

CLARK ELECTRIC DISTRIBUTION CORPORATION
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.

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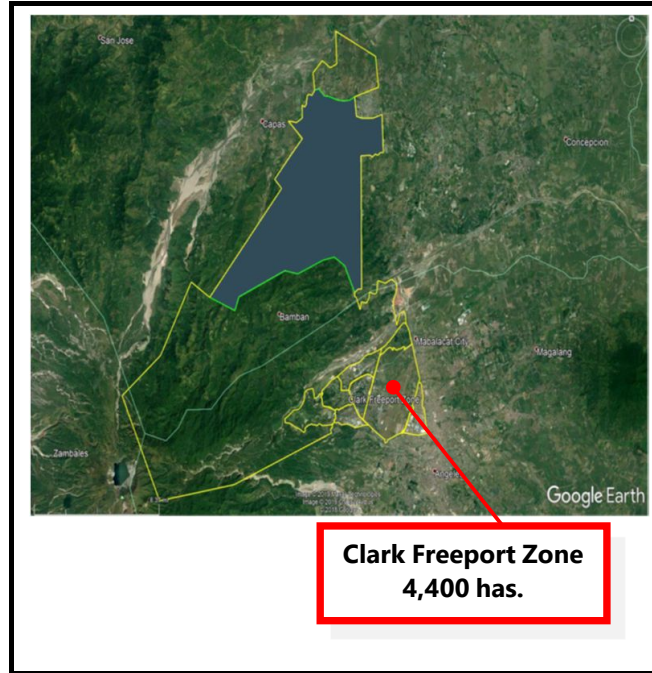
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INTRODUCTION

CLARK ELECTRIC DISTRIBUTION CORPORATION'S PROFILE

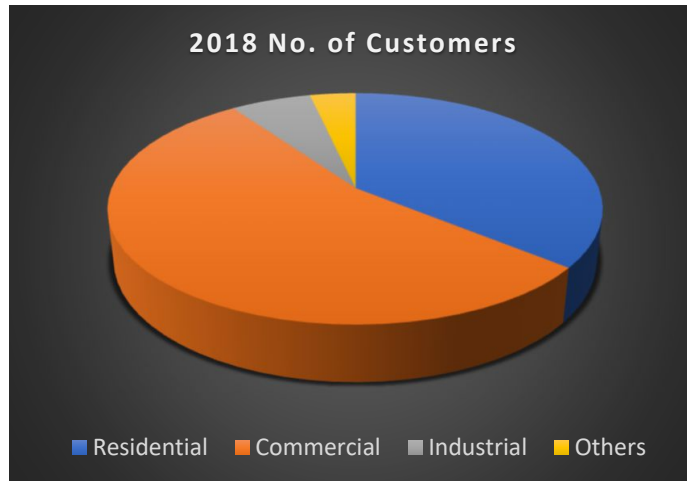
Clark Electric (CEDC) is a registered private distribution utility with a franchise granted by CDC, to own, operate and maintain a power distribution system and to distribute power exclusively within its franchise area - Clark Special Economic Zone (CSEZ) as determined pursuant to Presidential Decree No. 66 (1972), as amended and the JVA executed between CDC and MIESCOR.

DU's Franchise MAP



Number of Customer	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	812	841	874	909	946	984	1023	1064	1107	1151	1197
Commercial	1230	1278	1322	1369	1416	1467	1525	1586	1651	1718	1788
Industrial	141	146	144	145	149	151	154	162	169	178	185
Others	80	83	86	90	93	97	101	105	109	113	118
Contestable C	19	25	42	54	66	78	85	87	88	89	91
Total (Captive	2263	2348	2426	2513	2604	2699	2803	2917	3036	3160	3288

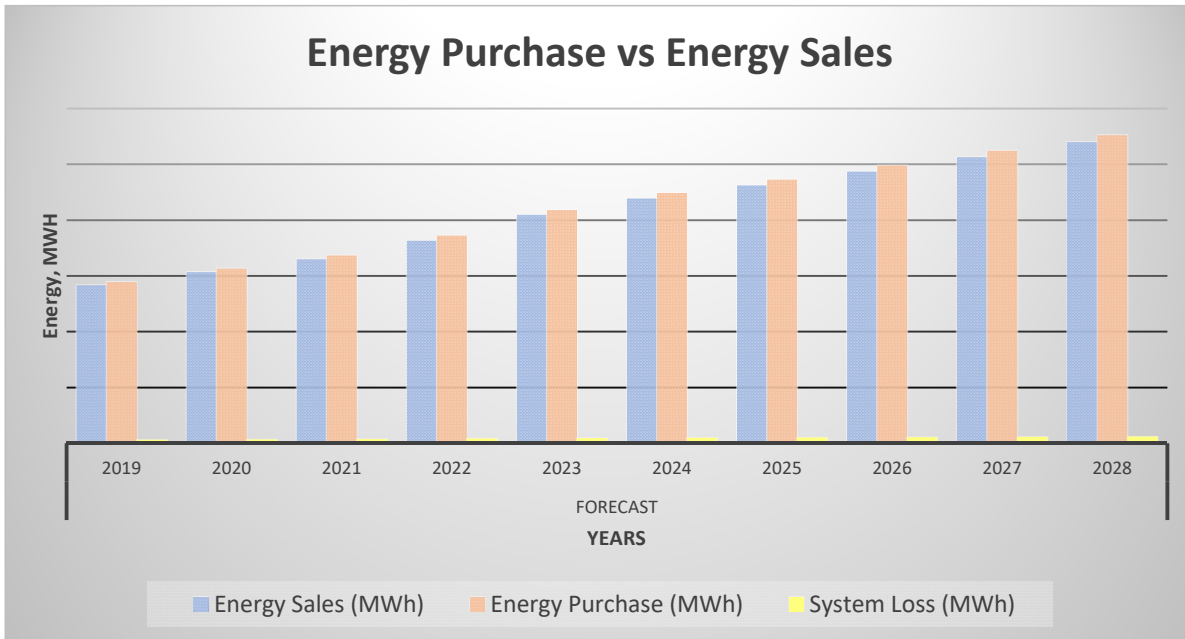
The increase in demand were mainly due to the increase in consumption of 69kV loads and 13.8kV loads. In addition, entry of big loads were expected to be energized in the coming years.



ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
Energy Purchase (MWh)	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
System Loss (MWh)	9,695	10,749	11,499	11,691	17,408	20,266	21,263	20,826	12,581	15,021

ENERGY SALES AND PURCHASE	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
Energy Purchase (MWh)	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
System Loss (MWh)	12,319	13,384	14,524	17,526	18,055	19,731	20,803	21,933	23,124	24,378

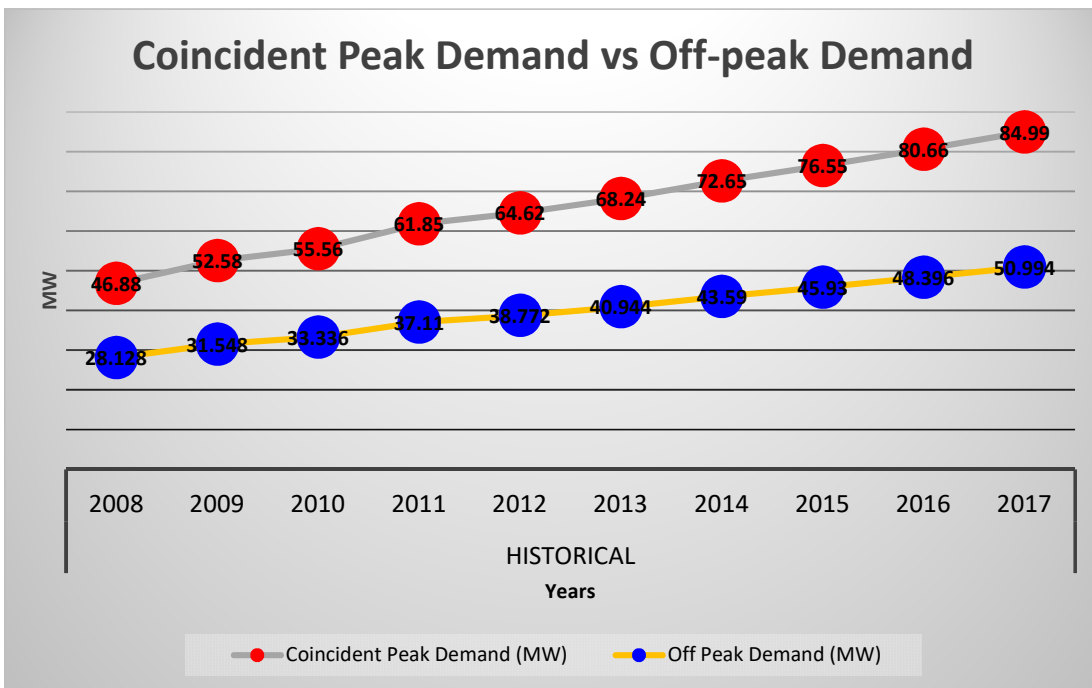


CEDC forecasted separately the 69 kV bulk load of TNSCI and YTPI based from their requirement. The 13.8kV loads have been divided according to customer class to come up with the historical growth rate and adopted 2.11% for residential, 2.09% for small commercial, 3% Commercial Industrial Secondary, 2.23% Commercial Industrial Primary. CEDC adopted the historical growth rate in order to forecast the CEDC’s load growth from 2019 to 2028 thereafter, the identified 13.8 kV and 69 kV spot loads were added to come up with the forecasted Energy Sales and Purchase.

DEMAND

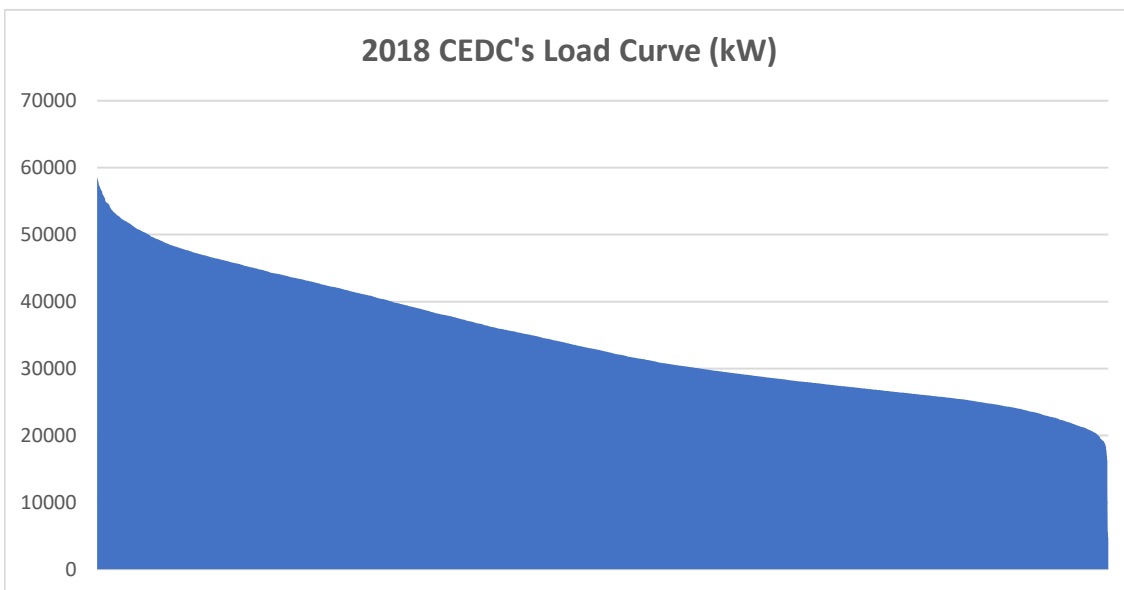
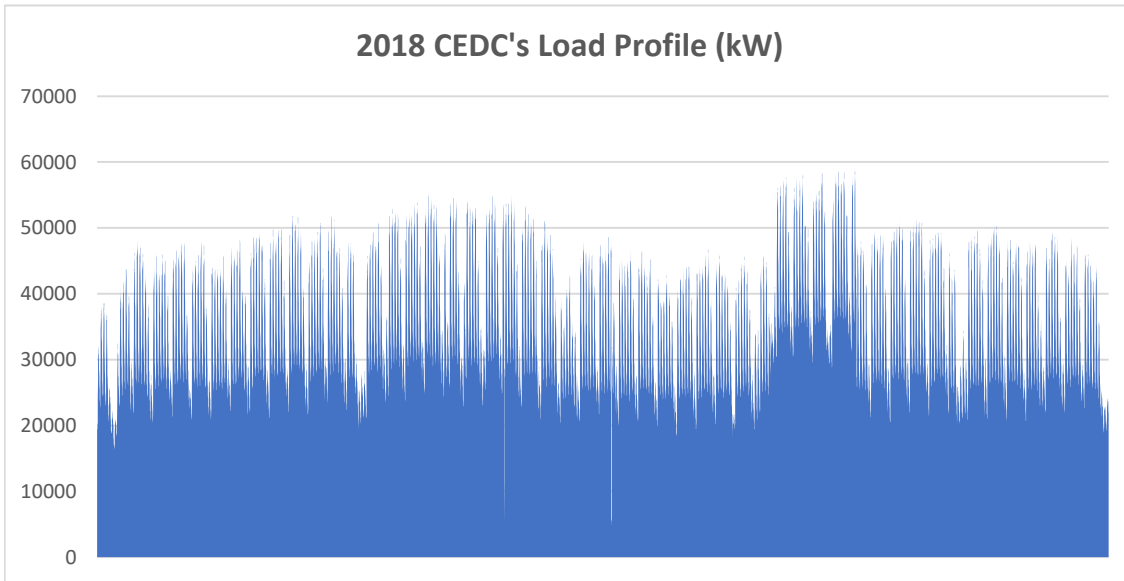
Demand	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coincident Peak Demand (MW)	44.58	50.06	51.24	55.27	65.37	74.08	79.07	84.43	69.17	54.88
Off Peak Demand (MW)	26.75	30.04	30.74	33.16	39.22	44.45	47.44	50.66	42.81	33.06

Demand	HISTORICAL									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Coincident Peak Demand (MW)	46.88	52.58	55.56	61.85	64.62	68.24	72.65	76.55	80.66	84.99
Off Peak Demand (MW)	28.13	31.55	33.34	37.11	38.77	40.94	43.59	45.93	48.4	50.99



Big developments inside Clark Freeport Zone are expected to be energized in the coming years and these include Clark Global City, Filinvest Mimosa, D'Heights Corporation Resort, Manila - Clark Railway and expansion of Clark International Airport.

LOAD PROFILE AND LOAD DURATION CURVE

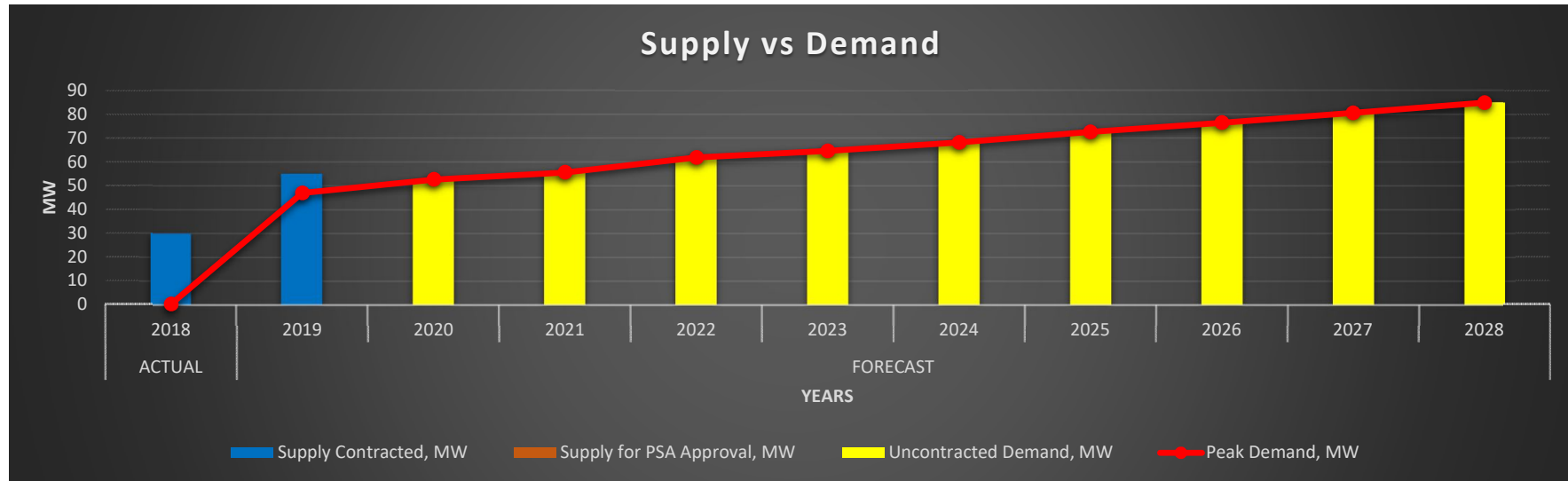


CEDC's annual peak demand usually occurs in June. Data provided are 2018 Load Profile and Load Duration Curve of CEDC Captive Market.

It was clearly shown in the graph that CEDC's requirement for 2018 under baseload, mid-merit and peaking are 25MW, 15MW and a peaking of 5MW respectively. However, the growth in the demand and the implementation of RCOA and other DOE rules relating to the decline in the captive customer requirement shall be considered in determining the future loads.

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		46.88	52.58	55.56	61.85	64.62	68.24	72.65	76.55	80.66	84.99
Supply Contracted, MW	30	55	0	0	0	0	0	0	0	0	0
SMEC - Sual Unit 1	30	30									
SPDC - San Roque		25									
Supply for PSA Approval, MW	0	0	0	0	0	0	0	0	0	0	0
Uncontracted Demand, MW	0	0	52.58	55.56	61.85	64.62	68.24	72.65	76.55	80.66	84.99



POWER SUPPLY PROCUREMENT PLAN

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)
Sual 1	SMEC	90.83%	03/13	12/19	30	n/a	Base	Grid connected	IPP	Online	Coal-fired	617	600
San Roque	SPDC	100%	06/19	12/19	25	n/a	Mid-merit	Grid connected	IPP	Online	Hydro	345	345

San Miguel Energy Corporation (SMEC) is the Independent Power Producer Administrator of the Sual Coal Fired Thermal Power Plant. As of 2018, the contracted capacity from Sual Unit 1 plant was at 30MW, which was originally at 70MW and was lowered due to the switching of eligible customers to the contestable market (implementation of RCOA).

On 26 June 2019, the CEDC-SPDC PSA was implemented. The contracted capacity was at 20MW (firm) and 5MW (non-firm) which runs from Mondays to Saturdays (excluding holidays) on trading intervals 10H to 21H.

DISTRIBUTION IMPACT STUDY

Embedded generators of CEDC had undergone distribution impact studies, in compliance with the requirements set forth in the Philippine Grid Code and Philippine Distribution Code.

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	47.55			30.00		17.55			
Feb	48.31			30.00		18.31			
Mar	54.78			30.00		24.78			
Apr	57.55			30.00		27.55			
May	58.88			30.00		28.88			
Jun	57.63			30.00		27.63			
Jul	52.71			55.00		(2.29)			
Aug	51.94			55.00		(3.06)			
Sep	53.66			55.00		(1.34)			
Oct	52.35			55.00		(2.65)			
Nov	53.31			55.00		(1.69)			
Dec	53.00			55.00		(2.00)			
2020									
Jan	49.93					(5.07)		55.00	
Feb	50.72					(4.28)		55.00	
Mar	57.52					2.52		55.00	
Apr	60.43					5.43		55.00	
May	61.82					6.82		55.00	
Jun	60.51					5.51		55.00	
Jul	55.35					0.35		55.00	
Aug	54.53					(0.47)		55.00	
Sep	56.34					1.34		55.00	
Oct	54.97					(0.03)		55.00	
Nov	55.97					0.97		55.00	
Dec	55.65					0.65		55.00	
2021									
Jan	52.20			0.00		(2.80)		55.00	
Feb	48.72			0.00		(6.28)		55.00	
Mar	57.71			0.00		2.71		55.00	
Apr	58.15			0.00		3.15		55.00	
May	62.51			0.00		7.51		55.00	
Jun	59.82			0.00		4.82		55.00	
Jul	55.05			0.00		0.05		55.00	
Aug	59.10			0.00		4.10		55.00	
Sep	58.83			0.00		3.83		55.00	
Oct	57.19			0.00		2.19		55.00	
Nov	57.65			0.00		2.65		55.00	
Dec	57.82			0.00		2.82		55.00	
2022									
Jan	59.46			0.00		4.46		55.00	
Feb	52.91			0.00		(2.09)		55.00	
Mar	61.04			0.00		6.04		55.00	
Apr	66.70			0.00		11.70		55.00	

POWER SUPPLY PROCUREMENT PLAN

May	66.02			0.00		11.02		55.00	
Jun	65.75			0.00		10.75		55.00	
Jul	59.72			0.00		4.72		55.00	
Aug	63.38			0.00		8.38		55.00	
Sep	63.38			0.00		8.38		55.00	
Oct	62.51			0.00		7.51		55.00	
Nov	63.05			0.00		8.05		55.00	
Dec	63.55			0.00		8.55		55.00	
2023									
Jan	60.49			0.00		5.49		55.00	
Feb	64.27			0.00		9.27		55.00	
Mar	61.81			0.00		6.81		55.00	
Apr	70.98			0.00		15.98		55.00	
May	71.64			0.00		16.64		55.00	
Jun	73.08			0.00		18.08		55.00	
Jul	72.45			0.00		17.45		55.00	
Aug	70.96			0.00		15.96		55.00	
Sep	70.95			0.00		15.95		55.00	
Oct	69.44			0.00		14.44		55.00	
Nov	68.19			0.00		13.19		55.00	
Dec	70.69			0.00		15.69		55.00	
2024									
Jan	63.75			0.00		8.75		55.00	
Feb	67.73			0.00		12.73		55.00	
Mar	65.13			0.00		10.13		55.00	
Apr	74.80			0.00		19.80		55.00	
May	75.49			0.00		20.49		55.00	
Jun	77.01			0.00		22.01		55.00	
Jul	76.35			0.00		21.35		55.00	
Aug	74.77			0.00		19.77		55.00	
Sep	74.77			0.00		19.77		55.00	
Oct	73.18			0.00		18.18		55.00	
Nov	71.85			0.00		16.85		55.00	
Dec	74.49			0.00		19.49		55.00	
2025									
Jan	65.27			0.00		65.27			
Feb	69.35			0.00		69.35			
Mar	66.69			0.00		66.69			
Apr	76.58			0.00		76.58			
May	77.29			0.00		77.29			
Jun	78.85			0.00		78.85			
Jul	78.17			0.00		78.17			
Aug	76.56			0.00		76.56			
Sep	76.55			0.00		76.55			
Oct	74.93			0.00		74.93			
Nov	73.57			0.00		73.57			
Dec	76.27			0.00		76.27			
2026									
Jan	68.77			0.00		68.77			
Feb	73.07			0.00		73.07			
Mar	70.27			0.00		70.27			
Apr	80.70			0.00		80.70			
May	81.44			0.00		81.44			

POWER SUPPLY PROCUREMENT PLAN

Jun	83.08			0.00		83.08			
Jul	82.37			0.00		82.37			
Aug	80.67			0.00		80.67			
Sep	80.66			0.00		80.66			
Oct	78.95			0.00		78.95			
Nov	77.52			0.00		77.52			
Dec	80.37			0.00		80.37			
2027									
Jan	72.47			0.00		72.47			
Feb	76.99			0.00		76.99			
Mar	74.04			0.00		74.04			
Apr	85.03			0.00		85.03			
May	85.82			0.00		85.82			
Jun	87.54			0.00		87.54			
Jul	86.79			0.00		86.79			
Aug	85.00			0.00		85.00			
Sep	84.99			0.00		84.99			
Oct	83.19			0.00		83.19			
Nov	81.68			0.00		81.68			
Dec	84.68			0.00		84.68			
2028									
Jan	73.92			0.00		73.92			
Feb	78.53			0.00		78.53			
Mar	75.52			0.00		75.52			
Apr	86.73			0.00		86.73			
May	87.53			0.00		87.53			
Jun	89.29			0.00		89.29			
Jul	88.53			0.00		88.53			
Aug	86.70			0.00		86.70			
Sep	86.69			0.00		86.69			
Oct	84.85			0.00		84.85			
Nov	83.31			0.00		83.31			
Dec	86.37			0.00		86.37			