



ALBAY ELECTRIC COOPERATIVE, INC.

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Power Supply Procurement Plan 2024-2033

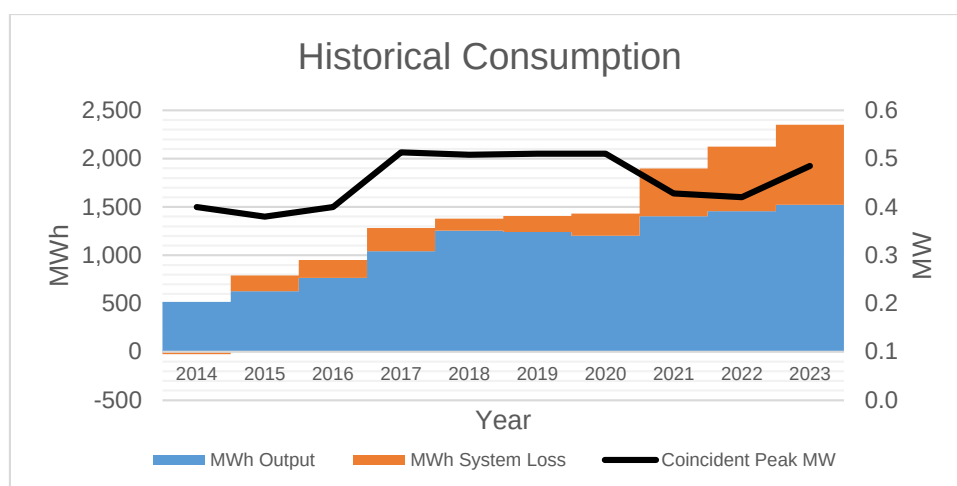
**Off-Grid
(Rapu-Rapu)**

Historical Consumption Data

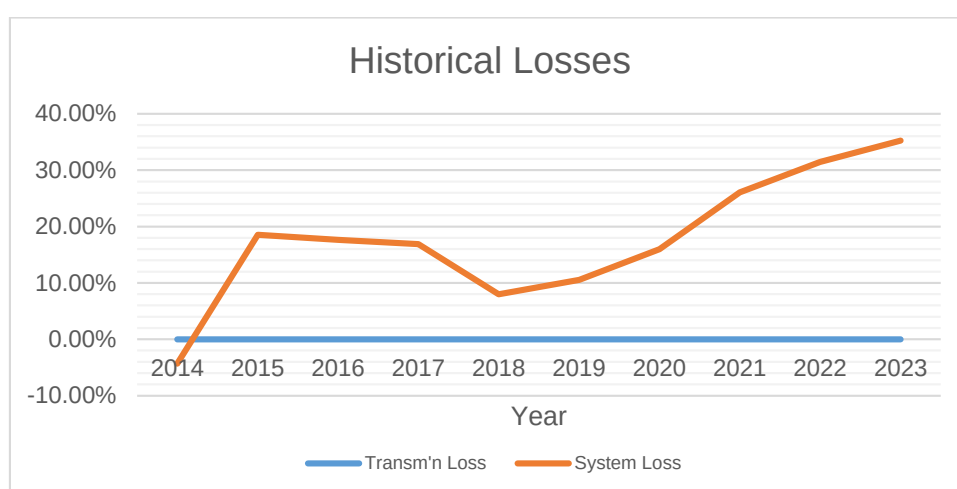
	Coincident Peak MW	MWh Offtake	*WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2014	0.40	549	0	549	517	-24	16%	-10.16%	0.00%	-4.32%
2015	0.38	873	0	873	629	162	26%	-9.39%	0.00%	18.53%
2016	0.40	1,060	0	1,060	765	187	30%	-10.23%	0.00%	17.63%
2017	0.51	1,412	0	1,412	1,043	238	31%	-9.26%	0.00%	16.89%
2018	0.51	1,547	0	1,547	1,255	123	35%	-10.92%	0.00%	7.96%
2019	0.51	1,568	0	1,568	1,241	165	35%	-10.28%	0.00%	10.55%
2020	0.51	1,432	0	1,432	1,203	229	32%	0.00%	0.00%	15.99%
2021	0.43	1,899	0	1,899	1,404	495	51%	0.00%	0.00%	26.05%
2022	0.42	2,124	0	2,124	1,456	668	58%	0.00%	0.00%	31.47%
2023	0.49	2,351	0	2,351	1,522	829	55%	0.00%	0.00%	35.25%

* Rapu-Rapu Island is an Off-Grid supplied area. WESM transaction is not applicable.

Peak Demand increased from **0.42 MW in 2022** to **0.49 MW in 2023**. MWh Offtake increased from **2,124 MWh in 2022** to **2,351 MWh in 2023** due to the increasing number of establishments and businesses that have been energized. Within the same period, Load Factor decreased from **58% to 55%**.

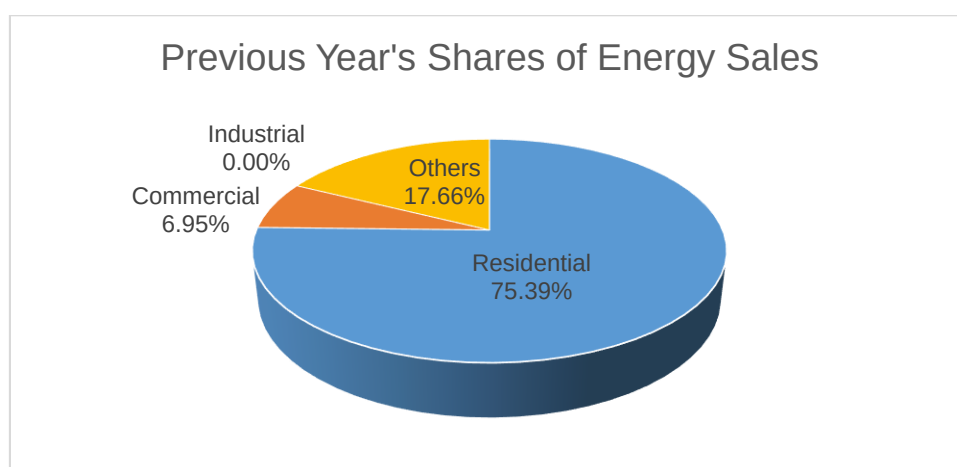


MWh Output increased from year 2022 to year 2023 at a rate of 4.37%, consequently MWh System Loss likewise increased within the same period.

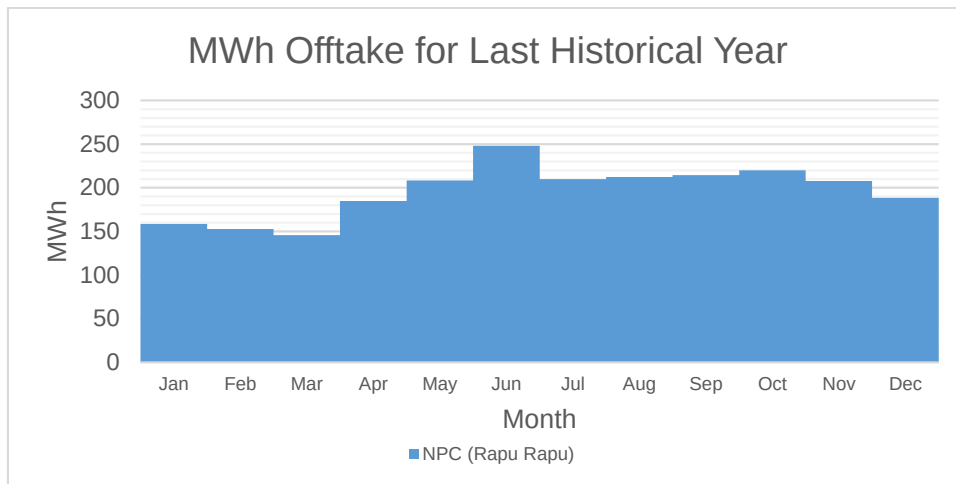


ALECO is still in the process of updating the data detailing the segregated distribution system losses. Details may be provided as soon as we have gathered all of the data.

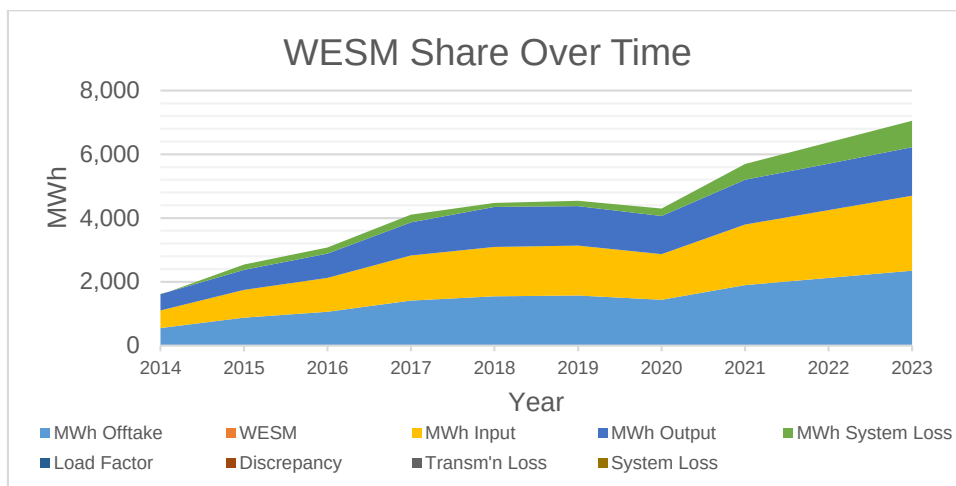
For the above figures, Transmission Loss is at zero percent (0%) because Rapu-Rapu Island is served by an embedded generator under NPC-SPUG. Meanwhile, System Loss was noted to have increased and on year 2023, it peaked at 35.25%.



Residential customers account for the bulk of energy sales at **75.39%** number of connections. In contrast, commercial customers accounted for only **6.95%** of energy sales and **17.66%** accounts for other connections such as public buildings and street lights.

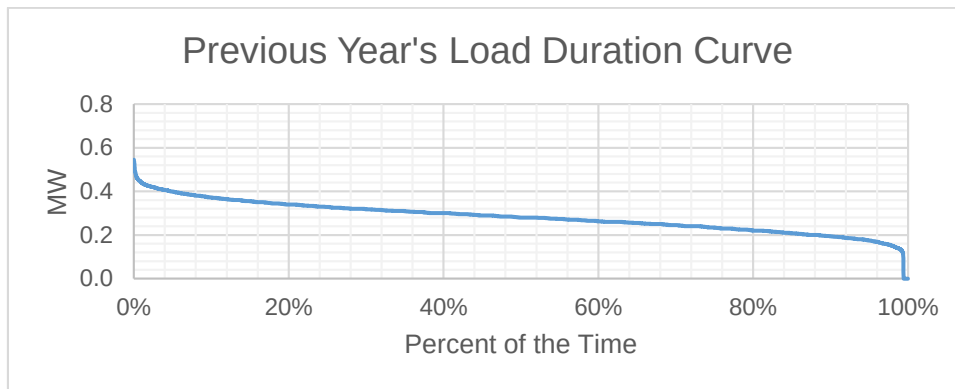


For 2023, the total Offtake for the last historical year is higher than the quantity stipulated in the PSA. The PSA with Residential accounts for the bulk of MWh Offtake.

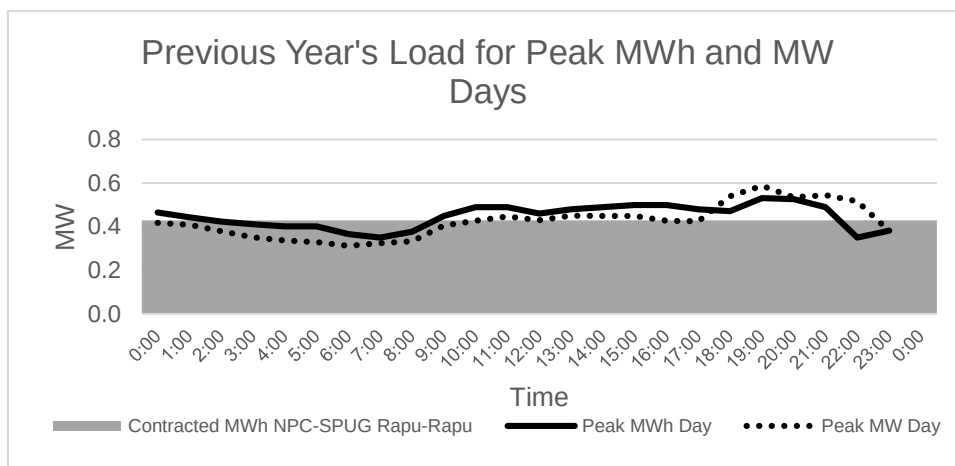


There is no WESM share in the total Offtake as power supply is fully contracted with NPC-SPUG.

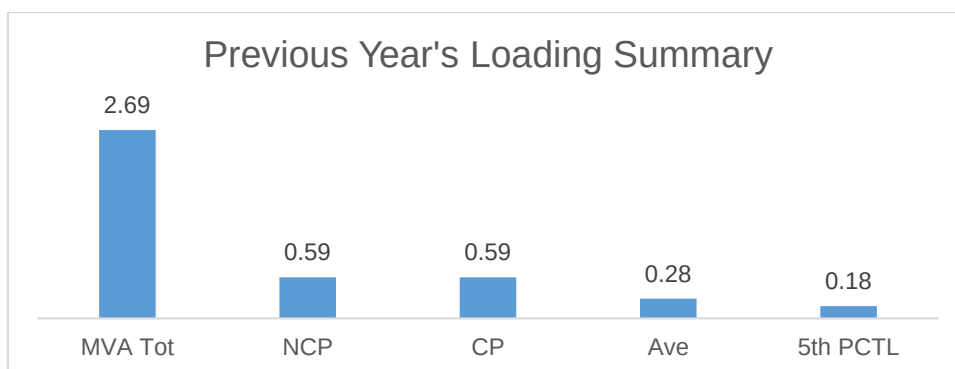
Previous Year's Load Profile



Based on available data provided by NPC, the Load Duration Curve shows that the maximum load was 0.588 MW for the last historical year.



Based on the available load profile data provided by NPC, the Load Duration Curve, the minimum load is **0.033 MW**, and the maximum load was **0.588 MW** for 2023.



The Non-coincident Peak Demand is **0.59 MW**. The ration between the Average Load of **0.28 MW** and the Non-coincident Peak Demand is **47.46%**. A safe estimate of the true minimum load is the fifth percentile load of **0.18 MW** which is **30.51%** of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
NPC-SPUG Rapu-Rapu	2.69 MW	0.588

The substation is owned by the National Power Corporation (NPC) and thus responsible for the monitoring of its loading capacity. The substation rating capacity is at 2.6 MW with a historical maximum load of 0.588 MW.

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	0.43	0.43	0.00	0.000		100%	100%	0.00
	Feb	0.42	0.42	0.00	0.000		100%	100%	0.00
	Mar	0.44	0.44	0.00	0.000		100%	100%	0.00
	Apr	0.46	0.46	0.00	0.000		100%	100%	0.00
	May	0.52	0.52	0.00	0.000		100%	100%	0.00
	Jun	0.50	0.50	0.00	0.000		100%	100%	0.00
	Jul	0.46	0.46	0.00	0.000		100%	100%	0.00
	Aug	0.52	0.52	0.00	0.000		100%	100%	0.00
	Sep	0.45	0.45	0.00	0.000		100%	100%	0.00
	Oct	0.43	0.43	0.00	0.000		100%	100%	0.00
	Nov	0.43	0.43	0.00	0.000		100%	100%	0.00
	Dec	0.42	0.42	0.00	0.000		100%	100%	0.00
2025	Jan	0.44	0.44	0.00	0.000		100%	100%	0.00
	Feb	0.42	0.42	0.00	0.000		100%	100%	0.00
	Mar	0.45	0.45	0.00	0.000		100%	100%	0.00
	Apr	0.46	0.46	0.00	0.000		100%	100%	0.00
	May	0.52	0.52	0.00	0.000		100%	100%	0.00
	Jun	0.50	0.50	0.00	0.000		100%	100%	0.00
	Jul	0.47	0.47	0.00	0.000		100%	100%	0.00
	Aug	0.52	0.52	0.00	0.000		100%	100%	0.00
	Sep	0.45	0.45	0.00	0.000		100%	100%	0.00
	Oct	0.43	0.43	0.00	0.000		100%	100%	0.00
	Nov	0.43	0.43	0.00	0.000		100%	100%	0.00
	Dec	0.43	0.43	0.00	0.000		100%	100%	0.00
2026	Jan	0.45	0.45	0.00	0.000		100%	100%	0.00
	Feb	0.43	0.43	0.00	0.000		100%	100%	0.00
	Mar	0.46	0.46	0.00	0.000		100%	100%	0.00
	Apr	0.47	0.47	0.00	0.000		100%	100%	0.00
	May	0.53	0.53	0.00	0.000		100%	100%	0.00
	Jun	0.51	0.51	0.00	0.000		100%	100%	0.00
	Jul	0.47	0.47	0.00	0.000		100%	100%	0.00

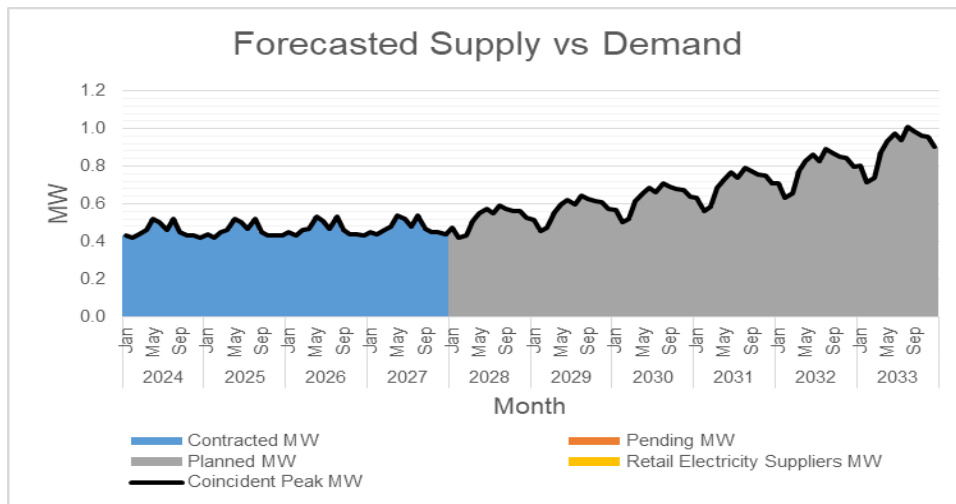
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Aug	0.53	0.53	0.00	0.000		100%	100%	0.00
	Sep	0.46	0.46	0.00	0.000		100%	100%	0.00
	Oct	0.44	0.44	0.00	0.000		100%	100%	0.00
	Nov	0.44	0.44	0.00	0.000		100%	100%	0.00
	Dec	0.43	0.43	0.00	0.000		100%	100%	0.00
2027	Jan	0.45	0.00	0.00	0.450		0%	100%	0.00
	Feb	0.44	0.00	0.00	0.440		0%	100%	0.00
	Mar	0.46	0.00	0.00	0.460		0%	100%	0.00
	Apr	0.48	0.00	0.00	0.480		0%	100%	0.00
	May	0.54	0.00	0.00	0.540		0%	100%	0.00
	Jun	0.52	0.00	0.00	0.520		0%	100%	0.00
	Jul	0.48	0.00	0.00	0.480		0%	100%	0.00
	Aug	0.54	0.00	0.00	0.540		0%	100%	0.00
	Sep	0.47	0.00	0.00	0.470		0%	100%	0.00
	Oct	0.45	0.00	0.00	0.450		0%	100%	0.00
	Nov	0.45	0.00	0.00	0.450		0%	100%	0.00
	Dec	0.44	0.00	0.00	0.440		0%	100%	0.00
2028	Jan	0.47	0.00	0.00	0.470		0%	100%	0.00
	Feb	0.42	0.00	0.00	0.419		0%	100%	0.00
	Mar	0.43	0.00	0.00	0.434		0%	100%	0.00
	Apr	0.51	0.00	0.00	0.510		0%	100%	0.00
	May	0.55	0.00	0.00	0.547		0%	100%	0.00
	Jun	0.57	0.00	0.00	0.571		0%	100%	0.00
	Jul	0.55	0.00	0.00	0.548		0%	100%	0.00
	Aug	0.59	0.00	0.00	0.589		0%	100%	0.00
	Sep	0.58	0.00	0.00	0.576		0%	100%	0.00
	Oct	0.56	0.00	0.00	0.564		0%	100%	0.00
	Nov	0.56	0.00	0.00	0.560		0%	100%	0.00
	Dec	0.53	0.00	0.00	0.529		0%	100%	0.00
2029	Jan	0.51	0.00	0.00	0.513		0%	100%	0.00
	Feb	0.46	0.00	0.00	0.457		0%	100%	0.00
	Mar	0.47	0.00	0.00	0.473		0%	100%	0.00
	Apr	0.56	0.00	0.00	0.556		0%	100%	0.00
	May	0.60	0.00	0.00	0.596		0%	100%	0.00
	Jun	0.62	0.00	0.00	0.623		0%	100%	0.00
	Jul	0.60	0.00	0.00	0.597		0%	100%	0.00
	Aug	0.64	0.00	0.00	0.642		0%	100%	0.00
	Sep	0.63	0.00	0.00	0.628		0%	100%	0.00
	Oct	0.61	0.00	0.00	0.615		0%	100%	0.00
	Nov	0.61	0.00	0.00	0.611		0%	100%	0.00
	Dec	0.58	0.00	0.00	0.576		0%	100%	0.00
2030	Jan	0.57	0.00	0.00	0.566		0%	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	0.50	0.00	0.00	0.505		0%	100%	0.00
	Mar	0.52	0.00	0.00	0.522		0%	100%	0.00
	Apr	0.61	0.00	0.00	0.614		0%	100%	0.00
	May	0.66	0.00	0.00	0.658		0%	100%	0.00
	Jun	0.69	0.00	0.00	0.687		0%	100%	0.00
	Jul	0.66	0.00	0.00	0.660		0%	100%	0.00
	Aug	0.71	0.00	0.00	0.709		0%	100%	0.00
	Sep	0.69	0.00	0.00	0.693		0%	100%	0.00
	Oct	0.68	0.00	0.00	0.679		0%	100%	0.00
	Nov	0.67	0.00	0.00	0.674		0%	100%	0.00
	Dec	0.64	0.00	0.00	0.636		0%	100%	0.00
2031	Jan	0.63	0.00	0.00	0.631		0%	100%	0.00
	Feb	0.56	0.00	0.00	0.563		0%	100%	0.00
	Mar	0.58	0.00	0.00	0.583		0%	100%	0.00
	Apr	0.69	0.00	0.00	0.685		0%	100%	0.00
	May	0.73	0.00	0.00	0.734		0%	100%	0.00
	Jun	0.77	0.00	0.00	0.767		0%	100%	0.00
	Jul	0.74	0.00	0.00	0.736		0%	100%	0.00
	Aug	0.79	0.00	0.00	0.791		0%	100%	0.00
	Sep	0.77	0.00	0.00	0.773		0%	100%	0.00
	Oct	0.76	0.00	0.00	0.757		0%	100%	0.00
	Nov	0.75	0.00	0.00	0.752		0%	100%	0.00
	Dec	0.71	0.00	0.00	0.710		0%	100%	0.00
2032	Jan	0.71	0.00	0.00	0.710		0%	100%	0.00
	Feb	0.63	0.00	0.00	0.633		0%	100%	0.00
	Mar	0.66	0.00	0.00	0.655		0%	100%	0.00
	Apr	0.77	0.00	0.00	0.771		0%	100%	0.00
	May	0.83	0.00	0.00	0.826		0%	100%	0.00
	Jun	0.86	0.00	0.00	0.863		0%	100%	0.00
	Jul	0.83	0.00	0.00	0.828		0%	100%	0.00
	Aug	0.89	0.00	0.00	0.890		0%	100%	0.00
	Sep	0.87	0.00	0.00	0.870		0%	100%	0.00
	Oct	0.85	0.00	0.00	0.852		0%	100%	0.00
	Nov	0.85	0.00	0.00	0.846		0%	100%	0.00
	Dec	0.80	0.00	0.00	0.798		0%	100%	0.00
2033	Jan	0.80	0.00	0.00	0.804		0%	100%	0.00
	Feb	0.72	0.00	0.00	0.716		0%	100%	0.00
	Mar	0.74	0.00	0.00	0.741		0%	100%	0.00
	Apr	0.87	0.00	0.00	0.872		0%	100%	0.00
	May	0.93	0.00	0.00	0.934		0%	100%	0.00
	Jun	0.98	0.00	0.00	0.976		0%	100%	0.00
	Jul	0.94	0.00	0.00	0.936		0%	100%	0.00
	Aug	1.01	0.00	0.00	1.007		0%	100%	0.00
	Sep	0.98	0.00	0.00	0.984		0%	100%	0.00

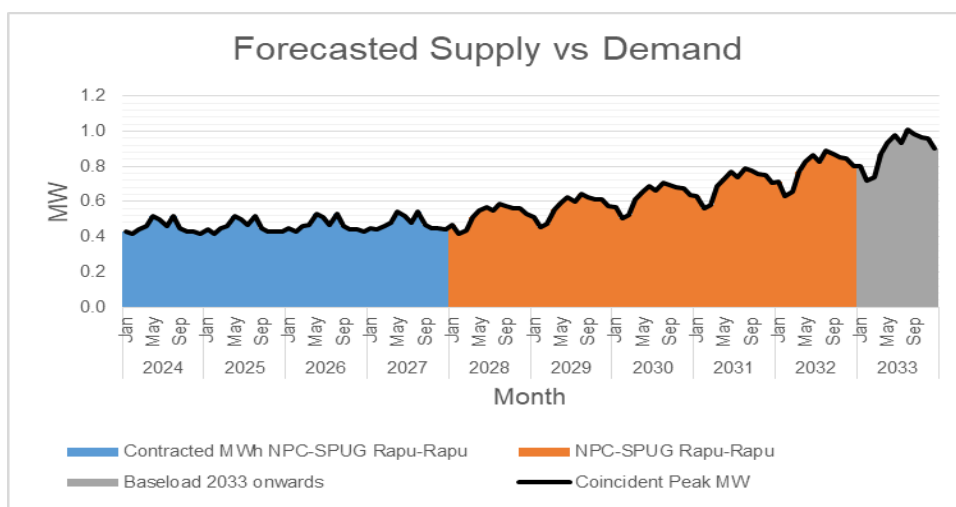
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Oct	0.96	0.00	0.00	0.963		0%	100%	0.00
	Nov	0.96	0.00	0.00	0.957		0%	100%	0.00
	Dec	0.90	0.00	0.00	0.903		0%	100%	0.00

**Retail Electricity Suppliers MW not applicable in Rapu-Rapu Island.*

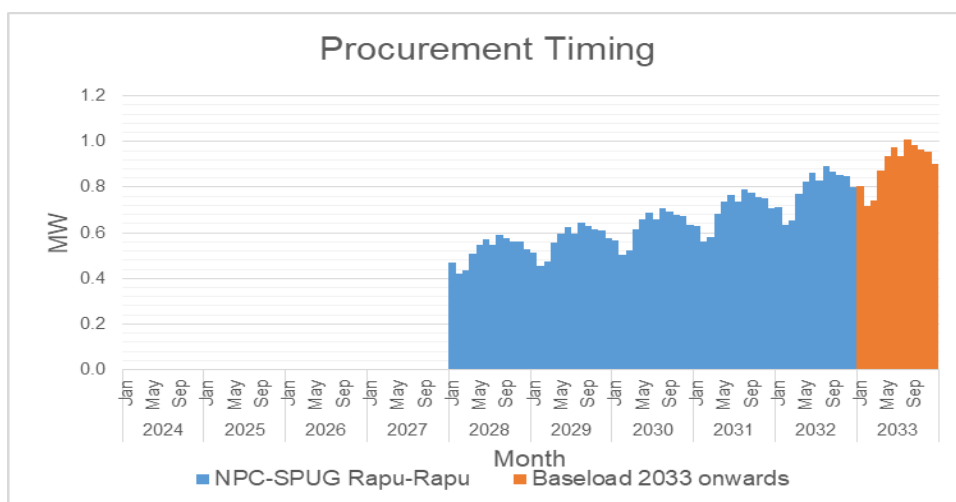
The Peak Demand was forecasted using the seven-year historical data and through regression method of forecasting. Monthly Peak Demand to occur on the months of August at 1.01 MW while it is lowest on the months of February and December at 0.42 MW.



The available supply is generally equal to the Peak Demand. NPC will still be able to cater ALECO's contracted level until 2033.

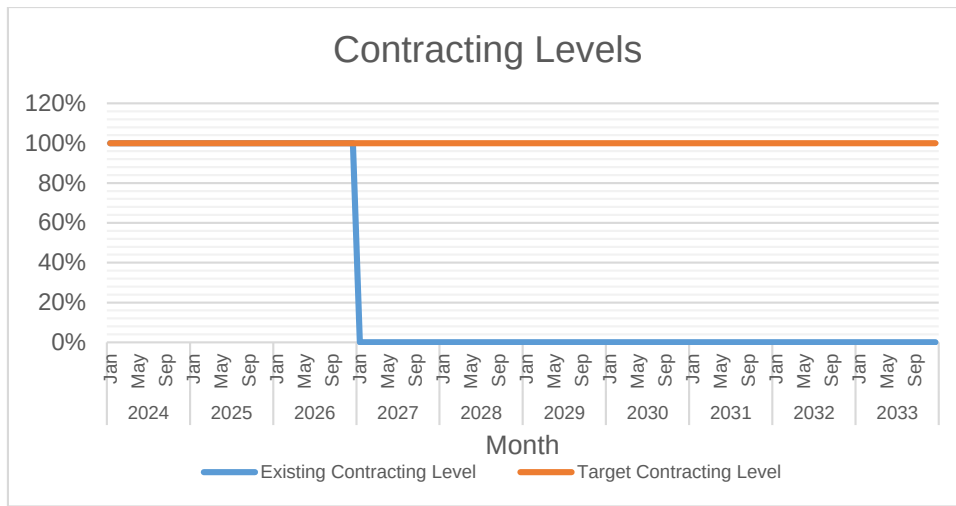


Of the available supply, the highest for 2024 is **0.52 MW** from NPC – SPUG (Rapu-Rapu).

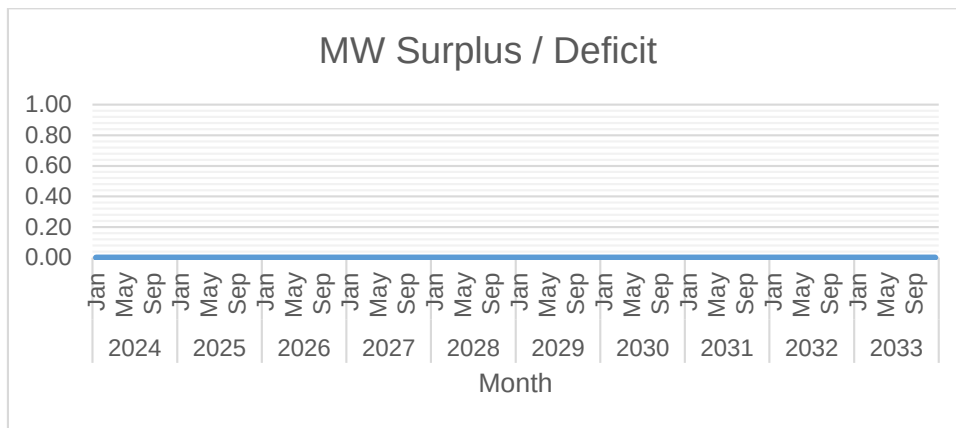


Since, ALECO had executed a five-year PSA with NPC-SPUG for a contract period of December 26, 2022 to December 25, 2027, procurement for the next PSA would be a year before the end of the five-year PSA with NPC-SPUG will be on year 2026 then for the next supply period on 2032.

The first wave of supply procurement for the 0.42 MW / 3,382 MWh for base load is by the month of February 2027 while for the 0.72 MW / 5,032 MWh will commence by June 2031.



Currently, 100% of Rapu-Rapu island's power requirement is being sourced from NPC-SPUG and this will continue until the year 2027. With NPC-SPUG having sufficient supply with their addition of hybrid solar-diesel power plant, we expect that ALECO will still have 100% contracting levels until 2033.

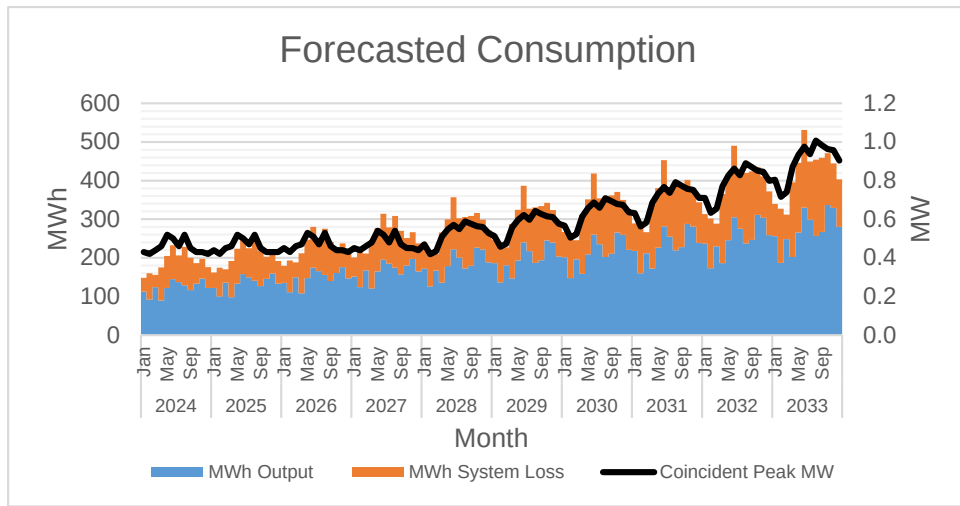


From year 2024 to 2027 there is sufficient supply contract for Rapu-Rapu.

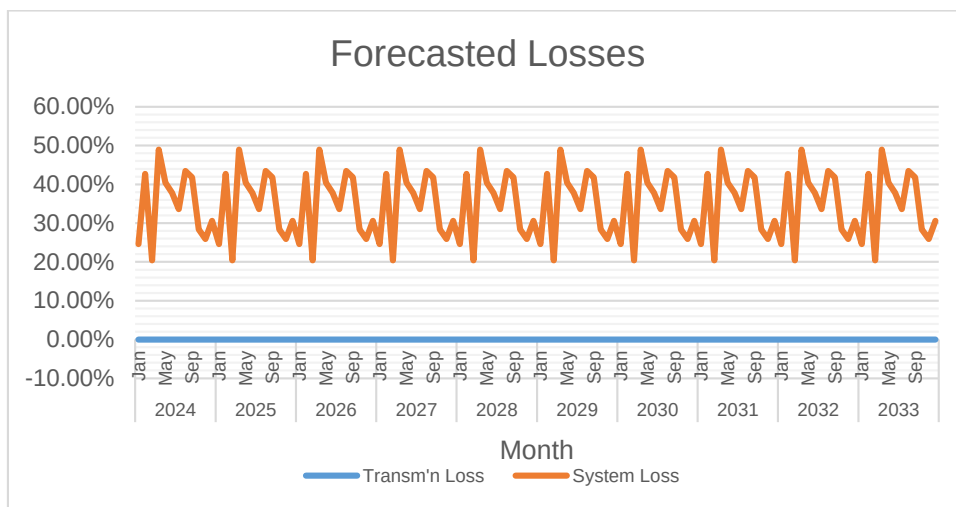
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	149	112	37	0.00%	24.57%
	Feb	160	92	68	0.00%	42.71%
	Mar	156	124	32	0.00%	20.38%
	Apr	176	90	86	0.00%	48.97%
	May	205	122	83	0.00%	40.39%
	Jun	232	145	88	0.00%	37.81%
	Jul	206	137	69	0.00%	33.60%
	Aug	228	129	99	0.00%	43.47%
	Sep	200	116	84	0.00%	41.83%
	Oct	186	133	53	0.00%	28.39%
	Nov	197	146	51	0.00%	25.94%
	Dec	176	122	54	0.00%	30.57%
2025	Jan	162	122	40	0.00%	24.57%
	Feb	175	100	75	0.00%	42.71%
	Mar	170	136	35	0.00%	20.38%
	Apr	191	98	94	0.00%	48.97%
	May	224	133	90	0.00%	40.39%
	Jun	254	158	96	0.00%	37.81%
	Jul	225	150	76	0.00%	33.60%
	Aug	249	141	108	0.00%	43.47%
	Sep	218	127	91	0.00%	41.83%
	Oct	203	145	58	0.00%	28.39%
	Nov	215	159	56	0.00%	25.94%
	Dec	192	133	59	0.00%	30.57%
2026	Jan	179	135	44	0.00%	24.57%
	Feb	193	111	83	0.00%	42.71%
	Mar	188	150	38	0.00%	20.38%
	Apr	212	108	104	0.00%	48.97%
	May	247	147	100	0.00%	40.39%
	Jun	280	174	106	0.00%	37.81%
	Jul	249	165	84	0.00%	33.60%
	Aug	275	156	120	0.00%	43.47%
	Sep	241	140	101	0.00%	41.83%
	Oct	224	161	64	0.00%	28.39%
	Nov	238	176	62	0.00%	25.94%
	Dec	212	147	65	0.00%	30.57%
2027	Jan	201	151	49	0.00%	24.57%
	Feb	216	124	92	0.00%	42.71%
	Mar	211	168	43	0.00%	20.38%
	Apr	237	121	116	0.00%	48.97%
	May	277	165	112	0.00%	40.39%
	Jun	314	195	119	0.00%	37.81%
	Jul	279	185	94	0.00%	33.60%
	Aug	308	174	134	0.00%	43.47%
	Sep	270	157	113	0.00%	41.83%
	Oct	251	180	71	0.00%	28.39%
	Nov	266	197	69	0.00%	25.94%
	Dec	237.18	165	73	0.00%	30.57%
2028	Jan	228	172	56	0.00%	24.57%
	Feb	220	126	94	0.00%	42.71%
	Mar	210	167	43	0.00%	20.38%
	Apr	266	136	130	0.00%	48.97%
	May	300	179	121	0.00%	40.39%
	Jun	357	222	135	0.00%	37.81%
	Jul	302	201	102	0.00%	33.60%
	Aug	305	173	133	0.00%	43.47%
	Sep	308	179	129	0.00%	41.83%
	Oct	316	227	90	0.00%	28.39%
	Nov	299	221	78	0.00%	25.94%
	Dec	271	188	83	0.00%	30.57%
2029	Jan	247	186	61	0.00%	24.57%
	Feb	238	136	102	0.00%	42.71%
	Mar	227	181	46	0.00%	20.38%
	Apr	288	147	141	0.00%	48.97%
	May	324	193	131	0.00%	40.39%
	Jun	386	240	146	0.00%	37.81%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Jul	327	217	110	0.00%	33.60%
	Aug	331	187	144	0.00%	43.47%
	Sep	334	194	140	0.00%	41.83%
	Oct	343	245	97	0.00%	28.39%
	Nov	323	239	84	0.00%	25.94%
	Dec	293	204	90	0.00%	30.57%
2030	Jan	267	202	66	0.00%	24.57%
	Feb	257	147	110	0.00%	42.71%
	Mar	246	196	50	0.00%	20.38%
	Apr	312	159	153	0.00%	48.97%
	May	351	209	142	0.00%	40.39%
	Jun	418	260	158	0.00%	37.81%
	Jul	354	235	119	0.00%	33.60%
	Aug	358	202	156	0.00%	43.47%
	Sep	361	210	151	0.00%	41.83%
	Oct	371	266	105	0.00%	28.39%
	Nov	350	259	91	0.00%	25.94%
	Dec	318	220	97	0.00%	30.57%
2031	Jan	289	218	71	0.00%	24.57%
	Feb	279	160	119	0.00%	42.71%
	Mar	266	212	54	0.00%	20.38%
	Apr	337	172	165	0.00%	48.97%
	May	380	227	154	0.00%	40.39%
	Jun	453	282	171	0.00%	37.81%
	Jul	383	255	129	0.00%	33.60%
	Aug	388	219	168	0.00%	43.47%
	Sep	391	228	164	0.00%	41.83%
	Oct	402	288	114	0.00%	28.39%
	Nov	379	281	98	0.00%	25.94%
	Dec	344	239	105	0.00%	30.57%
2032	Jan	313	236	77	0.00%	24.57%
	Feb	302	173	129	0.00%	42.71%
	Mar	288	230	59	0.00%	20.38%
	Apr	365	186	179	0.00%	48.97%
	May	412	245	166	0.00%	40.39%
	Jun	490	305	185	0.00%	37.81%
	Jul	415	276	139	0.00%	33.60%
	Aug	420	237	182	0.00%	43.47%
	Sep	424	247	177	0.00%	41.83%
	Oct	435	311	123	0.00%	28.39%
	Nov	411	304	107	0.00%	25.94%
	Dec	372	259	114	0.00%	30.57%
2033	Jan	339	256	83	0.00%	24.57%
	Feb	327	187	140	0.00%	42.71%
	Mar	312	249	64	0.00%	20.38%
	Apr	396	202	194	0.00%	48.97%
	May	446	266	180	0.00%	40.39%
	Jun	531	330	201	0.00%	37.81%
	Jul	450	299	151	0.00%	33.60%
	Aug	454	257	198	0.00%	43.47%
	Sep	459	267	192	0.00%	41.83%
	Oct	471	337	134	0.00%	28.39%
	Nov	445	329	115	0.00%	25.94%
	Dec	403	280	123	0.00%	30.57%

The Peak Demand was forecasted using exponential smoothing algorithm and was assumed to occur on the month of May due to historical and seasonal considerations. In general, Peak Demand is expected to grow at an average rate of **4.47%** annually for the first five years.



MWh Output was expected to grow at a rate of 9.00% annually.



Data and computation of losses will be in place after the facility study on distribution assets is completed, while initial System Loss computation for the first forecasted year is expected to have an average of 34.89%.

For the System Loss, ALECO shall update the data detailing the distribution system losses.

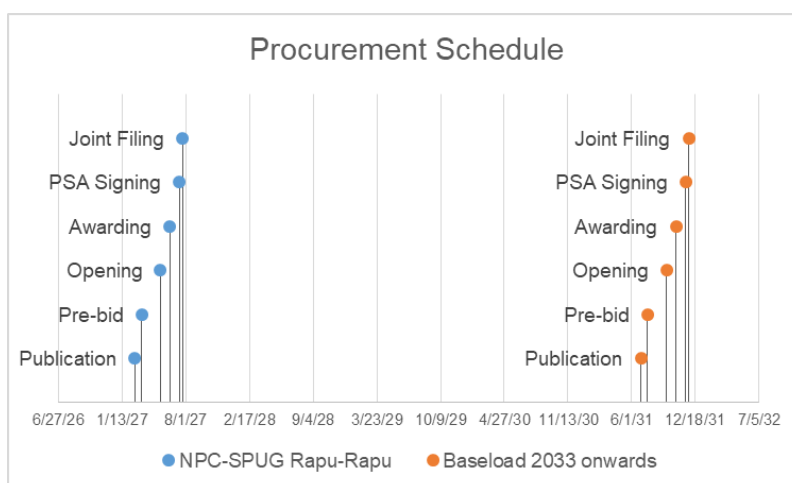
Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
Contracted MWh NPC-SPUG Rapu-Rapu	Base	National Power Corporation	0.42	2,108	12/26/2022	12/25/2027

ALECO secured a five (5) year power supply contract with NPC-SPUG to serve member-consumers at Rapu-Rapu Island from December 26, 2022 to December 25, 2027. Subsequent power requirements were planned to be sourced/renewed still from NPC-SPUG which, are now implementing expansion project of hybrid solar-diesel power plant in the area. Contracted capacities will likely be increased to meet the increasing demand for electricity on the island.

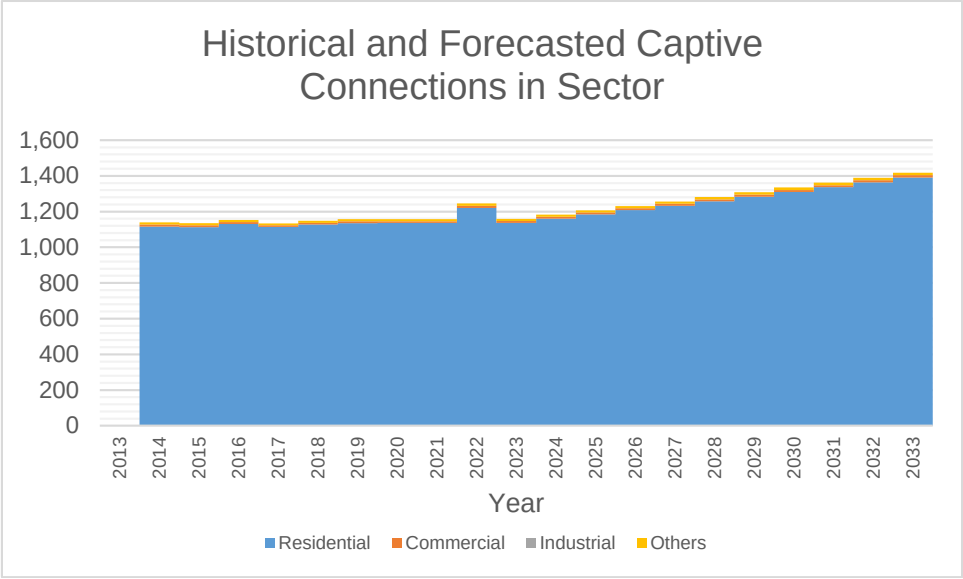
Should NPC-SPUG won't be able to accommodate the increase in demand, ALECO will result to the conduct of CSP to source power provider for the island of Rapu-Rapu.

	NPC-SPUG Rapu-Rapu	Baseload 2033 onwards
Type	Base	Base
Minimum MW	0.42	0.72
Minimum MWh/yr	3,382	5,032
PSA Start	12/26/2027	12/26/2032
PSA End	12/25/2032	12/25/2042
Publication	2/22/2027	6/30/2031
Pre-bid	3/15/2027	7/21/2031
Opening	5/14/2027	9/19/2031
Awarding	6/13/2027	10/19/2031
PSA Signing	7/13/2027	11/18/2031
Joint Filing	7/22/2027	11/27/2031



For the renewal/ sourcing/procurement of 0.42 MW of supply which is planned to be available on December 26, 2027, the first publication or launch of CSP will be on February 22, 2027. Joint filing is planned on July 22, 2027, or 150 days later, in accordance with the latest issuances on CSP.

Captive Customer Connections



The number of captive connections is expected to grow at a rate of 2.00% annually.