



Power Supply Procurement Plan 2024-2033

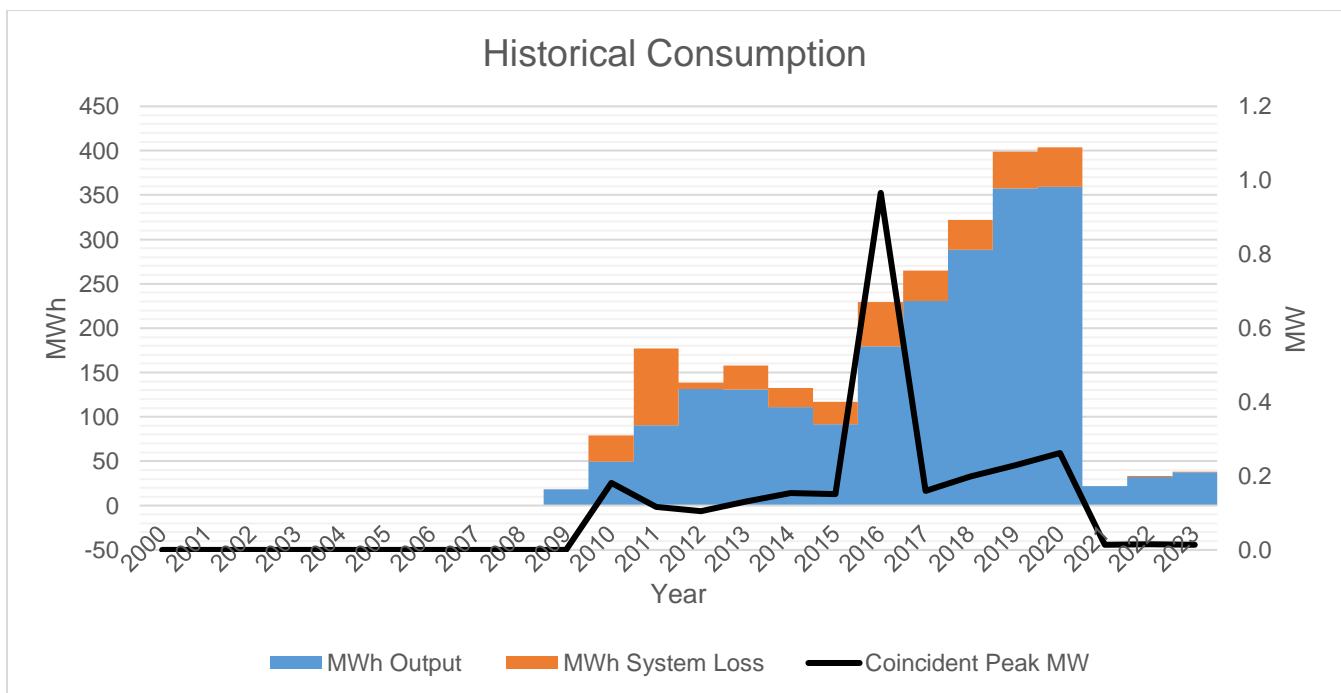
OFF-GRID NPC SPUG (ATULAYAN DPP)

**CAMARINES SUR IV ELECTRIC COOPERATIVE, INC
(CASURECO IV)**

Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2009	0.00	0	0	0	19	0	0	0	0	0
2010	0.18	79	0	79	50	29	5%	0.00%	0.00%	37.24%
2011	0.12	177	0	177	90	87	17%	0.00%	0.00%	48.93%
2012	0.11	138	0	138	131	7	15%	0.00%	0.00%	5.08%
2013	0.13	158	0	158	131	27	14%	0.00%	0.00%	17.17%
2014	0.15	133	0	133	111	22	10%	0.18%	0.00%	16.48%
2015	0.15	116	0	116	92	25	9%	0.77%	0.00%	21.74%
2016	0.97	230	0	230	180	50	3%	-0.17%	0.00%	21.61%
2017	0.16	265	0	265	231	34	19%	-0.01%	0.00%	12.85%
2018	0.20	322	0	322	288	34	18%	0.00%	0.00%	10.58%
2019	0.23	399	0	399	358	41	20%	0.00%	0.00%	10.34%
2020	0.26	404	0	404	359	44	18%	0.00%	0.00%	10.95%
2021	0.01	22	0	22	22	0	18%	0.00%	0.00%	-1.22%
2022	0.02	33	0	33	32	1	25%	0.00%	0.00%	3.17%
2023	0.01	38	0	38	37	1	32%	0.00%	0.00%	1.88%

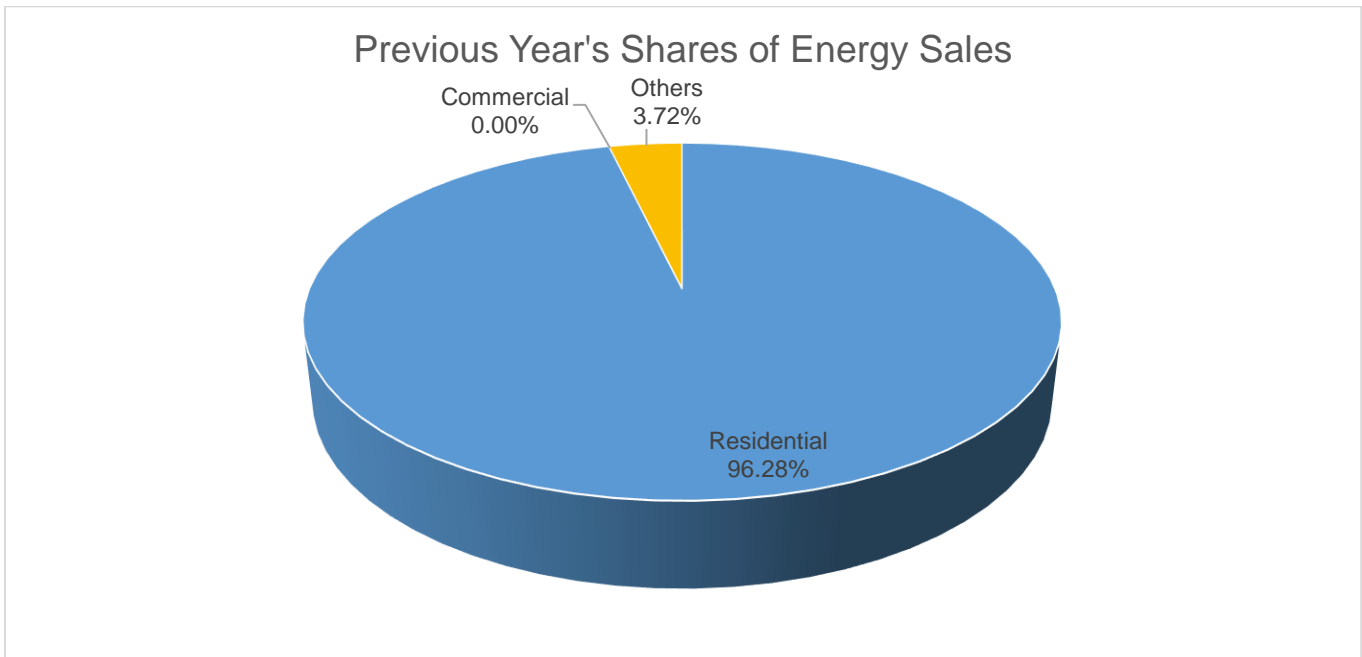
Peak Demand increased from 0.01 MW in 2021 to 0.02 MW in 2022 at a rate of 100% due to an increase in the number of customers. Consequently, the MWh Offtake increased from 22 MWh in 2021 to 38 MWh in 2023 at a rate of 13.16%. Within the same period, Load Factor ranged from 18% to 32%. The decrease of MWh Offtake from 2020 to 2021 is due to the commercial operation of FPIC in 2021 for the Islands of Lahuy and Quinalasag, only the remaining number of Residential connections in Atulayan Island will be supplied by the NPC.



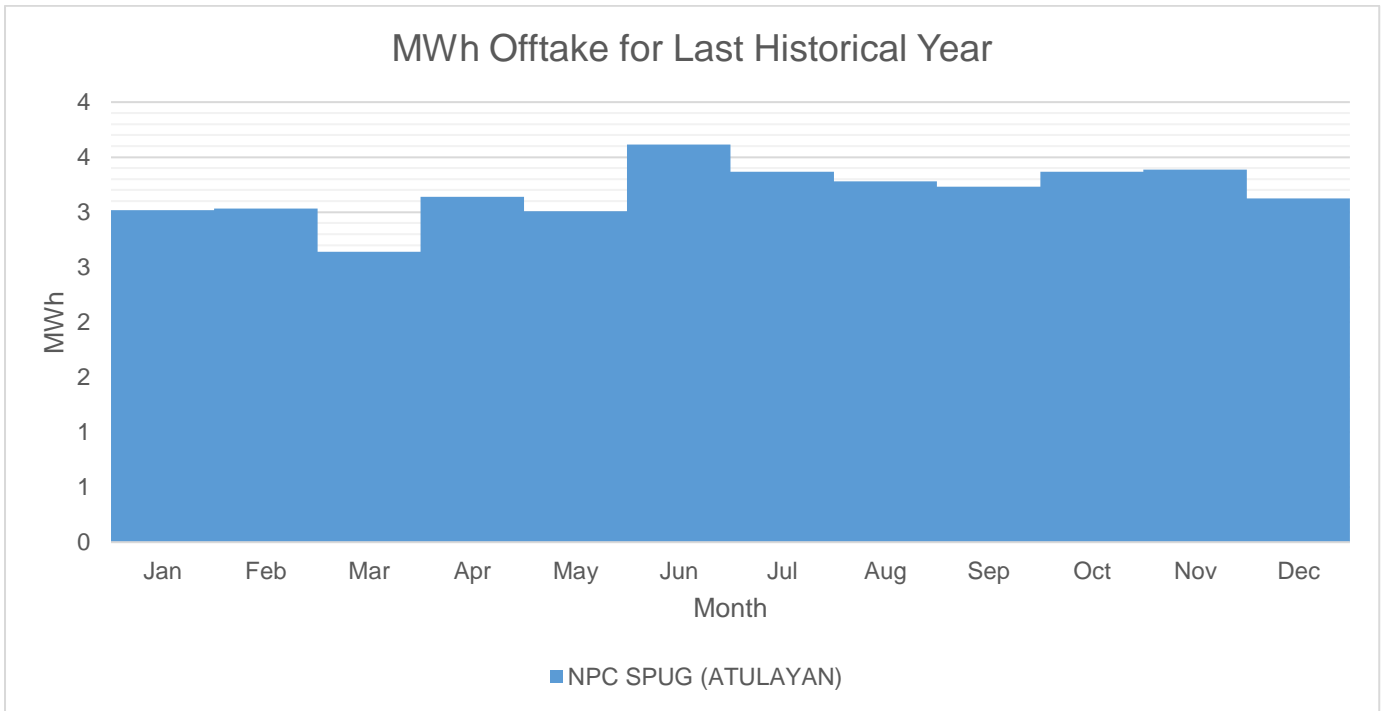
MWh Output increased from year 2022 to year 2023 at a rate of 15.15%, while MWh System Loss Decreased at a rate of 1.29% within the same period.



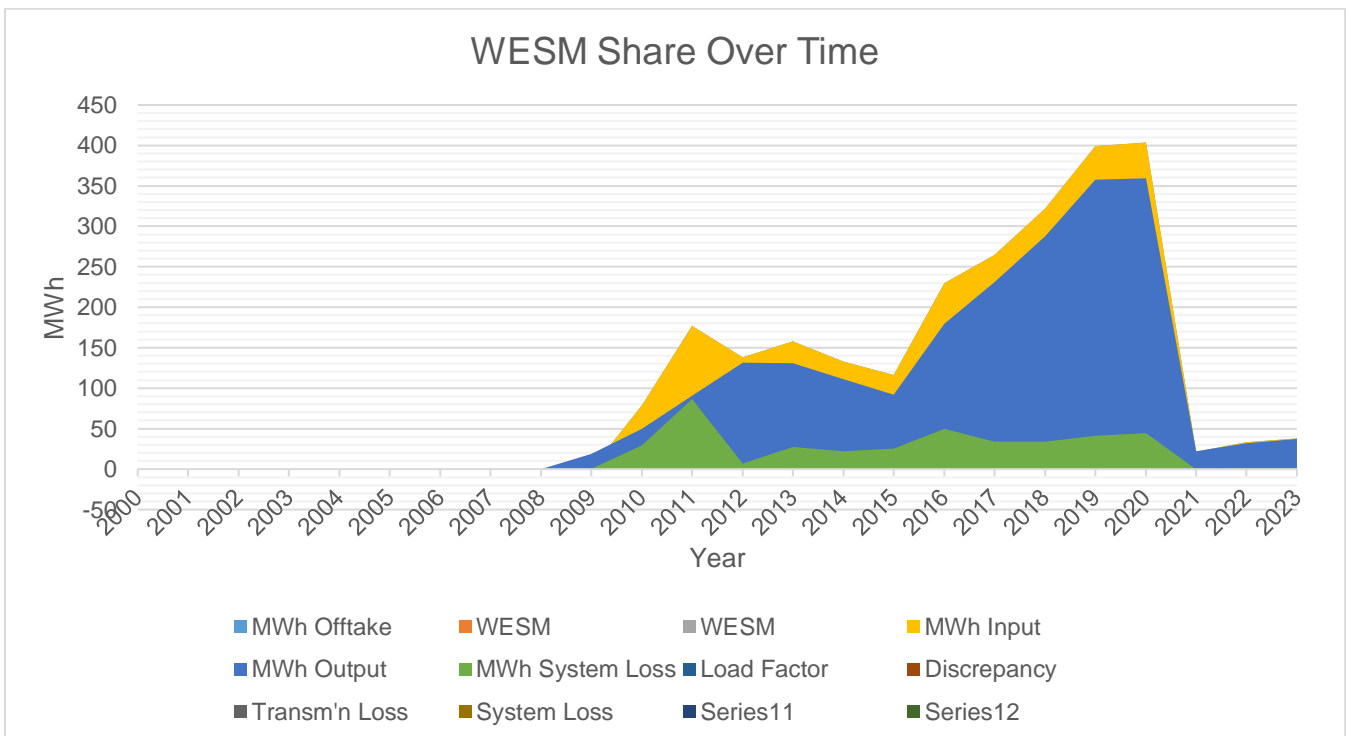
Historically, System Loss ranged from -1.22% to 48.93%. System Loss peaked at 48.93% on year 2011 and were reduced to 1.88% in 2023. There is no Non-technical loss in the data because the NPC has no segregation application to compute the technical loss and Non-technical loss. Only the total loss is calculated by the difference of purchased and sales.



Residential customers account for the bulk of energy sales at 96.28% due to the high number of connections. In contrast, Industrial customers accounted for only 3.72% of energy sales due to the low number of connections.

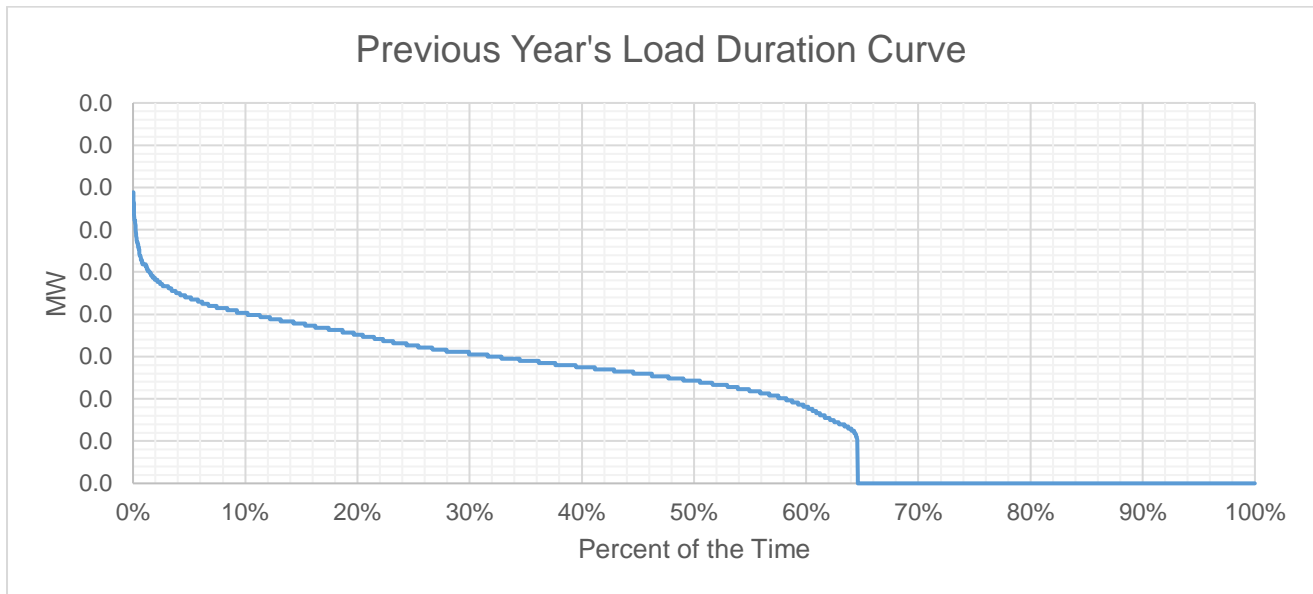


For 2023, the total Offtake for the last historical year is higher than the quantity stipulated in the Power Supply Agreement (PSA). As a sole supplier, the PSA with the National Power Corporation (NPC) accounts for the bulk of MWh Offtake.

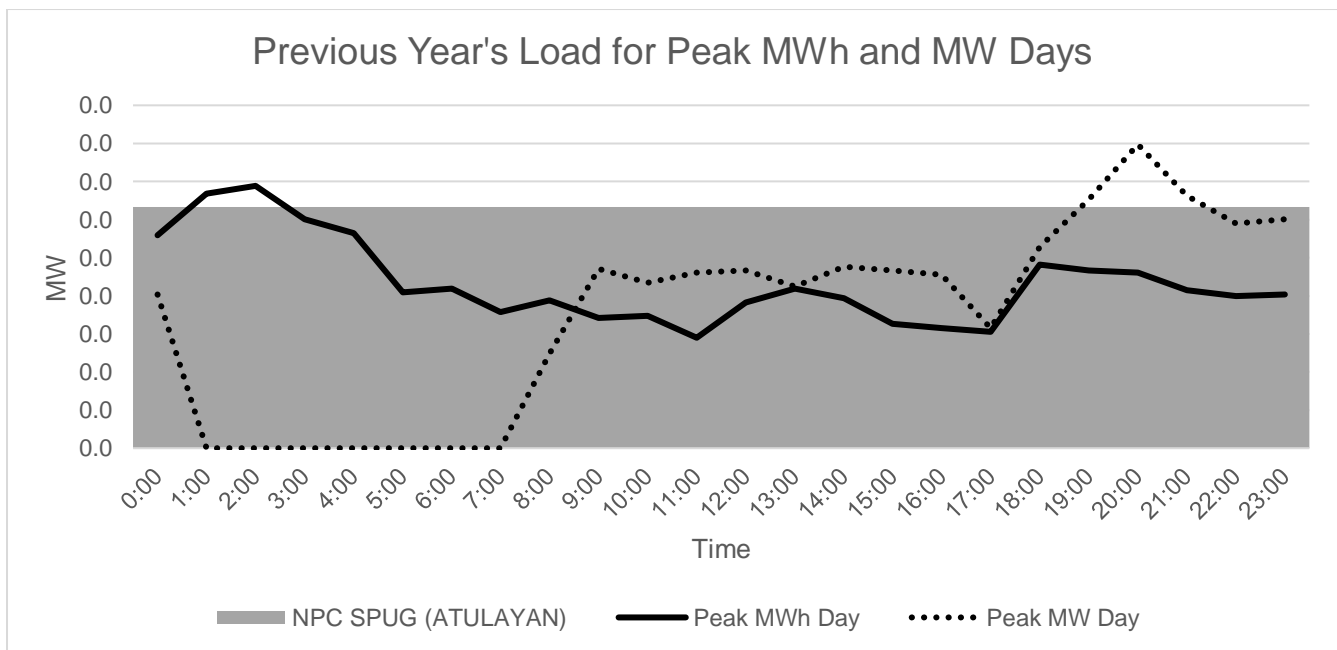


To this date, no WESM offtake for Atulayan Island supplied areas.

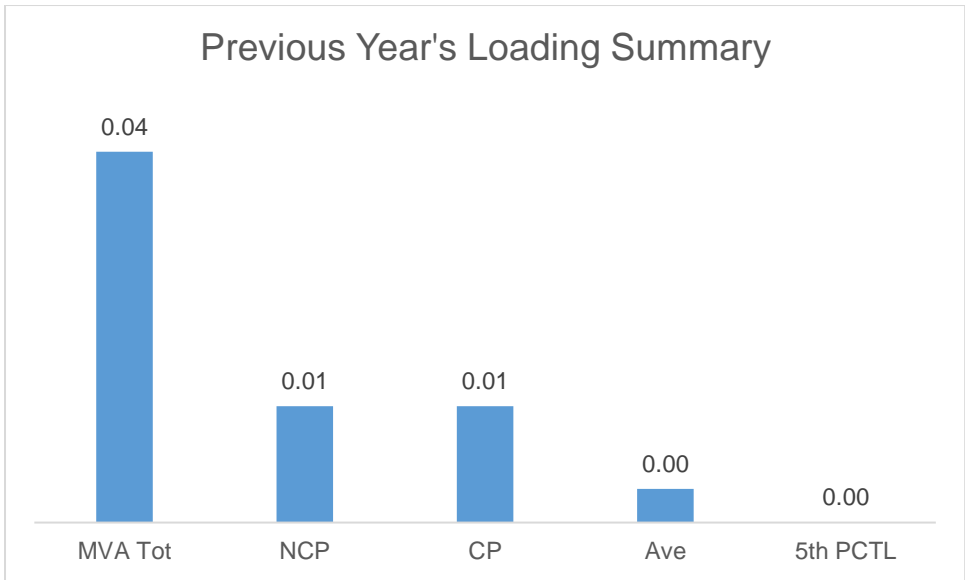
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0.004 MW and the maximum load is 0.0138 MW for the last historical year.



Peak MW occurred on Hour 20 due to high demand of energy. Peak daily MWh occurred on Hour 02 due to local festivities. As shown in the Load Curves, the available supply is lower than the Peak Demand.



The Non-coincident Peak Demand is 0.0138 MW, which is around 31.4% of the total substation capacity of 0.044 MVA. The load factor or the ratio between the Average Load of 0.00399 MW and the Non-coincident Peak Demand is 28.91%. A safe estimate of the true minimum load is the fifth percentile load of 0.0014 MW which is 10% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
Atulayan DDP	0.044	0.0138

The Generator loading as of 2023 is on 31%.

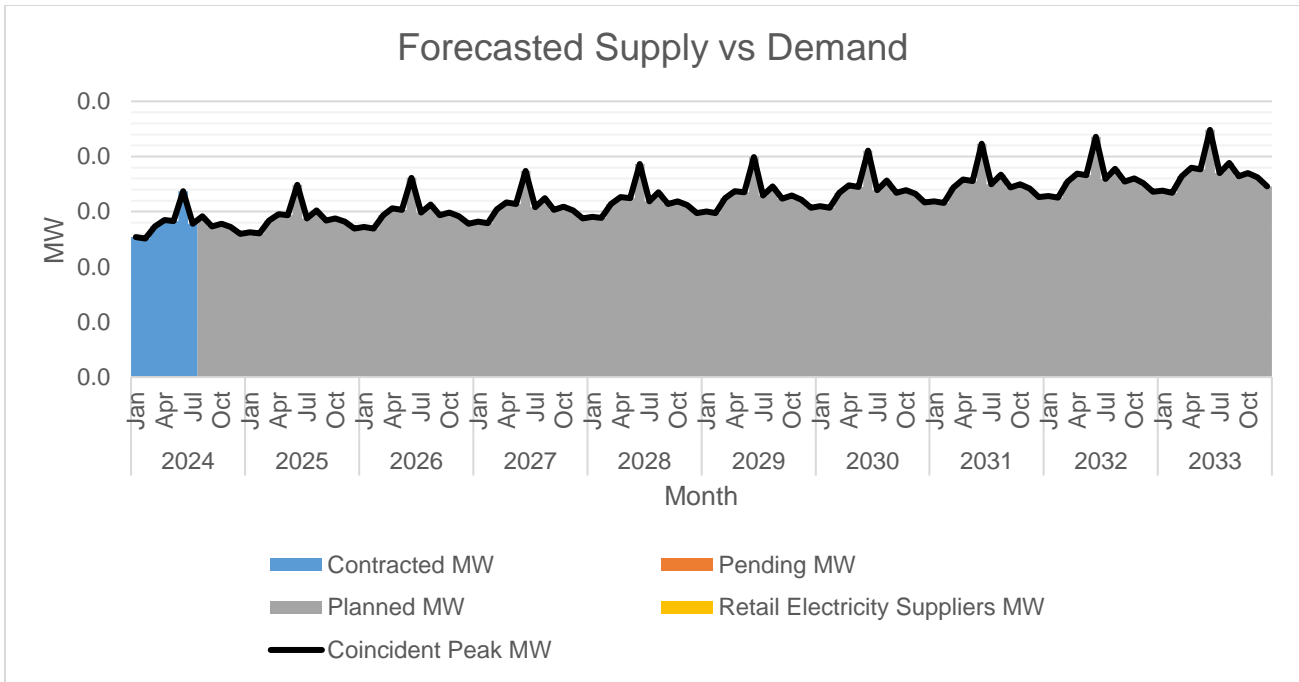
Forecasted Consumption Data

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2024	Jan	0.01	0.01	0.00	0.00	100%	100%	0.00
	Feb	0.01	0.01	0.00	0.00	100%	100%	0.00
	Mar	0.01	0.01	0.00	0.00	100%	100%	0.00
	Apr	0.01	0.01	0.00	0.00	100%	100%	0.00
	May	0.01	0.01	0.00	0.00	100%	100%	0.00
	Jun	0.02	0.02	0.00	0.00	100%	100%	0.00
	Jul	0.01	0.01	0.00	0.00	100%	100%	0.00
	Aug	0.01	0.00	0.00	0.01	0%	100%	0.00
	Sep	0.01	0.00	0.00	0.01	0%	100%	0.00
	Oct	0.01	0.00	0.00	0.01	0%	100%	0.00
	Nov	0.01	0.00	0.00	0.01	0%	100%	0.00
	Dec	0.01	0.00	0.00	0.01	0%	100%	0.00
2025	Jan	0.01	0.00	0.00	0.01	0%	100%	0.00
	Feb	0.01	0.00	0.00	0.01	0%	100%	0.00
	Mar	0.01	0.00	0.00	0.01	0%	100%	0.00
	Apr	0.01	0.00	0.00	0.01	0%	100%	0.00
	May	0.01	0.00	0.00	0.01	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.01	0.00	0.00	0.01	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.01	0.00	0.00	0.01	0%	100%	0.00
	Oct	0.01	0.00	0.00	0.01	0%	100%	0.00
	Nov	0.01	0.00	0.00	0.01	0%	100%	0.00
	Dec	0.01	0.00	0.00	0.01	0%	100%	0.00
2026	Jan	0.01	0.00	0.00	0.01	0%	100%	0.00
	Feb	0.01	0.00	0.00	0.01	0%	100%	0.00
	Mar	0.01	0.00	0.00	0.01	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.01	0.00	0.00	0.01	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.01	0.00	0.00	0.01	0%	100%	0.00
	Oct	0.01	0.00	0.00	0.01	0%	100%	0.00
	Nov	0.01	0.00	0.00	0.01	0%	100%	0.00
	Dec	0.01	0.00	0.00	0.01	0%	100%	0.00
2027	Jan	0.01	0.00	0.00	0.01	0%	100%	0.00
	Feb	0.01	0.00	0.00	0.01	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00

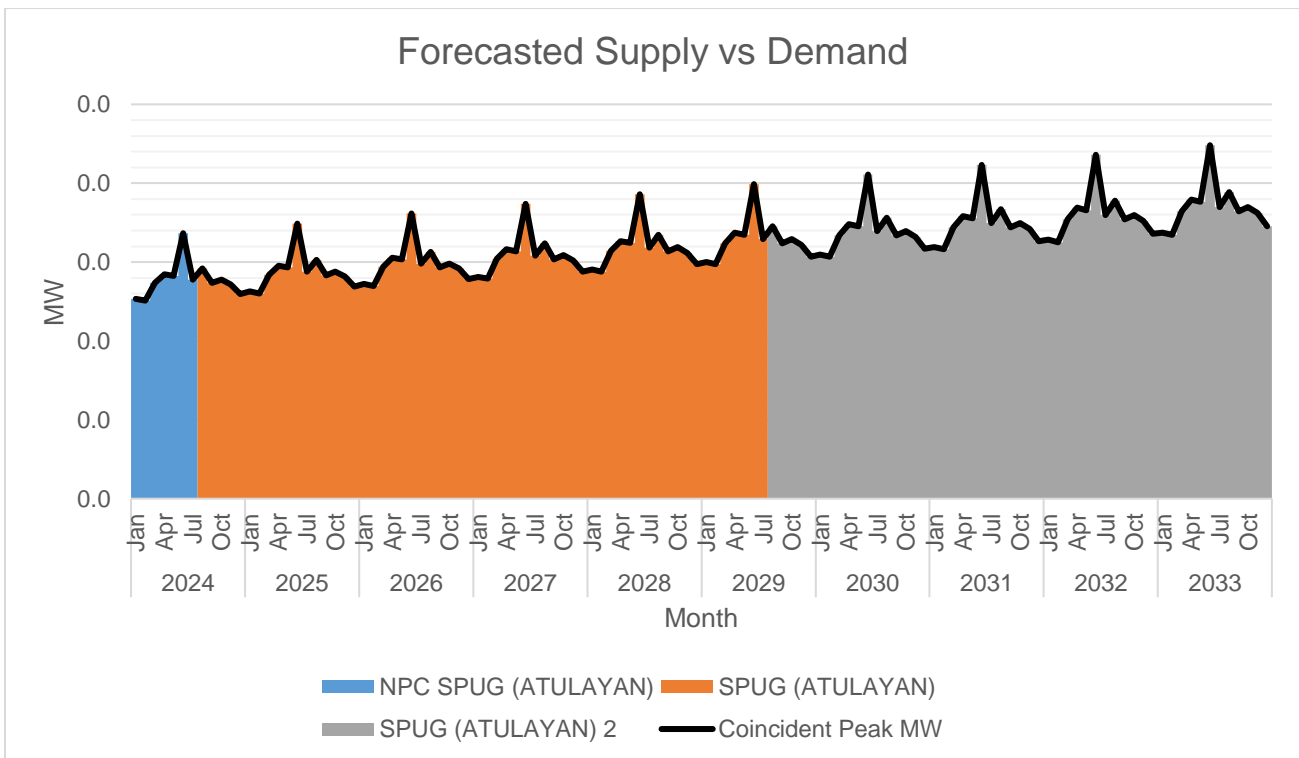
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.01	0.00	0.00	0.01	0%	100%	0.00
2028	Jan	0.01	0.00	0.00	0.01	0%	100%	0.00
	Feb	0.01	0.00	0.00	0.01	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.01	0.00	0.00	0.01	0%	100%	0.00
2029	Jan	0.02	0.00	0.00	0.02	0%	100%	0.00
	Feb	0.01	0.00	0.00	0.01	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.02	0.00	0.00	0.02	0%	100%	0.00
2030	Jan	0.02	0.00	0.00	0.02	0%	100%	0.00
	Feb	0.02	0.00	0.00	0.02	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.02	0.00	0.00	0.02	0%	100%	0.00
2031	Jan	0.02	0.00	0.00	0.02	0%	100%	0.00
	Feb	0.02	0.00	0.00	0.02	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00

	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.02	0.00	0.00	0.02	0%	100%	0.00
2032	Jan	0.02	0.00	0.00	0.02	0%	100%	0.00
	Feb	0.02	0.00	0.00	0.02	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.02	0.00	0.00	0.02	0%	100%	0.00
2033	Jan	0.02	0.00	0.00	0.02	0%	100%	0.00
	Feb	0.02	0.00	0.00	0.02	0%	100%	0.00
	Mar	0.02	0.00	0.00	0.02	0%	100%	0.00
	Apr	0.02	0.00	0.00	0.02	0%	100%	0.00
	May	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jun	0.02	0.00	0.00	0.02	0%	100%	0.00
	Jul	0.02	0.00	0.00	0.02	0%	100%	0.00
	Aug	0.02	0.00	0.00	0.02	0%	100%	0.00
	Sep	0.02	0.00	0.00	0.02	0%	100%	0.00
	Oct	0.02	0.00	0.00	0.02	0%	100%	0.00
	Nov	0.02	0.00	0.00	0.02	0%	100%	0.00
	Dec	0.02	0.00	0.00	0.02	0%	100%	0.00

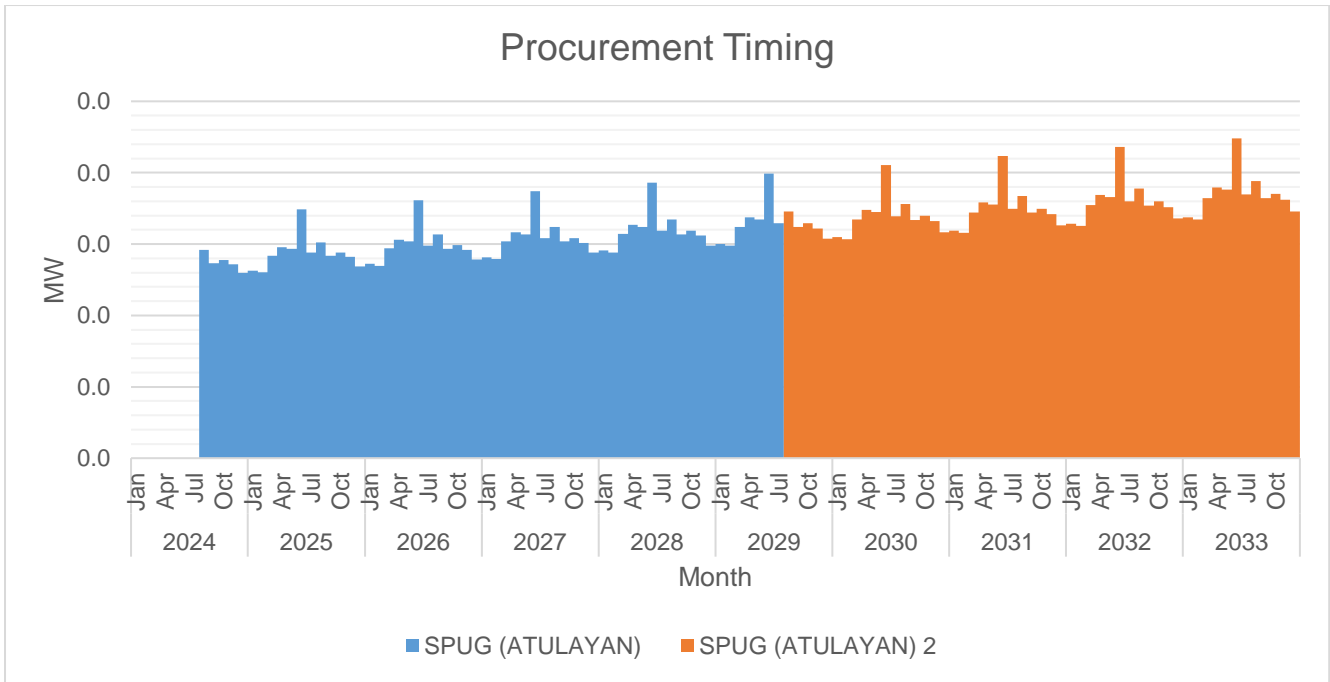
The Peak Demand was forecasted using linear trend analysis and was assumed to occur on the month of June due to summer season. Monthly Peak Demand is at its lowest on the month of February due to rainy season. In general, Peak Demand is expected to grow at a rate of 3.83% annually.



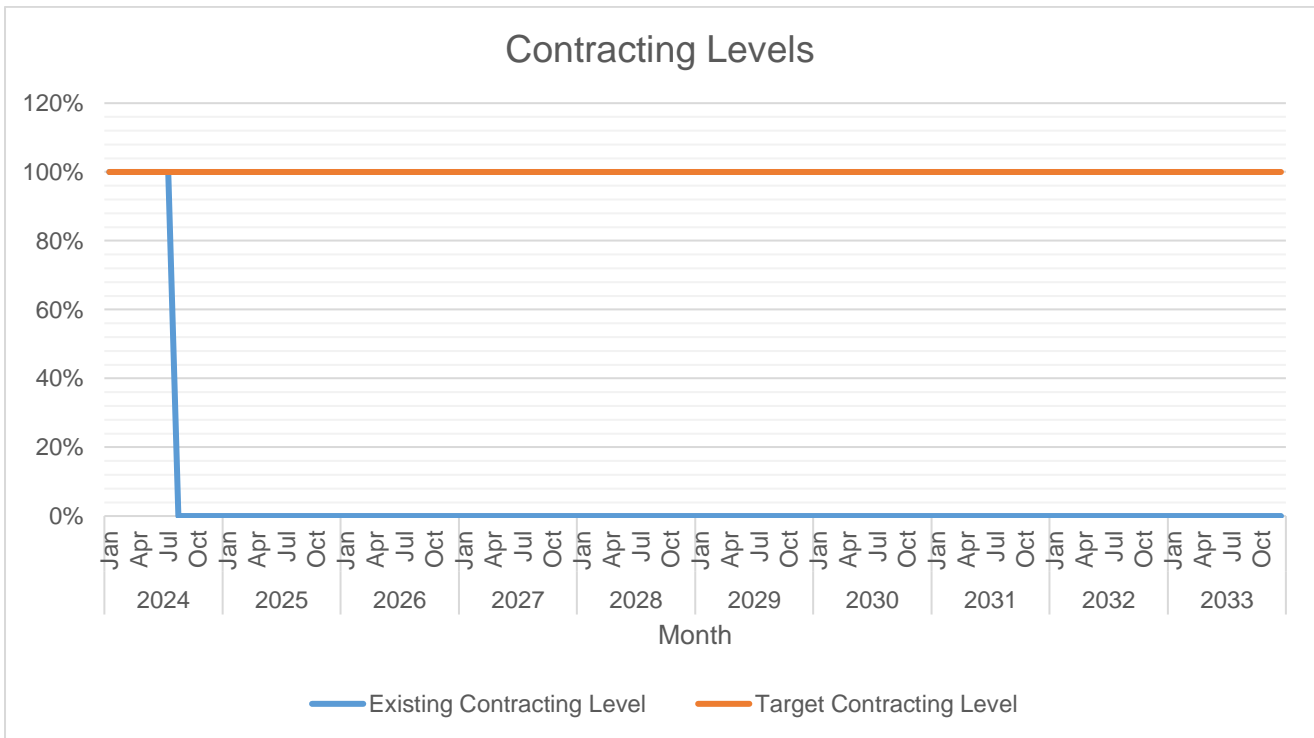
The available supply is generally equal to the Peak Demand. This is because of revise contract levels with NPC due to increase in operating hours of Atulayan DPP.



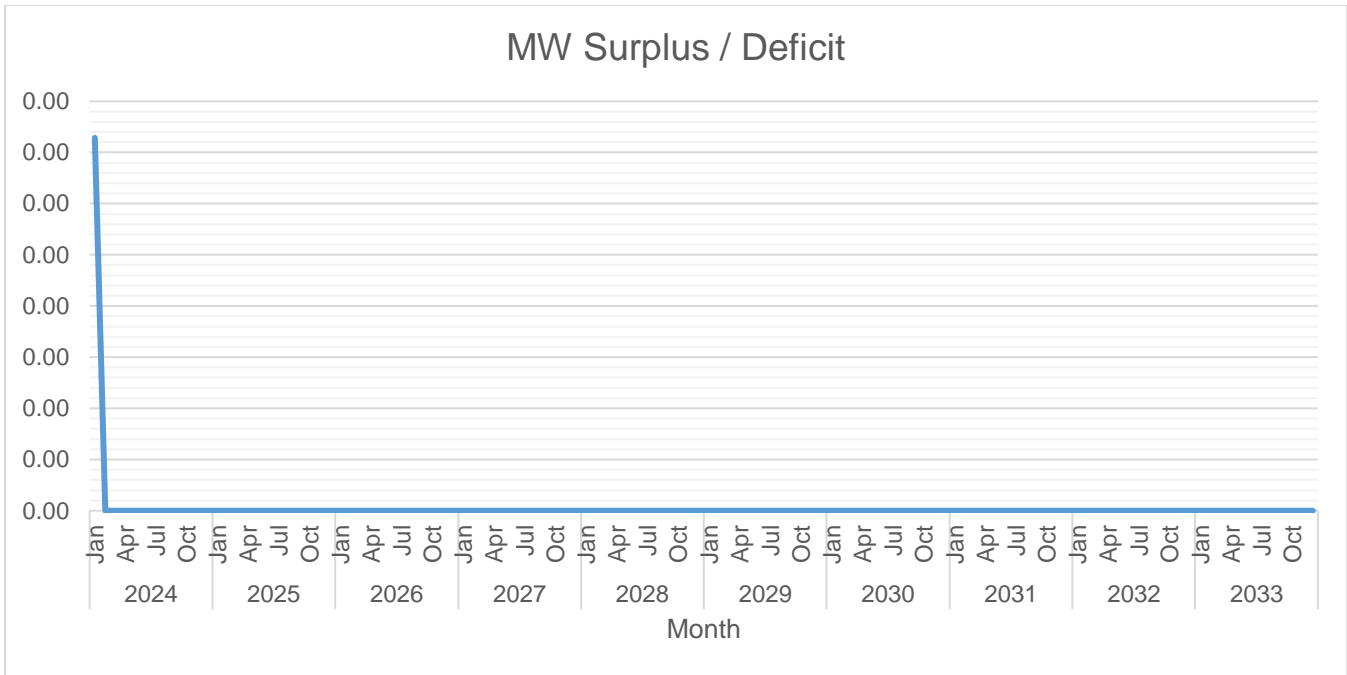
Of the NPC SPUG supply, the Atulayan Island contract will remain with 1.386 MW from 2022 to 3.075 MW in 2024.



The first wave of supply procurement will be for 0.01458 MW planned to be available by the month of August 2024. The second will be for 0.01534 MW planned to be available by the month of August 2029.



Currently, there is exact contracting by 100%.



Currently, there is almost equal contracting level.

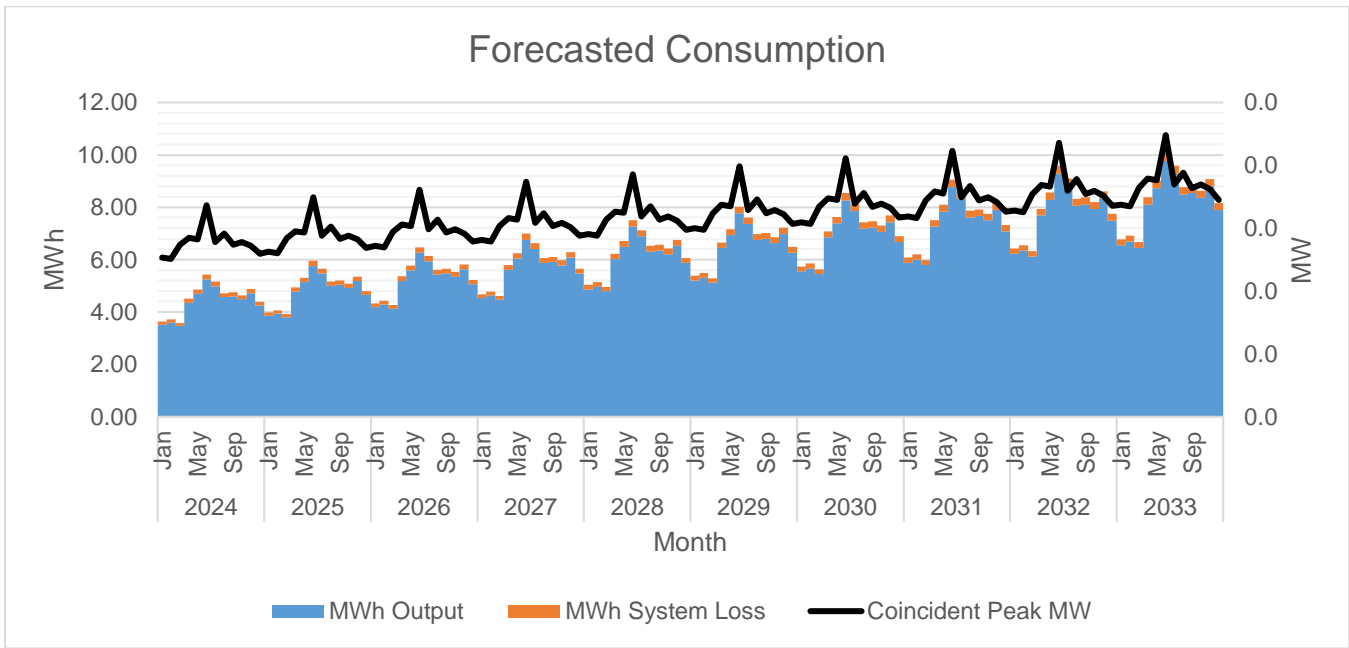
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	3.64	3.52	0.12	0.00%	3.25%
	Feb	3.72	3.60	0.12	0.00%	3.25%
	Mar	3.58	3.47	0.12	0.00%	3.25%
	Apr	4.50	4.36	0.15	0.00%	3.25%
	May	4.85	4.69	0.16	0.00%	3.25%
	Jun	5.43	5.25	0.18	0.00%	3.25%
	Jul	5.15	4.99	0.17	0.00%	3.25%
	Aug	4.72	4.56	0.15	0.00%	3.25%
	Sep	4.75	4.59	0.15	0.00%	3.25%
	Oct	4.64	4.49	0.15	0.00%	3.25%
	Nov	4.88	4.72	0.16	0.00%	3.25%
	Dec	4.39	4.24	0.14	0.00%	3.25%
2025	Jan	3.99	3.86	0.13	0.00%	3.25%
	Feb	4.07	3.94	0.13	0.00%	3.25%
	Mar	3.93	3.80	0.13	0.00%	3.25%
	Apr	4.93	4.77	0.16	0.00%	3.25%
	May	5.31	5.14	0.17	0.00%	3.25%
	Jun	5.95	5.76	0.19	0.00%	3.25%
	Jul	5.65	5.46	0.18	0.00%	3.25%
	Aug	5.17	5.00	0.17	0.00%	3.25%
	Sep	5.20	5.03	0.17	0.00%	3.25%
	Oct	5.09	4.92	0.17	0.00%	3.25%
	Nov	5.35	5.18	0.17	0.00%	3.25%
	Dec	4.81	4.65	0.16	0.00%	3.25%
2026	Jan	4.34	4.19	0.14	0.00%	3.25%
	Feb	4.43	4.28	0.14	0.00%	3.25%

	Mar	4.27	4.13	0.14	0.00%	3.25%
	Apr	5.36	5.19	0.17	0.00%	3.25%
	May	5.78	5.59	0.19	0.00%	3.25%
	Jun	6.47	6.26	0.21	0.00%	3.25%
	Jul	6.14	5.94	0.20	0.00%	3.25%
	Aug	5.62	5.44	0.18	0.00%	3.25%
	Sep	5.65	5.47	0.18	0.00%	3.25%
	Oct	5.53	5.35	0.18	0.00%	3.25%
	Nov	5.82	5.63	0.19	0.00%	3.25%
	Dec	5.23	5.06	0.17	0.00%	3.25%
2027	Jan	4.68	4.53	0.15	0.00%	3.25%
	Feb	4.78	4.63	0.16	0.00%	3.25%
	Mar	4.61	4.46	0.15	0.00%	3.25%
	Apr	5.79	5.60	0.19	0.00%	3.25%
	May	6.24	6.04	0.20	0.00%	3.25%
	Jun	6.99	6.76	0.23	0.00%	3.25%
	Jul	6.63	6.42	0.22	0.00%	3.25%
	Aug	6.07	5.87	0.20	0.00%	3.25%
	Sep	6.11	5.91	0.20	0.00%	3.25%
	Oct	5.97	5.78	0.19	0.00%	3.25%
	Nov	6.28	6.08	0.20	0.00%	3.25%
	Dec	5.65	5.46	0.18	0.00%	3.25%
2028	Jan	5.03	4.87	0.16	0.00%	3.25%
	Feb	5.14	4.97	0.17	0.00%	3.25%
	Mar	4.95	4.79	0.16	0.00%	3.25%
	Apr	6.22	6.02	0.20	0.00%	3.25%
	May	6.70	6.49	0.22	0.00%	3.25%
	Jun	7.51	7.26	0.24	0.00%	3.25%
	Jul	7.12	6.89	0.23	0.00%	3.25%
	Aug	6.52	6.31	0.21	0.00%	3.25%
	Sep	6.56	6.35	0.21	0.00%	3.25%
	Oct	6.42	6.21	0.21	0.00%	3.25%
	Nov	6.75	6.53	0.22	0.00%	3.25%
	Dec	6.06	5.87	0.20	0.00%	3.25%
2029	Jan	5.38	5.20	0.17	0.00%	3.25%
	Feb	5.49	5.31	0.18	0.00%	3.25%
	Mar	5.30	5.12	0.17	0.00%	3.25%
	Apr	6.65	6.44	0.22	0.00%	3.25%
	May	7.17	6.94	0.23	0.00%	3.25%
	Jun	8.03	7.76	0.26	0.00%	3.25%
	Jul	7.62	7.37	0.25	0.00%	3.25%
	Aug	6.97	6.74	0.23	0.00%	3.25%
	Sep	7.02	6.79	0.23	0.00%	3.25%
	Oct	6.86	6.64	0.22	0.00%	3.25%
	Nov	7.22	6.98	0.23	0.00%	3.25%
	Dec	6.48	6.27	0.21	0.00%	3.25%
2030	Jan	5.73	5.54	0.19	0.00%	3.25%
	Feb	5.85	5.66	0.19	0.00%	3.25%

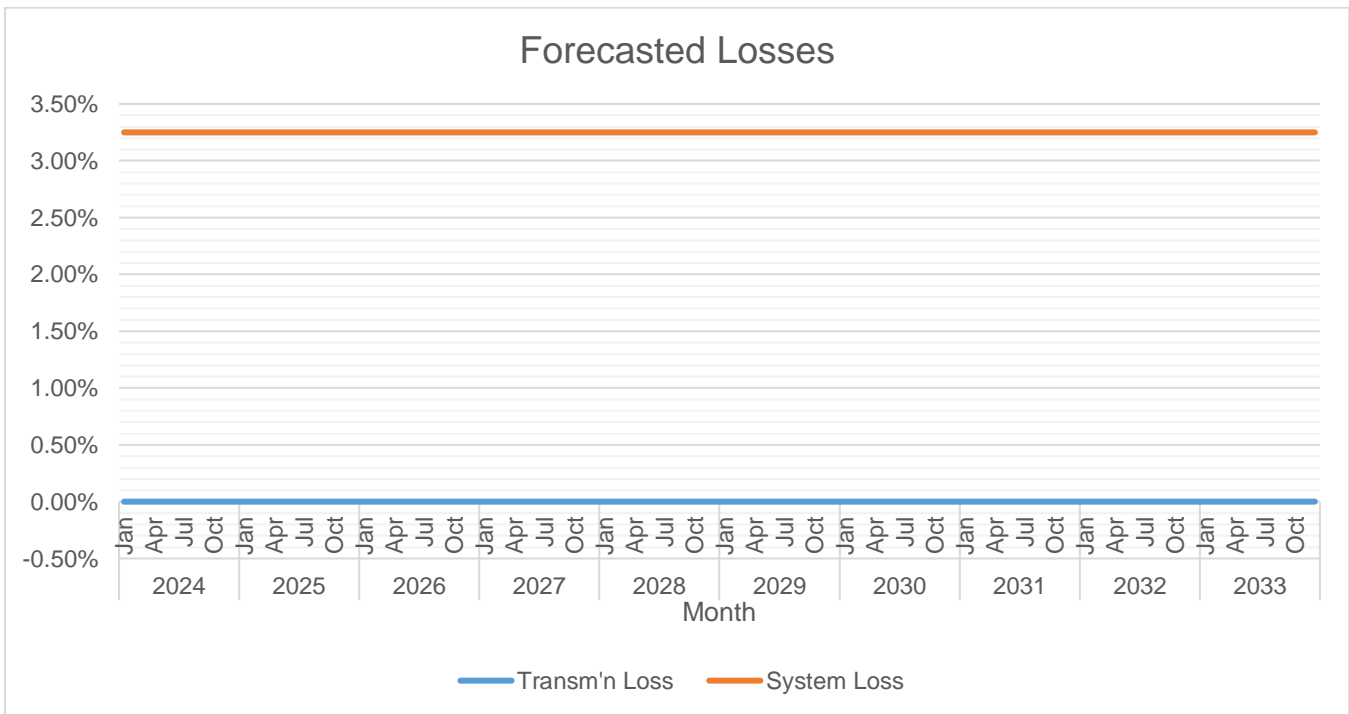
	Mar	5.64	5.45	0.18	0.00%	3.25%
	Apr	7.08	6.85	0.23	0.00%	3.25%
	May	7.63	7.38	0.25	0.00%	3.25%
	Jun	8.54	8.27	0.28	0.00%	3.25%
	Jul	8.11	7.85	0.26	0.00%	3.25%
	Aug	7.42	7.18	0.24	0.00%	3.25%
	Sep	7.47	7.23	0.24	0.00%	3.25%
	Oct	7.31	7.07	0.24	0.00%	3.25%
	Nov	7.68	7.43	0.25	0.00%	3.25%
	Dec	6.90	6.68	0.22	0.00%	3.25%
2031	Jan	6.07	5.88	0.20	0.00%	3.25%
	Feb	6.20	6.00	0.20	0.00%	3.25%
	Mar	5.98	5.79	0.19	0.00%	3.25%
	Apr	7.51	7.27	0.24	0.00%	3.25%
	May	8.10	7.83	0.26	0.00%	3.25%
	Jun	9.06	8.77	0.29	0.00%	3.25%
	Jul	8.60	8.32	0.28	0.00%	3.25%
	Aug	7.87	7.62	0.26	0.00%	3.25%
	Sep	7.92	7.67	0.26	0.00%	3.25%
	Oct	7.75	7.50	0.25	0.00%	3.25%
	Nov	8.15	7.89	0.26	0.00%	3.25%
	Dec	7.32	7.08	0.24	0.00%	3.25%
2032	Jan	6.42	6.21	0.21	0.00%	3.25%
	Feb	6.56	6.34	0.21	0.00%	3.25%
	Mar	6.32	6.12	0.21	0.00%	3.25%
	Apr	7.94	7.69	0.26	0.00%	3.25%
	May	8.56	8.28	0.28	0.00%	3.25%
	Jun	9.58	9.27	0.31	0.00%	3.25%
	Jul	9.09	8.80	0.30	0.00%	3.25%
	Aug	8.32	8.05	0.27	0.00%	3.25%
	Sep	8.38	8.10	0.27	0.00%	3.25%
	Oct	8.19	7.93	0.27	0.00%	3.25%
	Nov	8.62	8.34	0.28	0.00%	3.25%
	Dec	7.74	7.49	0.25	0.00%	3.25%
2033	Jan	6.77	6.55	0.22	0.00%	3.25%
	Feb	6.91	6.69	0.22	0.00%	3.25%
	Mar	6.67	6.45	0.22	0.00%	3.25%
	Apr	8.37	8.10	0.27	0.00%	3.25%
	May	9.02	8.73	0.29	0.00%	3.25%
	Jun	10.10	9.77	0.33	0.00%	3.25%
	Jul	9.59	9.28	0.31	0.00%	3.25%
	Aug	8.77	8.49	0.29	0.00%	3.25%
	Sep	8.83	8.54	0.29	0.00%	3.25%
	Oct	8.64	8.36	0.28	0.00%	3.25%
	Nov	9.08	8.79	0.30	0.00%	3.25%
	Dec	8.16	7.90	0.27	0.00%	3.25%

MWh Offtake was forecasted using linear trend analysis.

System Loss was calculated through the difference between input and sales.



MWh Output was expected to grow at a rate of 9.74% annually.



Loss is expected to range from 0% to 3.25%.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
NPC SPUG (ATULAYAN)	Base	National Power Corporation	0.01	1.39	7/26/2019	7/25/2024

The Power Supply Agreement (PSA) with National Power Corporation was procured pursuant to Republic Act 9136 and Section 1.a and Section 3.a of Rule 13 of IRR of RA 9136.

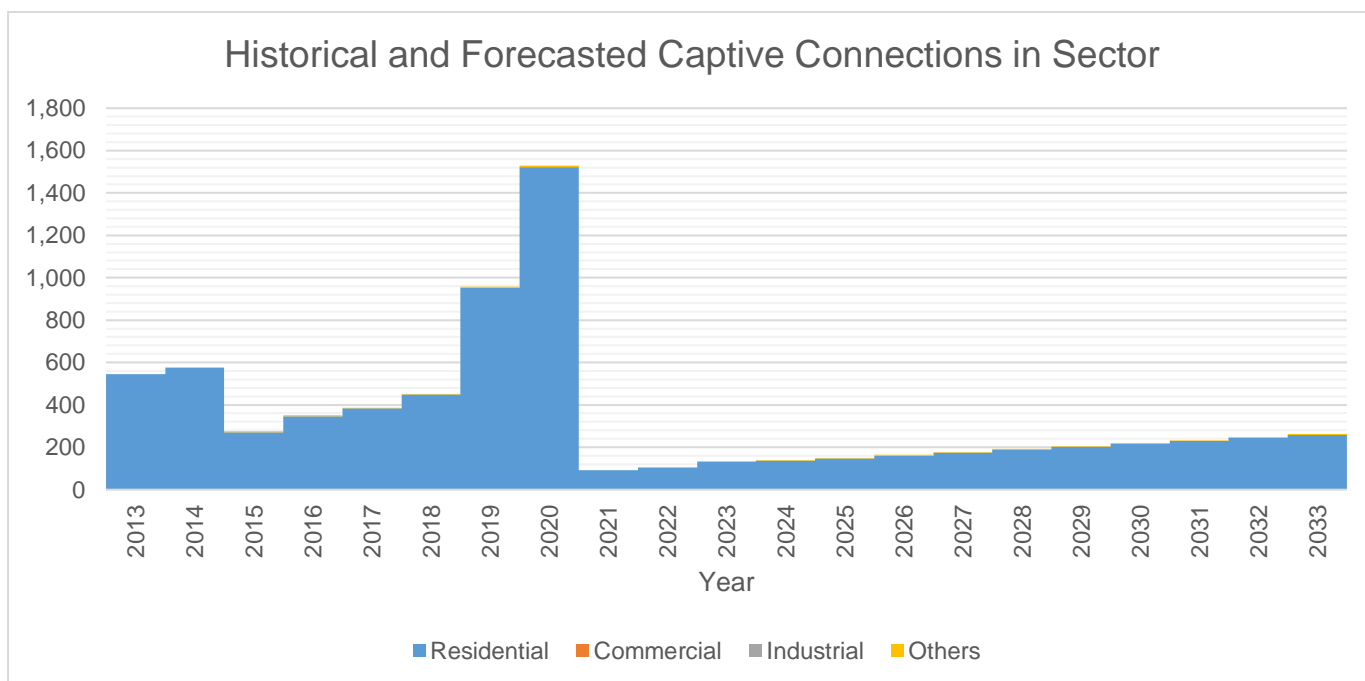
	SPUG (ATULAYAN)	SPUG (ATULAYAN) 2
Type	Base	Base
Minimum MW	0.01	0.02
Minimum MWh/yr	23.38	35
PSA Start	7/26/2024	7/26/2029
PSA End	7/25/2029	7/25/2034
Publication	3/26/2024	3/26/2028
Pre-bid	4/16/2024	4/16/2028
Opening	6/15/2024	6/15/2028
Awarding	7/15/2024	7/15/2028
PSA Signing	8/14/2024	8/14/2028
Joint Filing	8/23/2024	8/23/2028

For the procurement of 0.01 MW of supply which is planned to be available on July 26, 2024, the first publication or launch of CSP will be on March 26, 2024. Joint filing is planned on August 23, 2024, or 150 days later, in accordance with DOE's CSP Policy.

For the procurement of 0.02 MW of supply which is planned for July 26, 2029, the first publication or launch of CSP will be on March 26, 2028. Joint filing is planned on August 23, 2028, or 150 days later.

Starting January 2021, the two island grids Lahuy and Quinalasag, will be turned over to FP Island Energy Corporation (FPIC) under the QTP. Only the Atulayan Island will remain under CASURECO IV, supplied by NPC SPUG operating at 16 hours from 8 am to 12mn.

Captive Customer Connections



The number of Residential connections is expected to grow at a rate of 7.25% annually. Said customer class is expected to account for 96.28% of the total consumption.

Due to the commercial operation of FPIC in 2021 for the Islands of Lahuy and Quinalasag, only the remaining number of Residential and Public building connections in Atulayan Island will be supplied by the NPC.

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