

**True up for FY 2018-19,**

**Review of FY 2019-20,**

**AND**

**ARR and Tariff Revision Proposal for FY 2020-21**

**Main Text & Formats (Volume I)**

**Submitted to**

**Joint Electricity Regulatory Commission  
Gurgaon**

**By:**

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

**December 2019**



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**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 the  
FY 2020-21 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 2018-19, Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and Tariff Revision Proposal of EDDD for the FY 20-21 (Financial Year 2020-21).



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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).



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## Chapter I: Introduction

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### 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 total installed solar capacity in the UT of Daman and Diu is 16.186 MW out of which 10 MW is ground mounted and the remaining 6.186 MW is solar rooftop plants. The Department is in the process of procuring 80 MW of solar energy from NTPC and another 50 MW of solar energy from SECI from FY 2020-21 onwards. Further, procurement of solar power for 40 MW from open tender is also under the process.

The present transmission and distribution system of EDDD consists of 32.60 circuit kms of 220 kV Double Circuit (D/C) lines, 88.70 kms of 66kV lines, 435.62 circuit kms of 11kV lines O/H as well as U/G lines, 783.71 circuit kms of LT OH & U/G lines along with 924 transformers. Presently, there are 120 no. 11 kV feeders and 6 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.



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

The current demand is primarily dependent on the HT and LT Industrial consumers contributing approx. 91% of the total sales in FY 18-19.

Considering the increase in demand from the large industries, the demand is likely to reach to 350-360 MW by FY 2020-21. In view of the 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, 2018

EDDD's tariff determination is now governed by "Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018, hereinafter referred to as "MYT Regulations". The MYT Regulations, 2018 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, 2018 segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are



uncontrollable are passed through to the consumers. Further, the MYT Regulations, 2018 identifies the uncontrollable and controllable parameters as follows:

**1.2.1 Uncontrollable Parameters include**

- 1 Force Majeure events;
- 2 Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- 3 Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;
- 4 Transmission loss;
- 5 Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;
- 6 Variation in fuel cost;
- 7 Change in power purchase mix;
- 8 Inflation;
- 9 Transmission Charges for a Distribution Licensee;
- 10 Variation in market interest rates for long-term loans;
- 11 Employee expenses limited to one time payment owing requirements of a pay commission and terminal liability of employees;
- 12 Taxes and Statutory levies;
- 13 Taxes on income;
- 14 Income from the realisation of bad debts written off;

**1.2.2 Controllable Parameters include**

- 1 Variations in capitalisation on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;
- 2 Variation in Interest and Finance Charges, Return on Equity, and Depreciation on account of variation in capitalisation, as specified in clause (a) above;
- 3 Variations in technical and commercial losses of Distribution Licensee;
- 4 Availability of transmission system;
- 5 Variations in performance parameters;



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- 6 Failure to meet the standards specified in the Joint Electricity Regulatory Commission for the State of Goa & UTs (Standard of Performance for Distribution Licensees) Regulation, 2015, as amended from time to time;
- 7 Variations in labour productivity;
- 8 Variation in O&M Expenses, except to the extent of inflation;
- 9 Bad debts written off;

### 1.3 Contents of this Petition

This Petition covers the truing up for FY 18-19, revised estimates for FY 19-20 and the basis, assumptions and projections of individual elements constituting the determination of ARR for the FY 2020-21. 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 1<sup>st</sup> November 2010 and subsequently the second, third, fourth, fifth, sixth, seventh, eighth and ninth Tariff order for FY 11-12, FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16, MYT Control Period FY 2016-17 to FY 2018-19, FY 2017-18, FY 2018-19 and MYT Control Period FY 2019-20 to FY 2021-22 for EDDD were issued on 3<sup>rd</sup> October, 2011, 25<sup>th</sup> August, 2012, 22<sup>nd</sup> March, 2013, 1<sup>st</sup> May, 201, 31<sup>st</sup> March, 2015, 6<sup>th</sup> April, 2016, 29<sup>th</sup> May, 2017, 23<sup>rd</sup> March, 2018 and 20<sup>th</sup> May, 2019 respectively. The Commission in its Tariff Order for the FY 2019-20 has approved the ARR for the FY 2019-20 based on the actual cost for FY 17-18 and estimated expenses for FY 18-19.



## Chapter 2: True Up for FY 2018-19

### 2.1 Principles for True Up for FY 2018-19

As per JERC MYT Regulations, 2014, the Hon'ble Commission shall undertake the True Up of licensee for FY 2018-19 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 MYT Regulations, EDDD is filing its True Up for the year FY 2018-19. Information provided in the True Up for FY 2018-19 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 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019 for the FY 18-19.

Accordingly, revised Aggregate Revenue Requirement, revenue and gap for FY 18-19 are given in the following paragraphs of this chapter.

### 2.2 Energy Sales for FY 2018-19

The actual energy sale for FY 2018-19 has been shown below along with approved sales by Hon'ble Commission vide Tariff Order dated 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019. The actual energy sales for FY 2018-19 are as under:

Table 1: Consumer category wise energy sales for FY 2018-19

Particulars	(MU)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Domestic	124.82	135.38	134.47
LIG/ Kutir Jyoti*	0.17	0.03	0.00
Commercial	64.83	53.97	53.27
Agriculture	5.39	4.96	4.95
LT Industry	202.03	200.99	197.86
HT/EHT Industry	1903.49	2080.52	2,031.44
Public Lighting	10.30	8.51	8.26
Public Water Works	3.61	4.03	3.68
Temp. Supply	3.40	0.00	0.00
<b>Total Sales</b>	<b>2,318.04</b>	<b>2,488.39</b>	<b>2,433.91</b>

\*LIG sales is included in the Domestic category



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It can be observed from the above that there is a slight variation in the actual energy sold as compared to the energy sales approved by the Commission vide the Tariff Order dated 20<sup>th</sup> May, 2019. The reasons attributable for the same are:

- The actual sales of the HT category for the FY 2018-19 was 2031.44 MUs as compared to 2080.52 MUs approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019.
- The actual sales of the LT category for the FY 2018-19 was 197.86 MUs as compared to 200.99 MUs approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019.
- The actual sold to the Domestic category was 134.47 MUs as compared to 135.38 MUs approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019.
- The actual sold to the Public Water Works category was 3.68 MUs as compared to 4.03 MUs approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019.
- Overall the actual sales has decreased by 54.48 MUs in comparison to the sales approved by the Hon'ble Commission vide its Tariff Order dated 20<sup>th</sup> May, 2019.

The EDDD requests the Hon'ble Commission to approve the actual sales for FY 18-19.

### 2.3 Distribution Loss for FY 2018-19

EDDD is making all efforts to reduce the distribution losses in the UT of Daman & Diu. In FY 2018-19, the actual distribution losses were 6.18% as against the approved level of 8.30%.

In the Tariff Order dated 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019 the Hon'ble Commission had approved the distribution losses at 8.30% for the FY 2018-19. However, now EDDD has computed the distribution loss based on the actual sales data for FY 18-19. Based on that the distribution loss for FY 18-19 has been worked out at 6.18%. 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 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019.



Table 2: Distribution Loss

Particulars	(%)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Distribution Loss	8.30%	8.30%	6.19%

The EDDD requests the Hon'ble Commission to approve the actual T&D losses for FY 18-19.

#### 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 18-19 has been furnished below. The energy requirement had been met through various sources as described in the subsequent sections.

Table 3: Approved Energy Balance for FY 2018-19

Particulars	(MU)	
	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Retail Sales (a)	2488.39	2433.91
Open Access Sales (b)	0.00	0.00
Less: Energy Savings (c)	0.00	0.00
Total Sales (d=a+b-c)	2488.39	2433.91
Distribution Loss (MU) (e=g-d)	225.23	160.66
Distribution Loss (%) (f=e/g)	8.30%	6.19%
Energy Required at Periphery (g)	2713.62	2594.57
Add: Sale to common pool consumer/UI Sale(h)	1.90	9.73
Less: Own generation (i)	17.78	19.02
Total energy requirement at state periphery(j=g+h-i)	2697.74	2585.28
Less: Energy Purchased through UI at Periphery (k)	232.85	262.09
Less: Open Access Purchase at Periphery (l)	0.00	0.00
Less: Energy Purchased through Renewable Sources (m)	70.00	0.00
Energy requirement at state periphery from tied up sources (n=j-k-l-m)	2394.89	2323.20
Inter state loss (MU) (o=p-n)	90.97	64.67
Inter state loss (%)	3.66%	2.71%
Energy requirement at state periphery from generator end (p)	2485.86	2387.87
Total Energy requirement from tied up sources, UI and renewable sources at generator end	2788.71	2668.98





Particulars	FY 18-19	FY 18-19
	Approved (20th May, 2019)	Actual
(q=p+i+k+m)		
Total Energy requirement in UT including Open Access (r=q+l)	2788.71	2668.98

The net energy requirement for sale during FY 2018-19 was 2668.98 MUs.

## 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 18-19 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 2018-19**

Particulars	MUs		Cost (Rs. Crore)	
	FY 18-19	FY 18-19	FY 18-19	FY 18-19
	Approved	Actual	Approved	Actual
Power Purchase	2,806.49	2,668.98	1,082.46	1,028.43

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. 1082.46 Crore in the Tariff Order dated 20<sup>th</sup> May, 2019. Now, the EDDD has claimed a power purchase cost of Rs. 1028.43 Crore based on the Annual accounts for FY 18-19 and there is a decrease in the power purchase cost as compared to the power purchase cost approved by the Hon'ble Commission. The same is attributable to the decrease in sales witnessed during the FY 2018-19.

The EDDD also requests the JERC to allow the UI purchase during FY 18-19 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 18-19.

The EDDD purchased 262.09 MU during FY18-19 through UI at the cost of Rs. 72.09 Crore to meet the energy shortfall during the year. The EDDD also purchased 273.57 MUs during FY 2018-19 from the energy exchange at the cost of Rs.104.63 Crore to meet its energy demand.

Further, the EDDD procured 19.02 MUs of solar energy from its rooftop and ground mounted solar plants during the FY 2018-19 to meet its solar obligation. The EDDD procured 26800 solar certificates to meet the non-solar obligation.

The EDDD, therefore, requests the Hon'ble Commission to approve the actual power purchase cost for FY 18-19 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. 36.05 Crore and Rs. 36.92 Crore vide Tariff Orders dated 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019 respectively. During FY 18-19, EDDD incurred actual O&M expense of Rs. 42.57 Crore which was



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inclusive of employee cost of Rs. 16.37 Crore, Repair & Maintenance Charges of Rs. 16.23 Crore and Administration & General Expenses of Rs. 9.97 Crore as shown in the table below:

**Table 5: Operation & Maintenance Expenses for FY 2018-19**

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Employee Cost	12.96	13.83	16.37
R&M	17.30	17.30	16.23
A&G	5.79	5.79	9.97
<b>O&amp;M Expenses</b>	<b>36.05</b>	<b>36.92</b>	<b>42.57</b>

The O&M cost has increased due to the increase in the actual cost incurred by the EDDD during the FY 2018-19 as against the O&M cost approved by the Hon'ble Commission. The employee cost incurred by the EDDD during the FY 2018-19 was Rs. 16.37 Crore which is Rs. 2.54 Crores higher than the employee cost approved by the Hon'ble Commission.

Further, the A&G cost has also increased by Rs. 4.18 Crores. The increase in the A&G expenses can be attributed to the license fees paid to the JERC for Rs. 2.12 Crore and an amount of Rs. 1.09 Crore incurred towards celebration expenses during the FY 2018-19. The revised estimates submitted by the EDDD for FY 2018-19 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 2018-19. The EDDD, therefore, requests the Hon'ble Commission to approve the O&M expenses for FY 18-19 as submitted in herewith.

## 2.7 Capital Expenditure & Capitalization

The actual capital expenditure incurred by EDDD during the FY 18-19 was Rs. 48.00 Crore, which is higher than that of approved by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019. The capital expenditure incurred and actual capitalization made by the department for FY 18-19 against that approved by the Hon'ble Commission is as shown below:



Table 6: Capital expenditure and capitalization for FY 18-19

Particulars	(Rs. Crore)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Capital Expenditure	119.50	42.00	48.00
Capitalisation	35.50	12.48	19.82

The EDDD, therefore, requests the Hon'ble Commission to approve the capital expenditure and capitalization for FY 18-19.

### 2.8 Depreciation

The depreciation has been worked out after applying the Depreciation rates as per the JERC MYT Regulations, 2014. Accordingly, the depreciation so arrived and approved depreciation for FY 2018-19 is shown in the table below:

Table 7: Depreciation for FY 2018-19

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Opening GFA	607.78	587.65	587.63
Addition during the year	35.50	12.48	19.82
Closing GFA	643.28	600.13	607.45
Average GFA	625.53	593.89	597.54
Depreciation during the year	32.11	30.47	30.33

The EDDD, requests the Hon'ble Commission to approve the actual depreciation for FY 18-19 without any deduction.

### 2.9 Interest and Finance Charges

For assessing interest on Loans in FY 18-19, EDDD has considered the opening balance of loans for FY 18-19 as approved by the Hon'ble Commission vide its Tariff Order dated 20<sup>th</sup> May, 2019 for the Review of the ARR for FY 18-19. The normative loan addition in FY 18-19 has been computed as 70% of the capitalization for FY 2018-19 which works out to Rs. 19.82 Crore. The capitalization for FY 18-19 was Rs. 19.82 Crore as per the audited annual accounts for FY 18-19.

As per the JERC (Multi Year Distribution Tariff) Regulations, 2014, the repayment of loan during the year has been considered equal to the depreciation for the FY 2018-19. Further the rate of interest has been considered as equal to the SBI PLR of 13.45%.



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The following table depicts the total Interest & Financial charges for FY 18-19 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 18-19

(Rs. Crore.)

Particulars	FY 18-19	FY 18-19	FY 18-19
	Approved (13th March, 2018)	Approved (20th May, 2019)	Actual
Opening Loan	173.03	160.70	160.70
Loan for additional Capex (70:30 debt-equity)	24.85	8.73	13.87
Loan Repayment	32.11	30.47	30.33
Closing Loan	165.77	138.96	144.25
Interest Cost on Avg. Loans	22.70	20.15	20.51

The EDDD, requests the Hon'ble Commission to approve the interest on loan computed for FY 18-19.

#### 2.10 Interest on Working Capital

The interest on working capital has been calculated based on the normative principles outlined by the Hon'ble Commission in the JERC (Multi Year Distribution Tariff) Regulations, 2014.

EDDD has computed interest on working capital at 9.30% as equal to the SBI PLR rate. The following table shows the interest on working capital for FY 2018-19 against the approved amount for the consideration of the Hon'ble Commission:

Table 9: Interest on Working Capital for FY 2018-19

(Rs. Crore.)

Particulars	FY 18-19	FY 18-19	FY 18-19
	Approved (13th March, 2018)	Approved (20th May, 2019)	Actual
Receivables of two months of billing	163.20	195.28	156.57
Less power purchase cost of one month	73.97	90.21	85.70
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	55.01	67.82	80.46
Inventory for two months based on annual requirement for previous year	1.36	2.46	2.66
Total Working Capital requirement	35.58	39.71	-6.93



Particulars	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Interest on Working Capital	3.08	3.46	0.00

The EDDD, requests the Hon'ble Commission to approve the interested on working capital computed for FY 18-19.

### 2.11 Return on Equity

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

Return on equity has been computed on the actual paid up equity. The rate of return has been taken as 16% as per the MYT Regulations. Accordingly, the 16% post tax return on equity computed for FY 2018-19 is given in the Table below:

Table 10: Return on Equity for FY 18-19

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Return on Equity	14.25	12.82	12.99

The EDDD, requests the Hon'ble Commission to approve the return on equity computed for FY 18-19.

### 2.12 Interest on consumer security deposits

The Hon'ble Commission in its last Tariff Order has approved Rs. 4.24 Crore as interest payable on consumer security deposits. The actual interest on consumer security deposit paid by the EDDD was Rs. 4.08 Crores. The details of the interest on consumer security deposit have been given in the table below:

Table 11: Interest on Consumer Security Deposit for FY 18-19

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Interest on Security Deposit	3.44	4.24	4.08



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The EDDD, requests the Hon'ble Commission to approve the interest on consumer security deposit submitted for FY 18-19.

### 2.13 Non - Tariff Income

The actual Non-Tariff Income of EDDD for FY 18-19 was Rs. 16.46 Crore as against Rs. 18.82 Crore approved by the Hon'ble Commission. The non-tariff income includes meter rent of Rs. 1.31 Crores, Delayed Payment Charges of Rs. 6.45 Crores, Miscellaneous Income of Rs. 8.71 Crores. The following table presents and approved and actual Non-Tariff Income of EDDD for the approval of the Hon'ble Commission.

Table 12: Non Tariff Income for FY 18-19

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Non tariff Income	20.08	18.82	16.46

The EDDD, requests the Hon'ble Commission to approve the actual Non-Tariff Income for FY 18-19.

### 2.14 Aggregate Revenue Requirement for FY 18-19

Based on above expenses, table below summarizes actual Aggregate Revenue Requirement for FY 18-19 for EDDD vis-à-vis the ARR approved by the Hon'ble Commission in the previous two Tariff Orders.

Table 13: Aggregate Revenue Requirement for FY 18-19

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Power Purchase Cost	887.68	1,082.46	1,028.43
O&M Expense	36.05	36.92	42.57
Depreciation	32.11	30.47	30.33
Interest Cost on Long-term Capital Loans	22.70	20.15	20.51
Interest on Working Capital Loans	3.08	3.46	0.00
Return on Equity	14.25	12.82	12.99
Provision for Bad Debt	0.00	0.00	0.00
Interest on security deposit	3.44	4.24	4.08
Less:			



Particulars	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Non-Tariff Income	20.08	18.82	16.46
Revenue from Surplus Power Sale	0.00	0.00	6.95
<b>Annual Revenue Requirement</b>	<b>979.23</b>	<b>1,171.70</b>	<b>1,115.49</b>

The EDDD, requests the Hon'ble Commission to approve the ARR computed for FY 18-19.

#### 2.15 Revenue for FY 18-19

During the FY 18-19, EDDD's actual revenue amounted to Rs. 939.45 Crore (including, RRAS charge of Rs. 1.38 Crore, SLDC & STU charges of Rs. 0.11 Crores) as against Rs. 957.23 Crore and Rs. 987.72 Crore as approved vide its Tariff Order dated 13<sup>th</sup> March, 2018 and 20<sup>th</sup> May, 2019 respectively by the Hon'ble Commission.

**Table 14: Revenue for FY 18-19**

Particulars	(Rs. Crore.)		
	FY 18-19 Approved (13th March, 2018)	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Revenue from sale of power	957.23	987.72	939.45
<b>Total revenue</b>	<b>957.23</b>	<b>987.72</b>	<b>939.45</b>

#### 2.16 Revenue (Gap) / Surplus for FY 18-19

The Hon'ble Commission in Order dated 13<sup>th</sup> March, 2018 has approved a total Aggregate Revenue Requirement (ARR) of Rs. 979.23 Crore for FY 18-19. Further, the Commission has computed the revised ARR for FY 18-19 in the Order dated and 20<sup>th</sup> May, 2019 of Rs. 1171.70 Crore. Based on the annual accounts for FY 18-19 and the actual expenses incurred by the EDDD, the revised ARR for FY 2018-19 has been arrived at Rs. 1115.49 Crore.

This revised ARR is compared against the actual income highlighted in the previous section under various heads. Revenue realized from the existing tariff during the FY 2018-19 was Rs. 939.45 Crore. Accordingly, total revenue gap of EDDD for FY 18-19 is computed at Rs. 176.05 Crore as depicted in the Table below:





Table 15: Revenue (Gap)/surplus for FY 18-19

Particulars	(Rs. Crore.)	
	FY 18-19 Approved (20th May, 2019)	FY 18-19 Actual
Annual Revenue Requirement (a)	1171.70	1115.49
Revenue from sale of power (b)	987.72	939.45
Revenue from open access (c)	0.00	0.00
Revenue (Gap)/Surplus (d=b+c-a)	(183.98)	(176.05)
Previous Years' (Gap)/Surplus Carried Over (e)	306.92	306.92
Carrying Cost (f)	17.19	0.00
Net Revenue (Gap)/surplus (g=d+e+f)	140.13	130.87

EDDD requests the Hon'ble Commission to approve afore-mentioned revenue surplus for FY 18-19.



### Chapter 3: Review for the FY 2019-20

The review of aggregate revenue requirement for FY 19-20 is based on quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. This has been done based on actual data for six months and revised estimates for the remaining six months of FY 19-20. EDDD analysis in respect of items given below is discussed in the following paras:

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

#### 3.1 Energy Sales

Based on the actual retail sales to various consumers for the first six months and revised estimates for the remaining six months, EDDD has estimated the total retail energy sold for FY 19-20 as shown in the Table below:



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**Table 16: Category wise sales for FY 19-20 (Revised Estimate)**

(MU)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Domestic	135.57	165.37
LIG/ Kutir Jyoti*	0.10	0.00
Commercial	65.87	59.94
Agriculture	5.39	5.08
LT Industry	220.08	194.58
HT/EHT Industry	2178.22	2,094.75
Public Lighting	10.99	6.62
Public Water Works	4.55	2.80
Temp. Supply	6.40	0.00
<b>Total Sales</b>	<b>2,627.17</b>	<b>2,529.13</b>

\* LIG sales is included in Domestic category

As can be seen, EDDD's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 81%. The revised estimates of energy sales for the FY 2019-20 is 2529.13 MUs as against 2627.17 MUs approved by the Hon'ble Commission in the Tariff Order dated 20<sup>th</sup> May, 2019.

### 3.2 Distribution loss for FY 19-20

EDDD has considered the distribution losses of 6.10% for FY 19-20. The Hon'ble Commission had approved a distribution loss of 6.70% for the EDDD vide its Tariff Order dated 20<sup>th</sup> May, 2019. However, as the actual distribution loss for the FY 2018-19 stood at 6.19%, the EDDD has proposed the distribution loss of 6.10% for the FY 2019-20.

**Table 17: Distribution losses for FY 19-20**

(%)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Distribution Loss	6.70%	6.10%

### 3.3 Energy Requirement of the System

The following Table depicts the energy requirement of the EDDD for FY 19-20.



Table 18: Energy Requirement of the System

(MU)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Retail Sales (a)	2,627.17	2,529.13
Open Access Sales (b)	0.00	0.00
Less: Energy Savings (c)	0.00	0.00
Total Sales (d=a+b-c)	2,627.17	2,529.13
Distribution Loss (MU) (e=g-d)	188.66	164.30
Distribution Loss (%) (f=e/g)	6.70%	6.10%
Energy Required at Periphery (g)	2,815.83	2693.43
Sale to common pool consumer/UI Sale(h)	0.00	0.24
Own generation (i)	17.78	19.82
Total energy requirement at state periphery(j=g+h-i)	2,798.05	2,673.85
Less: Energy Purchased through UI at Periphery (k)	0.00	69.97
Less: Open Access Purchase at Periphery (l)	0.00	0.00
Less: Energy Purchased through Renewable Sources (m)	352.95	70.00
Energy requirement at state periphery from tied up sources (n=j-k-l-m)	2,445.10	2,533.88
Inter state loss (MU) (o=p-n)	92.89	96.26
Inter state loss (%)	3.66%	3.66%
Energy requirement at state periphery from generator end (p)	2,537.99	2,630.14
Total Energy requirement from tied up sources & UI at generator end (q=p+k)	2,890.94	2,789.93
Total Energy requirement in ut including Open Access (r=q+l)	2,890.94	2,789.93

### 3.4 Energy Availability and power purchase cost

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

The EDDD for the purpose of estimation of the power availability during FY 19-20 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations



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

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

For projecting of the energy availability for FY 19-20, six months actual power purchase has been considered. For projection of remaining six months of power purchase for FY 19-20, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no's. WRPC/Comml-I/6/Alloc/2019/11859 dated 26/09/2019 of Western Regional Power Committee. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

Table 19: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
<b>NTPC Stations</b>			
KSTPP	2,100	49	2.35%
KSTPP-III	500	5	1.03%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.92%
VSTPP- III	1,000	11	1.12%
VSTPP- IV	1,000	11	1.10%
VSTPS-V	500	7	1.48%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC )	500	70	14.00%
Sipat-I	1,980	22	1.11%
Sipat-II	1,000	10	0.99%
MSTPS-I	1,000	11	1.10%
MOUDA-II	1,320	15	1.13%
SOLAPUR	1320	24	1.81%
LARA	1600	7	0.46%

Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
GADARWARA	800	13	1.65%
<b>Subtotal</b>	<b>18,194</b>	<b>341</b>	
<b>Eastern Region</b>			
KHSTPP-II	1000	1.30	0.13%
<b>Subtotal</b>	<b>1000</b>	<b>1.3</b>	
<b>NPCIL</b>			
KAPPS	440	9	1.94%
TAPP 3&4	1080	13	1.22%
<b>Subtotal</b>	<b>1520.00</b>	<b>22</b>	
<b>Others</b>			
Ratnagiri	582	38	6.53%
<b>Subtotal</b>	<b>582</b>	<b>38</b>	
<b>Grand Total</b>	<b>21,295.59</b>	<b>402</b>	

Based on the actual power purchase cost of the first six months of FY 19-20 and the remaining six months projection, the revised estimated power purchase cost for FY 19-20 is presented in the following Table:

Table 20: Revised estimated Power Purchase cost for FY 19-20

(Rs. Crore)

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
<b>NTPC Stations</b>							
KSTPP	353.86	23.78	51.47	0.05		75.29	2.13
KSTPP-III	34.46	4.55	4.84	-0.03		9.37	2.72
VSTPP-I	90.91	7.93	16.55	0.39		24.87	2.74
VSTPP-II	59.05	4.09	10.20	0.25		14.55	2.46
VSTPP- III	82.69	8.39	14.74	0.29		23.42	2.83
VSTPP- IV	77.19	12.30	13.24	0.41		25.96	3.36
VSTPS-V	54.49	8.74	9.91	0.19		18.84	3.46
KAWAS	88.38	19.67	24.90	0.27		44.83	5.07
JGPP	60.23	24.56	16.94	0.35		41.86	6.95
Sipat-I	148.78	18.93	21.66	0.62		41.21	2.77
Sipat-II	68.73	8.77	11.34	0.12		20.24	2.94
MSIPS-I	61.10	15.21	19.48	0.71		35.40	5.79
MOUDA-II	70.28	16.47	22.31	2.42		41.20	5.86
KHSTPP-II	10.79	1.50	2.29	-0.06		3.73	3.46
SOLAPUR	70.42	29.25	23.82	0.01		53.08	7.54
LARA	24.53	0.00	7.87	0.00		7.87	3.21
GADARWARA	53.45	12.36	19.41	0.00		31.78	5.94
<b>Subtotal</b>	<b>1409.33</b>	<b>216.51</b>	<b>290.99</b>	<b>6.01</b>	<b>0.66</b>	<b>512.84</b>	<b>3.64</b>



Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
<b>NTPC Bhilai</b>							
Bhilai Unit-I & II (NTPC)	491.34	81.83	174.09	-0.50		255.42	5.20
<b>Subtotal</b>	<b>491.34</b>	<b>81.83</b>	<b>174.09</b>	<b>(0.50)</b>		<b>255.42</b>	<b>5.20</b>
<b>NPCIL</b>							
KAPPS	51.52	0.00	12.79	0.00		12.79	2.48
TAPP 3&4	91.12	0.00	26.90	0.00		26.90	2.95
<b>Subtotal</b>	<b>142.64</b>	<b>0.00</b>	<b>39.69</b>	<b>0.00</b>		<b>39.69</b>	<b>2.78</b>
<b>Others</b>							
Ratnagiri	95.57	20.14	37.07	0.00		57.21	5.99
<b>Subtotal</b>	<b>95.57</b>	<b>20.14</b>	<b>37.07</b>	<b>0.00</b>		<b>57.21</b>	<b>5.99</b>
<b>Power purchase from Other Sources</b>							
Power purchase from Indian E. Exchange	481.27	0.00	170.38	0.00		170.38	3.54
UI	69.97	0.00	21.97	0.00		21.97	3.14
Solar	29.82	0.00	0.00	0.00		0.00	0.00
Non Solar (Hydro)	70.00	0.00	31.36	0.00		31.36	4.48
Solar REC	0.00	0.00	8.90	0.00		8.90	0.00
Non Solar REC	0.00	0.00	10.20	0.00		10.20	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00		0.00	0.00
<b>Subtotal</b>	<b>651.06</b>	<b>0.00</b>	<b>242.82</b>	<b>0.00</b>		<b>242.82</b>	<b>3.73</b>
Misc. Arrears							
NTPC Rebate							
Gross Power Purchase	2789.93	318.48	784.65	5.51	0.66	1107.97	3.97
External Losses							
<b>Total Power Purchase</b>	<b>2789.93</b>	<b>318.48</b>	<b>784.65</b>	<b>5.51</b>	<b>0.66</b>	<b>1107.97</b>	<b>3.97</b>
PGCIL CHARGES						119.41	
WRLDC						0.59	
MSTCL						3.50	
REC						0.00	
<b>Grand Total of Charges - Net</b>	<b>2789.93</b>					<b>1231.48</b>	<b>4.41</b>

Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2019.

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



For FY 19-20, till September, 2019 the EDDD has procured 9.91 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 19.91 MU of solar power from its own generation and will purchase a further 89.05 MUs as solar certificates to meet its solar obligation till FY 2019-20.

To meet its non-solar obligation for the FY 2019-20, the EDDD has considered purchase of non solar energy of 70 MUs to meet its RPO target through this route. Further, to meet its RPO target EDDD has planned to purchase 101.98 MUs through non-solar certificates during the remaining six months of FY 2019-20.

### 3.5 Operation & Maintenance Costs

The approved and revised estimated O&M cost for FY 19-20 is shown in the following Table:

**Table 21: O&M Expense for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Employee Cost	17.61	17.06
R&M	19.62	19.35
A&G	7.13	10.39
O&M Expenses	44.36	46.80

The revision on the O&M cost for FY 19-20 is mainly on escalation in A&G expenses.

### 3.6 Capital Expenditure Plan

A summary of the capital expenditure and capitalization for FY 19-20 vis-à-vis approved by the Commission is summarized in Table below:

**Table 22: Capital Expenditure & Capitalization for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Capital Expenditure	50.55	26.50
Capitalisation	9.55	10.00





It is requested to approve the capital expenditure and capitalization as submitted in the above table.

### 3.7 Gross Fixed Assets

The Commission in its last Tariff Order has approved the opening GFA, addition of assets and closing GFA for FY 19-20 at Rs. 600.13 Crore, Rs. 9.55 Crore and Rs. 609.68 Crore respectively.

EDDD had Opening Gross Fixed Assets (GFA) of Rs. 587.63 Crore in FY 18-19. EDDD has further added assets worth Rs. 19.82 Crore during FY 18-19. The closing GFA by the end of FY 18-19 stands at Rs.607.45 Crore.

Based on the capital expenditure and capitalization estimated above, assets amounting to Rs. 10.00 Crore have been estimated to be capitalized during FY 19-20.

A summary of the Opening and Closing GFA and capitalization for FY 19-20 vis-à-vis approved by the Commission has been summarized in Table below:

Table 23: Opening and Closing GFA for FY 19-20

(Rs. Crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2019-20(Approved)	600.13	9.55	609.68
FY 2019-20(RE)	607.45	10.00	617.45

### 3.8 Depreciation

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

EDDD has applied the depreciation rates as specified in the MYT Regulations, 2018.

Table 24: Depreciation rate specified in the MYT Regulations, 2018

Asset Category	Depreciation Rate %
Plant & Machinery	3.60%
Buildings	1.80%



Asset Category	Depreciation Rate %
Vehicles	9.50%
Furniture & Fixtures	6.00%
Computers & Others	6.33%
Land	0.00%

Depreciation for the FY 19-20 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 19-20. The Table below summarizes the asset-wise depreciation vis-à-vis approved by the Commission and computed by EDDD:

Table 25: Depreciation for FY 19-20

(Rs. Crore)

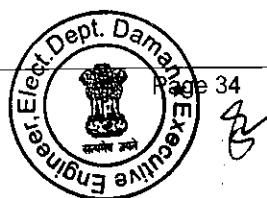
Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Opening GFA	600.13	607.45
Addition during the year	9.55	10.00
Closing GFA	609.68	617.45
Average GFA	604.91	612.45
Depreciation during the year	20.66	21.18

### 3.9 Interest & Financial Costs

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

Assets capitalized during the FY 2019-20 have been considered based on normative debt-equity ratio of 70:30 as per the as per the JERC (Multi Year Distribution Tariff) Regulations, 2018.

Interest rate of 9.55% has been considered for computation of interest cost for long-term loans which is similar to the 1 year SBI MCLR plus 100 basis points. The normative interest on long-term/capital loans against approved by the Commission in the Tariff Order dated 20<sup>th</sup> May, 2019 as against the revised estimates is shown in the Table below:



**Table 26: Interest on Long-term/Capital Loans for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Opening Loan	138.96	144.25
Loan for additional Capex (70:30 debt-equity)	6.69	7.00
Loan Repayment	20.66	21.18
Closing Loan	124.99	130.06
Interest Cost on Avg. Loans	12.60	13.10

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

### 3.9.2 Interest on Working Capital Borrowings

EDDD has computed the Interest on Working Capital for the Control Period based on normative basis as per the JERC (Multi Year Distribution Tariff) Regulations, 2018.

The working capital requirement for the FY 2019-20 has been computed considering the following parameters:

- Receivable equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

A rate of interest of 10.55% has been considered on the working capital requirement, being the 1 year SBI MCLR plus 200 basis points. This is in line with the JERC (Multi Year Distribution Tariff) Regulations, 2018 which states that "The rate of interest on working capital shall be equal one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points."

The normative interest on working capital for FY 19-20 considering the above methodology is summarized in the Table below:

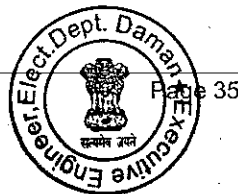


Table 27: Interest on Working Capital for FY 19-20

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
O&M expense for one month	3.70	3.90
Maintenance spares at 40% of R&M for one month	0.65	0.65
Receivables for 2 months	204.60	173.16
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	67.82	80.46
<b>Total Working Capital requirement</b>	<b>141.13</b>	<b>97.24</b>
<b>Interest on Working Capital</b>	<b>14.32</b>	<b>10.26</b>

### 3.10 Return on Equity

As per the JERC (Multi Year Distribution Tariff) Regulations, 2018, EDDD is entitled for a Return on Equity (RoE).

The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following:

“27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum.”

The EDDD has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the Regulation 26 of the MYT Regulations, 2018. The following table provides the Return on Equity for the FY 2019-20.



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**Table 28: Return on Equity for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Opening Equity	81.98	84.18
Addition in equity on account of new capitalization	2.87	3.00
Closing Equity	84.85	87.18
Average Equity	83.42	85.68
Average Equity (Wires Business)	75.07	77.11
Average Equity (Retail Supply Business)	8.34	8.57
Return on Equity for Wires Business (%)	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%
Return on Equity for Wires Business	11.64	11.95
Return on Equity for Retail Supply Business	1.33	1.37
<b>Return on Equity</b>	<b>12.97</b>	<b>13.32</b>

The EDDD, requests the Hon'ble Commission to approve the return on capital base computed for FY 19-20.

### 3.11 Interest on consumer security deposits

The Hon'ble Commission in its last Tariff Order has approved Rs. 4.24 Crore as interest payable on consumer security deposits. EDDD has made a provision to pay Rs. 4.08 Crore as interest on consumer security deposits in FY 19-20. The details of the interest on consumer security deposits have been given in the table below:

**Table 29: Interest on Consumer Security Deposit for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Interest on Security Deposit	4.24	4.08

The EDDD, requests the Hon'ble Commission to approve the interest on consumer security deposits computed for FY 19-20.



### 3.12 Non-Tariff & Other Income

For estimating the non-tariff income for FY 19-20, an increase of 5% p.a. has been considered over the actual non-tariff income of FY 18-19. Details of the non-tariff income is provided in table below:

**Table 30: Non-tariff Income for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (6th April, 2016)	FY 19-20 RE
Non tariff Income	19.76	10.45

### 3.13 Aggregate Revenue Requirement

The following Table summarizes EDDD's Aggregate Revenue Requirement for FY 19-20 against approved by the Hon'ble Commission in the Tariff Order dated 20<sup>th</sup> May, 2019.

**Table 31: Aggregate Revenue Requirement for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Power Purchase Cost	1,138.20	1,231.48
O&M Expense	44.36	46.80
Depreciation	20.66	21.18
Interest Cost on Long-term Capital Loans	12.60	13.10
Interest on Working Capital Loans	14.32	10.26
Return on Equity	12.97	13.32
Provision for Bad Debt	0.00	0.00
Interest on security deposit	4.24	4.08
Total	1,247.35	1,340.22
Less:		
Non-Tariff Income	19.76	10.45
Revenue from Surplus Power Sale	0.00	0.18
Annual Revenue Requirement	1,227.59	1,329.59



### 3.14 Revenue from Existing Tariff

Revenue from sale of power for FY 19-20 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Daman and Diu.

Revenue from sale of power at existing tariff is estimated to be Rs. 1038.94 Crore in FY 19-20, as shown in the following Table. The estimated revenue for FY 19-20 is based on the six month actual revenue at the exiting tariff. The revenue for remaining six months of FY 19-20 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the MYT Control Period FY 2019-20 to FY 2021-22 dated 20<sup>th</sup> May, 2019. As directed by the Hon'ble Commission in its Tariff Order dated 20<sup>th</sup> May, 2019, the fuel purchase adjustment surcharge approved by the Hon'ble Commission is being levied to the consumers of the EDDD. Further, the EDDD has considered the actual FPPCA for the second quarter billed to the consumers and has also considered the estimated FPPCA to be levied to the consumers during the third and fourth quarter while arriving at the total revenue for the FY 2019-20

The Table below summarizes the revenue from sale of power at existing tariff for FY 19-20:

**Table 32: Revenue from Sale of Power at Existing Tariff for FY 19-20**

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Revenue from sale of power	1,098.21	1,038.94
Revenue from FPPCA	0.00	115.07
<b>Total Revenue</b>	<b>1098.21</b>	<b>1154.01</b>

### 3.15 Coverage of Revenue Gap

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

The following Table summarizes the Revenue gap at existing tariff at Rs.175.58 Crore for FY 19-20.



Table 33: Revenue Gap/Surplus for FY 19-20

(Rs. Crore)

Particulars	FY 19-20 Approved (20th May, 2019)	FY 19-20 RE
Annual Revenue Requirement (a)	1227.59	1,329.59
Revenue from sale of power (b)	1098.21	1038.94
Revenue from FPPCA (c)	0.00	115.07
Revenue (Gap)/surplus (d=b+c-a)	(129.38)	(175.58)
Previous Years' (Gap)/Surplus Carried Over (e)	140.13	130.87
Carrying Cost (f)	7.20	0.00
Net Revenue (Gap)/surplus (g=d+e+f)	17.95	(44.70)

EDDD requests the Hon'ble Commission to approve afore-mentioned revenue surplus for FY 19-20.





## Chapter 4: ARR for the FY 2020-21

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EDDD is submitting its ARR for the FY 2020-21 broadly on the basis of the principles outlined in MYT Tariff Regulations notified by JERC. EDDD has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for the FY 2020-21.

The following sections explain in detail the basis and forecasts of the following elements for the FY 2020-21.

- 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 2020-21.

### 4.1 Load Growth

1. The Table given below summarizes the growth in sanctioned load over the past 6 years. The HT Industrial category has registered a load growth of 1.99% over this period. Overall growth for the UT has been 3.51%.



Table 34: Past Year's Load Growth

(kVA)						
Consumer Category	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
kVA	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	55,991	117161	119557	121827	131652	123187
Commercial	17,654	19322	19761	20781	23722	22187
Agriculture	2,512	3617	3672	3812	4003	3824
LT Industry	97,780	100284	107471	104148	108683	112502
HT/EHT Industry	488,495	486708	505321	536544	551163	543648
Public Lighting	1,649	1657	1690	880	1405	1447
Public Water Works	664	795	795	795	794	748
Temp. Supply			28	673	1986	1650
<b>Total</b>	<b>664,745</b>	<b>729,544</b>	<b>758,295</b>	<b>789,460</b>	<b>823,408</b>	<b>809,193</b>

2. The projected load for the FY 2019-20 and the FY2020-21 for all the categories has been given in the table below:

Table 35: Projected load growth during FY 2019-20 and FY 2020-21

(kVA)		
Consumer Category	FY 19-20	FY 20-21
kVA	RE	Projected
Domestic	153559	165844
Commercial	26388	27832
Agriculture	4283	4430
LT Industry	113829	116492
HT/EHT Industry	580988	596500
Public Lighting	1462	1491
Public Water Works	858	892
Temp. Supply	1986	1986
<b>Total</b>	<b>883,353</b>	<b>915,468</b>

3. The Hon'ble Commission is requested to approve the sanctioned load for the FY 2019-20 and the FY 2020-21 for the various consumer categories as submitted herewith.

#### 4.2 Consumer Growth

1. The Table 36 below summarizes the category wise growth in consumers over the past 6 years.



Table 36: Past Year's Consumer Growth

Consumer Category	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	43,962	45,298	46,420	47,403	48,287	48,455
Commercial	7,972	8,037	8,209	7,875	7,815	7,373
Agriculture	1,191	1,195	1,243	1,283	1,344	1,299
LT Industry	1,799	1,755	1,817	1,755	1,706	1,705
HT/EHT Industry	798	786	784	800	807	789
Public Lighting	339	524	529	571	633	635
Public Water Works	71	109	125	127	125	110
Temp. Supply	-	-	11	366	414	510
<b>Total</b>	<b>56,132</b>	<b>57,704</b>	<b>59,138</b>	<b>60,180</b>	<b>61,131</b>	<b>60,876</b>

2. The projected consumer growth for the FY 2019-20 and the FY 2020-21 has been given in the table below:

Table 37: Projected consumer growth during the FY 2019-20 and the FY 2020-21

Consumer Category	FY 19-20	FY 20-21
	RE	Projected
Domestic	50811	52122
Commercial	7944	8009
Agriculture	1419	1458
LT Industry	1740	1757
HT/EHT Industry	809	810
Public Lighting	718	765
Public Water Works	137	143
Temp. Supply	414	414
<b>Total</b>	<b>63,992</b>	<b>65,478</b>

3. The Hon'ble Commission is requested to approve the no. of consumers for the FY 2019-20 and the FY 2020-21 for the various consumer categories as submitted herewith.

#### 4.3 Energy Sales Growth

1. EDDD has forecasted the energy sales taking into account the past trends in the number of consumers, connected load and energy sales customer category-wise. Actual data available for the period from FY 2012-13 to FY 2018-19 has been considered to arrive at the Compound Annual Growth Rate (CAGR) for each of the customer categories. As the data available for FY 2019-20 pertains only to the first 6 months of the year, the figures for FY 2019-20 were not considered for arriving at the growth rates. However, the figures available for 6 months of FY 2019-20 have



been annualized, in line with the past trends to arrive at sales estimates for FY 2019-20. The figures for FY 2019-20 have been further used as the base for forecasting the values for the FY 2020-21.

2. Table 38 below presents the category-wise energy sales for the past 7 years.

**Table 38: Past Years' Energy Sales Growth**

Consumer Category	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19
	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	77.79	84.16	83.06	88.20	97.89	121.32	134.47
LIG/ Kutir Jyoti	0.04	0.08	0.08	0.09	0.10	0.10	0.00
Commercial	38.74	46.75	41.57	49.93	55.37	57.74	53.27
Agriculture	4.22	3.05	2.30	2.46	2.81	4.83	4.95
LT Industry	161.21	169.59	153.70	160.54	179.85	195.61	197.86
HT/EHT Industry	1,572.81	1,441.53	1,327.84	1,379.41	1407.81	1,708.63	2031.44
Public Lighting	6.51	7.06	8.80	7.43	7.89	9.48	8.26
Public Water Works	1.12	1.20	3.28	2.68	3.22	3.49	3.68
Temp. Supply	0.51	0.67	1.09	1.23	2.17		
<b>Total Sales</b>	<b>1,862.95</b>	<b>1,754.08</b>	<b>1,621.72</b>	<b>1,691.98</b>	<b>1,757.11</b>	<b>2,101.22</b>	<b>2,433.91</b>

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 FY 2020-21 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 2019-20 has been projected by considering the actual sales for the first six months of FY 2019-20 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 19-20, 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 19-20.



5. The table given below summarizes the projections of category wise increase in energy sales during the FY 2019-20 and the FY 2020-21. As can be observed, the overall energy sales in UT of Daman & Diu are significantly dependent upon HT industrial consumption.
6. EDDD submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 39: Projected Category wise Energy Sales for FY 2020-21

Consumer Category	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Domestic	143.31	181.17
LIG/ Kutir Jyoti*	0.10	0.00
Commercial	70.36	63.20
Agriculture	5.70	5.49
LT Industry	233.44	201.33
HT/EHT Industry	2,281.90	2182.77
Public Lighting	11.83	6.89
Public Water Works	5.19	3.11
Temp. Supply	6.40	0.00
<b>Total Sales</b>	<b>2,758.23</b>	<b>2,643.95</b>

\* LIG sales is included in the Domestic category

#### 4.4 Distribution 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 Distribution losses in its distribution area.
2. EDDD has achieved Distribution loss level of 6.19% for the FY 2018-19. Reduction of Distribution losses below 10% involves significant amount of capital expenditure and it is EDDD's endeavor to bring the Distribution loss level further down in the subsequent years. Further, the Hon'ble Commission had set a Distribution loss level target of 6.60% for the FY 2020-21 in the Tariff Order dated 20<sup>th</sup> May, 2019. The EDDD proposes to reduce the Distribution losses to 6.00% for FY 20-21. The approved and the projected Distribution Loss for the FY 2020-21 is as given in the table below:



Table 40: Proposed Distribution Loss for FY 2020-21

Particulars	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Distribution Loss	6.60%	6.00%

3. The EDDD submits to the Commission to approve the Distribution losses submitted herein.

#### 4.5 Energy Requirement of the System

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

Table 41: Energy Requirement of the System

Particulars	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Retail Sales (a)	2,758.23	2,643.95
Open Access Sales (b)	0.00	0.00
Less: Energy Savings (c)	0.00	0.00
Total Sales (d=a+b-c)	2,758.23	2,643.95
Distribution Loss (MU) (e=g-d)	194.91	168.76
Distribution Loss (%) (f=e/g)	6.60%	6.00%
Energy Required at Periphery (g)	2,953.14	2,812.71
Sale to common pool consumer/UI Sale(h)	0.00	0.75
Own generation (i)	17.78	63.02
Total energy requirement at state periphery(j=g+h-i)	2,935.36	2,750.44
Less: Energy Purchased through UI at Periphery (k)	0.00	0.00
Less: Open Access Purchase at Periphery (l)	0.00	0.00
Less: Energy Purchased through Renewable Sources (m)	352.95	352.95
Energy requirement at state periphery from tied up sources (n=j-k-l-m)	2,582.41	2,397.49
Inter state loss (MU) (o=p-n)	3.66%	3.66%
Inter state loss (%)	98.11	91.08
Energy requirement at state periphery from generator end (p)	2680.51	2488.57



Particulars	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Total Energy requirement from tied up sources & UI at generator end ( $q=p+k$ )	3033.46	2904.54
Total Energy requirement in ut including Open Access ( $r=q+l$ )	3033.46	2904.54

#### 4.6 Energy Availability

- Daman & Diu being a Union Territory with no generating stations of its own, mainly relies on the firm and infirm allocations of power from Central Generating Stations like Korba, Vindychal, Kahalgaon, Kawas, Tarapur and Kakrapar atomic power stations of NPCIL etc. to meet its energy requirement.
- The EDDD for the purpose of estimation of the power availability during the FY 2020-21 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
- 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.
- For projecting the energy availability for FY 19-20, actual power purchase for the first six months of FY 19-20 has been considered. For projection of energy availability for the FY 2020-21, firm and infirm allocation from various generating stations has been considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.



#### 4.6.1 Power Purchase

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 19-20 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 2019 to March 2020 has been estimated based on the revised allocation specified in the notification No. WRPC/Comm-I/6/Alloc/2019/11859 dated 26/09/2019 of Western Regional Power Committee. The energy allocation from various generating stations is summarized in table below:

Table 42: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
<b>NTPC Stations</b>			
KSTPP	2,100	49	2.35%
KSTPP-III	500	5	1.03%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.92%
VSTPP- III	1,000	11	1.12%
VSTPP- IV	1,000	11	1.10%
VSTPS-V	500	7	1.48%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC )	500	70	14.00%
Sipat-I	1,980	22	1.11%
Sipat-II	1,000	10	0.99%
MSTPS-I	1,000	11	1.10%
MOUDA-II	1,320	15	1.13%
SOLAPUR	1320	24	1.81%
LARA	1600	7	0.46%
GADARWARA	800	13	1.65%
<b>Subtotal</b>	<b>18,194</b>	<b>341</b>	
<b>Eastern Region</b>			
KHSTPP-II	1000	1.30	0.13%
<b>Subtotal</b>	<b>1000</b>	<b>1.3</b>	
<b>NPCIL</b>			
KAPPS	440	9	1.94%





Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
TAPP 3&4	1080	13	1.22%
<b>Subtotal</b>	<b>1520.00</b>	<b>22</b>	
Others			
Ratnagiri	582	38	6.53%
<b>Subtotal</b>	<b>582</b>	<b>38</b>	
<b>Grand Total</b>	<b>21,295.59</b>	<b>402</b>	

3. Actual power purchase in first six months of FY 19-20 and power allocation of 70 MW from NTPC-SAIL Bhilai power plant has been considered while estimating the power availability from this plant during FY 19-20.
4. The EDDD received 47.78 MUs of power from Ratnagiri Gas Power Plant during the first six months of FY 19-20. Hence, it is expected that EDDD will be getting power from Ratnagiri at the same level for the rest of the FY 2019-20 and therefore 95.57 MUs have been considered from the plant for the FY 2019-20.
5. During the FY 2019-20 the EDDD will start getting power from Lara generating station. A capacity of 7.34 MW has been allocated to EDDD from Lara. The same has been considered for the FY 2019-20 and FY 2020-21.
6. For projecting the power availability for FY 2020-21, EDDD has considered average allocation of firm and infirm power from the western region generation stations (NTPC and NPCIL) of Western Regional Power Committee. For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account.
7. Additionally, EDDD has 70 MW allocations from NSPCL Bhilai power stations. Energy availability from NSPCL Bhilai power stations for FY 2020-21 has been considered by taking 70 MW allocation from the plant.
8. Power purchase quantum from the NTPC stations of the current year and FY 2020-21 has been calculated based on the installed capacity of each plant and by applying the average PLF as approved by the Hon'ble Commission vide its Order for the Business Plan for the MYT Control Period dated 31st October, 2018 to calculate the plant-wise gross generation.
9. For gas based generating stations i.e. Kawas (KGPP) and Gandhar (GGPP) the average PLF as approved by the Hon'ble Commission vide its Order for the



- Business Plan for the MYT Control Period dated 31st October, 2018 has been taken into account.
10. Auxiliary consumption of 7.75% and 2.50% has been considered for estimating the net generation from coal and gas based generating stations respectively.
  11. Merit Order Dispatch: Further, the NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost has been projected. However the fixed charges have been approved for full allocation.
  12. For the FY 2019-20 and the FY 2020-21 the EDDD has considered purchase of non solar energy of 70 MUs to meet its RPO target through this route.
  13. To meet the solar obligation for the FY 2019-20 and the FY 2020-21, the department is in the process of purchasing 80 MW power from NTPC, 50 MW from Solar Energy Corporation of India (SECI) and 40 MW from open tender on long term basis (25 years) on Power Purchase Agreement (PPA) basis. Further, the EDDD has an installed capacity of 16.186 MW of solar plants which include 10 MW ground mounted plants and remaining 6.186 MW of rooftop solar plants. It is expected that an additional 27 MW of rooftop solar plant will be added to the existing capacity during the 2019-20. A summary of the Renewable Purchase Obligation (RPO) to be met by the EDDD during the FY 2019-20 and FY 2020-21 is given in the table below:

**Table 43: Summary of renewable Purchase Obligation for the FY 2019-20 and FY 2020-21**

Description	(MU)	
	FY 2019-20	FY 2020-21
Sales within State (MU)	2,529.13	2,643.95
RPO obligation (%)	11.50%	14.10%
Solar	4.70%	6.10%
Non-Solar	6.80%	8.00%
RPO obligation for the year (MU)	290.85	372.80
Solar	118.87	161.28
Non-Solar	171.98	211.52
RPO Compliance (Procurement and own generation)	99.82	415.97
Solar	29.82	345.97
Non-Solar	70.00	70.00
RPO Compliance (REC certificate purchase)	191.03	141.52
Solar	89.05	0.00
Non-Solar	101.98	141.52



14. For computing the power availability at the periphery, 3.66% weighted average external transmission losses have been applied on the gross power purchase for FY 2019-20 and the FY 2020-21.
15. Table 44 below depicts the station wise power purchase for FY 2019-20 and the FY 2020-21.

Table 44: Power Purchase Quantum

Source	(MU)	
	FY 2019-20	FY 2020-21
<b>NTPC Stations</b>		
KSTPP	353.86	354.43
KSTPP-III	34.46	36.97
VSTPP-I	90.91	88.35
VSTPP-II	59.05	61.62
VSTPP- III	82.69	75.03
VSTPP- IV	77.19	73.52
VSTPS-V	54.49	49.70
KAWAS	88.38	82.19
JGPP	60.23	96.46
Sipat-I	148.78	156.45
Sipat-II	68.73	70.34
MSTPS-I	61.10	37.20
MOUDA-II	70.28	50.68
KHSTPP-II	10.79	8.09
SOLAPUR	70.42	117.63
LARA	24.53	49.73
GADARWARA	53.45	89.29
<b>Subtotal</b>	<b>1409.33</b>	<b>1497.71</b>
<b>NTPC Bhilai</b>		
Bhilai Unit-I &II(NTPC )	491.34	469.51
<b>Subtotal</b>	<b>491.34</b>	<b>469.51</b>
<b>NPCIL</b>		
KAPPS	51.52	48.37
TAPP 3&4	91.12	83.41
<b>Subtotal</b>	<b>142.64</b>	<b>131.79</b>
<b>Others</b>		
Ratnagiri	95.57	95.57
<b>Subtotal</b>	<b>95.57</b>	<b>95.57</b>
<b>Power purchase from Other Sources</b>		
Power purchase from Indian E. Exchange	481.27	294.00
UI	69.97	0.00
Solar	29.82	63.02
Non Solar (Hydro)	70.00	70.00
Solar REC	0.00	0.00



Source	FY 2019-20	FY 2020-21
Non Solar REC	0.00	0.00
Solar (SECI, NTPC)	0.00	282.95
<b>Subtotal</b>	<b>651.06</b>	<b>709.97</b>
<b>Gross Power Purchase</b>	<b>2789.93</b>	<b>2904.54</b>
<b>Total Power Purchase</b>	<b>2789.93</b>	<b>2904.54</b>

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

#### 4.6.2 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 2020-21.

Table 45: Energy Balance

Particulars	(MU)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Retail Sales (a)	2,758.23	2,643.95
Open Access Sales (b)	0.00	0.00
Less: Energy Savings (c)	0.00	0.00
Total Sales (d=a+b-c)	2,758.23	2,643.95
Distribution Loss (MU) (e=g-d)	194.91	168.76
Distribution Loss (%) (f=e/g)	6.60%	6.00%
Energy Required at Periphery (g)	2,953.14	2,812.71
Sale to common pool consumer/UI Sale(h)	0.00	0.75
Own generation (i)	17.78	63.02
Total energy requirement at state periphery(j=g+h-i)	2,935.36	2,750.44
Less: Energy Purchased through UI at Periphery (k)	0.00	0.00
Less: Open Access Purchase at Periphery (l)	0.00	0.00
Less: Energy Purchased through Renewable Sources (m)	352.95	352.95
Energy requirement at state periphery from tied up sources (n=j-k-l-m)	2,582.41	2,397.49
Inter state loss (MU) (o=p-n)	3.66%	3.66%
Inter state loss (%)	98.11	91.08



Particulars	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Energy requirement at state periphery from generator end (p)	2680.51	2488.57
Total Energy requirement from tied up sources & UI at generator end (q=p+k)	3033.46	2904.54
Total Energy requirement in ut including Open Access (r=q+l)	3033.46	2904.54

#### 4.6.3 Power Purchase Cost

1. The cost of purchase from the central generating stations for FY 2019-20 has been estimated based on the following assumptions:

- Fixed cost for NTPC for the FY 2020-21 has been kept at the same level as estimated for the F 2019-20.
- Variable cost for each NTPC generating stations for the FY 2020-21 has been projected at the same rate as received during the first six months of FY 2019-20.
- For nuclear plants i.e. KAPP and TAPP single part tariff, the actual average variable cost per unit has been considered at the same rate as received during the first six months of FY 2019-20 for projecting the power purchase cost for the FY 2020-21.
- For power purchase from renewable energy sources, the EDDD has considered the purchase of solar power at Rs. 3.00 per unit. For the non-solar power, the EDDD has considered a rate of Rs. 4.48 per unit. Further, the EDDD has considered the purchase of non-solar renewable energy certificates at Rs. 1.00 per unit.
- The average power purchase cost for procurement of power from the energy exchange has been considered at Rs. 3.54/unit.

2. The Total Power Purchase cost from various sources for the FY 2020-21 is summarized in the Table below:

Table 46: Power Purchase Cost

(Rs. Crore.)

Source	Units Purchased	Fixed Charges	Variable Charges	All Charges Total	Per Unit Cost
NTPC Stations					
KSTPP	354.43	23.78	51.55	75.33	2.13



Source	Units Purchased	Fixed Charges	Variable Charges	All Charges Total	Per Unit Cost
KSTPP-III	36.97	4.55	5.19	9.75	2.64
VSTPP-I	88.35	7.93	16.09	24.02	2.72
VSTPP-II	61.62	4.09	10.65	14.73	2.39
VSTPP- III	75.03	8.39	13.38	21.76	2.90
VSTPP- IV	73.52	12.30	12.61	24.92	3.39
VSTPS-V	49.70	8.74	9.04	17.78	3.58
KAWAS	82.19	19.67	23.15	42.82	5.21
JGPP	96.46	24.56	27.13	51.70	5.36
Sipat-I	156.45	18.93	22.78	41.71	2.67
Sipat-II	70.34	8.77	11.61	20.38	2.90
MSTPS-I	37.20	15.21	11.86	27.07	7.28
MOUDA-II	50.68	16.47	16.09	32.57	3.17
KHSTPP-II	8.09	1.50	1.72	3.22	3.98
SOLAPUR	117.63	29.25	39.79	69.04	3.38
LARA	49.73	0.00	15.96	15.96	3.21
GADARWARA	89.29	12.36	32.43	44.79	3.63
<b>Subtotal</b>	<b>1497.71</b>	<b>216.51</b>	<b>321.03</b>	<b>537.54</b>	<b>3.59</b>
<b>NTPC Bhilai</b>					
Bhilai Unit-I &II(NTPC )	469.51	81.83	166.35	248.18	5.29
<b>Subtotal</b>	<b>469.51</b>	<b>81.83</b>	<b>166.35</b>	<b>248.18</b>	<b>5.29</b>
<b>NPCIL</b>					
KAPPS	48.37	0.00	14.28	14.28	2.95
TAPP 3&4	83.41	0.00	24.63	24.63	2.95
<b>Subtotal</b>	<b>131.79</b>	<b>0.00</b>	<b>38.91</b>	<b>38.91</b>	<b>2.95</b>
<b>Others</b>					
Ratnagiri	95.57	20.14	37.07	57.21	5.99
<b>Subtotal</b>	<b>95.57</b>	<b>20.14</b>	<b>37.07</b>	<b>57.21</b>	<b>5.99</b>
<b>Power purchase from Other Sources</b>					
Power purchase from Indian E. Exchange	294.00	0.00	104.08	104.08	3.54
UI	0.00	0.00	0.00	0.00	0.00
Solar	63.02	0.00	0.00	0.00	0.00
Non Solar (Hydro)	70.00	0.00	31.36	31.36	4.48
Solar REC	0.00	0.00	0.00	0.00	0.00
Non Solar REC	0.00	0.00	14.15	14.15	0.00
Solar (SECI, NTPC)	282.95	0.00	84.88	84.88	3.00
<b>Subtotal</b>	<b>709.97</b>	<b>0.00</b>	<b>234.47</b>	<b>234.47</b>	<b>3.30</b>
<b>Misc. Arrears</b>					
<b>NTPC Rebate</b>					
<b>Gross Power Purchase</b>	<b>2904.54</b>	<b>318.48</b>	<b>797.83</b>	<b>1116.31</b>	<b>3.84</b>
<b>External Losses</b>					
<b>Total Power Purchase</b>	<b>2904.54</b>	<b>318.48</b>	<b>797.83</b>	<b>1116.31</b>	<b>3.84</b>



#### 4.6.4 Transmission and Other Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. EDDD has a mix of firm and infirm capacity allocations from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Therefore, the EDDD has estimated the transmission charges for FY 19-20 based on the actual transmission charges for the first six months and considering the same level of transmission charges for the remaining six months of FY 2019-20. Further, EDDD has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission charges for ensuing year.

For projecting the PGCIL transmission charges for the FY 2020-21, an escalation of 5% over the estimated FY 19-20 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 47: Total Power Purchase Cost for the FY 2020-21

Source	All Charges Total
<b>Total Power Purchase</b>	<b>1116.31</b>
PGCIL CHARGES	125.38
WRLDC	0.62
MSTCL	3.68
<b>Grand Total of Charges – Net</b>	<b>1245.99</b>

(Rs. Crore.)

#### 4.7 Operation & Maintenance Costs

1. Operation and Maintenance expenses comprise of the following heads:

- **Employees Expenses** which includes the basic pay, dearness pay, dearness allowances, house rent allowances, and other allowances paid to the staff;
- **Repair and Maintenance (R&M) Expenses**, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
- **Administrative and General Expenses**, which include all expenditure incurred in operating a business such as telephone charges, consultancy and regulatory fee etc.



2. The methodology adopted by EDDD for projecting the values of each component of the O&M expense for the FY 2020-21 has been explained in the following section.

#### 4.7.1 Employee Expense

1. The Employee expense estimated by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, medical expenses, leave travel allowances, honorarium, etc. But the Petitioner does not maintain cost related to leave salary contribution, pension and terminal benefits of the employee in the employee cost. Therefore, the Petitioner will claim these expenses relating to the employee cost at an appropriate time when the respective cost items become payable.
2. Based on the various expense head related to employee booked during six months of FY 19-20 EDDD has estimated the total employee cost for full year of FY 19-20 as Rs. 17.06 Crore. Salary expenses for the FY 2020-21 is estimated based on the average increase in the Consumer Price Index (CPI) for immediately preceding three years. The average CPI for the last three years is 4.22%.
3. As per the MYT Regulations, 2018, the employees' expenses have been calculated as per the following formulae:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (CPI_{inflation})$$

where:

EMP<sub>n</sub> – Employee expenses of the Distribution Licensee for the nth Year;

G<sub>n</sub> is a growth factor for the nth Year. Value of G<sub>n</sub> shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

CPI inflation: is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

4. The average growth in the CPI for the last three years is 4.22%. Total employee cost of EDDD for the FY 2020-21 is as given in the table below:





Table 48: Employee Expenses

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Employee Cost	18.43	17.78

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

#### 4.7.2 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 2018-19 is Rs. 16.23 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:

$$R\&M_n = K \times GFAn-1 \times (WPI \text{ inflation})$$

where:

R&M<sub>n</sub> - Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GFAn-1 - Gross Fixed Asset of the transmission Licensee for the n-1th Year;

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

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

Inflation Index is CPI : WPI :: 60 : 40

WPI inflation - is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

- For projecting the R&M expense for the FY 2020-21, the EDDD has considered the WPI inflation as 2.97%. Total repair & maintenance cost of EDDD for the FY 2020-21 is summarized in the table below:



Table 49: Repairs &amp; Maintenance Expense

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
R&M	19.93	19.67

5. The EDDD also requests the Hon'ble Commission to include the following activities as part of Energy Efficiency measures under the R&M Expenses:
- Energy conservation program and workshops
  - Publicity and awareness material
  - Implementation of demonstration projects
  - State Energy Conservation Fund related activities
  - Other energy efficiency related activities as per guidelines of SDA and BEE.

We may propose to have yearly requirement of Rs. 1 crore for Daman and Rs. 50 Lakh for Diu.

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

#### 4.7.3 Administration & General Expense

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
  - Compensation towards accidents etc.
2. The actual A&G expense for FY 18-19 is Rs. 9.97 Crore.
3. For projecting the A&G expenses for the FY 2020-21 the following formula has been used as given in the MYT Regulations:



$$A\&G_n = (A\&G_{n-1}) \times (CPI_{inflation})$$

where:

A&G<sub>n</sub> - Administrative and General expenses of the Distribution Licensee for the nth Year;

CPI<sub>inflation</sub> - is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

The A&G expenses projected for the FY 2020-21 have been given in the table below:

Table 50: A&G Expense

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
A&G	7.44	10.83

4. The Regulatory & Consultancy expenses for the FY 2020-21 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.

#### 4.7.4 Total Operation and Maintenance Expense

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

Table 51: Total O&M Expense

Particulars	(Rs. Crore.)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Employee Cost	18.43	17.78
R&M	19.93	19.67
A&G	7.44	10.83
<b>O&amp;M Expenses</b>	<b>45.80</b>	<b>48.28</b>

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



#### 4.8 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. The scheme wise capital expenditure plan for the FY 2020-21 is given in the table below:

Table 52: Capital Expenditure for the FY 2020-21

(Rs. Crore.)

Sr. No.	Name of Scheme	Proposed Expenditure (INR Cr)
1	Establishment of new hybrid bays at Dalwada Sub-Station (2 Nos) and Zari Sub-station (2 Nos.), Daman	8.00
2	Inter connection of 66 KV line from Zari Sub-station to Eurocoustic and replacement of Panther conductor from Kachigam Sub-Station to EPL	4.50
3	Installation of 2.64 MVAR capacitor bank at 66 KV Substation in Daman	24.00
4	Implementation of SCADA system at 66 Substations along with necessary hardware replacement.	5.00
5	Normal Development Works and release of service connection	4.50
6	Providing Underground Power Distribution system in Daman & Diu city/ rural areas and extension of the scheme to Industrial Estate.	20.00
7	Implementation of Advance Metering Infrastructure (Smart Metering Solution) in Daman and Diu.	25.00
9	Improvement and renovation of 220 KV and 66 KV Sub station	4.00
	<b>TOTAL</b>	<b>95.00</b>

3. The EDDD requests the Hon'ble Commission to approve the capital expenditure against the scheme as submitted herewith.



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4. A summary of the capital expenditure and capitalization for the FY 2019-20 and FY 2020-21 is summarized in Table below:

**Table 53: Capital Expenditure & Capitalization for the FY 2019-20 and FY 2020-21**

(Rs. Crore)

Sr.No.	Particulars	Proposed Expenditure	
		2019-20 (Projected)	2020-21 (Projected)
1	Capital Expenditure	26.50	95.00
2	Capitalization	10.00	38.00

5. The EDDD requests the Hon'ble Commission to approve the capital expenditure and capitalization as projected above.

#### 4.9 Gross Fixed Assets

- EDDD had Rs. 587.63 Crore of Opening Gross Fixed Assets (GFA) in FY 18-19. Assets amounting to Rs. 19.82 Crore have been added to the GFA during the FY 2018-19.
- Assets amounting to Rs. 10.00 Crore have been estimated to be added in the GFA during FY 19-20.
- Similarly, based on the capital expenditure plan as detailed above, Rs. 38.00 Crore, is proposed to be capitalized during the FY 2020-21.
- A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

**Table 54: Opening and Closing GFA for the FY 2020-21**

(Rs. Crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2020-21(Approved)	609.68	64.10	673.78
FY 2020-21(Projected)	617.45	38.00	655.45

5. The EDDD requests the Hon'ble Commission to approve the GFA as projected above.



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#### 4.10 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. EDDD has applied the depreciation rates as specified in the MYT Regulations, 2018.
3. Depreciation for the FY 2020-21 is determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the FY 2020-21. 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 2018-19 as given in the fixed asset register and the estimated capitalization for FY 19-20 and FY 20-21.
4. Therefore the EDDD requests the Hon'ble Commission to approve the depreciation as given in the table below:

Table 55: Depreciation

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening GFA	609.68	617.45
Addition during the year	64.10	38.00
Closing GFA	673.78	655.45
Average GFA	641.73	636.45
Depreciation during the year	21.92	22.05

5. The EDDD requests the Hon'ble Commission to approve the depreciation as projected above.

#### 4.11 Interest & Finance Costs

##### 4.11.1 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.



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2. However, EDDD is now migrating from a Government owned utility to a commercial utility under the Electricity Act, 2003, it has come under the direction of the Joint Electricity Regulatory Commission. It has been assumed that EDDD would work as a separate commercial utility and therefore would be utilizing the debt facilities in the coming years.
3. Assets capitalized during the FY 2020-21 have been considered based on normative debt-equity ratio of 70:30 as per the MYT Regulations, 2018.
4. Interest rate of 9.55% has been considered for computation of interest cost for long-term loans which is similar to the prevailing 1 year SBI MCLR plus 100 basis points. Details of the loan amounts and interest cost computed for FY 2020-21 is summarized in Table below:

Table 56: Total Interest on Long-term Loans

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening Loan	124.99	130.06
Loan for additional Capex (70:30 debt-equity)	44.87	26.60
Loan Repayment	21.92	22.05
Closing Loan	147.94	134.62
Interest Cost on Avg. Loans	13.03	12.64

5. The EDDD requests the Hon'ble Commission to approve the interest on long-term capital loans as given in the table above.

#### 4.11.2 Interest on Working Capital Borrowings

1. EDDD has computed the Interest on Working Capital for the FY 2020-21 based on normative basis as per the MYT Regulations, 2018.
2. The working capital requirement for the FY 2020-21 has been computed considering the following parameters:
  - a. O&M Expenses for one (1) month; plus
  - b. Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus



- c. Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff;  
Less
- d. Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from Consumers except the security deposits held in the form of Bank Guarantees:
- 3 A rate of interest of 10.55% has been considered on the working capital requirement, being the 1 year SBI MCLR as on 1<sup>st</sup> April of the year plus 200 basis points. This is in line with the MYT Regulations, 2018 which states that "The rate of interest on working capital shall be equal one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points."
- 4 The normative interest on working capital for the FY 2020-21 considering the above methodology is summarized in the Table below:

Table 57: Interest on Working Capital for the FY 2020-21

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
O&M expense for one month	3.82	4.02
Maintenance spares at 40% of R&M for one month	0.66	0.66
Receivables for 2 months	222.04	180.89
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	67.82	80.46
<b>Total Working Capital requirement</b>	<b>158.70</b>	<b>105.10</b>
<b>Interest on Working Capital</b>	<b>16.11</b>	<b>11.09</b>

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

#### 4.12 Return on Equity

1. As per the JERC (Multi Year Distribution Tariff) Regulations, 2018, EDDD is entitled for a Return on Equity (RoE).





2. The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following:
- “27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.
- 27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum.”
3. The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business.
4. The equity component has been determined in accordance with Regulation 26 of the MYT Regulations. The following table provides the ROE for the FY 2020-21:

Table 58: Proposed Return on Equity

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Opening Equity	84.84	87.18
Addition in equity on account of new capitaization	19.23	11.40
Closing Equity	104.07	98.58
Average Equity	94.46	92.88
Average Equity (Wires Business)	85.01	83.59
Average Equity (Retail Supply Business) Business	9.45	9.29
Return on Equity for Wires Business (%)	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%
Return on Equity for Wires Business	13.18	12.96
Return on Equity for Retail Supply Business	1.51	1.49
<b>Return on Equity</b>	<b>14.69</b>	<b>14.44</b>

5. The EDDD requests the Hon'ble Commission to approve the return on equity as given above.

#### 4.13 Interest on consumer security deposits

1. The Hon'ble Commission in its last Tariff Order has approved Rs. 4.24 Crore as interest payable on consumer security deposits. EDDD has made a provision to pay Rs. 4.08 Crore as interest on consumer security deposits during the FY 2020-21. The details of interest on consumer security deposits for the FY 2020-21 have been given in the table below:

Table 59: Interest on Consumer Security Deposit

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Interest on Security Deposit	4.24	4.08

2. The EDDD requests the Hon'ble Commission to approve the interest on consumer security deposits as given above.

#### 4.14 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, Interest on advances to suppliers/contractors, and Miscellaneous receipts.
2. For projecting the non-tariff income for the FY 2020-21, an increase of 5% p.a. has been considered over the estimated non-tariff income for FY 19-20. Details of the non-tariff income for the FY 2020-21 is provided in table below:

Table 60: Non-tariff Income

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Non tariff Income	20.75	10.91

3. The EDDD requests the Hon'ble Commission to approve the return on equity as given above.



#### 4.15 Aggregate Revenue Requirement

1. Table 61 summarizes EDDD's Aggregate Revenue Requirement for FY 2020-21.

Table 61: Aggregate Revenue Requirement

Particulars	(Rs. Crore)	
	FY 20-21 Approved (20th May, 2019)	FY 20-21 Projected
Power Purchase Cost	1,237.19	1,245.99
O&M Expense	45.80	48.28
Depreciation	21.92	22.05
Interest Cost on Long-term Capital Loans	13.03	12.64
Interest on Working Capital Loans	16.11	11.09
Return on Equity	14.69	14.44
Provision for Bad Debt	0.00	0.00
Interest on security deposit	4.24	4.08
Total	1,352.98	1,358.56
Less:		
Non-Tariff Income	20.75	10.91
Revenue from Surplus Power Sale	0.00	0.22
<b>Annual Revenue Requirement</b>	<b>1,332.23</b>	<b>1,347.43</b>

#### 4.16 Revenue at Existing Tariff

1. Revenue from sale of power for the FY 2020-21 is determined based on the energy sales estimated in Table 39 and category wise tariff prevalent in the UT of Daman & Diu.
2. EDDD has computed the revenue for the FY 2020-21 based on the tariff notified by the Hon'ble Commission in the Tariff Order for the FY 2019-20 dated 20<sup>th</sup> May, 2019.
3. The table below summarizes the revenue from sale of power at existing tariff for FY 2020-21:

Table 62: Revenue from Sale of Power at Existing Tariff

Revenue @ Existing Tariff (Rs Crore)	(Rs. Crore.)	
	FY 20-21 Projected	
Domestic	34.69	
LIG	0.01	
Commercial	18.93	



Revenue @ Existing Tariff (Rs Crore)	FY 20-21 Projected
Agriculture	0.40
LT Industry	76.40
HT/EHT Industry	950.94
Public Lighting	2.75
Public Water Works	1.14
Temp. Supply	0.00
<b>Total</b>	<b>1085.27</b>
Revenue from Open access	0.00
<b>Total Revenue</b>	<b>1085.27</b>

#### 4.17 Coverage of Revenue Gap

1. Revenue from sale of power with-in the UT (category-wise) is determined in Table 62.
2. Table 63 summarizes the ARR for EDDD for FY 2018-19, FY 2019-20 and FY 2020-21 along with the revenue and the resulting revenue (gap)/surplus. The cumulative revenue gap for the three years is Rs. 306.87 Crores as given in the table below.

Table 63: Revenue Gap for FY 2020-21

Sr. No.	Particulars	(Rs. Crore.)		
		FY18-19 Actual	FY19-20 Revised Estimates	FY20-21 Projected
1	Total ARR	1,115.49	1,329.59	1,347.43
2	Revenue @ Existing Tariff (including open access)	939.45	1,154.01	1,085.27
3	Total Revenue	939.45	1,154.01	1,085.27
4	Revenue (Gap) /Surplus(3-1)	(176.05)	(175.58)	(262.16)
	Covered By			
5	Previous Years' (Gap)/Surplus Carried Over	306.92	130.87	(44.70)
6	Revenue (Gap) /Surplus(4+5)	130.87	(44.70)	(306.87)
7	Addl Revenue @ Proposed Tariff	0.00	0.00	308.46
8	Total (Gap)/Surplus for three years(6+7)	130.87	(44.70)	1.60



3. It is evident from Table 63 that there is a standalone revenue gap of Rs. 262.16 Crores during the FY 2020-21. The present tariff approved by the Hon'ble Commission is not adequate to meet the expenses of the EDDD and the Department is incurring operational losses in order to meet the power demand of the UT of Daman and Diu. The EDDD is not able to recover the power purchase cost from the present tariff and is incurring loss on every unit of power sold to the consumers of the UT of Daman and Diu. Therefore, the present tariff does not incentivize the Department to meet the full demand of the consumers of the UT of Daman and Diu.
4. It can also be seen from the Table 63 that there is a cumulative revenue gap of Rs. 306.87 Crores at the end of FY 2020-21 and the same has to be met with an adequate increase in the retail tariff across the consumer categories. Further, as given in Table 64 the difference between the average cost of supply and the average revenue realization during the FY 2020-21 is Rs. 0.99/unit and the tariff will have to be increased to meet this gap.
5. The EDDD therefore proposes to recover additional revenue from increase in tariff during the FY 2020-21. This will also allow the EDDD to meet its operational expenses through revenue billed to the consumers of the Department.

#### 4.18 Average Cost of Supply

1. Table 64 summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

Table 64: Average Cost of Supply & Revenue Realization

Average Realization & Cost of Supply (Rs/Unit)	FY18-19 Actual	FY19-20 Revised Estimate	FY20-21 Projected
Average Cost of Supply of EDDD	4.56	5.26	5.09
Average Realization	3.84	4.56	4.10
Revenue Gap at Existing Tariff	(0.72)	(0.69)	(0.99)
Net Revenue (Gap)/Surplus(Includes gap of previous year)	1.26	0.52	(0.17)
Additional revenue through proposed tariff	0.00	0.00	1.17



Average Realization & Cost of Supply (Rs/Unit)	FY18-19 Actual	FY19-20 Revised Estimate	FY20-21 Projected
Net Revenue (Gap)/Surplus	0.54	(0.18)	0.01

#### 4.19 Tariff Proposal for FY 20-21

- As discussed above the EDDD proposes to recover Rs. 308.46 Crore through increase in tariff during the FY 2020-21. The table below summarizes the existing and proposed tariff structure for various consumer categories for FY 2020-21.

Table 65: Proposed Tariff Structure for FY 20-21

Tariff Structure	Phase	Existing (FY 2019-20)		Proposed (FY 2020-21)	
		Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
<b>LT-D/Domestic</b>					
0 to 100 Units	Single	1.20	20 Rs./Con/Month	1.20	20 Rs./Con/Month
101 to 200 Units	Single	1.70	20 Rs./Con/Month	1.70	20 Rs./Con/Month
201 to 400 Units	Single	2.10	20 Rs./Con/Month	2.10	20 Rs./Con/Month
Beyond 401 Units	Single	2.45	20 Rs./Con/Month	2.90	20 Rs./Con/Month
0 to 100 Units	Three	1.20	45 Rs./Con/Month	1.20	45 Rs./Con/Month
101 to 200 Units	Three	1.70	45 Rs./Con/Month	1.70	45 Rs./Con/Month
201 to 400 Units	Three	2.10	45 Rs./Con/Month	2.10	45 Rs./Con/Month
Beyond 401 Units	Three	2.45	45 Rs./Con/Month	2.90	45 Rs./Con/Month
<b>Low Income Group</b>			Rs. 10/connection /month		Rs. 10/connection /month
<b>LT- C/Commercial</b>					
1st 100 Units	Single	2.50	25 Rs./Con/Month	2.50/kVAh	25 Rs./Con/Month
Beyond 100 Units	Single	3.40	25 Rs./Con/Month	3.90/kVAh	25 Rs./Con/Month



Tariff Structure	Phase	Existing (FY 2019-20)		Proposed (FY 2020-21)	
		Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
1st 100 Units	Three	2.50	50 Rs./Con/Month	2.50/kVAh	50 Rs./Con/Month
Beyond 100 Units	Three	3.40	50 Rs./Con/Month	3.90/kVAh	50 Rs./Con/Month
<b>HT Commercial</b>					
For the category		3.60/kVAh	Rs. 100/kVA/month	4.20/kVAh	Rs./100/kVA/month
<b>LT- Ag/ Agriculture</b>					
Upto 10 HP		0.65		0.65	
Beyond 10 HP and upto 99HP		0.90		0.90	
<b>LT Industry</b>					
For the category		3.10/kVAh	Rs. 25/HP/month	3.90/kVAh	Rs. 50/HP/month
<b>LT-PL/Public Lighting</b>					
Public Lighting		4.00		4.00	
<b>LT-Public Water Works</b>					
For the category		3.60	Rs. 25/HP/month	3.60	Rs. 25/HP/month
<b>HT</b>					
<b>HTC General Industrial/ Motive Power 11KV or 66KV having CMD above 100KVA</b>					
For all units		3.60/kVAh	Rs. 240/kVA/month	4.65/kVAh	Rs. 300/kVA/month
<b>HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)</b>					
For all units		3.55/kVAh	Rs. 425/kVA/month	4.60kVAh	Rs. 500/kVA/month
<b>220 kV</b>					
For all units		-	-	4.60/kVAh	Rs. 350/kVA/month
<b>Hoardings/Sign</b>					



Tariff Structure	Phase	Existing (FY 2019-20)		Proposed (FY 2020-21)	
		Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
<b>Boards</b>					
For all units		6.20	Rs. 100/kVA/month	6.20	Rs. 100/kVA/month
<b>Electric Vehicle Charging Station</b>					
For the category		4.00	Rs. 100/kVA/month	4.00	Rs.100/kVA/month

2. EDDD, requests the Hon'ble Commission to approve the fuel purchase adjustment formula including the "k" factor for FY 20-21 as well, which can take care of any variation in the ARR over and above the approved level by the Commission for FY 20-21.





## Chapter 5: Determination of Open access charges

### 5.1 Allocation Matrix

The allocation between wheeling and retail supply business for FY 2020-21 as per the ARR proposed for FY 2020-21 is provided in the table below:

Table 66: Allocation of ARR between Wheeling and Retail Supply

Annual Revenue Requirement Rs. Crs	Allocation (%)		Allocation FY 2020-21	
	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	1,245.99
Employee	40%	60%	7.11	10.67
R&M	90%	10%	17.70	1.97
A&G	50%	50%	5.41	5.41
Depreciation	90%	10%	19.84	2.20
Interest Cost on Long-term Capital Loans	90%	10%	11.37	1.26
Interest on Working Capital Loans	10%	90%	1.11	9.98
Interest on Security Deposit	10%	90%	0.41	3.67
Return on Equity	90%	10%	13.00	1.44
Provision for Bad Debt	0%	100%	-	-
<b>Annual Revenue Requirement</b>			<b>75.96</b>	<b>1282.60</b>
Less: Non-Tariff Income	10%	90%	1.11	10.02
Income from other business	50%	50%	-	-
<b>Net Revenue Requirement</b>			<b>74.85</b>	<b>1272.58</b>

### 5.2 Voltage wise Wheeling Charges

The EDDD has considered the voltage wise losses for FY 2020-21 as considered by the Hon'ble Commission in its Tariff Order for the FY 2019-20.



In order to determine the wheeling charges prudently, the wheeling costs has been allocated on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by Open Access consumers and primarily comprise of O&M Expenses and other costs as provided in the table above. The criteria for allocation of wheeling costs is elaborated as follows:

- O&M Expenses are allocated on the basis of number of consumers under each category.
- All expenses other than the O&M expenses are allocated on the basis of voltage wise asset allocation.

The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

**Table 67: Parameters assumed for voltage wise allocation of wheeling charges**

Category	Sales (MU)	Voltage wise losses (%)	Energy Input	Consumers	Asset Allocation (%)
LT	461.19	21.34%	586.32	64668	30%
HT & EHT	2,182.77	1.96%	2226.40	810	70%
<b>Total</b>	<b>2644</b>	<b>6.00%</b>	<b>2812.71</b>	<b>65478</b>	<b>100%</b>

HT/EHT wheeling charges have been allocated to HT/EHT and LT consumers based on the energy input at HT/EHT level for sale at HT/EHT and LT consumers. LT wheeling charges were allocated to LT consumers only. Accordingly, the Wheeling Charges have been computed as follows:

**Table 68: Wheeling charges proposed for FY 2020-21**

Category	O&M	Others	Total	Wheeling Charges (Rs./kWh)
LT	29.85	13.39	43.24	0.74
HT & EHT	0.37	31.23	31.61	0.14
<b>Total</b>	<b>30.23</b>	<b>44.62</b>	<b>74.85</b>	<b>0.27</b>

### 5.3 Cross Subsidy Surcharge

The Cross Subsidy Surcharge has been determined as considered by the Hon'ble Commission in its Tariff Order for the FY 2019-20. The cross-subsidy surcharge has been calculated with respect to the voltage wise cost of supply.

The following approach has been adopted to determine the voltage wise cost of supply:



Voltage Wise losses at each voltage level are assumed for LT & HT/EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State distribution losses at 6.00%, as proposed in the ARR for FY 2020-21. Using these losses the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 69: Energy Input at each voltage level (MU)

Category	Sales (MU)	Voltage wise losses (%)	Energy Input
LT	461.19	21.34%	586.31
HT & EHT	2,182.77	1.96%	2226.40
<b>Total</b>	<b>2644</b>	<b>6.00%</b>	<b>2812.71</b>

Now the overall ARR proposed for FY 2020-21 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated to LT level on the basis of input energy, as the HT/EHT network is utilized by both HT/EHT and LT network consumers.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 70: Parameters used for allocation of fixed costs

Category	Energy Input	Asset Allocation (%)	Consumers
LT	586.31	30.00%	64668
HT & EHT	2,226.40	70.00%	810
<b>Total</b>	<b>2812.71</b>	<b>100.00%</b>	<b>65478</b>

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the table below:



Table 71: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (Rs. Cr)	Allocated Variable Cost (Rs. Cr)	Total Cost (Rs. Cr)	Energy Sales (MU)	VCoS (Rs./kWH)
LT	164.88	239.35	404.23	461.19	8.76
HT & EHT	384.72	558.48	943.20	2,182.77	4.32

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge. Accordingly, the approved Cross-subsidy surcharge is shown in the table below.

Table 72: Proposed Cross Subsidy Surcharge for FY 2020-21

Category	VCoS (Rs./kWH)	ABR (Rs./kWH)	Cross Subsidy
LT	8.76	3.49	(5.27)
HT & EHT	4.32	5.65	1.33

#### 5.4 Additional Surcharge

The Additional Surcharge has been determined as considered by the Hon'ble Commission in its Tariff Order for the FY 2019-20.

Table 73: Additional Surcharge for the FY 2020-21

Particulars	FY 2020-21
Total Power Purchase cost (Rs. Cr)	1,245.99
Fixed Cost component in Power Purchase Cost (Rs. Cr)	443.86
Energy Sales (MU)	2,643.95
Additional Surcharge (Rs/kWh)	1.68

#### 5.5 Application and Agreement Fees

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



## Chapter 6: Directives

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The Hon'ble Commission vide Tariff Order dated 20th May, 2019 had issued a set of directives to be followed by EDDD to comply with the "The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2018."

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

### A. Directives continued in this Order

#### 1. Directive 1: Assets created from consumer contribution

The Petitioner has failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation in future, once the details of the consumer contribution are made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by Commission in future Tariff Orders.

#### Petitioner's Submission

The EDDD would like to submit that the details of assets created from consumer contribution shall be submitted to the Hon'ble Commission shortly.

#### Commission's Response

The Commission has noted with concern that Petitioner is yet to submit the details of assets created from consumer contribution. The absence of this data constraints the Commission in fair determination of average cost of supply and tariff. The Commission directs the petitioner to submit the data pertaining to the assets created from consumer contribution along with the Tariff petition for determination of retail Tariff for FY 2020-21.

#### Petitioner's Submission

The EDDD would like to submit to the Hon'ble Commission that the assets created out of consumer contribution are not included in the asset register being prepared by the Department for the FY 2018-19. Further, the depreciation on the assets created out of consumer contribution is not included in the ARR being filed by the Department for determination of Tariff.



## 2. Directive 2: Creation of SLDC

Currently the functions of scheduling of power is being performed by the ED DD itself. The Commission directs the Petitioner to form a separate SLDC which is ring fenced from the ED DD. The Petitioner is directed to employ employees dedicated to the SLDC operations, which are independent from the ED DD.

### Petitioner's Submission

Electricity Department would like to submit that, presently Department acts as a vertically integrated entity, looking after transmission, distribution, and system operation. However, as per the direction of Hon'ble Commission, ring-fencing has been initiated for SLDC operation. Till now, we have implemented following,

- Head of the SLDC is nominated
- Necessary staff to SLDC has been provided for independent operation
- Budget of SLDC is separately provided by Administration.

### Commission's Response

The Commission appreciates the efforts of the Petitioner towards creating an independent SLDC. The Commission directs the Petitioner to expedite the process of creation of separate SLDC and submit a detailed implementation plan for the same within 3 months of the issuance of this Order.

### Petitioner's Submission

The EDDD would like to submit that the Department has provided a separate infrastructure for the functioning of the SLDC.

## 3. Directive 3: kVAh based tariff

During the Technical Validation Session the Commission enquired about the Petitioner's readiness to implement kVAh tariff for its high voltage consumers. The Petitioner responded that it does not currently possess the requisite infrastructure to implement the same. The Commission also notes that in spite of having similar conditions as the ED DD, DNHPDCL has already implemented kVAh tariff for its HT/EHT consumers.

The Commission thus directs the Petitioner to ensure that proper infrastructure and capabilities are in place to roll-out kVAh based tariff for its HT/EHT from the next tariff cycle.

### Petitioner's Submission

The EDDD would like to submit that the Electricity Department is in process to quantify benefits of KVAH billing in the context existing framework ToD Tariff. As



implementation of KVAH billing requires meter software upgrades along with ToD changes, techno-commercial feasibility is under process. The report of the same along with outcome shall be submitted to Hon'ble commission shortly.

#### **Commission's Response**

The Petitioner has already indicated its readiness for implementation of kVAh billing and that necessary changes in metering has been made by them. The Commission has accordingly approved kVAh based tariff for LT Industry, HT industry and HT commercial categories in FY 2019-20. The compliance report regarding implementation of kVAh billing in above categories may be submitted to the Commission accordingly within 3 months of the issuance of this Order.

#### **Petitioner's Submission**

The EDDD would like to submit to the Hon'ble Commission that the Department has implemented kVAh billing in the LT Industry, HT Industry and HT commercial categories as approved in the Tariff Order for the FY 2019-20.



## 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. For the consumer who requires load more than 25000 KVA, 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 a 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.
5. If connected load of a domestic category is found to be at variance with 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. **Power Factor Charges** - LT and Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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.



7. If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days notice as per the provisions of the Act and the Supply Code Regulations.
8. 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.
9. The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 90% 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-drawal 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.
10. Unless specifically stated to the contrary, the figures of energy charges relate to paisa per unit (kWh) charge for the energy consumed during the month.
11. 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 the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only up to the month of permanent disconnection.



12. **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the bill amount (excluding security deposit) for the respective month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.
13. **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.
14. **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	120% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	95% of normal rate of energy charges

Currently the TOD Tariff is applicable only to the HT industrial, LT industrial and the HT Commercial category. It is proposed to extend the TOD tariff to the LT commercial category for all loads greater than or equal to 9 KW.

15. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula notified in Chapter 9 of this Order. Such charges shall be recovered/refunded in accordance with the terms and conditions specified in the FPPCA formula.
16. 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.



**DETAILED TARIFF SCHEDULE****I. (A) Domestic Category**

This schedule shall apply 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./kWh)
0-100 units	120
101-200 units	170
201-400 units	210
401 and above	290

**2. Fixed Charges**

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

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

Power supply to low income group connections will be charged at INR10 per service connection per month. For any unauthorized increase in the load beyond 2\*40 watts, penal charges at the rate of INR20 per month per point will be levied and the installation will be liable for disconnection.

**II. Non-Domestic Category/Commercial**

This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations.

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.



**1. Energy Charges**

Usage(Units/Month)	Energy Charge (Ps./kVAh)
1-100 units	250
101 units and above	390

**2. Fixed Charges**

Usage(Rs./Consumer/month)	Fixed Charge
For category as defined above	Single Phase: Rs. 25 Three Phase: Rs. 50

**3. Power Factor Charges**

Connections running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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.

**III. HT Commercial**

This schedule shall apply to all the consumers falling under the LT Commercial category above but connected at 11 kV or above voltage level.

**1. Energy Charges**

Usage(Units/Month)	Energy Charge (Ps./kVAh)
For all units	420

**2. Fixed Charges**

Usage(Rs./kVA/month)	Fixed Charge
For category as defined above	100



### 3. Power Factor Charges

Connections running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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. LT Industrial Category

This schedule shall apply to all Low Tension Industrial Motive Power Connections including water works/pumps with sanctioned load up to 120 HP.

#### i. Energy Charges

Usage(Units/month)	Energy Charge (Ps./kVAh)
For all units	390

#### ii. Fixed Charges

	Fixed charge (Rs./HP/month) or part thereof
For category as defined above	Rs 50.00/- per HP or part thereof

Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry

#### iii. Power Factor Charges

LT running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations

notified by JERC, shall apply. 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.

#### V. LT Public Water Works

##### i. Energy Charges

Usage(Units/month)	Energy Charge (Ps./kWh)
For all units	360

##### 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

LT running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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. HT/EHT Category

##### A. High Tension Consumer

This schedule shall apply 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 300/kVA/month or part thereof

## 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./kVAh)
For all units	465

## 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 500/- per kVA per month

Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry.

## 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./kVAh)
For all units	460

## C. HT Industrial (220 kV)

This schedule shall apply to all Industrial/Motive power consumers drawing through 220 kV systems having contract demand of 100 kVA and above.

## 1. Fixed Charges(Demand Charges)

For Billing Demand	Tariff (Rs./KVA/month) or part thereof
Up to Contract Demand	Rs 350/- per kVA per month



## 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./kVAh)
For all units	460

## VII. Agriculture

This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.

### 1. Energy Charges

Usage	Tariff (Ps./Unit)
For connected load upto 10 HP	65
Beyond 10 HP and upto 99 HP connected load	90

### 2. Power Factor Charges

Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 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. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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.

## VII. Public Lighting

### 1. Energy Charges

Usage	Tariff (Ps./kWh)
For all units	400

## VIII. Hoardings /Signboards





This schedule shall apply to 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
620	Rs 100 per kVA per Month or part Thereof

#### IX. Electric Vehicle Charging Stations

This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT).

Energy Charges Paise/kWh	Fixed Charge
400	Rs 100 per kVA per Month or part Thereof

X. 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 is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations.



**VIII. Schedule of Other Charges****a. Meter Rent**

S.No.	Meter type	Tariff (in Rs.)/Month or part thereof
1	Single Phase	Rs 20 per month or part Thereof
2	Three Phase	Rs 50 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: Reconnection Charges(as per provisions of Regulation 9.3 (c) of JERC (Electricity Supply Code) Regulations 2010**

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase LT	Rs 200
2	Three Phase LT	Rs 1000
3	HT	Rs 2000

Note: If the same consumer seeks reconnection within 12 months from the date disconnection, 50% will be added to above charges

**c. Service Connection Charges(as per provisions of Regulation 3.3 (3) of JERC (Electricity Supply Code) Regulations 2010**

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 50/meter
2	Three Phase	Rs 100/meter

Note: Extra length chargeable will be beyond the permissible 30 meters free length from existing network for new connections 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 the ED DD.

**f. Testing Fee for various Metering Equipment**

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

**g. Fees (Non-refundable) for submission of Test Report of wiring Completion**

S.No.	Types of Connection	Fee per test report (in Rs.)
1	Single Phase Lighting / Domestic	20
2	Three Phase Lighting /Domestic	50
3	Single Phase Lighting / Non Domestic	100



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

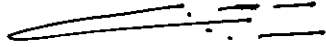


**Prayer**

1. EDDD requests the Hon'ble Commission to:

- Admit the Aggregate Revenue Requirement for the FY 2020-21 as submitted herewith as well as the revised estimates for FY 19-20.
- Admit and approve the Trued up ARR for FY 2018-19.
- Approve the tariff schedule as proposed by the EDDD under Table no. 65.
- 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:

6.12.2019



# FORMATS

Format-1

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
ENERGY DEMAND  
FY 2018-19

Sr.No.	Category of Consumer	No. of Consumers at the end of FY 16-17 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic	48,455	123,187.00	134.47
2	LIG/ Kutir Jyoti			0.00
3	Commercial	7,373	22,187.00	53.27
4	Agriculture	1,299	3,824.00	4.95
5	LT Industry	1,705	112,502.00	197.86
6	HT/EHT Industry	789	543,648.00	2,031.44
7	Public Lighting	635	1,447.00	8.26
8	Public Water Works	110	748.00	3.68
9	Temp. Supply	510	1,650.00	0.00
10	Total	60,876	809,193.00	2,433.91



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Format-1

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
ENERGY DEMAND  
FY 2019-20

Sr.No.	Category of Consumer	No. of Consumers at the end of FY 17-18 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic	50,811	153,558.89	165.37
2	LiG/ Kutir Jyoti			0.00
3	Commercial	7,944	26,388.17	59.94
4	Agriculture	1,419	4,283.14	5.08
5	LT Industry	1,740	113,828.87	194.58
6	HT/EHT Industry	809	580,988.02	2,094.75
7	Public Lighting	718	1,461.76	6.62
8	Public Water Works	137	858.13	2.80
9	Temp. Supply	414	1,986.00	0.00
10	Total	63,992	883,352.98	2,529.13



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Format -1

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
ENERGY DEMAND  
FY 2020-21

Sr.No.	Category of Consumer	No. of Consumers at the end of FY 18-19 (Nos.)	Connected Load	Energy Sale/Demand (MUs)
1	2	3	5	6
1	Domestic			181.17
2	LIG/ Kutir Jyoti	52,122	165,843.60	0.00
3	Commercial	8,009	27,831.60	63.20
4	Agriculture	1,458	4,430.48	5.49
5	LT Industry	1,757	116,492.47	201.33
6	HT/EHT Industry	810	596,500.40	2,182.77
7	Public Lighting	765	1,491.00	6.89
8	Public Water Works	143	892.11	3.11
9	Temp. Supply	414	1,986.00	0.00
10	Total	65,478	915,467.66	2,643.95



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding AT&C Loss Of Licensee

S. No.	Particulars	Calculation	Unit	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM.	A	MU	19.02	29.82	63.02
2	Input energy (metered Import) received at interface points of DISCOM network.	B	MU			
3	Input energy (metered Export) by the DISCOM at interface points of DISCOM network.	C	MU	2585	2664	2750
4	Total energy available for sale within the licensed area to the consumers of the DISCOM	D=A+BC	MU	2595	2693	2813
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU	2434	2529	2644
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU			
7	Total energy billed	G=E+F	MU	2434	2529	2644
8	Amount billed to consumer within the licensed area of DISCOM.	H	Rs.	939.45	1038.94	1085.27
9	Amount realized by the DISCOM out of the amount Billed at H#	I	Rs.	882.47	1038.94	1085.27
10	Collection efficiency (%) (= Revenue realized/Amount billed)	J=(I/H)x100	%	95.00%	100.00%	100.00%
11	Energy realized by the DISCOM	K=JxG	MU	2312	2529	2644
12	Distribution loss (%)	L=(DG/D)x1%	%	6.19%	6.10%	6.00%
13	AT&C Loss (%)*	M=((DK)/D)x1%	%	10.88%	6.10%	6.00%



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Format-3

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
ENERGY BALANCE

(all figures in Mus)

Sr.No.	Category of Consumer	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
A)	<b>ENERGY REQUIREMENT</b>			
1	Energy sales to metered category within the State/UT	2,433.91	2,529.13	2,643.95
2	Energy sales to Agriculture consumers			
3	Open Access Sales	0.00	0.00	0.00
4	Total sales within the State/UT	2,433.91	2,529.13	2,643.95
5	Sales to common pool consumers/ UI	9.73	0.61	0.75
6	Sales outside state/UT			
7	Sales to electricity traders & through PX			
	Sales to other distribution licensees			
	a) Bilateral Trade			
	b) Banking Arrangement			
8				
9	Total sales	2,443.65	2,529.74	2,644.70
10	T&D losses			
(i)	%	6.19%	6.10%	6.00%
(ii)	MU	160.66	164.30	168.76
11	<b>Total energy requirement</b>	<b>2,604.30</b>	<b>2,694.04</b>	<b>2,813.46</b>
B)	<b>ENERGY AVAILABILITY</b>			
1	Net own generation	19.02	29.82	63.02
2	Net Purchase	2,649.96	2,760.11	2,841.52
3	Injection through Open access	0.00	0.00	0.00
4	Net power purchase (1 +2 +3)	2,668.98	2,789.93	2,904.54
12	<b>Total energy availability</b>	<b>2,668.98</b>	<b>2,789.93</b>	<b>2,904.54</b>



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
POWER PURCHASE COST  
FY 18-19 (Actual)

Sr.No.	Source	Capacity (MW)	Firm allocation to Licensee (in MW)	Availability/ PLF (in %)	Licensee share (%)	Purchase (MU)	VC (Rs/ Unit)	FC (Rs. Cr)	VC (Rs. Cr)	Others	Rebate	Credit for URS	(Rs. Crores)		
													10	11	12
1	NTPC Stations														
1	KSTPP	2,100	4828	89%	2.35%	346	136	23.15	47.70	(0.14)			70.71		
2	KSTPP-III	500	514	89%	1.03%	43	139	5.52	5.96	(0.01)			11.49		
3	VSTPP-I	1,260	1317	83%	1.03%	93	162	7.55	15.02	0.55			23.12		
4	VSTPP-II	1,000	919	83%	0.92%	65	153	4.28	10.01	0.50			14.79		
5	VSTPP-III	1,000	1119	83%	1.12%	83	155	7.95	12.88	0.46			21.29		
6	VSTPP-IV	1,000	1096	72%	83%	95	159	13.32	14.78	0.66			28.76		
7	VSTPP-V	500	741	3.65%	83%	60	155	9.37	9.26	0.34			18.97		
8	KAWAS	556	3104	1.78%	31%	4.73%	130	274	20.22	35.69	0.37		46.28		
9	JGPP	857	3137	2.07%	36%	4.77%	97	263	27.04	25.66	2.52		55.22		
10	Spata-I	1,850	2200	15.26%	88%	1.11%	183	133	22.14	24.26	0.25		46.69		
11	Spata-II	1,000	938	7.70%	88%	0.89%	71	137	8.26	9.75	(0.03)		17.95		
12	MSTPS-I	1,000	1096	3.679	47%	1.0%	68	296	18.01	25.92	0.52		44.45		
13	MOUDA-II	1,320	1493	4.857	42%	1.13%	126	266	18.64	36.11	0.07		55.12		
14	KSTPP-I	1,000	130	6.74%	77%	0.13%	14	210	1.50	3.10	(0.01)		4.80		
15	KSTPP-II	0	0	0	0%	0	0	0	0	0	0		0		
16	RSTPS	0	0	0	0%	0	0	0	0	0	0		0		
17	SOJAPUR	1,320	2386	7.69%	61%	1.81%	46	386	20.38	18.08	(0.08)		39.40		
18	DARA	1,600	734	11.91%	83%	0.83%	0	0	0	0	0		0		
19	GHORWARA	800	1316	3.87%	89%	1.65%	0	0	0	0	0		0		
20	Subtotal	18,894	272	12.131%		1,539	191	207.85	294.21	5.95	13	(0)	494.85		
1	NTPC Bhilai	500	7000	3.65%	85%	14.03%	448	229	78.80	102.89	(2.61)		179.07		
2	Bhilai-II (NTPC)	800	7000	3.65%		448	228	78.80	102.89	(2.61)			178.07		
3	APRIL	440	852	2.75%	73%	1.84%	16	0	0.00	3.35	0.03		3.24		
4	KAPPS	1,060	1323	7.66%	62%	2.78%	68	311	0.00	26.88	0.00		28.55		
5	KAPPS (II & IV)	100	0	0	0%	0	0	0	0	0	0		0		
6	Subtotal	1,820	22	11.08%		102	285	0.00	30.14	0.00			30.14		
1	Ravapuri	582	3800	4.34%	85%	6.03%	23	0	3.39	9.59	0.00		12.98		
2	Subtotal	882	38	4.34%		23	0	0	0	0	0		12.98		
V	Power purchase from Other Sources	0	0	0		274	387	0.00	105.93	0.20	1.50		104.83		
1	UI	0	0	0		262	275	0.00	72.09	0.00			72.09		
2	UI	0	0	0		18	0	0.00	0.00	0.00			0.00		
3	Solar	0	0	0		0	0	0.00	0.00	0.00			0.00		
4	Non Solar (Hydro)	0	0	0		0	0	0.00	0.00	0.00			0.00		
5	Solar REC	0	0	0		0	0	0.00	0.00	0.00			0.00		
6	Non Solar REC	0	0	0		0	0	0.00	0.00	0.00			0.00		
7	Solar (SEC, NTPC)	170	0	0		0	0	0.00	0.00	0.00			0.00		
8	Subtotal	170	0	0		0	0	0.00	0.00	0.00			0.00		
VI	Misc. Arrears	0	0	0		565	330	0.00	183	0			182		
VII	NTPC Rebate	21,688	402	141.26%		2,688.98	288.83	620.11	3.53	13.02	(0.13)		898.83		
VIII	External Losses					0									
1	PGCIL CHARGES														
2	WRLDC														
3	MSTCL														
4	REC														
5	GETCO														
6	PSVCL														
7	POSCO														
8	Grand Total of Charges					2,688.98							1,028.43		



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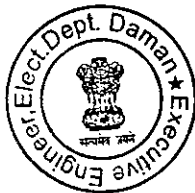
Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
POWER PURCHASE COST  
FY 19-20 (RE)

Sr. No.	Source	Capacity (MW)	Firm Allocation to Licensee (in MW)	Gen. (MU)	Availability/PLF (in %)	Licenses share (%)	Purchase (MU)	VC (P/ Unit)	FC (Rs. Cr)	VC (Rs. Cr)	Others (Rs. Cr)	Rebate (Rs. Cr)	Credit for URS (Rs. Cr)	Total (Rs. Cr)
1	NTPC Bhilain													
1	NTPC Bhilain	21.00	49.26	16,372	86%	3.26%	364	1.45	22.76	51.47	0.08		74.29	
2	NTTP-II	1500	544	3,668	85%	1.03%	34	1.41	4.84	10.03			20.24	
3	NTTP-II	1260	1317	9,165	85%	1.05%	81	1.82	7.53	16.55	0.38		24.87	
4	NTTP-II	1000	919	7,271	85%	0.92%	69	1.73	4.08	10.20	0.28		14.55	
5	NTTP-III	1000	1119	7,271	85%	1.02%	63	1.78	8.38	14.74	0.28		23.42	
6	NTTP-IV	1000	1096	7,271	85%	1.10%	77	1.72	12.30	13.24	0.41		25.96	
7	NTTP-V	500	741	3,635	85%	1.48%	54	1.82	8.74	9.81	0.19		18.84	
8	KAVAS	658	31.04	1,782	31%	4.73%	88	282	19.67	24.80	0.27		44.83	
9	JGRP	657	31.37	2,073	36%	4.77%	90	201	24.56	15.94	0.35		41.86	
10	Sheet	1,980	22.00	15,263	86%	1.11%	149	146	18.93	21.65	0.62		41.21	
11	Sheet	1,000	9,889	7,788	86%	0.99%	69	165	8.77	11.34	0.12		20.24	
12	MSTP-II	1,000	10,96	3,679	42%	1.10%	61	318	15.21	19.45	0.71		35.40	
13	MOUDA-II	1,350	14,93	4,857	42%	1.10%	70	317	16.47	22.31	2.42		41.20	
14	MSTP-III	1,000	1,30	8,745	77%	0.13%	11	212	1.50	2.25	0.05		3.73	
15	RGS	0	0.00	0	0%	0.00%	0	0	0.00	0.00	0.00		0.00	
16	REDA	1,320	33.39	7,584	0%	0.00%	0	38	38.03	0.00	0.00		38.03	
17	LAJAPUR	1,500	32.29	11,814	84%	0.14%	25	58	6.02	7.82	0.00		13.84	
18	LABA	800	13.18	5,857	65%	1.65%	53	0	12.36	19.41	0.00		31.76	
19	GADARWARA	18,884	272	123,912			1,408	208	217	281	6	0.48	0	
20	Subtotal													513
21	NTPC Bhilain													
1	Bhan Unnati (NTPC)	500	70.00	3,635	83%	14.00%	491	354	81.83	174.09	0.50		256.42	
2	Subtotal	900	70.00	3,635			491	354	81.83	174.09	0.50		256.42	
3	INPCIL													
1	KAPPS	440	6.52	2,775	72%	1.84%	52	248	0.00	12.78	0.00		12.78	
2	TAPP 384	1,060	13.23	7,589	86%	1.22%	81	265	0.00	26.86	0.00		26.86	
3	KAPPS (III & IV)	100	0.00	745	85%	0.00%	0	0	0.00	0.00	0.00		0.00	
4	Subtotal	1,600	22	11,088			143	278	0.00	39.69	0.00		39.69	
IV	Others													
1	Runagill	562	36.00	4,354	85%	5.55%	88	88	20.14	37.07	0.00		57.21	
2	Subtotal	882	36	4,354			88	88	20	37	0.00		87.21	
7	Power purchase from Other Sources													
1	Power purchase from Indian E. Exchange	0	0.00	0	0	0	481	384	0.00	170.38	0.00		170.38	
2	UI	0	0.00	0	0	0	30	314	0.00	21.97	0.00		21.97	
3	Solar	0	0.00	0	0	0	30	0	0.00	0.00	0.00		0.00	
4	Non Solar (Hydro)	0	0.00	0	0	0	70	448	0.00	31.36	0.00		31.36	
5	Solar REC	0	0.00	0	0	0	0	0	0.00	6.80	0.00		6.80	
6	Non-Solar REC	0	0.00	0	0	0	0	0	0.00	10.20	0.00		10.20	
7	Solar (SECI, NTPC)	170	0.00	283	0	0	0	0	0.00	0.00	0.00		0.00	
8	Subtotal	170	0	283			841	373	0	243	0		243	
VI	Micro. Arrang													
VII	NTPC Rebate													
1	Gross Power Purchase Cost	21,686	402	141,282			2,799.53		318.48	784.85	6.51		1,107.37	
2	External Losses						0							
VIII	Total Power Purchase Cost						2,799.53		318.48	784.85	6.51		1,107.37	
1	Power Charges													
2	MFDC													
3	MSTC													
4	REC													
5	SETCO													
6	PGVCL													
7	POSCO													
8	Grand Total of Charges						2,799.53		318.48	784.85	6.51		1,107.37	



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
POWER PURCHASE COST  
FY 20-21 (Projected)

Sl.No.	Source	Capacity (MW)	Firm allocation to Licensee (in MW)	Gen. (MU)	Availability/ PLF (in %)	Licensee share (%)	Purchase (MU)	VC (Rs./ Unit)	FC (Rs./ Cr.)	VC (Rs./ Cr.)	Others (Rs./ Cr.)	Total (Rs./ Cr.)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	NTPC Stations											
1	KSTPP	2,100	49.29	16,372	89%	2.35%	354	145	23.78	51.55	0.00	75.33
2	KSTPP-III	500	5.14	3,899	89%	1.03%	37	141	4.55	5.19	0.00	9.75
3	VSJPP-I	1,260	13.17	9,181	83%	1.05%	86	182	7.93	16.09	0.00	24.02
4	VSJPP-II	1,000	9.19	7,271	83%	0.92%	62	173	4.06	10.65	0.00	14.73
5	VSJPP-III	1,000	11.19	7,271	83%	1.12%	75	178	6.39	13.36	0.00	21.78
6	VSJPP-IV	1,000	10.86	7,271	83%	1.10%	74	172	12.30	12.61	0.00	24.92
7	VSJPP-V	500	7.41	3,815	83%	1.46%	50	182	6.74	9.04	0.00	17.78
8	KAVAS	656	31.04	1,782	31%	4.73%	92	282	19.67	23.15	0.00	42.82
9	JGPP	657	31.37	2,073	38%	4.77%	96	281	24.58	27.13	0.00	51.70
10	Sheti-I	1,880	22.00	15,203	88%	1.11%	158	146	16.93	22.76	0.00	41.71
11	Sheti-II	1,000	9.89	7,709	88%	0.95%	70	165	8.77	11.81	0.00	20.38
12	MSTPS-I	1,200	10.98	3,679	42%	1.10%	37	318	16.21	11.86	0.00	27.07
13	MUDAJI	1,320	14.93	4,957	42%	1.13%	51	317	16.47	16.09	0.00	32.22
14	KHSTPS-I	1,000	1.30	9,745	77%	0.13%	8	212	1.50	1.72	0.00	3.22
15	KHSTPS-II	0	0.00	0	0%	0.00%	0	0	0.00	0.00	0.00	0.00
16	RSTPS	0	0.00	0	0%	0.00%	0	0	0.00	0.00	0.00	0.00
17	SOJAPUR	1,320	23.95	7,854	57%	0.93%	113	338	29.25	38.79	0.00	68.04
18	LARA	1,000	7.34	11,914	87%	0.46%	50	0	0.00	15.96	0.00	15.96
19	KAPPS-3&4	1,060	12.23	7,569	85%	0.85%	89	0	0.00	32.43	0.00	44.13
20	GADWARARA	900	13.15	3,857	85%	1.65%	132	295	21	321	0	528
Subtotal		18,884	272	121,912			1,488	214	217	321	0	528
I	NTPC (Mithi)											
1	Sham. Unit-I (NTPC)	500	70.00	3,852	83%	14.00%	470	354	81.83	165.35	0.00	248.18
2	Subtotal	500	70.00	3,852			470	354	81.83	165.35	0.00	248.18
II	Other											
1	KAPPS	440	8.52	2,725	73%	1.84%	48	295	0.00	14.78	0.00	14.78
2	KAPPS-3&4	1,060	12.23	7,569	85%	1.32%	83	295	0.00	34.63	0.00	34.63
3	KAPPS (III & IV)	100	0.00	243	85%	0.00%	0	0	0.00	0.00	0.00	0.00
4	Subtotal	1,600	22	11,048			132	295	0.00	38.81	0.00	38.81
IV	Other											
1	Renewable	582	38.00	4,334	85%	6.63%	86	0	20.14	37.07	0.00	57.21
2	Subtotal	582	38	4,334			86	0	20.14	37.07	0.00	57.21
V	Power purchase from Other Sources											
1	Power purchase from Indian E. Exchange	0	0.00	0	0		264	354	0.00	104.08	0.00	104.08
2	LI	0	0.00	0	0		0	#DIV/0!	0.00	0.00	0.00	0.00
3	Solar	0	0.00	0	0		63	0	0.00	0.00	0.00	0.00
4	Non-Solar (Hydro)	0	0.00	0	0		70	448	0.00	31.36	0.00	31.36
5	Solar REC	0	0.00	0	0		0	0	0.00	0.00	0.00	0.00
6	Non-Solar REC	0	0.00	0	0		0	0	0.00	0.00	0.00	0.00
7	Solar (SEG: NTPC)	170	0.00	283	0		283	0	0.00	14.15	0.00	14.15
8	Subtotal	170	0	283			710	330	0	234	0	234
VI	Misc. Annuity											
1	NTPC Rebate	21,586	402	141,252			2,804.54		316.48	787.83	0.00	1,116.31
2	Gross Power Purchase Cost						2,804.54					
3	External Losses											
4	Subtotal						2,804.54		316.48	787.83	0.00	1,116.31
VIII	Total Power Purchase						2,804.54		316.48	787.83	0.00	1,116.31
1	PGCIL CHARGES											
2	WRLOC											
3	MSTOL											
4	REC											
5	GETCO											
6	PGVCL											
7	POSCO											
9	Grand Total of Charges						2,804.54					1,245.98



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Investment Plan (year-wise)

Name of scheme	Project Details					SOURCE OF FINANCING FOR SCHEME					
	Year of Start	Nature of Project (Select appropriate code from below)	Approved by the Commission* (YES/NO)	Project Start Date (DD-MM-YY)	Project Completion date (DD-MMY)	Total capital expenditure approved by JERC (Rs. Cr.)	Equity component		Subsidies / grants component	Consumer Contribution	Actual Expenditure
							Internal Accrual (from free reserves and surplus)	Equity infused**			
2	3	4	5	6	7	8	9	10	11	12	
1				NA							



Notes:  
 \* Support with appropriate paper work i.e. Detailed Project Reports and other documents, as necessary  
 \*\* Provide break up of Government and Licensee/Private share  
 Codes for selecting Nature of work  
 a. EHV Schemes  
 b. Distribution schemes  
 I. System augmentation  
 II. System improvement  
 III. Schemes for loss reduction  
 c. Metering schemes  
 d. Capacitor  
 e. SCADA / DMS etc  
 f. Miscellaneous

Format-6

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Capital Base and Return

(all figures in Crs)

Sr.No.	Category of Consumer	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	4	5	6
1	Gross block at beginning of the year	587.63	607.45	617.45
2	Less accumulated depreciation	238.71	259.89	281.94
3	Net block at beginning of the year	348.92	347.55	335.51
4	Less accumulated consumer contribution	0.00	0.00	0.00
5	Net fixed assets at beginning of the year	348.92	347.55	335.51
6	Reasonable return @3% of NFA	10.47	10.43	10.07



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Original Cost of Fixed Assets

Sr.No.	Particulars Name of the Assets	Value of assets at the beginning of the year	Addition during the FY2018-19	Closing balance at the end of FY2018-19	Addition during FY2019-20	Closing balance at the end of FY2019-20	Addition during FY2020-21	Closing balance at the end of FY2020-21
1	Plant & Machinery	524.87	17.93	542.80	10.00	552.80	38.00	590.80
2	Buildings	23.70	0.00	23.70	0.00	23.70	0.00	23.70
3	Vehicles	0.67	0.00	0.67	0.00	0.67	0.00	0.67
4	Furniture & Fixtures	2.62	0.20	2.82	0.00	2.82	0.00	2.82
5	Computers & Others	10.98	1.69	12.67	0.00	12.67	0.00	12.67
6	Land	24.79	0.00	24.79	0.00	24.79	0.00	24.79
7	Total	587.63	19.82	607.45	10.00	617.45	38.00	655.45

(Rs. Crores)



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Interest Capitalized

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	WIP*			
2	GFA* at the end of the year			
3	WIP+GFA at the end of the year		NA	
4	Interest(excluding interest on WCL*)			
5	Interest Capitalized			



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Details of loans for the year

Sr.No.	Particulars (Source)	Opening Balance	Rate of Interest	Addition during the year	Repayment during the year	Amount of interest paid		
						Closing Balance	Current year	Ensuing year
1	SLR Bonds							
2	Non SLR Bonds							
3	LIC							
4	REC							
5	Commercial Banks							
6	Bills discounting							
7	Lease rental							
8	PFC							
9	GPF							
10	CSS							
11	Working capital loan							
12	Others							
13	Total							
	Add Govt. loan							
	-State Govt.							
	-Central Govt.							
14	Total							
15	Total (13+14)							
16	Less capitalization							
17	Net interest							
18	Add prior period							
19	Total interest							
20	Finance charges							
21	Total interest and finance charges							

N/A



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding restructuring of outstanding loans during the year

(Rs. Crores)

Sr.No.	Source of Loan	2	Amount of original loan (Rs. in crores)	3	Old rate of interest	6	Amount already restructured (Rs. in crores)	7	Revised rate of interest of interest	8	Amount now being restructured (Rs. in crores)	9	New rate of interest	10
1														

N/A



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Value of Assets and Depreciation Charges

Sr.No.	Particulars Name of the Assets	Rate of depreciation*	Previous Year		Current Year		Ensuing Year	
			Assets value at the beginning of FY 2018-19	Depreciation charges	Assets value at the beginning of FY 2019-20	Depreciation charges	Assets value at the beginning of FY 2020-21	Depreciation charges
1	Plant & Machinery	5.28%	524.87	27.71	542.80	19.72	552.80	20.58
2	Buildings	3.34%	23.70	0.79	23.70	0.43	23.70	0.43
3	Vehicles	9.50%	0.67	0.01	0.67	0.06	0.67	0.06
4	Furniture & Fixtures	6.33%	2.62	0.17	2.82	0.17	2.82	0.17
5	Computers & Others	6.33%	10.98	1.65	12.67	0.80	12.67	0.80
6	Land	0.00%	24.79	0.00	24.79	0.00	24.79	0.00
7	Total		587.63	30.33	607.45	21.18	617.45	22.05

(Rs. Crores)



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Repair and Maintenance Expenses

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	4	5	6
1	Plant & machinery	Breakup not available		
	-Plant & Apparatus			
	-EHV substations			
	- 33kV substation			
	- 11KV substation			
	- Switchgear and cable connections			
	- Others			
	Total			
2	Building			
3	Hydraulic works & civil works			
4	Line cable & network			
	-EHV Lines			
	- 33KV lines			
	- 11KV lines			
	- LT Lines			
	- Meters and metering equipment			
	- Others			
	Total			
5	Vehicles			
6	Furniture & fixtures			
7	Office equipments			
8	Operating expenses			
9	Total			
10	Add/Deduct share of others (To be specified)			
11	Total expenses			
12	Less capitalized			
13	Net expenses			
14	Add prior period *			
15	Total expenses charged to revenue as R&M expenses	16.23	19.35	19.67



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Total Number of Employees

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	Number of employees as on 1st April	267	269	270
2	Employees on deputation/ foreign service as on 1st April	0	0	0
3	Total number of employees (1+2)	267	269	270
4	Number of employees retired/retiring during the year	2	1	1
5	Number of employees added	4	2	3
6	Number of employees at the end of the year (4-5)	269	270	272



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Employee Cost

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
	<b>Salaries &amp; Allowances</b>			
1	Basic Pay	8.03	8.37	8.72
2	Dearness Pay	2.06	2.15	2.24
3	Dearness Allowance	4.19	4.37	4.55
4	House Rent Allowance	0.87	0.91	0.95
5	Fixed medical allowance	0.00	0.00	0.00
6	Medical reimbursement charges	0.00	0.00	0.00
7	Over time payment	0.00	0.00	0.00
8	Other allowances (detailed list to be attached)	0.00	0.00	0.00
	a. Washing allowance	0.00	0.00	0.00
	b. Transport allowance	0.87	0.91	0.95
	c. L.T.C.	0.00	0.00	0.00
	d. Children Education All.	0.14	0.15	0.15
	e. Family Planning Allow.	0.03	0.04	0.04
9	Generation incentive	0.00	0.00	0.00
10	Bonus	0.17	0.18	0.19
11	<b>Total</b>	<b>16.37</b>	<b>17.06</b>	<b>17.78</b>
	<b>Terminal Benefits</b>			
12	Leave encashment	-	-	-
13	Gratuity	-	-	-
14	Commutation of Pension	-	-	-
15	Workmen compensation	-	-	-
16	Ex-grata	-	-	-
17	<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Pension Payments</b>			
18	Basic Pension	-	-	-
19	Dearness Pension	-	-	-
20	Dearness Allowance	-	-	-
21	Any other expenses	-	-	-
22	<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
23	<b>Total (11+17+22)</b>	<b>16.37</b>	<b>17.06</b>	<b>17.78</b>
24	Amount capitalized	-	-	-
25	Net amount	-	-	-
26	Add prior period expenses	-	-	-
27	<b>Grand total</b>	<b>16.37</b>	<b>17.06</b>	<b>17.78</b>



8



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Administration and General Expenses

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	Advertisement expenses	0.09	0.10	0.10
2	Amc expense	1.19	1.24	1.29
3	Building Maintanance	0.22	0.23	0.24
4	Celebration expenses	1.09	1.14	1.19
5	Cleanning expense	0.09	0.09	0.10
6	Data download charges & Internet Expenses	0.35	0.37	0.38
7	Diesel expenses	0.07	0.07	0.07
8	Digital document & data entry charge	0.28	0.29	0.30
9	Electric Expense/Repair	0.01	0.01	0.01
10	Electricity expenses	0.14	0.14	0.15
11	E-tendingr expenses	0.09	0.09	0.09
12	Garden expense	0.85	0.89	0.92
13	Gift/Welfare of Students	0.02	0.02	0.02
14	JERC fees	2.12	2.21	2.31
15	Meter reading expense	0.44	0.46	0.47
16	News paper & magazine expense	0.01	0.01	0.01
17	Office cleaning expense	0.17	0.18	0.18
18	Office expense daman & diu	0.68	0.71	0.74
19	Online Transaction Charges	0.15	0.15	0.16
20	Postage stamp	0.00	0.00	0.00
21	Printing & stationery expenses	0.27	0.28	0.29
22	Professional charges	0.96	1.00	1.04
23	Security service charges	0.40	0.42	0.44
24	Telephone expenses	0.09	0.09	0.09
25	Vehicles maintenance & repairs	0.02	0.02	0.02
26	Water charge expenses	0.02	0.02	0.02
27	WRLDC Fees	0.18	0.18	0.19
38	<b>Total</b>	<b>9.97</b>	<b>10.39</b>	<b>10.83</b>
39	Add/Deduct share of others (to be specified)			
40	<b>Total expenses</b>	<b>9.97</b>	<b>10.39</b>	<b>10.83</b>
41	Less capitalized	0.00	0.00	0.00
42	<b>Net expenses</b>	<b>9.97</b>	<b>10.39</b>	<b>10.83</b>
43	Add prior period	0.00	0.00	0.00
44	<b>Total expenses charges to revenue</b>	<b>9.97</b>	<b>10.39</b>	<b>10.83</b>



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding Bad and Doubtful Debts

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	4	5	6
1	Amount of receivable	939.45	1,038.94	1,085.27
1	Provision made for debts in ARR	0.00	0.00	0.00



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Electricity Department of Daman & Diu  
**ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21**  
 Information regarding Working Capital for the current and ensuing year

Sr.No.	Particulars	Current Year FY 2018-19
		(Actual)
1	2	3
1	Receivables of two months of billing	156.57
2	Less power purchase cost of one month	85.70
3	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	80.46
4	Inventory for two months based on annual requirement for previous year	2.66
5	<b>Total Working Capital requirement</b>	<b>(6.93)</b>



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding Working Capital for the current and ensuing year

Sr.No.	Particulars	Amount (in Crores Rs.)	
		Ensuing Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4
1	O&M expense for one month	3.90	4.02
2	Maintenance spares at 40% of R&M for one month	0.65	0.66
3	Receivables for 2 months	173.16	180.88
4	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	80.46	80.46
5	<b>Total Working Capital requirement</b>	<b>97.24</b>	<b>105.10</b>



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding Foreign Exchange Rate Variation (FERV)

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	Amount of liability provided			
2	Amount recovered			
3	Amount adjusted			
				NA

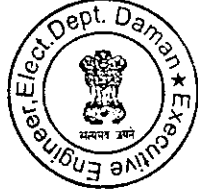


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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Non Tariff Income

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	Meter/service rent	1.31	1.31	1.31
2	Late payment surcharge	6.45	0.00	0.00
3	Theft/pilferage of energy	0.00	0.00	0.00
4	Wheeling charges under	0.00	0.00	0.00
5	open access	0.00	0.00	0.00
6	Interest on staff loans &	0.00	0.00	0.00
7	advance	0.00	0.00	0.00
8	Income from trading	0.00	0.00	0.00
9	Income staff welfare activities	0.00	0.00	0.00
10	Investment & bank	0.00	0.00	0.00
11	balances	0.00	0.00	0.00
12	Misc. Receipts/income	8.71	9.14	9.60
13	<b>Total income</b>	<b>16.46</b>	<b>10.45</b>	<b>10.91</b>
14	Add prior period income*	0.00	0.00	0.00
15	<b>Total non tariff income</b>	<b>16.46</b>	<b>10.45</b>	<b>10.91</b>



Format-21

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding Revenue from Other Business

(Rs. in crores)

Sr.No.	Particulars	Previous Year FY 2018-19 (Actual)	Current Year FY 2019-20 (RE)	Ensuing Year FY 2020-21 (Projections)
1	2	3	4	5
1	Total revenue from other business			
2	Income from other business to be considered for licensed business as per regulations		NA	



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Lease Details

Sr.No.	Name of Lesser	Gross Assets (Rs.in crores)	Lease entered on	Lease Rentals	Primary period ended/ ending by	Secondary period ending by
1	2	3	4	5	6	7
Not Applicable						



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding Wholesale Price Index (All Commodities)

Sr.No.	Period	WPI/CPI	Increase over previous year
1	2	3	4
1	FY 2016-17	111.62	1.73%
2	FY 2017-18	114.88	2.92%
3	FY 2018-19	119.76	4.25%
4	FY 2019-20	121.36	1.34%



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Information regarding amount of equity and loan

(Rs. in crores)

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



Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21

(Rs. in crores)

Sr.No.	Particular	FY 2018-19 Approved by the Commission (Tariff Order dated 20th May, 2019)	FY 2018-19 Actuals
1	Cost of power purchase	1,082.46	1,028.43
2	Employee costs	13.83	16.37
3	R&M expenses	17.30	16.23
4	Administration and General expenses	5.79	9.97
5	Depreciation	30.47	30.33
6	Interest charges (including interest on working capital)	23.61	20.51
7	Return on NFA / Equity	12.82	12.99
8	Provision for Bad Debt	0.00	0.00
9	Interest on security deposit	4.24	4.08
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0.00
11	<b>Total revenue requirement</b>	<b>1,190.52</b>	<b>1,138.91</b>
12	Less: non tariff income	18.82	16.46
13	<b>Net revenue requirement (10-11)</b>	<b>1,171.70</b>	<b>1,122.44</b>
14	Revenue from tariff	987.72	939.45
15	Revenue from UI	0.00	6.95
16	<b>(Gap)/surplus (12-13)</b>	<b>(183.98)</b>	<b>(176.05)</b>
17	(Gap)/surplus for previous year	306.92	306.92
18	Carrying cost	17.19	0.00
19	<b>Total (gap)/surplus (14+15)</b>	<b>140.13</b>	<b>130.87</b>
20	Revenue surplus carried over	0.00	0.00
21	Carrying Cost	0.00	0.00
22	Additional revenue from proposed tariff		
23	Energy sales (MU)	2,488.39	2,433.91



23

Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21

(Rs. in crores)

Sr.No.	Particular	FY 2019-20 Approved by the Commission (Tariff Order dated 20th May, 2019)	FY 2019-20 RE
1	Cost of power purchase	1,138.20	1,231.48
2	Employee costs	17.61	17.06
3	R&M expenses	19.62	19.35
4	Administration and General expenses	7.13	10.39
5	Depreciation	20.66	21.18
6	Interest charges (including interest on working capital)	26.92	23.36
7	Return on NFA / Equity	12.97	13.32
8	Provision for Bad Debt	0.00	0.00
9	Interest on security deposit	4.24	4.08
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0.00
11	<b>Total revenue requirement</b>	<b>1,247.35</b>	<b>1,340.22</b>
12	Less: non tariff income	19.76	10.45
13	<b>Net revenue requirement (10-11)</b>	<b>1,227.59</b>	<b>1,329.77</b>
14	Revenue from tariff	1,098.21	1,154.01
15	Revenue from UI	0.00	0.18
16	<b>(Gap)/surplus (12-13)</b>	<b>(129.38)</b>	<b>(175.58)</b>
17	Gap for previous year	140.13	130.87
18	Carrying cost	7.20	0.00
19	<b>Total gap (14+15)</b>	<b>17.95</b>	<b>(44.70)</b>
20	Revenue surplus carried over	0.00	0.00
21	Carrying Cost	0.00	0.00
22	Additional revenue from proposed tariff		
23	Energy sales (MU)	2,627.17	2,529.13



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21

Format 25

(Rs. in crores)

Sr.No.	Particular	FY 2020-21 Approved by the Commission (Tariff Order dated 20th May, 2019)	FY 2020-21 Projected
1	Cost of power purchase	1,237.19	1,245.99
2	Employee costs	18.43	17.78
3	R&M expenses	19.93	19.67
4	Administration and General expenses	7.44	10.83
5	Depreciation	21.92	22.05
6	Interest charges (including interest on working capital	29.14	23.73
7	Return on NFA / Equity	14.69	14.44
8	Provision for Bad Debt	0.00	0.00
9	Interest on security deposit	4.24	4.08
10	RPO provisioning to cover backlog of the previous years upto current year	0.00	0
11	<b>Total revenue requirement</b>	<b>1,352.98</b>	<b>1,358.56</b>
12	Less: non tariff income	20.75	10.91
13	<b>Net revenue requirement (10-11)</b>	<b>1,332.23</b>	<b>1,347.65</b>
14	Revenue from tariff	0.00	1,085.27
15	Revenue from UI	0.00	0.22
16	<b>(Gap)/surplus (12-13)</b>	<b>0.00</b>	<b>(262.16)</b>
17	(Gap)/surplus for previous year	0.00	(44.70)
18	Carrying cost	0.00	0.00
19	<b>Total gap (14+15)</b>	<b>0.00</b>	<b>(306.87)</b>
20	Revenue surplus carried over	0.00	0.00
21	Carrying Cost	0.00	0.00
22	Additional revenue from proposed tariff		
23	Energy sales (MU)	2,758.23	2,643.95



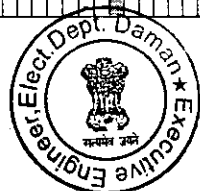
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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2023-24  
Revenue from Existing Tariff

2019-20

Sl. No.	Category of Consumer	No. of Consumers	Energy (kWh) (Apr to Mar 2019)	Tariff (Rs per kWh)	Total Revenue (Rs)	Energy Charge for 2019 (Rs)	Energy Charge for 2018 (Rs)	Estimated No. of Meters	Domestic Charge (Rs/KVA)	Tariff Rate (Rs/kWh)	Domestic Charge (Rs)	Energy Charge (Rs)	Domestic Charge (Rs)	Total Revenue (Rs)	Total Revenue (Rs)	Total Revenue (Rs)
1	Domestic															
	Up to 100 units	951	1.10	1.05	44.94			20		1.20				5.39		
	101-200 units	533	1.60	0.95	25.19			20		1.70				4.29		
	201-400 units	195	1.95	0.87	21.16			20		2.10				4.44		
	401 units and above	957	2.35	2.20	45.8			20		2.45				1.07		
	Total Domestic	2636		4.87	138.48			80		1.22				29.19		31.38
2	LIGHT															
	All units				0.00			10		0.01				0.01		0.01
2	MS/Commercial															
	0-100 units	108	2.4	0.26	4.81			25		2.50				1.23		
	101-200 units	973	3.25	3.16	44.21			25		3.40				15.03		
	Total Commercial	1081		3.42	49.13			25		0.24				18.28		19.92
3	Public Lighting	719	1.18	0.44	5.43			1492		0.00				5.17		2.62
4	Public Water Work	137	0.92		2.28			888		0.02				0.82		0.84
	Above 20 HP Connected Load		0.92	0.17	2.28			658		0.02				0.82		0.84
5	Industrial															
	HT (A) General	782	331.58	118.42	181.29			66976		2.40				612.82		788.96
	For all units		331.58	118.42	181.29			66976		2.40				612.82		788.96
	HT (B) Furnace	27	15.22	4.03	64.81			11810		8.12				29.81		34.14
	For all units		15.22	4.03	64.81			11810		8.12				29.81		34.14
	Total Industrial	809			246.10			78786		10.52				642.63		823.10
6	LT	1740	37.82	0.40	181.81			113878		2.80				88.08		71.76
	For all units		37.82	0.40	181.81			113878		2.80				88.08		71.76
	Total HT & LT Industrial	2549		131	180.87			664617		14.87				70.06		850.43
6	Agriculture Consumption	1419	0.97	0.07	4.11			4233		0.00				0.30		0.37
	Up to 10 HP		0.65	0.04	2.85					0.05				0.19		
	Beyond 10 HP		0.30	0.03	1.26					0.00				0.11		
7	Temporary	41400			0.00			1996						0.52		0.52
	All units				0.00			1996						0.52		0.52
7	Total Revenue Billed	83882	427	14176	2107.89			883392.98		180.87				746		1038.94
8	FPPCA															0.00
9	OA Charges															0.00
10	Other Charges															0.00
11	REC Charges															0.00
12	Total	83882			14176			883392.98		180.87				746		1038.94
13	Grand Total	83882			2107.89			883392.98		180.87				746		1038.94

1. Figures of HT Industrial for Connected load are in KVA



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY 2020-21  
Revenue from Existing Load

S. No.	Category of Consumers	No. of Consumers	Energy Sales (MU)	Contracted Max Demand (KVA)	Demand Charge (Rs/KVA)	Tariff Rate (Rs/Unit)	Demand Charge (Rs In Crore)	Energy Charges (Rs In Crore)	Total Revenue (Rs In Crore)
1	Domestic								
	Up to 100 units	17163	59.55	20	0.41	1.20	0.41	7.16	7.57
	101-200 units	9622	33.44	20	1.70	0.23	5.69	5.92	5.92
	201-400 units	8081	28.93	20	2.10	0.19	5.90	6.09	6.09
	401 units and above	17267	59.98	20	2.45	0.41	14.70	15.11	15.11
	<b>Total Domestic</b>	<b>62,122</b>	<b>181.17</b>	<b>168844</b>	<b>0</b>	<b>0</b>	<b>33.44</b>	<b>34.60</b>	<b>34.60</b>
2	Light								
	All units		0.00	10	0.01				0.01
2	NBS/Commercial								
	0-100 units	3937	31.07	25	2.50	0.12	7.71	7.89	7.89
	Above 100 units	4972	32.13	25	3.40	0.12	10.93	11.05	11.05
	<b>Total Commercial</b>	<b>8,909</b>	<b>63.20</b>	<b>27632</b>	<b>0</b>	<b>0</b>	<b>18.69</b>	<b>18.93</b>	<b>18.93</b>
3	Public Lighting								
		766	8.89	1481	0	4.00	0.00	2.75	2.75
4	Public Water Work								
	Above 20 HP Connected Load	143	3.11	892	0	3.00	0.02	1.12	1.14
5	Industrial								
	a) HT								
	i) HT (A) General	806	2099.54	594090	240	143.13	771.26	914.39	914.39
	For all units		2142.39	240		3.60	771.26	771.26	771.26
	ii) HT (B) Furnace	4	83.23	11810	425	5.12	31.43	36.55	36.55
	For all units		88.54	425		3.55	31.43	31.43	31.43
	<b>Total HT Industrial</b>	<b>810</b>	<b>2180.97</b>	<b>606100</b>	<b>665</b>	<b>148.22</b>	<b>802.69</b>	<b>945.84</b>	<b>945.84</b>
	b) LT								
	For all units	1787	201.33	118482	25	2.97	73.43	76.40	76.40
	<b>Total HT+LT Industrial</b>	<b>2597</b>	<b>2382.30</b>	<b>724582</b>	<b>710</b>	<b>151.22</b>	<b>876.12</b>	<b>1022.34</b>	<b>1022.34</b>
6	Agriculture Consumption								
	Up to 10 HP	1456	5.46	4430	0	0.65	0.26	0.40	0.40
	Beyond 10 HP		1.68			0.99	0.15	0.15	0.15
	<b>Total Temporary</b>	<b>1456</b>	<b>7.14</b>	<b>4430</b>	<b>0</b>	<b>1.64</b>	<b>0.41</b>	<b>0.55</b>	<b>0.55</b>
7	Other								
	All units	414.00	0.00	1986					
	<b>Total Revenue Billed</b>	<b>66476</b>	<b>2443.93</b>	<b>916467.98</b>	<b>151.26</b>	<b>151.26</b>	<b>933</b>	<b>1085.27</b>	<b>1085.27</b>
8	PFPPCA								
	OA Charges								
	Other Charges								
10	REC charges								
11	REC charges								
12	UI								
13	<b>Grand Total</b>	<b>66476</b>	<b>2443.93</b>	<b>916467.98</b>	<b>151.26</b>	<b>151.26</b>	<b>933</b>	<b>1085.49</b>	<b>1085.49</b>

1. Figures of HT Industrial for Connected load are in KVA



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Electricity Department of Daman & Diu  
ANNUAL REVENUE REQUIREMENT FOR THE FY. 2020-21  
Revenue from Existing LT/HT

S.No.	Category of Consumers	No. of Consumers	Rating (KVA)	Connected Load (KVA)	Rating Charge (Rs/KVA)	Total Rating Charge (Rs)	Demand Charge (Rs/In Crd)	Rating Charge (Rs/In Crd)	Total Rating Charge (Rs/In Crd)
1	Domestic	17463	58.85		20	1,20	0.41	7.16	7.57
	Up to 100 units	9622	33.44		20	1,70	0.23	5.89	5.92
	101-200 units	6081	28.09		20	2,10	0.19	5.90	6.08
	201-400 units	17257	58.88		20	2,90	0.41	17.39	17.81
	401 units and above	52,122	181.17	1868.44	0		1.25	36.14	37.39
2	LIGHT		0.00		10		0.01		0.01
2	NRS/Commercial	3937	31.07		25	2,50	0.12	7.77	7.89
	0-100 units	4072	32.13		25	3,90	0.12	12.53	12.65
	Above 100 units	8,009	63.20	2783.2	0		0.24	20.30	20.54
	Total Commercial								
3	Public Lighting	765	6.88	1481	0	4,00	0.00	2.75	2.75
4	Public Water Work	143	3.11	892	0		0.02	1.12	1.14
	Above 20 HP Connected Load			892	25	3,80	0.02	1.12	1.12
5	Industrial								
a) HT									
i) HT (A) General	808	2089.54	56490	300		188.44		998.21	1185.85
	For all units	2,142.39		300	4.05	989.21			
ii) HT (B) Furnace	4	83.23	11810	500		6.36		40.73	47.10
	For all units	86.54		500	4.80			40.73	
	Total HT Industrial	812	2172.77	68300		194.80		1039.94	1234.75
b) LT									
For all units	1,757	201.33	118482			6.37		92.38	98.74
Total HT+LT Industrial	2887	2384.10	712893	50	3.90	202.18		1129.31	1331.50
6	Agriculture Consumption	1,458	5.48	4430	0			0.40	0.40
	Up to 10 HP		3.81			0.65		0.25	
	Beyond 10 HP	414.00	1.68	1996		0.90		0.15	
7	Temporary		0.00	1986				0.00	0.00
	All units	85478	2643.95	816467.88			202.22	1190	1393.73
8	PPCA								0.00
9	OA Charges								0.00
10	Other charges								0.00
11	REC charges								0.00
12	LT								0.22
13	Grand Total	85478	2643.95	816467.88		13461.98	202.22	1190	1393.96

1. Figures of HT Industrial for Connected load are in KVA



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