

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

Submitted to:

**Joint Electricity Regulatory Commission for
the State of Goa & Union Territories**

Submitted By:

Electricity Department of Daman & Diu



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List of Abbreviations

Sr. No	Abbreviations	Descriptions
1.	A&G	Administrative and General
2.	AC	Auxiliary Consumption
3.	APR	Annual Performance Review
4.	ARR	Aggregate Revenue Requirement
5.	AS	Accounting Standard
6.	CAGR	Compound Annual Growth Rate
7.	CAPEX	Capital Expenditure
8.	CERC	Central Electricity Regulatory Commission
9.	CGS	Central Generating Station
10.	CoS	Cost of Supply/ Service
11.	CPPs	Captive Power Plants
12.	Crs	Crores
13.	CWIP	Capital Work in Progress
14.	DF	Distribution Franchisee
15.	Discom	Distribution Companies
16.	DPS	Delayed Payment Surcharge
17.	DS	Domestic Service
18.	DSM	Demand Side Management
19.	DTC	Distribution Transformer
20.	EA/The Act	The Electricity Act 2003
21.	F&A	Finance & Accounts
22.	FY	Financial Year
23.	GFA	Gross Fixed Assets
24.	G.O.	Government Order
25.	Gol	Government of India
26.	HR	Human Resource
27.	HRA	House Rent Allowance
28.	HT	High Tension
29.	KV	Kilo Volt
30.	kVA	Kilo Volt Ampere
31.	kVAh	Kilo Volt Ampere Hour
32.	kW	Kilo Watt
33.	kWh	Kilo Watt Hour
34.	LF	Load Factor
35.	LT	Low Tension
36.	MD	Maximum Demand
37.	MOD	Merit Order Despatch
38.	MoP	Ministry of Power
39.	MOU	Memorandum of Understanding
40.	MU	Million Units (Million kWh)



Sr. No	Abbreviations	Descriptions
41.	MVA	Mega Volt Ampere
42.	MW	Mega Watt
43.	MYT	Multi Year Tariff
44.	NEP	National Electricity Policy
45.	NTP	National Tariff Policy
46.	NTPC	National Thermal Power Corporation
47.	O&M	Operation & Maintenance
48.	PAF	Plant Availability Factor
49.	PF	Provident Fund
50.	PFC	Power finance Corporation
51.	PLF	Plant Load Factor
52.	PLR	Prime Lending Rate
53.	PPA	Power Purchase Agreement
54.	PSD	Power Service Division
55.	REC	Rural Electrification Corporation
56.	R&M	Repair and Maintenance
57.	ROE	Return on Equity
58.	RPO	Renewable Purchase Obligation
59.	Rs	Rupees
60.	SBI	State Bank of India
61.	SLM	Straight Line Method
62.	SHR	Station Heat Rate
63.	T&D	Transmission and Distribution
64.	w.e.f	With effect from
65.	Y-o-Y	Year on Year



Chapter 1: Introduction

1 Background

Daman and Diu is a district in the Union Territory of Dadra and Nagar Haveli and Daman and Diu 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 14.363 MW out of which 10 MW is ground mounted and the remaining 4.363 MW is solar rooftop plants. Further, as per the renewable energy Policy, 2017 all the HT/EHT consumers were directed to install solar rooftop plants at 5% of the contrast demand. Hence, as of now a total of 25.90 MW of solar rooftop plants have been installed by HT/EHT consumers.

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, 447.62 circuit kms of 11kV lines O/H as well as U/G lines, 791.71 circuit kms of LT OH & U/G lines along with 926 transformers. Presently, there are 124 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.
- 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 428.67 MW (376.25 MW at peak hours and 484.75 MW at off peak hours) 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 20-21.

Considering the increase in demand from the large industries, the demand is likely to reach to 360-370 MW by FY 2022-23. In view of the huge power demand in future, EDDD had proposed a number of schemes to be implemented during the coming years for strengthening and augmentation of the transmission and distribution system in the territory. EDDD is also undertaking efforts to get higher allocation from the Central Generating Stations. The EDDD is undertaking all necessary actions to tie-up for long-term power purchase for meeting the deficit in the UT of Daman and Diu.

2 Objective of Business Plan

The Joint Electricity Regulatory Commission for the State of Goa and Union Territories, in exercise of the powers conferred on it by sub-Section (2) of Section 181 read with Section 36, Section 39, Section 40, Section 41, Section 51, Section 61, Section 62, Section 63, Section 64, Section 65 and Section 86 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, has issued the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021, hereinafter referred to as "MYT Regulations".

As per the Regulations, the Distribution Licensee shall file Business Plan, for Control Period of three financial years from April 1, 2022 to March 31, 2025, which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets before the Hon'ble Commission as part of the Tariff Filing before the beginning of the Control Period.



Accordingly, the EDDD is hereby filing the Business Plan for the Control Period (FY 2022-23 to FY 2024-25) based on the available data for the FY 2020-21 and data of previous 5 years.

EDDD has prepared the Business Plan taking cognizance of the existing internal factors and external business environment affecting the business. EDDD submits that the Business plan being a dynamic document may need to be updated at periodic intervals taking into account the changes in the internal and external environment and these changes would be intimated to the Hon'ble Commission from time to time.



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Chapter 2: About the Electricity Department Daman & Diu

1 Mission of Electricity Department Daman & Diu

Uninterrupted, Reliable and Quality Power Supply to all our Consumers on competitive rates

2 Area Served

Daman District comprises of an area of 72 sq. km whereas Diu District comprises of an area of 40 sq. km.

Figure 1: District map of Daman & Diu



3 Generation Transmission & Distribution

Electricity Department of Daman & Diu is mainly engaged in the procurement, transmission and distribution of electricity to the various categories of consumers. The bulk power supply is drawn from the Central Sector Power Stations in Western Region through PGCIL Grid. 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 present power allocation of Daman & Diu is approximately 428.67 MW (376.25 MW at peak hours and 484.75 MW at off peak hours) 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). Against this allocation, the U.T is getting only an average of 270-300 MW (off peak hrs) as a daily power schedule.

The Department is mainly engaged in the work of construction, operation and maintenance of power distribution system which caters to power demand of various categories of consumers.

Table 1: Transmission and Distribution System

Sr.No.	Details	Daman	Diu	Total
01.	220 KV D/C line	32.60 C.Kms.	--	32.60 C Kms.
02.	66 KV D/C line	66.70 C.Kms.	22.00 C. Kms.	88.70 C. Kms.
03.	11KV line O/H	180.32 C. Kms.	4.00 C. Kms.	184.32 C. Kms.
04.	11KV line U/G	177.92 C. Kms.	85.38 C. Kms.	263.30 C. Kms.
05.	L.T. Line	430.50 C. Kms.	77.00 C. Kms.	507.50 C. Kms.
06.	L.T line U/G	174.20 C. Kms.	110.00 C. Kms.	284.20 C. Kms.
07.	Transformer Centre	795 Nos.	131 Nos.	926 Nos.

4 Organization Structure: Roles and Responsibilities

Electricity Department is part of the Administration of Union Territory of Daman & Diu & headed by the Secretary (Power). Day to day work related to functioning of the Department is looked by the Executive Engineer (Elect.) at Division level.

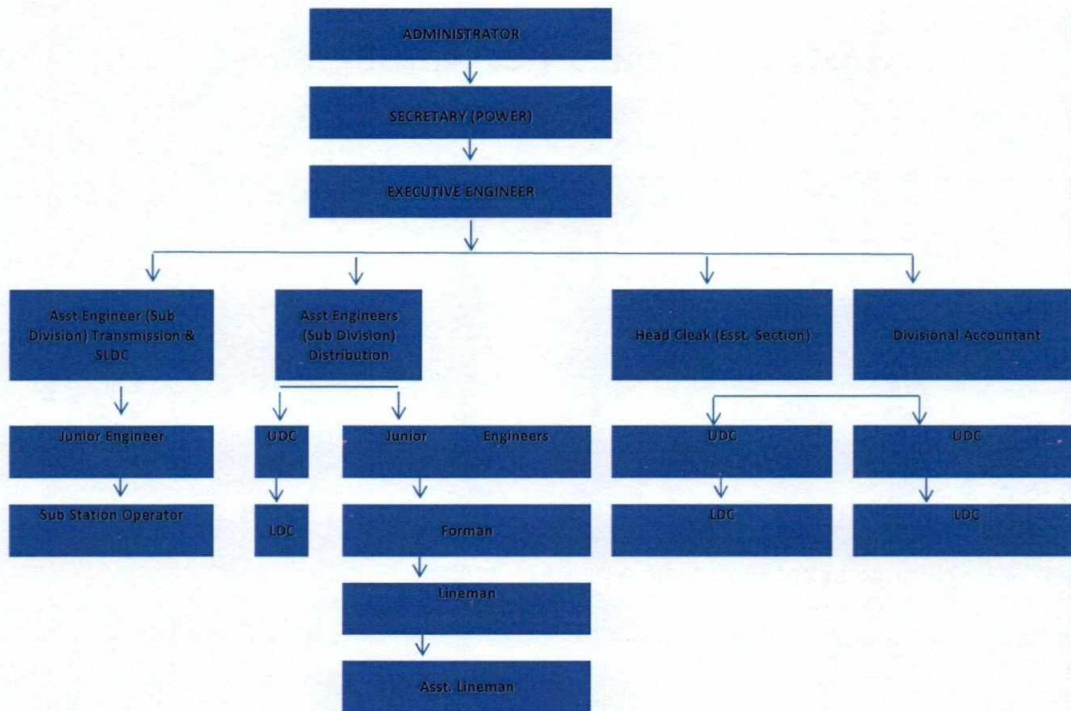
Under Division there are four Sub Division headed by the Assistant Engineer. Executive Engineer at Division Office is also help by Technical Section headed by The Assistant Engineer, Establishment Section headed by Head Clerk and Account Section headed by the Accountant.

At lower level there are Junior Engineer who look after the Operation & Maintenance work of their respected assigned areas and report to their respected Assistant Engineer.



Figure 2: Organisation structure of Daman and Diu Electricity Dept.

ORGANIZATIONAL CHART OF DAMAN & DIU



5 Power Sector of Daman & Diu

The UT of Daman & Diu does not have its own power stations and relies on power from Central Generating Stations (NTPC, NPCIL) to meet its demand.

Chart 1: Depicting Percentage of Energy Allocation from Central Generating Stations

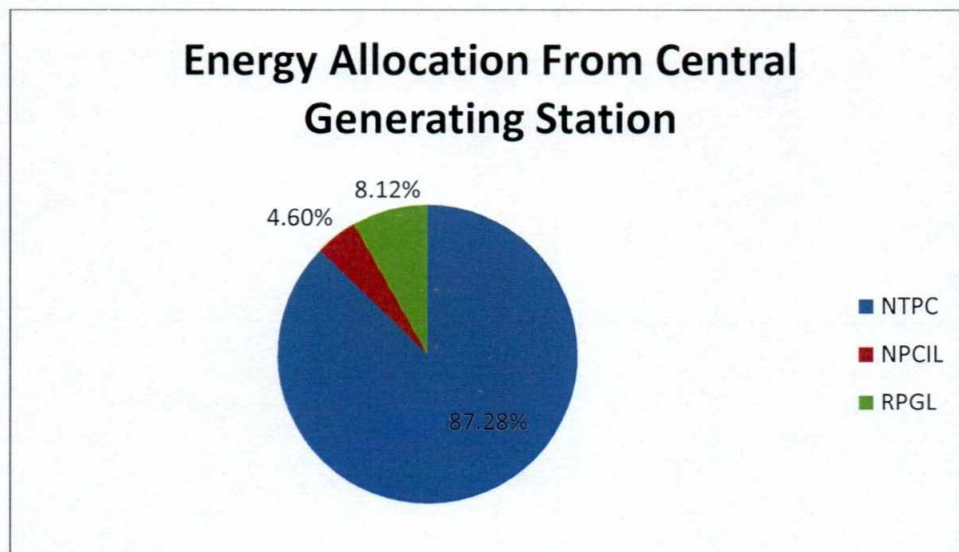


Chart 2: Depicting Increase in Growth of Consumer Numbers

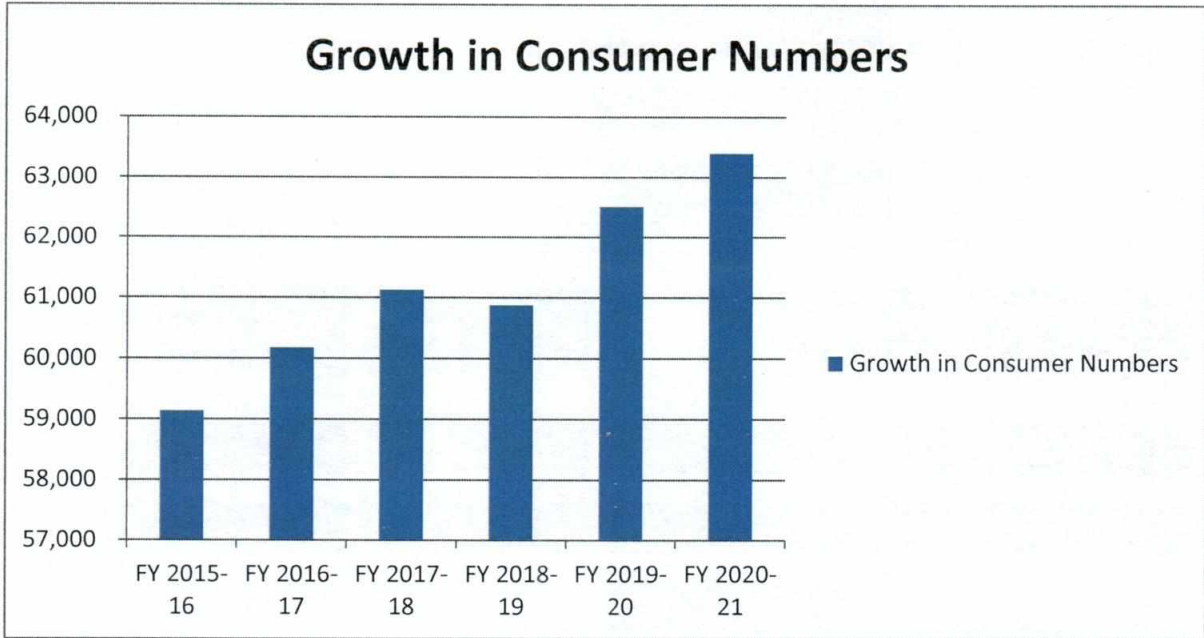


Chart 3: Depicting Consumer Mix Percentage for FY (2020-21)

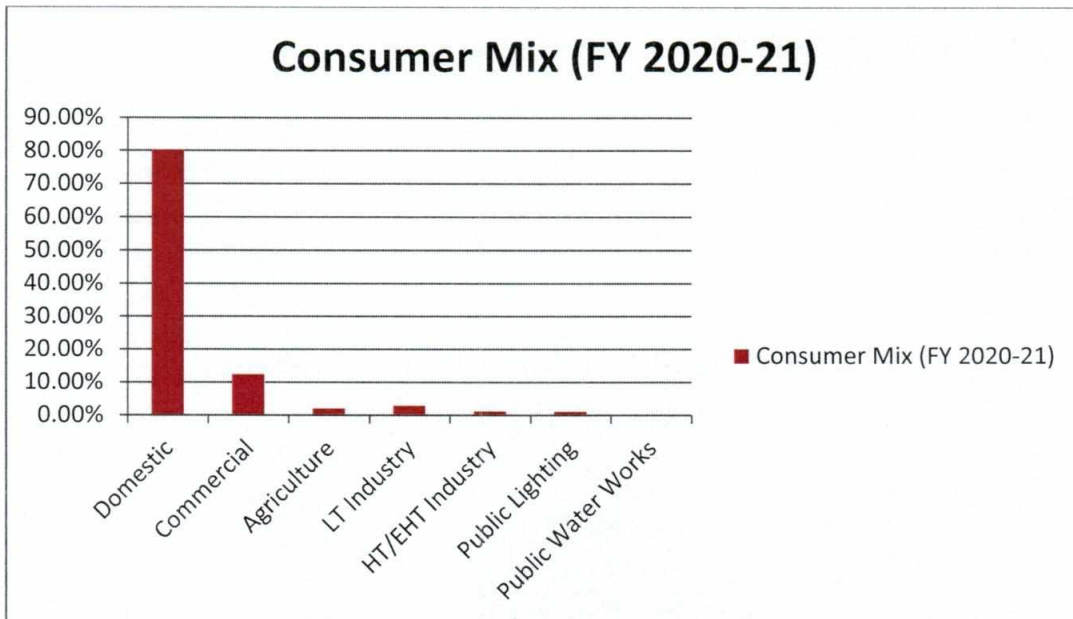


Chart 4: Depicting Consumer Growth Category Wise

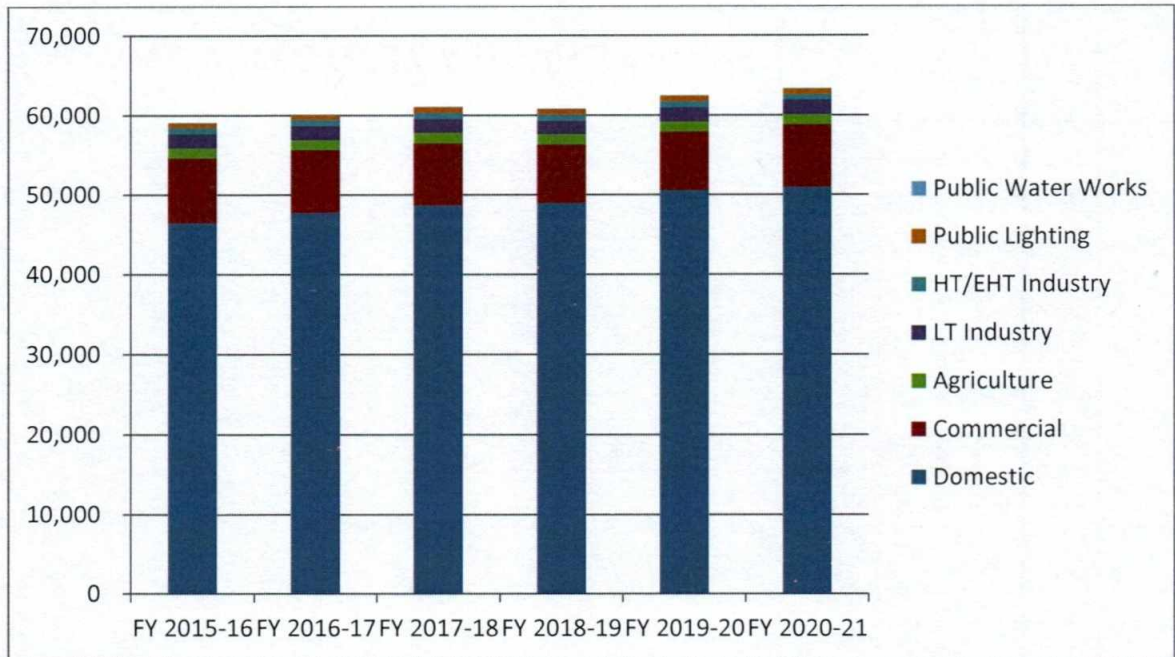


Chart 5: Depicting Year Wise Growth of Energy Sales in (MU)

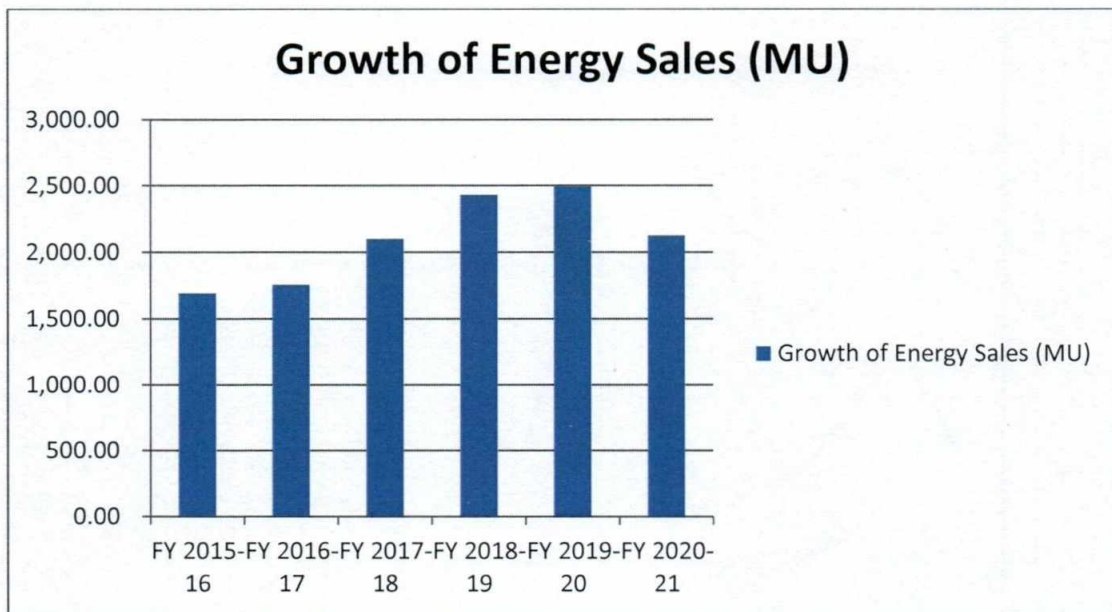


Chart 6: Depicting Percentage of Sales Category Wise

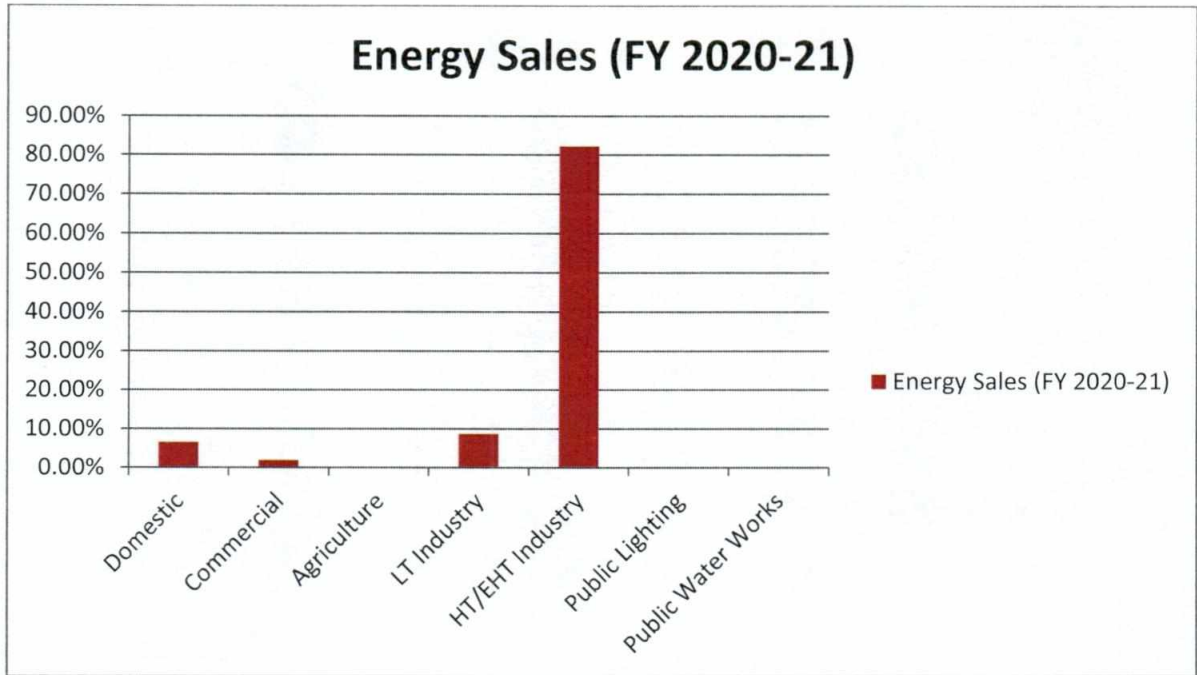


Chart 7: Load Curve for the FY 2019-20

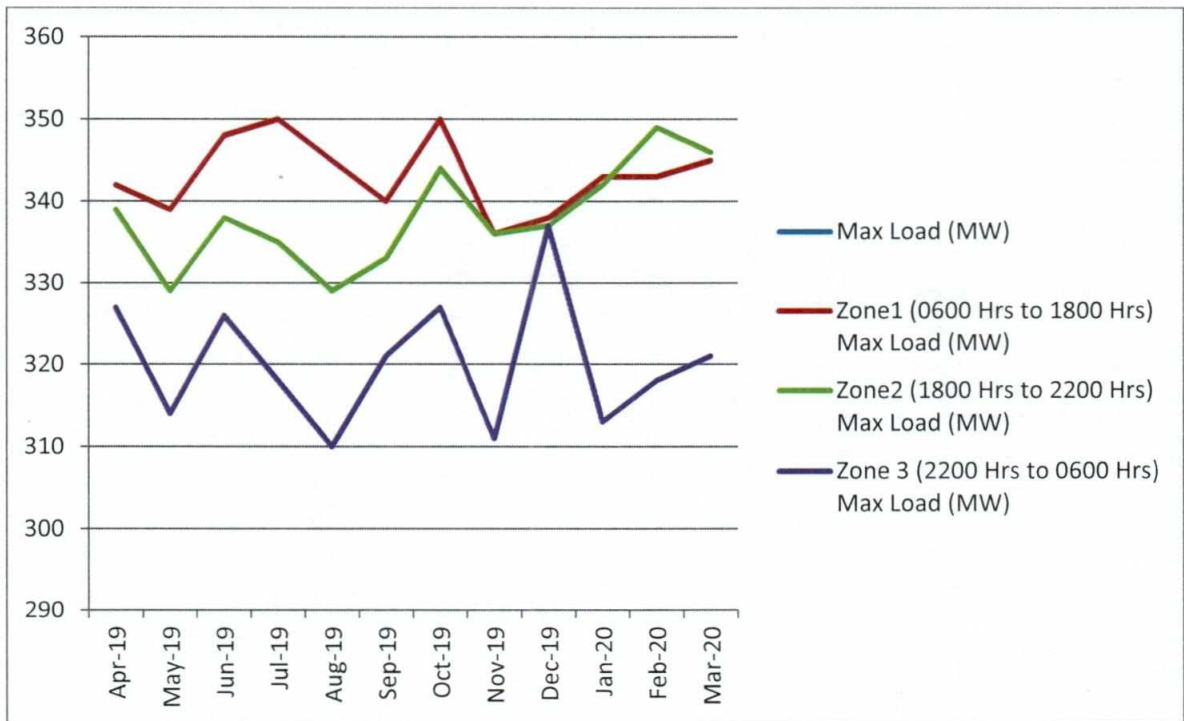
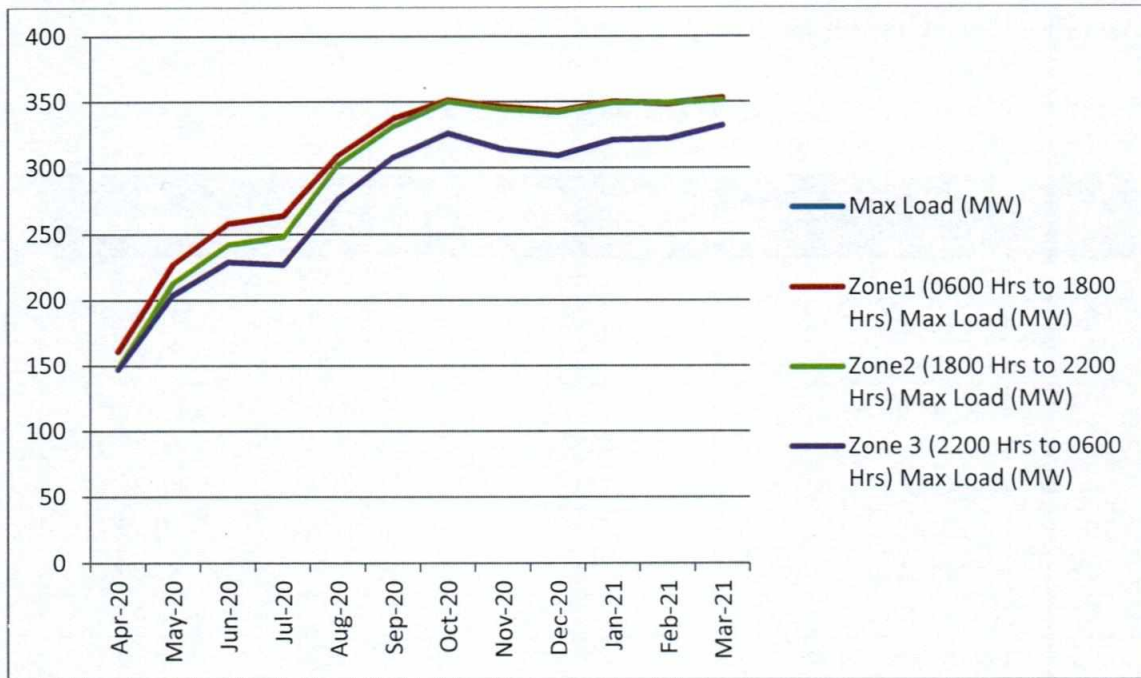


Chart 8: Load Curve for the FY 2020-21



6 Grid details

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.

There are 9 nos 66/11 kv, Sub-station at Dabhel, Kachigam, Kachigam-II, Dalwada, Bhimpore, Varkund, Ringanwada & Magarwada in Daman & Malala at Diu. Consumers received power supply through Distribution network. Power supply to Diu District is received through GETCO network through 66 kV Transmission lines.

7 Future Power Allocation

During the control period, it is expected that capacity from the following plants will also be allocated to EDDD. The capacity to be allocated to EDDD shall be decided by the Ministry of Power. The details of the plants are as given below:

- BARH Super Thermal Power Station Stage-II – 1320 MW
- Jagdishpura Combined Cycle Power Station – 475 MW
- Ratnagiri CCPP, Stage-II – 2100 MW
- Bhilai Expansion Power Project Stage-II – 500 MW

8 Transmission Sub Stations

There are two 220/66 KV sub-station and nine 66/11 KV sub-stations in Daman & Diu. The details of the same have been shown in the table given below:

Table 2: Transmission Sub Stations

Sr.No.	Sub-Station	Voltage Level (KV)	Installed capacity	% loading
01.	Magarwada	220/66	520 MVA	60.00%
02.	Ringanwada	220/66	260 MVA	42.30%
03.	Magarwada	66/11	30 MVA	43.00%
04.	Kachigam	66/11	90 MVA	67.00%
05.	Dabhel	66/11	90 MVA	86.85%
06.	Dalwada	66/11	80 MVA	80.25%
07.	Varkund	66/11	42 MVA	50.00%
08.	Ringanwada	66/11	50 MVA	80.00%
09.	Malala, Diu	66/11	20 MVA	5.46%
10.	Bhimpore	66/11	30 MVA	95.00%
11.	Kachigam II	66/11	30MVA	93.00%

9 Reliability Indices

The reliability indices for the EDDD for the FY 2019-20, FY 2020-21, FY 2021-22 and the MYT control period have been given in the table below:

Table 3: Reliability Indices for FY 2019-20, FY 2020-21, FY 2021-22 and the MYT Control Period

Reliability Indices	2019-20 (Actual)	2020-21 (Actual)	2021-22 (RE)	2022-23 (Projected)	2023-24 (Projected)	2024-25 (Projected)
SAIFI	2.31	1.44	1.30	1.17	1.05	0.94
SAIDI	3.78	2.35	2.12	1.90	1.71	1.54
MAIFI	1.03	0.64	0.58	0.52	0.47	0.42

10 IT Initiatives

- Revenue Administration through Computerized Energy billing system (RACE).
- Customization of Tally software to maintain the record of accounts of every payment made by the department to various agencies.
- Online system for preparation of estimates.
- e-Indent for store management.
- Online Application for power connection.
- Complaint Management System (CMS).



- Power outage software (Vidyuth Pravah).

Payment Modes available:

- Cash collection counters at various places.
- Anytime payment kiosk.
- Common Service Center.
- Online – through Net Banking, Debit/Credit Cards, e-wallet / Cash Cards, IMPS (Immediate Payment Service) & UPI (Unified Payment Interface), Bharat QR code.
- Mobile app (Department).
- Banks mobile app.
- Payment through NEFT (VAN service)

11 Physical achievements during the MYT Control Period FY 2019-20 to FY 2021-22

01. Normal Development works and Release of connections.
Connection released: 1237 Nos.
02. Providing Under-ground cable power Distribution system in Daman & Diu City / Rural areas and extension of the schemes To the Industrial Estate.
 - a. Conversion of 11 KV High Tension overhead lines in to U/G system: 22 Kms.
 - b. Conversion of Low Tension Overhead lines in to U/G system: 16 Kms.
03. a) Installation of 0.502 MW rooftop solar power plants at various Govt/Semi Govt. Buildings in Daman and Diu.
b)) Installation of 25.9 MW rooftop solar power plants by private Consumers in Daman and Diu.

Chapter 3: SWOT Analysis

As part of the development of a strategic plan for any organization, it is necessary to understand the inherent competitive advantage of the electricity department as well as the risk surrounding its business environment. Like any other businesses, it is very important for EDDD to evaluate the environment – both internal and external while charting out its growth path. The aim of a SWOT analysis is to identify the key internal and external factors that are important for achieving the objectives of the company.

The SWOT analysis is a strategic planning technique used to assess the internal and external environment in which the electricity department operates and competes. These come from within the company's unique value chain. The information being used for the SWOT analysis is grouped into two main categories:

- Internal factors – The strengths and weaknesses internal to the organization;
- External factors – The opportunities and threats presented by the external environment to the organization;

This section provides the analysis of the strengths, weaknesses, opportunities and threats as perceived by EDDD. These are summarized in the following table:

	Helpful <i>In achieving the objective</i>	Harmful <i>In achieving the objective</i>
Internal Attributes of the Organisation	STRENGTHS <ul style="list-style-type: none"> ✓ Quality Power Supply ✓ Lower Losses ✓ Efficient Customer Service ✓ Online services for customer 	WEAKNESS <ul style="list-style-type: none"> ✓ Ageing Distribution Network ✓ Very Less Own generation ✓ Inadequate Manpower ✓ Less allocation during peak hours
External Attributes of the Environment	OPPORTUNITIES <ul style="list-style-type: none"> ✓ Business Growth due to setting up of new industries 	THREATS <ul style="list-style-type: none"> ✓ Increase in Coal Prices

Strengths:

- **Quality Power Supply:** EDDD has been providing quality and reliable power supply to its consumers with low voltage fluctuations and power supplied at a stable frequency.



- **Lower Losses:** EDDD has been very proficient in reducing the Distribution losses to 6.85% up to 2017-18 over the last few years. EDDD has been and shall always be committed towards taking the best possible measures to minimise distribution losses by adopting pro-active approach and adopting best practices prevalent in the distribution sector in India.
- **Efficient Customer Service:** EDDD has been providing efficient services to its consumers and has also initiated Consumer Management System ensuring better services to its consumers round the clock.

Weakness:

- **Ageing Distribution Network:** EDDD has been supplying electricity for a very long time and has also been maintaining its network. However, with passage of time the Distribution Network has started showing signs of ageing and this shall lead to deterioration in performance of EDDD, if adequate and timely steps are not taken.
- **Very Less Own Generation:** The own generation of EDDD is limited to the solar plants in Daman and Diu. The EDDD has to depend upon the power generation from the Central Generating Stations like NTPC, NPCIL etc. At times when there is a grid outage or a shutdown of the plants allocated to EDDD, the department has to resort to costly short term power purchase to supply uninterrupted power supply to the industries.
- **Inadequate Manpower:** The manpower of EDDD serving the UT of Daman and Diu is inadequate. The ratio of the no. of consumers per employee is much higher as compared to the Distribution companies in other states.
- **Less Allocation During Peak Hours:** The allocation of power during the peak hours is not adequate to meet the demand of the consumers of EDDD. Hence, the Department has to resort to short term power to meet the demand of the consumers.

Opportunity:

- **Business growth due to setting up of new industries:** Over the past ten to fifteen years, the UT has seen a tremendous growth in the no. of industries setting up base in Daman due to the tax free policy of the Government of India. As such, EDDD foresees an expansion of Customer base and load growth in its license area.

Threats

- **Increase in Coal Prices:** It is a well known fact that the recent increase in imported Coal prices is causing some serious strains to the power utilities. As a result of this, generators at the central level are seeking increase in tariffs. If such increase in tariff is allowed in the near future, this increase will have to be borne by the consumers. EDDD feels that this shall cause hardship on its consumers.

Chapter 4: Sales**1 Load Growth**

The Table given below summarizes the growth in sanctioned load over the past 6 years.

Table 4: Past Years' Load Growth

Consumer Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
kVA	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	119557	121827	131652	123187	104658	108229
Commercial	19761	20781	23722	22187	25034	27444
Agriculture	3672	3812	4003	3824	3743	3866
LT Industry	107471	104148	108683	112502	117295	121331
HT/EHT Industry	505321	536544	551163	543648	537595	519668
Public Lighting	1690	880	1405	1447	1488	1536
Public Water Works	795	795	794	748	733	728
Temp. Supply	28	673	1986	1650	1495	0
Total	7,58,295	7,89,460	8,23,408	8,09,193	7,92,041	7,82,802

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

Table 5: Projected load growth during Control Period (Y 2022-23 to FY 2024-25)

Consumer Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	CAGR
kVA	RE	Projected	Projected	Projected	
Domestic	110394	112602	114854	117151	2.00%
Commercial	28810	30244	31750	33331	4.98%
Agriculture	3906	3947	3988	4029	1.04%
LT Industry	124310	127363	130490	133694	2.46%
HT/EHT Industry	522586	525520	528471	531438	0.56%
Public Lighting	1567	1598	1630	1663	2.00%
Public Water Works	742	757	772	788	2.00%
Temp. Supply	0	0	0	0	0.00%
Total	7,92,316	8,02,031	8,11,955	8,22,094	



2 Consumer Growth

The Table 5 below summarizes the category wise growth in consumers over the past 6 years.

Table 6: Past Years' Consumer Growth

Consumer Category	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	46,420	47,403	48,287	48,455	49,924	50,957
Commercial	8,209	7,875	7,815	7,373	7,413	7,880
Agriculture	1,243	1,283	1,344	1,299	1,257	1,286
LT Industry	1,817	1,755	1,706	1,705	1,783	1,822
HT/EHT Industry	784	800	807	789	763	720
Public Lighting	529	571	633	635	637	631
Public Water Works	125	127	125	110	104	104
Temp. Supply	11	366	414	510	629	0
Total	59,138	60,180	61,131	60,876	62,510	63,400

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

Table 7: Projected consumer growth during Control Period (FY 2022-23 to FY 2024-25)

Consumer Category	FY 21-22	FY 22-23	FY 23-24	FY 24-25	CAGR
	RE	Projected	Projected	Projected	
Domestic	51,879	52,819	53,775	54,748	1.81%
Commercial	8,038	8,198	8,362	8,530	2.00%
Agriculture	1,295	1,304	1,313	1,321	0.68%
LT Industry	1,858	1,896	1,934	1,972	2.00%
HT/EHT Industry	734	749	764	779	2.00%
Public Lighting	647	663	680	697	2.53%
Public Water Works	312	108	110	113	2.00%
Temp. Supply	0	0	0	0	0.00%
Total	64,764	65,737	66,938	68,161	

3 Energy Sales Growth

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

Table 8: Past Years' Energy Sales Growth

Consumer Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Domestic	83.06	88.20	97.89	121.32	134.47	147.83	139.73

Consumer Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
	Actual	Actual	Actual	Actual	Actual	Actual	Actual
LIG/ Kutir Jyoti	0.08	0.09	0.10	0.10	0.00	0.00	0.00
Commercial	41.57	49.93	55.37	57.74	53.27	51.35	41.77
Agriculture	2.30	2.46	2.81	4.83	4.95	4.35	3.40
LT Industry	153.70	160.54	179.85	195.61	197.86	204.68	184.53
HT/EHT Industry	1,327.84	1,379.41	1407.81	1,708.63	2031.44	2078.33	1,749.48
Public Lighting	8.80	7.43	7.89	9.48	8.26	6.32	5.53
Public Water Works	3.28	2.68	3.22	3.49	3.68	2.81	2.46
Temp. Supply	1.09	1.23	2.17	0.00	0.00	0.00	0.00
Total Sales	1,621.72	1,691.98	1,757.11	2,101.22	2,433.91	2,495.67	2,126.89

The sales for the FY 2021-22 have been projected based on six months actual sales for the period April, 2021 to September, 2021 on the basis of the past year CAGR for the different consumer categories. For projecting the sales for the MYT control period for the HT industrial category a CAGR of 4.75% has been considered. A six year CAGR has been considered for the domestic, commercial and LT industry. For the public lightning category a normalized CAGR of 2% has been considered. For the public water works a four year CAGR has been considered. For projecting the sales in the agriculture category a normalized CAGR of 8% has been considered. The table given below summarizes the projections of category wise increase in energy sales over the control period (FY 2022-23 to FY 2024-25).

Table 9: Projected energy sales during Control Period (FY 2022-23 to FY 2024-25)

Consumer Category	FY 21-22 RE	FY 22-23 Projected	FY 23-24 Projected	FY 24-25 Projected
Domestic	155.02	170.28	187.05	205.46
LIG/ Kutir Jyoti*	0.00	0.00	0.00	0.00
Commercial	50.16	50.96	51.76	52.58
Agriculture	3.54	3.83	4.13	4.47
LT Industry	210.30	217.00	223.91	231.04
HT/EHT Industry	2034.44	2131.00	2232.13	2338.07
Public Lighting	5.20	5.30	5.41	5.52
Public Water Works	2.60	2.63	2.66	2.70
Temp. Supply	0.00	0.00	0.00	0.00
Total Sales	2,461.28	2,581.00	2,707.05	2,839.82



Chapter 5: Power Purchase Plan**1 Power Purchase Quantum**

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).

The power availability for FY 2021-22 and the MYT Control Period has been estimated based on the revised allocation issued by the Western Region Power Committee (WRPC) vide No. WRPC/Comm-I/6/Alloc/2021/1048 dated 29.10.2021. The energy allocation from various generating stations is summarized in table below:

Table 10: Energy Allocation from Central Generating Stations

Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
NTPC Stations			
KSTPP	2,100	49	2.35%
KSTPP-III	500	6	1.19%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.93%
VSTPP- III	1,000	11	1.13%
VSTPP- IV	1,000	13	1.26%
VSTPS-V	500	8	1.64%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC)	500	70	14.00%
Sipat-I	1,980	25	1.28%
Sipat-II	1,000	10	1.00%
MSTPS-I	1,000	13	1.26%
MOUDA-II	1,320	17	1.30%
SOLAPUR	1320	26	1.97%
LARA	800	21	2.65%
GADARWARA	800	29	3.62%
KHTPP	1320	24	1.79%
Subtotal	18,714	407	
Eastern Region			
KHSTPP-II	1000	1.30	0.13%
Subtotal	1000	1.3	
NPCIL			
KAPPS	440	9	2.06%
TAPP 3&4	1080	12	1.16%
Subtotal	1520.00	22	
Others			
Ratnagiri	582	38	6.53%

Particulars	Plant Capacity MW	EDDD Allocation MW	Avg. EDDD Allocation (%)
Subtotal	582	38	
Grand Total	21,815.59	468	

Actual power purchase in first six months of FY 21-22 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 21-22.

The EDDD received 8.55 MUs of power from Ratnagiri Gas Power Plant during the first six months of FY 21-22. Further, it is expected that EDDD will be getting same power from Ratnagiri for the rest of the FY 2021-22 and therefore 17.10 MUs have been considered from the plant for the FY 2021-22.

For projecting the power availability for MYT Control Period, EDDD has considered average allocation of firm and infirm power from the western region generation stations (NTPC and NPCIL) of Western Regional Power Committee. For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account.

Additionally, EDDD has 70 MW allocations from NSPCL Bhilai power stations. Energy availability from NSPCL Bhilai power stations for MYT Control Period has been considered by taking 70 MW allocation from the plant.

Power purchase quantum from the NTPC stations of the current year and MYT Control Period 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.

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.

Auxiliary consumption of 7.75% and 2.50% has been considered for estimating the net generation from coal and gas based generating stations respectively.

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.

The total installed solar capacity in the UT of Daman and Diu is 14.363 MW out of which 10 MW is ground mounted and the remaining 4.363 MW is solar rooftop plants. Additionally, 27 MW of rooftop solar plant has been added to the existing capacity during the 2020-21. Further, the EDDD will also procure 50 MUs of solar power form the open market. Hence, EDDD will procure 93.65 MUs from solar plants during the FY 2021-22 and 98.40 MUs during the MYT Control Period. The remaining solar RPO obligation will be fulfilled by procuring renewable energy certificates. For meeting the non-solar RPOs the EDDD will procure 30 MUs non-solar energy from the open market



and the remaining RPO obligation shall be met by purchasing renewable energy certificates during the FY 2021-22 and the MYT Control Period. A summary of the Renewable Purchase Obligation (RPO) to be met by the EDDD during the FY 2021-22 and the MYT Control Period is given in the table below:

Table 11: Summary of renewable Purchase Obligation for the MYT Control Period

Description	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Sales within State (MU)	2,461.28	2,581.00	2,707.05	2,839.82
RPO obligation (%)	17.00%	17.00%	17.00%	17.00%
Solar	8.00%	8.00%	8.00%	8.00%
Non-Solar	9.00%	9.00%	9.00%	9.00%
RPO obligation for the year (MU)	418.42	438.77	460.20	482.77
Solar	93.65	206.48	216.56	227.19
Non-Solar	221.51	232.29	243.63	255.58
RPO Compliance (Procurement and own generation)	123.65	128.40	128.40	128.40
Solar	93.65	98.40	98.40	98.40
Non-Solar	30.00	30.00	30.00	30.00
RPO Compliance (REC certificate purchase)	294.77	310.37	331.80	354.37
Solar	103.25	108.08	118.16	128.79
Non-Solar	191.51	202.29	213.63	225.58

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 2021-22 and the MYT Control Period.

Table 12 below depicts the station wise power purchase for FY 2021-22 and the MYT Control Period.

Table 12: Power Purchase Quantum

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
(MU)				
NTPC Stations				
KSTPP	364.33	355.52	355.52	355.52
KSTPP-III	44.16	42.82	42.82	42.82
VSTPP-I	91.38	88.35	88.35	88.35
VSTPP-II	61.37	62.22	62.22	62.22
VSTPP- III	74.18	75.64	75.64	75.64
VSTPP- IV	91.34	84.56	84.56	84.56
VSTPS-V	59.33	55.16	55.16	55.16
KAWAS	43.23	82.19	82.19	82.19
JGPP	55.81	96.46	96.46	96.46
Sipat-I	178.64	179.59	179.59	179.59
Sipat-II	74.87	70.97	70.97	70.97
MSTPS-I	61.32	42.79	42.79	42.79

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
MOUDA-II	63.25	58.06	58.06	58.06
KHSTPP-II	11.01	8.09	8.09	8.09
SOLAPUR	97.04	128.34	128.34	128.34
LARA	145.46	143.39	143.39	143.39
GADARWARA	162.69	196.34	196.34	196.34
KHTPP	114.63	160.22	160.22	160.22
Subtotal	1794.04	1930.68	1930.68	1930.68
NTPC Bhilai				
Bhilai Unit-I &II(NTPC)	480.62	469.51	469.51	469.51
Subtotal	480.62	469.51	469.51	469.51
NPCIL				
KAPPS	50.60	51.41	51.41	51.41
TAPP 3&4	86.34	78.79	78.79	78.79
Subtotal	136.94	130.20	130.20	130.20
Others				
Ratnagiri	17.10	17.10	17.10	17.10
Subtotal	17.10	17.10	17.10	17.10
Power purchase from Other Sources				
Power purchase from Indian E. Exchange	235.64	288.00	419.00	558.00
UI	46.39	0.00	0.00	0.00
Solar	11.25	16.00	16.00	16.00
Non Solar (Hydro)	0.00	0.00	0.00	0.00
Solar REC	0.00	0.00	0.00	0.00
Non Solar REC	0.00	0.00	0.00	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00
Subtotal	293.27	304.00	435.00	574.00
Gross Power Purchase	2721.97	2851.50	2982.50	3121.50
External Losses				
Total Power Purchase	2721.97	2851.50	2982.50	3121.50

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

2 Power Purchase Cost

1. The cost of purchase from the central generating stations for FY 2021-22 and the MYT Control Period has been estimated based on the following assumptions:

- Fixed cost for NTPC for the MYT Control Period has been projected by considering the fixed cost estimated for the various stations for the FY 2021-22.
- Variable cost for each NTPC generating stations for the MYT Control Period has been projected at the same rate as received during the first six months of FY 2021-22.



- 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 2021-22 for projecting the power purchase cost for the MYT Control Period.
- The average power purchase cost for procurement of power from the energy exchange has been considered at Rs. 2.50/unit.

2. The Total Power Purchase cost from various sources for the FY 2021-22 and the MYT Control Period is summarized in the Table below:

Table 13: Power Purchase Cost

(Rs. Cr.)

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
NTPC Stations				
KSTPP	81.81	78.45	78.45	78.45
KSTPP-III	12.35	12.22	12.22	12.22
VSTPP-I	24.65	23.06	23.06	23.06
VSTPP-II	14.28	14.42	14.42	14.42
VSTPP- III	19.32	19.76	19.76	19.76
VSTPP- IV	28.89	27.77	27.77	27.77
VSTPS-V	19.65	19.04	19.04	19.04
KAWAS	28.46	35.78	35.78	35.78
JGPP	34.23	42.22	42.22	42.22
Sipat-I	52.20	52.63	52.63	52.63
Sipat-II	21.49	20.91	20.91	20.91
MSTPS-I	35.65	29.58	29.58	29.58
MOUDA-II	38.88	36.52	36.52	36.52
KHSTPP-II	4.02	3.35	3.35	3.35
SOLAPUR	65.51	76.09	76.09	76.09
LARA	58.79	58.44	58.44	58.44
GADARWARA	89.60	99.74	99.74	99.74
KHTPP	60.07	73.79	73.79	73.79
Subtotal	689.83	723.76	723.76	723.76
NTPC Bhilai				
Bhilai Unit-I &II(NTPC)	207.40	204.27	204.27	204.27
Subtotal	207.40	204.27	204.27	204.27
NPCIL				
KAPPS	11.74	11.93	11.93	11.93
TAPP 3&4	29.13	26.59	26.59	26.59
Subtotal	40.88	38.52	38.52	38.52
Others				
Ratnagiri	19.71	23.70	23.70	23.70
Subtotal	19.71	23.70	23.70	23.70
Power purchase from Other Sources				
Power purchase from Indian E. Exchange	65.81	57.60	104.75	139.50
UI	16.05	0.00	0.00	0.00

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Solar	0.00	0.00	0.00	0.00
Non Solar (Hydro)	0.00	0.00	0.00	0.00
Solar REC	0.00	0.00	0.00	0.00
Non Solar REC	0.00	0.00	0.00	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00
Subtotal	81.85	57.60	104.75	139.50
Gross Power Purchase	1039.68	1047.85	1095.00	1129.75
External Losses				
Total Power Purchase	1039.68	1047.85	1095.00	1129.75

3 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 21-22 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 2021-22. 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 MYT Control Period, the transmission charges estimated FY 21-22 have been considered. 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 14: Total Power Purchase Cost for the Control Period

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Total Power Purchase	1039.68	1047.85	1095.00	1129.75
PGCIL CHARGES	174.48	174.48	174.48	174.48
WRLDC	0.26	0.26	0.26	0.26
MSTCL	3.50	3.50	3.50	3.50
Grand Total of Charges - Net	1217.92	1226.10	1273.25	1308.00

(Rs.Cr.)



Chapter 6: T&D Loss Trajectory and Energy Balance

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

EDDD has achieved Distribution loss level of 4.48% for the FY 2020-21. 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 6.50% for the FY 2021-22 in the Tariff Order dated 23rd March, 2021. The EDDD has kept the same distribution loss level as approved by the Hon'ble Commission for the FY 2021-22. The approved and the projected Distribution Loss for the FY 2021-22 and the MYT Control period is as given in the table below:

Table 15: Proposed T&D Loss Trajectory

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25
	RE	Projected	Projected	Projected
Distribution Loss	6.50%	6.40%	6.30%	6.20%

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 16: Energy Balance

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
	RE	Projection	Projection	Projection
Retail Sales (a)	2,461.28	2,581.00	2,707.05	2,839.82
Open Access Sales (b)	0.00	0.00	0.00	0.00
Less: Energy Savings (c)	0.00	0.00	0.00	0.00
Total Sales (d=a+b-c)	2,461.28	2,581.00	2,707.05	2,839.82
Distribution Loss (MU) (e=g-d)	171.10	176.48	182.01	187.71
Distribution Loss (%) (f=e/g)	6.50%	6.40%	6.30%	6.20%
Energy Required at Periphery (g)	2632.38	2757.48	2889.07	3027.53
Sale to common pool consumer/UI Sale(h)	0.70	0.78	0.19	0.73
Own generation (i)	11.25	16.00	16.00	16.00
Total energy requirement at state periphery(j=g+h-i)	2621.83	2742.26	2873.26	3012.26
Less: Energy Purchased through UI at Periphery (k)	46.39	0.00	0.00	0.00
Less: Open Access Purchase at Periphery (l)	0.00	0.00	0.00	0.00
Less: Energy Purchased through Renewable Sources (m)	0.00	0.00	0.00	0.00
Less: Energy Purchased through IEX (n)	235.64	288.00	419.00	558.00
Energy requirement at state periphery from tied up sources (o=j-k-l-m-n)	2339.81	2454.26	2454.26	2454.26
Inter state loss (MU) (p=q-o)	88.89	93.24	93.24	93.24
Inter state loss (%)	3.66%	3.66%	3.66%	3.66%



Particulars	FY 2021-22 RE	FY 2022-23 Projection	FY 2023-24 Projection	FY 2024-25 Projection
Energy requirement at state periphery from generator end (q)	2428.70	2547.50	2547.50	2547.50
Total Energy requirement from tied up sources, UI and renewable sources at generator end (r=i+k+m+n)	2721.97	2851.50	2982.50	3121.50
Total Energy requirement in ut including Open Access (r=q+l)	2721.97	2851.50	2982.50	3121.50



Chapter 7: Capital Investment Plan**1 Capital Investment plan of EDDD**

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.

Based upon the above mandate the CAPEX Plan proposals (scheme wise) for FY 22-23 to FY 24-25 under the MYT Control Period FY 2022-25 have been formulated by EDDD in order to effect better planning, budgeting and monitoring at macro & micro levels.

A. Detailed Schemes**Table 17: Capital Expenditure Schemes proposed during MYT Control Period**

(Rs. Crore)

Sr.No.	Name of Scheme	Total Scheme Amount	Proposed Expenditure		
			2022-23	2023-24	2024-25
1	Scheme for establishment of 2x100 MVA, 220/66 KV GIS Sub-station at Dabhel, Daman alongwith associated 220 KV multicircuit Magarwada-Dabhel transmission line via Kachigam	49.60	0.00	0.00	20.00
2	Scheme for establishment of 66/11 KV, 2x20 MVA GIS Sub-station alongwith associated line at Dabhel, Daman	31.52	10.00	10.00	11.52
3	Scheme for establishment of 66/11 KV GIS Sub-station at Bhimpore, Daman	32.58	16.00	16.58	0.00
4	Establishment of new hybrid bays at Dalwada Sub-station (2 Nos.) and Zari Sub-station (2 Nos.), Daman	3.19	3.19	0.00	0.00
5	Scheme for inter connection of 66 KV line from Zari Sub-station to Eurocoustic and replacement of Panther conductor from Kachigam Sub-station to EPL	6.36	6.36	0.00	0.00



Sr.No.	Name of Scheme	Proposed Expenditure			
		Total Scheme Amount	2022-23	2023-24	2024-25
6	Scheme for shifting and commissioning of newly procured/existing equipment in the newly constructed control room building near existing 66 KV Sub station at Dalwada and Dabhel Sub station	14.00	7.00	7.00	0.00
	Total	137.25	42.55	33.58	31.52

- Name of Scheme: Scheme for establishment of 2x100 MVA, 220/66 KV GIS Sub-station at Dabhel, Daman alongwith associated 220 KV multicircuit Magarwada-Dabhel transmission line via Kachigam**

Cost Rs.4960.00 Lakh.

Objective of the Scheme:

The scheme will provide third 220 KV power source to the UT of Daman and will improve the voltage regulation of the electrical system and reduce the line losses by ensuring extra High voltage transmission of lines. It will improve power supply and will ensure stand by feeding arrangement in case major breakdown on 220 KV Magarwada S/s or 220 KV Ringanwada S/s, Dabhel S/s will be connected to CTU networks.

Salient Features:

At present Dabhel Substation is connected with 220/66 kV Magarwada Substation through double circuit 66 KV line via 66 kV Kachigam line and present load on this circuit is 212 MW. This demand cannot be catered from existing system. Therefore Department has proposed to establish 220/66 KV, 2x100 MVA Substation at Dabhel and same Substation will be connected to Magarwada 400/220 KV Substation (PGCIL). By implementing this scheme Daman district will be connected to CTU system and reliability of Power supply will be increased and line losses can be reduced.

Hence the scheme is very essential on financial as well as technical point of view.

- Name of Scheme: Scheme for establishment of 66/11 KV, 2x20 MVA GIS Sub-station alongwith associated line at Dabhel, Daman.**

Cost Rs.3152.00 Lakh.

Objective of the Scheme:



The scheme provides for erection of 66 KV line and 66/11 KV, 2x20 MVA GIS S/S along with all associated equipments at Dabhel area in order to share the enhanced loading of Dabhel existing 66/11 KV S/S and to meet future load growth to improve regulation.

Salient Features:

The 66 kV Dabel S/s is presently fed from 66 kV Magarwada Dabel vis Kachigam line. Being a lengthy 66 kV feeder the losses are on a higher side. In order to lower the losses and provide a stable and reliable power to the industries and residential consumers at Dabhel it is proposed to establish the 66/11 KV 2x20 MVA GIS S/S. Also, at present in Daman all the 07 Nos. S/S's at Kachigam, Dalwada, Dabhel, Varkund Ringanwada, Magarwada and Bhimpore are loaded up to their optimum capacity. As Daman is a small UT with limited financial and technical sanction powers, it is generally not proper to load the S/S by more than 80% capacity and also always some spare capacity has to be maintained to avoid heavy load shedding in the eventuality of outage of any power transformers.

Considering the present load growth it is expected that the Maximum demand of Daman area could be around 400 MWs at the end of 12th Five Year Plan. Keeping in view of the loading of existing S/S and future load, it is essential to establish a new 66/11 KV GIS S/S at Dabhel, Daman to cope up with the forth coming loading of this area.

At this present condition major industries are connected with existing Dabhel S/S therefore it has been loaded more than 80% and therefore it is very hard to cope up with this load and since the substation is old there is no new space for expansion. After commissioning of this S/S some loads from existing Dabhel S/S can be shifted to this new 2 X 20 MVA GIS S/S which will help in reducing load in existing substation and same will also help in increase reliability of power.

Hence it is proposed to establish new 66/11 KV, 2x20 MVA GIS S/S at Dabhel, Daman to cater the future load in the said areas during the Control Period and to earn more revenue to the Department by sale of more power to Industrial as well as other category of consumers.

3. Name of Scheme: Scheme for establishment of 66/11 KV GIS Sub-station at Panchal Industrial Area, Bhimpore, Daman.

Cost Rs.3258.00 Lakh.

Objective of the Scheme:

The scheme provides for erection of 66 KV line and 66/11 KV GIS S/S along with all associated equipments at Bhimpore area in order to share the enhanced loading of existing 66/11 KV S/S and to meet future load growth to improve regulation. The technical sanction for the scheme has been obtained from CEA.

Salient Features:

The present demand of Panchal industrial area is about 8.25 MW which is being met by existing 66/11 KV Bhimpore S/s. this maximum demand of Panchal area is expected to increase to about 27 MW by FY 2021-22. As Bhimpore S/s is about 3 km away from the industrial area and also there is no



space for further augmentation of Bhimpore S/s, it is proposed to establish new 2X20 MVA, 66/11 KV S/s at load centre at Panchal to meet the expected demand in the area.

4. Name of Scheme: Establishment of new hybrid bays at Dalwada Sub-station (2 Nos.) and Zari Sub-station (2 Nos.), Daman

Cost Rs.319.00 Lakh.

Objective of the Scheme:

The scheme provides establishing new hybrid bay in 66/11 KV Substations at Dalwada Sub-station (2 Nos.) and Zari Sub-station (2 Nos.), Daman.

Salient Features:

The existing 66/11 KV substations at Dalwada Sub-station (2 Nos.) and Zari Sub-station (2 Nos.), Daman are heavily loaded (almost 70 %) then its capacity and load is increasing day by day so to cope up with existing demand new transformers as well as bays has to be installed which requires extra space which is not available in the substation therefore department is going to adopt new technology i.e. hybrid bay system, as its occupy half the space of current installed bay and provide better efficiency and less maintenance then current system.

It's costing will be 20 % higher than existing bays but keeping in mind less space consumption and low maintenance cost the overall cost is justified.

5. Name of Scheme: Scheme for inter connection of 66 KV line from Zari Sub-station to Eurocaustic and replacement of Panther conductor from Kachigam Sub-station to EPL.

Cost Rs.636.00 Lakh.

Objective of the Scheme:

Scheme for inter connection of 66 KV line from Zari SS to Eurocaustic and replacement of Panther conductor from Kachigam S/S to EPL.

Salient Features:

Presently the entire load of Eurocaustic is fed from 66/11 KV Kachigam S/s. also, the load of Dabhel S/s is fed through 66 KV Magarwada-Kachigam line resulting in oberloading of the line. Considering the future industrial growth and to make supply reliable thereby relaxing the loading of 66 KV MAgarwada – Kachigam line it is proposed to erect 66 KV D/c line from Zari Sub-station to Eurocaustic and replacement of Panther conductor from Kachigam Sub-station to Eurocaustic.

This will reduce the load of existing substation and at same time will increase the efficiency of power transfer.



6. **Name of Scheme: Scheme for construction of new control room building, shifting and commissioning of existing/new equipment at 66 KV Sub station at Dalwada and Dabhel, Daman.**

Cost Rs.1400.00 Lakh.

Objective of the Scheme:

The existing 66/11 KV S/s at Dalwada was commissioned in the 1991 and the 66/11 KV S/s at Dabhel was commissioned in 1996. The building is very old and there is water leakage in the building during rainy season. Hence, it is proposed to construct a new control room.

2 Proposed Capitalization

The proposed capitalization schedule for the MYT Control Period is provided in the table given below:

Table 18: Capital Expenditure Schemes proposed during MYT Control Period

(Rs. Crore)

Sr.No.	Particulars	Total Scheme Amount	Proposed Expenditure		
			2022-23 (Projected)	2023-24 (Projected)	2024-25 (Projected)
1	Capital Expenditure	137.25	42.55	33.58	31.52
2	Capitalization	87.65	23.55	32.58	31.52

3. Proposed Trajectory of Availability of Wheeling Business (wires availability) and Supply Business (supply availability):-

The proposed trajectory of availability of Wheeling Business (wires availability) and Supply Business (supply availability) will be submitted along with the Tariff Petition for the MYT Control Period.