

POWER SUPPLY PROCUREMENT PLAN

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 PSPP shall be consistent with the DDP. The tables and graph format to be used 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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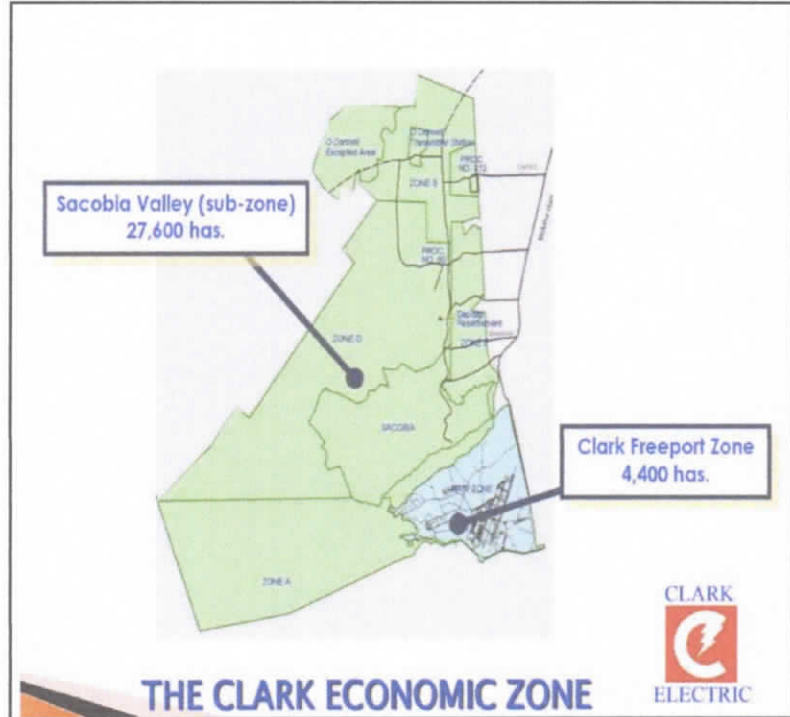
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INTRODUCTION

CLARK ELECTRIC DISTRIBUTION CORPORATION'S PROFILE

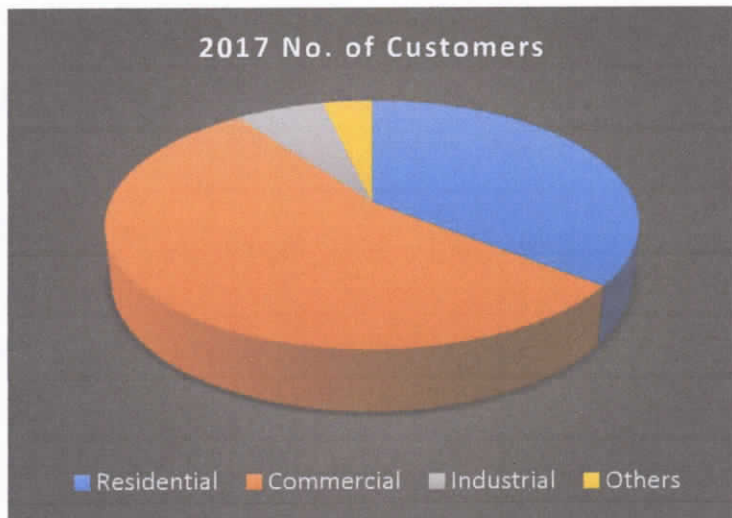
Clark Electric (CEDC) is a registered private distribution utility with a franchise granted by CDC, to own, operate and maintain a power distribution system and to distribute power exclusively within its franchise area – Clark Special Economic Zone (CSEZ) as determined pursuant to Presidential Decree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

Clark Electric Distribution Corporation's Franchise MAP



Number of Customer Connections in	ACTUAL		FORECAST								
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential	762	788	816	844	873	903	935	967	1000	1035	1071
Commercial	1160	1190	1232	1275	1320	1366	1413	1463	1514	1567	1621
Industrial	136	132	137	143	148	154	160	166	173	179	186
Others	75	78	80	83	86	89	92	95	98	102	105
Contestable Customers served by RES	12	19	19	19	19	19	19	19	19	19	19
Total (Captive Customers)	2133	2188	2265	2345	2427	2512	2600	2691	2785	2883	2983

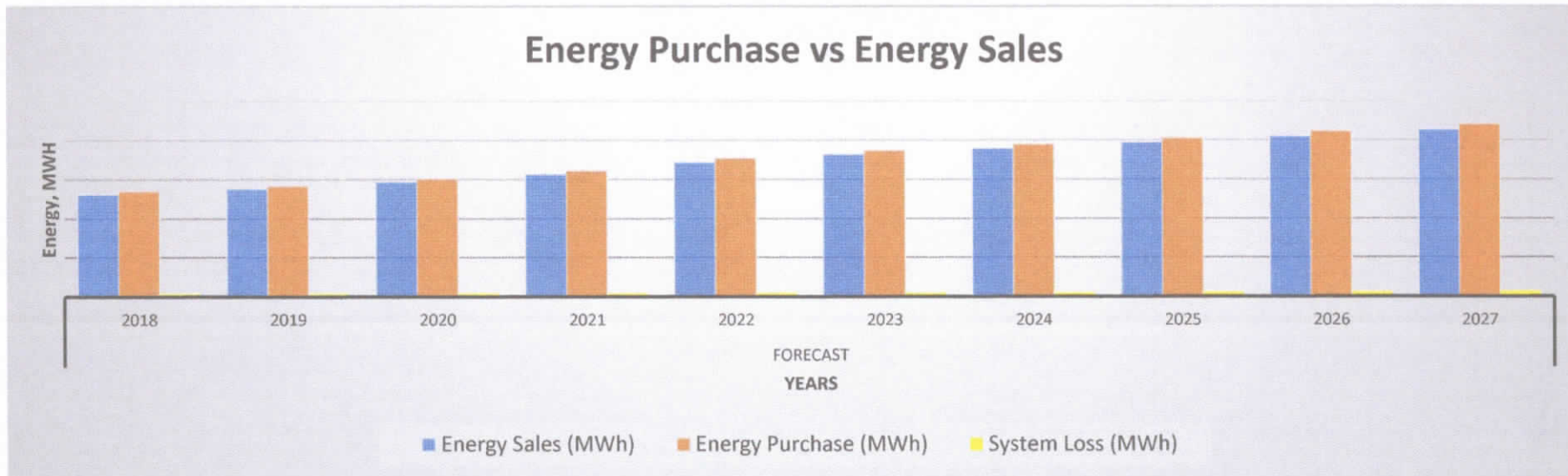
Load growth is expected to be driven mainly by 69 kV and 13.8 kV loads.



ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Energy Sales (MWh)	250,035	241,304	271,526	278,672	299,930	379,847	437,037	509,254	559,540	574,599
Energy Purchase (MWh)	262,802	251,285	282,219	290,171	311,621	402,022	464,027	539,802	589,106	588,800
System Loss (MWh)	12,793	9,981	10,749	11,499	11,691	17,408	20,266	21,263	20,826	12,581

ENERGY SALES AND PURCHASE	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Energy Sales (MWh)	524,061	551,543	587,479	626,592	687,602	727,886	757,217	787,731	819,475	852,497
Energy Purchase (MWh)	539,842	567,299	604,523	644,593	707,683	748,659	779,709	812,083	845,842	881,048
System Loss (MWh)	15,780	15,756	17,045	18,001	20,081	20,773	22,491	24,352	26,368	28,551

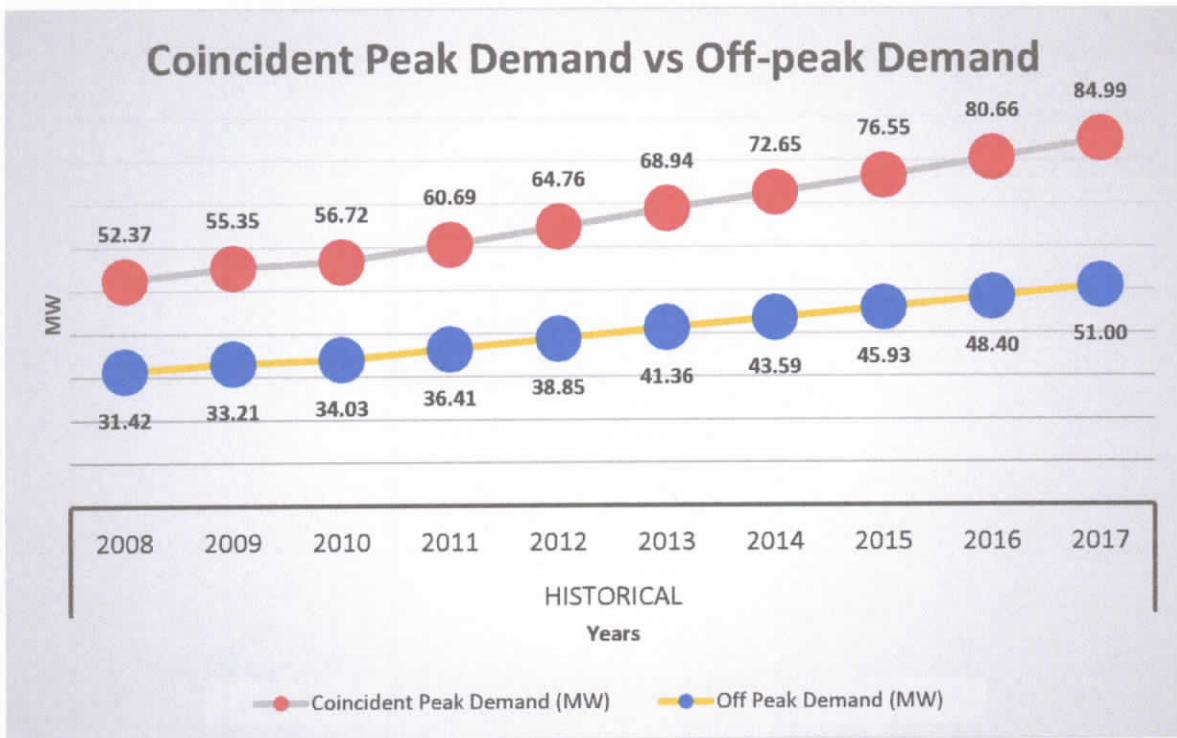


CEDC forecasted separately the 69 kV bulk load of Taiyo Nippon Sanso Clark Inc. (TNSCI) and Yokohama Tires Philippines Inc. (YTPI). The 13.8kV loads has been divided according to customer class to compute the historical growth rate and adopted 2.11% for residential, 2.09% for small commercial, 3% Commercial Industrial Secondary, 2.23% Commercial Industrial Primary. CEDC adopted the historical growth rate in order to forecast the CEDC's load growth from 2017 to 2026 thereafter, the identified 13.8 kV and 69 kV spot loads were added to come up with the forecasted Energy Sales and Purchase.

DEMAND

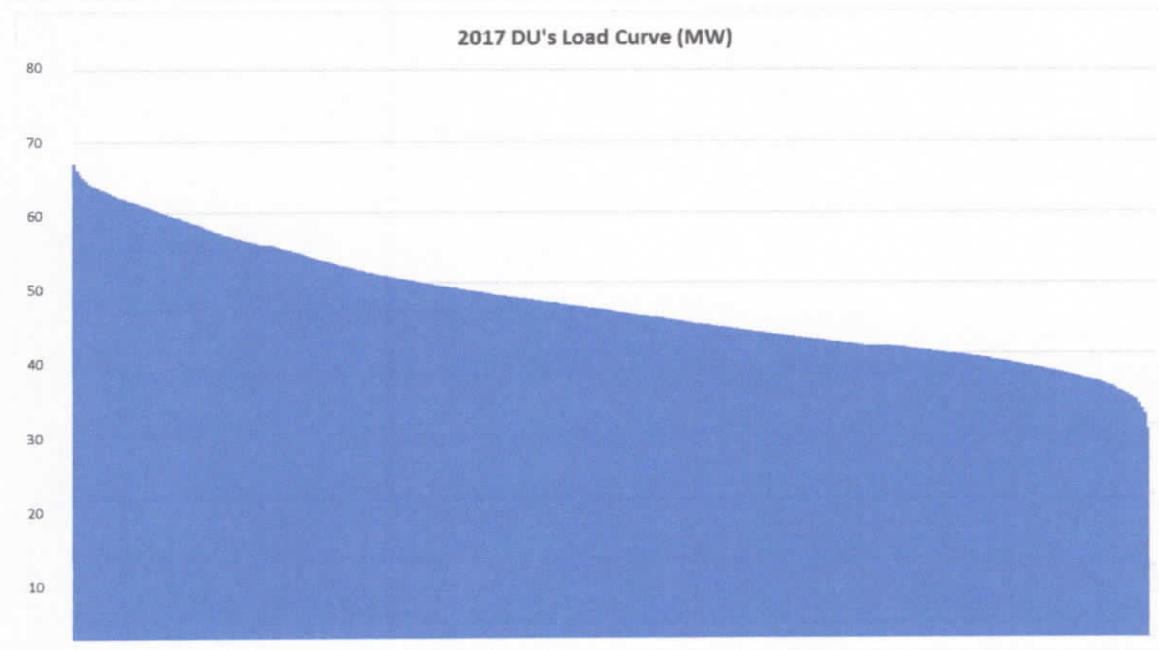
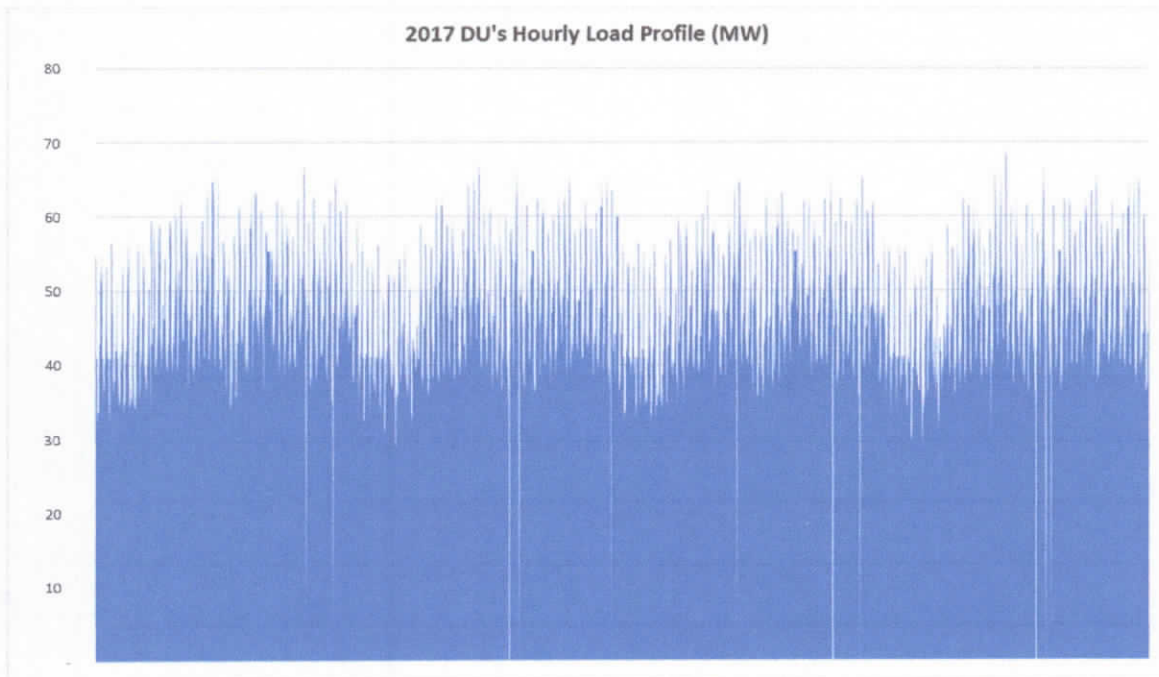
Demand	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Coincident Peak Demand (MW)	46.84	44.58	50.06	51.24	55.27	65.37	74.08	79.07	84.43	71.36
Off Peak Demand (MW)	28.10	26.75	30.04	30.74	33.16	39.22	44.45	47.44	50.66	42.81

Demand	FORECASTED									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Coincident Peak Demand (MW)	52.37	55.35	56.72	60.69	64.76	68.94	72.65	76.55	80.66	84.99
Off Peak Demand (MW)	31.42	33.21	34.03	36.41	38.85	41.36	43.59	45.93	48.40	51.00



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.

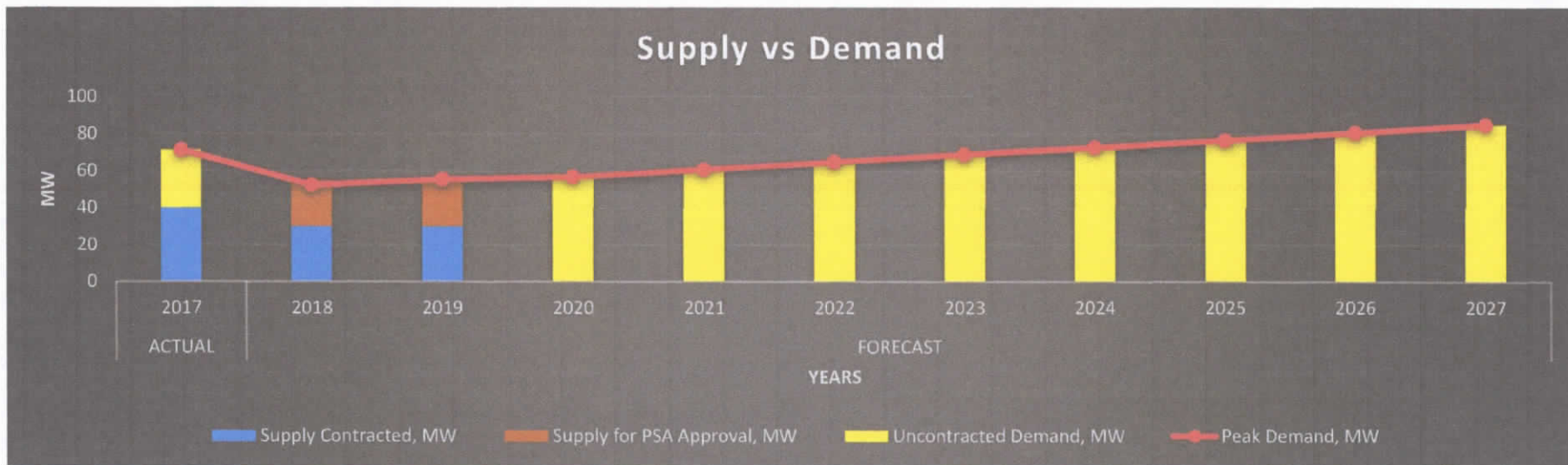
LOAD PROFILE AND LOAD DURATION CURVE



CEDC's annual peak demand usually occurs in May. Data provided are 2017 Load Profile and Load Duration Curve of CEDC Captive Market.

MIX SUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL	FORECAST									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Peak Demand, MW	71.357	52.37	55.35089	56.71826	60.69026	64.75818	68.94153	72.64508	76.54759	80.65975	84.9928
Supply Contracted, MW	40	30	30	0	0	0	0	0	0	0	0
SMEC - Sual Unit 1	40	30	30	-	-	-	-	-	-	-	-
Supply for PSA Approval, MW	0	25	25	0	0	0	0	0	0	0	0
SPDC - San Roque		25	25	-	-	-	-	-	-	-	-
Uncontracted Demand, MW	31.357	0	0.35089	56.71826	60.69026	64.75818	68.94153	72.64508	76.54759	80.65975	84.9928



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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	91.50%	03/13	12/19	30	n/a	Base	Grid Connected	IPP	-	Coal-Fired	617	600

San Miguel Energy Corporation (SMEC) is the Independent Power Producer Administrator of the Sual Coal Fired Thermal Power Plant. As of 2017, the contracted capacity from the Sual Unit 1 plant was 40 MW. In 2018, due to the switching of eligible customers to the contestable market (implementation of RCOA), CEDC returned 10 MW of its 40 MW Contracted Capacity to SMEC to avoid possible increase in generation charges resulting from higher capacity payment.

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		Uncontracted 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)
2018									
Jan	48.33			30.00		18.33			
Feb	49.07			30.00		19.07			
Mar	50.00			30.00		20.00			
Apr	51.44			30.00		21.44			
May	52.37			30.00		22.37			
Jun	50.75			30.00		20.75			
Jul	49.36			30.00		19.36			
Aug	47.78			30.00		17.78			
Sep	49.45			30.00		19.45			
Oct	48.43			30.00		18.43			
Nov	48.53			30.00		18.53			
Dec	49.53			30.00		19.53			
2019									
Jan	44.97			55.00		-10.03			
Feb	47.90			55.00		-7.10			
Mar	49.62			55.00		-5.38			
Apr	55.20			55.00		0.20			
May	55.35			55.00		0.35			
Jun	53.56			55.00		-1.44			
Jul	52.91			55.00		-2.09			
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	45.65			0.00		0.65		45.00	
Feb	43.86			0.00		-1.14		45.00	
Mar	50.19			0.00		5.19		45.00	
Apr	52.18			0.00		7.18		45.00	
May	56.72			0.00		11.72		45.00	
Jun	53.49			0.00		8.49		45.00	
Jul	54.06			0.00		9.06		45.00	
Aug	53.51			0.00		8.51		45.00	
Sep	54.01			0.00		9.01		45.00	
Oct	51.05			0.00		6.05		45.00	
Nov	54.71			0.00		9.71		45.00	
Dec	53.07			0.00		8.07		45.00	
2021									

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Jan	50.68			0.00		5.68		45.00
Feb	47.30			0.00		2.30		45.00
Mar	56.03			0.00		11.03		45.00
Apr	56.46			0.00		11.46		45.00
May	60.69			0.00		15.69		45.00
Jun	58.08			0.00		13.08		45.00
Jul	53.44			0.00		8.44		45.00
Aug	57.38			0.00		12.38		45.00
Sep	57.11			0.00		12.11		45.00
Oct	55.52			0.00		10.52		45.00
Nov	55.97			0.00		10.97		45.00
Dec	56.13			0.00		11.13		45.00
2022								
Jan	57.73			0.00		12.73		45.00
Feb	51.37			0.00		6.37		45.00
Mar	59.26			0.00		14.26		45.00
Apr	64.76			0.00		19.76		45.00
May	64.10			0.00		19.10		45.00
Jun	63.83			0.00		18.83		45.00
Jul	57.98			0.00		12.98		45.00
Aug	61.53			0.00		16.53		45.00
Sep	61.53			0.00		16.53		45.00
Oct	60.69			0.00		15.69		45.00
Nov	61.21			0.00		16.21		45.00
Dec	61.70			0.00		16.70		45.00
2023								
Jan	57.07			0.00		7.07		50.00
Feb	60.64			0.00		10.64		50.00
Mar	58.31			0.00		8.31		50.00
Apr	66.96			0.00		16.96		50.00
May	67.58			0.00		17.58		50.00
Jun	68.94			0.00		18.94		50.00
Jul	68.35			0.00		18.35		50.00
Aug	66.94			0.00		16.94		50.00
Sep	66.94			0.00		16.94		50.00
Oct	65.51			0.00		15.51		50.00
Nov	64.33			0.00		14.33		50.00
Dec	66.69			0.00		16.69		50.00
2024								
Jan	60.14			0.00		10.14		50.00
Feb	63.90			0.00		13.90		50.00
Mar	61.45			0.00		11.45		50.00
Apr	70.57			0.00		20.57		50.00
May	71.22			0.00		21.22		50.00
Jun	72.65			0.00		22.65		50.00
Jul	72.03			0.00		22.03		50.00
Aug	70.54			0.00		20.54		50.00
Sep	70.54			0.00		20.54		50.00
Oct	69.04			0.00		19.04		50.00
Nov	67.79			0.00		17.79		50.00

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Dec	70.28			0.00		20.28		50.00	
2025									
Jan	63.37			0.00		13.37		50.00	
Feb	67.33			0.00		17.33		50.00	
Mar	64.74			0.00		14.74		50.00	
Apr	74.35			0.00		24.35		50.00	
May	75.04			0.00		25.04		50.00	
Jun	76.55			0.00		26.55		50.00	
Jul	75.90			0.00		25.90		50.00	
Aug	74.33			0.00		24.33		50.00	
Sep	74.32			0.00		24.32		50.00	
Oct	72.74			0.00		22.74		50.00	
Nov	71.43			0.00		21.43		50.00	
Dec	74.05			0.00		24.05		50.00	
2026									
Jan	66.77			0.00		11.77		55.00	
Feb	70.94			0.00		15.94		55.00	
Mar	68.22			0.00		13.22		55.00	
Apr	78.35			0.00		23.35		55.00	
May	79.07			0.00		24.07		55.00	
Jun	80.66			0.00		25.66		55.00	
Jul	79.97			0.00		24.97		55.00	
Aug	78.32			0.00		23.32		55.00	
Sep	78.31			0.00		23.31		55.00	
Oct	76.65			0.00		21.65		55.00	
Nov	75.26			0.00		20.26		55.00	
Dec	78.02			0.00		23.02		55.00	
2027									
Jan	70.36			0.00		15.36		55.00	
Feb	74.75			0.00		19.75		55.00	
Mar	71.88			0.00		16.88		55.00	
Apr	82.55			0.00		27.55		55.00	
May	83.32			0.00		28.32		55.00	
Jun	84.99			0.00		29.99		55.00	
Jul	84.26			0.00		29.26		55.00	
Aug	82.52			0.00		27.52		55.00	
Sep	82.52			0.00		27.52		55.00	
Oct	80.76			0.00		25.76		55.00	
Nov	79.30			0.00		24.30		55.00	
Dec	82.21			0.00		27.21		55.00	