DAVAO LIGHT AND POWER CO., 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.

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INTRODUCTION

DISTRIBUTION UTILITIES PROFILE

Davao Light is the third largest privately-owned electric distribution utility in the country in terms of customers and annual kilowatt-hour (kWh) sales.

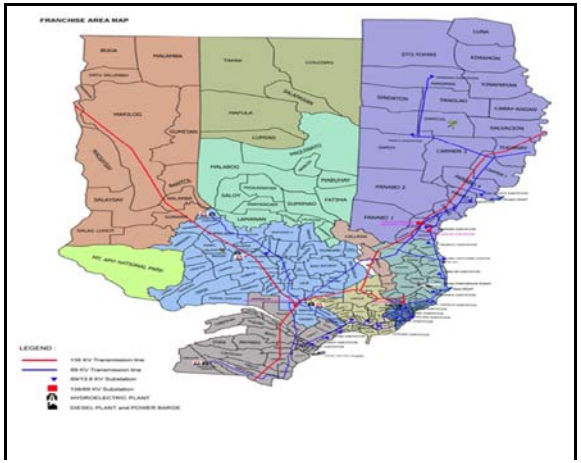
With a franchise covering Davao City and Davao del Norte areas of Panabo City and the Municipalities of Carmen, Dujali and Santo Tomas, Davao Light services a population of approximately 1,777,926 and a total area of 3,561 square kilometers.

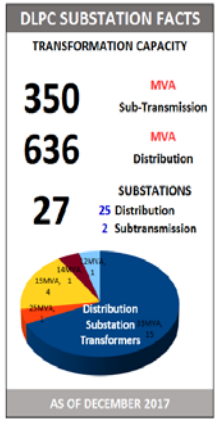
Davao Light has 384,434 customers as of December 2017, with 27 distribution substations and 2 sub-transmission substations strategically located throughout its franchise.

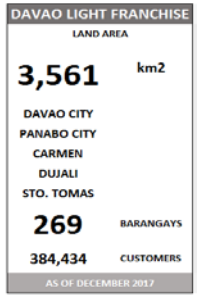
As of December 2017, Davao Light hit a cumulative 2,298,361,482 kWh in energy sales posting a 10-year compounded annual growth rate of 5.75%. Meanwhile, peak demand was recorded at 404 MW higher than last year's 379 MW.

One of Davao Light's approaches to keep rates at reasonable levels is by maintaining its systems losses well within the government mandated cap of 8.5%. The 12-month average system loss as of December 2017 is 7.32%.

DU's Franchise MAP



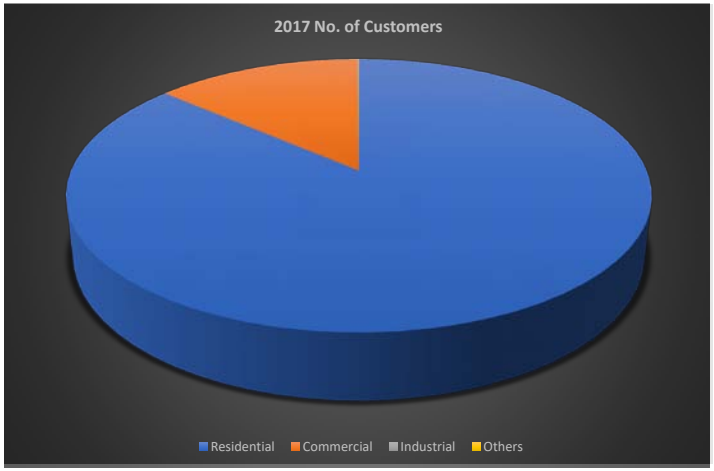




Number of Customer Connections in Franchise	ACTUAL	FORECAST									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential	332,102	349,337	363,889	380,301	398,023	416,491	435,816	456,038	477,381	499,818	523,409
Commercial	52,008	55,321	55,321	60,309	62,969	65,746	68,737	71,819	75,092	78,565	82,258
Industrial	205	206	211	216	221	226	231	236	241	246	251
Others (Flat Lighting)	119	119	121	123	125	127	129	131	133	135	137
Contestable Customers served by RES											
Total (Captive Customers)											

The positive outlook on DLPC's kWh sales growth is mainly driven by positive economic growth in the region. GRDP for 2017 grew by 10.9% vs 2016; and NEDA projected a growth range of 9.2% to 10.5% yearly GRDP up to year 2022.

Investors are coming in to put up manufacturing firms/plants, schools, BPOs, and other industries. As a result, it is projected that real property developments like condominiums and townships will continue to rise.

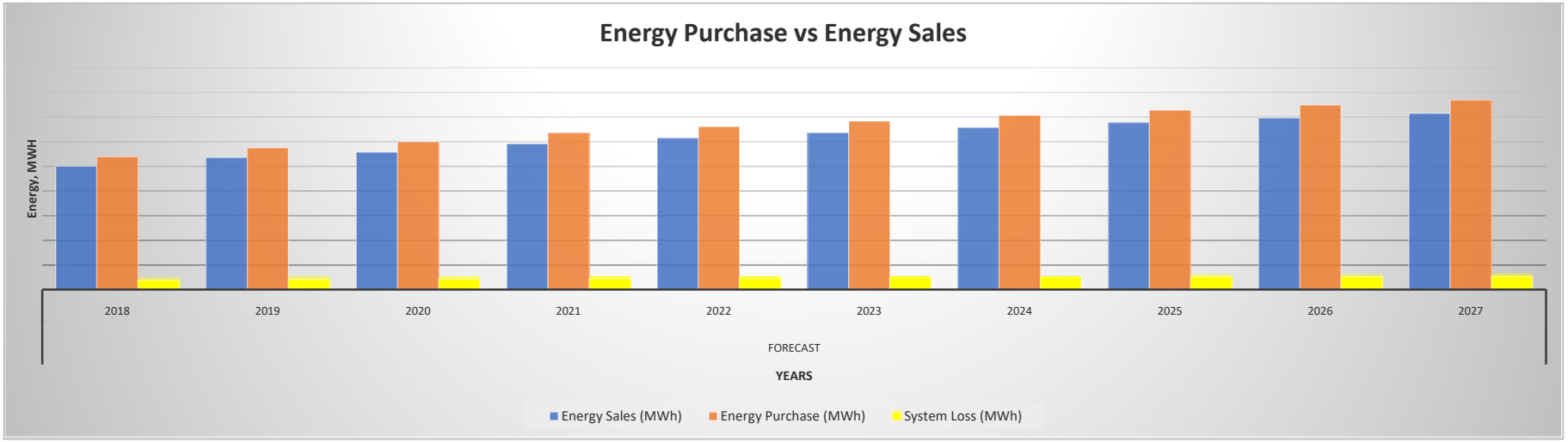


ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Energy Sales (MWh)	1,370,950	1,459,161	1,549,734	1,584,389	1,681,720	1,770,739	1,981,258	2,069,127	2,173,373	2,298,361
Energy Purchase (MWh)	1,492,868	1,588,080	1,675,973	1,731,177	1,818,920	1,922,039	2,100,237	2,228,816	2,340,692	2,479,985
System Loss (MWh)	121,918	128,919	126,239	146,788	137,200	151,300	118,978	159,690	167,318	181,624

ENERGY SALES AND PURCHASE	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Energy Sales (MWh)	2,502,802	2,671,891	2,787,163	2,954,667	3,069,670	3,176,778	3,282,257	3,382,743	3,476,961	3,572,282
Energy Purchase (MWh)	2,691,185	2,873,001	2,996,949	3,177,061	3,300,720	3,415,890	3,529,308	3,637,359	3,738,668	3,841,163
System Loss (MWh)	188,383	201,110	209,786	222,394	231,050	239,112	247,052	254,615	261,707	268,881

Note: Data are sample only for graph presentation



Brief highlight/report

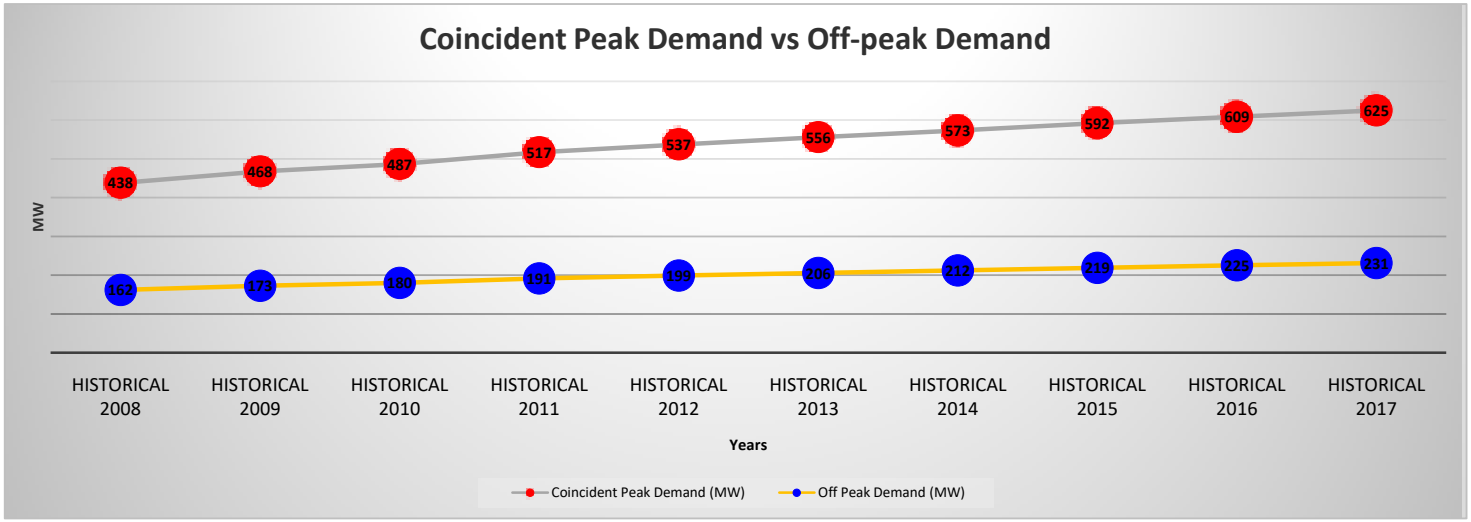
Two of DLPC's peak load supplier are expiring in 2018; SPPC will expire on April 28, 2018 while TMI will expire on July 25, 2018. DLPC is looking forward sourcing its peaking requirement from peaking plants and/or from wesm after the latters commercial operations in Mindanao. We are planning to conduct CSP for 50MW peaking with no minimum energy but without the timeline since timeline will depend on the response from the DOE.

DEMAND

Demand	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Coincident Peak Demand (MW)	249	267	282	280	304	324	344	354	380	404
Off Peak Demand (MW)	92	99	104	104	112	120	127	134	159	151

Demand	HISTORICAL									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Coincident Peak Demand (MW)	438	468	487	517	537	556	573	592	609	625
Off Peak Demand (MW)	162	173	180	191	199	206	212	219	225	231

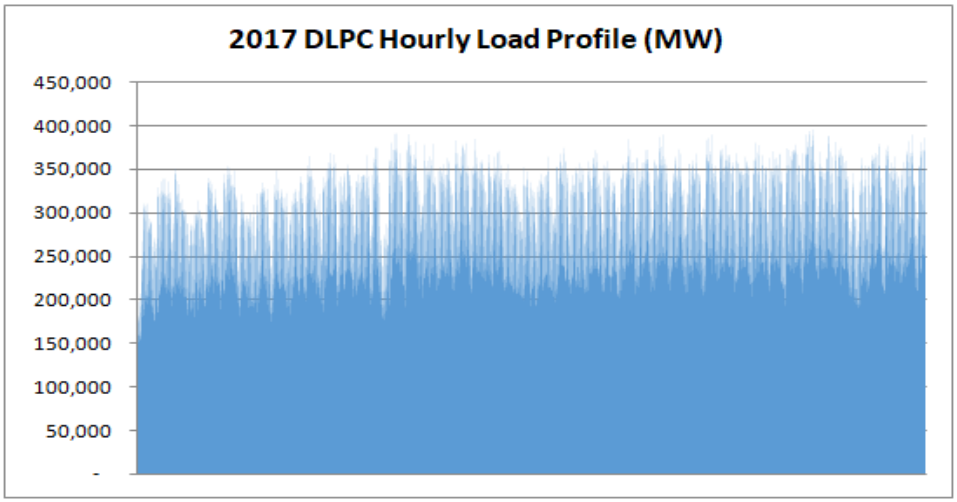
Note: Data are sample only for graph presentation

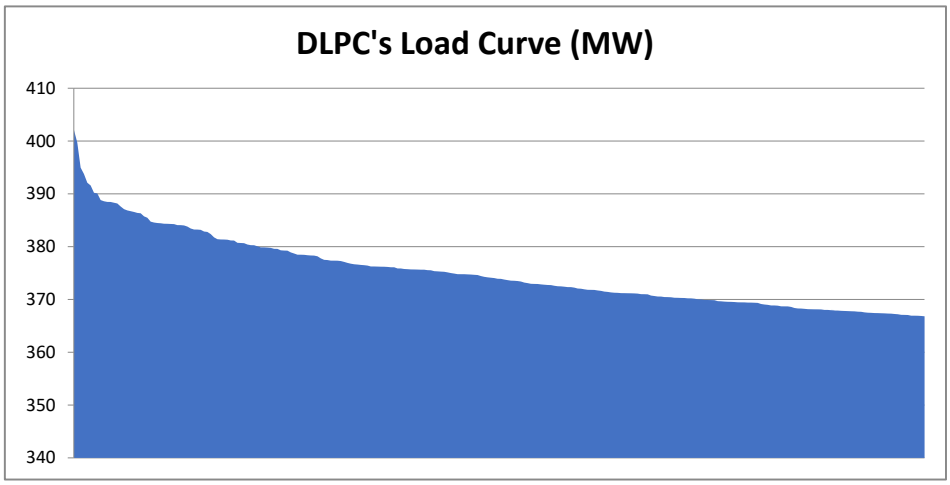


Brief highlight of historical demand and forecasting methodology and result

In 2017, there was no significant entry of big industrial/commercial customer or spot load except for the expected normal forecasted load. With regards to our coincident peak demand that occur last October, BPP was not contributory to this as it is not running during this time. Looking forward, we are anticipating a demand growth of about 100MW in the span of three(3) years. These are triggered by growth in real estate businesses, sprouting big universities, commercial complexes and big BPO's where some or most of them are currently on full swing constructions.

LOAD PROFILE AND LOAD DURATION CURVE





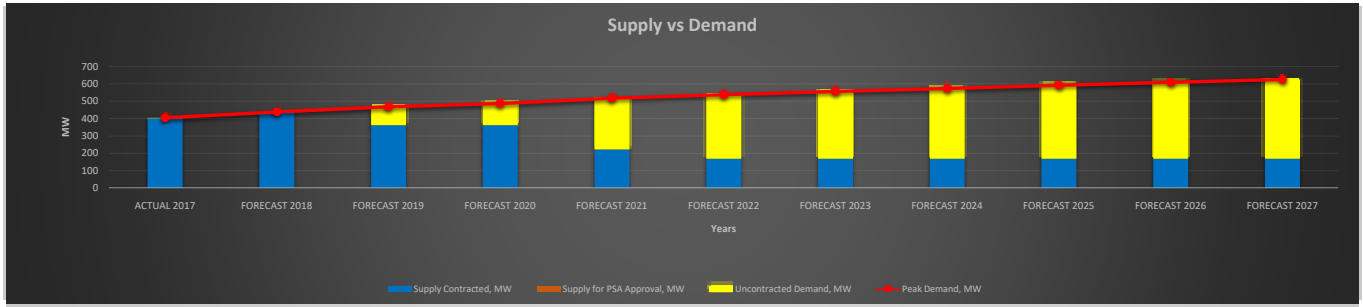
Brief highlight:
Base on the load curve identify the base-load, mid-merit and peaking. As such the data can be used for the strategy in contracting the DUs demand requirement.

Base load is at 150MW, and peaking load is at 350MW.

MIXSUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL	FORECAST									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Peak Demand, MW	**404**	**438**	**468**	**487**	**517**	**537**	**556**	**573**	**592**	**609**	**625**
Supply Contracted, MW	**401**	**435**	**361**	**361**	**221**	**168**	**168**	**168**	**168**	**168**	**168**
PSALM	160	133	140	140	0	0	0	0	0	0	0
Therma Marine Inc.	30	30									
Therma South Inc.	108	108	108	108	108	108	108	108	108	108	108
Southern Philippines Power Corporation	50	50									
Hedcor Sibulan	49	49	49	49	49						
Hedcor, Inc	4.47	4.47	4.47	4.47	4.47						
Miguel Consolidated Power Corpor	Miguel Consolidated Power Corporaonsolidated Powe	0	60	60	60	60	60	60	60	60	60	60
Supply for PSA Approval, MW	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Uncontracted Demand, MW	**3**	**3**	**106**	**125**	**296**	**369**	**388**	**405**	**424**	**441**	**457**

Note: Data are sample only for graph presentation



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)
PSALM	PSALM		December 26, 2016	December 25, 2017	160	1,120,918							
Therma Marine Inc.	Therma Marine Inc.		August 26, 2011	July 25, 2018	30	262,800					Diesel	200	
Therma South Inc.	Therma South Inc.		September 18, 2015	September 17, 2040	108	744,600					Coal	300	
HEDCOR Sibulan Inc.	Hedcor Sibulan Inc.		February 26, 2010	February 25, 2022	49	200,000					Run-off river	49	
Upper Talomo Hydro Power Plant	Hedcor Inc.		April 2005	w/ pending applicatior	1	5,500					Run-off river	1	
Lower Talomo Hydro Power Plant	Hedcor Inc.		February 2006	February 2021	3.47	24,844					Run-off river	3	
Southern Philippines Power Corpo	Southern Philippines Power Corporation		April 29, 2016	May 2018	50	219,000					Diesel	55	
San Miguel Consolidated Power C	San Miguel Consolidated Power Corporation		February 26, 2018	February 25, 2028	60	440,640					Coal	300	

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

DLPC contracting considers its base load, intermmediate, and peaking requirements. On the daily trading of electricity, DLPC dispatch first its minimum contractual obligation from suppliers. The remaining requirement is optimized by prioritizing the suppliers with least variable generation cost. The variable cost such as fuel, labor, and operating expenses is the cost incurred in relation to the volume generated by the power plant.

DISTRIBUTION IMPACT STUDY

Brief discussion on the following: Readiness of substation, distribution lines on the forecasted increase of loads Impact on the entry of a new power plant which may affects transmission congestion Loading of substations Compliance with the PDC and PEC

DLPC power distribution systems are composed of sub-transmission and distribution substations, and correspondingly, sub-transmission and distribution lines, with voltage level ranging from 230V up 138kV and network coverage spread widely within Davao City up to nearby municipalities of Carmen, Dujali and Sto. Tomas.

Given this, the system forecast for demand, energy, losses, and load factor, if done separately, would becomes complicated. This is due to the very dynamic nature of the feeders within the system frequent load transfers and switching would render it hard to have a normalized loading for a specific substation or feeder. Thus, we only did forecast on our system energy sales and add systems loss to derive purchase. From this forecast, we derived all substation and feeder loading using weighted average method for the next 5 years.

With this stated, the 5-year projects are purposely created to address system issues such as safety, capacity, reliability, statutory compliance, customer request and etc.. If all 5-year projects are implemented accordingly, the system will be ready for the load growth expected. However beyond 5 years, proposed projects are yet to be determined. Nevertheless, DLPC substation and feeders are already equipped to cater this load growth for the next 5 years.

Should there be entry of new embedded power plant to the system, a DIS must be conducted to evaluate its impact to the distribution system. Such is the case of SAMAL Module Diesel generator which was evaluated on May last 2017. However, if such power plants were to be connected to the grid before our sub-transmission substations, then such DIS will no longer be needed as this is an issue with the transmission provider. Transmission congestion to the grid are concerns to be catered by transmission provider. This is not an issue with the DU as most sub-transmission lines traversing within Davao Area are owned by DLPC. The issue of overloading were already considered in the project list formulation in the DU's internal DDP.

Also loading of substation were already considered in the project formulation thus there is no longer an issue with load growth and with indicative spot loads. Moreover, substation loading are also monitored to reduce reliability indices thus providing better services to the consumer.

Compliance to regulatory standards were considered in the formulation and prioritization of the projects proposed. Electrical equipment ratings, construction clearances, power quality performances, service reliability, safety and efficiency are all compliant and most of the time are more than the minimum standards set by PDC and PGC. At all times, compliance to regulatory standards is of high regard since it provides more benefit than liability to the company.

SCHEDULE OF CSP

Base / mid-merit / peaking	For CSP		Proposed contract period		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 of Bids	Opening of Bids	Bid Evaluation	Awarding	PSA Signing	Joint Application to ERC
Peaking	50	438,000	Aug. 26, 2018	Aug. 25, 2021	June 18 & 25, 2018	July 9, 2018	July 20, 2018	July 23, 2018	July 23, 2018	July 23, 2018	July 30, 2018	Aug. 6, 2018

10 Year Monthly Data

Year	Forecast			Contracted and For PSA Approval Demand and Energy		Uncontracted Demand and Energy		Committed for CSP	
	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)
2018									
Jan	395	166	204,641	369	187,603	25	17,038		
Feb	404	170	212,326	429	226,198	-	-		
Mar	381	164	197,609	438	219,848	-	-		
Apr	429	180	225,588	430	228,802	-	-		
May	432	182	230,286	386	207,810	46	22,476		
Jun	412	173	225,266	402	220,411	10	4,856		
Jul	410	172	221,298	367	212,694	43	8,604		
Aug	429	180	238,075	304	177,591	126	60,484		
Sep	423	178	237,581	355	189,165	68	48,416		
Oct	438	162	235,417	382	199,123	56	36,293		
Nov	421	177	233,171	367	211,701	53	21,469		
Dec	426	179	229,926	376	208,955	50	20,971		
2019									
Jan	416	175	218,466	347	199,673	69	18,794		
Feb	420	176	226,671	362	208,844	58	17,827		
Mar	401	173	210,960	361	198,252	41	12,708		
Apr	452	190	240,829	350	201,795	102	39,034		
May	461	194	245,844	365	207,270	96	38,575		
Jun	445	187	240,485	375	216,622	70	23,863		
Jul	426	179	236,249	340	193,072	86	43,177		
Aug	453	190	254,160	343	197,640	109	56,519		
Sep	457	192	253,632	370	213,383	88	40,249		
Oct	468	173	251,321	380	216,107	87	35,214		
Nov	443	186	248,924	370	213,721	73	35,203		
Dec	455	191	245,460	374	212,566	80	32,894		
2020									
Jan	406	183	227,892	352	257,237	54	-		
Feb	456	192	236,450	352	266,774	104	-		
Mar	392	180	220,061	361	257,797	31	-		
Apr	472	198	251,219	354	260,843	117	-		
May	457	192	256,451	361	268,149	96	-		
Jun	447	188	250,860	371	285,651	76	-		
Jul	439	184	246,441	371	259,933	68	-		
Aug	466	196	265,125	320	236,304	146	28,821		
Sep	471	198	264,575	366	279,301	106	-		
Oct	487	180	262,164	385	291,063	101	-		
Nov	462	194	259,663	371	282,731	92	-		
Dec	474	199	256,050	375	281,583	99	-		
2021									
Jan	447	201	241,588	221	179,825	226	61,763		
Feb	484	203	250,660	221	188,996	262	61,664		
Mar	432	199	233,287	221	180,048	211	53,239		
Apr	500	210	266,317	221	181,947	278	84,369		
May	503	211	271,863	221	187,970	282	83,893		
Jun	492	207	265,937	221	196,775	271	69,162		
Jul	477	201	261,252	221	173,772	256	87,480		
Aug	507	213	281,058	221	177,792	285	103,266		
Sep	506	212	280,475	221	193,535	284	86,940		
Oct	517	191	277,920	221	196,807	296	81,112		
Nov	497	209	275,268	221	193,873	275	81,395		
Dec	503	211	271,438	221	193,266	281	78,172		
2022									
Jan	465	209	250,991	168	102,816	297	148,175		
Feb	502	211	260,417	168	102,816	334	157,601		
Mar	449	206	242,367	168	102,816	281	139,551		
Apr	519	218	276,682	168	102,816	351	173,866		
May	523	220	282,444	168	102,816	355	179,628		
Jun	512	215	276,287	168	102,816	344	173,471		
Jul	496	208	271,421	168	102,816	328	168,605		
Aug	527	221	291,998	168	102,816	359	189,182		
Sep	526	221	291,392	168	102,816	358	188,576		
Oct	537	199	288,737	168	102,816	369	185,921		
Nov	516	217	285,982	168	102,816	348	183,166		
Dec	522	219	282,003	168	102,816	354	179,187		
2023									
Jan	481	216	259,748	168	102,816	313	156,932		
Feb	520	218	269,503	168	102,816	352	166,687		
Mar	464	214	250,823	168	102,816	296	148,007		
Apr	537	226	286,336	168	102,816	369	183,520		

May	541	227	292,300	168	102,816	373	189,484		
Jun	529	222	285,928	168	102,816	361	183,112		
Jul	513	216	280,891	168	102,816	345	178,075		
Aug	545	229	302,186	168	102,816	377	199,370		
Sep	544	228	301,559	168	102,816	376	198,743		
Oct	556	206	298,812	168	102,816	388	195,996		
Nov	534	224	295,961	168	102,816	366	193,145		
Dec	540	227	291,842	168	102,816	372	189,026		
2024									
Jan	497	224	268,373	168	102,816	329	165,557		
Feb	537	226	278,452	168	102,816	369	175,636		
Mar	480	221	259,152	168	102,816	312	156,336		
Apr	555	233	295,844	168	102,816	387	193,028		
May	559	235	302,005	168	102,816	391	199,189		
Jun	547	230	295,421	168	102,816	379	192,605		
Jul	530	223	290,218	168	102,816	362	187,402		
Aug	563	237	312,220	168	102,816	395	209,404		
Sep	562	236	311,572	168	102,816	394	208,756		
Oct	573	212	308,733	168	102,816	405	205,917		
Nov	552	232	305,788	168	102,816	384	202,972		
Dec	558	235	301,533	168	102,816	390	198,717		
2025									
Jan	512	230	276,589	168	102,816	344	173,773		
Feb	554	233	286,976	168	102,816	386	184,160		
Mar	495	228	267,085	168	102,816	327	164,269		
Apr	572	240	304,901	168	102,816	404	202,085		
May	576	242	311,251	168	102,816	408	208,435		
Jun	564	237	304,466	168	102,816	396	201,650		
Jul	547	230	299,103	168	102,816	379	196,287		
Aug	580	244	321,778	168	102,816	412	218,962		
Sep	579	243	321,111	168	102,816	411	218,295		
Oct	592	219	318,185	168	102,816	424	215,369		
Nov	568	239	315,149	168	102,816	400	212,333		
Dec	575	242	310,764	168	102,816	407	207,948		
2026									
Jan	526	237	284,293	168	102,816	358	181,477		
Feb	569	239	294,969	168	102,816	401	192,153		
Mar	508	234	274,524	168	102,816	340	171,708		
Apr	588	247	313,393	168	102,816	420	210,577		
May	592	249	319,920	168	102,816	424	217,104		
Jun	580	243	312,946	168	102,816	412	210,130		
Jul	562	236	307,433	168	102,816	394	204,617		
Aug	597	251	330,741	168	102,816	429	227,925		
Sep	595	250	330,054	168	102,816	427	227,238		
Oct	609	225	327,047	168	102,816	441	224,231		
Nov	584	245	323,927	168	102,816	416	221,111		
Dec	592	248	319,420	168	102,816	424	216,604		
2027									
Jan	541	243	292,087	168	102,816	373	189,271		
Feb	585	246	303,056	168	102,816	417	200,240		
Mar	522	240	282,051	168	102,816	354	179,235		
Apr	604	254	321,985	168	102,816	436	219,169		
May	609	256	328,691	168	102,816	441	225,875		
Jun	595	250	321,525	168	102,816	427	218,709		
Jul	577	242	315,862	168	102,816	409	213,046		
Aug	613	257	339,808	168	102,816	445	236,992		
Sep	612	257	339,103	168	102,816	444	236,287		
Oct	625	231	336,013	168	102,816	457	233,197		
Nov	600	252	332,807	168	102,816	432	229,991		
Dec	608	255	328,176	168	102,816	440	225,360		