#### POWER SUPPLY PROCUREMENT PLAN

#### AGUSAN DEL SUR ELECTRIC COOPERATIVE INC.

#### 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 PSSP 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 or you may contact us through telephone numbers (02) 840-2173 and (02) 479-2900 local 202.

## **TABLE OF CONTENTS**

- I. Introduction
- II. Energy and Demand Forecast (10 year historical and forecast)
- III. Energy Sales and Purchase
- IV. Demand
- V. Daily Load Profile and Load Duration Curve
- VI. Existing Contracts & Existing GenCos due diligence report
- VII. DU's Current Supply and Demand
- VIII. Distribution Impact Study
- IX. Schedule of Power Supply Procurement
- X. Timeline of the CSP

#### **INTRODUCTION**

#### **DISTRIBUTION UTILITIES PROFILE**

ASELCO is a non-stock, non-profit electric cooperative. It was granted a franchise to distribute electricity in the city of Bayugan and the municipalites of Trento, Sta. Josefa, Veruela, Loreto, La Paz, Bunawan, Rosario, San Francisco, Prosperidad, Talacogon, San Luis, Esperanza, and Sibagat, all in the province of Agusan del Sur.

It is a consistent AAA electric cooperative. As of december 2018 its status of operation and performance are as follows:

- Total no. of billed consumers: 130,795
- Household energization level: 99.81%
- Peak Demand (NCP): 41.267 MW

- System Loss: 8.01%

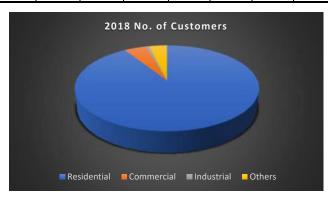
- Collection Efficiency: 98.68%

The cooperative is also one of the top performing electric cooperatives with respect to the implementation of SEP and BLEP programs of the National Electrification Administration (NEA).



Number of Customer Connections in	ACTUAL					FORE	CAST				
Franchise	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	119,045	126,144	132,974	139,318	145,243	150,800	156,034	160,981	165,672	170,132	174,383
Commercial	5,942	6,258	6,556	6,856	7,158	7,460	7,763	8,067	8,371	8,675	8,980
Industrial	931	977	1,027	1,082	1,143	1,210	1,283	1,362	1,446	1,537	1,633
Others	4,877	5,121	5,376	5,624	5,866	6,102	6,332	6,556	6,774	6,988	7,196
Contestable Customers served by RES											
Total (Captive Customers)											

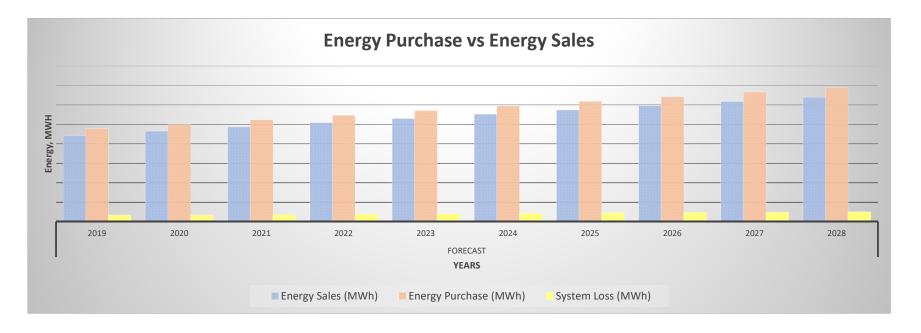
As shown in the chart, ASELCO's customers is highly residential. The massive implementation of Sitio Electrification Program (SEP), Barangay Line Enhancement Program (BLEP) and Nationwide Intensification of Household Electrification (NIHE) contributes a lot in the significant increase of residential customers. The entry of lots of convenience stores in the franchise area such as 7 Eleven helps increased the cooperatives kWh sales since these stores are operating 24 hours a day.



## **ENERGY SALES AND PURCHASE**

ENERGY SALES AND					HISTO	RICAL				
PURCHASE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	79,674.286	81,389.741	108,290.849	119,859.332	133,220.335	165,410.013	180,739.283	192,217.604	199,928.402	210,131.508
Energy Purchase (MWh)	92,732.609	94,159.162	121,419.866	134,160.364	149,102.323	181,645.950	198,279.627	210,647.877	216,785.651	228,420.544
System Loss (MWh)	12,816.986	12,769.421	13,129.017	14,301.032	15,881.988	16,235.937	17,540.345	18,425.833	16,857.249	18,289.036

ENERGY SALES AND					FORE	CAST				
PURCHASE	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	221,720.880	232,607.073	243,467.284	254,310.358	265,147.787	275,992.670	286,859.123	297,761.916	308,716.257	319,737.644
Energy Purchase (MWh)	238,790.488	249,768.781	261,643.610	273,499.440	285,348.953	297,206.600	309,087.951	321,009.295	332,987.402	345,039.362
System Loss (MWh)	17,069.608	17,161.708	18,176.326	19,189.082	20,201.166	21,213.930	22,228.828	23,247.379	24,271.145	25,301.718



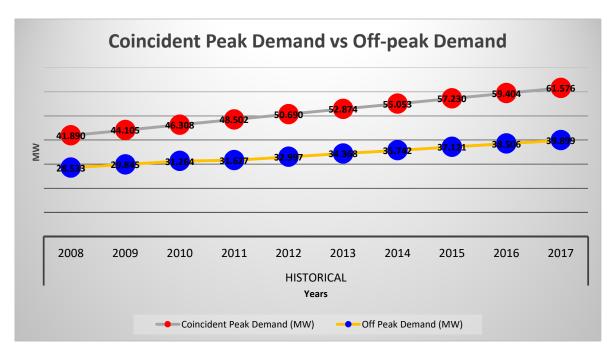
The bar graph shows that the energy requirement of the cooperative is steadily increasing. This is due to the coming in of big commercial and industrial customers and the continuing increase of energy requirements from residential customers. The cooperative is aiming to maintain a single digit system loss up to the year 2028.

\_ \_

### **DEMAND**

Demand		HISTORICAL											
Demand	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
Coincident Peak Demand (MW)	19.336	22.601	20.898	23.266	27.127	30.147	33.014	35.358	37.341	39.492			
Off Peak Demand (MW)	11.634	12.779	13.182	14.739	17.605	18.947	20.426	22.449	24.025	26.077			

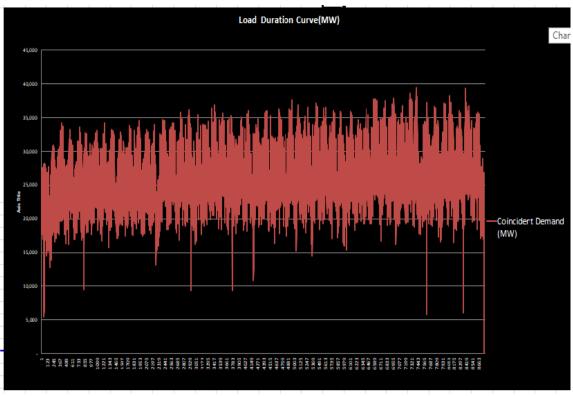
Domand		FORECAST												
Demand	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028				
Coincident Peak Demand (MW)	41.890	44.105	46.308	48.502	50.690	52.874	55.053	57.230	59.404	61.576				
Off Peak Demand (MW)	28.533	29.845	31.264	31.627	32.997	34.368	35.742	37.121	38.506	39.899				

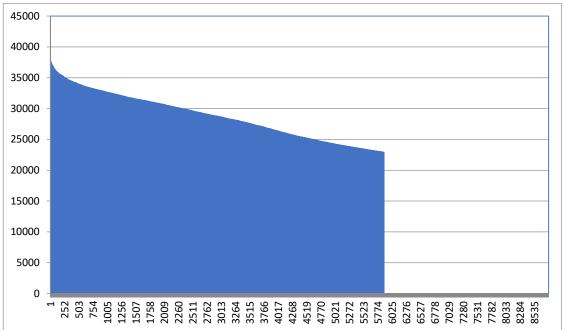


The historical data of the cooperative shows that the demand of the cooperative has increased significantly for the past ten years. Its demand from 2009 has increased by around 20 MW in the year 2019 or more, doubling its original value. This increase is brought about by the coming in of big industrial and commercial customers and also the significant increased in residential customer's demand due to the massive implementation of the Sitio Electrification Program (SEP) and Barangay Line Enhancement Program (BLEP) of the National Electrification Administration (NEA).

In forecasting the future coincidental peak demand of the cooperative, we choose from among the forecasting models as to which will yield a result which will best illustrate the future demands of the cooperative. It assumed that the significant increase of the demand will still be due to the coming in of additional big industrial and commercial customers and also the continuing implementation of SEP and BLEP projects with the addition of the Nationwide Intensification of Household Electrification (NIHE) program from the Department of Energy (DOE).

## LOAD PROFILE AND LOAD DURATION CURVE





The graph above illustrates the cooperative's base-load which is around 24 MW, the mid-merit is around 35 MW and the peak load reaches up to 39.49 MW. Based on the data, the coincidental peak demand is 39.49 MW and the contracted capacity is 43.3 MW which implies that the cooperative's contracted capacity is more than enough to accommodate the cooperative's deamnd.

#### MIX SUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL					FORECA	ST				
зирріу Demand	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Peak Demand, MW	39.492	41.890	44.105	46.308	48.502	50.690	52.874	55.053	57.230	59.404	61.576
Supply Contracted, MW	43.323	48.497	53.486	57.720	57.720	57.720	57.720	57.720	57.720	57.720	47.720
Therma South Incorporated (TSI)	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Sarangani Energy Corporation (SEC)	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
San Miguel Consolidated Power Corporation (SMCPC)	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	
Peak Power San Francisco Inc. (PSFI) Unit 1	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Peak Power San Francisco Inc. (PSFI) Expansion	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Power Sector Assets and Liabilities Management (PSALM)	3.323	3.497	3.486								
GN Power Kauswagan		5.000	10.000	17.720	17.720	17.720	17.720	17.720	17.720	17.720	17.720
Supply for PSA Approval, MW	0	0	0	0	0	0	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	0	0	1.683970949	13.85608



#### List of Existing Contracts and Details

Supply Contracted		Capacity Factor	(MM/YR)	PSA Expiration (MM/YR)	MW	Contracted Energy, MWH	Base / Mid- merit / Peaking	Grid Connected	Utility- owned/ NPC/ IPP/ NPC-IPP	Status	Fuel Type	Installed Capacity (MW)	(MW)
Therma South Incorporated (TSI)	Aboitiz Power Corporation		September 2015	September 2040	10.000	87,600.000	Base	Grid	IPP		Coal	300	300
Sarangani Energy Corporation (SEC)	Alsons Power Group		April 2016	April 2041	10.000	87,600.000	Base & Mid	Grid	IPP		Coal	100	100
San Miguel Consolidated Power Corporation (SMCPC)	San Miguel Consolidated Power		July 2017	July 2027	10.000	87,600.000	Base	Grid	IPP		Coal	300	300
Peak Power San Francisco Inc. (PSFI) Unit 1	Peakpower Energy Inc.		March 2015	March 2030	5.000	43,800.000	Peaking	Embedded	IPP		Diesel (Bunker)	5.2	5
Peak Power San Francisco Inc. (PSFI) Expansion	Peakpower Energy Inc.		January 2018	January 2033	5.000	43,800.000	Peaking	Embedded	IPP		Diesel (Bunker)	5.2	5
Power Sector Assets and Liabilities Management (PSALM)	NPC/PSALM		December 2017	December 2020	3.497	24,500.259	Base	Grid	NPC		Mixed	1,456.58	
GN Power Kauswagan	GNPower Ltd. Co.		June 2019	June 2039	17.720	155,227.200	Base	Grid	IPP		Coal	540	540

During the first year of operation of Therma South Incorporated (TSI), there were multiple of times its plant had an emergency/scheduled shutdowns bui in the succeeding years, number emergency/scheduled shutdowns decreased. Sarangani Energy Corporation (SEC) also had multiple of emergency/scheduled shutdowns during their first year of operation fortunately it had back-up power plants that served as replacement power to cater the power that SEC unable to supply. San Miguel Consolidated Power Corporation (SMCPC) has lesser emergency shutdowns compared to other contracted generators. PSFI unit 1 and 2 sometimes experienced minor problems but nevertheless has performed well and is able to supply when needed. PSALM performed well also since it can supply our contracted allocation and can also supply additional energy when needed. For optimal supply mix, the cooperative does a monthly Power Supply Analysis which we can determine the least to highest cost based on existing contracted generation companies through the variable rates. Then we prioritize the least cost generator in our power supply nomination to attain least electricity cost to be charged to our consumers. Based on our analysis, our contracted Coal Fired Power Plants has lesser variable rates than Diesel Power Plants so the SMCPC, TSI, SEC, PSALM will be the cooperative's base-load and mid-merit power generators and PSFI 1 & 2 for peaking loads. Sometimes Coal Fired Power Plants will supply also for peaking hours if the total capacity of these plants could supply the total demand of the Cooperative.

## DISTRIBUTION IMPACT STUDY

The cooperative adopted in its Distribution Development Plan the perspectives that will address issues on safety, capacity, reliability, power quality, efficiency and customer service. Using the cooperatives historical data, the cooperative forecasted that its coincident peak demand will reach to 61,576 kW in the year 2028. We the cooperatives' substation capacity of 45 MVA plus privately owned substation capacity of 20 MVA, the cooperative plans to include in its new capital expenditure project application the upgrading of its existing 10 MVA Bayugan substation to 20 MVA Substation in order to cater the forecasted load growth of the cooperative. Power quality problems experienced in parts of the Municipality of Rosario will be addressed with the installation of 5 MVA which is expected to be energized on this coming October 2019. The cooperative were able to identify the parts of its coverage area where power quality problems were experienced. Thus, the cooperative included in its capital expenditure projects the projects that will solve the problems that were identified.

# **SCHEDULE OF CSP**

	For	CSP	Proposed	l contract			Propose	ed schedule (	MM/YYYY)				
Base / mid- merit / peaking	Demand (MW)	Energy (MWh)	Start Month and Year	End Month and Year	Publication of Invitation to Bid	Pre-bid	Submission and Opening of Bids	Bid Evaluation	Awarding	PSA Signing	Joint Application to ERC		
The cooperat	tive sees no a	dditonal pow	er supply req	uirement unt	il 2028 since	the available	contracted er	nergy for the	year 2028 ca	n still cater th	e energy		
requirement	requirement of the cooperative. Therefore, there is no need for the cooperative to conduct CSP for the moment.												

# 10 Year Monthly Data

		Forecas	t	Approva	ed and For PSA I Demand and Energy	Uncontract	ed Demand and Energy	Committe	ed for CSP
Year	Coincident Peak Demand (MW)	Off Peak Demand (MW)	Energy Requirement (MWh)	Demand (MW)	Energy (MWh)	Uncontracted Demand (MW)	Uncontracted Energy (MWh)	Demand (MW)	Energy (MWh)
2019									
Jan	36.246	24.037	17,883.879	43.813	32,029.351	0	0	0	0
Feb	36.238	27.428	19,089.952	43.727	31,978.316	0	0	0	0
Mar	36.664	23.440	17,439.156	43.752	28,897.015	0	0	0	0
Apr	37.922	28.113	20,241.261	42.979	31,533.051	0	0	0	0
May	39.142	26.855	19,979.954	48.107	30,589.569	0	0	0	0
Jun	38.201	27.444	19,759.834	47.920	35,217.865	0	0	0	0
Jul	39.916	26.670	19,842.225	47.432	33,800.641	0	0	0	0
Aug	39.331	28.163	20,953.109	48.259	35,419.838	0	0	0	0
Sep	40.097	28.120	20,246.677	48.943	35,826.850	0	0	0	0
Oct	40.913	28.140	20,936.060	48.793	34,584.572	0	0	0	0
Nov	41.890	28.533	20,544.081	48.968	35,842.049	0	0	0	0
Dec	41.768	29.401	21,874.300	49.273	34,861.142	0	0	0	0
2020									
Jan	38.162	25.143	18,706.083	53.965	39,560.228	0	0	0	0
Feb	38.154	28.689	19,967.605	53.467	39,263.743	0	0	0	0
Mar	38.601	24.517	18,240.913	53.760	36,893.633	0	0	0	0
Apr	39.927	29.405	21,171.845	53.070	39,027.286	0	0	0	0
May	41.211	28.089	20,898.524	53.014	37,735.874	0	0	0	0
Jun	40.220	28.706	20,668.284	52.840	38,890.230	0	0	0	0
Jul	42.026	27.896	20,754.463	53.060	37,762.715	0	0	0	0
Aug	41.409	29.458	21,916.419	52.634	38,767.729	0	0	0	0
Sep		29.413	21,177.510	53.837	39,483.571	0	0	0	0
Oct	43.076	29.434	21,898.587	53.907	38,250.441	0	0	0	0
Nov	44.105	29.845	21,488.586	53.985	39,572.139	0	0	0	0
Dec	43.976	30.753	22,879.962	54.290	38,471.243	0	0	0	0
2021	101010				55, 11 212 15		-		
Jan	40.068	26.338	19,595.432	57.720	42,943.680	0	0	0	0
Feb	40.059	30.053	20,916.930	57.720	42,943.680	0	0	0	0
Mar	40.529	25.683	19,108.146	57.720	40,173.120	0	0	0	0
Apr	41.921	30.803	22,178.424	57.720	42,943.680	0	0	0	0
May	43.269	29.425	21,892.109	57.720	41,558.400	0	0	0	0
Jun	42.229	30.071	21,650.922	57.720	42,943.680	0	0	0	0
Jul	44.125	29.222	21,741.199	57.720	41,558.400	0	0	0	0
Aug		30.858	22,958.398	57.720	42,943.680	0	0	0	0
Sep	44.325	30.812	22,184.358	57.720	42,943.680	0	0	0	0
Oct	45.227	30.833	22,939.718	57.720	41,558.400	0	0	0	0
Nov	46.308	31.264	22,510.224	57.720	42,943.680	0	0	0	0
Dec	46.173	32.215	23,967.751	57.720	41,558.400	0	0	0	0
2022	70.173	52.213	25,507.751	37.720	.1,555.400		<u> </u>		
Jan	41.967	27.531	20,483.358	57.720	42,943.680	0	0	0	0
Feb		29.388	20,483.338	57.720	42,943.680	0	0	0	0
Mar	42.450	29.723	19,973.992	57.720	40,173.120	0	0	0	0
Apr	43.907	31.160	23,183.392	57.720	42,943.680	0	0	0	0
May	45.320	31.783	22,884.104	57.720	41,558.400	0	0	0	0
Jun	44.231	30.419	22,631.988	57.720	42,943.680	0	0	0	0
Jul	46.216	31.564	22,726.355	57.720	41,558.400	0	0	0	0
-	45.538	32.256	23,998.709	57.720	42,943.680	0	0	0	0
Aug		31.169	23,998.709	57.720	42,943.680	0	0	0	0
Sep Oct		33.304	23,189.596	57.720	41,558.400	0		0	0
Uct	4/.3/1	oo.504	23,979.183	57.720	41,558.400	U	0	U	U

### POWER SUPPLY PROCUREMENT PLAN

Nov	48.502	31.627	23,530.228	57.720	42,943.680	0	0	0	0
Dec	48.361	34.797	25,053.799	57.720	41,558.400	0	0	0	0
2023									
Jan	43.860	28.724	21,370.810	57.720	42,943.680	0	0	0	0
Feb	43.851	30.661	22,812.039	57.720	42,943.680	0	0	0	0
Mar	44.365	31.011	20,839.376	57.720	40,173.120	0	0	0	0
Apr	45.888	32.511	24,187.825	57.720	42,943.680	0	0	0	0
May	47.364	33.161	23,875.570	57.720	41,558.400	0	0	0	0
Jun	46.226	31.737	23,612.531	57.720	42,943.680	0	0	0	0
Jul	48.301	32.932	23,710.987	57.720	41,558.400	0	0	0	0
Aug	47.593	33.654	25,038.467	57.720	42,943.680	0	0	0	0
Sep	48.520	32.519	24,194.297	57.720	42,943.680	0	0	0	0
						0	0		0
Oct	49.508	34.747	25,018.094	57.720	41,558.400			0	
Nov	50.690	32.997	24,549.687	57.720	42,943.680	0	0	0	0
Dec	50.543	36.305	26,139.268	57.720	41,558.400	0	0	0	0
2024									
Jan	45.749	29.918	22,258.872	57.720	42,943.680	0	0	0	0
Feb	45.740	31.935	23,759.991	57.720	42,943.680	0	0	0	0
Mar	46.276	31.186	21,705.354	57.720	40,173.120	0	0	0	0
Apr	47.865	33.861	25,192.948	57.720	42,943.680	0	0	0	0
May	49.404	34.538	24,867.717	57.720	41,558.400	0	0	0	0
Jun	48.217	33.056	24,593.748	57.720	42,943.680	0	0	0	0
Jul	50.381	34.300	24,696.295	57.720	41,558.400	0	0	0	0
Aug	49.643	35.052	26,078.938	57.720	42,943.680	0	0	0	0
Sep	50.610	33.871	25,199.689	57.720	42,943.680	0	0	0	0
Oct	51.640	36.191	26,057.718	57.720	41,558.400	0	0	0	0
Nov	52.874	34.368	25,569.847	57.720	42,943.680	0	0	0	0
Dec	52.720	37.813	27,225.483	57.720	41,558.400	0	0	0	0
2025	32.720	37.013	27,223.463	37.720	41,336.400	0	U	0	U
<b>-</b>	47.625	24.44.4	22.440.700	F7 720	42.042.600	0	0		
Jan	47.635	31.114	23,148.709	57.720	42,943.680	0	0	0	0
Feb	47.625	33.212	24,709.838	57.720	42,943.680	0	0	0	0
Mar	48.184	33.591	22,573.063	57.720	40,173.120	0	0	0	0
Apr	49.838	35.215	26,200.080	57.720	42,943.680	0	0	0	0
May	51.441	35.919	25,861.847	57.720	41,558.400	0	0	0	0
Jun	50.205	34.378	25,576.926	57.720	42,943.680	0	0	0	0
Jul	52.458	35.672	25,683.572	57.720	41,558.400	0	0	0	0
Aug	51.689	36.454	27,121.488	57.720	42,943.680	0	0	0	0
Sep	52.696	35.225	26,207.090	57.720	42,943.680	0	0	0	0
Oct	53.769	37.638	27,099.421	57.720	41,558.400	0	0	0	0
Nov	55.053	35.742	26,592.046	57.720	42,943.680	0	0	0	0
Dec	54.893	39.325	28,313.869	57.720	41,558.400	0	0	0	0
2026									
Jan	49.518	32.314	24,041.542	57.720	42,943.680	0	0	0	0
Feb	49.508	34.493	25,662.882	57.720	42,943.680	0	0	0	0
Mar	50.089	34.886	23,443.694	57.720	40,173.120	0	0	0	0
Apr	51.808	36.573	27,210.602	57.720	42,943.680	0	0	0	0
May	53.475	37.305	26,859.324	57.720	41,558.400	0	0	0	0
	52.190	35.704	26,563.413	57.720	42,943.680	0	0	0	0
Jun									
Jul	54.532	37.047	26,674.173	57.720	41,558.400	0	0	0	0
Aug	53.733	37.860	28,167.549	57.720	42,943.680	0	0	0	0
Sep	54.780	36.583	27,217.883	57.720	42,943.680	0	0	0	0
Oct	55.895	39.090	28,144.630	57.720	41,558.400	0	0	0	0
Nov	57.230	37.121	27,617.686	57.720	42,943.680	0	0	0	0
Dec	57.063	40.842	29,405.919	57.720	41,558.400	0	0	0	0
2027								<u> </u>	
Jan	51.400	33.520	24,938.625	57.720	42,943.680	0	0	0	0
Feb	51.389	35.780	26,620.464	57.720	42,943.680	0	0	0	0
Mar	51.992	36.188	24,318.469	57.720	40,173.120	0	0	0	0
Apr	53.776	37.938	28,225.936	57.720	42,943.680	0	0	0	0
۱ ۱۲۰۱	33.773	_ , .555	_5,5.555	20	,5 .5.555	•	<u> </u>		

## POWER SUPPLY PROCUREMENT PLAN

May	55.506	38.697	27,861.550	57.720	41,558.400	0	0	0	0
Jun	54.172	37.036	27,554.597	57.720	42,943.680	0	0	0	0
Jul	56.604	38.430	27,669.490	57.720	41,558.400	0	0	0	0
Aug	55.774	39.272	29,218.590	47.720	35,503.680	8.05	0	0	0
Sep	56.861	37.948	28,233.488	47.720	35,503.680	9.14	0	0	0
Oct	58.018	40.548	29,194.816	47.720	34,358.400	10.30	0	0	0
Nov	59.404	38.506	28,648.210	47.720	35,503.680	11.68	0	0	0
Dec	59.231	42.366	30,503.168	47.720	34,358.400	11.51	0	0	0
2028									
Jan	53.279	34.733	25,841.240	47.720	35,503.680	5.56	0	0	0
Feb	53.268	37.075	27,583.950	47.720	35,503.680	5.55	0	0	0
Mar	53.893	36.205	25,198.638	47.720	33,213.120	6.17	0	0	0
Apr	55.743	39.311	29,247.529	47.720	35,503.680	8.02	0	0	0
May	57.536	40.097	28,869.955	47.720	34,358.400	9.82	0	0	0
Jun	56.153	38.376	28,551.893	47.720	35,503.680	8.43	0	0	0
Jul	58.674	39.821	28,670.944	47.720	34,358.400	10.95	0	0	0
Aug	57.813	40.694	30,276.111	47.720	35,503.680	10.09	0	0	0
Sep	58.940	39.322	29,255.355	47.720	35,503.680	11.22	0	0	0
Oct	60.140	42.016	30,251.477	47.720	34,358.400	12.42	0	0	0
Nov	61.576	39.899	29,685.087	47.720	35,503.680	13.86	0	0	0
Dec	61.397	43.899	31,607.183	47.720	34,358.400	13.68	0	0	0