

**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, Transmission Division,
Dadra and Nagar Haveli,
UT of Dadra and Nagar Haveli and Daman and Diu**

TABLE OF CONTENTS

LIST OF ABBREVIATIONS 4

CHAPTER 1: INTRODUCTION 6

1 BACKGROUND 6

2 OBJECTIVE OF BUSINESS PLAN 6

CHAPTER 2: ABOUT THE ELECTRICITY DEPARTMENT, TRANSMISSION DIVISION . 8

1 MISSION OF ELECTRICITY DEPARTMENT, TRANSMISSION DIVISION 8

2 AREA SERVED 8

3 EXISTING TRANSMISSION SYSTEM OF ELECTRICITY DEPARTMENT, TRANSMISSION DIVISION 9

4 ORGANIZATION STRUCTURE: ROLES AND RESPONSIBILITIES 10

5 IT INITIATIVES 11

6 PHYSICAL ACHIEVEMENTS DURING THE PAST YEARS 11

CHAPTER 3: SWOT ANALYSIS..... 12

CHAPTER 4: DEMAND – SUPPLY PROJECTIONS..... 15

1 DEMAND FORECAST 15

2 POWER PURCHASE QUANTUM..... 15

CHAPTER 5: TRANSMISSION LOSS TRAJECTORY 18

CHAPTER 6: CAPITAL INVESTMENT PLAN..... 19

1 CAPITAL INVESTMENT PLAN OF ED-DNH 19

LIST OF TABLES

TABLE 1: STATUS OF TRANSMISSION ASSETS – DC KMS 9
TABLE 2: DETAILS OF EXISTING SUBSTATIONS..... 9
TABLE 3: PROJECTED ENERGY SALES DURING CONTROL PERIOD (FY 2022-23 TO FY 2024-25) 15
TABLE 4: ENERGY ALLOCATION FROM CENTRAL GENERATING STATIONS 15
TABLE 5: POWER PURCHASE QUANTUM..... 16
TABLE 6: PROPOSED T&D LOSS TRAJECTORY..... 18
TABLE 7: NEW SCHEMES 19
TABLE 8: CAPITALIZATION SCHEDULE 21

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.	GoI	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)
41.	MVA	Mega Volt Ampere

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Sr. No	Abbreviations	Descriptions
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**

Dadra and Nagar Haveli is a district in the UT of Dadra and Nagar Haveli and Daman and Diu, situated in the western part of the country and is surrounded by the states of Maharashtra in the south and Gujarat in the north. The total area of territory is 491 sq. kms. There are 72 villages and the capital of territory is Silvassa. The total population as per 2011 census is 3,42,853.

This territory is having 62% tribal population and has wide range of untapped natural resources. The climate of this territory is medium and temperature range is between 25° to 40° C. The monsoon season ranges from June to Oct., winter season ranges from November to February and summer season from March to May.

There are many tourists' places in this territory. At the same time this is a highly developed industrial area. The liberalized policies of central government has benefited very much in all round development of territory.

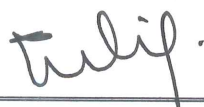
The power demand of this territory is met from the central sector Generating Stations of Western Region as there is no power generation in this territory. After liberation the power was fed to this territory through 11 KV feeder of GEB and the demand was up to 500 KVA. Now due to rapid development of the territory the demand of power increased tremendously. The present peak demand is 885 MW. Due to rapid industrialization, the power demand is increasing day by day. Dadra and Nagar Haveli has already achieved the goal of 100 % electrification by providing electricity to all the villages of the territory.

The share of power generated by Central Sector Stations is transmitted to load centers in the UT of Dadra and Nagar Haveli through an extensive network of 400KV and 220KV transmission lines and substations. The major functions of ED-DNH are:

1. Ensure reliable supply energy to DNHPDCL which in turn supplies power to the end consumers across the state.
2. Development of transmission network to meet the growing needs of the DNHPDCL.
3. Provide short term open access depending upon the margins in the existing facilities.
4. Functioning of SLDC

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



5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

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 Transmission 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 projections for load growth in the transmission network, capital investment plan, capital structure and performance targets before the Hon'ble Commission as part of the Tariff Filing before the beginning of the Control Period.

Accordingly, the ED-DNH 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 4 years.

ED-DNH has prepared the Business Plan taking cognizance of the existing internal factors and external business environment affecting the business. ED-DNH 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.

Prady.

Chapter 2: About the Electricity Department, Transmission Division

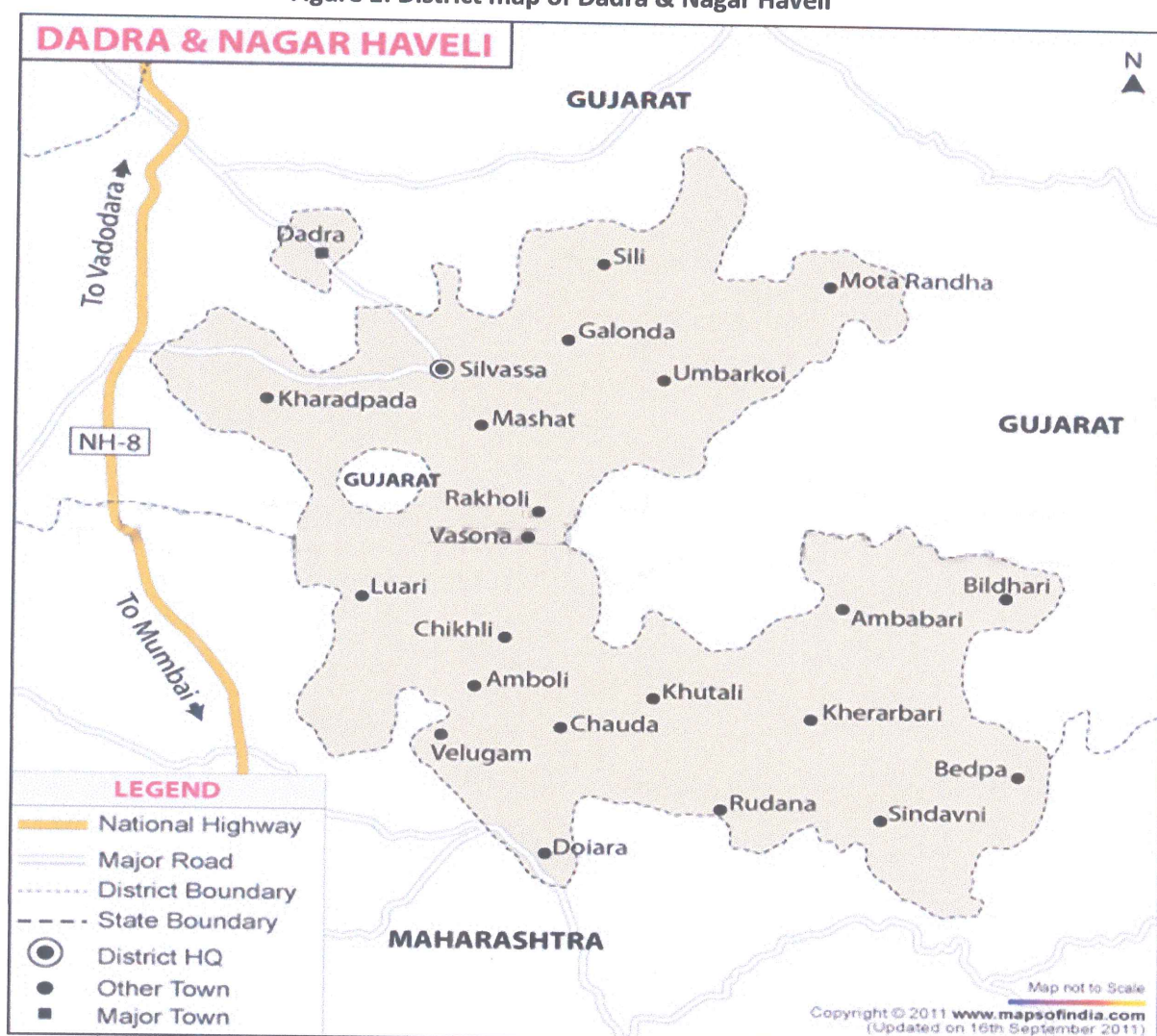
1 Mission of Electricity Department, Transmission Division

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

2 Area Served

Dadra & Nagar Haveli District comprises of an area of 491 sq. Kms.

Figure 1: District map of Dadra & Nagar Haveli



Handwritten signature

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

3 Existing Transmission System of Electricity Department, Transmission Division

Key assets of Electricity Department, Transmission Division include the transmission lines and substations. The total length of the transmission assets as on March 31, 2021 was 38.18 DC Kilo meters (DC Kms). The EHV lines in DC km existing at end of FY 2020-21 and their growth are shown in the table below:

Table 1: Status of Transmission Assets – DC kms

ASSETS	UNITS	FY 2020-21
EHT		
220 KV lines	DC kms	38.18

The details of existing substations of the Electricity Department, Transmission Division are as given below:

Table 2: Details of Existing Substations

SR. NO.	SUB-STATION	CAPACITY	TOTAL
1	400 KV Ambheti-Vapi Sub-Station (CTU-Power Grid)	3 x 315 MVA	945 MVA
2	400 KV Kala Sub-Station (CTU-Power Grid)	2 x 315 + 1X500 MVA	1130 MVA
3	220 KV Kharadpada Sub-Station	2 x 100 + 2 x 160 MVA	520 MVA
4	220 KV Khadoli Sub-Station	3 x 160 MVA	480 MVA
5	220 /66 KV Vaghchipa Sub-Station	2X160 MVA	320 MVA
6	220KV Switching Stations at Sayli, New Kharadpada and Bhilosa.	03 Nos	
	TOTAL Capacity (220KV Level)		1320 MVA

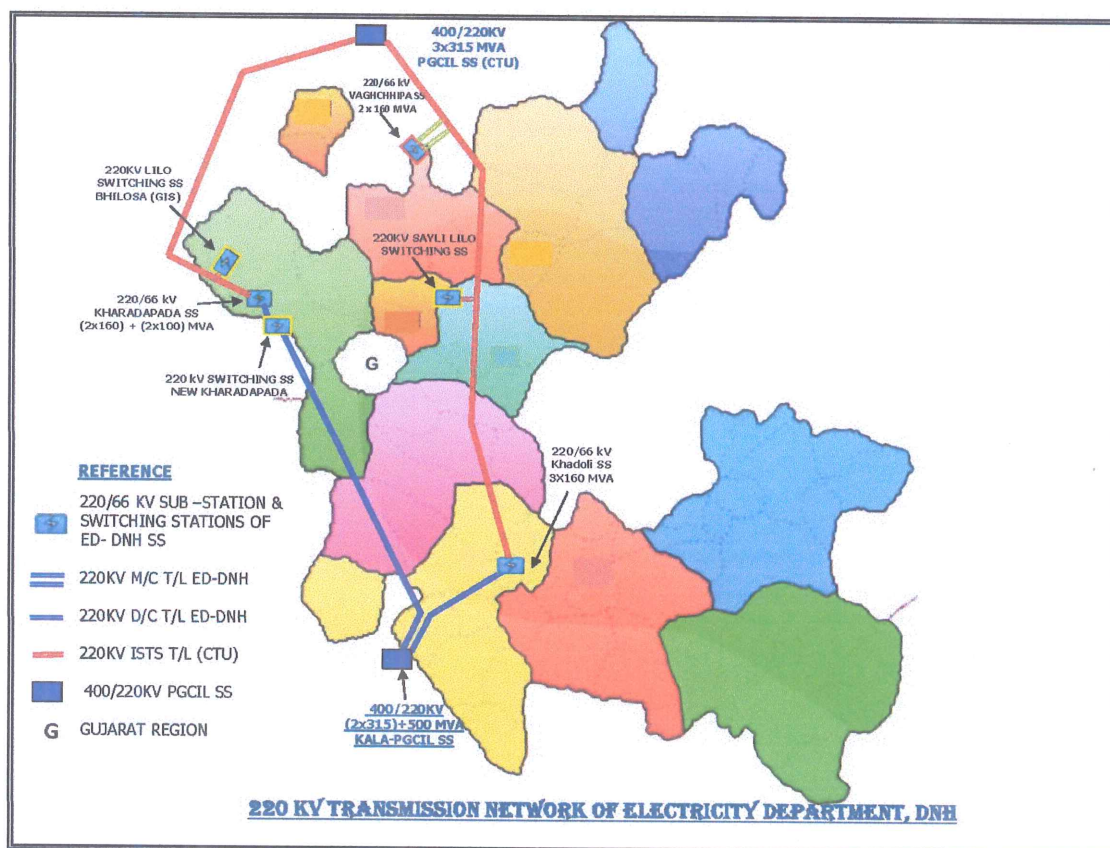
Further, the capacity of 220/66 KV Vaghchipa Substation was added to the network during the FY 2019-20 i.e. 2X160 MVA.

The present the transmission system of Electricity Department, Transmission Division consists of 38.18 DC km of 220 kV double circuit (D/C) lines.

At present, the UT of Dadra & Nagar Haveli gets power from 400/220 kV PGCIL Vapi and 400/220 kV Kala substation of PGCIL.

Handwritten signature

Figure 1: 220/66kV Transmission Network of DNH



4 Organization Structure: Roles and Responsibilities

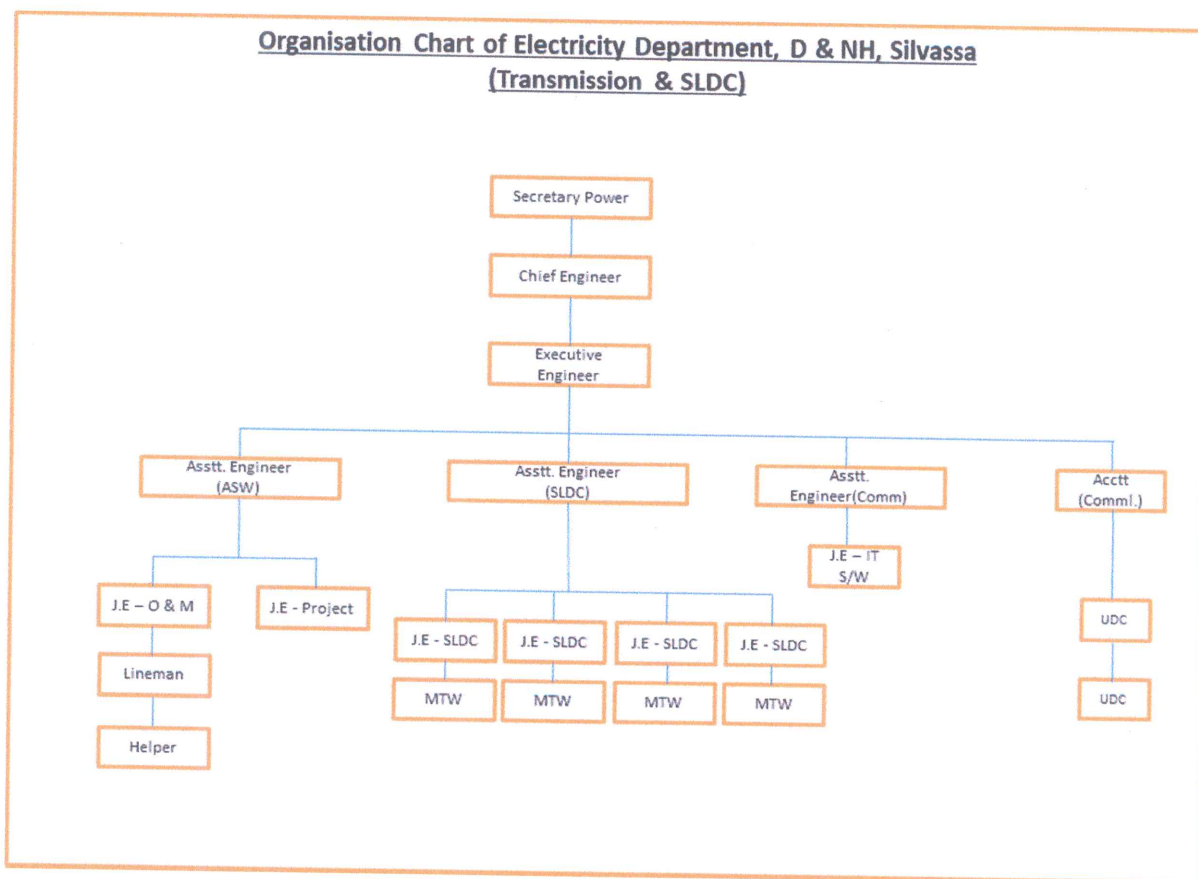
Electricity Department, Transmission Division is part of the Administration of Union Territory of Dadra & Nagar Haveli & headed by the Secretary (Power). Day to day work related to functioning of the Department is looked by the Executive Engineer (Elect.) at Division level.

There are three Assistant Engineers under the Executive Engineers heading three sub-divisions i.e. 1) ASW 2) SLDC and 3) Commercial. Further, the accounts division is headed by the Accountant.

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

Handwritten signature

Figure 2: Organisation structure of Dadra & Nagar Haveli Electricity Dept.



5 IT Initiatives

Electricity Department, D & NH is in process to upgrade the below mentioned existing 220 kV Sub-Stations in to SCADA operative sub-station.

1. Upgradation and modernization of existing 220/66 kV Kharadpada Sub-Station by providing SCADA system
2. Upgradation and modernization of existing 220 kV New Kharadpada switching Station by providing SCADA system.

6 Physical achievements during the past years

1. The capacity of 220/66 KV Vaghchiba Substation was added to the network during the FY 2019-20 i.e. 2X160 MVA.

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 ED-DNH 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 ED-DNH. 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"> ✓ Small Area ✓ Low cost of Power ✓ High level of Electrification ✓ 24X7 Reliable Power Supply ✓ Low T&D Losses 	WEAKNESS <ul style="list-style-type: none"> ✓ Lower growth in industrial demand
External Attributes of the Environment	OPPORTUNITIES <ul style="list-style-type: none"> ✓ Modernization of the utilities and infrastructure 	THREATS <ul style="list-style-type: none"> ✓ Dependent on Power Sources from out side ✓ High share of unallocated quota ✓ Fate of Industries with respect to Industries Policy and Planning

Tulip

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Strengths:

- **Small Area:** The area served by the ED-DNH is small hence, it is easy to manage the operations and supply quality power to the consumers of the UT of Dadra and Nagar Haveli.
- **Low cost of Power:** The cost of power purchase is low as most of the power is purchased through long term sources of power and dependency on short term sources is very less.
- **High Level of Electrification:** The level of electrification in the UT of Dadra and Nagar Haveli is very high and as a result the Electricity Department is able to serve reliable and quality power to its consumers.
- **24X7 reliable Power Supply:** The Electricity Department supplies 24X7 reliable power to all its consumers which has resulted in the economic and social development of the UT of Dadra and Nagar Haveli.
- **Low T&D Losses:** The Transmission and distribution losses of the territory are one of the lowest in the country.

Weakness:

- **Lower growth in Industrial Demand:** The industrial growth in the recent past has been quite low due to various economic factors which has also led to low growth in the demand for electricity.

Opportunity:

- **Modernization of the utilities and Infrastructure:** As the electrical network is getting modernized the quality and reliability of power will improve further in the future.

Threats

- **Dependent on power Sources from outside:** The own generation of the UT of Dadra and Nagar Haveli is limited to the upcoming solar plants. The Discom 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 the Discom, the department has to resort to costly short term power purchase to supply uninterrupted power supply to the industries.
- **High share of unallocated quota:** The UT of Dadra and Nagar Haveli has a high share of unallocated quota due to which there is a uncertainty regarding the supply of power the Central Generating Stations which are the major source of procurement of power for the utility.
- **Fate of Industries with respect to Industries Policy and Planning:** The largest consumer category of the UT of Dadra and Nagar Haveli is the industrial category and hence the growth of the electricity department is also dependent on the growth of the industrial category. The functioning of the Industrial category is dependent upon the Industries Policy

July

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

and Planning and hence any change in industrial policy and planning will directly affect the growth of the electricity department in the UT of Dadra and Nagar Haveli.

July

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Chapter 4: Demand – Supply Projections**1 Demand Forecast**

ED-DNH presently has only one long term open access consumer i.e. the DNHPDCL. The DNHPDCL distributes electricity to all the consumers of the UT of Dadra and Nagar Haveli. Further, based on the actual sales made to the various consumer categories of the UT of Dadra and Nagar Haveli the projected sales during the MYT Control Period FY 2022-23 to FY 2024-25 is given below:

Table 3: Projected energy sales during Control Period (FY 2022-23 to FY 2024-25)

Sales	(MU)			
	FY 21-22	FY 22-23	FY 23-24	FY 24-25
	RE	Projected	Projected	Projected
Total Sales	6588.80	6809.35	7037.92	7274.84

2 Power Purchase Quantum

Dadra & Nagar Haveli has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), and NTPC Sail Power Company Ltd (NSPCL).

The power availability for 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 4: Energy Allocation from Central Generating Stations

Name of the plant	(MW)		
	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	54.32	0.00	54.32
KSTPS -3	20.48	2.20	22.68
VSTPP-I	38.41	5.00	43.41
VSTPP-II	29.52	4.00	33.52
VSTPP- III	29.52	6.00	35.52
VSTPP- IV	40.97	5.55	46.52
KAWAS	56.23	25.00	81.23
GGPP	56.74	2.00	58.74
Sipat – I	81.12	9.00	90.12
Sipat – II	28.11	4.00	32.11
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	0.00	0.00	0.00
VSTPP-V	20.48	5.55	26.03
Mauda II	54.08	8.60	62.68

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
Solapur	54.08	21.57	75.65
Gadarwara	65.55	20.83	86.38
LARA	64.97	10.46	75.43
Kharagaon	54.08	16.83	70.91
NPCIL – KAPS	14.37	2.00	16.37
NPCIL - TAPP 3&4	35.22	7.00	42.22
Total	801.77	155.59	957.36
NSPCL Bhilai		100	100.00

It is expected that DNHPDCL will not be getting any power from Ratnagiri for FY 2021-22 and the MYT Control Period and therefore no power purchase from the plant has been considered.

Power purchase quantum from the NTPC stations for the MYT Control Period has been calculated based on the installed capacity of each plant and by applying the PLF approved by the Hon'ble Commission vide. Order for the Business Plan dated 5th November, 2018.

Auxiliary consumption of 9% and 3% has been considered for coal and gas based generating stations, respectively.

DNHPDCL has already installed 4.585 MW of solar plants in its territory for generation of solar energy out of which 4.1 MW is ground mounted and 485 KW is solar rooftop. Hence, generation from these solar plants has been considered for the FY 2021-22 and the MYT Control Period.

For computing the power availability at the periphery, 3.66% external transmission losses have been applied on the gross power purchase for the MYT Control Period.

Table 5 below depicts the station wise power purchase for FY 21-22 and FY 2022-23 to FY 2024-25.

Table 5: Power Purchase Quantum

Source	(MU)			
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
NTPC Stations				
KSTPS	400.54	390.64	390.64	390.64
KSTPS 3	169.11	164.98	164.98	164.98
VSTPP-I	307.55	301.71	301.71	301.71
VSTPP-II	224.82	230.26	230.26	230.26
VSTPP- III	237.95	246.87	246.87	246.87
VSTPP- IV	342.56	323.28	323.28	323.28
KGPP	143.58	277.51	277.51	277.51
GGPP	118.86	210.72	210.72	210.72
Sipat-I	644.64	655.42	655.42	655.42

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Source	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Sipat-II	243.51	233.52	233.52	233.52
Mauda	0.00	0.01	0.01	0.01
VSTPS-V	191.30	180.93	180.93	180.93
Mauda 2	288.56	243.14	243.14	243.14
Solapur	312.80	366.82	366.82	366.82
LARA	520.92	511.07	511.07	511.07
Gadarwara	502.96	585.30	585.30	585.30
Kharagaon	375.64	480.50	480.50	480.50
KHSTPP-II	21.67	22.06	22.06	22.06
Subtotal - NTPC	5047.00	5424.73	5424.73	5424.73
NSPCL - Bhilai	709.28	703.06	703.06	703.06
NPCIL				
KAPS	84.23	93.46	93.46	93.46
TAPS	292.53	267.79	267.79	267.79
Subtotal	376.76	361.25	361.25	361.25
Power purchase from Other Sources				
Indian E. Exchange/Bilateral	931.83	841.00	1076.00	1321.00
UI	28.99	0.00	0.00	0.00
Solar	5.91	5.91	5.91	5.91
Non Solar	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
Subtotal	966.72	846.91	1081.91	1326.91
Rebate				
Total Power Purchase	7099.76	7335.94	7570.94	7815.94
External Losses				
Availability at ED-DNH Periphery	7099.76	7335.94	7570.94	7815.94

Chapter 5: Transmission Loss Trajectory

The ED-DNH has achieved a significant reduction in transmission losses. The ED-DNH would like to submit that the system improvement works executed every year under the plan schemes as well as increase in energy sales quantum at higher voltages has resulted in the reduction of Transmission losses.

The transmission loss reduction trajectory for the Control Period is as given in the table below:

Table 6: Proposed T&D Loss Trajectory

Sr. No	From Substation-To Substation	2022-23	2023-24	2024-25
1	220 KV New K'pada-K'pada CKT-1	0.75	0.65	0.6
2	220 KV New K'pada-K'pada CKT-2	0.52	0.5	0.49
3	400 KV Kala- 220 KV Khadoli CKT-1	1.4	1.2	1.1
4	400 KV Kala- 220 KV Khadoli CKT-2	0.3	0.3	0.2
5	220 KV Sayli – Khadoli	0.2	0.14	0.1
6	400 KV Kala-220 New K'pada CKT-1	0.7	0.6	0.55
7	400 KV Kala-220 New K'pada CKT-2	1.2	1.1	0.9



59/10/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

Chapter 6: Capital Investment Plan**1 Capital Investment plan of ED-DNH**

The petitioner has undertaken the capital expenditure for the following purpose:

1. Laying of new transmission lines
2. Construction of new substations
3. Strengthening of the existing transmission network to cope up with the growing demand and future generation

The CAPEX Plan proposals (scheme wise) for FY 2022-23 to FY 2024-25 under the MYT Control Period FY 2022-25 have been formulated by ED-DNH in order to effect better planning, budgeting and monitoring at macro & micro levels. The details of the schemes are provided below:

New Schemes**Table 7: New Schemes**

(Rs. Crore)

Sr.No.	Name of Scheme	Total Estimated amount	Proposed Expenditure		
			2022-23	2023-24	2024-25
1	Augmentation of 220/66KV Vaghchipa sub-station from 2x160MV A to 3x160MVA associate with 220KV bay and 66KV Bus.	12.00	6.00	6.00	0.00
2	Up gradation and Modernization of existing 220 kV Switching Sub-Station New Kharadpada and 220/66 KV Kharadpada Sub-station by providing SCADA system	6.00	6.00	0.00	0.00
3	Providing OPGW on Double Circuit 220KV line emanation from 400KV PGCIL- Kala s / s to 220KV Khadoli s/s and 400KV Kala- S/s to 220KV Kharadpada S/s to receive online data at SLDC, Silvassa.	10.00	2.50	2.50	5.00
Total		28.00	14.50	8.50	5.00

1. Name of Scheme: Augmentation of 220/66KV Vaghchipa sub-station from 2x160MV A to 3x160MVA associate with 220KV bay and 66KV Bus.

Cost Rs.1200.00 Lakh.

Salient Features:

5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

2X160 MVA, 220/66 KV Vaghchipsa S/s has been commissioned and kept in commercial operation since February 2019. Load of 4 nos. of 66/11 KV substations of DNHPDCL are being fed through this substation. At present the total peak load feeding to this S/s is around 140 MW. DNHPDCL is planning to connect 66/11 KV Dadra and Vaghchipsa S/s to Vaghchipsa substation. Therefore, anticipated load of 100 MW is expected to be added to the present load of the substation. Hence, to maintain the n-1 contingency for transformers, it is proposed to add 1 no. of 160 MVA, 220/66 KV power transformer at 220/66 KV Vaghchipsa substation. In view of the above the scheme or augmentation of Vaghchipsa substation is proposed at an estimated cost of Rs. 12.00 Crore.

2. Name of Scheme: Up gradation and Modernization of existing 220 kV Switching Sub-Station New Kharadpada and 220/66 KV Kharadpada Sub-station by providing SCADA system.

Cost Rs. 600.00 Lakh.

Salient Features:

The 220/66 kV Kharadpada substation was commissioned in the year 2002. Control and Relay panels of Kharadpada substation is of old design and consists of electromechanical type relays. Spares for these relay are not available in the market for O & M works. Hence, these relay panel needs to be replaced by a new microprocessor based relays & panels for 220 kV & 66 kV with integration of SCADA system for better monitoring and getting real time data for SLDC. WRLDC is also pressing hard for submission of Disturbance Records reports in the event of tripping and other incidents. Hence a scheme for upgradation and modernisation for 220/66 kV Kharadpada Sub-Station is proposed.

220 New kV Kharadpada substation was commissioned in the year 2015. The Sub-Station is having Control and Relay panels with SCADA compatible relays inbuilt. To enhance the New Kharadpada substation, a SCADA system needs to be installed. By providing the SCADA system in New Kharadpada substation, better monitoring and getting real time data for SLDC operations will be ensured. Also, there is a possibility to reduce the O & M cost for this sub-station by remote operations from Kharadpada substation by extending SCADA controls.

3. Name of the Scheme: Providing OPGW on Double Circuit 220KV line emanation from 400KV PGCIL- Kala s / s to 220KV Khadoli s/s and 400KV Kala- S/s to 220KV Kharadpada S/s to receive online data at SLDC, Silvassa.

Cost Rs. 1000.00 lacs

Salient Features: As per the discussion held in 5th SCADA meeting called by WRPC, all the SLDC's should be connected through alternate route to add redundancy for connectivity of SLDC's. Accordingly, this scheme is proposed to provide OPGW from 400KV PGCIL- Kala s / s to 220KV Khadoli s/s and 400KV Kala- S/s to 220KV Kharadpada S/s to enhance the connectivity of SLDC and meet the directives of WRPC.



5910/2021/Diary Section

Electricity Department, Transmission Division - Business Plan for MYT Control Period: FY 2022-23 to FY 2024-25

2. Capitalization Schedule

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

Table 8: Capitalization Schedule

Sr. No.	Particulars	(Rs. Crore)		
		Proposed Capital Expenditure and Capitalization		
		2022-23	2023-24	2024-25
1	Capital Expenditure	14.50	8.50	5.00
2	Capitalization	6.00	12.00	10.00

The above capital expenditure shall be funded from Government funds.

Handwritten signature