55		2.55	
Low Income Group		Rs. 10/connection /month		Rs. 10/connection /month
LT-C/Commercial				
Ist 100 Units	2.65		2.65	
Beyond 100 Units	3.65		3.65	
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 category	3.70	Rs. 25/HP/month	3.70	Rs. 25/HP/month
HT				

Tariff Structure	Existing		Proposed	
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
HTC General Industrial/ Motive Power 11KV or 66KV having CMD above 100KVA				
For all units	4.70	Rs. 105/kva/month	4.70	Rs. 125/kva/month
HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)				
For all units	4.55	Rs. 375/kva/month	4.55	Rs. 375/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 15-16 as well, which can take care of any variation in the ARR over and above the approved level by the Commission for FY 15-16.

Chapter 4: Determination of Open access charges

4.1 Allocation Matrix

The allocation between wheeling and retail supply business for FY 2015-16 as per the ARR proposed for FY 2015-16 is provided in the table below:

Table 53: Allocation of ARR between Wheeling and Retail Supply

Annual Revenue Requirement Rs. Crs	Allocation (%)		Allocation FY 2015-16	
	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	867.57
Employee	70%	30%	7.55	3.24
R&M	50%	50%	5.41	5.41
A&G	90%	10%	4.75	0.53
Depreciation	90%	10%	19.70	2.19
Interest Cost on Long-term Capital Loans	90%	10%	15.86	1.76
Interest on Working Capital Loans	22%	78%	0.72	2.55
Interest on Security Deposit	0%	100%	-	2.21
Return on Equity	90%	10%	6.89	0.77
Provision for Bad Debt	0%	100%	-	4.13
RPO Provisioning	0%	100%	-	-
Provision for Interest on security deposit	0%	100%	-	-
Annual Revenue Requirement			60.87	890.35
Less: Non-Tariff Income	0%	100%	-	12.06
Less: Revenue from Surplus Power Sale	0%	100%	-	43.65
Less Revenue from OA consumer	0%	100%	-	-
Net Revenue Requirement			60.87	834.63

4.2 Voltage wise Wheeling Charges

The EDDD has considered the voltage wise losses for FY 2015-16 as considered by the Hon'ble Commission in its Tariff Order for FY 2014-15.

The total loss for FY 2015-16 has been considered as considered for FY 2015-16 as 8.70%. 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 54: Determination of input energy for network usage percentage

Particulars	UoM	S.No.	FY 2015-16
Total Input	MU	A	1,907.39
Input for HT and EHT	MU	$B = G / (1 - E)$	1,443.22
% to total input	%	$C = B / A$	75.66%
Losses for HT and EHT (%age of total input)	%	$D = F / A$	1.72%
Losses for HT and EHT (%age of HT input)	%	$E = F / B$	2.27%
Losses	MU	$F = B - G$	32.76
Sales at 11 kV and above	MU	G	1,410.46
Input for LT	MU	$H = A - B$	464.17
% of total input	%	$I = H / A$	24.34%
Losses at LT level (%age of LT input)	%	$J = K / H$	28.28%
Losses	MU	$K = H - L$	131.27
Sales at 11 kV and below	MU	L	332.89
Balance	MU		-

Accordingly the wheeling cost has been considered in the ratio of 75.66:23.34 and the wheeling charge so arrived has been shown in the table below.

Table 55: Wheeling charges proposed for FY 2014-15

Particulars	UoM	S.No.	FY 2015-16
Wheeling Cost	Rs. Crore	A	60.87
Wheeling Cost at EHT and HT	Rs. Crore	B=A*75.66%	46.06
Wheeling Cost at LT	Rs. Crore	C=A*24.34%	14.81
Energy Input at Discom Periphery	MU	D	1,907.39
Energy Input for HT and EHT	MU	E=I/(1-G)	1,443.22
Wheeling Charge at EHT and HT level	Rs. per unit	F=B/E*10	0.32
EHT and HT losses	%	G	2.27%
EHT and HT losses	MU	H=E-I	32.76
Sales at EHT and HT level	MU	I	1,410.46
Energy Input at LT	MU	J=D-E	464.17
Wheeling Charge at LT level	Rs. per unit	K=C/J*10	0.32
Sales at LT level	MU	L	332.89
LT Losses	MU	M=J-L	131.27
Total Losses	MU	N=H+M	164.04
Total Losses	%		8.60%

4.3 Cross Subsidy Surcharge

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

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

Where,

S is the surcharge

T is the Tariff payable by the relevant category of consumers;

C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power

D is the Wheeling Charges

L is the System losses for the applicable voltage level, expressed as percentage.

The computation of each item is as below.

Table 56: Calculation of "T"

Particular	Sale (MU)	Revenue from approved tariff (Rs. Crore)	Average Tariff (Rs./kwh)
T	1,410.46	717.49	5.09

Table 57: Calculation of "C"

Station	Energy Procured (MU)	Average Rate (Rs./kwh)	Total Power Purchase Cost (Rs. Crore)
C	646.27	4.06	262.57

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

Table 58: Proposed Cross Subsidy Surcharge for FY 2015-16

Cross Subsidy Surcharge	UoM	HT & EHT Industry
T	Rs. per kwh	5.09
C	Rs. per kwh	4.06
D	Rs. per kwh	0.32
L	%	2.27%
Surcharge	Rs. per kwh	0.70

4.4 Application and Agreement Fees

The application and agreement fees are proposed as Rs 5000/- and Rs 50,000/- respectively.

Tariff Schedule

General Terms and Conditions:

1. The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
2. Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
3. Supply to consumers having contracted load between 100 KVA to 4000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be 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

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 75% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the 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 ($12000 \times 100 / 120$) 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

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 2015-16.
16. Schedule of 'Other Charges' would be as approved in this tariff order.

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

(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**. 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

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. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

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. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

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 125/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.
- a) 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 0.95 (lagging). If the monthly average power factor of a consumer falls below 95% (0.95 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 97% (0.97 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 0.97 (lagging)

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

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

5. **Billing Demand**

Billing demand will be the highest among the following:

- (a) 100 kVA
(b) 75% 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 375.00/- 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 0.95 (lagging). If the monthly average power factor of a consumer falls below 95% (0.95 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 97% (0.97 lagging), a power factor incentive @ 0.5% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging)

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

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

5. Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 75% 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 0.95 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. 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	420

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

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 50
2	Three Phase LT	Rs 100
3	HT	Rs 1000

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

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.

f. Service connection charges for- Under Ground Lines

(a) Single phase consumers

(i) Area outside municipal limit - Full cost plus 15% supervision charges

(ii) Area within municipal limit - Rs. 150/- plus Rs. 40/- 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. 550/- plus Rs. 60 /- per meter beyond 30 meters

(c) 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	100
2	Three Phase	300
3	Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	500
4	Three Phase Tri-vector Meter (0.5 Class) 11 KV HT Consumer	500
5	Three Phase Tri-vector Meter (0.2 Class) 66KV EHT Consumers	1000
6	Combined CTPT Unit for 11 KV Consumer	500
7	66 KV CT / PT Unit	500
8	Three Phase CT Block	300
9	CT Coil	100

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	10
2	Three Phase Lighting /Domestic	25

S.No.	Types of Connection	Fee per test report (in Rs.)
3	Single Phase Lighting / Non Domestic	50
4	Three Phase Lighting / Non Domestic	100
5	Three Phase LT Industries	250
6	Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	50
7	HT Industries upto 500 KVA	1000
8	HT Industries upto 2500 KVA	5000
9	HT Industries above 2500 KVA	10000

Prayer

1. EDDD requests the Hon'ble Commission to:

- Admit the Aggregate Revenue Requirement for the MYT Control Period FY 15-16 to FY 2017-18 as submitted herewith as well as the revised estimates for FY 14-15.
- Admit and approve the Trued up ARR for FY 2013-14.
- 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:

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