

## POWER SUPPLY PROCUREMENT PLAN

### MARIPIPI MULTI- PURPOSE COOPERATIVE (MMPC) POWER SUPPLY PROCUREMENT PLAN

In compliance with the Department of Energy's (DOE) Department Circular No. DC 2018-02-0003, "Adopting and Prescribing the Policy for the Competitive Selection Process in the Procurement by the Distribution Utilities of Power Supply Agreement for the Captive Market" or the Competitive Selection process (CSP) Policy, the Power Supply Procurement Plan (PSPP) Report is hereby created, pursuant to the Section 4 of the said Circular.

The PSPP refers to the DUs' plan for the acquisition of a variety of demand-side and supply-side resources to cost-effectively meet the electricity needs of its customers. The PSPP is an integral part of the Distribution Utilities' Distribution Development Plan (DDP) and must be submitted to the Department of Energy with supported Board Resolution and/or notarized Secretary's Certificate.

The Third-Party Bids and Awards Committee (TPBAC), Joint TPBAC or Third Party Auctioneer (TPA) shall submit to the DOE and in the case of Electric Cooperatives (ECs), through the National Electrification Administration (NEA) the following:

- a. Power Supply Procurement Plan;
- b. Distribution Impact Study/ Load Flow Analysis conducted that served as the basis of the Terms of Reference; and
- c. Due diligence report of the existing generation plant

All Distribution Utilities' shall follow and submit the attached report to the Department of Energy for posting on the DOE CSP Portal. For ECs such reports shall be submitted to DOE and NEA. The NEA shall review the submitted report within ten (10) working days upon receipt prior to its submission to DOE for posting at the DOE CSP Portal.

The content of the PSPP shall be consistent with the DDP. The tables and graph format to be use on the PSPP report is provided on the following sheets. Further, the PSPP shall contain the following sections:

- I. Table of Contents
- II. Introduction
- III. Energy and Demand Forecast (10 year historical and forecast)
- IV. Energy Sales and Purchase
- V. Daily Load Profile and Load Duration Curve
- VI. Existing Contracts & Existing GenCos due diligence report
- VII. Currently approved SAGR for Off-Grid ECs to be passed-on to consumers;
- VIII. DU's Current Supply and Demand
- IX. Distribution Impact Study
- X. Schedule of Power Supply Procurement
- XI. Timeline of the CSP

For inquiries, you may send it at [doe.csp@gmail.com](mailto:doe.csp@gmail.com) or you may contact us through telephone numbers (02) 840-2173 and (02) 479-2900 local 202.

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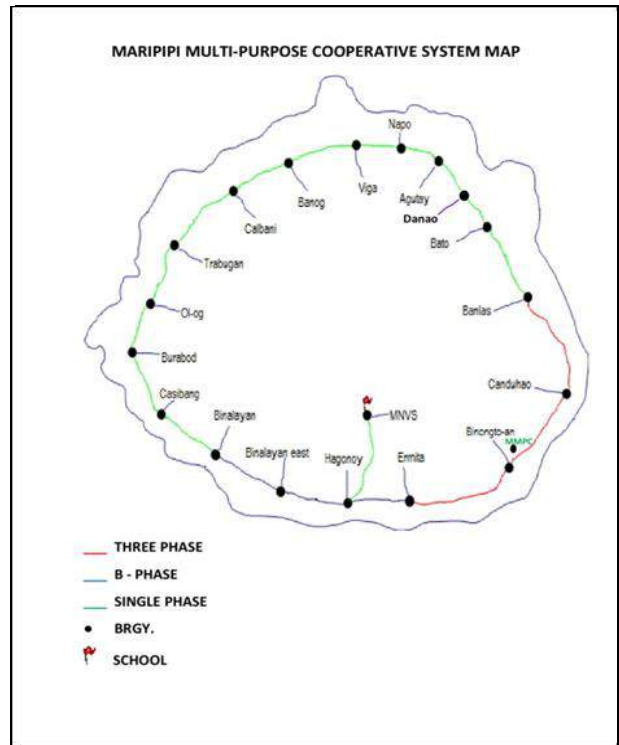
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# INTRODUCTION

## DISTRIBUTION UTILITIES PROFILE

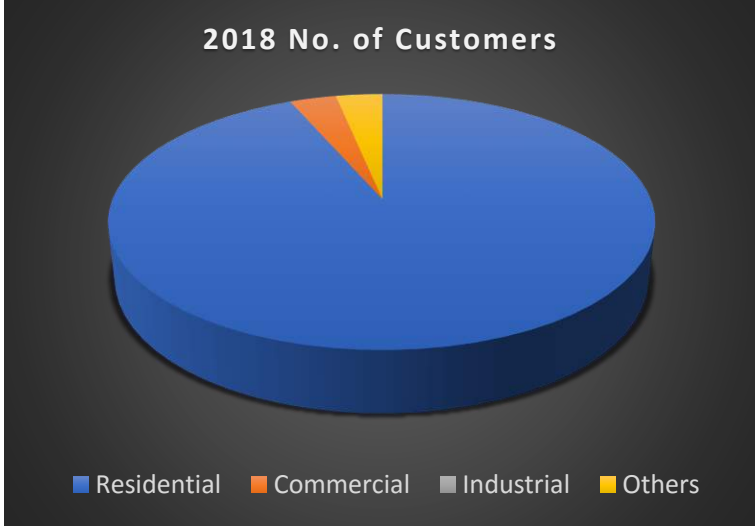
Maripipi Multi- Purpose Cooperative (MMPC) is a recognized franchise holder to distribute Electric Power in the Island Municipality of Maripipi, Province of Biliran. The power distribution in Maripipi started in the year 1994 but the franchise of the MMPC started in the year 2005, considering the span of our power lines a rehabilitation is one of our priorities. The Island consists of 15 Barangays, 84.17% was energized and a land area of 28.198370 square meter. Our electric service supplied by National Power Corporation Diesel Plant.

DU's Franchise MAP



Number of Customer	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	1404	1419	1433	1448	1462	1477	1491	1506	1520	1535	1549
Commercial	49	50	50	51	51	52	52	53	53	54	54
Industrial											
Others	49	49	49	49	49	49	49	49	49	49	49
Contestable Customers											
Total (Captive Customers)	1502	1517	1532	1547	1562	1577	1592	1607	1622	1637	1652

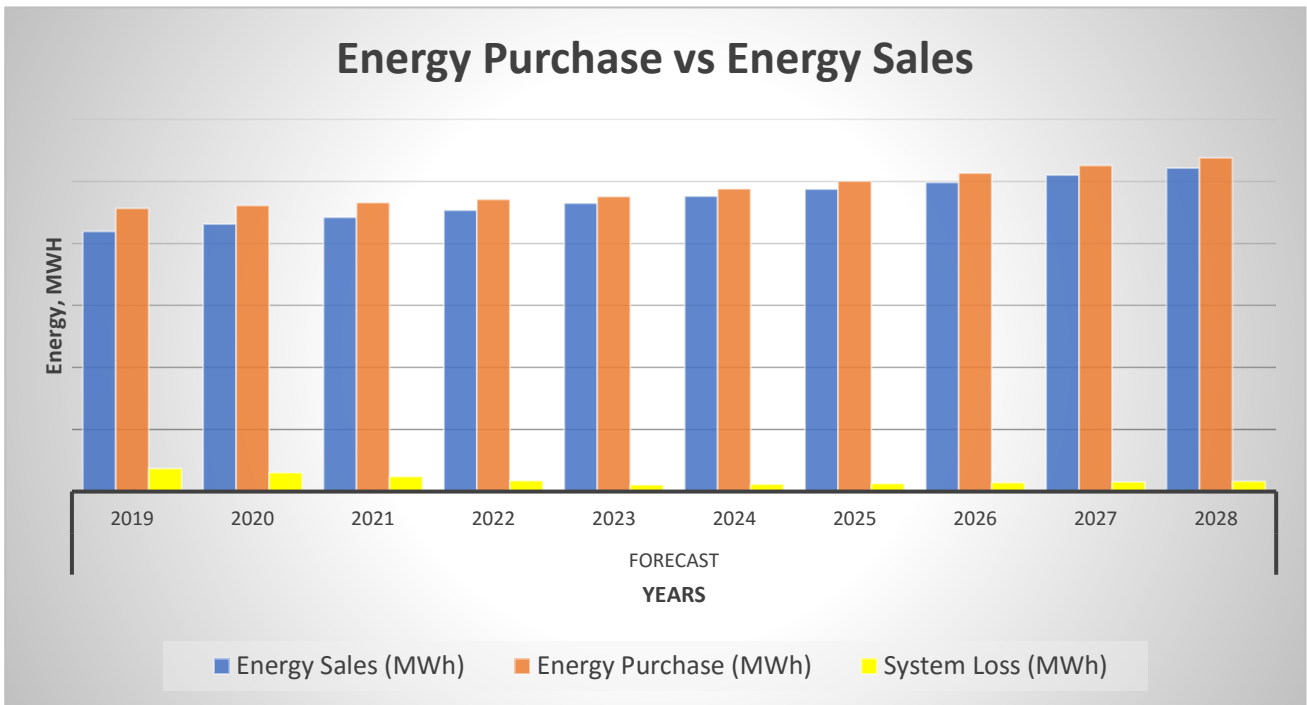
Our supply demand is increasing especially today that our time operation is 24 hours in the Island. Our customers are encouraged to buy new appliances and more business is expected to come to the Island to invest since our electric power is already stable.



## ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	338	405	408	406	426	403	479	504	628	816
Energy Purchase (MWh)	379	446	452	449	477	458	525	554	697.5	903.3
System Loss (MWh)	49	49	44	43	52	55	45	50	70	86

ENERGY SALES AND PURCHASE	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	839	862	884	907	929	952	975	997	1020	1043
Energy Purchase (MWh)	913	922	932	942	951	976	1001	1026	1051	1076
System Loss (MWh)	74	61	48	35	22	24	26	29	31	33

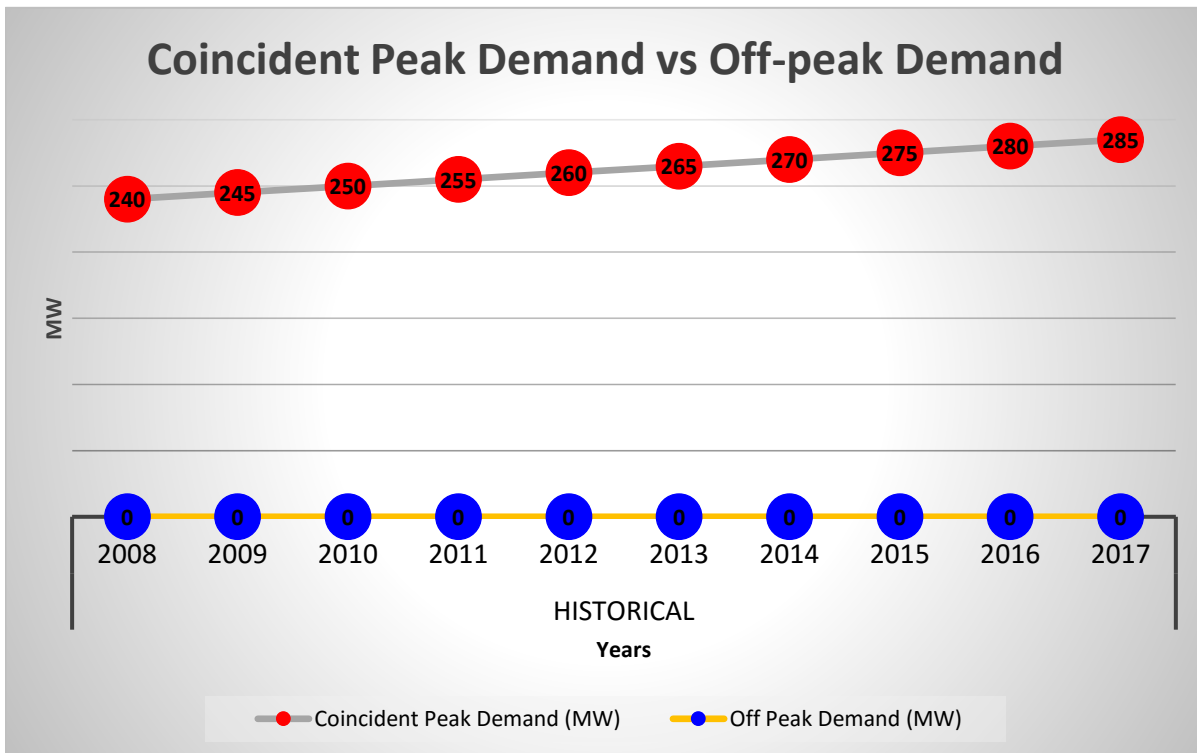


There is an increase of the energy sales and energy purchase for the year 2018 due to our 24 hours operation.

## DEMAND

Demand	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coincident Peak Demand (MW)	65	80	110	120	190	200	224	231	214	229
Off Peak Demand (MW)										

Demand	HISTORICAL									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Coincident Peak Demand (MW)	240	245	250	255	260	265	270	275	280	285
Off Peak Demand (MW)										

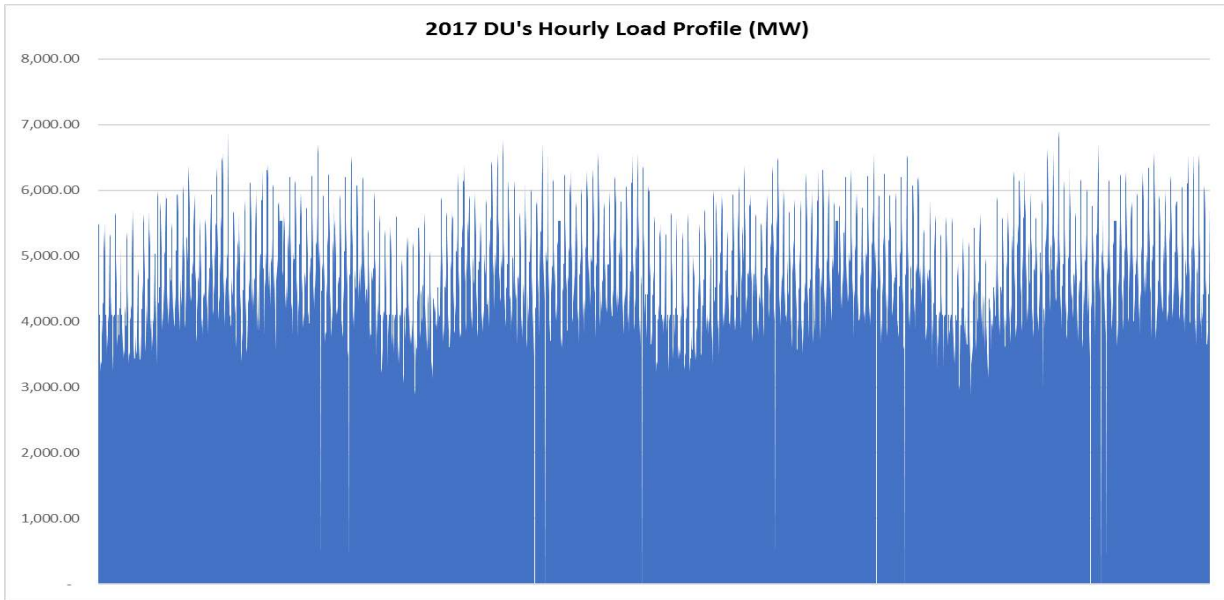


There is an increase demand for every year due to the 24 hours operation and we used regression method for forecasting.

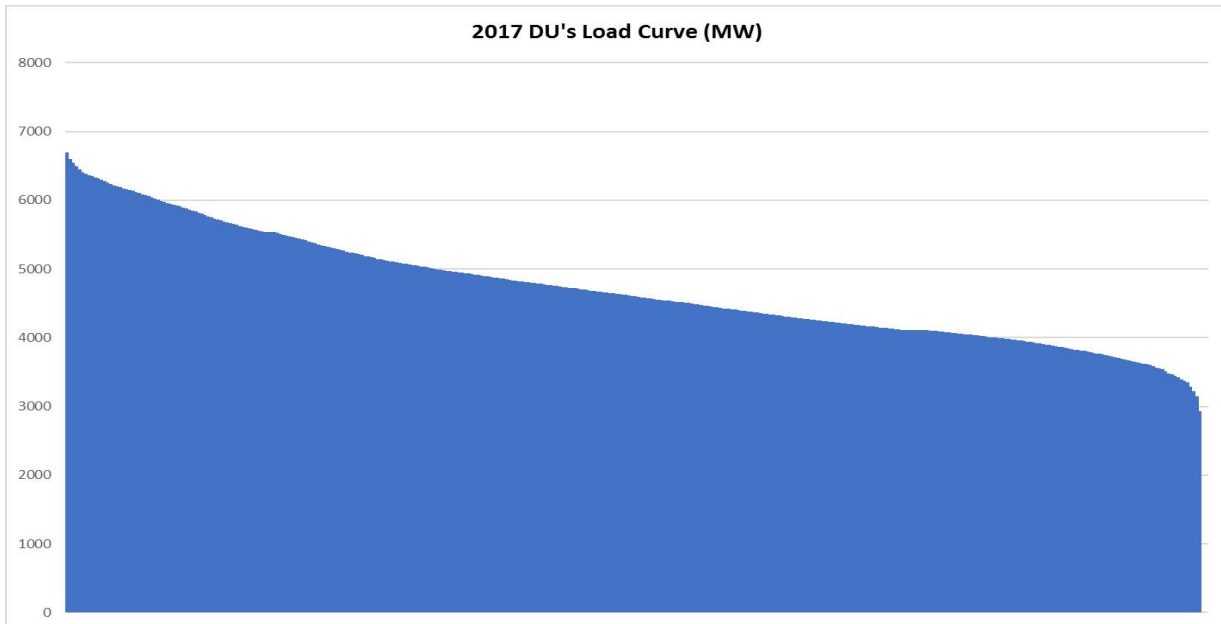
# POWER SUPPLY PROCUREMENT PLAN



## LOAD PROFILE AND LOAD DURATION CURVE



GRAPH PROVIDED HERE IS SAMPLE ONLY



**Brief highlight:**

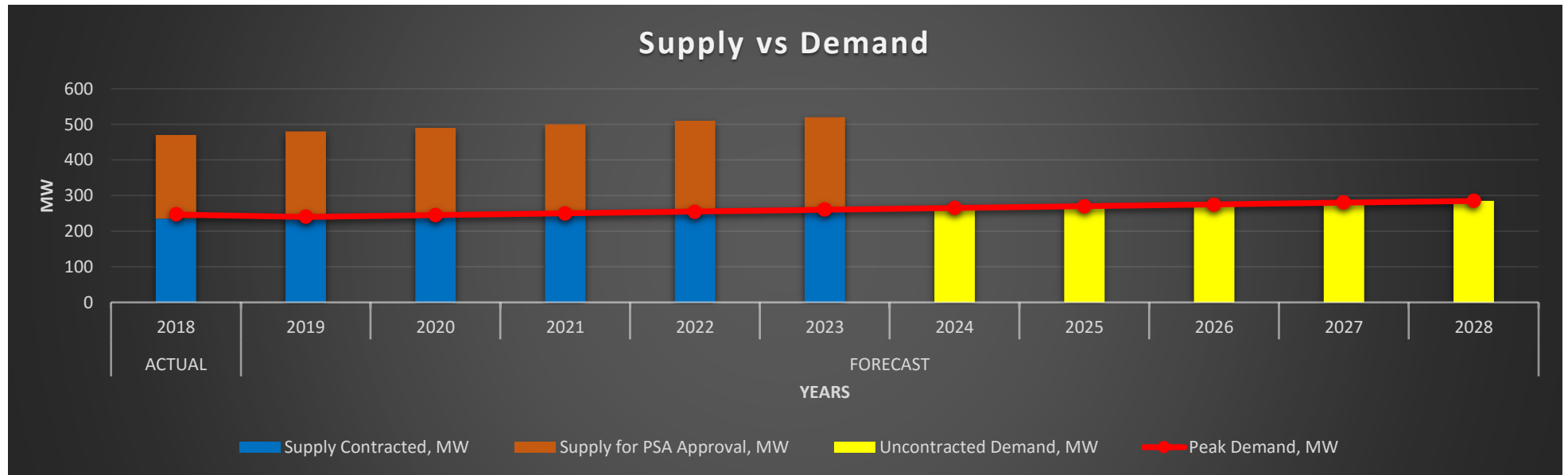
Base on the load curve identify the base-load, mid-merit and peaking. As such the data can be used for the strategy in contracting the DUs demand requirement.

# POWER SUPPLY PROCUREMENT PLAN



## MIXSUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Peak Demand, MW	247	240	245	250	255	260	265	270	275	280	285
Supply Contracted, MW	235	240	245	250	255	260	0	0	0	0	0
Generation Plant Name 1	NPC-SPUG										
Generation Plant Name 2	NPC-SPUG										
Generation Plant Name 3	NPC-SPUG										
Supply for PSA Approval, MW	235	240	245	250	255	260	0	0	0	0	0
Generation Plant Name 1											
Generation Plant Name 2											
Generation Plant Name 3											
Uncontracted Demand, MW	0	0	0	0	0	0	265	270	275	280	285



POWER SUPPLY PROCUREMENT PLAN

List of Existing Contracts and Details

Supply Contract ed	Plant Owner/ Operator	Capacity Factor	PSA Effectivity (MM/YR)	PSA Expiration (MM/YR)	Contracte d Capacity, MW	Contracte d Energy, MWH	Base / Mid-merit / Peaking	Embedde d/ Grid Connecte d	Utility- owned/ NPC/ IPP/ NPC-IPP	Status	Fuel Type	Installed Capacity (MW)	Net Dependab le Capacity (MW)
GenCo 1	NPC-SPUG		26/08/2018	25/08/2023	240	929082			MMPC	Operating	Diesel	163KW	
GenCo 2	NPC-SPUG		26/08/2018	25/08/2023	245	956955			MMPC	Operating	Diesel	163KW	
GenCo 3	NPC-SPUG		26/08/2018	25/08/2023	250	985663			MMPC	Operating	Diesel	150KW	
GenCo 4	NPC-SPUG		26/08/2018	25/08/2023	255	1015233			MMPC	Operating	Diesel	300KW	

Discuss the following:  
 Performance of the existing Contracted Generation Companies.  
 For off-grid DUs specify the approved SAGR  
 Further, discuss the **optimal supply mix** for the DU given the load curve, performance of the existing contracted generation companies and other factors as found significant

## **DISTRIBUTION IMPACT STUDY**

The information that we gathered on the study we made on the distribution is that there is an increase demand of the captive customers if the power supply is efficient, reliable and more stable. The business investment in the Island is expected to grow and migration will be lessen.

## SCHEDULE OF CSP

Base / mid-merit / peaking	For CSP		Proposed contract		Proposed schedule (MM/YYYY)						
	Demand (MW)	Energy (MWh)	Start Month and Year	End Month and Year	Publication of Invitation to Bid	Pre-bid Conference	Submission and Opening of Bids	Bid Evaluation	Awarding	PSA Signing	Joint Application to ERC

We don't have plan for the CSP as of now because we are not yet ready .

## 10 Year Monthly Data

Year	Forecast			Contracted and For PSA Approval Demand and Energy		Contracted Demand and Energy		Committed for CSP	
	Coinciden t Peak Demand (MW)	Off Peak Demand (MW)	Energy Requirem ent (MWh)	Demand (MW)	Energy (MWh)	Uncontrac ted Demand (MW)	Uncontrac ted Energy (MWh)	Demand (MW)	Energy (MWh)
2019									
Jan	210			210	70,444				
Feb	210			210	67,534				
Mar	215			240	60,428				
Apr	240			240	72,626				
May	240			240	80,683				
Jun	240			240	87,901				
Jul	230			240	77,046				
Aug	230			230	78,836				
Sep	230			230	80,403				
Oct	230			230	80,179				
Nov	225			225	85,886				
Dec	225			225	87,117				
2020									
Jan	215			215	72,557				
Feb	220			215	69,560				
Mar	225			220	62,241				
Apr	230			245	74,804				
May	245			245	83,103				
Jun	250			245	90,538				
Jul	255			245	79,357				
Aug	260			235	81,201				
Sep	265			235	82,815				
Oct	270			235	82,585				
Nov	275			230	88,463				
Dec	280			230	89,731				
2021									
Jan	220			220	74,734				
Feb	223			220	71,647				
Mar	225			225	64,108				
Apr	230			250	77,049				
May	250			250	85,596				
Jun	253			250	93,254				
Jul	255			250	81,738				
Aug	258			240	83,637				
Sep	257			240	85,299				
Oct	270			240	85,062				
Nov	260			235	91,117				
Dec	262			235	92,423				
2022									
Jan				225	76,976				



