NAME OF DU

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

INTRODUCTION

DISTRIBUTION UTILITIES PROFILE

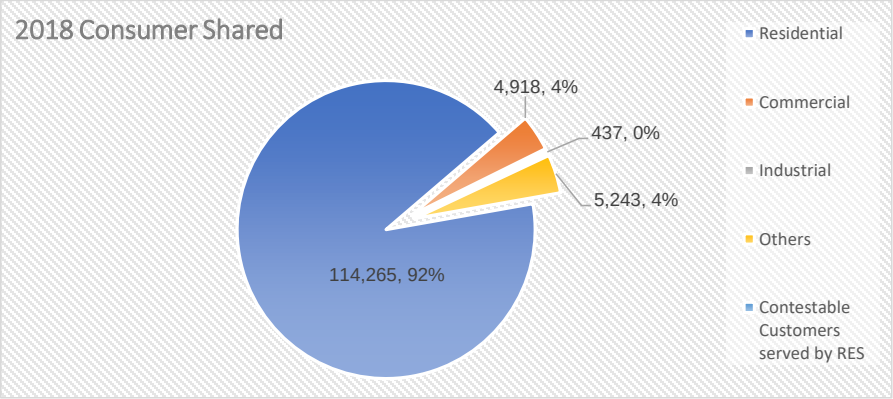
Bohol II Electric Cooperative, Inc. (BOHECO II) is an integral part of the economic engine of Bohol and a non-stock—non-profit entity incorporated in the Philippines to operate an electric light and power service. It covers north-east of Bohol with an approximate topographical area of 2,101 square kilometers, with an official address located at Cantagay, Jagna, Bohol. The cooperative was organized on May 13, 1978 and its first energization was last March 7, 1980. BOHECO-II was given a certificate of Franchise from the National Electrification Administration last June 11, 1980, providing electric service to 491 barangays & 21 municipalities. One of which is an island municipality of Carlos P. Garcia.

Date Organized: May 13, 1978
Date of First Energization: March 7, 1980
Date of Franchise Period: June 11, 1980
Franchise Period: 50 years
Certificates received from NEA: Certificate of Registration No.105 given on May 13, 1978 Certificate of Franchise No. 062 given on June 11, 1980, and Certificate of Franchise No. 139 given on March 16, 19.

Figure 1-1. BOHECO II System Map

Number of Customer Connections in Franchise	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	114,265	115,402	121,559	124,901	128,069	131,085	133,961	136,713	139,352	141,887	146,144
Commercial	4,918	4,861	5,232	5,376	5,512	5,642	5,766	5,884	5,998	6,107	6,290
Industrial	437	407	462	474	485	496	506	516	525	505	520
Others	5,243	5,172	5,564	5,712	5,853	5,985	6,114	6,236	6,352	6,810	7,014
Contestable Customers served by RES											
Total (Captive Customers)	124,863	125,842	132,817	136,463	139,919	143,208	146,347	149,349	152,227	155,309	159,968

The current number of customer mix served as shown in Figure 1-2 is largely residential at 91% *(50 % at Mainland and 41 % Residential from BAPA&ECA)*, and the rest were Commercial at 4%, Public Building and Street lighting at 4%, and Industrial is less than 1%).



10 YEAR HISTORICAL - ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	2009												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	4,439	4,191	4,390	4,863	5,078	4,848	4,538	4,889	4,659	4,839	4,845	4,941	56,522
Energy Purchase (MWh)	5,069	4,977	4,713	5,448	5,620	5,573	5,116	5,344	5,380	5,145	5,555	5,358	63,298
System Loss (MWh)	629	786	322	585	543	725	577	455	721	306	710	417	6,776

ENERGY SALES AND PURCHASE	2010												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	4,589	4,469	4,786	5,172	5,815	5,352	4,974	5,171	5,050	5,039	5,277	5,515	61,208
Energy Purchase (MWh)	5,417	5,233	4,906	5,894	6,444	6,365	5,648	5,866	5,819	5,712	5,975	6,024	69,302
System Loss (MWh)	827	764	120	722	629	1,013	674	696	769	673	698	509	8,094

ENERGY SALES AND PURCHASE	2011												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	4,959	4,785	4,811	5,373	5,819	5,646	5,352	5,353	5,492	5,520	5,604	5,932	64,646
Energy Purchase (MWh)	5,620	5,633	5,120	5,984	6,521	6,444	5,985	6,140	6,238	6,130	6,563	6,532	72,911
System Loss (MWh)	661	849	310	610	702	798	632	787	746	610	959	600	8,265

ENERGY SALES AND PURCHASE	2012												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	5,769	5,501	5,654	6,390	6,692	6,234	5,917	5,944	5,834	5,870	5,957	6,130	71,891
Energy Purchase (MWh)	6,600	6,338	6,038	7,191	7,550	7,234	6,547	6,752	6,554	6,419	6,857	6,522	80,604
System Loss (MWh)	831	837	384	801	859	1,000	630	808	720	549	900	393	8,713

ENERGY SALES AND PURCHASE	2013												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	5,909	5,838	6,158	6,878	7,330	6,737	6,342	6,556	6,507	6,035	2,851	5,947	73,088
Energy Purchase (MWh)	6,955	6,570	6,396	7,781	8,249	7,741	7,055	7,142	7,369	6,800	3,245	6,276	81,580
System Loss (MWh)	1,047	732	239	903	919	1,004	713	585	863	766	394	329	8,492

ENERGY SALES AND PURCHASE	2014												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Energy Sales (MWh)	5,384	5,599	5,832	6,893	7,619	7,110	6,502	6,733	6,537	6,645	6,747	6,473	78,073

Energy Purchase (MWh)	6,482	6,297	6,065	7,451	8,512	8,063	7,220	7,595	7,268	7,183	7,852	7,074	87,062
System Loss (MWh)	1,098	698	233	558	893	953	717	863	731	538	1,105	601	8,989

ENERGY SALES AND PURCHASE	**2015**												**TOTAL**
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Energy Sales (MWh)	6,257	6,203	6,420	7,466	8,027	7,517	7,138	7,383	7,266	7,501	7,567	7,660	86,405
Energy Purchase (MWh)	6,914	7,152	6,663	8,303	8,838	8,709	7,818	8,049	8,126	8,075	8,568	8,281	95,496
System Loss (MWh)	657	949	243	837	811	1,191	680	666	860	574	1,001	620	9,091

ENERGY SALES AND PURCHASE	**2016**												**TOTAL**
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Energy Sales (MWh)	7,460	7,224	7,574	8,883	9,298	8,591	8,275	8,642	8,332	8,090	7,871	8,262	98,502
Energy Purchase (MWh)	8,502	8,125	7,956	9,643	10,471	9,816	8,816	9,561	9,338	8,949	8,890	8,607	108,675
System Loss (MWh)	1,042	901	382	760	1,173	1,225	542	920	1,006	859	1,019	345	10,173

ENERGY SALES AND PURCHASE	**2017**												**TOTAL**
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Energy Sales (MWh)	7,797	7,453	7,533	8,841	9,495	9,135	6,144	8,935	8,890	8,627	8,963	9,034	100,848
Energy Purchase (MWh)	9,018	8,502	7,871	9,528	10,535	10,526	6,399	9,868	9,847	9,339	10,083	9,598	111,115
System Loss (MWh)	1,221	1,049	338	687	1,040	1,391	255	933	958	712	1,120	563	10,268

ENERGY SALES AND PURCHASE	**2018**												**TOTAL**
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Energy Sales (MWh)	8,716	8,395	8,846	9,792	10,644	10,110	9,686	10,012	9,672	9,984	9,540	9,886	115,282
Energy Purchase (MWh)	9,912	9,604	9,164	10,725	11,801	11,374	10,645	11,113	10,520	10,697	10,801	10,589	126,946
System Loss (MWh)	1,196	1,209	318	932	1,157	1,263	959	1,101	849	713	1,262	703	11,664

DEMAND

The peak demand forecast is derived from the quotient of the forecasted energy by the product of the Load Factor and the total number of hours in a year (8,760 hours) as shown in Equation. BOHECO II used the system load factor from the hourly load data provided by NGCP for the year 2018.

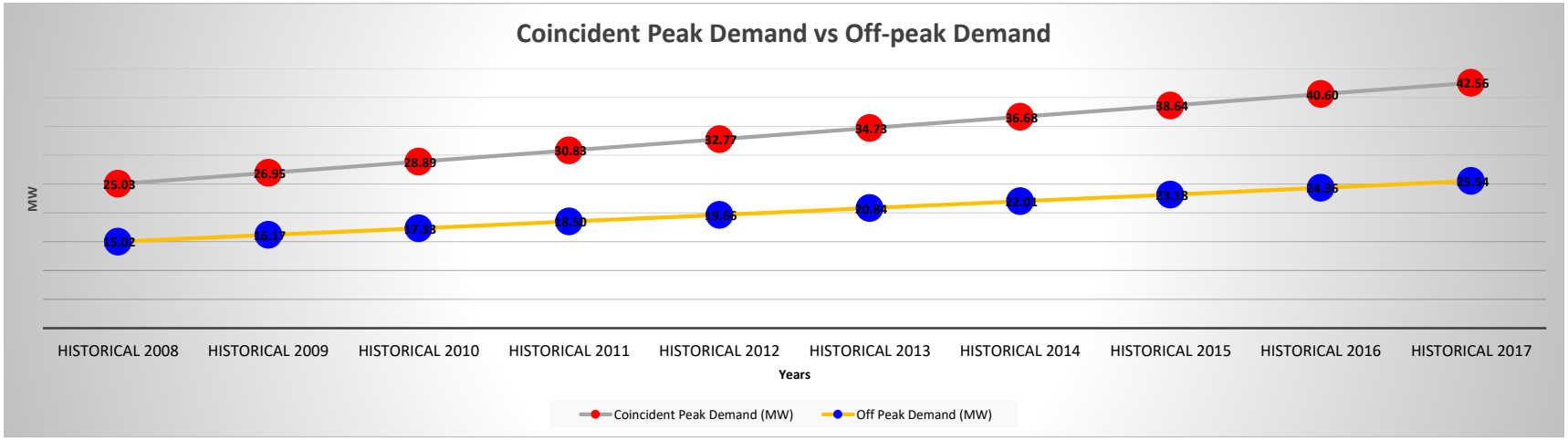
EquationSystem Demand Formula

$$Demand_{system} = \frac{Energy\ Forecast_{system}}{L.F_{system} \times 8760}$$

Peak demand are forecasted in the same process as discussed in the above, is derived through the same equation as shown in Equation .Where, it is the quotient of forecasted energy by the product of time (t) equal to 8760 hours in a year and the system load factor (L.F. $_{system}$) are calculated based on the registered energy of NGCP metering point for the year 2018. Where system load factor was assumed to be constant in a succeeding period of forecasting based on its historical trend in the previous year. Table below shows the historical demand and the forecasted demand of BOHECO II.

Demand	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coincident Peak Demand (MW)	14.55	15.52	16.49	17.46	17.38	18.75	18.87	20.78	21.48	23.03
Off Peak Demand (MW)	8.73	9.31	9.89	10.48	10.43	11.25	11.32	12.47	12.89	13.82

Demand	HISTORICAL									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Coincident Peak Demand (MW)	25.03	26.95	28.89	30.83	32.77	34.73	36.68	38.64	40.60	42.56
Off Peak Demand (MW)	15.02	16.17	17.33	18.50	19.66	20.84	22.01	23.18	24.36	25.54



ENERGY SALES AND PURCHASE

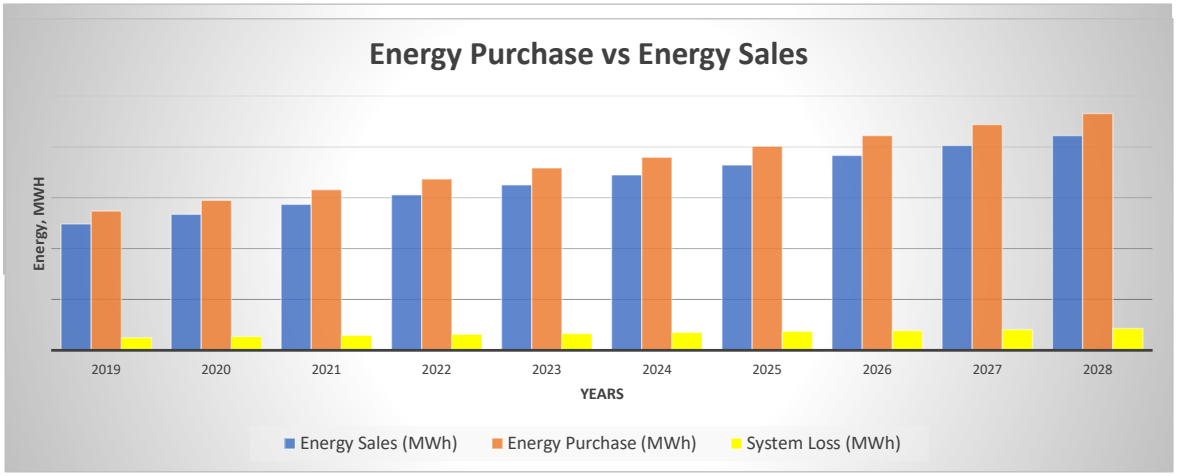
BOHECO II forecast the normalized data of energy sales through "per component" and "directly" approach forecasting in accordance with the forecasting methodology presented. The mathematical model that best fit and meets the required criteria as discussed are shown in Equation 3-1.

Equation 3-1. Energy Forecast Mathematical Model

$$Energy\ Forecast_{System} = a(t\hat{} - 1) + b(t) + c$$

ENERGY SALES AND PURCHASE	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	56,522	61,208	64,646	71,890	73,088	78,073	86,405	98,502	100,848	115,282
Energy Purchase (MWh)	63,298	69,304	72,911	80,604	81,580	87,062	95,496	108,675	111,115	126,946
System Loss (MWh)	6,776	7,959	8,265	8,714	8,492	8,989	9,091	10,173	10,268	11,664

ENERGY SALES AND PURCHASE	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	124,170	133,711	143,305	152,937	162,598	172,281	181,982	191,696	201,422	211,156
Energy Purchase (MWh)	136,811	147,324	157,895	168,508	179,152	189,821	200,509	211,212	221,928	232,654
System Loss (MWh)	12,641	13,613	14,589	15,570	16,554	17,539	18,527	19,516	20,506	21,497



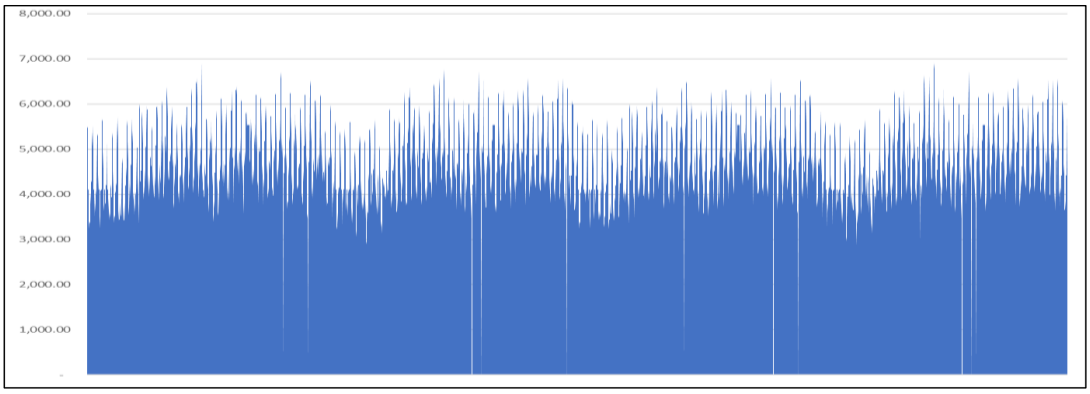
The validity and accuracy test criteria result of the directly forecasting approach using the mathematical model in Equation 3-1 that passes or best fit in the historical data trend are shown in table below.

Intercepts		P Value	t Statistic
Coefficient	Value	< 0.1	< -2, >2
a		0.011507	4.420458
b		8.3E-05	16.29431
c		0.000375	11.10172
d		N/A	N/A
Coefficient		0.000375	11.10172

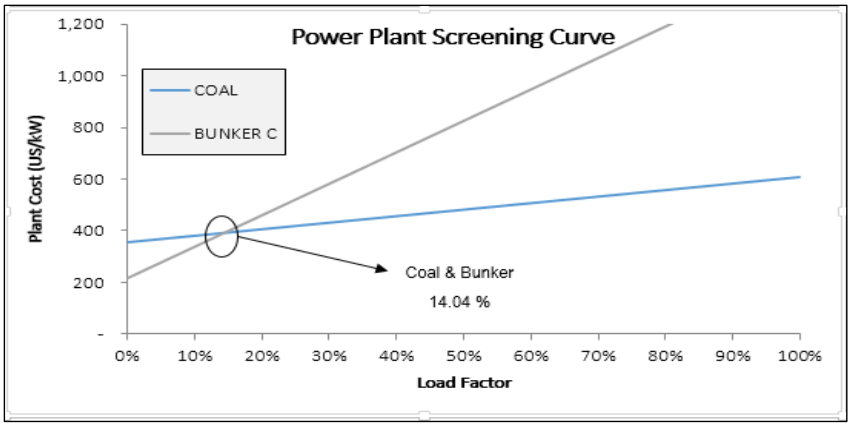
Test Parameters	MAPE	r^2	r^2adj	Growth Rate
Actual	1.11%	0.993507	0.99026	5.00%
Requisite	≤ 3%	>0.99	>0.99	Reasonable

LOAD PROFILE AND LOAD DURATION CURVE

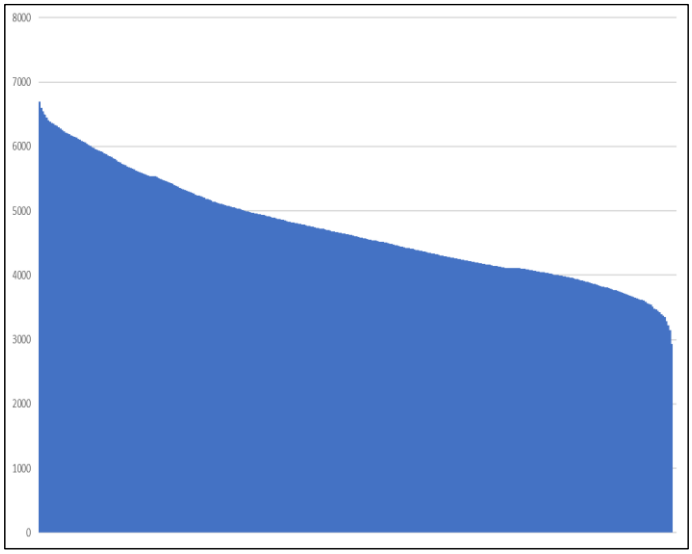
The **8760-hour typical** or average annual load profile of the franchise area is an important determinant in the mix of baseload and peaking capacity requirements. A load profile which is relatively flat or has a high load factor will require more baseload capacity in the mix compared to one with a lower load factor. On the other hand, a load profile that is relatively steep or has a low load factor will require more peaking capacity than that with a higher load factor. For purposes of illustration, Figure below *"2018 BOHECO II Hourly Load Profile"* shows the hourly load profile of BOHECO II for the year 2018.



In determining the optimal mix of power supply for the baseload and peaking load allocation, we generate the Power Plant Screening Curve from the power plant data. We used power plant types representing peaking plants (Bunker Diesel) and typical baseload plants (Coal) as shown in the graph below.

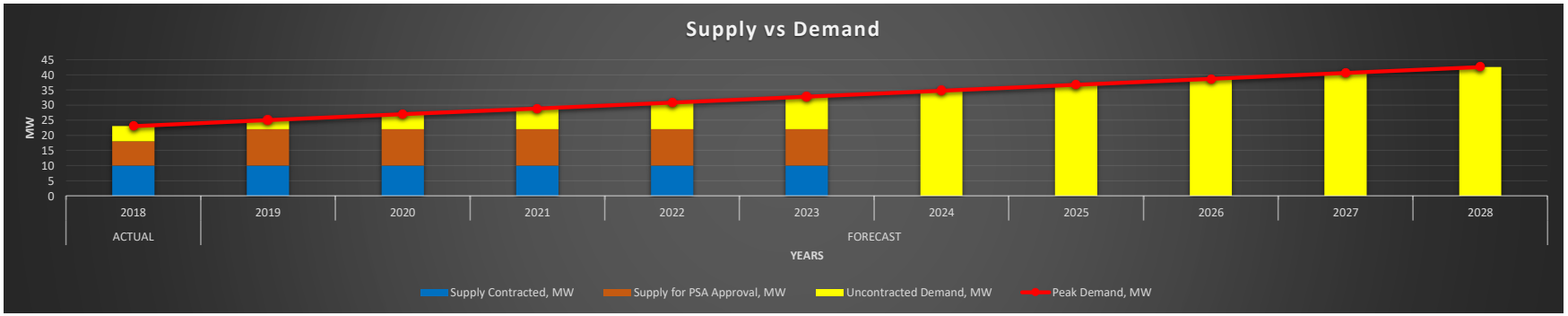


The graph shows that for capacity factor less than 14.04%, the Power Plant utilizing Bunker C fuel is the least cost compare to coal power plant types. This is due to the relatively low investment cost for construction of Diesel Plants. Above 14.04% capacity factor, the Coal Plant becomes least cost as coal is a much cheaper fuel than Bunker C. Due to the high cost of fuel of Diesel Plants, they are normally operated as peaking plants with low utilization levels. Projecting the intersection of the representative peaking plant (Bunker C) and the representative baseload plant (Coal) into the Load Duration Curve (LDC), we get the optimal (least cost) Generation Mix of 76.26 % Baseload Capacity (represented by Coal) and only 23.74% Peaking Capacity (represented by Bunker C). In terms of annual energy requirement, the optimal mix is 98.1% baseload and 1.9% peaking energy.



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	**23.0**	**25.03**	**26.95**	**28.89**	**30.83**	**32.77**	**34.73**	**36.68**	**38.64**	**40.60**	**42.56**
Supply Contracted, MW	**10**	**10**	**10**	**10**	**10**	**10**	**0**	**0**	**0**	**0**	**0**
Greencore Geothermal, Inc. (GCGI)	10	10	10	10	10	10					
Supply for PSA Approval, MW	**8**	**12**	**12**	**12**	**12**	**12**	**0**	**0**	**0**	**0**	**0**
Unified Leyte Geothermal Energy,Inc. (ULGEI)	8										
PSALM *(Replacement Power due to delay of operation of GNPD)*		12	12								
GNPower Dinginin Ltd. (GNPD)				12	12	12					
Uncontracted Demand, MW	**5.03**	**3.03**	**4.95**	**6.89**	**8.83**	**10.77**	**34.73**	**36.68**	**38.64**	**40.60**	**42.56**



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)
GCGI	Greencore Geothermal, Inc.	100%	26/01/2023	25/12/2023	10.00	87,600.00	Base	Grid Connected	IPP	Operational	Geothermal	304.5	
ULGEI	Unified Leyte Geothermal Energy,Inc.	70%-100%	26/12/2016	25/12/2018	8.00	70,080.00	Base	Grid Connected	IPP	Operational	Geothermal		
GNPD	GNPower Dingingin Ltd.	70%-100%	26/12/2018	25/12/2023	12.00	105,120.00	Base	Grid Connected	IPP	Operational	Geothermal	600	
PSALM	Power Sector Asset Liabilities Managemen	TOU	26/12/2018	25/12/2020	12.00	105,120.00	Base	Grid Connected	IPP	Operational	Geothermal		

Small Power Utilities Group - Existing Approved Effective

Table below shows the Effective Rate for the month of July 2019 as published on https://www.napocor.gov.ph/index.php/npc-spug-electricity-rates.

Areas	EFFECTIVE RATE, P/kWh				
	Existing Subsidized Approved Generation Rate (SAGR)	Deferred Accounting Adjustments (DAA)			TOTAL
		GRAM	ICERA	Total	
Mindoro Area	5.6404	0.0000	0.0000	0.0000	5.6404
Marinduque	5.6404	0.0000	0.0000	0.0000	5.6404
Mainland Palawan	5.6404	0.0000	0.0000	0.0000	5.6404
Catanduanes	5.6404	0.0000	0.0000	0.0000	5.6404
Masbate	5.1167	0.0000	0.0000	0.0000	5.1167
Tablas	5.6404	0.0000	0.0000	0.0000	5.6404
Romblon	5.6404	0.0000	0.0000	0.0000	5.6404
Bantayan	6.2553	0.0000	0.0000	0.0000	6.2553
Camotes	6.2553	0.0000	0.0000	0.0000	6.2553
Siquijor	6.2553	0.0000	0.0000	0.0000	6.2553
Tawi-Tawi	5.1167	0.0000	0.0000	0.0000	5.1167
Basilan	5.1167	0.0000	0.0000	0.0000	5.1167
Sulu	5.1167	0.0000	0.0000	0.0000	5.1167
Other Luzon					
Group 1	4.8024	0.0000	0.0000	0.0000	4.8024
Group 2	5.6404	0.0000	0.0000	0.0000	5.6404
Other Visayas	5.6404	0.0000	0.0000	0.0000	5.6404
Other Mindanao	4.8024	0.0000	0.0000	0.0000	4.8024

The existing SAGR is based on CY 2003 cost level which was approved by the Commission on 16 December 2005 under ERC Case No. 20014-449 RC for the First Wave Areas (inclusing Visayas) and on 7 March 2011 under ERC Case No. 2006-020 for the remaining NPC-Spug areas.

National Power Corporation (NPC) filed a petition seeking for the Commission's approval of the proposed new SAGR, with prayer for the issuance of provisional authority with ERC Case No. 2018-048 RC. This is in view of the implementation of TRAIN Law, where the electricity prices were affected since NPC-SPUG uses diesel and bunker fuels in its power plant. Later fuel prices increased due to this law. The said petition is still pending for Commission's decision specifically for the Visayas area.

DISTRIBUTION IMPACT STUDY

Dlistribution Impact Study Methodology

BOHECO II Distribution Impact study methodology are inaccordance on the Electric Cooperative Distribution Utility Planning Manual. Also, BOHECO II are using "Distribution System Applied Software" and "Synergi Electric" simulation tool software to help engineer on the assessment/evaluation of Distribution System Performance (i.e. Power quality performance, capcacity performance, reliability performance and safety performance) in timely manner.

Distribution Line Description	DISTRIBUTION LINE LENGTH (KM)					
	2013	2014	2015	2016	2017	2018
69kV Line	0.355	0.355	0.355	0.355	0.355	0.355
Triple Circuit	1.5	1.5	1.5	1.5	1.5	1.5
Double Circuit	20.611	20.611	20.611	20.611	24.111	24.111
3Phase Circuit	248.171	257.436	261.107	266.973	265.873	266.891
2Phase Circuit	197.79	197.86	198.571	198.595	198.49	198.756
1Phase Circuit	863.522	885.245	919.152	926.559	936.692	961.547
Underbuilt	718.272	742.537	768.733	773.551	774.636	789.333
Open Secondary	862.719	926.664	993.848	1007.234	1010.477	1037.685

Consumer Type	SALES 2018	
	MWh	%
Residential	74,138,485.55	65%
Commercial	12,785,609.02	11%
Industrial	15,926,434.85	14%
Public Building	11,289,027.43	10%
Street Light	794,057.01	1%
TOTAL	**114,933,613.85**	**100%**

Consumer and Sales Profile

The current average energy consumption per customer type is also presented in the table below, from which it is shown that the residential customers draws the largest part of the total energy requirements at 65%, and for Commercial is 11%, Street Lighting at 1%, Public Building at 10%, and industrial at 14%.

Capacity Data

BOHECO II has seven (7) substations connected in two (2) 100 MVA NGCP Substation located in Imelda, Ubay and Sambog, Corella with an total capacity of 40 MVA namely: Garcia Substation, Guindulman Substation, Alicia Substation, Trinindad Substation, Imelda Substation, Mahayag Substation an the newly energized 5 MVA Cantagay Substation with an overall loading percentage equal to 50.91 % based on its non-coincident peak.
In year 2018, BOHECO II has 25.03MW and 26.11 MW coincident and non-coincident peak demand respectively with an average 60% load. Table below shows substation loading percentage details at its maximum rated MVA *(125% x rated capacity)*.

SUBSTATION	LOAD	YEAR				
		2014	2015	2016	2017	2018
Garcia Substation	Demand (MV	3.41	3.54	3.72	1.88	2.25
Max Rating (5/6.25MVA)	*Loading %*	*55%*	*57%*	*60%*	*30%*	*36%*
Cantagay Substation	Demand (MVA)				1.9	2.31
Max Rating (5/6.25MVA)	*Loading %*				*30%*	*37%*
Guindulman Substation	Demand (MV	2.33	3.02	2.99	3.09	3.15
Max Rating (5/6.25MVA)	*Loading %*	*37%*	*48%*	*48%*	*49%*	*50%*
Alicia Substation	Demand (MV	3.56	3.71	4.14	4.14	3.39
Max Rating (5/6.25MVA)	*Loading %*	*57%*	*59%*	*66%*	*66%*	*54%*
Trinidad Substation	Demand (MV	4.94	5.2	5.46	5.93	7.00
Max Rating (10/12.5MVA)	*Loading %*	*40%*	*42%*	*44%*	*47%*	*56%*
Imelda Substation	Demand (MV	3.19	3.15	4.63	3.72	4.11
Max Rating (5/6.25MVA)	*Loading %*	*51%*	*50%*	*74%*	*59%*	*66%*
Mahayag Substation	Demand (MV	1.45	1.51	1.7	3.45	3.90
Max Rating (5/6.25MVA)	*Loading %*	*23%*	*24%*	*27%*	*55%*	*62%*

SCHEDULE OF CSP

Base / mid-merit / peaking	For CSP		Proposed contract		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 and Opening of Bids	Bid Evaluation	Awarding	PSA Signing	Joint Application to ERC
Base Load:											
2024	12	105,408	26/12/2023	25/12/2033	23/02/2020	03/23/2020 and 04/6/2020	30/06/2020	30/06/2020	20/07/2020	13/08/2020	18/08/2020
2025	14	122,640									
2026	16	140,160									
2027	17	148,920									
2028	18	158,112									
2029	18	157,680									
2030	18	157,680									
2031	18	157,680									
2032	18	158,112									
2033	18	157,680									
Peaking Load:			26/04/2024	25/12/2023	23/02/2020	23/03/2020	15/06/2020	15/06/2020	01/07/2020	03/07/2020	06/07/2020
2020	3	3,204									
2021	4	4,272									
2022	5	5,340									
2023	6	6,408									

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)
2019									
Jan	23.12	13.87	10,699.21	22.00	16,368.00	1.12	5,668.79		
Feb	20.92	12.55	10,366.23	22.00	16,368.00	(1.08)	6,001.77		
Mar	21.90	13.14	9,891.59	22.00	14,784.00	(0.10)	4,892.41		
Apr	23.30	13.98	11,576.00	22.00	16,368.00	1.30	4,792.00		
May	25.03	15.02	12,737.67	22.00	15,840.00	3.03	3,102.33		
Jun	24.11	14.46	12,276.27	22.00	16,368.00	2.11	4,091.73		
Jul	22.82	13.69	11,490.29	22.00	15,840.00	0.82	4,349.71		
Aug	23.08	13.85	11,994.96	22.00	16,368.00	1.08	4,373.04		
Sep	21.14	12.68	11,355.37	22.00	16,368.00	(0.86)	5,012.63		
Oct	21.43	12.86	11,545.95	22.00	15,840.00	(0.57)	4,294.05		
Nov	21.99	13.19	11,658.86	22.00	16,368.00	(0.01)	4,709.14		
Dec	24.80	14.88	11,429.54	22.00	15,840.00	2.80	4,410.46		
2020									
Jan	23.12	13.87	11,521.73	22.00	16,368.00	1.12	4,846.27		
Feb	20.92	12.55	11,163.14	22.00	16,368.00	(1.08)	5,204.86		
Mar	21.90	13.14	10,652.02	22.00	15,312.00	(0.10)	4,659.98		
Apr	23.30	13.98	12,465.91	22.00	16,368.00	1.30	3,902.09		
May	25.03	15.02	13,716.89	22.00	15,840.00	3.03	2,123.11		
Jun	24.11	14.46	13,220.02	22.00	16,368.00	2.11	3,147.98		
Jul	22.82	13.69	12,373.61	22.00	15,840.00	0.82	3,466.39		
Aug	23.08	13.85	12,917.09	22.00	16,368.00	1.08	3,450.91		
Sep	21.14	12.68	12,228.33	22.00	16,368.00	(0.86)	4,139.67		
Oct	21.43	12.86	12,433.56	22.00	15,840.00	(0.57)	3,406.44		
Nov	21.99	13.19	12,555.15	22.00	16,368.00	(0.01)	3,812.85		
Dec	24.80	14.88	12,308.20	22.00	15,840.00	2.80	3,531.80		
2021									
Jan	24.89	14.94	12,348.93	22.00	16,368.00	2.89	4,019.07		
Feb	22.53	13.52	11,964.60	22.00	16,368.00	0.53	4,403.40		
Mar	23.58	14.15	11,416.78	22.00	14,784.00	1.58	3,367.22		
Apr	25.09	15.05	13,360.91	22.00	16,368.00	3.09	3,007.09		
May	26.95	16.17	14,701.70	22.00	15,840.00	4.95	1,138.30		
Jun	25.96	15.58	14,169.16	22.00	16,368.00	3.96	2,198.84		
Jul	24.58	14.75	13,261.98	22.00	15,840.00	2.58	2,578.02		
Aug	24.86	14.91	13,844.47	22.00	16,368.00	2.86	2,523.53		
Sep	22.76	13.66	13,106.26	22.00	16,368.00	0.76	3,261.74		
Oct	23.07	13.84	13,326.23	22.00	15,840.00	1.07	2,513.77		
Nov	23.68	14.21	13,456.55	22.00	16,368.00	1.68	2,911.45		
Dec	26.70	16.02	13,191.87	22.00	15,840.00	4.70	2,648.13		
2022									
Jan	28.47	17.08	13,179.61	22.00	16,368.00	6.47	3,188.39		
Feb	25.77	15.46	12,769.43	22.00	16,368.00	3.77	3,598.57		
Mar	26.97	16.18	12,184.76	22.00	14,784.00	4.97	2,599.24		
Apr	28.69	17.22	14,259.66	22.00	16,368.00	6.69	2,108.34		
May	30.83	18.50	15,690.64	22.00	15,840.00	8.83	149.36		
Jun	29.69	17.81	15,122.28	22.00	16,368.00	7.69	1,245.72		
Jul	28.11	16.87	14,154.08	22.00	15,840.00	6.11	1,685.92		
Aug	28.43	17.06	14,775.76	22.00	16,368.00	6.43	1,592.24		
Sep	26.04	15.62	13,987.89	22.00	16,368.00	4.04	2,380.11		
Oct	26.39	15.83	14,222.65	22.00	15,840.00	4.39	1,617.35		
Nov	27.08	16.25	14,361.74	22.00	16,368.00	5.08	2,006.26		
Dec	30.54	18.33	14,079.25	22.00	15,840.00	8.54	1,760.75		
2023									
Jan	30.27	18.16	14,012.96	22.00	16,368.00	8.27	2,355.04		
Feb	27.40	16.44	13,576.85	22.00	16,368.00	5.40	2,791.15		
Mar	28.68	17.21	12,955.20	22.00	14,784.00	6.68	1,828.80		
Apr	30.51	18.30	15,161.30	22.00	16,368.00	8.51	1,206.70		
May	32.77	19.66	16,682.77	22.00	15,840.00	10.77	(842.77)		
Jun	31.57	18.94	16,078.47	22.00	16,368.00	9.57	289.53		
Jul	29.88	17.93	15,049.05	22.00	15,840.00	7.88	790.95		
Aug	30.23	18.14	15,710.03	22.00	16,368.00	8.23	657.97		
Sep	27.68	16.61	14,872.35	22.00	16,368.00	5.68	1,495.65		
Oct	28.06	16.83	15,121.96	22.00	15,840.00	6.06	718.04		
Nov	28.79	17.28	15,269.83	22.00	16,368.00	6.79	1,098.17		
Dec	32.47	19.48	14,969.48	22.00	15,840.00	10.47	870.52		

2024									

Jan	32.07	19.24	14,848.43	10.00	7,440.00	22.07	(7,408.43)	12.00	8,928.00
Feb	29.03	17.42	14,386.31	10.00	7,440.00	19.03	(6,946.31)	12.00	8,928.00
Mar	30.39	18.23	13,727.61	10.00	6,960.00	20.39	(6,767.61)	12.00	8,352.00
Apr	32.32	19.39	16,065.24	10.00	7,440.00	22.32	(8,625.24)	12.00	8,928.00
May	34.73	20.84	17,677.41	10.00	7,200.00	24.73	(10,477.41)	12.00	8,640.00
Jun	33.45	20.07	17,037.09	10.00	7,440.00	23.45	(9,597.09)	12.00	8,928.00
Jul	31.66	19.00	15,946.29	10.00	7,200.00	21.66	(8,746.29)	12.00	8,640.00
Aug	32.03	19.22	16,646.68	10.00	7,440.00	22.03	(9,206.68)	12.00	8,928.00
Sep	29.33	17.60	15,759.06	10.00	7,440.00	19.33	(8,319.06)	12.00	8,928.00
Oct	29.73	17.84	16,023.55	10.00	7,200.00	19.73	(8,823.55)	12.00	8,640.00
Nov	30.51	18.30	16,180.24	10.00	7,440.00	20.51	(8,740.24)	12.00	8,928.00
Dec	34.41	20.64	15,861.98	10.00	7,200.00	24.41	(8,661.98)	12.00	8,640.00
2025									
Jan	33.88	20.33	15,685.64	10.00	7,440.00	23.88	(8,245.64)	14.00	10,416.00
Feb	30.67	18.40	15,197.46	10.00	7,440.00	20.67	(7,757.46)	14.00	10,416.00
Mar	32.10	19.26	14,501.62	10.00	6,720.00	22.10	(7,781.62)	14.00	9,408.00
Apr	34.14	20.49	16,971.05	10.00	7,440.00	24.14	(9,531.05)	14.00	10,416.00
May	36.68	22.01	18,674.12	10.00	7,200.00	26.68	(11,474.12)	14.00	10,080.00
Jun	35.33	21.20	17,997.70	10.00	7,440.00	25.33	(10,557.70)	14.00	10,416.00
Jul	33.45	20.07	16,845.40	10.00	7,200.00	23.45	(9,645.40)	14.00	10,080.00
Aug	33.83	20.30	17,585.28	10.00	7,440.00	23.83	(10,145.28)	14.00	10,416.00
Sep	30.98	18.59	16,647.60	10.00	7,440.00	20.98	(9,207.60)	14.00	10,416.00
Oct	31.40	18.84	16,927.01	10.00	7,200.00	21.40	(9,727.01)	14.00	10,080.00
Nov	32.23	19.34	17,092.53	10.00	7,440.00	22.23	(9,652.53)	14.00	10,416.00
Dec	36.34	21.81	16,756.34	10.00	7,200.00	26.34	(9,556.34)	14.00	10,080.00
2026									
Jan	35.69	21.41	16,524.30	10.00	7,440.00	25.69	(9,084.30)	16.00	11,904.00
Feb	32.30	19.38	16,010.03	10.00	7,440.00	22.30	(8,570.03)	16.00	11,904.00
Mar	33.81	20.29	15,276.98	10.00	6,720.00	23.81	(8,556.98)	16.00	10,752.00
Apr	35.97	21.58	17,878.44	10.00	7,440.00	25.97	(10,438.44)	16.00	11,904.00
May	38.64	23.18	19,672.57	10.00	7,200.00	28.64	(12,472.57)	16.00	11,520.00
Jun	37.22	22.33	18,959.98	10.00	7,440.00	27.22	(11,519.98)	16.00	11,904.00
Jul	35.23	21.14	17,746.07	10.00	7,200.00	25.23	(10,546.07)	16.00	11,520.00
Aug	35.63	21.38	18,525.51	10.00	7,440.00	25.63	(11,085.51)	16.00	11,904.00
Sep	32.64	19.58	17,537.70	10.00	7,440.00	22.64	(10,097.70)	16.00	11,904.00
Oct	33.08	19.85	17,832.04	10.00	7,200.00	23.08	(10,632.04)	16.00	11,520.00
Nov	33.95	20.37	18,006.42	10.00	7,440.00	23.95	(10,566.42)	16.00	11,904.00
Dec	38.29	22.97	17,652.25	10.00	7,200.00	28.29	(10,452.25)	16.00	11,520.00
2027									
Jan	37.50	22.50	17,364.23	10.00	7,440.00	27.50	(9,924.23)	17.00	12,648.00
Feb	33.94	20.37	16,823.81	10.00	7,440.00	23.94	(9,383.81)	17.00	12,648.00
Mar	35.53	21.32	16,053.50	10.00	6,720.00	25.53	(9,333.50)	17.00	11,424.00
Apr	37.79	22.67	18,787.20	10.00	7,440.00	27.79	(11,347.20)	17.00	12,648.00
May	40.60	24.36	20,672.52	10.00	7,200.00	30.60	(13,472.52)	17.00	12,240.00
Jun	39.10	23.46	19,923.71	10.00	7,440.00	29.10	(12,483.71)	17.00	12,648.00
Jul	37.02	22.21	18,648.10	10.00	7,200.00	27.02	(11,448.10)	17.00	12,240.00
Aug	37.44	22.47	19,467.16	10.00	7,440.00	27.44	(12,027.16)	17.00	12,648.00
Sep	34.29	20.58	18,429.14	10.00	7,440.00	24.29	(10,989.14)	17.00	12,648.00
Oct	34.76	20.85	18,738.44	10.00	7,200.00	24.76	(11,538.44)	17.00	12,240.00
Nov	35.67	21.40	18,921.68	10.00	7,440.00	25.67	(11,481.68)	17.00	12,648.00
Dec	40.23	24.14	18,549.51	10.00	7,200.00	30.23	(11,349.51)	17.00	12,240.00
2028									
Jan	39.31	23.59	18,205.27	10.00	7,440.00	29.31	(10,765.27)	18.00	13,392.00
Feb	35.58	21.35	17,638.68	10.00	7,440.00	25.58	(10,198.68)	18.00	13,392.00
Mar	37.24	22.35	16,831.06	10.00	6,960.00	27.24	(9,871.06)	18.00	12,528.00
Apr	39.62	23.77	19,697.16	10.00	7,440.00	29.62	(12,257.16)	18.00	13,392.00
May	42.56	25.54	21,673.81	10.00	7,200.00	32.56	(14,473.81)	18.00	12,960.00
Jun	40.99	24.60	20,888.72	10.00	7,440.00	30.99	(13,448.72)	18.00	13,392.00
Jul	38.81	23.29	19,551.33	10.00	7,200.00	28.81	(12,351.33)	18.00	12,960.00
Aug	39.25	23.55	20,410.06	10.00	7,440.00	29.25	(12,970.06)	18.00	13,392.00
Sep	35.95	21.57	19,321.76	10.00	7,440.00	25.95	(11,881.76)	18.00	13,392.00
Oct	36.44	21.86	19,646.05	10.00	7,200.00	26.44	(12,446.05)	18.00	12,960.00
Nov	37.39	22.43	19,838.16	10.00	7,440.00	27.39	(12,398.16)	18.00	13,392.00
Dec	42.17	25.30	19,447.96	10.00	7,200.00	32.17	(12,247.96)	18.00	12,960.00