

## **TABLE OF CONTENTS**

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

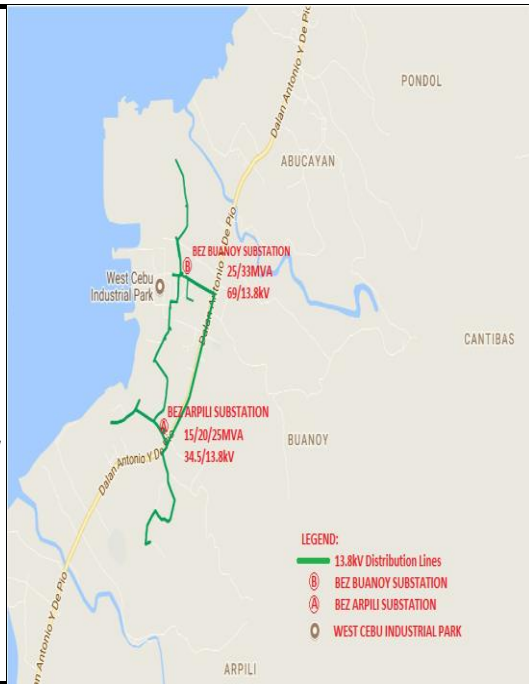
XI. Timeline of the CSP

# INTRODUCTION

## DISTRIBUTION UTILITIES PROFILE

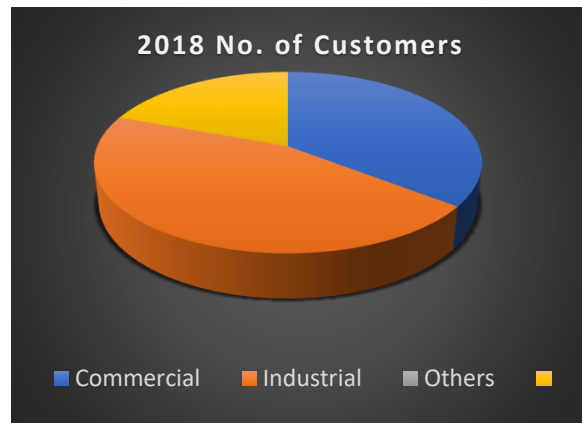
## DU's Franchise MAP

**Balamban Enerzone Corporation (BEZ)** engages in the distribution of electricity to the West Cebu Industrial Park (WCIP), Special Economic Zone, Buanoy, Balamban, Cebu under the authority of Philippine Economic Zone Authority (PEZA). The economic zone has an area of 280 hectares and has not been fully occupied. BEZ has 31 customers as of December 2018 composed of 11 commercial and 20 industrial wherein 6 are contestable customers served by RES. In 2018, BEZ has a maximum demand of 27,065 kW, where 1,500 kW for the captive customers captive industrial and 25,565 kW for the contestable customers.



Number of Customer Connections in Franchise	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	0	0	0	0	0	0	0	0	0	0	0
Commercial	11	12	12	12	12	12	12	12	12	12	12
Industrial	14	15	15	15	15	15	15	15	15	15	15
Others	0	0	0	0	0	0	0	0	0	0	0
Contestable Customers served by RES	6	6	6	6	6	6	6	6	6	6	6
Total (Captive Customers)	25	27	27	27	27	27	27	27	27	27	27

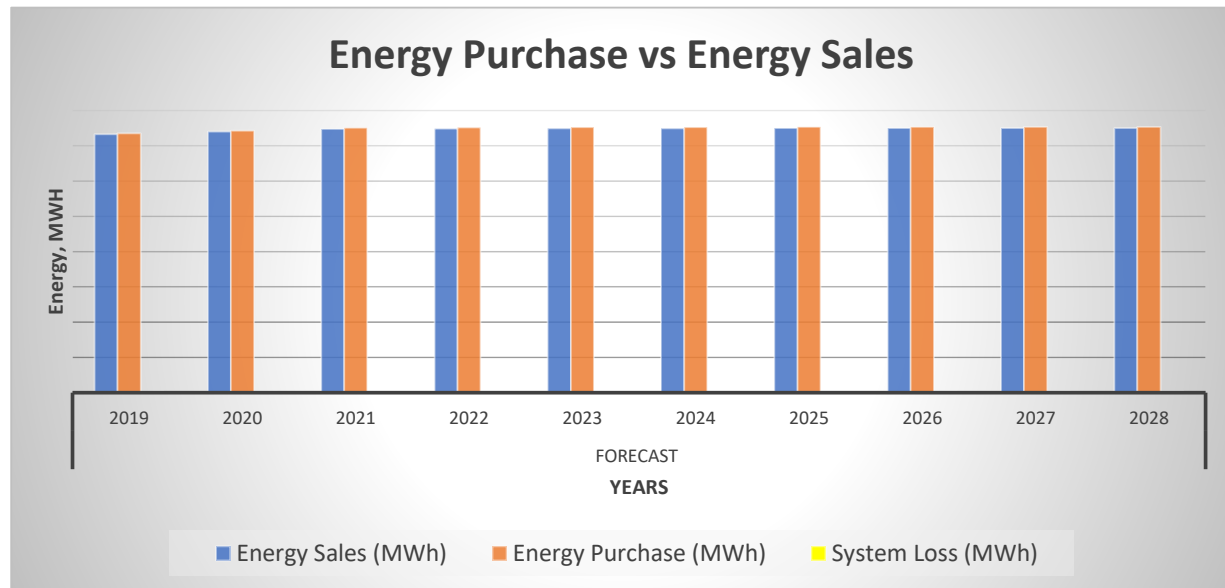
In year 2018, BEZ recorded the maximum demand of 27,065 kW and minimum of 24,942 kW. Currently there are still available lots for lease at the West Cebu Industrial Park Special Economic Zone and potential for growth.



## ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	60,376	90,174	116,377	124,299	113,779	107,329	113,874	93,572	8,663	6,598
Energy Purchase (MWh)	61,691	91,522	117,958	126,269	115,364	108,330	114,911	94,286	9,051	6,939
System Loss (MWh)	1,315	1,348	1,581	1,970	1,585	1,001	1,037	714	388	342

ENERGY SALES AND PURCHASE	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	7,325	7,400	7,479	7,486	7,493	7,499	7,506	7,506	7,506	7,506
Energy Purchase (MWh)	7,356	7,432	7,512	7,518	7,525	7,532	7,538	7,538	7,538	7,538
System Loss (MWh)	31	32	32	32	32	32	33	33	33	33

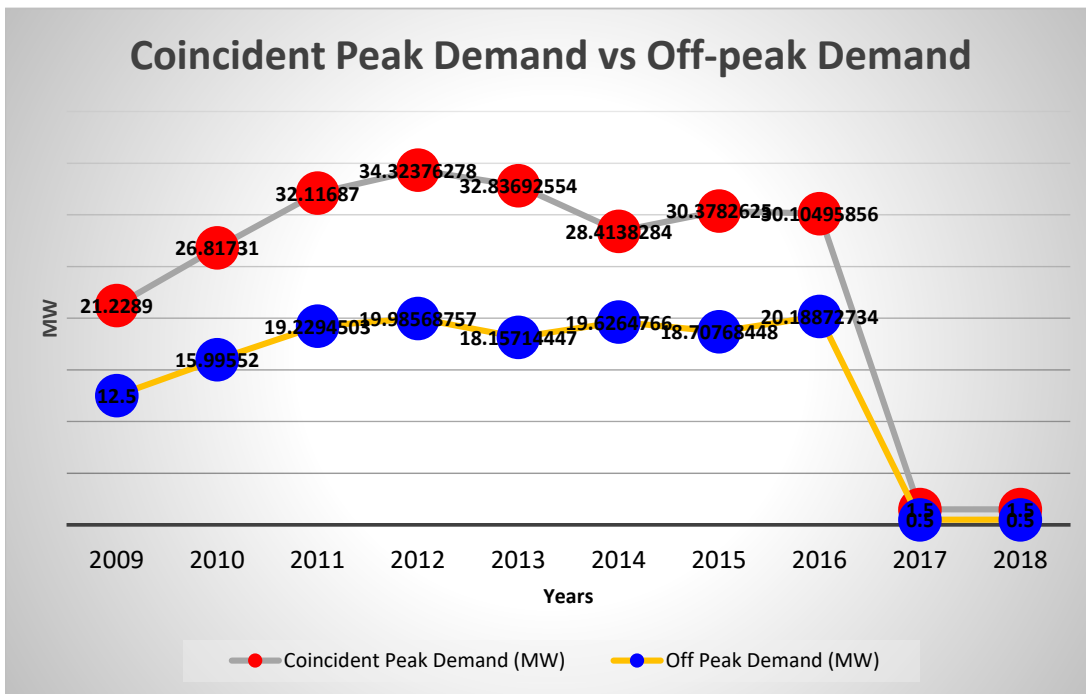


With the operation of RCOA in the visayas, all BEZ contestable customers switched to their respective RES starting with ALPLUS last June 26, 2016. THI Phase 4 was the last to switched to RES. In January 26, 2017 all the 6 contestable customers already switched to their respective RES. BEZ purchased energy dropped by 90% .

# DEMAND

Demand	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coincident Peak Demand (MW)	21.23	26.82	32.12	34.32	32.84	28.41	30.38	30.1	1.5	1.5
Off Peak Demand (MW)	12.5	16	19.23	19.99	18.16	19.63	18.71	20.19	0.5	0.5

Demand	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Coincident Peak Demand (MW)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Off Peak Demand (MW)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

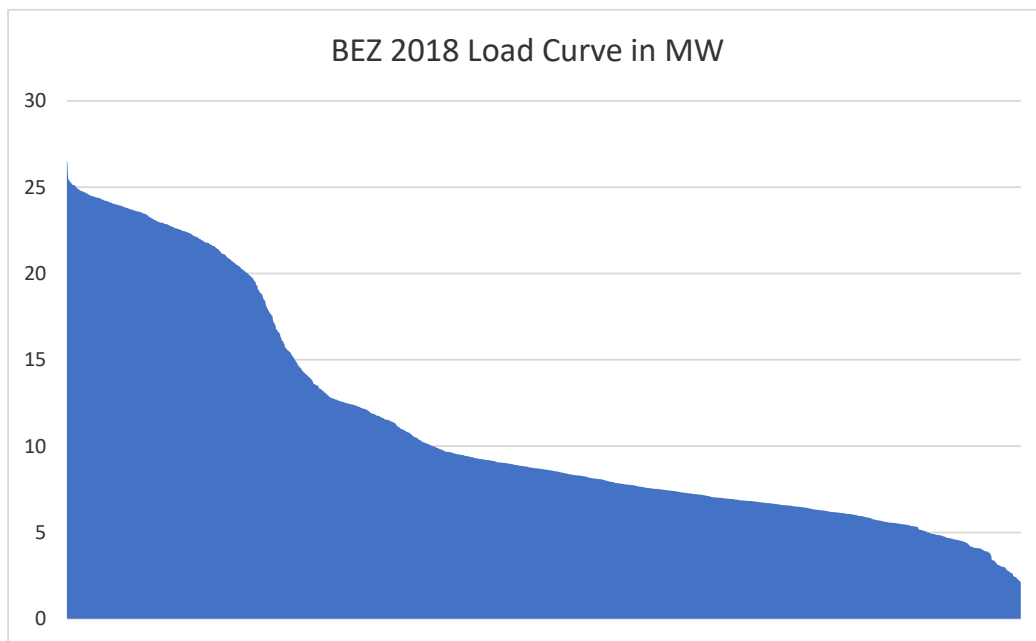
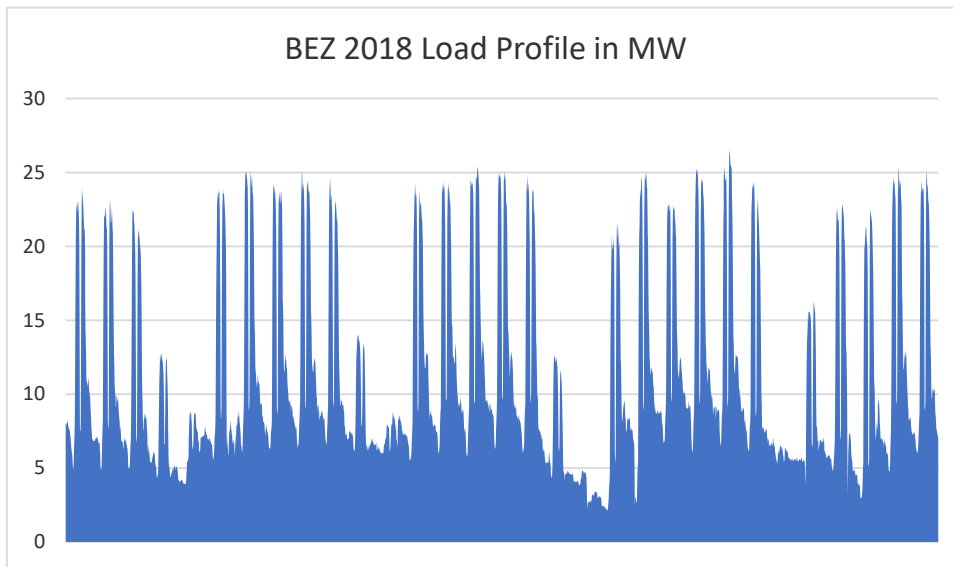


Balamban Enerzone Corporation's highest demand was recorded at 34.3 MW and occurred last 2012 wherein ALPLUS gas plant operated their 2 gas plants simultaneously. The drop in the demand from 2012 to 2017 is due to the operation of one gas plant of ALPLUS at a time. With the RCOA implementation in the Visayas, the captive demand dropped to 1,500 kW. The forecasted BEZ demands are based on the 2018 BEZ demand and the customers projected demands.

# POWER SUPPLY PROCUREMENT PLAN

Vertical line on the left side of the page.

## LOAD PROFILE AND LOAD DURATION CURVE

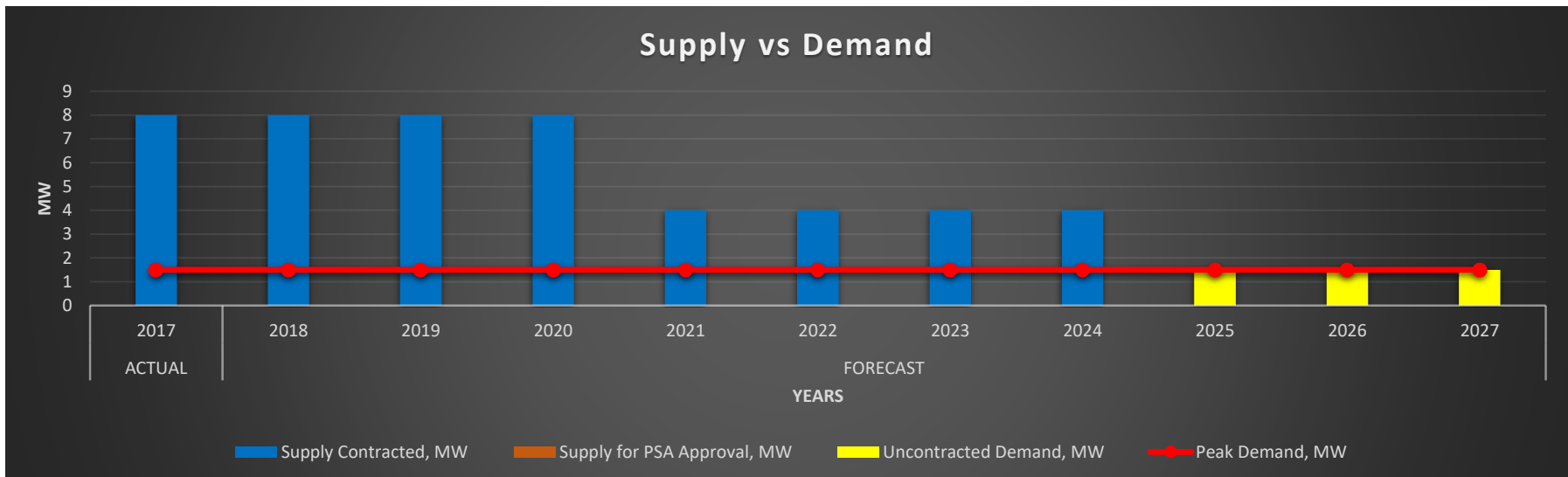


### Brief highlight:

Balamban Enerzone Corporation's (BEZ) load profile is reflective on the on the load profile of BEZ biggest customer which is Tsuneishi Heavy Industries (Cebu) Inc., Japanese ship building company. Its normal operations starts at 8AM and peaks at 10:30 AM and drops at 12 noon for the noon break. The load increases at 1:30 PM , peaks at 2:45PM and the load drops again at 5:00 PM and stabilizes until 8 PM. The load further drops after 8 PM. Minimal loading observed during off peaks, weekends and holidays.

### MIX SUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Peak Demand, MW</b>	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Supply Contracted, MW</b>	8	8	8	8	4	4	4	4	0	0	0
Cebu Energy Development Corp.	8	8	8	8	4	4	4	4	0	0	0
Generation Plant Name 2											
Generation Plant Name 3											
<b>Supply for PSA Approval, MW</b>	0	0	0	0	0	0	0	0	0	0	0
Generation Plant Name 1	0	0	0	0	0	0	0	0	0	0	0
Generation Plant Name 2	0	0	0	0	0	0	0	0	0	0	0
Generation Plant Name 3	0	0	0	0	0	0	0	0	0	0	0
<b>Uncontracted Demand, MW</b>	0	0	0	0	0	0	0	0	1.5	1.5	1.5



## List of Existing Contracts and Details

Supply Contracted	Plant Owner/ Operator	Capacity Factor	PSA Effectivity (MM/YR)	PSA Expiration (MM/YR)	Contracted Capacity, MW	Contracted Energy, MWH	Base / Mid-merit / Peaking	Embedded/ Grid Connected	Utility-owned/ NPC/ IPP/ NPC-IPP	Status	Fuel Type	Installed Capacity (MW)	Net Dependable Capacity (MW)
CEDC	GBPC	75%	Dec. 2010	Feb 2025	4		Base	NGCP Calung Calung	None	Active	Coal	246	210
CEDC	GBPC	75%	Sept 2011	Sept. 2021	4		Base	NGCP Calung Calung	None	Active	Coal	246	210

BEZ has 2 firm contracts with Cebu Energy Development Corporation (CEDC) . It has 3 coal fired power plants located at Sangi, Toledo City with an installed capacity of 246 MW and net dependable capacity of 210 MW. BEZ 1st PSA with CEDC is 4MW at a load factor of 75% while the 2nd PSA with CEDC is another 4MW at a load factor of 75%. Total contracted demand with CEDC is 8 MW. With the RCOA implementation in the Visayas in 2016 , BEZ demand for captive customers dropped to 1.5 MW.

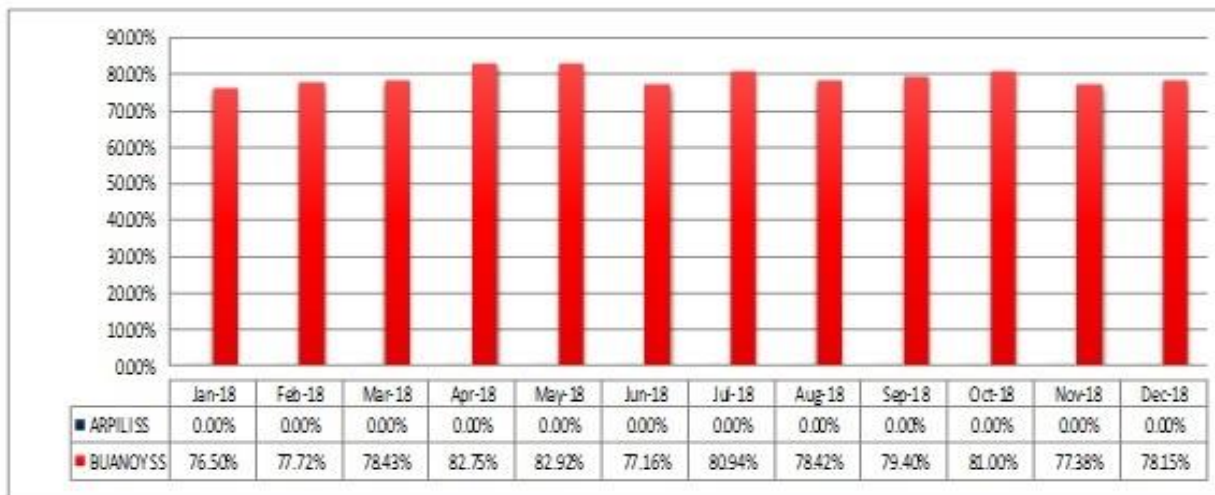
**Note : As of March 2017, BEZ nominated 1MW only out of the 8MW contracted demand from CEDC. The remaining contracted demand were under dispute.**



# DISTRIBUTION IMPACT STUDY

Balamban Enerzone Corporation has 2 power substations namely, Arpili SS and Buanoy SS rated at 69/34.5 /13.8 kV , 25 MVA and 69 / 13.8 kV 33 MVA respectively for a total transformation capacity of 58 MVA. Arpili SS has 3 feeders while Buanoy SS has 4 feeders. Currently only the Buanoy SS is energized loaded at 78.15% as of December 2018. BEZ Arpili SS is on hot standby and can be energized anytime to serve the additional BEZ loading . BEZ peak demand as of December 2018 is 27,065 kW.

## % SUBSTATION LOADING





### 10 Year Monthly Data

Year	Forecast			Contracted and For PSA Approval Demand and Energy		Uncontracted Demand and Energy		Commitment
	Coincident Peak Demand (MW)	Off Peak Demand (MW)	Energy Requirement (MWh)	Demand (MW)	Energy (MWh)	Uncontracted Demand (MW)	Uncontracted Energy (MWh)	Demand (MW)
2019								-
Jan	1.50	0.50	523.62	8.00	4,464.00	(6.50)	(3,940.38)	-
Feb	1.50	0.50	582.85	8.00	4,464.00	(6.50)	(3,881.15)	-
Mar	1.50	0.50	555.36	8.00	4,248.00	(6.50)	(3,692.64)	-
Apr	1.50	0.50	590.79	8.00	4,464.00	(6.50)	(3,873.21)	-
May	1.50	0.50	591.56	8.00	4,392.00	(6.50)	(3,800.44)	-
Jun	1.50	0.50	662.15	8.00	4,464.00	(6.50)	(3,801.85)	-
Jul	1.50	0.50	680.19	8.00	4,392.00	(6.50)	(3,711.81)	-
Aug	1.50	0.50	637.17	8.00	4,464.00	(6.50)	(3,826.83)	-
Sep	1.50	0.50	650.11	8.00	4,464.00	(6.50)	(3,813.89)	-
Oct	1.50	0.50	639.62	8.00	4,392.00	(6.50)	(3,752.38)	-
Nov	1.50	0.50	588.62	8.00	4,464.00	(6.50)	(3,875.38)	-
Dec	1.50	0.50	548.08	8.00	4,392.00	(6.50)	(3,843.92)	-
2020				-				
Jan	1.50	0.50	531.43	8.00	4,464.00	(6.50)	(3,932.57)	-
Feb	1.50	0.50	627.36	8.00	4,464.00	(6.50)	(3,836.64)	-
Mar	1.50	0.50	524.29	8.00	4,248.00	(6.50)	(3,723.71)	-
Apr	1.50	0.50	577.26	8.00	4,464.00	(6.50)	(3,886.74)	-
May	1.50	0.50	660.49	8.00	4,392.00	(6.50)	(3,731.51)	-
Jun	1.50	0.50	592.72	8.00	4,464.00	(6.50)	(3,871.28)	-
Jul	1.50	0.50	657.56	8.00	4,392.00	(6.50)	(3,734.44)	-
Aug	1.50	0.50	681.24	8.00	4,464.00	(6.50)	(3,782.76)	-
Sep	1.50	0.50	665.25	8.00	4,464.00	(6.50)	(3,798.75)	-
Oct	1.50	0.50	723.77	8.00	4,392.00	(6.50)	(3,668.23)	-
Nov	1.50	0.50	698.03	8.00	4,464.00	(6.50)	(3,765.97)	-
Dec	1.50	0.50	718.37	8.00	4,392.00	(6.50)	(3,673.63)	-
2021				-				
Jan	1.50	0.50	531.43	8.00	4,464.00	(6.50)	(3,932.57)	-
Feb	1.50	0.50	627.36	8.00	4,464.00	(6.50)	(3,836.64)	-
Mar	1.50	0.50	524.29	8.00	4,176.00	(6.50)	(3,651.71)	-
Apr	1.50	0.50	577.26	8.00	4,464.00	(6.50)	(3,886.74)	-
May	1.50	0.50	660.49	8.00	4,320.00	(6.50)	(3,659.51)	-
Jun	1.50	0.50	592.72	8.00	4,464.00	(6.50)	(3,871.28)	-
Jul	1.50	0.50	657.56	8.00	4,320.00	(6.50)	(3,662.44)	-
Aug	1.50	0.50	681.24	8.00	4,464.00	(6.50)	(3,782.76)	-
Sep	1.50	0.50	665.25	8.00	4,464.00	(6.50)	(3,798.75)	-
Oct	1.50	0.50	723.77	8.00	4,320.00	(6.50)	(3,596.23)	-
Nov	1.50	0.50	698.03	8.00	4,464.00	(6.50)	(3,765.97)	-
Dec	1.50	0.50	718.37	8.00	4,320.00	(6.50)	(3,601.63)	-
				-		-	-	

POWER SUPPLY PROCUREMENT PLAN

				-		-	-	
2022				-		-	-	
Jan	1.50	0.50	531.43	8.00	4,464.00	(6.50)	(3,932.57)	-
Feb	1.50	0.50	627.36	8.00	4,464.00	(6.50)	(3,836.64)	-
Mar	1.50	0.50	524.29	8.00	4,248.00	(6.50)	(3,723.71)	-
Apr	1.50	0.50	577.26	8.00	4,464.00	(6.50)	(3,886.74)	-
May	1.50	0.50	660.49	8.00	4,392.00	(6.50)	(3,731.51)	-
Jun	1.50	0.50	592.72	8.00	4,464.00	(6.50)	(3,871.28)	-
Jul	1.50	0.50	657.56	8.00	4,392.00	(6.50)	(3,734.44)	-
Aug	1.50	0.50	681.24	8.00	4,464.00	(6.50)	(3,782.76)	-
Sep	1.50	0.50	665.25	8.00	4,464.00	(6.50)	(3,798.75)	-
Oct	1.50	0.50	723.77	4.00	2,160.00	(2.50)	(1,436.23)	-
Nov	1.50	0.50	698.03	4.00	2,232.00	(2.50)	(1,533.97)	-
Dec	1.50	0.50	718.37	4.00	2,160.00	(2.50)	(1,441.63)	-
2023								
Jan	1.50	0.50	531.43	4.00	2,232.00	(2.50)	(1,700.57)	-
Feb	1.50	0.50	627.36	4.00	2,232.00	(2.50)	(1,604.64)	-
Mar	1.50	0.50	524.29	4.00	2,016.00	(2.50)	(1,491.71)	-
Apr	1.50	0.50	577.26	4.00	2,232.00	(2.50)	(1,654.74)	-
May	1.50	0.50	660.49	4.00	2,160.00	(2.50)	(1,499.51)	-
Jun	1.50	0.50	592.72	4.00	2,232.00	(2.50)	(1,639.28)	-
Jul	1.50	0.50	657.56	4.00	2,160.00	(2.50)	(1,502.44)	-
Aug	1.50	0.50	681.24	4.00	2,232.00	(2.50)	(1,550.76)	-
Sep	1.50	0.50	665.25	4.00	2,232.00	(2.50)	(1,566.75)	-
Oct	1.50	0.50	723.77	4.00	2,160.00	(2.50)	(1,436.23)	-
Nov	1.50	0.50	698.03	4.00	2,232.00	(2.50)	(1,533.97)	-
Dec	1.50	0.50	718.37	4.00	2,160.00	(2.50)	(1,441.63)	-
2024						-	-	
Jan	1.50	0.50	531.43	4.00	2,232.00	(2.50)	(1,700.57)	-
Feb	1.50	0.50	627.36	4.00	2,232.00	(2.50)	(1,604.64)	-
Mar	1.50	0.50	524.29	4.00	2,016.00	(2.50)	(1,491.71)	-
Apr	1.50	0.50	577.26	4.00	2,232.00	(2.50)	(1,654.74)	-
May	1.50	0.50	660.49	4.00	2,160.00	(2.50)	(1,499.51)	-
Jun	1.50	0.50	592.72	4.00	2,232.00	(2.50)	(1,639.28)	-
Jul	1.50	0.50	657.56	4.00	2,160.00	(2.50)	(1,502.44)	-
Aug	1.50	0.50	681.24	4.00	2,232.00	(2.50)	(1,550.76)	-
Sep	1.50	0.50	665.25	4.00	2,232.00	(2.50)	(1,566.75)	-
Oct	1.50	0.50	723.77	4.00	2,160.00	(2.50)	(1,436.23)	-
Nov	1.50	0.50	698.03	4.00	2,232.00	(2.50)	(1,533.97)	-
Dec	1.50	0.50	718.37	4.00	2,160.00	(2.50)	(1,441.63)	-
2025						-	-	
Jan	1.50	0.50	531.43	4.00	2,232.00	(2.50)	(1,700.57)	-
Feb	1.50	0.50	627.36	4.00	2,232.00	(2.50)	(1,604.64)	-
Mar	1.50	0.50	524.29	4.00	2,016.00	(2.50)	(1,491.71)	-
Apr	1.50	0.50	577.26	4.00	2,232.00	(2.50)	(1,654.74)	-
May	1.50	0.50	660.49	4.00	2,160.00	(2.50)	(1,499.51)	-
Jun	1.50	0.50	592.72	4.00	2,232.00	(2.50)	(1,639.28)	-
Jul	1.50	0.50	657.56	4.00	2,160.00	(2.50)	(1,502.44)	-
Aug	1.50	0.50	681.24	4.00	2,232.00	(2.50)	(1,550.76)	-
Sep	1.50	0.50	665.25	4.00	2,232.00	(2.50)	(1,566.75)	-

POWER SUPPLY PROCUREMENT PLAN

Oct	1.50	0.50	723.77	4.00	2,160.00	(2.50)	(1,436.23)	-
Nov	1.50	0.50	698.03	4.00	2,232.00	(2.50)	(1,533.97)	-
Dec	1.50	0.50	718.37	4.00	2,160.00	(2.50)	(1,441.63)	-
2026				-		-	-	
Jan	1.50	0.50	531.43	4.00	2,232.00	(2.50)	(1,700.57)	-
Feb	1.50	0.50	627.36	4.00	2,232.00	(2.50)	(1,604.64)	-
Mar	1.50	0.50	524.29		-	1.50	524.29	-
Apr	1.50	0.50	577.26		-	1.50	577.26	-
May	1.50	0.50	660.49		-	1.50	660.49	-
Jun	1.50	0.50	592.72		-	1.50	592.72	-
Jul	1.50	0.50	657.56		-	1.50	657.56	-
Aug	1.50	0.50	681.24		-	1.50	681.24	-
Sep	1.50	0.50	665.25		-	1.50	665.25	-
Oct	1.50	0.50	723.77		-	1.50	723.77	-
Nov	1.50	0.50	698.03		-	1.50	698.03	-
Dec	1.50	0.50	718.37		-	1.50	718.37	-
2027				-		-	-	
Jan	1.50	0.50	531.43		-	1.50	531.43	-
Feb	1.50	0.50	627.36		-	1.50	627.36	-
Mar	1.50	0.50	524.29		-	1.50	524.29	-
Apr	1.50	0.50	577.26		-	1.50	577.26	-
May	1.50	0.50	660.49		-	1.50	660.49	-
Jun	1.50	0.50	592.72		-	1.50	592.72	-
Jul	1.50	0.50	657.56		-	1.50	657.56	-
Aug	1.50	0.50	681.24		-	1.50	681.24	-
Sep	1.50	0.50	665.25		-	1.50	665.25	-
Oct	1.50	0.50	723.77		-	1.50	723.77	-
Nov	1.50	0.50	698.03		-	1.50	698.03	-
Dec	1.50	0.50	718.37		-	1.50	718.37	-
2028				-		-	-	
Jan	1.50	0.50	531.43		-	1.50	531.43	-
Feb	1.50	0.50	627.36		-	1.50	627.36	-
Mar	1.50	0.50	524.29		-	1.50	524.29	-
Apr	1.50	0.50	577.26		-	1.50	577.26	-
May	1.50	0.50	660.49		-	1.50	660.49	-
Jun	1.50	0.50	592.72		-	1.50	592.72	-
Jul	1.50	0.50	657.56		-	1.50	657.56	-
Aug	1.50	0.50	681.24		-	1.50	681.24	-
Sep	1.50	0.50	665.25		-	1.50	665.25	-
Oct	1.50	0.50	723.77		-	1.50	723.77	-
Nov	1.50	0.50	698.03		-	1.50	698.03	-
Dec	1.50	0.50	718.37		-	1.50	718.37	-