Power Supply Procurement Plan 2024

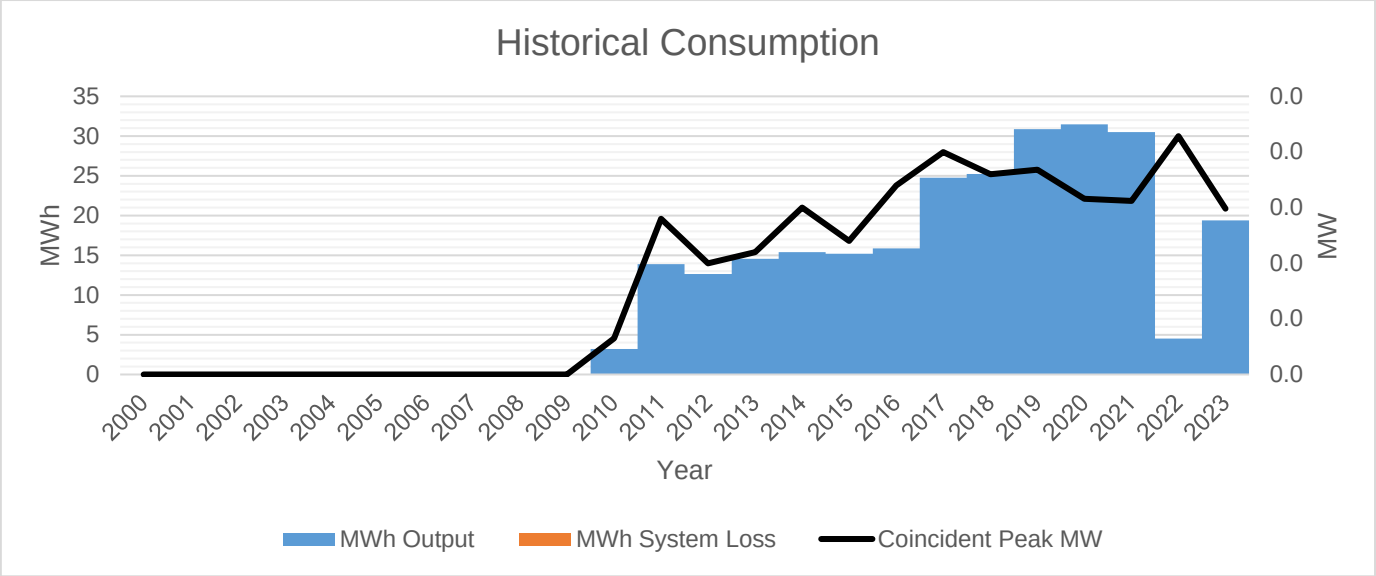
BOHOL I ELECTRIC COOPERATIVE, INC.
(BOHECO I)

PANGAPASAN ISLAND

Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	Load Factor
2010	0.003	3	n/a	3	3	11%
2011	0.01	14	n/a	14	14	11%
2012	0.01	13	n/a	13	13	14%
2013	0.01	15	n/a	15	15	15%
2014	0.02	15	n/a	15	15	12%
2015	0.01	15	n/a	15	15	14%
2016	0.02	16	n/a	16	16	11%
2017	0.02	25	n/a	25	25	14%
2018	0.02	25	n/a	25	25	16%
2019	0.02	31	n/a	31	31	19%
2020	0.02	31	n/a	31	31	23%
2021	0.02	30	n/a	30	30	22%
2022	0.02	5	n/a	5	5	2%
2023	0.01	19	n/a	19	19	15%

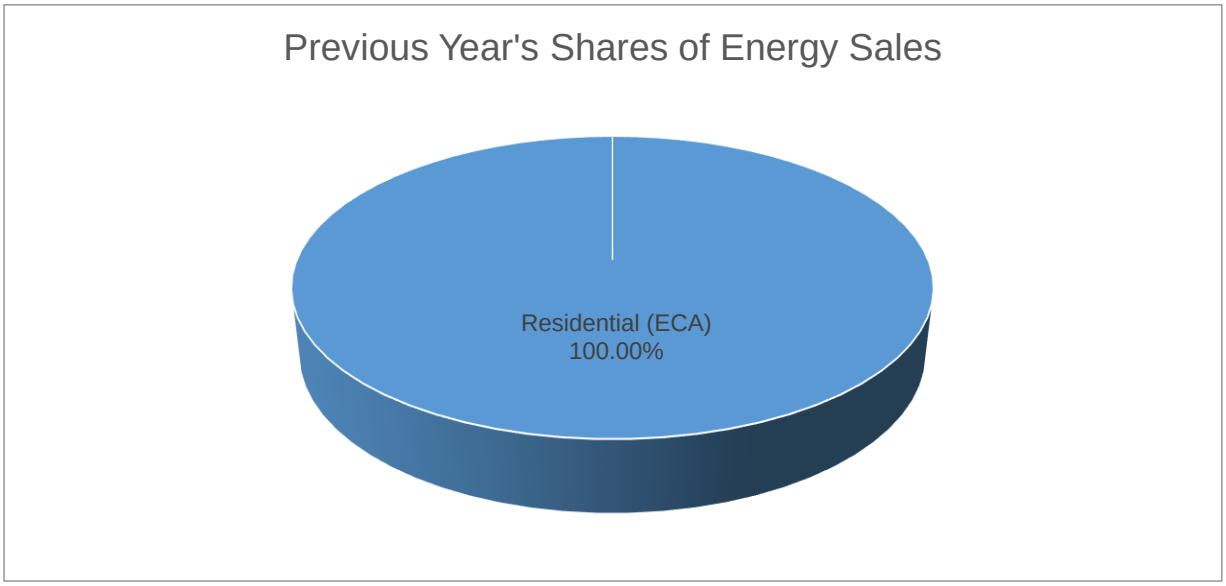
The above historical data was the only available/retrieved data as of the moment. The Peak Demand an increase from 0.003 MW in 2010 to 0.01 MW in 2023 at an average rate of 23.72%. The MWh Offtake also increased from 3 MWh in 2010 to 19 MWh in 2023, marking a growth rate of 23.72% primarily attributed to the escalating load connections. Throughout this period, the Load Factor fluctuated from 2% to 23%. There was an abrupt change in consumption in year 2022 due to the occurrence of Typhoon Odette affecting the entire province of Bohol.



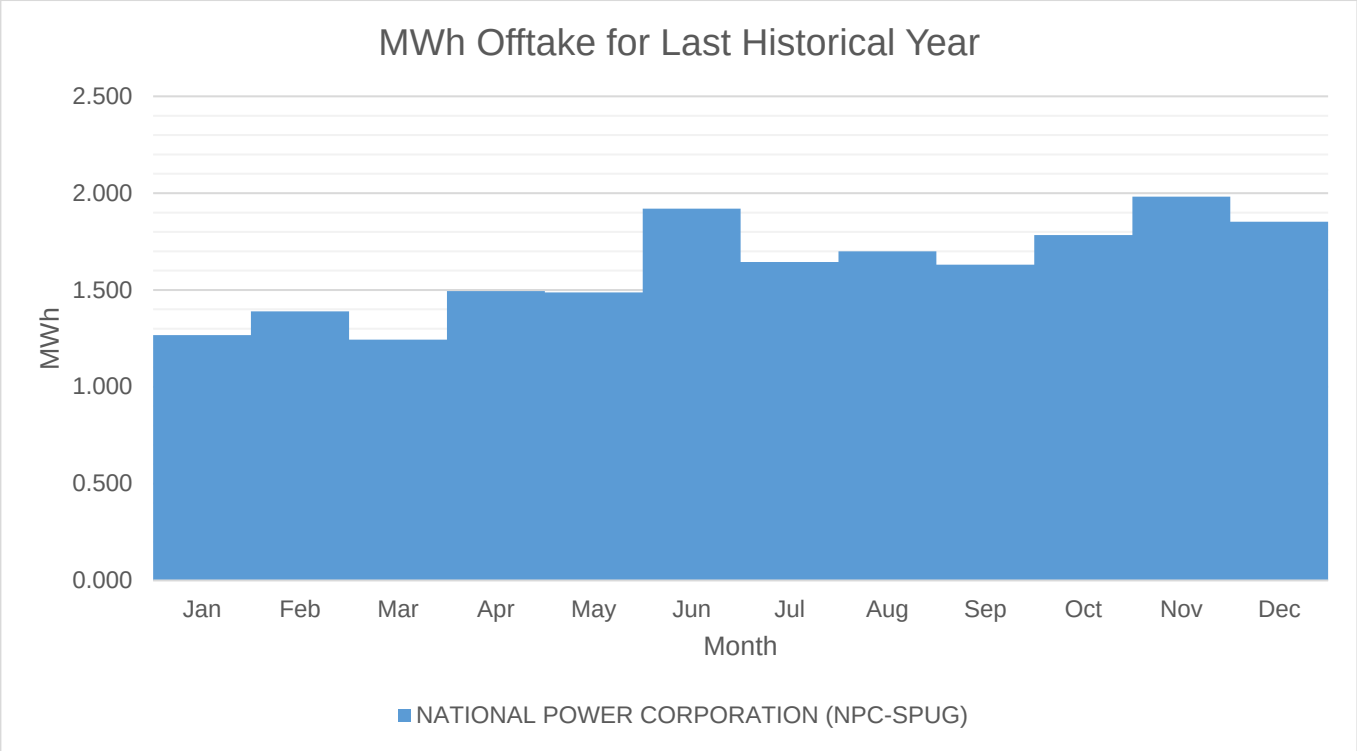
The above figure presents a graphical representation of energy consumption over the past 14 years. The MWh Output demonstrated an increase from year 2010 to year 2023 with an average growth rate of 50.41%. On the other hand, the MWh Output in year 2022 significantly drops to -83.33% due to the occurrence of Typhoon Odette affecting the entire province of Bohol.

System Loss

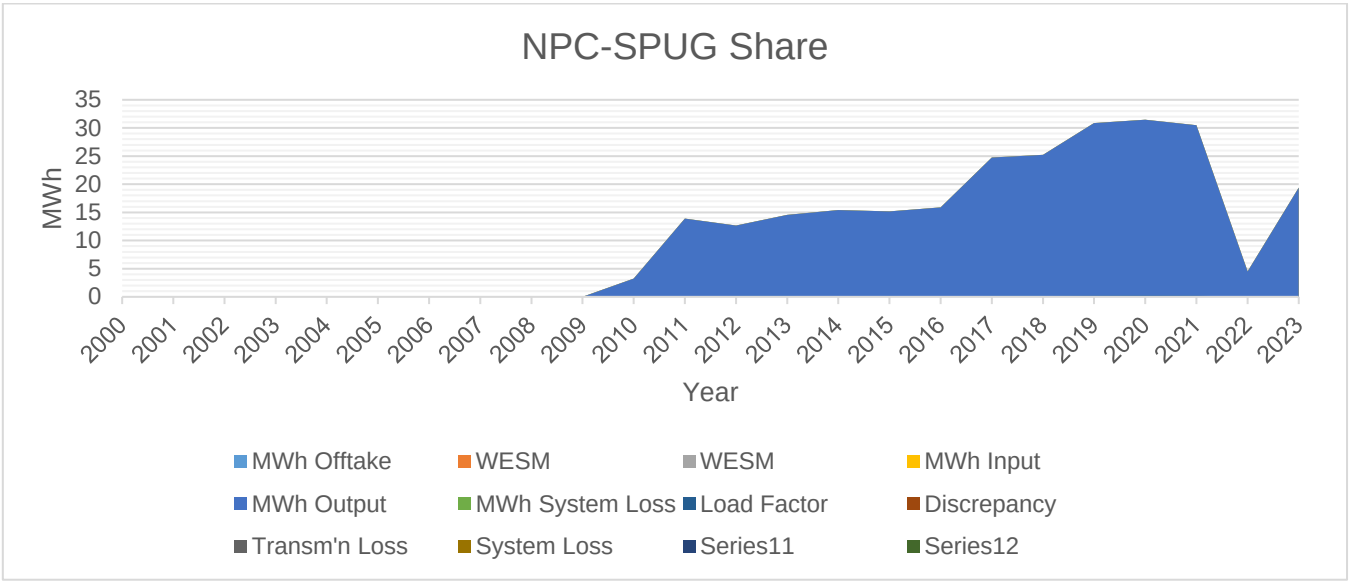
BOHECO I's report shows NO system loss in supplying power to Island Barangays through SPUG. This is because the kWh meter reading used for NPC SPUG's billing to BOHECO I is identical to BOHECO I's meter reading for sales to the Island Barangays. This alignment stems from a clustering setup, employing 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.

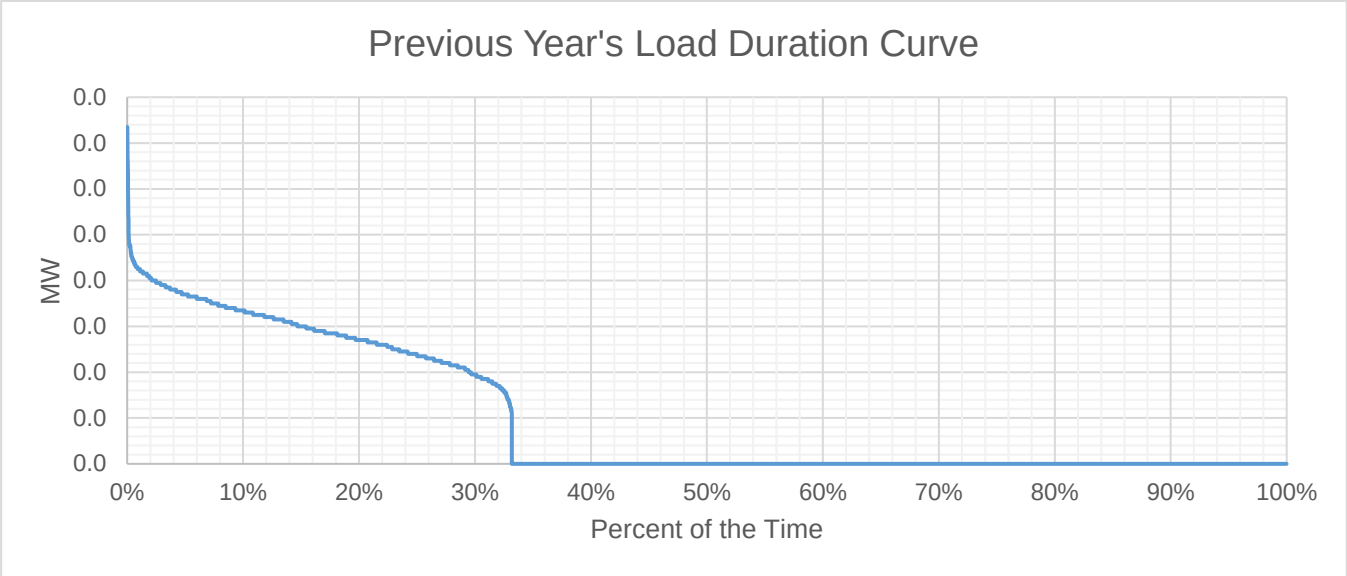


For NPC-SPUG, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with NPC-SPUG constitutes solely for the MWh Offtake.

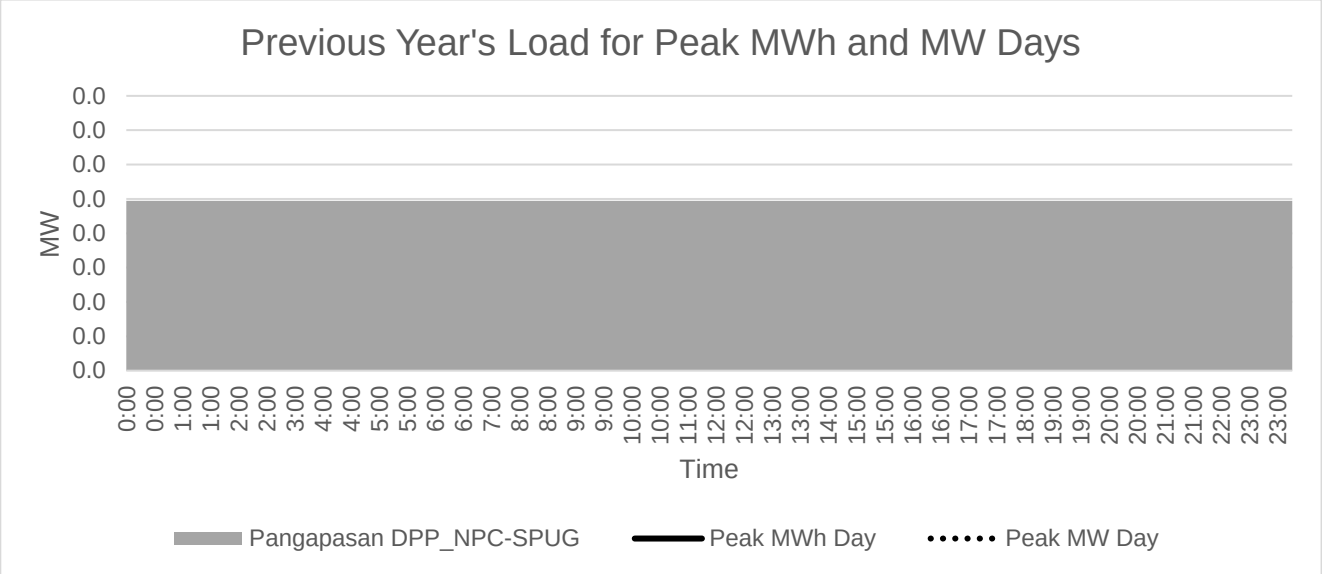


There is no share of WESM in the offtake since this is solely supplied by National Power Corporation – Small Power Utilities Group (NPC-SPUG).

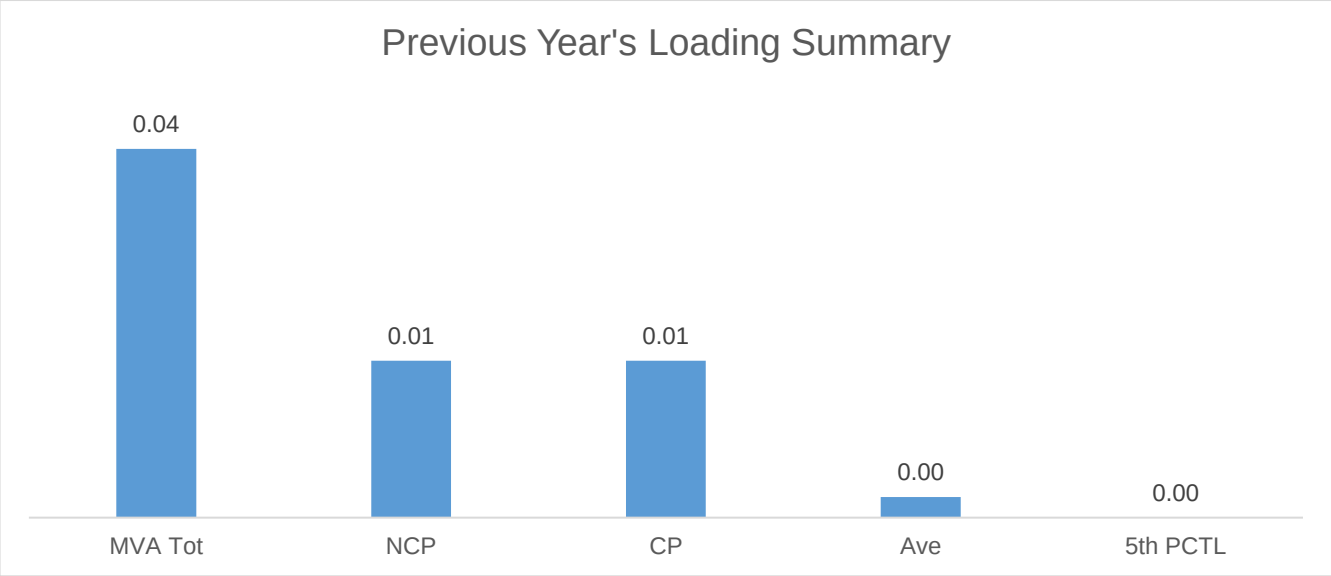
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0.002 MW and the maximum load is 0.015 MW for the last historical year. The normal operating hours for islands is from 8-10 hours per day.



Peak MW occurred on June 12 & 13, 2023. Peak daily MWh occurred on the same day at 11:00 P.M. and 12:00 A.M. respectively.



The Non-coincident Peak Demand is 0.0149 MW, which is around 46.78% of the total substation capacity of 0.035 MVA at a power factor of 91%. The load factor or the ratio between the Average Load of 0.0019 MW and the Non-coincident Peak Demand is 13.06%. A safe estimate of the true minimum load is the fifth percentile load of 0 MW.

Metering Point	Substation MVA	Substation Peak MW
PANGAPASAN	0.035	0.015

No substation loaded at 70% and above.

Forecasted Consumption Data

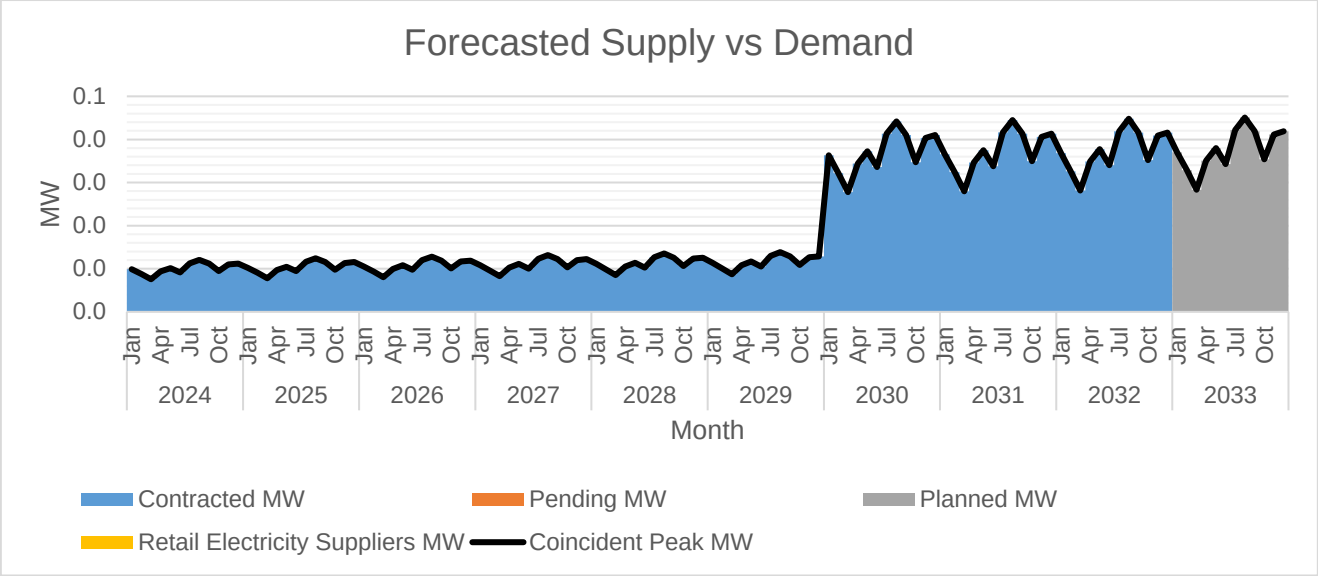
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2024	Jan	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.008	0.008	0.000	0.000	0.000	100%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

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Jun	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.012	0.012	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	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
2027	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	0.008	0.008	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.010	0.010	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	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.012	0.012	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	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.012	0.012	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	0.010	0.010	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	0.011	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	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.014	0.014	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.012	0.012	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.013	0.013	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

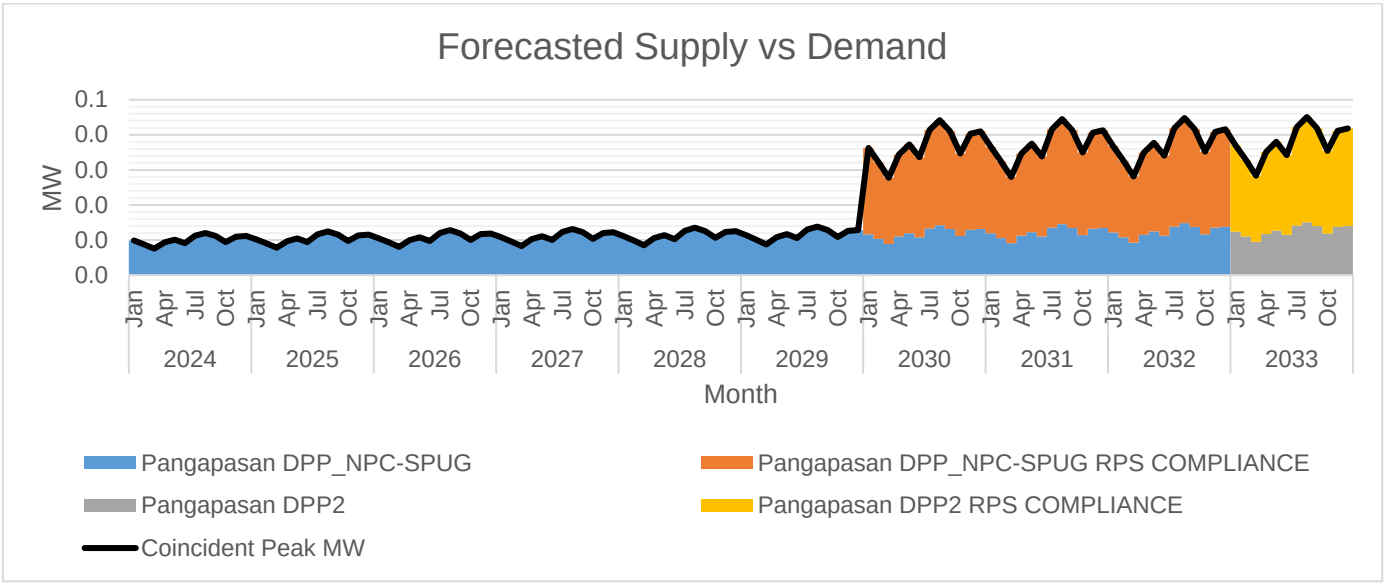
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Feb	0.010	0.010	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.009	0.009	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	May	0.012	0.012	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	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.014	0.014	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.011	0.011	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.013	0.013	0.000	0.000	0.000	100%	100%	0.00
2030	Jan	0.036	0.036	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.032	0.032	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.028	0.028	0.000	0.000	0.000	100%	100%	0.00
	Apr	0.034	0.034	0.000	0.000	0.000	100%	100%	0.00
	May	0.037	0.037	0.000	0.000	0.000	100%	100%	0.00
	Jun	0.034	0.034	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.044	0.044	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.035	0.035	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.040	0.040	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
2031	Jan	0.037	0.037	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.032	0.032	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.028	0.028	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	0.034	0.034	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.042	0.042	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.044	0.044	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.041	0.041	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
	Oct	0.035	0.035	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
2032	Jan	0.037	0.037	0.000	0.000	0.000	100%	100%	0.00
	Feb	0.033	0.033	0.000	0.000	0.000	100%	100%	0.00
	Mar	0.028	0.028	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	0.034	0.034	0.000	0.000	0.000	100%	100%	0.00
	Jul	0.042	0.042	0.000	0.000	0.000	100%	100%	0.00
	Aug	0.045	0.045	0.000	0.000	0.000	100%	100%	0.00
	Sep	0.042	0.042	0.000	0.000	0.000	100%	100%	0.00
	Oct	0.035	0.035	0.000	0.000	0.000	100%	100%	0.00
	Nov	0.041	0.041	0.000	0.000	0.000	100%	100%	0.00
	Dec	0.042	0.042	0.000	0.000	0.000	100%	100%	0.00
2033	Jan	0.037	0.000	0.000	0.037	0.000	0%	100%	0.00
	Feb	0.033	0.000	0.000	0.033	0.000	0%	100%	0.00
	Mar	0.028	0.000	0.000	0.028	0.000	0%	100%	0.00
	Apr	0.035	0.000	0.000	0.035	0.000	0%	100%	0.00
	May	0.038	0.000	0.000	0.038	0.000	0%	100%	0.00
	Jun	0.034	0.000	0.000	0.034	0.000	0%	100%	0.00
	Jul	0.042	0.000	0.000	0.042	0.000	0%	100%	0.00
	Aug	0.045	0.000	0.000	0.045	0.000	0%	100%	0.00
	Sep	0.042	0.000	0.000	0.042	0.000	0%	100%	0.00
	Oct	0.035	0.000	0.000	0.035	0.000	0%	100%	0.00
	Nov	0.041	0.000	0.000	0.041	0.000	0%	100%	0.00
	Dec	0.042	0.000	0.000	0.042	0.000	0%	100%	0.00

Employing an Excel-based forecasting model, the Peak Demand was projected to peak in August due to high economic activities of small businesses in the island during this season. Conversely, the Monthly Peak Demand experiences its lowest point is in March, a phenomenon attributed to a shorter billing cycle, which effectively reduces the number of days in that particular month. In general, the Peak Demand is anticipated to exhibit a growth trajectory with an average annual rate of 26.13%.



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.

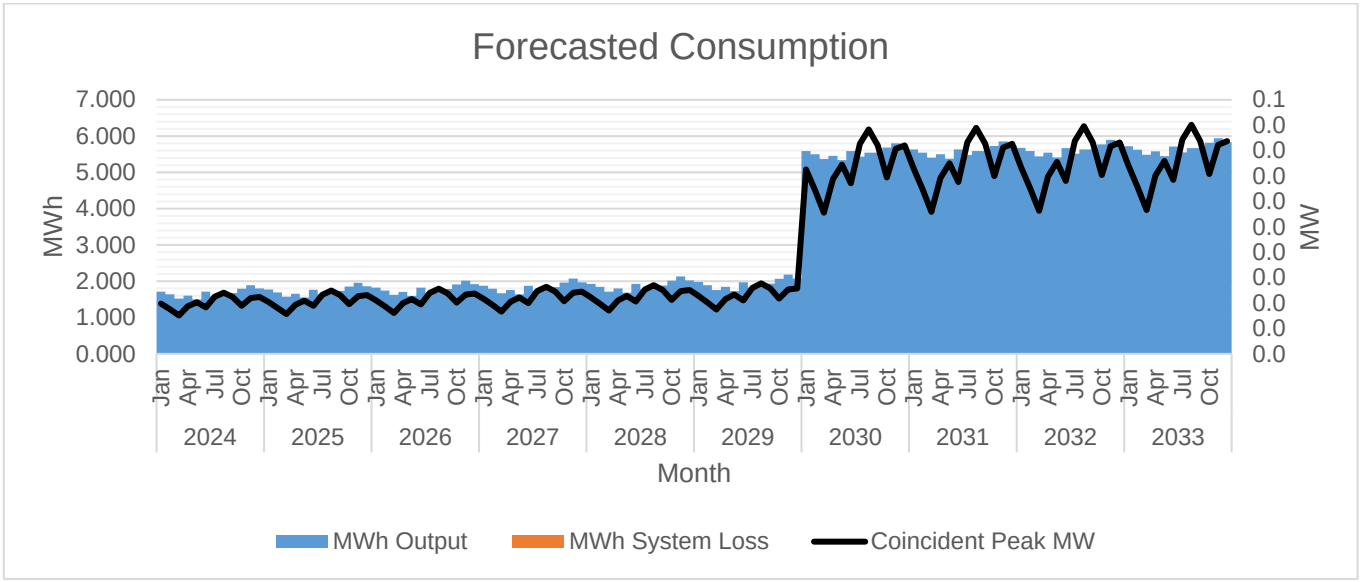
The highest target contracting level is 100% which is expected to occur in the entire contract period.

		MWh Offtake	MWh Output
2024	Jan	1.716	1.716
	Feb	1.640	1.640
	Mar	1.527	1.527
	Apr	1.605	1.605
	May	1.501	1.501
	Jun	1.712	1.712
	Jul	1.585	1.585
	Aug	1.679	1.679
	Sep	1.678	1.678
	Oct	1.793	1.793
	Nov	1.894	1.894
	Dec	1.803	1.803
2025	Jan	1.773	1.773
	Feb	1.695	1.695
	Mar	1.578	1.578
	Apr	1.658	1.658
	May	1.551	1.551
	Jun	1.769	1.769
	Jul	1.638	1.638
	Aug	1.735	1.735
	Sep	1.734	1.734
	Oct	1.853	1.853
	Nov	1.958	1.958
	Dec	1.863	1.863
2026	Jan	1.827	1.827
	Feb	1.747	1.747
	Mar	1.626	1.626
	Apr	1.709	1.709
	May	1.598	1.598
	Jun	1.824	1.824
	Jul	1.688	1.688
	Aug	1.788	1.788
	Sep	1.787	1.787
	Oct	1.910	1.910
	Nov	2.018	2.018
	Dec	1.921	1.921
2027	Jan	1.879	1.879
	Feb	1.797	1.797
	Mar	1.672	1.672
	Apr	1.758	1.758
	May	1.644	1.644
	Jun	1.875	1.875
	Jul	1.736	1.736
	Aug	1.839	1.839
	Sep	1.838	1.838

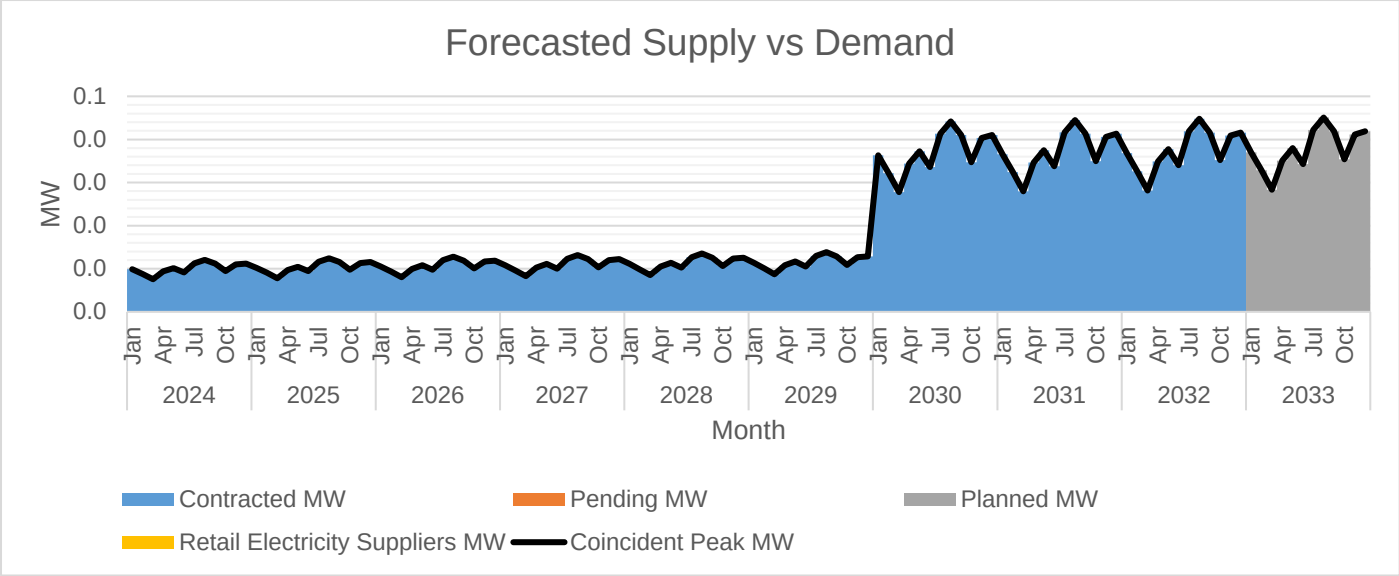
		MWh Offtake	MWh Output
	Oct	1.964	1.964
	Nov	2.075	2.075
	Dec	1.975	1.975
2028	Jan	1.929	1.929
	Feb	1.844	1.844
	Mar	1.717	1.717
	Apr	1.804	1.804
	May	1.687	1.687
	Jun	1.925	1.925
	Jul	1.782	1.782
	Aug	1.888	1.888
	Sep	1.886	1.886
	Oct	2.016	2.016
	Nov	2.130	2.130
	Dec	2.027	2.027
2029	Jan	1.977	1.977
	Feb	1.890	1.890
	Mar	1.759	1.759
	Apr	1.849	1.849
	May	1.729	1.729
	Jun	1.972	1.972
	Jul	1.826	1.826
	Aug	1.934	1.934
	Sep	1.933	1.933
	Oct	2.066	2.066
	Nov	2.182	2.182
	Dec	2.077	2.077
2030	Jan	5.590	5.590
	Feb	5.502	5.502
	Mar	5.368	5.368
	Apr	5.459	5.459
	May	5.337	5.337
	Jun	5.586	5.586
	Jul	5.436	5.436
	Aug	5.547	5.547
	Sep	5.546	5.546
	Oct	5.682	5.682
	Nov	5.801	5.801
	Dec	5.694	5.694
2031	Jan	5.635	5.635
	Feb	5.544	5.544
	Mar	5.407	5.407
	Apr	5.501	5.501
	May	5.376	5.376
	Jun	5.630	5.630
	Jul	5.477	5.477
	Aug	5.590	5.590
	Sep	5.589	5.589
	Oct	5.728	5.728

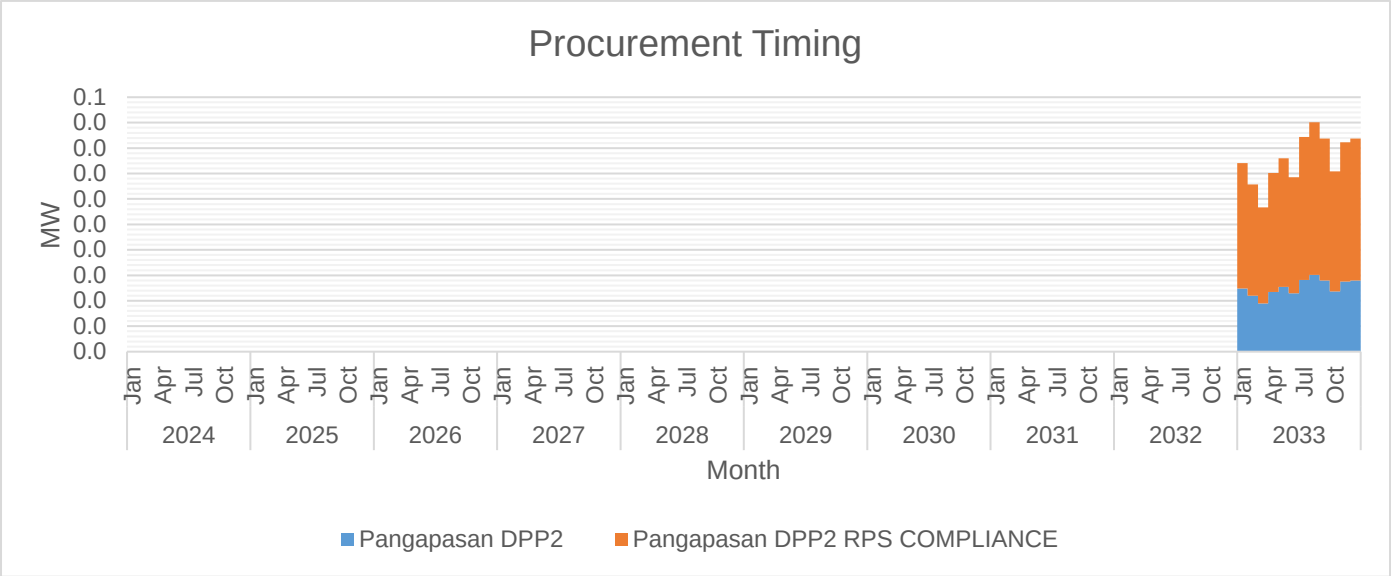
		MWh Offtake	MWh Output
	Nov	5.850	5.850
	Dec	5.740	5.740
2032	Jan	5.677	5.677
	Feb	5.585	5.585
	Mar	5.445	5.445
	Apr	5.541	5.541
	May	5.413	5.413
	Jun	5.673	5.673
	Jul	5.516	5.516
	Aug	5.632	5.632
	Sep	5.631	5.631
	Oct	5.772	5.772
	Nov	5.897	5.897
	Dec	5.785	5.785
2033	Jan	5.719	5.719
	Feb	5.624	5.624
	Mar	5.482	5.482
	Apr	5.579	5.579
	May	5.449	5.449
	Jun	5.714	5.714
	Jul	5.554	5.554
	Aug	5.673	5.673
	Sep	5.671	5.671
	Oct	5.815	5.815
	Nov	5.943	5.943
	Dec	5.828	5.828

MWh Offtake was forecasted using an Excel-based forecasting model. The assumed load factor averages at 19.10%.



MWh Output was expected to grow at an average rate of 20.29% annually.





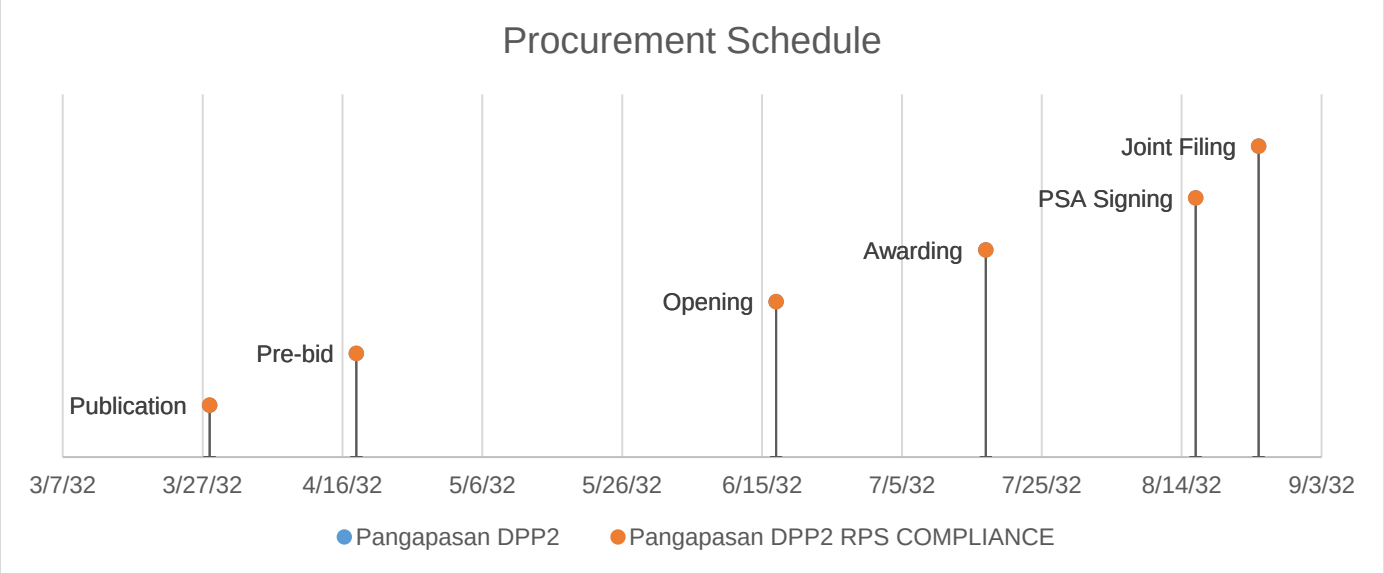
The first wave of supply procurement will be for 0.009 MW minimum and 0.030 MW minimum from an eligible RE which is planned to be available on December 26, 2032. The planned CSP will address the forecasted demand requirement for the year 2033 onwards.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
Pangapasan DPP_NPC-SPUG	Base	National Power Corporation	0.008	20	12/26/2022	12/25/2032
Pangapasan DPP_NPC-SPUG RPS COMPLIANCE	Base	National Power Corporation	0.030	43	12/26/2022	12/25/2032

The Power Supply Agreement (PSA) with Pangapasan 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*."

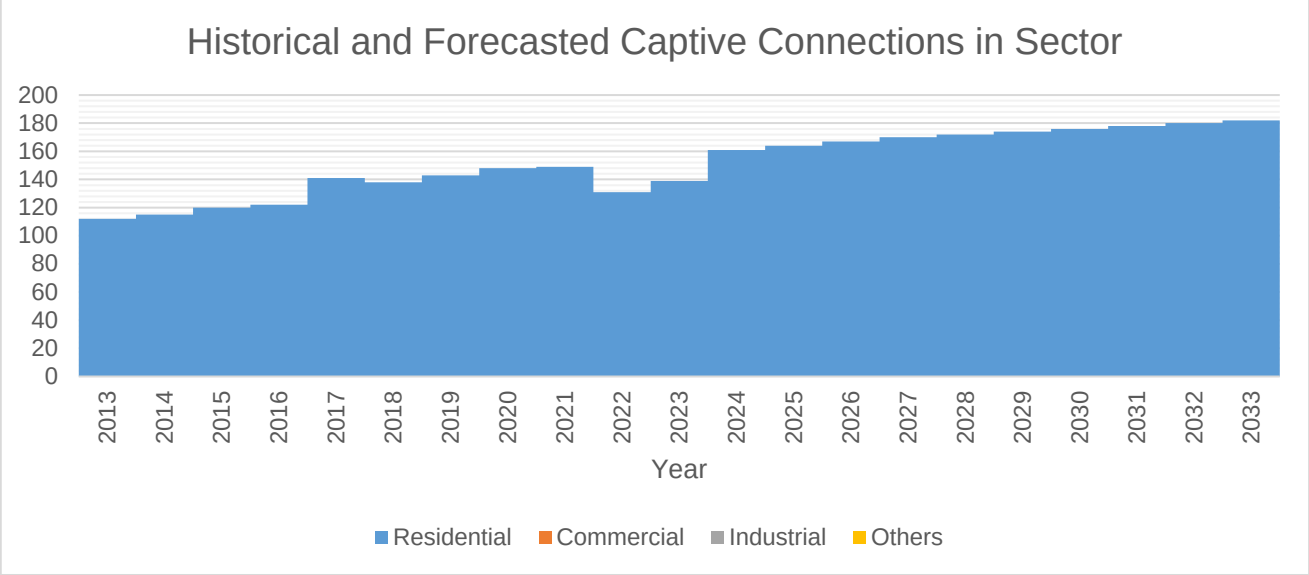
	Pangapasan DPP2	Pangapasan DPP2 RPS COMPLIANCE
Type	Base	Base
Minimum MW	0.009	0.030
Minimum MWh/yr	25	43
PSA Start	12/26/2032	12/26/2032
PSA End	12/25/2042	12/25/2042
Publication	3/28/2032	3/28/2032
Pre-bid	4/18/2032	4/18/2032
Opening	6/17/2032	6/17/2032
Awarding	7/17/2032	7/17/2032
PSA Signing	8/16/2032	8/16/2032
Joint Filing	8/25/2032	8/25/2032



For the procurement of 0.009 MW minimum and 0.030 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 PANGAPASAN 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 1.37% annually. Said customer class is expected to account for 100% of the total consumption.