Power Supply Procurement Plan 2024

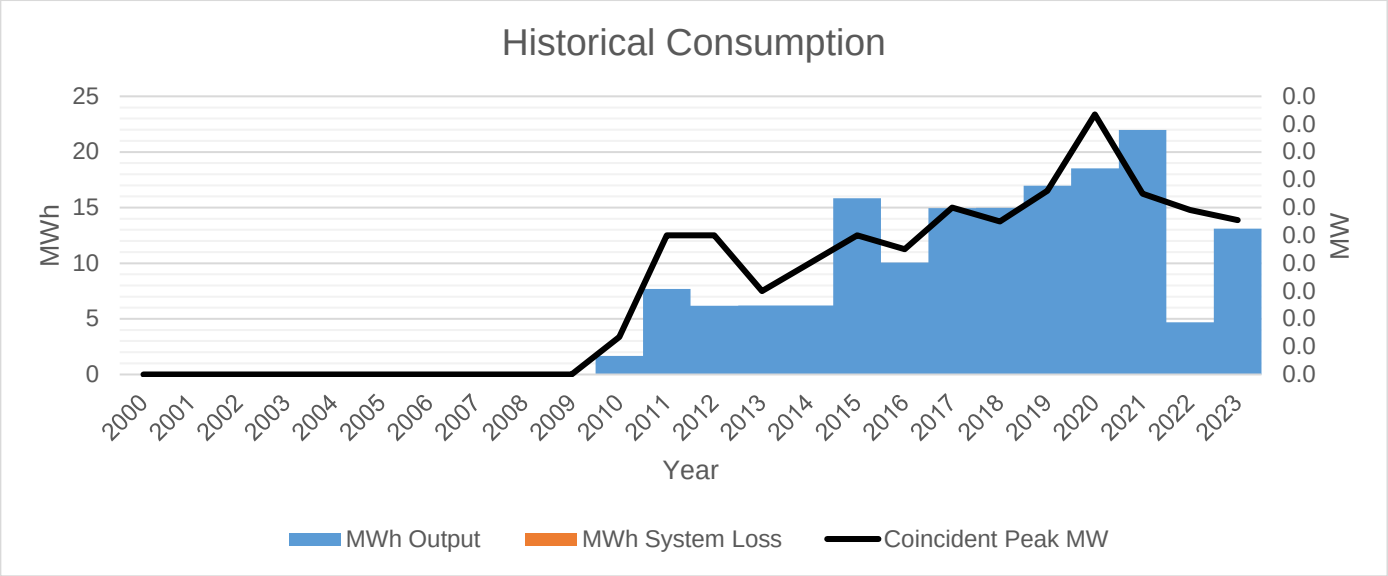
BOHOL I ELECTRIC COOPERATIVE, INC.
(BOHECO I)

BILANGBILANGAN ISLAND

Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	Load Factor
2010	0.003	2	n/a	2	2	7%
2011	0.01	8	n/a	8	8	9%
2012	0.01	6	n/a	6	6	7%
2013	0.01	6	n/a	6	6	12%
2014	0.01	6	n/a	6	6	9%
2015	0.01	16	n/a	16	16	18%
2016	0.01	10	n/a	10	10	13%
2017	0.01	15	n/a	15	15	14%
2018	0.01	15	n/a	15	15	16%
2019	0.01	17	n/a	17	17	15%
2020	0.02	19	n/a	19	19	11%
2021	0.01	22	n/a	22	22	19%
2022	0.01	5	n/a	5	5	5%
2023	0.01	13	n/a	13	13	13%

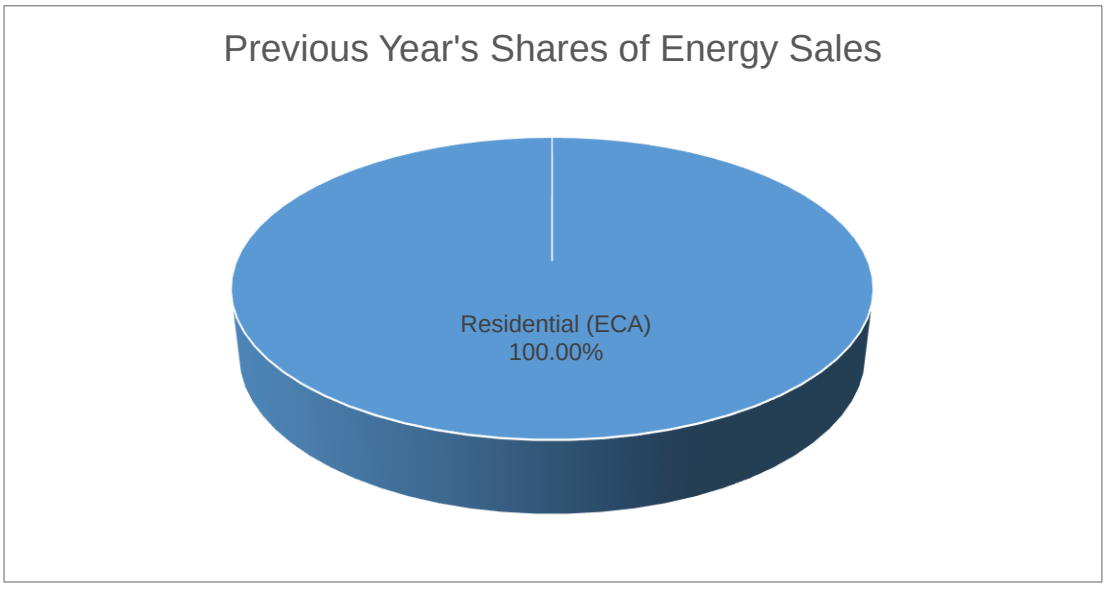
The above historical data was the only available/retrieved data as of the moment. The Peak Demand exhibited an increase from 0.003 MW in 2011 to 0.01 MW in 2023 at an average rate of 21.79%, on the other hand, the MWh Offtake increased from 2 MWh in 2010 to 13 MWh in 2023, marking an average growth rate of 44.44% primarily attributed to the escalating load connections. Throughout this period, the Load Factor fluctuated from 5% to 19%. There was an abrupt change in consumption in year 2022 due to the occurrence of Typhoon Odette affecting the entire province of Bohol.



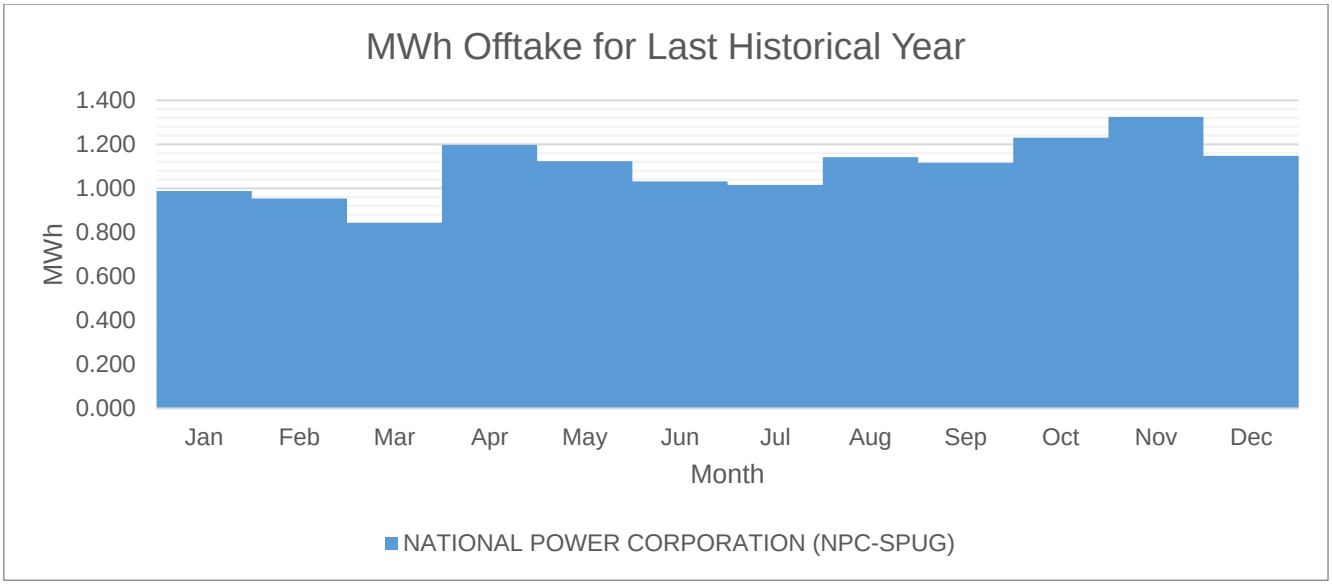
The above figure presents a graphical representation of energy consumption over the past years. The MWh Output demonstrated a consistent increased from year 2010 to year 2023 with an average growth rate of 44.44%. On the other hand, the MWh Output in year 2022 significantly drops to -77.27% due to the occurrence of Typhoon Odette affecting the entire province of Bohol.

System Loss

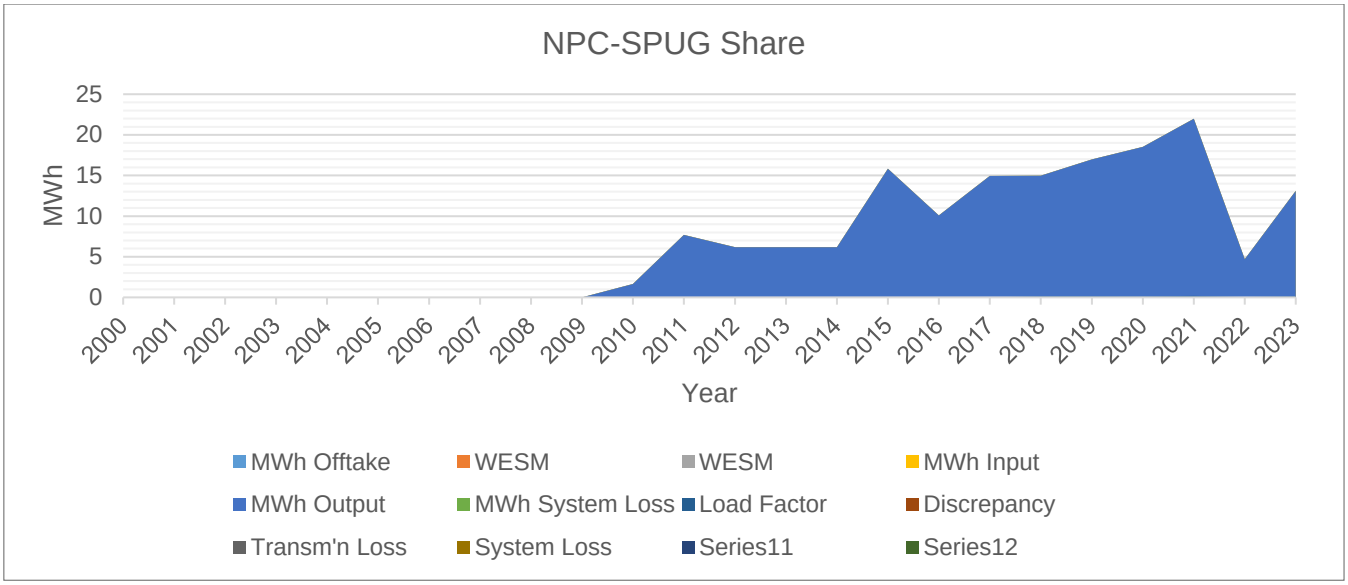
BOHECO I's report shows NO system loss in supplying power to Island Barangays through SPUG. This is because the kWh meter reading used for NPC SPUG's billing to BOHECO I is identical to BOHECO I's meter reading for sales to the Island Barangays. This alignment stems from a clustering setup, employing a single meter known as the Mother Meter for meter reading. NPC SPUG also utilizes this Mother Meter. Individual consumer bills are then generated internally, with the system loss prorated accordingly.



Residential customers constitute the entire energy sales on this island.

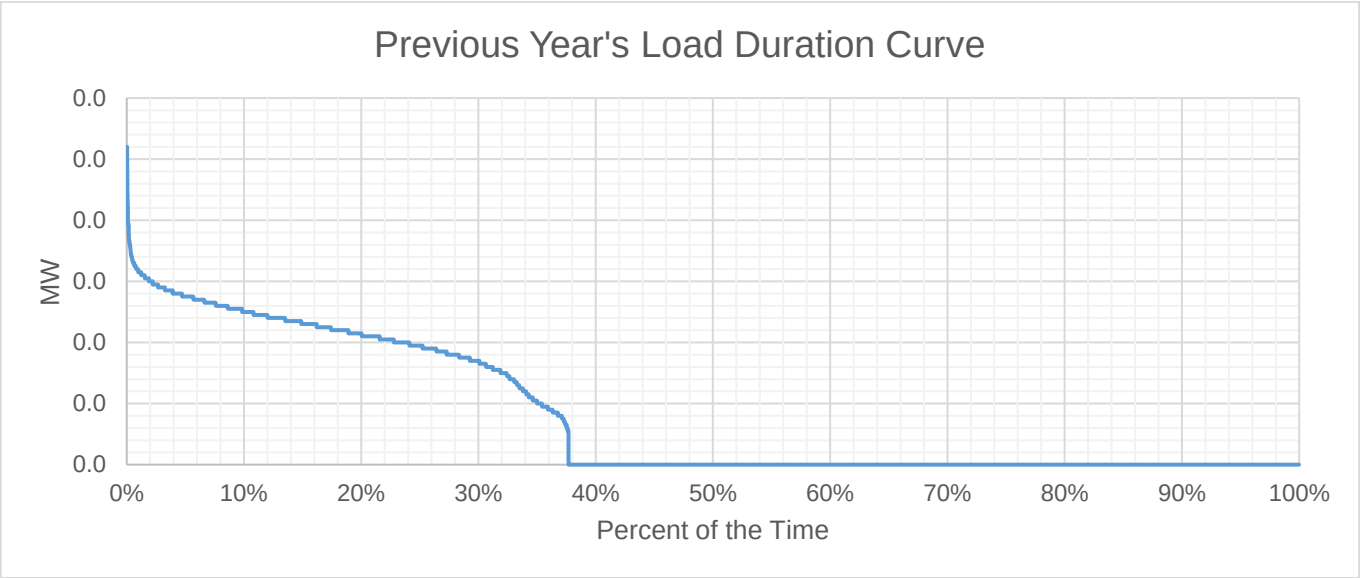


For NPC-SPUG, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with NPC-SPUG constitutes solely for the MWh Offtake.

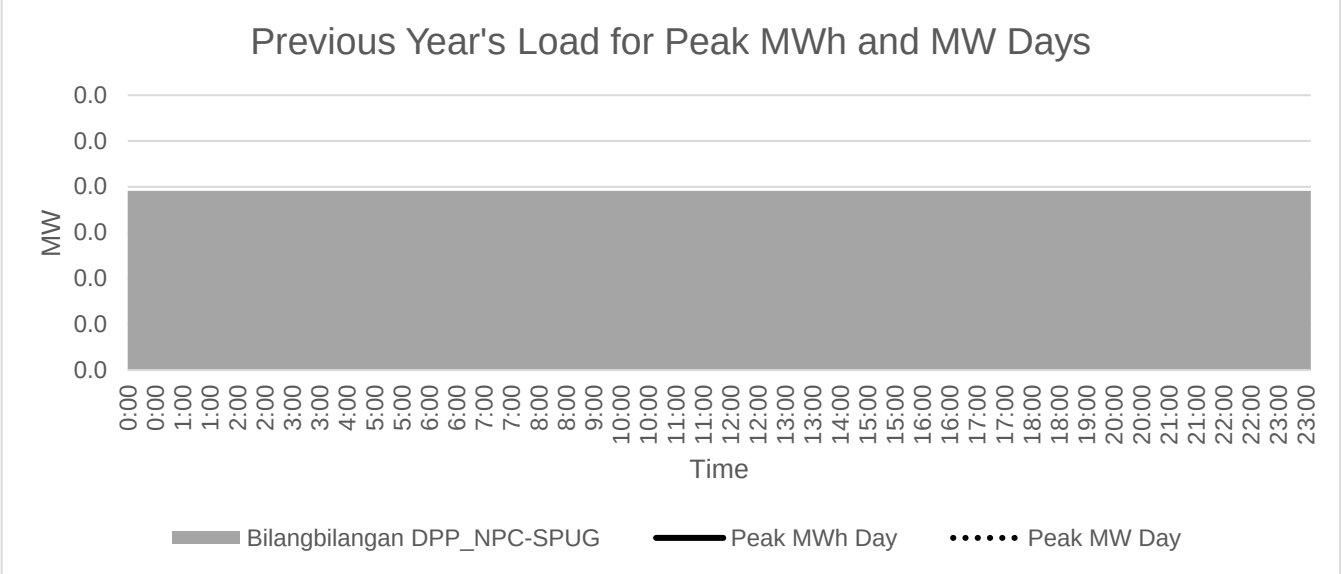


There is no share of WESM in the offtake since this is solely supplied by National Power Corporation – Small Power Utilities Group (NPC-SPUG).

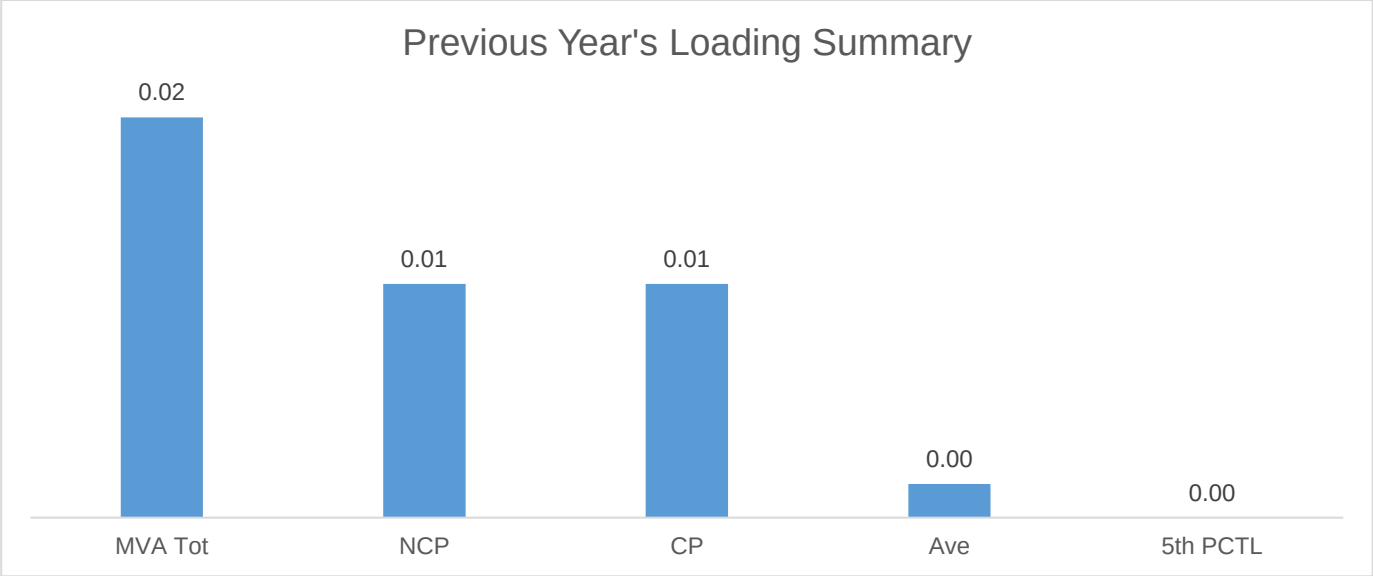
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0.001 MW and the maximum load is 0.011 MW for the last historical year. The normal operating hours for islands is from 8-10 hours per day.



Peak MW occurred on April 25, 2023. Peak daily MWh occurred on April 25, 2023 at 8:00 P.M.



The Non-coincident Peak Demand is 0.0111 MW, which is around 64% of the total substation capacity of 0.019 MVA at a power factor of 91%. The load factor or the ratio between the Average Load of 0.0016 MW and the Non-coincident Peak Demand is 14.44%. A safe estimate of the true minimum load is the fifth percentile load of 0 MW.

Metering Point	Substation MVA	Substation Peak MW
BILANGBILANGAN	0.019	0.011

There is no substation loaded at 70% and above.

Forecasted Consumption Data

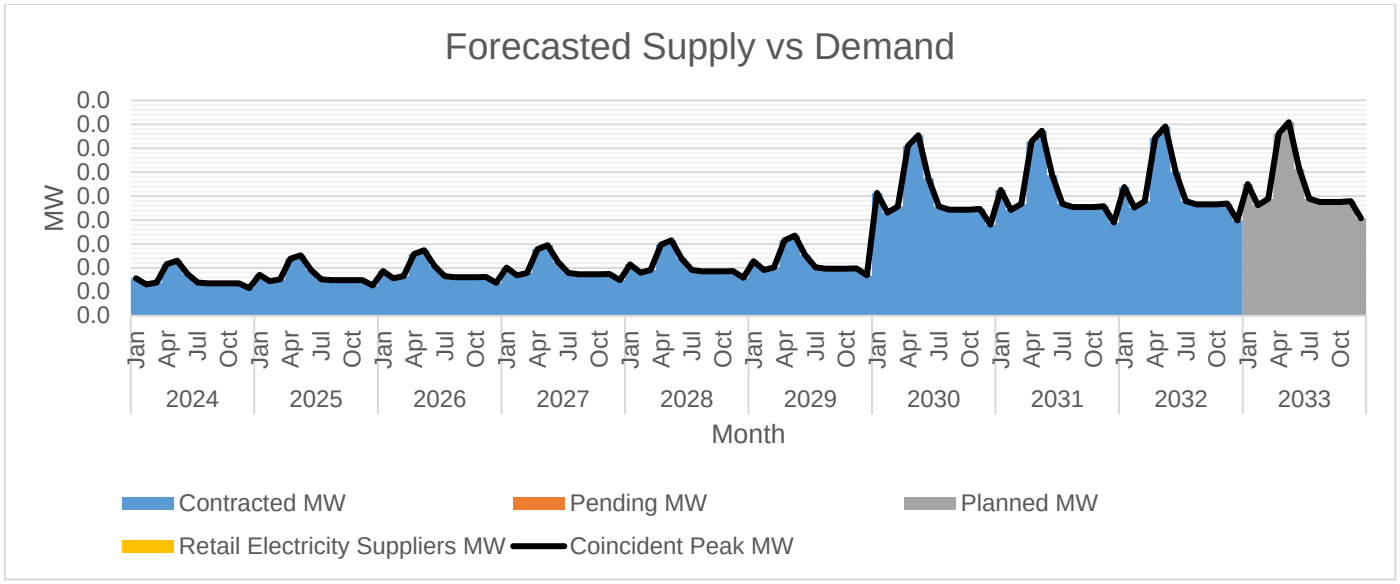
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2024	Jan	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	May	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.006	0.006	0.000	0.000	0.000	100%	100%	0.00
2025	Jan	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	May	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.006	0.006	0.000	0.000	0.000	100%	100%	0.00
2026	Jan	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	May	0.014	0.014	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Aug	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
2027	Jan	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.014	0.014	0.000	0.000	0.000	100%	100%	0.00
	May	0.015	0.015	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.007	0.007	0.000	0.000	0.000	100%	100%	0.00
2028	Jan	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.015	0.015	0.000	0.000	0.000	100%	100%	0.00
	May	0.016	0.016	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
2029	Jan	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.016	0.016	0.000	0.000	0.000	100%	100%	0.00

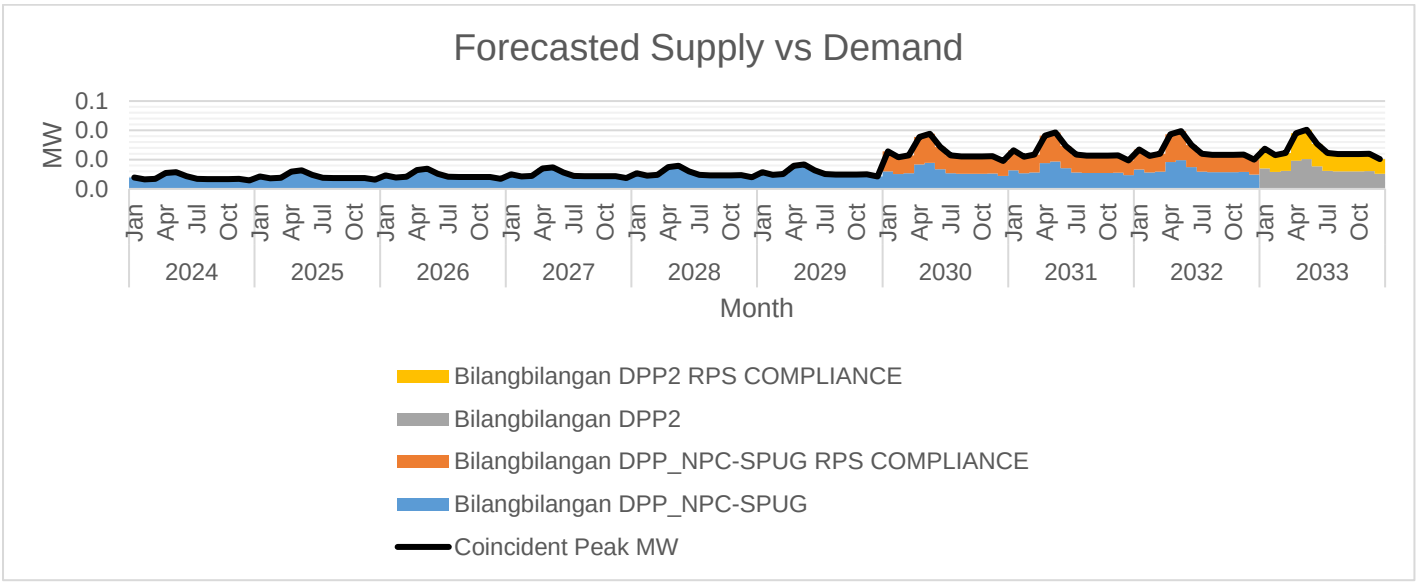
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	May	0.017	0.017	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
2030	Jan	0.026	0.026	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.035	0.035	0.000	0.000	0.000	100%	100%	0.00
	May	0.038	0.038	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.029	0.029	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.019	0.019	0.000	0.000	0.000	100%	100%	0.00
2031	Jan	0.026	0.026	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.022	0.022	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.036	0.036	0.000	0.000	0.000	100%	100%	0.00
	May	0.039	0.039	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.029	0.029	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.019	0.019	0.000	0.000	0.000	100%	100%	0.00
2032	Jan	0.027	0.027	0.000	0.000	0.000	100%	100%	0.00

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Feb	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.024	0.024	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.037	0.037	0.000	0.000	0.000	100%	100%	0.00
	May	0.040	0.040	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.030	0.030	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.024	0.024	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.023	0.023	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.020	0.020	0.000	0.000	0.000	100%	100%	0.00
2033	Jan	0.028	0.000	0.000	0.028	0.000	0%	100%	0.00
	Feb	0.023	0.000	0.000	0.023	0.000	0%	100%	0.00
	Mar	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Apr	0.038	0.000	0.000	0.038	0.000	0%	100%	0.00
	May	0.040	0.000	0.000	0.040	0.000	0%	100%	0.00
	Jun	0.031	0.000	0.000	0.031	0.000	0%	100%	0.00
	Jul	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Aug	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Sep	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Oct	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Nov	0.024	0.000	0.000	0.024	0.000	0%	100%	0.00
	Dec	0.020	0.000	0.000	0.020	0.000	0%	100%	0.00

Employing an Excel-based forecasting model, the Peak Demand was projected to peak in May due to high temperature and high economic activities of small businesses in the island during summer season. Conversely, the Monthly Peak Demand experiences its lowest point is in December maybe due to low temperature which affects the economic activities. In general, the Peak Demand is anticipated to exhibit a growth trajectory with an average annual rate of 19.02%.



The available supply is generally equal to the Demand. This is because the kWh meter reading used for NPC SPUG's billing to BOHECO I is identical to BOHECO I's meter reading for sales to the Island Barangays. This alignment stems from a clustering setup, employing a single meter known as the Mother Meter for meter reading. NPC SPUG also utilizes this Mother Meter.



Power Supply Contracting.

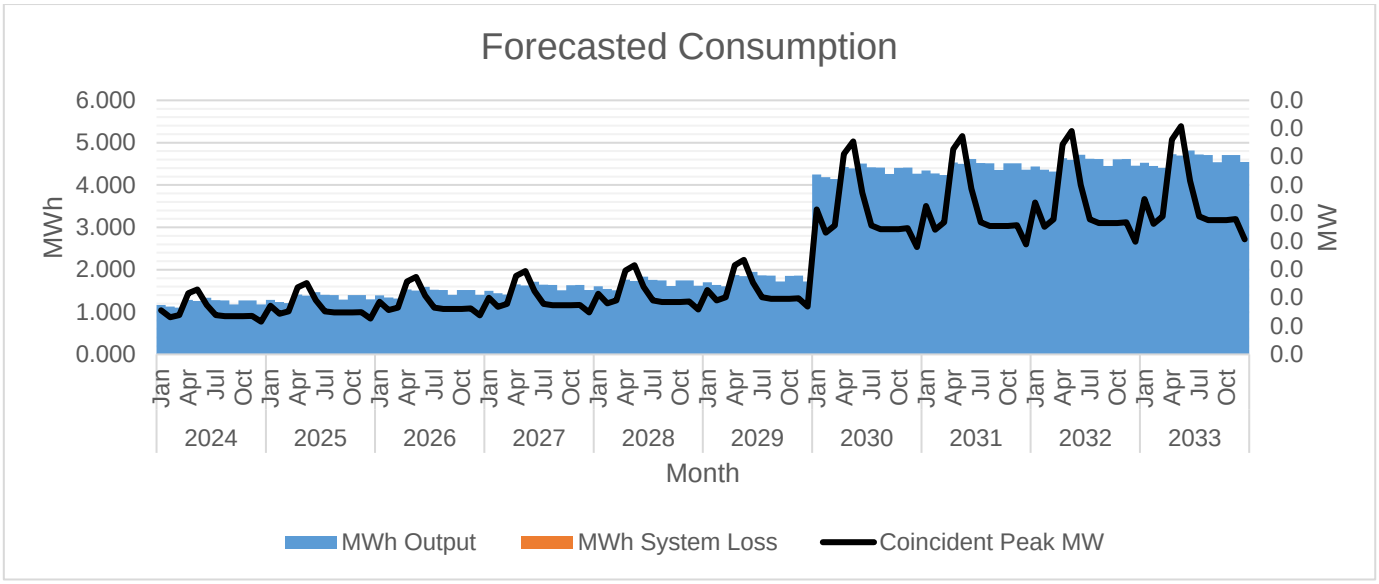
The highest target contracting level is 100% which is expected to occur in the entire contract period.

		MWh Offtake	MWh Output
2024	Jan	1.170	1.170
	Feb	1.127	1.127
	Mar	1.103	1.103
	Apr	1.285	1.285
	May	1.265	1.265
	Jun	1.336	1.336
	Jul	1.280	1.280
	Aug	1.274	1.274
	Sep	1.179	1.179
	Oct	1.273	1.273
	Nov	1.275	1.275
	Dec	1.182	1.182
2025	Jan	1.285	1.285
	Feb	1.238	1.238
	Mar	1.211	1.211
	Apr	1.411	1.411
	May	1.390	1.390
	Jun	1.467	1.467
	Jul	1.406	1.406
	Aug	1.400	1.400
	Sep	1.295	1.295
	Oct	1.399	1.399
	Nov	1.401	1.401
	Dec	1.298	1.298
2026	Jan	1.396	1.396
	Feb	1.344	1.344
	Mar	1.316	1.316
	Apr	1.533	1.533
	May	1.510	1.510
	Jun	1.594	1.594
	Jul	1.527	1.527
	Aug	1.520	1.520
	Sep	1.406	1.406
	Oct	1.519	1.519
	Nov	1.521	1.521
	Dec	1.410	1.410
2027	Jan	1.503	1.503
	Feb	1.447	1.447
	Mar	1.416	1.416
	Apr	1.650	1.650
	May	1.625	1.625
	Jun	1.716	1.716

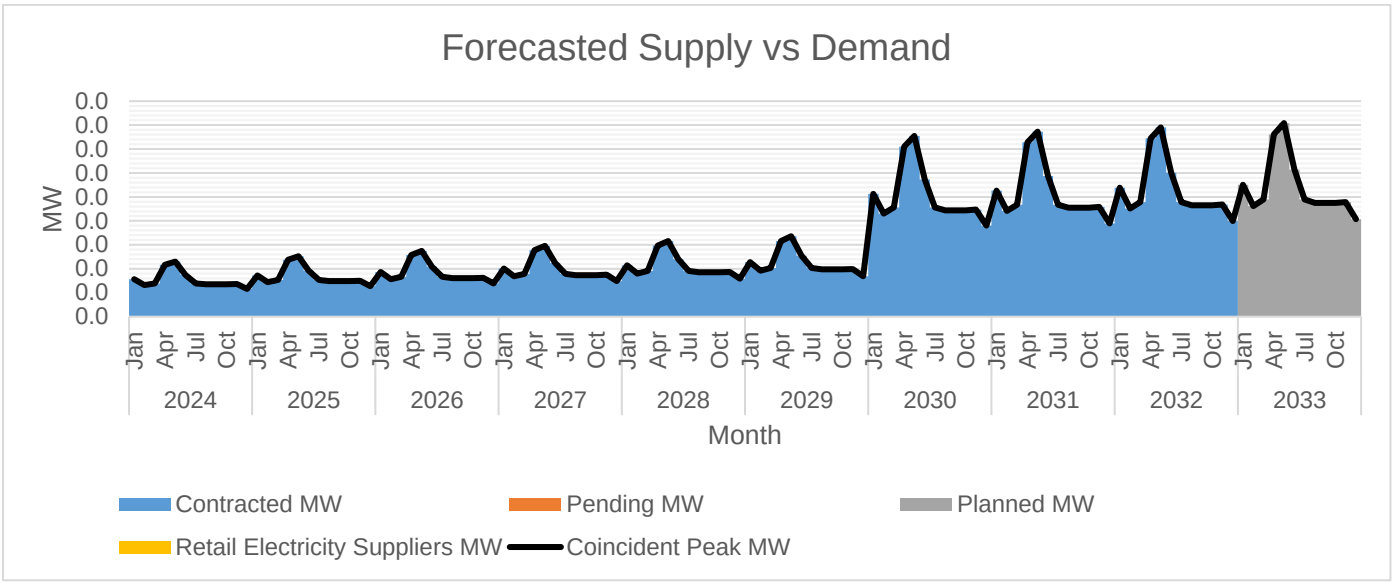
		MWh Offtake	MWh Output
	Jul	1.644	1.644
	Aug	1.637	1.637
	Sep	1.514	1.514
	Oct	1.635	1.635
	Nov	1.638	1.638
	Dec	1.518	1.518
2028	Jan	1.606	1.606
	Feb	1.547	1.547
	Mar	1.514	1.514
	Apr	1.764	1.764
	May	1.737	1.737
	Jun	1.834	1.834
	Jul	1.757	1.757
	Aug	1.749	1.749
	Sep	1.618	1.618
	Oct	1.748	1.748
	Nov	1.750	1.750
	Dec	1.622	1.622
2029	Jan	1.706	1.706
	Feb	1.643	1.643
	Mar	1.608	1.608
	Apr	1.874	1.874
	May	1.845	1.845
	Jun	1.948	1.948
	Jul	1.867	1.867
	Aug	1.858	1.858
	Sep	1.719	1.719
	Oct	1.857	1.857
	Nov	1.859	1.859
	Dec	1.724	1.724
2030	Jan	4.249	4.249
	Feb	4.183	4.183
	Mar	4.145	4.145
	Apr	4.426	4.426
	May	4.396	4.396
	Jun	4.505	4.505
	Jul	4.419	4.419
	Aug	4.410	4.410
	Sep	4.263	4.263
	Oct	4.408	4.408
	Nov	4.411	4.411
	Dec	4.268	4.268
2031	Jan	4.343	4.343
	Feb	4.274	4.274
	Mar	4.234	4.234
	Apr	4.530	4.530
	May	4.498	4.498
	Jun	4.613	4.613

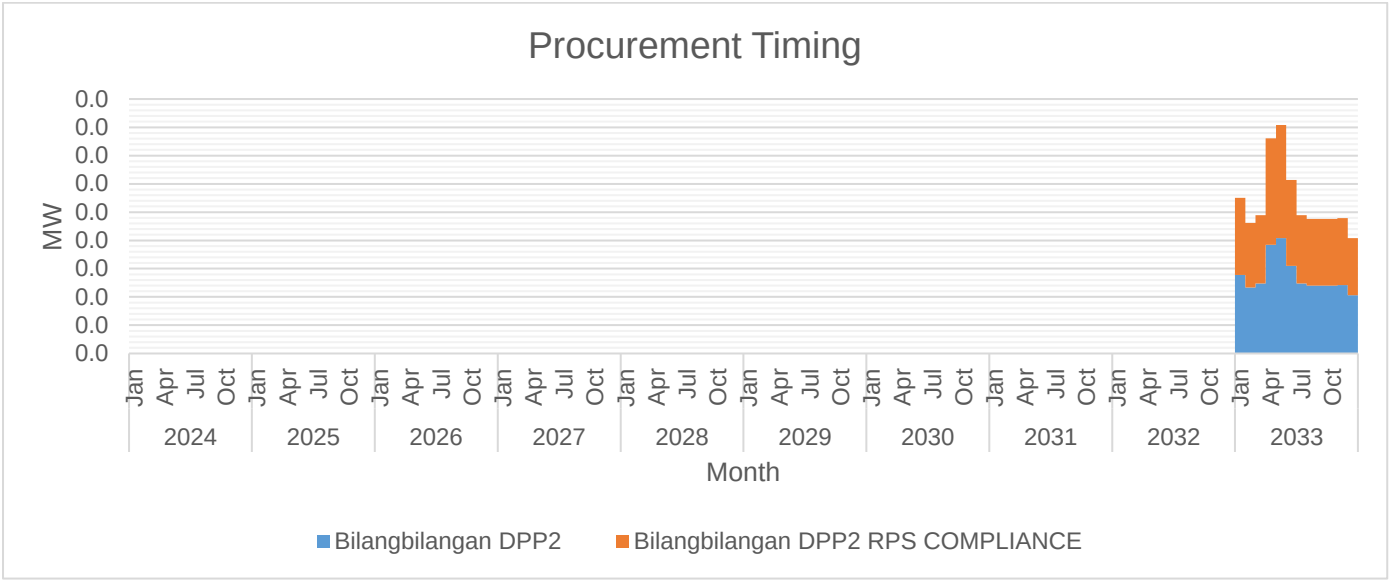
		MWh Offtake	MWh Output
	Jul	4.522	4.522
	Aug	4.512	4.512
	Sep	4.358	4.358
	Oct	4.511	4.511
	Nov	4.514	4.514
	Dec	4.363	4.363
2032	Jan	4.435	4.435
	Feb	4.362	4.362
	Mar	4.321	4.321
	Apr	4.631	4.631
	May	4.597	4.597
	Jun	4.717	4.717
	Jul	4.623	4.623
	Aug	4.612	4.612
	Sep	4.450	4.450
	Oct	4.611	4.611
	Nov	4.614	4.614
	Dec	4.456	4.456
2033	Jan	4.524	4.524
	Feb	4.448	4.448
	Mar	4.405	4.405
	Apr	4.729	4.729
	May	4.694	4.694
	Jun	4.819	4.819
	Jul	4.720	4.720
	Aug	4.710	4.710
	Sep	4.540	4.540
	Oct	4.708	4.708
	Nov	4.711	4.711
	Dec	4.546	4.546

MWh Offtake was forecasted using an Excel-based forecasting model. The assumed load factor averages at 14.64%.



MWh Output was expected to grow at an average rate of 19.70% annually.





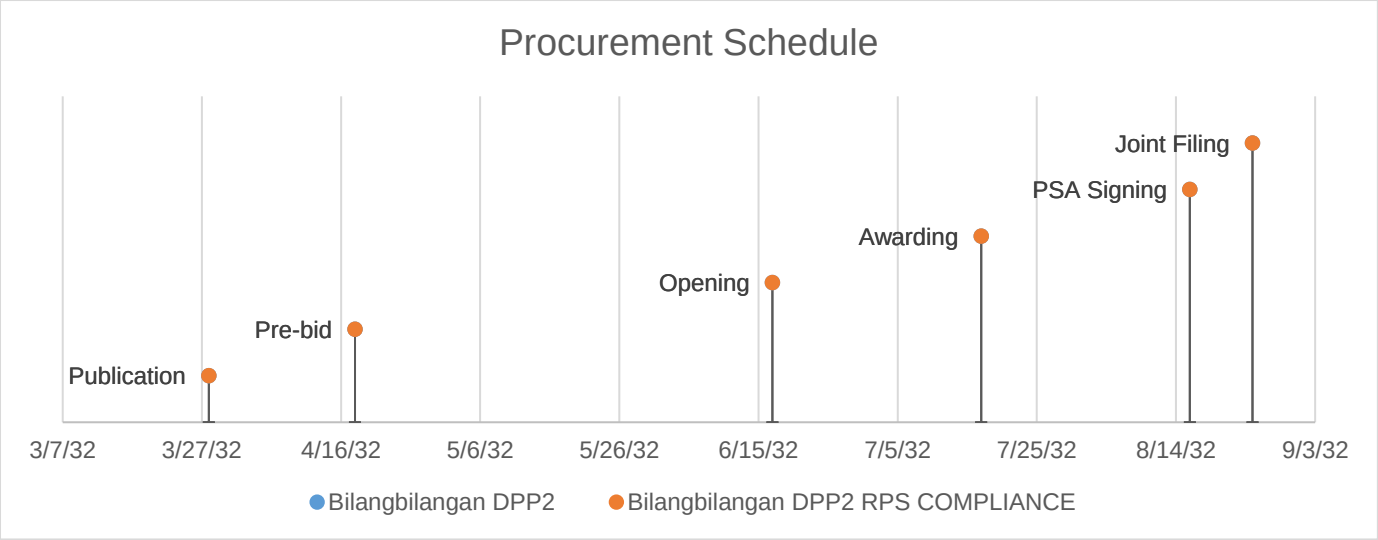
The first wave of supply procurement will be for 0.010 MW minimum and 0.020 MW minimum from an eligible RE which is planned to be available on December 26, 2032. The planned CSP will address the forecasted demand requirement for the year 2033 onwards.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
Bilangbilangan DPP_NPC-SPUG	Base	National Power Corporation	0.007	24	12/26/2022	12/25/2032
Bilangbilangan DPP_NPC-SPUG RPS COMPLIANCE	Base	National Power Corporation	0.020	29	12/26/2022	12/25/2032

The Power Supply Agreement (PSA) with Bilangbilangan Island as well as other islands under the coverage area of BOHECO I was renewed up to ten years. Under Section 3 of the approved PSA states that, "*This PSA shall remain in full force and effect for TEN (10) years from 26 December 2022 to 25 December 2032 covering the areas of Bagongbanwa, Balicasag, Batasan, Bilangbilangan, Cuaming. Hambongan, Mantatao, Mocaboc, Pamilacan, Pangapasan, and Ubay, renewable by mutual consent of the Parties*."

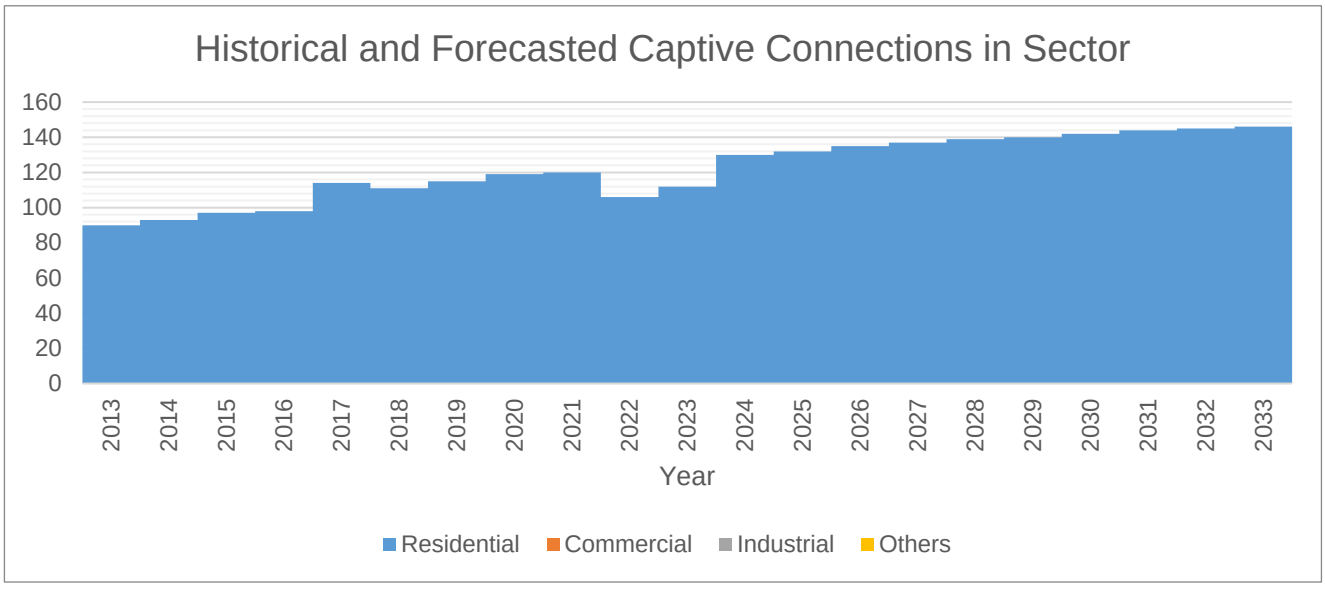
	Bilangbilangan DPP2	Bilangbilangan DPP2 RPS COMPLIANCE
Type	Base	Base
Minimum MW	0.010	0.02
Minimum MWh/yr	26	29
PSA Start	12/26/2032	12/26/2032
PSA End	12/25/2042	12/25/2042
Publication	3/28/2032	3/28/2032
Pre-bid	4/18/2032	4/18/2032
Opening	6/17/2032	6/17/2032
Awarding	7/17/2032	7/17/2032
PSA Signing	8/16/2032	8/16/2032
Joint Filing	8/25/2032	8/25/2032



For the procurement of 0.010 MW minimum and 0.020 MW minimum from an eligible RE which is planned to be available on December 26, 2032, the first publication or launch of CSP will be on March 28, 2032. The planned CSP will address the forecasted demand requirement of BILANGBILANGAN ISLAND.

Joint filing is planned on August 25, 2032. However, the above schedule is subject to change to comply the CSP rulings and/or the completeness of the CSP process.

Captive Customer Connections



The number of Residential connections is expected to grow at an average rate of 1.30% annually. Said customer class is expected to account for 100% of the total consumption.