

BASILAN 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

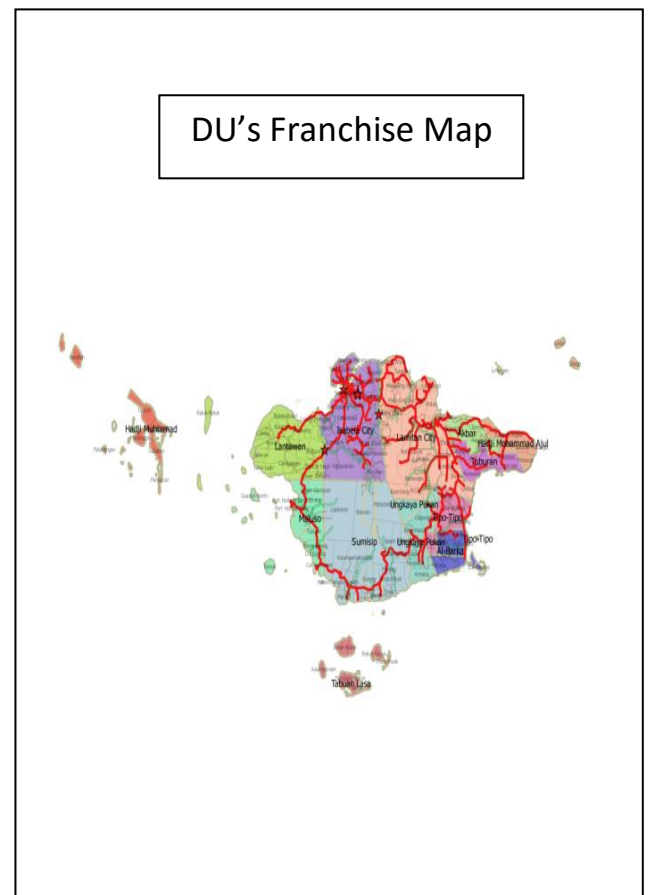
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I. INTRODUCTION

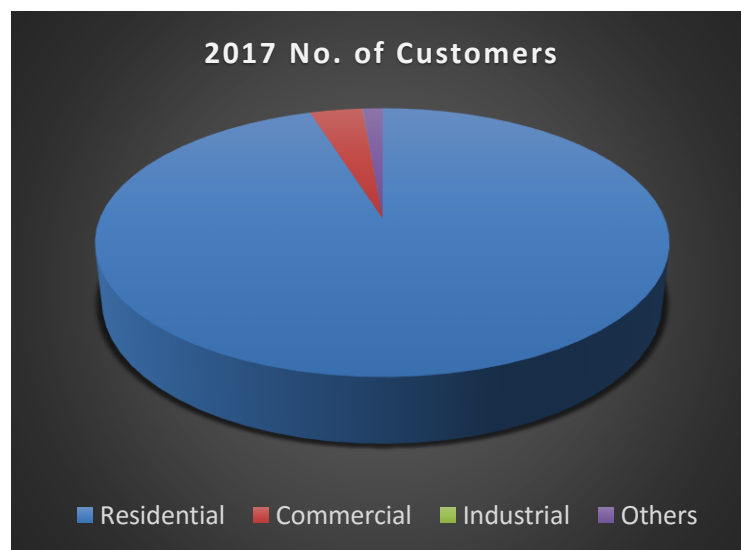
DISTRIBUTION UTILITIES PROFILE

BASELCO was formally registered as the 62th cooperative in the country on May 24, 1975 and presently classified as large coop and categorized as class "D" or ailing coop. Basilan is typhoon free with an annual average rainfall of 73.62 inches for the rainy months of May to September. The population growth rate of 27% ; population is 1.8 people per hectare; average household size is 5.5 members per household. The total land area of Basilan is 1,359 sq.kms. The status of electrification as of December 31, 2017 is 57%. The total length of primary lines is 640 kms. and 480 kms for secondary lines including underbuilt. The main source of power is NPC-SPUG.



Number of Customer Connections in Franchise	ACT UAL	FORECAST									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential	29063	29447	30006	30608	31251	31929	32640	33379	34143	34931	35738
Commercial	1070	1078.6	1089.7	1102.9	1118.5	1136.5	1157.3	1181	1207.9	1238	1271.7
Industrial	4	4.3104	4.5876	4.8792	5.1864	5.5108	5.8537	6.2164	6.6005	7.0072	7.4379
Others	414	419.04	427.23	436.11	445.78	456.34	467.89	480.5	494.28	509.3	525.65
Contestable Customers served by RES											
Total (Captive Customers)											

The actual total number of connected consumers is composed of 95% residential and only 4 industrials. There is a proposed citimall commercial establishment to be located at Isabela City has an estimated load of 2 MW and tentatively open by year 2020. LGUs are also planning to put up ecozones in their respective municipalities.

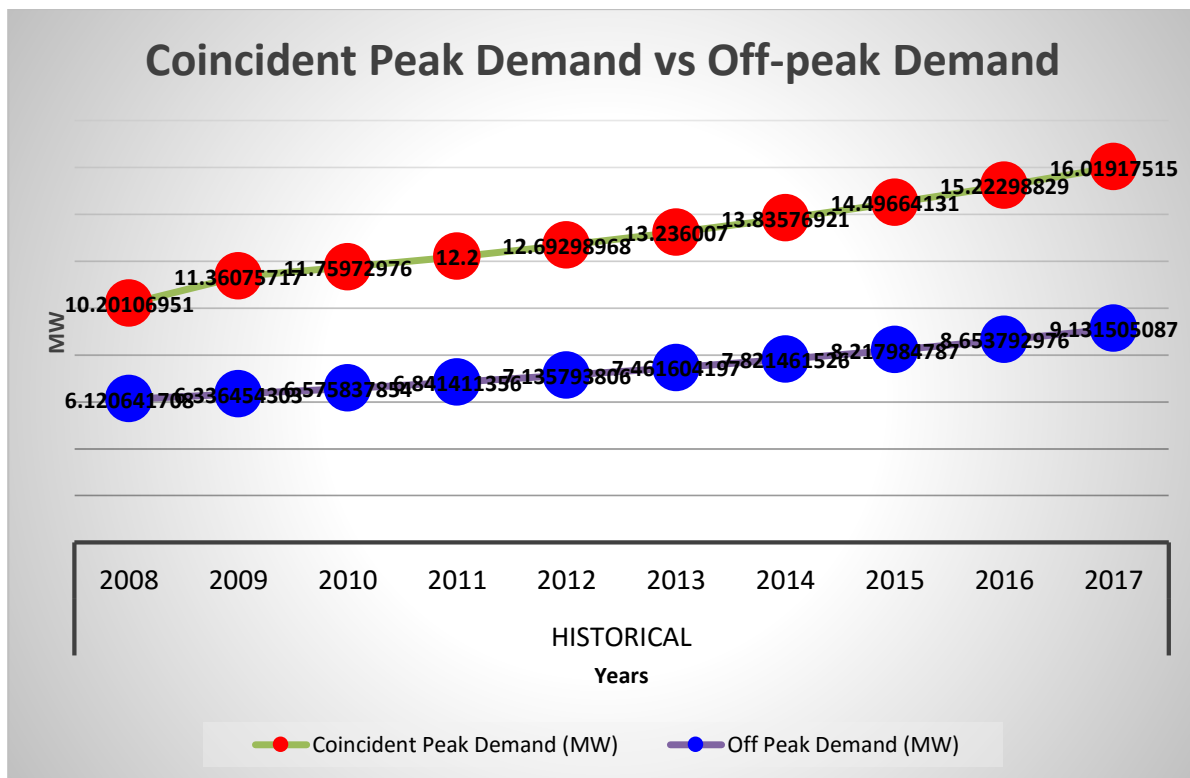


II. Energy and Demand Forecast (10 year historical and forecast)

DEMAND

Demand	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Coincident Peak Demand (MW)	7.2	7.95	8	8.3	8.3	8.45	8.5	9	9	9
Off Peak Demand (MW)	4.32	4.77	4.8	4.98	4.98	5.07	5.1	5.4	5.4	6

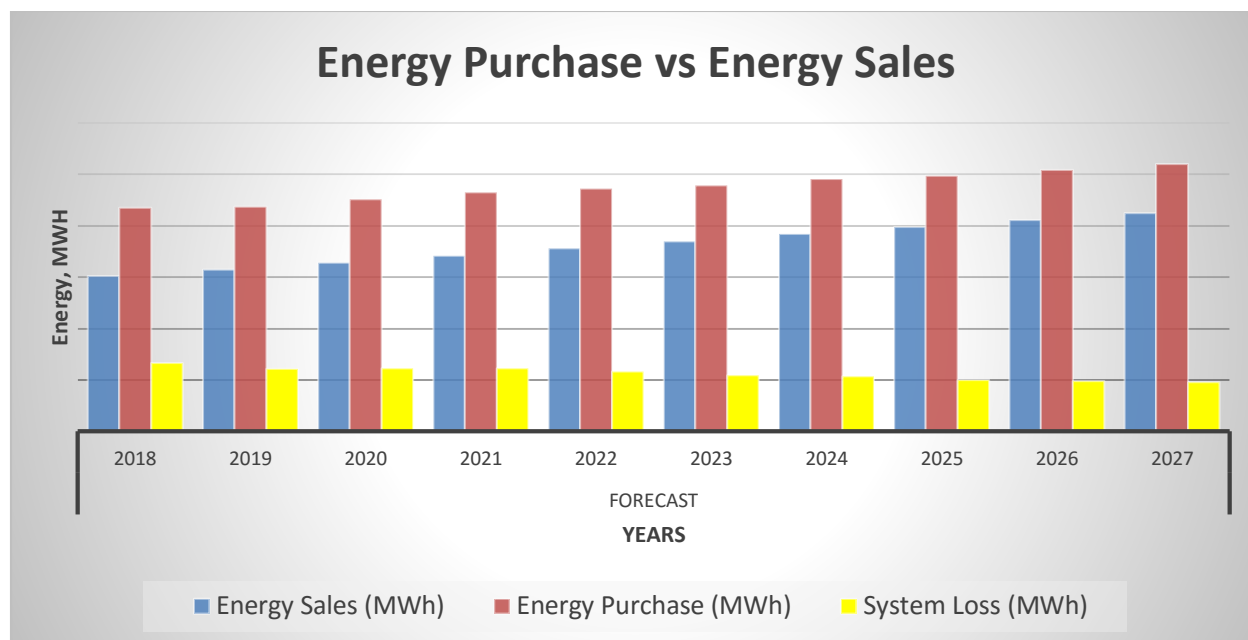
Demand	HISTORICAL									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Coincident Peak Demand (MW)	10.2	11.36	11.76	12.2	12.69	13.24	13.84	14.5	15.22	16.02
Off Peak Demand (MW)	6.121	6.336	6.576	6.841	7.136	7.462	7.821	8.218	8.654	9.132



Presently, the demand of BASELCO is 10 MW, incurred an increase of 30% since 2008. There is a proposed citimall commercial establishment to be located at Isabela City with a total load of 2 MW and will commence by year 2020. LGUs are also planning to have an agri-industrial park (ecozone) in their respective cities and municipalities. The methodology used in the forecasting was using different trending formulas and choose from among that passed the criteria

III. ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Energy Sales (MWh)	21232	22904	24733	23958	24709	24009	24254	25513	26699	29519
Energy Purchase (MWh)	27631	30191	32788	32895	33538	34259	35330	37144	39651	43791
System Loss (MWh)	6399	7287	8055	8937	8829	10250	11076	11631	12952	14272
ENERGY SALES AND PURCHASE	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Energy Sales (MWh)	30187	31486	32825	34194	35581	36976	38368	39746	41099	42417
Energy Purchase (MWh)	43486	43710	45114	46490	47218	47903	49142	49731	50874	51973
System Loss (MWh)	13298	12224	12288	12297	11637	10927	10774	9985	9775	9556

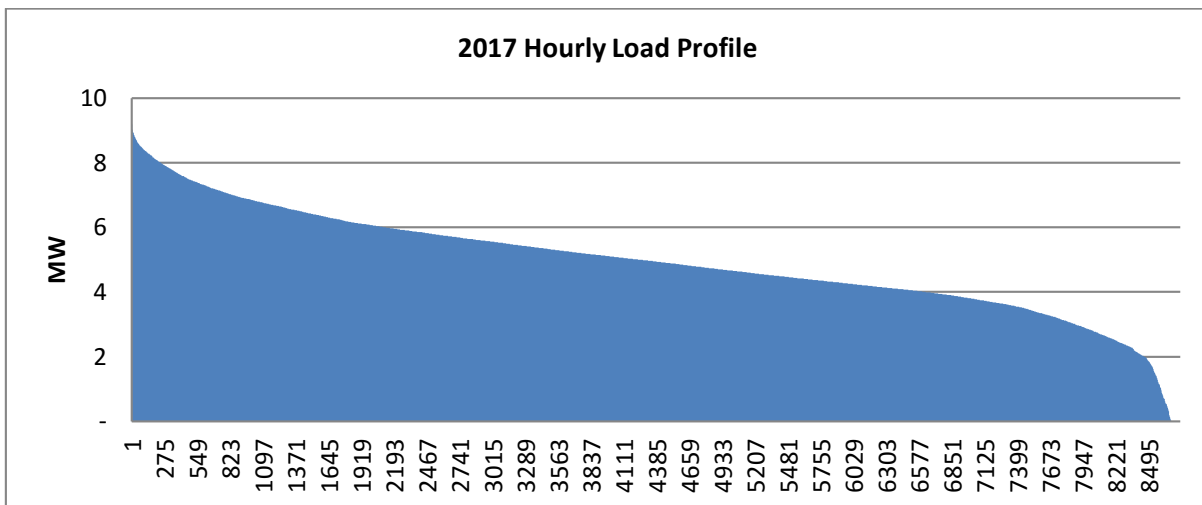
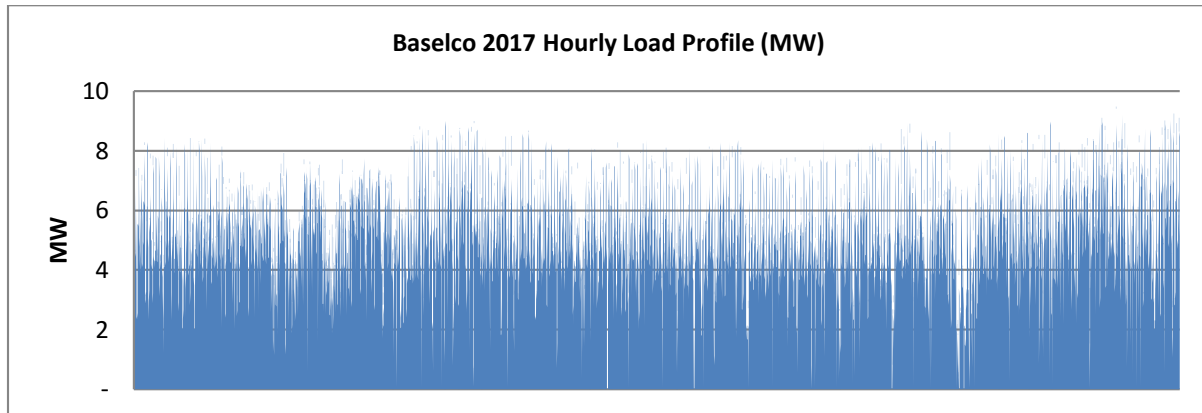


The annual energy purchased reached 44, 000 MWhr and the total system loss is 32% or equivalent to 14, 000 Mwhr. When segregated, the estimated technical loss is 17% computed during peak hour using powerworld software. Contributory factor of technical loss are over-extended distribution lines, undersized conductors and due to transformer losses. Non-technical losses are due to unbilled consumers, defective meters and rampant pilferage.

Description of methodology used in the forecasting and supply expansion plan and the source of assumption was base on the actual historical data.

Model No.	Forecasting Model	Model Description	Validity Tests	Accuracy Tests	Remarks (Pass/Fail)
44	$Y = e(t)-1 + d\ln(t)3 + c\ln(t)2 + b\ln(t)1 + a$	Cubic Logarithmic with Smoothing and Horizon	$R^2 = 0.9968$ and Adj. $R^2 = 0.9905$	MAPE = 0.62%	Pass
34	$Y = a(t)3 + c(t) + d$	Cubic with Horizon	$R^2 = 0.997$ and Adj. $R^2 = 0.996$	MAPE = 0.62%	Pass

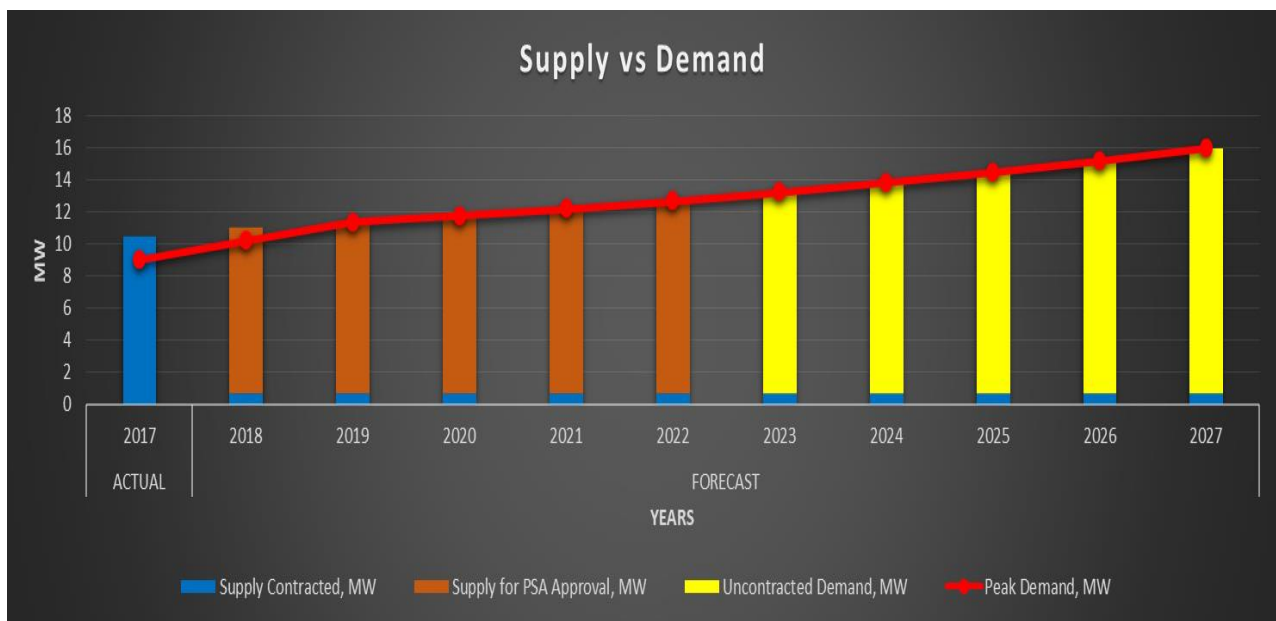
IV. LOAD PROFILE AND LOAD DURATION CURVE



The coincident peak demand of BASELCO was 9 MW and occurred from 6:00 pm to 8:00 pm, 60% to 70% of the peak demand for the base load and occurred during off-peak. BASELCO distribution system has two feeders, namely, Isabela feeder and Lamitan feeder. Isabela feeder has the most connected commercial consumers hence, experienced high demand during daytime, which is approximately 3 to 4 MW. Monthly peak demand occurred during the months of April and December which is due to summer vacation and Christmas seasons. At certain point, hourly loads were zero because of the occurrences of power interruptions.

V. (a) 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	9	10.20107	11.36076	11.75973	12.2	12.69299	13.23601	13.83577	14.49664	15.22299	16.01918
Supply Contracted, MW	10.46	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
NPC_SPUG	9.82										
Kumalarang MH	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Supply for PSA Approval, MW	0	10.398	10.721	11.12	11.562	12.053	0	0	0	0	0
NPC_SPUG		10.398	10.721	11.12	11.562	12.053					
Uncontracted Demand, MW	0	0	0	0	0	0	12.59601	13.19577	13.85664	14.58299	15.37918



VI. (b) 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)
1988	BASELCO	0.5	Jan-88		0.64	600	Mid-merit	Embedded	Utility Owned	Operational	Hydro	0.67	0.4

Baselco being under NPC-SPUG area isolated from the mainland grid is not included in the WESM and do not have contestable demand from all types of consumers. The PSA contract between NPC-SPUG and BASELCO is effective starting year 2011 up to year 2017 only and the arrangement of payment, BASELCO will only pay the total energy purchased excluding the demand with a rate of Php5. 1167 per kilowatthour. Baselco is also in the process of preparing the Terms of Reference for the conduct of Competitive Selection Process for New Power Provider to enter into contract to supply power in the franchise area of Baselco.

VI. Committed Energy and Demand for CSP

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	9.37	6.09	3,059.03	0.64	600.00	8.73	2,459.03	12.50	2,459.03
Feb	8.89	5.78	3,256.81	0.64	600.00	8.25	2,656.81	12.50	2,656.81
Mar	8.67	5.63	3,341.74	0.64	600.00	8.03	2,741.74	12.50	2,741.74
Apr	10.20	6.63	3,388.45	0.64	600.00	9.56	2,788.45	12.50	2,788.45
May	9.83	6.39	3,451.11	0.64	600.00	9.19	2,851.11	12.50	2,851.11
Jun	9.41	6.11	3,533.17	0.64	600.00	8.77	2,933.17	12.50	2,933.17
Jul	9.39	6.10	3,589.24	0.64	600.00	8.75	2,989.24	12.50	2,989.24
Aug	9.38	6.10	3,678.91	0.64	600.00	8.74	3,078.91	12.50	3,078.91
Sep	10.01	6.51	3,792.40	0.64	600.00	9.37	3,192.40	12.50	3,192.40
Oct	9.69	6.30	3,801.67	0.64	600.00	9.05	3,201.67	12.50	3,201.67
Nov	10.08	6.55	4,198.47	0.64	600.00	9.44	3,598.47	12.50	3,598.47
Dec	10.20	6.63	4,394.73	0.64	600.00	9.56	3,794.73	12.50	3,794.73
2019									
Jan	10.43	6.78	3,118.91	0.64	600.00	9.79	2,518.91	12.50	2,518.91
Feb	9.91	6.44	3,311.62	0.64	600.00	9.27	2,711.62	12.50	2,711.62
Mar	9.66	6.28	3,389.11	0.64	600.00	9.02	2,789.11	12.50	2,789.11
Apr	11.36	7.38	3,427.76	0.64	600.00	10.72	2,827.76	12.50	2,827.76
May	10.95	7.12	3,482.55	0.64	600.00	10.31	2,882.55	12.50	2,882.55

Jun	10.48	6.81	3,556.82	0.64	600.00	9.84	2,956.82	12.50	2,956.82
Jul	10.46	6.80	3,604.86	0.64	600.00	9.82	3,004.86	12.50	3,004.86
Aug	10.44	6.79	3,686.55	0.64	600.00	9.80	3,086.55	12.50	3,086.55
Sep	11.15	7.25	3,791.90	0.64	600.00	10.51	3,191.90	12.50	3,191.90
Oct	10.79	7.01	3,793.02	0.64	600.00	10.15	3,193.02	12.50	3,193.02
Nov	11.22	7.30	4,180.17	0.64	600.00	10.58	3,580.17	12.50	3,580.17
Dec	11.36	7.38	4,366.67	0.64	600.00	10.72	3,766.67	12.50	3,766.67
2020									
Jan	10.80	7.02	3,219.06	0.64	600.00	10.16	2,619.06	12.50	2,619.06
Feb	10.26	6.67	3,417.96	0.64	600.00	9.62	2,817.96	12.50	2,817.96
Mar	10.00	6.50	3,497.94	0.64	600.00	9.36	2,897.94	12.50	2,897.94
Apr	11.76	7.64	3,537.83	0.64	600.00	11.12	2,937.83	12.50	2,937.83
May	11.33	7.37	3,594.37	0.64	600.00	10.69	2,994.37	12.50	2,994.37
Jun	10.85	7.05	3,671.03	0.64	600.00	10.21	3,071.03	12.50	3,071.03
Jul	10.83	7.04	3,720.62	0.64	600.00	10.19	3,120.62	12.50	3,120.62
Aug	10.81	7.03	3,804.93	0.64	600.00	10.17	3,204.93	12.50	3,204.93
Sep	11.54	7.50	3,913.66	0.64	600.00	10.90	3,313.66	12.50	3,313.66
Oct	11.17	7.26	3,914.82	0.64	600.00	10.53	3,314.82	12.50	3,314.82
Nov	11.62	7.55	4,314.40	0.64	600.00	10.98	3,714.40	12.50	3,714.40
Dec	11.76	7.64	4,506.89	0.64	600.00	11.12	3,906.89	12.50	3,906.89
2021									
Jan	11.21	7.28	3,317.32	0.64	600.00	10.57	2,717.32	12.50	2,717.32
Feb	10.64	6.92	3,522.28	0.64	600.00	10.00	2,922.28	12.50	2,922.28
Mar	10.38	6.75	3,604.71	0.64	600.00	9.74	3,004.71	12.50	3,004.71
Apr	12.20	7.93	3,645.81	0.64	600.00	11.56	3,045.81	12.50	3,045.81
May	11.76	7.64	3,704.08	0.64	600.00	11.12	3,104.08	12.50	3,104.08

Jun	11.26	7.32	3,783.08	0.64	600.00	10.62	3,183.08	12.50	3,183.08
Jul	11.24	7.30	3,834.18	0.64	600.00	10.60	3,234.18	12.50	3,234.18
Aug	11.22	7.29	3,921.07	0.64	600.00	10.58	3,321.07	12.50	3,321.07
Sep	11.97	7.78	4,033.11	0.64	600.00	11.33	3,433.11	12.50	3,433.11
Oct	11.59	7.53	4,034.31	0.64	600.00	10.95	3,434.31	12.50	3,434.31
Nov	12.06	7.84	4,446.08	0.64	600.00	11.42	3,846.08	12.50	3,846.08
Dec	12.20	7.93	4,644.45	0.64	600.00	11.56	4,044.45	12.50	4,044.45
2022									
Jan	11.66	7.58	3,369.25	0.64	600.00	11.02	2,769.25	12.50	2,769.25
Feb	11.08	7.20	3,577.43	0.64	600.00	10.44	2,977.43	12.50	2,977.43
Mar	10.80	7.02	3,661.14	0.64	600.00	10.16	3,061.14	12.50	3,061.14
Apr	12.69	8.25	3,702.89	0.64	600.00	12.05	3,102.89	12.50	3,102.89
May	12.23	7.95	3,762.07	0.64	600.00	11.59	3,162.07	12.50	3,162.07
Jun	11.71	7.61	3,842.30	0.64	600.00	11.07	3,242.30	12.50	3,242.30
Jul	11.69	7.60	3,894.20	0.64	600.00	11.05	3,294.20	12.50	3,294.20
Aug	11.67	7.59	3,982.45	0.64	600.00	11.03	3,382.45	12.50	3,382.45
Sep	12.46	8.10	4,096.25	0.64	600.00	11.82	3,496.25	12.50	3,496.25
Oct	12.06	7.84	4,097.47	0.64	600.00	11.42	3,497.47	12.50	3,497.47
Nov	12.54	8.15	4,515.69	0.64	600.00	11.90	3,915.69	12.50	3,915.69
Dec	12.69	8.25	4,717.16	0.64	600.00	12.05	4,117.16	12.50	4,117.16
2023									
Jan	12.16	7.90	3,418.11	0.64	600.00	11.52	2,818.11	16.00	2,818.11
Feb	11.55	7.51	3,629.30	0.64	600.00	10.91	3,029.30	16.00	3,029.30
Mar	11.26	7.32	3,714.23	0.64	600.00	10.62	3,114.23	16.00	3,114.23
Apr	13.24	8.60	3,756.59	0.64	600.00	12.60	3,156.59	16.00	3,156.59
May	12.76		3,816.62			12.12	3,216.62		

		8.29		0.64	600.00			16.00	3,216.62
Jun	12.21	7.94	3,898.02	0.64	600.00	11.57	3,298.02	16.00	3,298.02
Jul	12.19	7.92	3,950.67	0.64	600.00	11.55	3,350.67	16.00	3,350.67
Aug	12.17	7.91	4,040.20	0.64	600.00	11.53	3,440.20	16.00	3,440.20
Sep	12.99	8.44	4,155.65	0.64	600.00	12.35	3,555.65	16.00	3,555.65
Oct	12.57	8.17	4,156.89	0.64	600.00	11.93	3,556.89	16.00	3,556.89
Nov	13.08	8.50	4,581.17	0.64	600.00	12.44	3,981.17	16.00	3,981.17
Dec	13.24	8.60	4,785.56	0.64	600.00	12.60	4,185.56	16.00	4,185.56
2024									
Jan	12.71	8.26	3,506.55	0.64	600.00	12.07	2,906.55	16.00	2,906.55
Feb	12.07	7.85	3,723.21	0.64	600.00	11.43	3,123.21	16.00	3,123.21
Mar	11.77	7.65	3,810.33	0.64	600.00	11.13	3,210.33	16.00	3,210.33
Apr	13.84	8.99	3,853.78	0.64	600.00	13.20	3,253.78	16.00	3,253.78
May	13.34	8.67	3,915.37	0.64	600.00	12.70	3,315.37	16.00	3,315.37
Jun	12.76	8.30	3,998.88	0.64	600.00	12.12	3,398.88	16.00	3,398.88
Jul	12.74	8.28	4,052.89	0.64	600.00	12.10	3,452.89	16.00	3,452.89
Aug	12.73	8.27	4,144.74	0.64	600.00	12.09	3,544.74	16.00	3,544.74
Sep	13.58	8.83	4,263.18	0.64	600.00	12.94	3,663.18	16.00	3,663.18
Oct	13.14	8.54	4,264.44	0.64	600.00	12.50	3,664.44	16.00	3,664.44
Nov	13.67	8.89	4,699.70	0.64	600.00	13.03	4,099.70	16.00	4,099.70
Dec	13.84	8.99	4,909.39	0.64	600.00	13.20	4,309.39	16.00	4,309.39
2025									
Jan	13.32	8.66	3,548.53	0.64	600.00	12.68	2,948.53	16.00	2,948.53
Feb	12.65	8.22	3,767.78	0.64	600.00	12.01	3,167.78	16.00	3,167.78
Mar	12.33	8.02	3,855.95	0.64	600.00	11.69	3,255.95	16.00	3,255.95
Apr	14.50	9.42	3,899.92	0.64	600.00	13.86	3,299.92	16.00	3,299.92
May	13.97		3,962.25			13.33	3,362.25		

		9.08		0.64	600.00			16.00	3,362.25
Jun	13.37	8.69	4,046.75	0.64	600.00	12.73	3,446.75	16.00	3,446.75
Jul	13.35	8.68	4,101.42	0.64	600.00	12.71	3,501.42	16.00	3,501.42
Aug	13.33	8.67	4,194.36	0.64	600.00	12.69	3,594.36	16.00	3,594.36
Sep	14.23	9.25	4,314.22	0.64	600.00	13.59	3,714.22	16.00	3,714.22
Oct	13.77	8.95	4,315.50	0.64	600.00	13.13	3,715.50	16.00	3,715.50
Nov	14.32	9.31	4,755.97	0.64	600.00	13.68	4,155.97	16.00	4,155.97
Dec	14.50	9.42	4,968.16	0.64	600.00	13.86	4,368.16	16.00	4,368.16
2026		-							
Jan	13.98	9.09	3,630.11	0.64	600.00	13.34	3,030.11	16.00	3,030.11
Feb	13.28	8.63	3,854.40	0.64	600.00	12.64	3,254.40	16.00	3,254.40
Mar	12.95	8.42	3,944.60	0.64	600.00	12.31	3,344.60	16.00	3,344.60
Apr	15.22	9.89	3,989.58	0.64	600.00	14.58	3,389.58	16.00	3,389.58
May	14.67	9.54	4,053.34	0.64	600.00	14.03	3,453.34	16.00	3,453.34
Jun	14.04	9.13	4,139.78	0.64	600.00	13.40	3,539.78	16.00	3,539.78
Jul	14.02	9.11	4,195.70	0.64	600.00	13.38	3,595.70	16.00	3,595.70
Aug	14.00	9.10	4,290.78	0.64	600.00	13.36	3,690.78	16.00	3,690.78
Sep	14.94	9.71	4,413.40	0.64	600.00	14.30	3,813.40	16.00	3,813.40
Oct	14.46	9.40	4,414.71	0.64	600.00	13.82	3,814.71	16.00	3,814.71
Nov	15.04	9.78	4,865.30	0.64	600.00	14.40	4,265.30	16.00	4,265.30
Dec	15.22	9.89	5,082.38	0.64	600.00	14.58	4,482.38	16.00	4,482.38
2027									
Jan	14.71	9.56	3,708.53	0.64	600.00	14.07	3,108.53	16.00	3,108.53
Feb	13.98	9.09	3,937.67	0.64	600.00	13.34	3,337.67	16.00	3,337.67
Mar	13.63	8.86	4,029.81	0.64	600.00	12.99	3,429.81	16.00	3,429.81
Apr	16.02	10.41	4,075.77	0.64	600.00	15.38	3,475.77	16.00	3,475.77

May	15.44	10.04	4,140.91	0.64	600.00	14.80	3,540.91	16.00	3,540.91
Jun	14.78	9.61	4,229.22	0.64	600.00	14.14	3,629.22	16.00	3,629.22
Jul	14.75	9.59	4,286.34	0.64	600.00	14.11	3,686.34	16.00	3,686.34
Aug	14.73	9.58	4,383.48	0.64	600.00	14.09	3,783.48	16.00	3,783.48
Sep	15.72	10.22	4,508.74	0.64	600.00	15.08	3,908.74	16.00	3,908.74
Oct	15.22	9.89	4,510.08	0.64	600.00	14.58	3,910.08	16.00	3,910.08
Nov	15.83	10.29	4,970.41	0.64	600.00	15.19	4,370.41	16.00	4,370.41
Dec	16.02	10.41	5,192.17	0.64	600.00	15.38	4,592.17	16.00	4,592.17
2028									
Jan	15.51	10.08	3,783.84	0.64	600.00	14.87	3,183.84	16.00	3,183.84
Feb	14.74	9.58	4,017.63	0.64	600.00	14.10	3,417.63	16.00	3,417.63
Mar	14.37	9.34	4,111.64	0.64	600.00	13.73	3,511.64	16.00	3,511.64
Apr	16.89	10.98	4,158.53	0.64	600.00	16.25	3,558.53	16.00	3,558.53
May	16.28	10.58	4,224.99	0.64	600.00	15.64	3,624.99	16.00	3,624.99
Jun	15.58	10.13	4,315.10	0.64	600.00	14.94	3,715.10	16.00	3,715.10
Jul	15.55	10.11	4,373.39	0.64	600.00	14.91	3,773.39	16.00	3,773.39
Aug	15.53	10.10	4,472.49	0.64	600.00	14.89	3,872.49	18.00	3,872.49
Sep	16.57	10.77	4,600.30	0.64	600.00	15.93	4,000.30	18.00	4,000.30
Oct	16.05	10.43	4,601.67	0.64	600.00	15.41	4,001.67	18.00	4,001.67
Nov	16.69	10.85	5,071.35	0.64	600.00	16.05	4,471.35	18.00	4,471.35
Dec	16.89	10.98	5,297.61	0.64	600.00	16.25	4,697.61	18.00	4,697.61

HISTORICAL MONTHLY DATA

Year	Energy Purchased (MWh)	Energy Sales (MWh)	Peak Demand (MW)	Contracted Demand (MW)	Contracted Energy (MWh)
2008					
Jan	2,261.78	1,676.52	6.38	6.80	2,488.29
Feb	2,332.68	1,736.59	6.30	6.80	2,488.29
Mar	2,224.81	1,654.24	6.24	6.80	2,488.29
Apr	2,473.56	1,830.23	6.34	6.80	2,488.29
May	2,066.65	1,616.18	6.57	6.80	2,488.29
Jun	2,291.35	1,784.98	6.40	6.80	2,488.29
Jul	2,233.85	1,741.81	6.12	6.80	2,488.29
Aug	2,325.76	1,790.11	6.63	6.80	2,488.29
Sep	2,471.76	1,879.46	6.50	6.80	2,488.29
Oct	2,549.80	1,837.16	6.47	6.80	2,488.29
Nov	2,323.80	1,834.65	6.53	6.80	2,488.29
Dec	2,512.09	1,847.74	6.57	6.80	2,488.29
2009					
Jan	2,404.21	1,789.51	5.77	7.00	2,606.66
Feb	2,532.84	1,879.57	6.10	7.00	2,606.66
Mar	2,313.76	1,779.65	5.99	7.00	2,606.66
Apr	2,536.24	1,920.85	6.03	7.00	2,606.66
May	2,524.77	1,910.32	6.18	7.00	2,606.66
Jun	2,557.60	1,959.37	6.07	7.00	2,606.66
Jul	2,445.24	1,884.16	6.49	7.00	2,606.66
Aug	2,495.91	1,962.62	6.63	7.00	2,606.66
Sep	2,772.28	2,060.88	6.87	7.00	2,606.66
Oct	2,511.52	1,942.58	6.87	7.00	2,606.66
Nov	2,631.02	2,062.21	6.84	7.00	2,606.66
Dec	2,616.11	2,021.95	6.95	7.00	2,606.66
2010					
Jan	2,547.49	1,923.71	5.99	7.30	2,633.13
Feb	2,600.63	1,986.22	6.39	7.30	2,633.13
Mar	2,443.91	1,884.21	6.27	7.30	2,633.13
Apr	2,765.69	2,052.57	6.34	7.30	2,633.13
May	2,788.76	2,108.41	6.56	7.30	2,633.13
Jun	2,827.09	2,167.79	6.39	7.30	2,633.13
Jul	2,607.85	1,996.09	6.64	7.30	2,633.13
Aug	2,749.25	2,093.61	7.20	7.30	2,633.13
Sep	2,848.65	2,151.77	7.24	7.30	2,633.13
Oct	2,730.25	2,132.07	7.33	7.30	2,633.13

Nov	2,789.57	2,124.75	7.53	7.30	2,633.13
Dec	2,846.41	2,196.21	6.83	7.30	2,633.13
2011					
Jan	2,840.32	2,149.48	6.20	7.59	2,661.25
Feb	2,712.80	2,049.29	5.55	7.59	2,661.25
Mar	2,598.45	1,955.33	6.13	7.59	2,661.25
Apr	2,663.04	1,956.70	7.19	7.59	2,661.25
May	2,627.13	1,996.59	7.51	7.59	2,661.25
Jun	2,894.09	2,108.11	7.52	7.59	2,661.25
Jul	2,609.65	1,865.20	7.85	7.59	2,661.25
Aug	2,832.81	2,099.06	6.91	7.59	2,661.25
Sep	2,656.34	1,951.97	6.34	7.59	2,661.25
Oct	2,865.25	2,088.81	6.36	7.59	2,661.25
Nov	2,689.68	1,979.47	7.09	7.59	2,661.25
Dec	2,459.80	1,902.85	8.10	7.59	2,661.25
2012					
Jan	3,024.28	2,241.27	7.65	8.07	2,683.64
Feb	2,767.10	1,914.91	7.62	8.07	2,683.64
Mar	2,820.54	2,075.12	7.50	8.07	2,683.64
Apr	3,155.93	2,242.09	7.59	8.07	2,683.64
May	2,740.12	1,949.28	7.67	8.07	2,683.64
Jun	2,382.01	1,772.97	7.59	8.07	2,683.64
Jul	2,682.10	1,963.12	7.65	8.07	2,683.64
Aug	2,925.32	2,028.28	7.82	8.07	2,683.64
Sep	2,737.48	1,943.43	7.85	8.07	2,683.64
Oct	2,823.61	1,917.61	7.86	8.07	2,683.64
Nov	2,988.13	2,523.26	7.89	8.07	2,683.64
Dec	2,987.60	2,237.92	8.07	8.07	2,683.64
2013					
Jan	2,891.54	2,440.62	5.74	8.44	2,693.66
Feb	2,900.47	2,198.86	5.94	8.44	2,693.66
Mar	2,707.83	1,998.84	6.33	8.44	2,693.66
Apr	3,054.66	2,065.91	6.48	8.44	2,693.66
May	2,737.13	2,053.67	6.49	8.44	2,693.66
Jun	2,644.49	1,865.04	6.52	8.44	2,693.66
Jul	2,585.44	1,758.03	6.50	8.44	2,693.66
Aug	2,611.96	1,943.61	6.33	8.44	2,693.66
Sep	2,901.07	1,929.32	6.99	8.44	2,693.66
Oct	2,737.24	1,969.74	7.56	8.44	2,693.66
Nov	3,229.98	1,985.25	7.85	8.44	2,693.66
Dec	3,256.70	2,239.19	8.03	8.44	2,693.66

2014					
Jan	3,076.12	1,798.62	7.49	8.68	2,786.50
Feb	2,740.34	1,879.86	5.87	8.68	2,786.50
Mar	2,686.21	1,819.33	6.60	8.68	2,786.50
Apr	3,162.36	2,069.65	6.66	8.68	2,786.50
May	2,800.45	1,915.05	6.51	8.68	2,786.50
Jun	2,976.42	2,036.29	7.11	8.68	2,786.50
Jul	2,876.93	2,040.10	7.12	8.68	2,786.50
Aug	3,103.81	2,067.06	7.71	8.68	2,786.50
Sep	2,910.79	2,068.09	7.60	8.68	2,786.50
Oct	2,800.24	1,943.25	7.70	8.68	2,786.50
Nov	3,049.96	2,073.49	7.61	8.68	2,786.50
Dec	3,094.81	2,284.53	9.12	8.68	2,786.50
2015					
Jan	3,158.52	1,935.28	7.09	9.18	2,899.63
Feb	2,740.34	2,075.57	7.00	9.18	2,899.63
Mar	2,845.62	1,985.72	7.55	9.18	2,899.63
Apr	3,040.20	2,040.03	7.55	9.18	2,899.63
May	2,752.24	1,911.37	7.39	9.18	2,899.63
Jun	3,372.85	2,354.15	7.77	9.18	2,899.63
Jul	3,172.35	2,040.74	8.50	9.18	2,899.63
Aug	3,037.95	2,170.96	8.50	9.18	2,899.63
Sep	3,163.95	2,208.09	8.98	9.18	2,899.63
Oct	3,172.35	2,186.93	8.95	9.18	2,899.63
Nov	3,185.78	2,302.05	8.90	9.18	2,899.63
Dec	3,502.04	2,426.75	9.00	9.18	2,899.63
2016					
Jan	3,172.35	2,363.08	7.77	9.51	3,012.75
Feb	3,654.00	2,318.61	7.85	9.51	3,012.75
Mar	3,528.00	2,416.00	8.38	9.51	3,012.75
Apr	3,502.80	2,365.45	8.09	9.51	3,012.75
May	3,284.40	2,148.51	8.15	9.51	3,012.75
Jun	3,015.54	2,116.12	8.39	9.51	3,012.75
Jul	2,746.80	1,972.57	8.71	9.51	3,012.75
Aug	3,015.80	2,303.24	8.98	9.51	3,012.75
Sep	2,914.80	2,084.00	8.65	9.51	3,012.75
Oct	3,091.20	2,259.43	9.18	9.51	3,012.75
Nov	3,444.00	2,467.72	8.99	9.51	3,012.75
Dec	3,544.80	2,543.79	9.10	9.51	3,012.75
2017					
Jan	3,809.87	2,416.47	8.74	9.82	3,125.87

Feb	3,818.27	2,446.54	8.32	9.82	3,125.87
Mar	3,062.43	2,281.90	8.12	9.82	3,125.87
Apr	3,537.50	2,430.40	9.49	9.82	3,125.87
May	3,779.44	2,420.82	9.16	9.82	3,125.87
Jun	3,784.23	2,616.86	8.78	9.82	3,125.87
Jul	3,678.74	2,378.78	8.77	9.82	3,125.87
Aug	3,881.63	2,643.24	8.76	9.82	3,125.87
Sep	3,634.62	2,420.21	9.32	9.82	3,125.87
Oct	3,313.53	2,374.32	9.03	9.82	3,125.87
Nov	3,828.87	2,549.65	9.38	9.82	3,125.87
Dec	3,565.75	2,601.45	9.49	9.82	3,125.87

VII. Currently approved SAGR for Off-Grid ECs to be passed-on to consumers

The current approved SAGR for Off-Grid particularly Basilan Electric Cooperative, Inc. is Php. 5.1167.

VIII. DU's Current Supply and Demand

Plant Parameters (MW)		2018				
		JAN	FEB	MAR	APR	MAY
NPC-SPUG	Contracted Capacity	9.365	8.893	8.668	10.201	9.83
	Available Capacity	10.3	10.3	10.3	10.3	10.3
Kumalarang MHPP	Contracted Capacity	0.67	0.67	0.67	0.67	0.67
	Available Capacity	0.64	0.64	0.64	0.64	0.64
TOTAL CONTRACTED CAPACITY		10.04	9.56	9.34	10.87	10.5
TOTAL AVAILABLE CAPACITY		10.94	10.94	10.94	10.94	10.94
COINCIDENT PEAK DEMAND		9.11	9.69	9.98	10.07	9.44
GROSS RESERVE/DEFICIT		0.93	-0.13	-0.64	0.8	1.06

Note:

1. The Power Supply Agreement between NPC and BASELCO was already extended for another three years until March 31, 2020.

2. The contracted capacity stated above is the proposed demand to be indicated in the PSA.

IX. DISTRIBUTION IMPACT STUDY

With the current situation of BASELCO distribution line having a centralized power plant station at Isabela City as shown in figure 1. using a powerworld simulation our estimated technical losses is **17.44%** and the line voltage at the receiving end on secondary side is **177** volts during peak hours in Lamitan City and **182** volts in Maluso Municipality as presented in figure 2. When a power interruption occurred at Lamitan City and Maluso Municipality, power restoration takes too long due to the distance from the substation/ power plant.

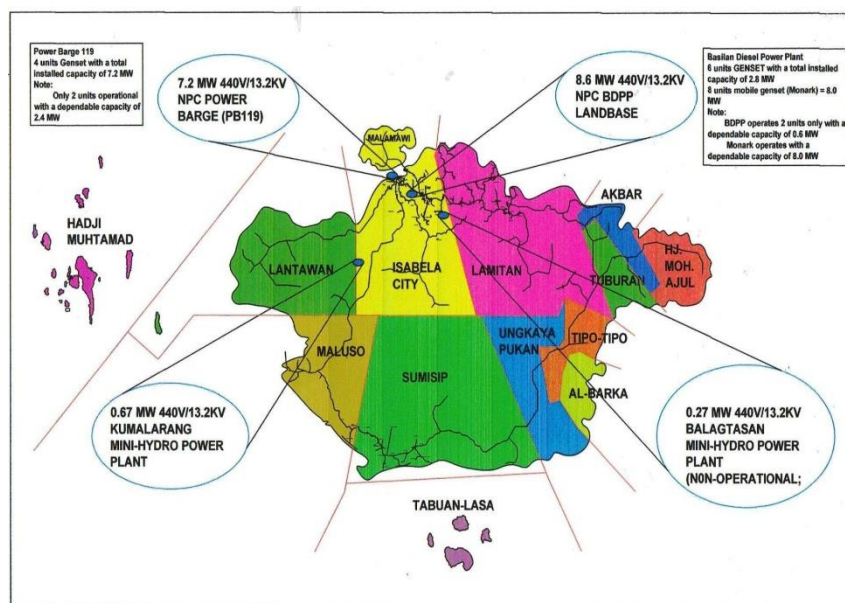


Figure 21. Area Map

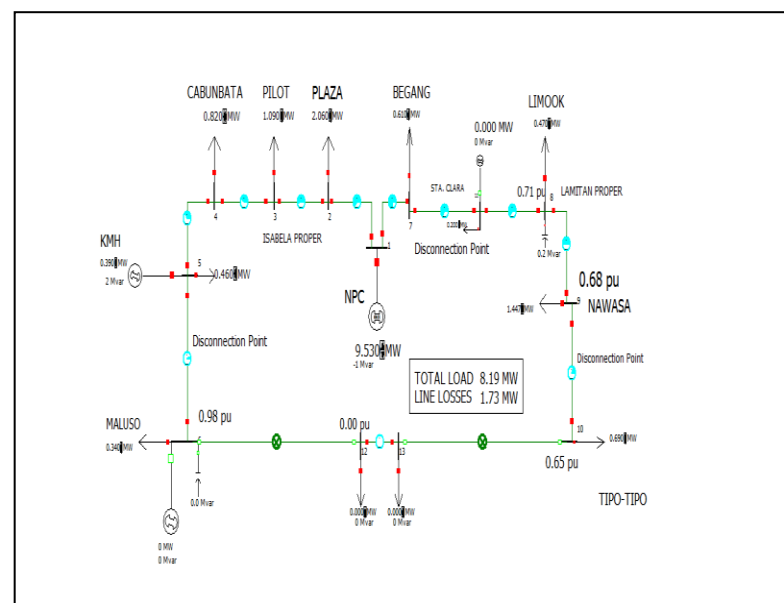


Figure 22. Centralized Power Stations

To minimize the frequent and unexpected occurrences of power interruptions that are not within the prescribed power outages as standardized by NEA, BASELCO Management come up with a proposal having Three (3) Power Plant Substations installed in three (3) different locations with a different demand of Power Supply as shown in Figure 23. Through a powerworld simulation, our estimated technical losses drop down to **7.22%** and the line voltage at the receiving end on secondary side is **223** volts during peak hours in Lamitan City and **235** volts at Maluso Municipality. Power interruption will lessen due to the point of having a nearer power station.

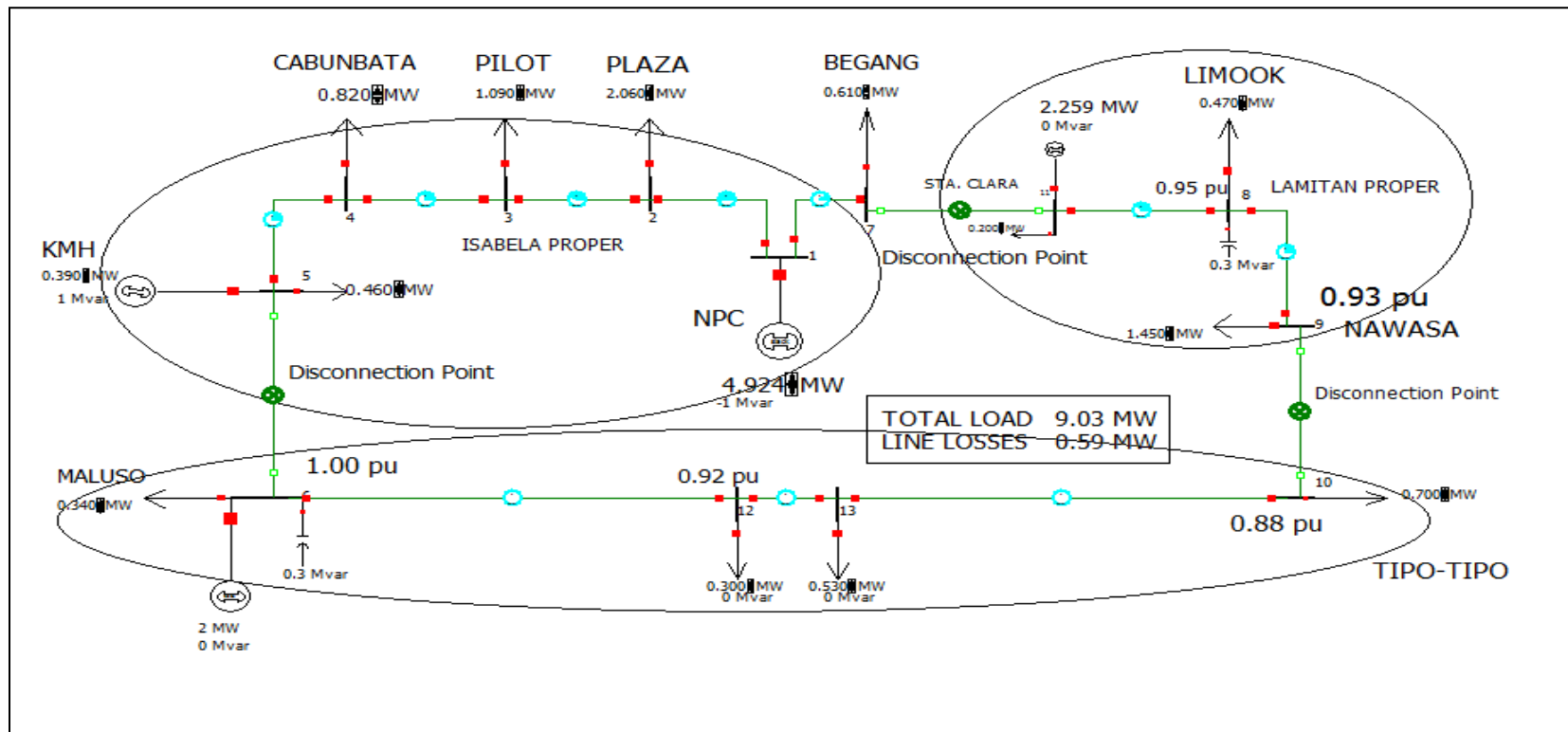


Figure 23. Three Power Stations in three different locations

X. Schedule of Power Supply Procurement

No.	Activities	Schedule
1.	Publication of 1 st Invitation to Bid	April 5, 2019 (Apr. 5- 14, 2019)
2.	Submission of Pre-qualification Requirements	April 19, 2019 (Apr. 15-19, 2019)
3.	Announcement of Pre-Qualified Bidders	April 29, 2019
4.	Issuance of Information Memorandum / Bid Documents/ Terms of Reference/PSPP/PSA Draft	May 3, 2019 (May 3-7, 2019)
5.	Pre-Bid Conference	May 20, 2019
6.	Start of due diligence	May 20, 2019
7.	Last day of due diligence	May 27, 2019
8.	Submission and Opening of Technical and Financial Bids	May 28, 2019
9.	Evaluation of Technical and Financial Bids	May 29, 2019
10.	Post-Qualification	June 7, 2019
11.	Confirmation of BOD	June 13, 2019
12.	Announcement of Winning Bidder	June 14, 2019
13.	Deliberation of PSA	June 18, 2019 (Jun. 15-18, 2019)
14.	Signing of PSA	June 24, 2019
15.	Filing of Joint ERC Petition for the Approval of the PSA	June 28, 2019
16.	Target Commercial Operation Date of Power Plant	June 15, 2020

XI. TIMELINE OF THE CSP

[illegible]

