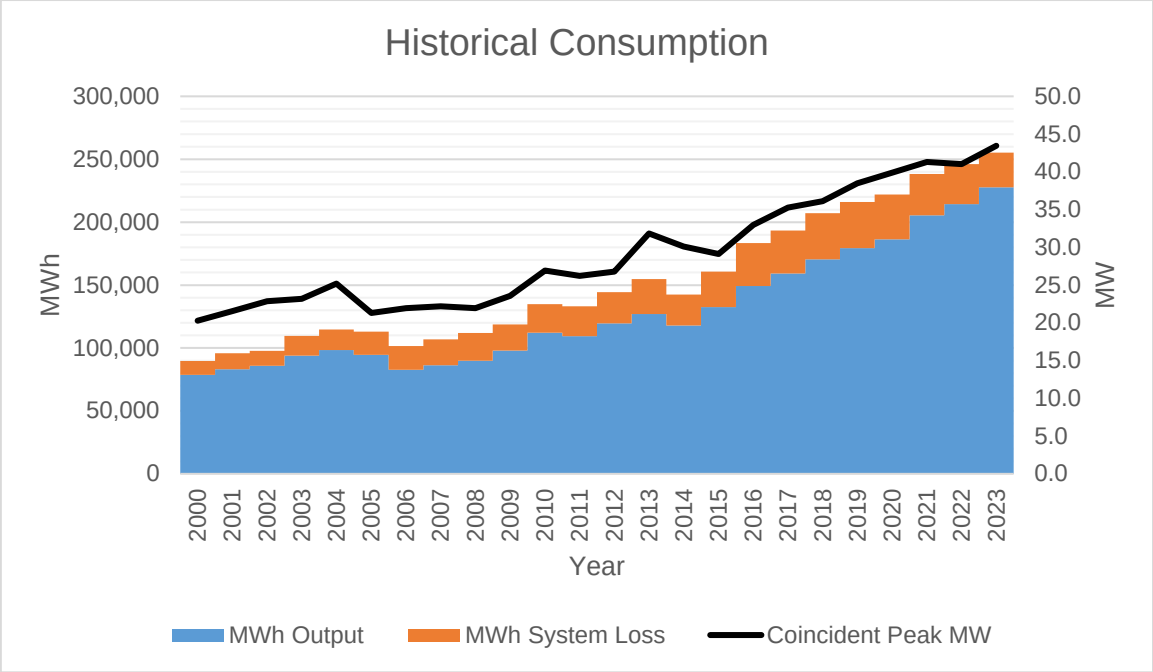
Power Supply Procurement Plan 2024

Quezon 1 Electric Cooperative, Inc.

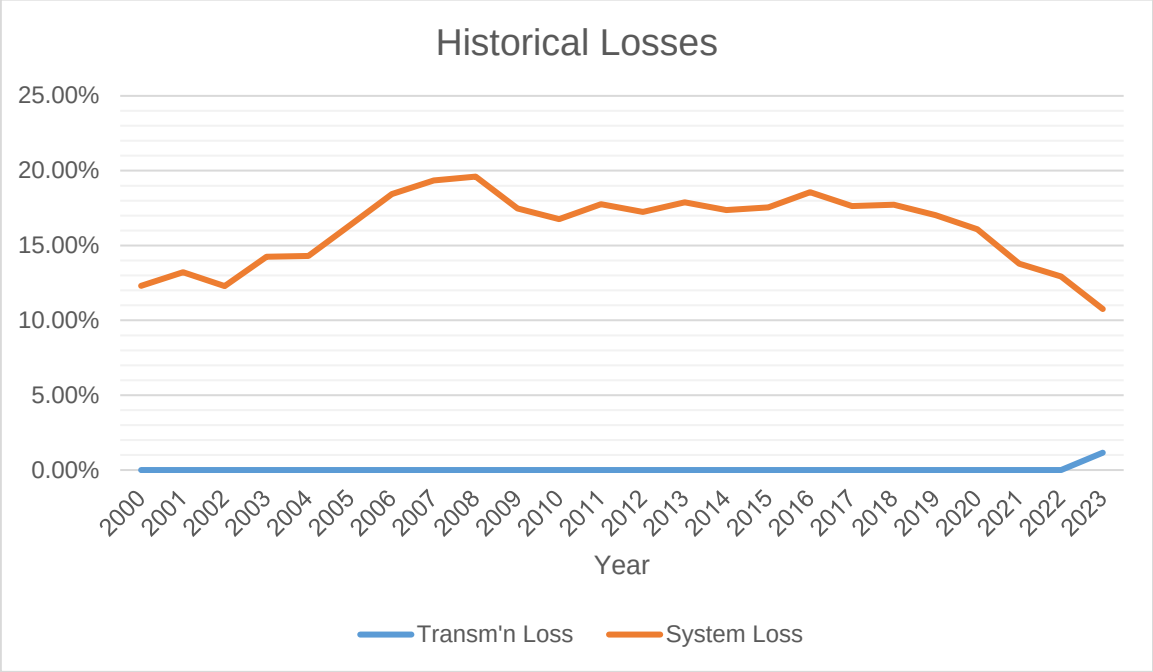
Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	20.28	89,709	0	89,709	78,666	11,044	50%	0.00%	0.00%	12.31%
2001	21.54	95,740	0	95,740	83,094	12,646	51%	0.00%	0.00%	13.21%
2002	22.87	97,805	0	97,805	85,787	12,018	49%	0.00%	0.00%	12.29%
2003	23.19	109,648	0	109,648	94,017	15,631	54%	0.00%	0.00%	14.26%
2004	25.21	114,716	0	114,716	98,300	16,416	52%	0.00%	0.00%	14.31%
2005	21.30	113,047	0	113,047	94,547	18,500	61%	0.00%	0.00%	16.36%
2006	21.93	101,478	0	101,478	82,759	18,719	53%	0.00%	0.00%	18.45%
2007	22.20	106,900	0	106,900	86,208	20,693	55%	0.00%	0.00%	19.36%
2008	21.95	111,848	0	111,848	89,919	21,929	58%	0.00%	0.00%	19.61%
2009	23.57	118,791	0	118,791	98,027	20,764	58%	0.00%	0.00%	17.48%
2010	26.94	134,875	0	134,875	112,261	22,614	57%	0.00%	0.00%	16.77%
2011	26.21	133,063	0	133,063	109,416	23,647	58%	0.00%	0.00%	17.77%
2012	26.80	144,479	26,802	144,479	119,574	24,905	62%	0.00%	0.00%	17.24%
2013	31.83	154,795	34,145	154,795	127,098	27,697	56%	0.00%	0.00%	17.89%
2014	30.11	142,575	26,562	142,575	117,806	24,769	54%	0.00%	0.00%	17.37%
2015	29.12	160,710	33,086	160,710	132,498	28,212	63%	0.00%	0.00%	17.55%
2016	32.99	183,377	51,748	183,377	149,340	34,037	63%	0.00%	0.00%	18.56%
2017	35.27	193,308	28,628	193,308	159,225	34,084	63%	0.00%	0.00%	17.63%
2018	36.10	207,093	35,934	207,093	170,383	36,710	65%	0.00%	0.00%	17.73%
2019	38.49	216,119	49,882	216,119	179,293	36,825	64%	0.00%	0.00%	17.04%
2020	39.89	222,022	65,679	222,022	186,307	35,715	64%	0.00%	0.00%	16.09%
2021	41.32	238,271	77,353	238,271	205,430	32,841	66%	0.00%	0.00%	13.78%
2022	41.02	246,137	87,030	246,137	214,297	31,840	68%	0.00%	0.00%	12.94%
2023	43.45	258,206	73,596	255,213	227,759	27,454	67%	0.00%	1.16%	10.76%

Peak Demand **increased** from **41.02 MW** in **2022** to **43.45 MW** in **2023** at a rate of **5.92%** due to the **growing number of customers**, either Residential, Commercial, Industrial and Others. MWh Offtake **increased** from **246,137 MWh** in **2022** to **258,206 MWh** in **2023** at a rate of **4.90%** due to **continuous usage of electricity**. Within the same period, Load Factor ranged from **67%** to **68%**. There was an abrupt change in consumption on **2014** due to the effect of **typhoon Glenda** that hit the coop on July 2014.

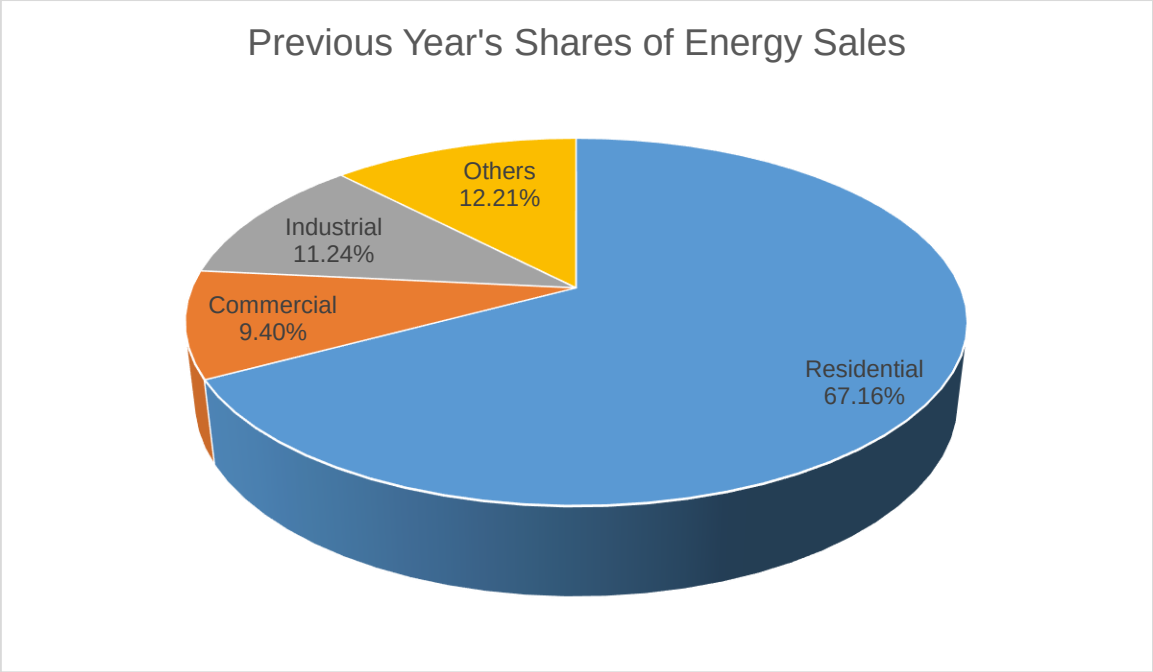


MWh Output **increased** from year **2022** to year **2023** at a rate of **6.28%**, while MWh System Loss **decreased** at a rate of **4.38%** within the same period.

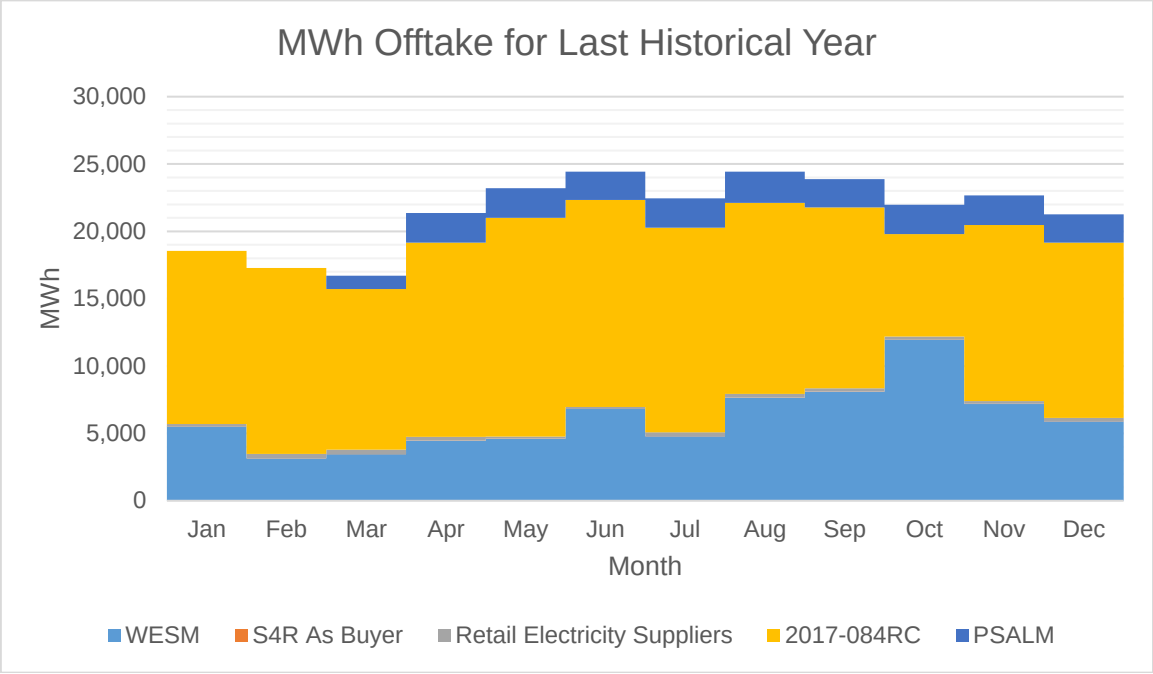


Historically, Transmission Loss is **1.16% in 2023**, while System Loss ranged from **11.79%** to **19.61%.** System Loss peaked at **19.61%** on year **2008** because of overextended lines and insufficient programs implemented to reduce system losses.

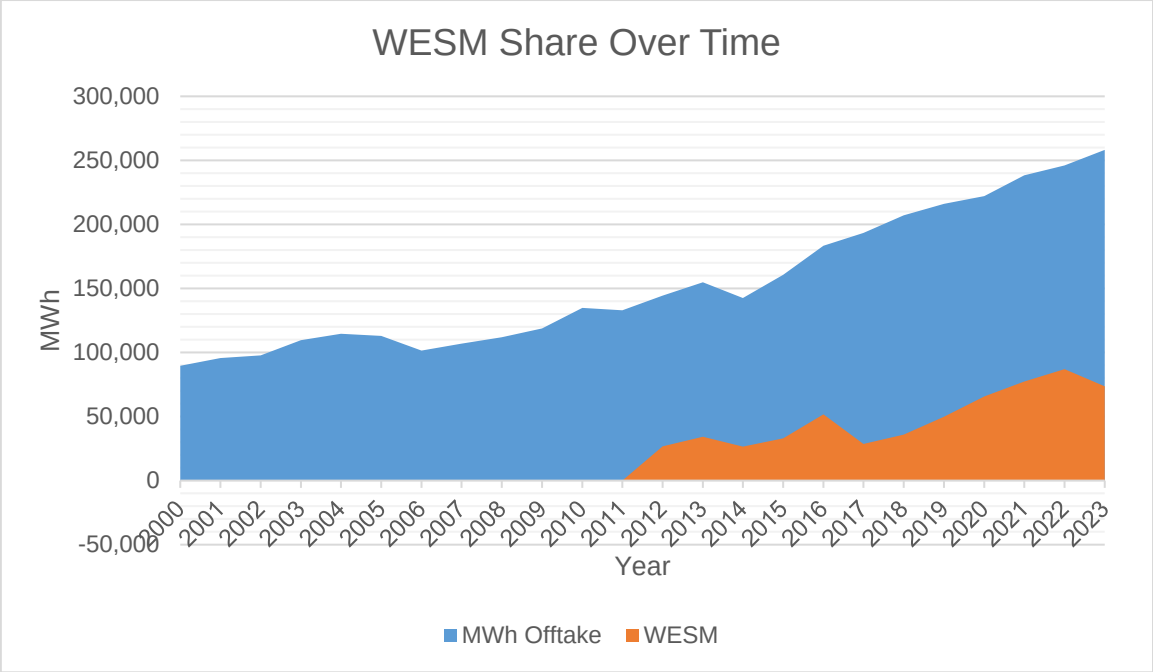
In 2022 and the years prior, transmission loss remains at 0% which the DOE observed that QUEZELCO1 misinterpreted this data. QUEZELCO1 acknowledged the DOE's comments and made the necessary corrections to the data exclusively for 2023 since correcting the entire historical data will require so much time. Since the submission of QUEZELCO1 DDP PSPP 2024-2033 is a requirement for the conduct of Competitive Selection Process (CSP), which is being expedited by QUEZELCO1, the DOE takes it into consideration.



Residential customers account for the bulk of energy sales at **67.16%** due to the **high number of connections**. In contrast, **Commercial** customers accounted for only **9.40%** of energy sales despite of the high number of connections.

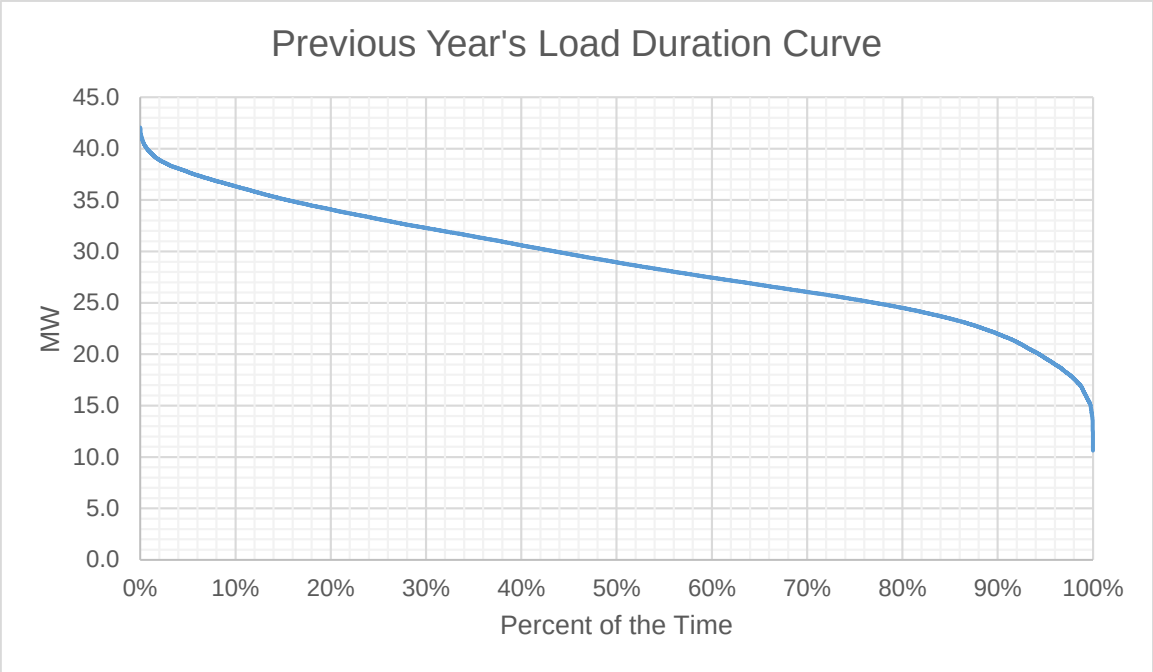


The total Offtake for the last historical year is **higher** than the quantity stipulated in the PSA. The PSA with **GN Power Dinginin (2017-084RC)** accounts for the bulk of MWh Offtake.

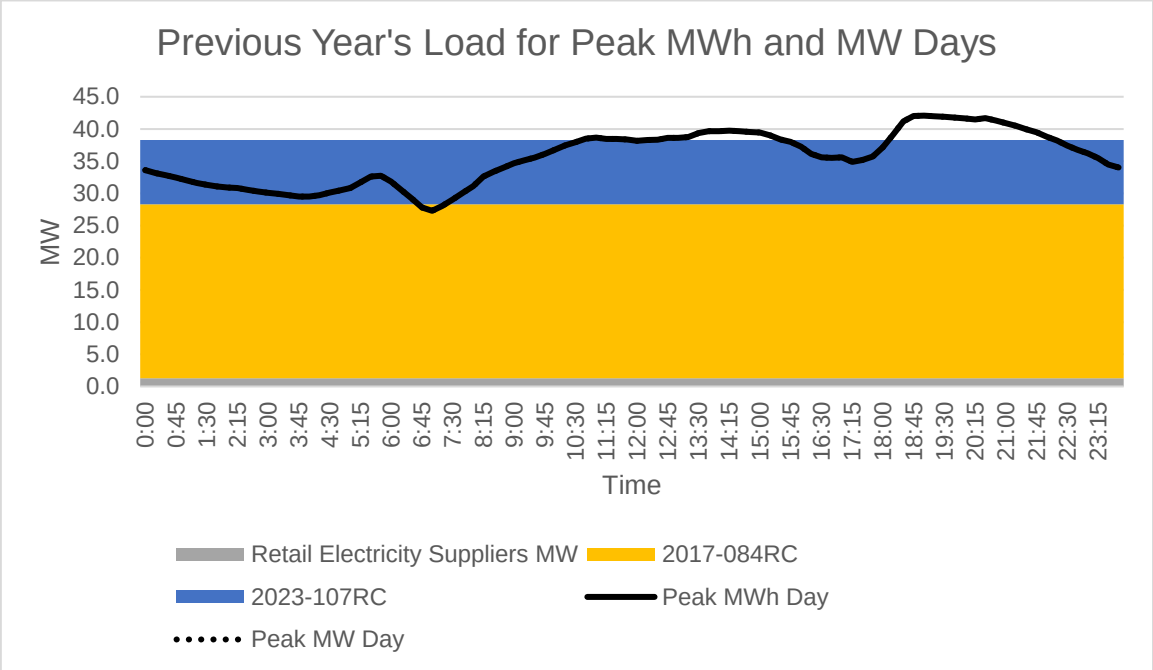


WESM Offtake **decreased** from **87,030 MWh** in **2022** to **73,596 MWh** in **2023** at a rate of **15.44%** due to **additional Energy Supplier which is PSALM**.

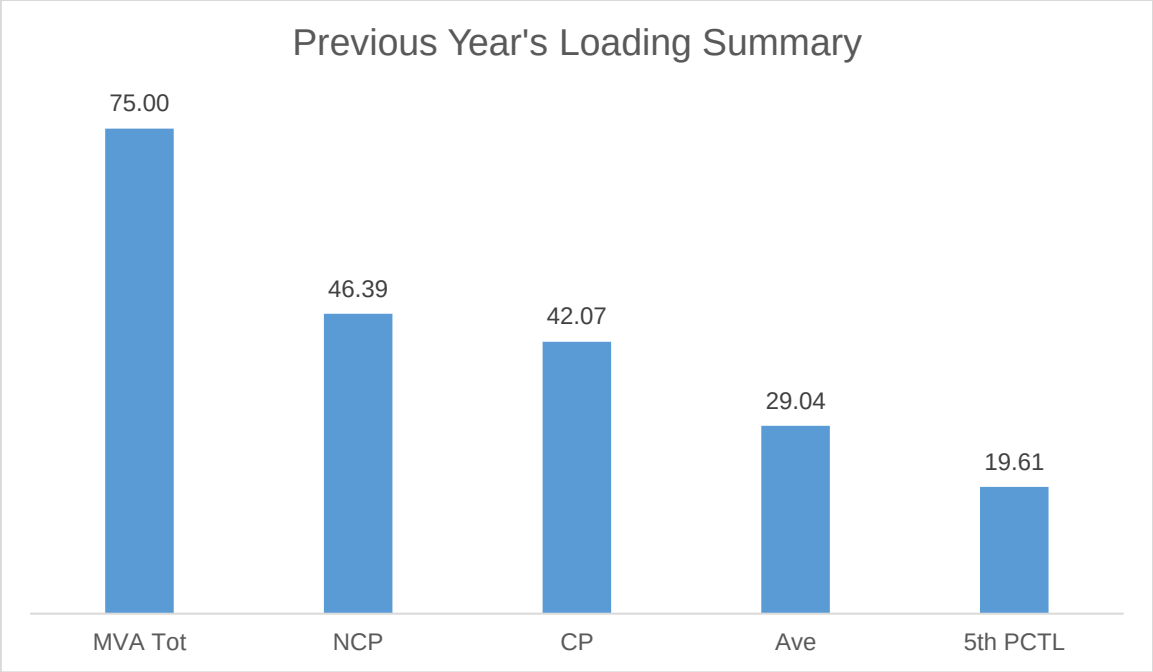
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is **10.63 MW** and the maximum load is **42.06 MW** for the last historical year.



Peak MW occurred on **September 7, 2023 7:00 PM** due to **high usage of Residential customers**. As shown in the Load Curves, the available supply is **sufficient** to accommodate the Peak Demand.



The Non-coincident Peak Demand is **46.39 MW**, which is around **61.85%** of the total substation capacity of **75 MVA** at a power factor of **96%.** The load factor or the ratio between the Average Load of **29.04 MW** and the Non-coincident Peak Demand is **62.60%**. A safe estimate of the true minimum load is the fifth percentile load of **19.61 MW** which is **42.27%** of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
GUMQUE101 ATIMONAN	5	4.090
LOPQUE103 HONDAGUA F1	2.5	2.680
GUMQUE104 TAGKAWAYAN	10	3.872
GUMQUE105 GUMACA	10	7.126
LOPQUE106 HONDAGUA F2	2.5	1.730
GUMQUE107 LOPEZ	10	6.896
GUMQUE108 CATANAUAN	5	4.127
PTGQUE110 PITOGO F2	5	3.964
MULQUE111 MULANAY	10	5.210
GUMQUE112 BALINARIN	5	3.447
MULQUE113 SAN NARCISO	10	3.248

The substations loaded at above 70% are Atimonan (101), Hondagua (103&106), Catanauan (108) and Pitogo (110). This loading problem will be solved by the following projects;

1. Uprating the capacity of Atimonan from 5MVA to 10MVA.
2. Installation of Alabat 10MVA substation to relieve the 5MVA of Hondagua.
3. Installation of Calauag 15MVA substation to reduce the loading of Lopez (107) and Balinarin (112) substations.
4. Installation of Macalelon 10MVA substation to relieve the 5MVA Pitogo and 5MVA Catanauan.
5. Installation of Agdangan 15MVA substation to transfer most of the load of Pitogo.

Forecasted Consumption Data

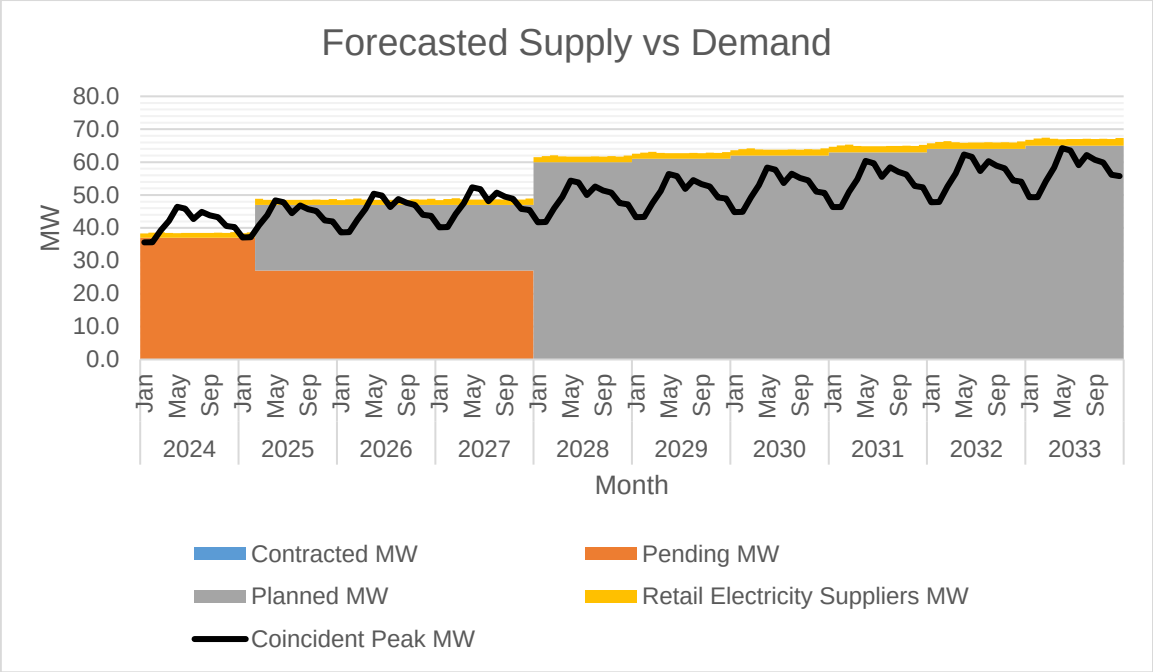
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2024	Jan	35.61	0.00	37.00	0.000	1.30	0%	108%	2.69
	Feb	35.65	0.00	37.00	0.000	1.57	0%	109%	2.93
	Mar	39.17	0.00	37.00	0.000	1.76	0%	99%	-0.41
	Apr	42.15	0.00	37.00	0.000	1.50	0%	91%	-3.65
	May	46.41	0.00	37.00	0.000	1.42	0%	82%	-7.99
	Jun	45.88	0.00	37.00	0.000	1.44	0%	83%	-7.44
	Jul	42.66	0.00	37.00	0.000	1.44	0%	90%	-4.22
	Aug	44.90	0.00	37.00	0.000	1.50	0%	85%	-6.40
	Sep	43.85	0.00	37.00	0.000	1.45	0%	87%	-5.40
	Oct	43.26	0.00	37.00	0.000	1.54	0%	89%	-4.71
	Nov	40.55	0.00	37.00	0.000	1.46	0%	95%	-2.09
	Dec	40.25	0.00	37.00	0.000	1.71	0%	96%	-1.54
2025	Jan	37.13	0.00	37.00	0.000	1.36	0%	103%	1.23
	Feb	37.16	0.00	37.00	0.000	1.64	0%	104%	1.48
	Mar	40.84	0.00	27.00	20.000	1.83	0%	121%	8.00
	Apr	43.94	0.00	27.00	20.000	1.56	0%	111%	4.62
	May	48.38	0.00	27.00	20.000	1.48	0%	100%	0.09
	Jun	47.83	0.00	27.00	20.000	1.50	0%	101%	0.67
	Jul	44.48	0.00	27.00	20.000	1.50	0%	109%	4.02
	Aug	46.81	0.00	27.00	20.000	1.57	0%	104%	1.76
	Sep	45.72	0.00	27.00	20.000	1.51	0%	106%	2.79
	Oct	45.10	0.00	27.00	20.000	1.61	0%	108%	3.51
	Nov	42.28	0.00	27.00	20.000	1.52	0%	115%	6.25
	Dec	41.96	0.00	27.00	20.000	1.79	0%	117%	6.82
2026	Jan	38.66	0.00	27.00	20.000	1.41	0%	126%	9.75
	Feb	38.70	0.00	27.00	20.000	1.71	0%	127%	10.01
	Mar	42.52	0.00	27.00	20.000	1.91	0%	116%	6.39
	Apr	45.76	0.00	27.00	20.000	1.63	0%	106%	2.87
	May	50.38	0.00	27.00	20.000	1.54	0%	96%	-1.84

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Jun	49.81	0.00	27.00	20.000	1.56	0%	97%	-1.24
	Jul	46.32	0.00	27.00	20.000	1.56	0%	105%	2.25
	Aug	48.74	0.00	27.00	20.000	1.63	0%	100%	-0.11
	Sep	47.60	0.00	27.00	20.000	1.57	0%	102%	0.97
	Oct	46.96	0.00	27.00	20.000	1.68	0%	104%	1.72
	Nov	44.02	0.00	27.00	20.000	1.59	0%	111%	4.56
	Dec	43.69	0.00	27.00	20.000	1.86	0%	112%	5.17
2027	Jan	40.20	0.00	27.00	20.000	1.47	0%	121%	8.27
	Feb	40.24	0.00	27.00	20.000	1.78	0%	122%	8.54
	Mar	44.21	0.00	27.00	20.000	1.99	0%	111%	4.77
	Apr	47.58	0.00	27.00	20.000	1.69	0%	102%	1.11
	May	52.38	0.00	27.00	20.000	1.60	0%	93%	-3.79
	Jun	51.79	0.00	27.00	20.000	1.63	0%	94%	-3.16
	Jul	48.16	0.00	27.00	20.000	1.63	0%	101%	0.47
	Aug	50.68	0.00	27.00	20.000	1.70	0%	96%	-1.99
	Sep	49.50	0.00	27.00	20.000	1.63	0%	98%	-0.86
	Oct	48.83	0.00	27.00	20.000	1.74	0%	100%	-0.09
	Nov	45.77	0.00	27.00	20.000	1.65	0%	107%	2.87
	Dec	45.43	0.00	27.00	20.000	1.93	0%	108%	3.50
2028	Jan	41.74	0.00	0.00	60.000	1.53	0%	149%	19.79
	Feb	41.78	0.00	0.00	60.000	1.84	0%	150%	20.06
	Mar	45.91	0.00	0.00	60.000	2.06	0%	137%	16.15
	Apr	49.40	0.00	0.00	60.000	1.75	0%	126%	12.35
	May	54.39	0.00	0.00	60.000	1.66	0%	114%	7.27
	Jun	53.77	0.00	0.00	60.000	1.69	0%	115%	7.92
	Jul	50.00	0.00	0.00	60.000	1.69	0%	124%	11.68
	Aug	52.62	0.00	0.00	60.000	1.76	0%	118%	9.14
	Sep	51.39	0.00	0.00	60.000	1.69	0%	121%	10.30
	Oct	50.70	0.00	0.00	60.000	1.81	0%	123%	11.11
	Nov	47.53	0.00	0.00	60.000	1.71	0%	131%	14.19
	Dec	47.17	0.00	0.00	60.000	2.01	0%	133%	14.84

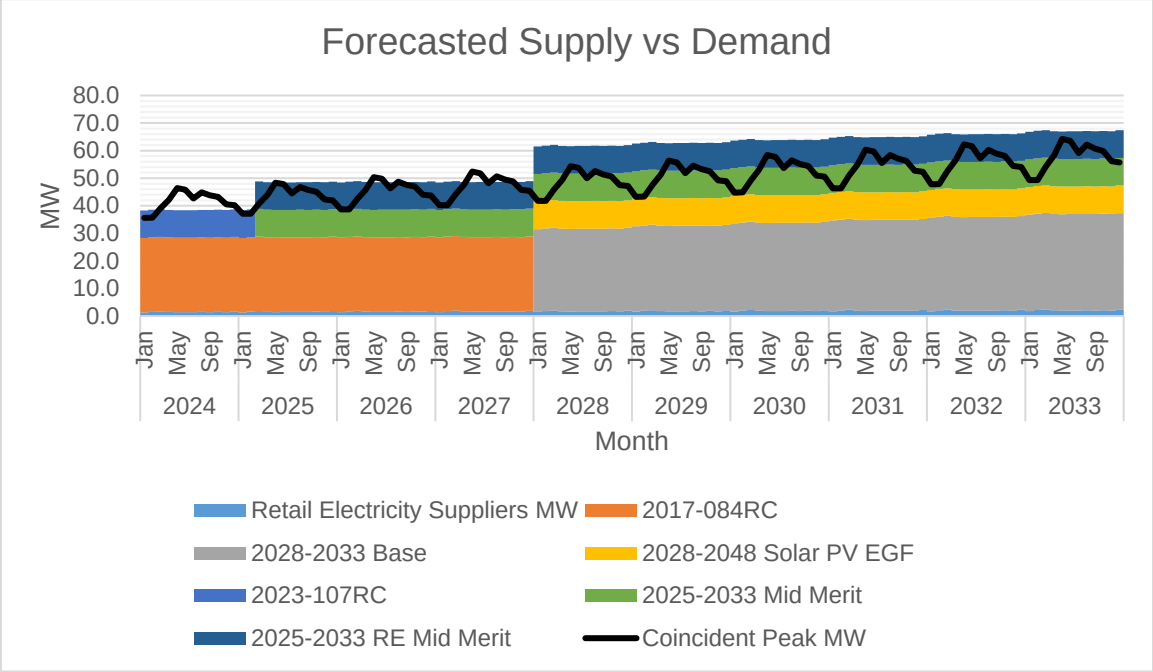
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2029	Jan	43.27	0.00	0.00	61.000	1.58	0%	146%	19.31
	Feb	43.32	0.00	0.00	61.000	1.91	0%	147%	19.60
	Mar	47.60	0.00	0.00	61.000	2.14	0%	134%	15.54
	Apr	51.22	0.00	0.00	61.000	1.82	0%	123%	11.60
	May	56.39	0.00	0.00	61.000	1.72	0%	112%	6.33
	Jun	55.75	0.00	0.00	61.000	1.75	0%	113%	7.00
	Jul	51.84	0.00	0.00	61.000	1.75	0%	122%	10.91
	Aug	54.56	0.00	0.00	61.000	1.82	0%	116%	8.27
	Sep	53.28	0.00	0.00	61.000	1.76	0%	118%	9.48
	Oct	52.56	0.00	0.00	61.000	1.88	0%	120%	10.31
	Nov	49.27	0.00	0.00	61.000	1.77	0%	128%	13.50
	Dec	48.91	0.00	0.00	61.000	2.08	0%	130%	14.18
2030	Jan	44.80	0.00	0.00	62.000	1.64	0%	144%	18.84
	Feb	44.84	0.00	0.00	62.000	1.98	0%	145%	19.14
	Mar	49.27	0.00	0.00	62.000	2.21	0%	132%	14.94
	Apr	53.02	0.00	0.00	62.000	1.88	0%	121%	10.86
	May	58.38	0.00	0.00	62.000	1.78	0%	110%	5.40
	Jun	57.71	0.00	0.00	62.000	1.81	0%	111%	6.10
	Jul	53.67	0.00	0.00	62.000	1.81	0%	120%	10.14
	Aug	56.48	0.00	0.00	62.000	1.89	0%	114%	7.41
	Sep	55.16	0.00	0.00	62.000	1.82	0%	116%	8.66
	Oct	54.42	0.00	0.00	62.000	1.94	0%	118%	9.52
	Nov	51.01	0.00	0.00	62.000	1.84	0%	126%	12.82
	Dec	50.63	0.00	0.00	62.000	2.15	0%	128%	13.52
2031	Jan	46.32	0.00	0.00	63.000	1.69	0%	141%	18.38
	Feb	46.36	0.00	0.00	63.000	2.05	0%	142%	18.68
	Mar	50.94	0.00	0.00	63.000	2.29	0%	129%	14.35
	Apr	54.82	0.00	0.00	63.000	1.95	0%	119%	10.13
	May	60.35	0.00	0.00	63.000	1.84	0%	108%	4.49
	Jun	59.67	0.00	0.00	63.000	1.87	0%	109%	5.21
	Jul	55.49	0.00	0.00	63.000	1.87	0%	118%	9.38

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Aug	58.39	0.00	0.00	63.000	1.95	0%	112%	6.56
	Sep	57.03	0.00	0.00	63.000	1.88	0%	114%	7.85
	Oct	56.26	0.00	0.00	63.000	2.01	0%	116%	8.75
	Nov	52.74	0.00	0.00	63.000	1.90	0%	124%	12.16
	Dec	52.34	0.00	0.00	63.000	2.23	0%	126%	12.88
2032	Jan	47.82	0.00	0.00	64.000	1.75	0%	139%	17.93
	Feb	47.87	0.00	0.00	64.000	2.11	0%	140%	18.25
	Mar	52.60	0.00	0.00	64.000	2.36	0%	127%	13.77
	Apr	56.60	0.00	0.00	64.000	2.01	0%	117%	9.41
	May	62.31	0.00	0.00	64.000	1.90	0%	106%	3.59
	Jun	61.61	0.00	0.00	64.000	1.93	0%	107%	4.33
	Jul	57.29	0.00	0.00	64.000	1.93	0%	116%	8.64
	Aug	60.29	0.00	0.00	64.000	2.02	0%	110%	5.73
	Sep	58.88	0.00	0.00	64.000	1.94	0%	112%	7.06
	Oct	58.09	0.00	0.00	64.000	2.07	0%	114%	7.99
	Nov	54.45	0.00	0.00	64.000	1.96	0%	122%	11.51
	Dec	54.04	0.00	0.00	64.000	2.30	0%	124%	12.26
2033	Jan	49.31	0.00	0.00	65.000	1.80	0%	137%	17.49
	Feb	49.36	0.00	0.00	65.000	2.18	0%	138%	17.82
	Mar	54.24	0.00	0.00	65.000	2.44	0%	125%	13.20
	Apr	58.36	0.00	0.00	65.000	2.07	0%	115%	8.71
	May	64.26	0.00	0.00	65.000	1.96	0%	104%	2.70
	Jun	63.53	0.00	0.00	65.000	1.99	0%	106%	3.47
	Jul	59.08	0.00	0.00	65.000	1.99	0%	114%	7.92
	Aug	62.17	0.00	0.00	65.000	2.08	0%	108%	4.91
	Sep	60.72	0.00	0.00	65.000	2.00	0%	111%	6.29
	Oct	59.90	0.00	0.00	65.000	2.14	0%	113%	7.24
	Nov	56.15	0.00	0.00	65.000	2.02	0%	120%	10.87
	Dec	55.73	0.00	0.00	65.000	2.37	0%	122%	11.64

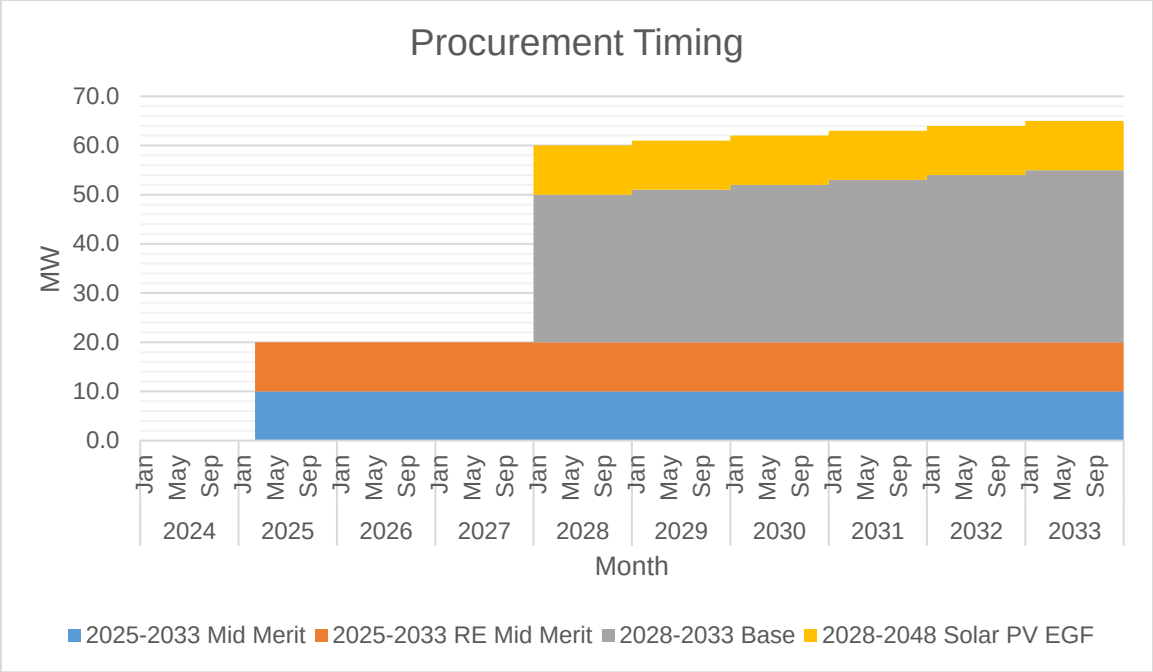
The Peak Demand was forecasted using **Regression Analysis** and was assumed to occur on the month of **June** due to the reason that the Peak Demand of the coop is occurring on that month. Monthly Peak Demand is at its lowest on the month of **February** due to **cold weather** on that month. In general, Peak Demand is expected to grow at a rate of **4.34%** annually.



The available supply is generally **below** the Peak Demand. This is because of the reason that **QUEZELCO I's contracted capacity is 27 MW** and a **10 MW from PSALM for 9AM-10PM** only. The coop will conduct its Competitive Selection Process this year **2025** to augment its contracted capacity and serve its growing number of customers.

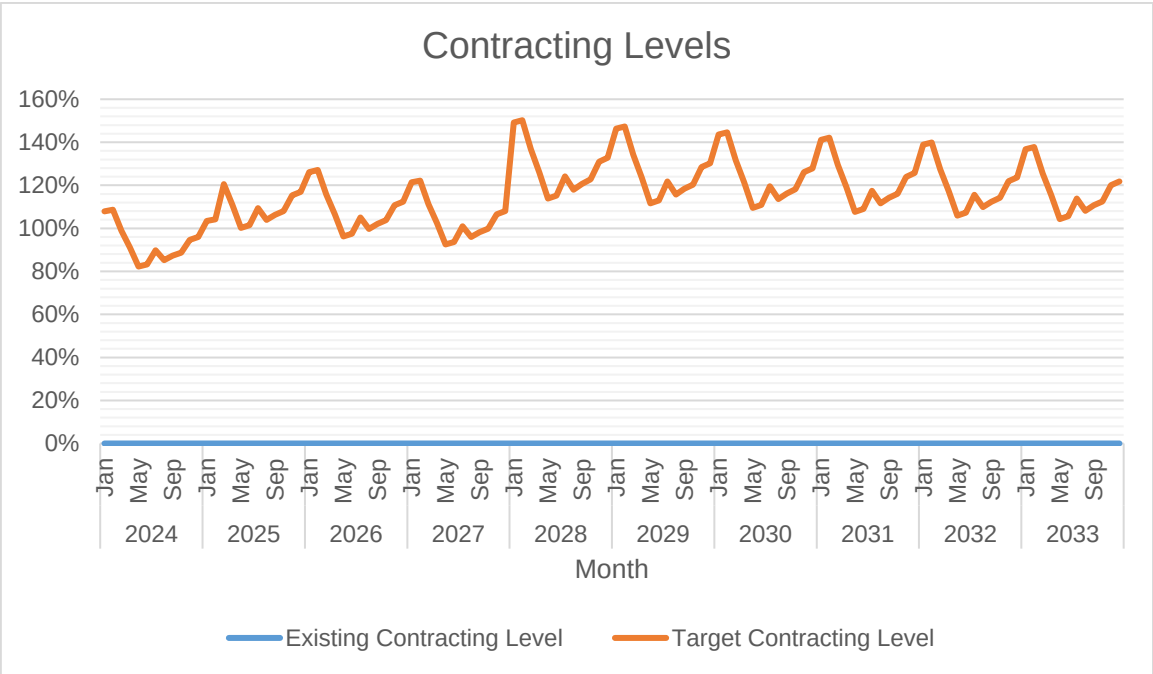


Of the available supply, the largest is **27 MW** from GNPower. This is followed by **10 MW from PSALM**. The coop will conduct its Competitive Selection Process for a new power supplier to start supplying in **2025**. And, planning to have a **Solar PV Embedded Generation Facility** in **December 2027**.

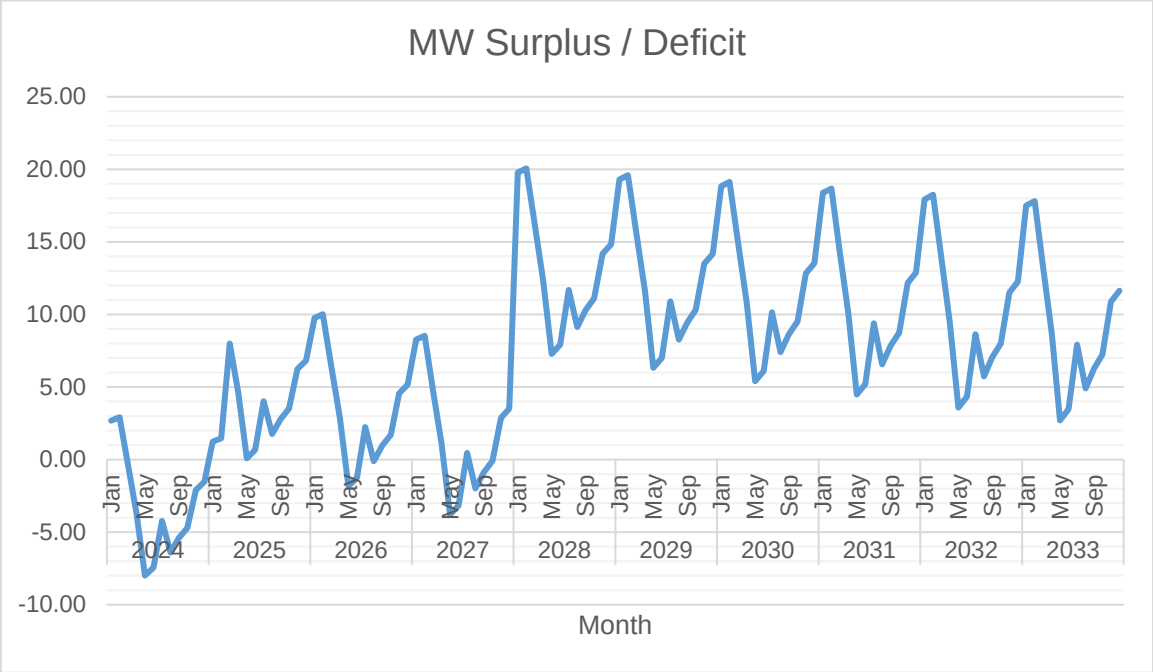


The first wave of supply procurement will be a **10 MW load-following (open-technology)** and **10 MW RE mid-merit (from 11:00AM to 10:00PM)** planned to be available by the month of **January 2025 until December 2033**, and **March 2025 until December 2033**, respectively. For the year 2028, the supply procurement will be a **30 MW load-following** with **1 MW incremental every year** starting **January 2028 until December 2033.** Additionally, the coop is planning to enter in a **joint venture** in a **10 MW Solar PV EGF (from 8:00AM to 4:00PM)** which shall be inter-connected and synchronized to Feeder 2 Gumaca Substation of NGCP. The target operation of the said EGF is **December 2027**. Lastly, the 2023-107RC (PSALM) supplying a **10 MW** will be extended their contract until **February 2025**.

QUEZELCO1 will not be over-contracted with the above planned contracts since there are contracts with specific time dispatch. For 2028 the peak demand for January to February is 41MW with possible maximum nomination of 60MW and possible minimum nominations of: 20MW from intervals 1 to 8, 30MW from intervals 9 to 10, 40MW from intervals 11 to 16, 30MW from intervals 17 to 21 and, 20MW from intervals 22 to 24. Also, the coop energy trading section will have a very flexible trading scheme to trade in WESM for a much competitive rate.



Currently, QUEZELCO I's two contracts are **pending** to ERC's approval – a **27 MW** contract capacity with **GNPower Dinginin** and a **10 MW** contract capacity with **PSALM**.



Currently, there is **under-contracting** by **5.06 MW**. The highest **deficit** is **7.99 MW** which is expected to occur on the month of **May 2024**. The lowest deficit is **0.41 MW** which is expected to occur on the month of **March 2024**. The highest surplus is **20.06 MW** which is expected to occur on the month of **February 2024**. But, if the basis is per interval nomination, the coop will not be over-contracted as explained in the procurement timing.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	19,239	16,983	2,055	1.05%	10.79%
	Feb	19,141	16,773	2,180	0.98%	11.50%
	Mar	18,987	17,291	1,509	0.99%	8.03%
	Apr	22,824	19,883	2,665	1.21%	11.82%
	May	24,436	21,392	2,719	1.33%	11.28%
	Jun	24,957	21,523	3,093	1.36%	12.56%
	Jul	22,413	20,908	1,208	1.33%	5.46%
	Aug	24,257	21,302	2,753	0.83%	11.44%
	Sep	23,706	21,403	2,098	0.87%	8.93%
	Oct	22,589	20,968	1,425	0.87%	6.36%
	Nov	22,082	20,020	1,666	1.79%	7.68%
	Dec	20,910	19,394	1,338	0.85%	6.45%
2025	Jan	20,049	17,832	2,016	1.00%	10.16%
	Feb	19,947	17,611	2,149	0.94%	10.88%
	Mar	19,787	18,155	1,445	0.95%	7.37%
	Apr	23,784	20,877	2,631	1.16%	11.19%
	May	25,463	22,462	2,676	1.28%	10.64%
	Jun	26,005	22,599	3,065	1.31%	11.94%
	Jul	23,355	21,952	1,105	1.27%	4.79%
	Aug	25,281	22,367	2,713	0.80%	10.82%
	Sep	24,707	22,473	2,029	0.83%	8.28%
	Oct	23,542	22,015	1,330	0.84%	5.70%

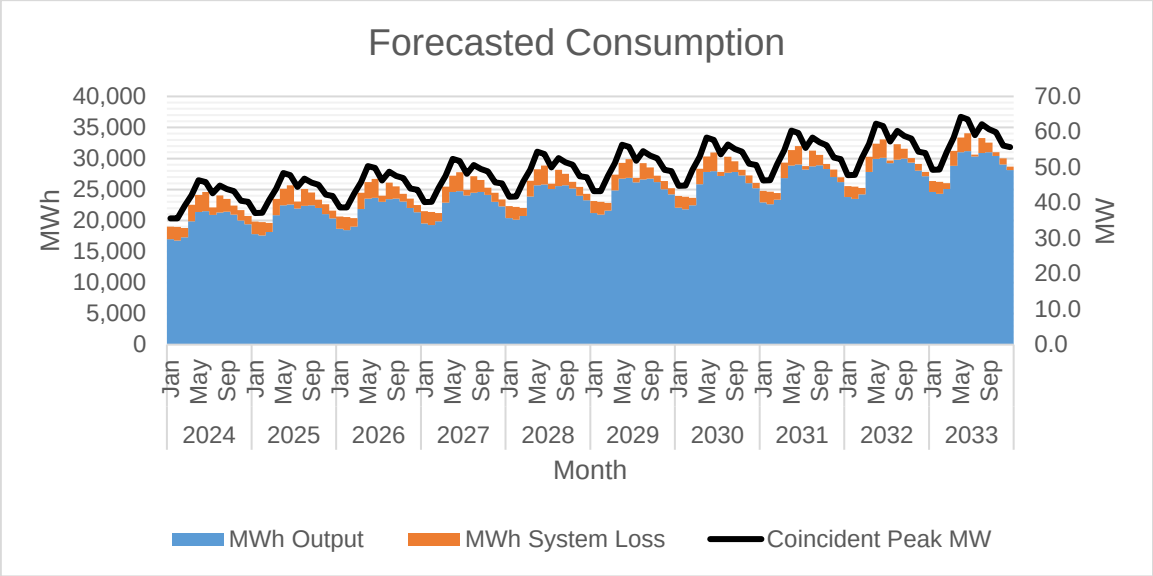
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Nov	23,005	21,020	1,589	1.72%	7.03%
	Dec	21,793	20,363	1,252	0.82%	5.79%
2026	Jan	20,868	18,681	1,986	0.96%	9.61%
	Feb	20,763	18,448	2,127	0.90%	10.34%
	Mar	20,596	19,019	1,390	0.91%	6.81%
	Apr	24,754	21,871	2,608	1.11%	10.65%
	May	26,500	23,531	2,644	1.23%	10.10%
	Jun	27,064	23,674	3,049	1.26%	11.41%
	Jul	24,306	22,997	1,012	1.22%	4.21%
	Aug	26,316	23,431	2,683	0.77%	10.27%
	Sep	25,718	23,542	1,970	0.80%	7.72%
	Oct	24,506	23,063	1,246	0.80%	5.12%
	Nov	23,938	22,021	1,521	1.65%	6.46%
	Dec	22,685	21,332	1,175	0.78%	5.22%
2027	Jan	21,691	19,530	1,960	0.93%	9.12%
	Feb	21,582	19,286	2,108	0.87%	9.85%
	Mar	21,408	19,883	1,338	0.87%	6.31%
	Apr	25,728	22,865	2,588	1.07%	10.17%
	May	27,542	24,600	2,616	1.18%	9.61%
	Jun	28,127	24,750	3,037	1.21%	10.93%
	Jul	25,262	24,042	923	1.18%	3.70%
	Aug	27,355	24,495	2,658	0.74%	9.79%
	Sep	26,734	24,612	1,915	0.77%	7.22%
	Oct	25,474	24,111	1,166	0.77%	4.61%
	Nov	24,875	23,022	1,458	1.59%	5.95%
	Dec	23,581	22,301	1,101	0.75%	4.71%
2028	Jan	22,514	20,379	1,934	0.89%	8.67%
	Feb	22,401	20,124	2,089	0.84%	9.40%
	Mar	22,221	20,747	1,287	0.84%	5.84%
	Apr	26,703	23,859	2,569	1.03%	9.72%
	May	28,584	25,670	2,589	1.14%	9.16%
	Jun	29,191	25,826	3,025	1.17%	10.48%
	Jul	26,218	25,087	834	1.13%	3.22%
	Aug	28,395	25,560	2,633	0.71%	9.34%
	Sep	27,749	25,682	1,861	0.74%	6.76%
	Oct	26,441	25,159	1,085	0.74%	4.14%
	Nov	25,812	24,022	1,394	1.53%	5.49%
	Dec	24,477	23,270	1,028	0.73%	4.23%
2029	Jan	23,334	21,228	1,905	0.86%	8.24%
	Feb	23,218	20,962	2,067	0.81%	8.98%
	Mar	23,031	21,611	1,233	0.81%	5.40%
	Apr	27,675	24,853	2,547	0.99%	9.29%
	May	29,623	26,739	2,559	1.10%	8.73%
	Jun	30,252	26,902	3,010	1.13%	10.06%
	Jul	27,171	26,132	742	1.09%	2.76%
	Aug	29,431	26,624	2,606	0.68%	8.91%
	Sep	28,762	26,752	1,804	0.72%	6.32%
	Oct	27,406	26,207	1,002	0.72%	3.68%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Nov	26,747	25,023	1,328	1.48%	5.04%
	Dec	25,370	24,239	953	0.70%	3.78%
2030	Jan	24,150	22,077	1,872	0.83%	7.82%
	Feb	24,030	21,800	2,042	0.78%	8.56%
	Mar	23,837	22,475	1,175	0.79%	4.97%
	Apr	28,641	25,846	2,520	0.96%	8.88%
	May	30,657	27,809	2,523	1.06%	8.32%
	Jun	31,307	27,977	2,989	1.09%	9.65%
	Jul	28,119	27,177	645	1.06%	2.32%
	Aug	30,462	27,689	2,572	0.66%	8.50%
	Sep	29,769	27,822	1,741	0.69%	5.89%
	Oct	28,366	27,255	914	0.69%	3.25%
	Nov	27,677	26,023	1,257	1.43%	4.61%
	Dec	26,259	25,208	872	0.68%	3.34%
2031	Jan	24,961	22,926	1,834	0.81%	7.41%
	Feb	24,837	22,638	2,011	0.76%	8.16%
	Mar	24,637	23,338	1,112	0.76%	4.55%
	Apr	29,601	26,840	2,486	0.93%	8.48%
	May	31,683	28,878	2,480	1.03%	7.91%
	Jun	32,355	29,053	2,962	1.05%	9.25%
	Jul	29,060	28,221	542	1.02%	1.88%
	Aug	31,487	28,753	2,532	0.64%	8.09%
	Sep	30,770	28,892	1,672	0.67%	5.47%
	Oct	29,320	28,303	820	0.67%	2.82%
	Nov	28,600	27,024	1,180	1.38%	4.18%
	Dec	27,141	26,177	786	0.66%	2.92%
2032	Jan	25,765	23,774	1,789	0.78%	7.00%
	Feb	25,638	23,476	1,974	0.73%	7.76%
	Mar	25,431	24,202	1,042	0.74%	4.13%
	Apr	30,554	27,834	2,445	0.90%	8.07%
	May	32,702	29,947	2,429	0.99%	7.50%
	Jun	33,395	30,129	2,926	1.02%	8.85%
	Jul	29,995	29,266	432	0.99%	1.45%
	Aug	32,503	29,817	2,484	0.62%	7.69%
	Sep	31,763	29,962	1,595	0.65%	5.05%
	Oct	30,265	29,350	718	0.65%	2.39%
	Nov	29,516	28,024	1,095	1.34%	3.76%
	Dec	28,017	27,146	693	0.64%	2.49%
2033	Jan	26,562	24,623	1,738	0.76%	6.59%
	Feb	26,431	24,314	1,930	0.71%	7.35%
	Mar	26,218	25,066	965	0.71%	3.71%
	Apr	31,498	28,827	2,395	0.87%	7.67%
	May	33,711	31,016	2,370	0.97%	7.10%
	Jun	34,425	31,204	2,881	0.99%	8.45%
	Jul	30,920	30,311	313	0.96%	1.02%
	Aug	33,510	30,881	2,427	0.60%	7.29%
	Sep	32,746	31,031	1,509	0.63%	4.64%
	Oct	31,203	30,398	608	0.63%	1.96%

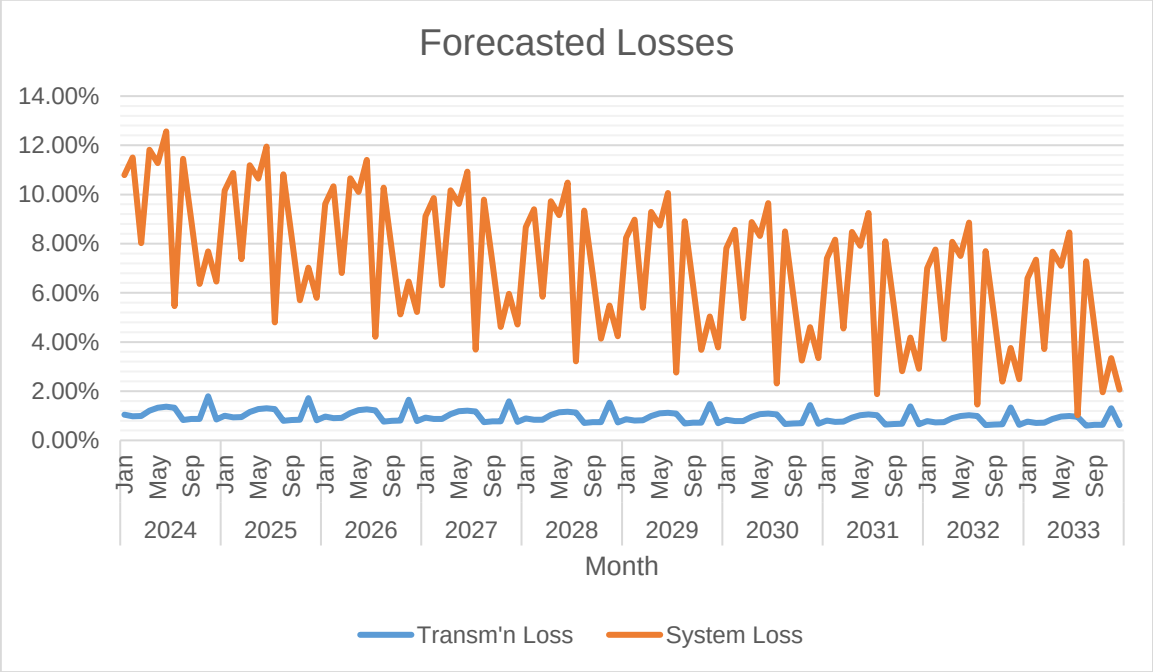
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Nov	30,424	29,025	1,003	1.30%	3.34%
	Dec	28,885	28,115	592	0.62%	2.06%

MWh Offtake was forecasted using the **regression analysis**.

System Loss was calculated through a **Load Flow Study** conducted using **Synergi software**. Based on the same study, the Distribution System cannot adequately convey electricity to customers. Therefore, QUEZELCO I is implementing its **CAPEX projects** to satisfy its consumers.



MWh Output was expected to grow at a rate of **3.43%** annually.



Transmission Loss is expected to range from **0.62% to 1.79%** while System Loss is expected to range from **5.46%** to **12.56%.**

Power Supply

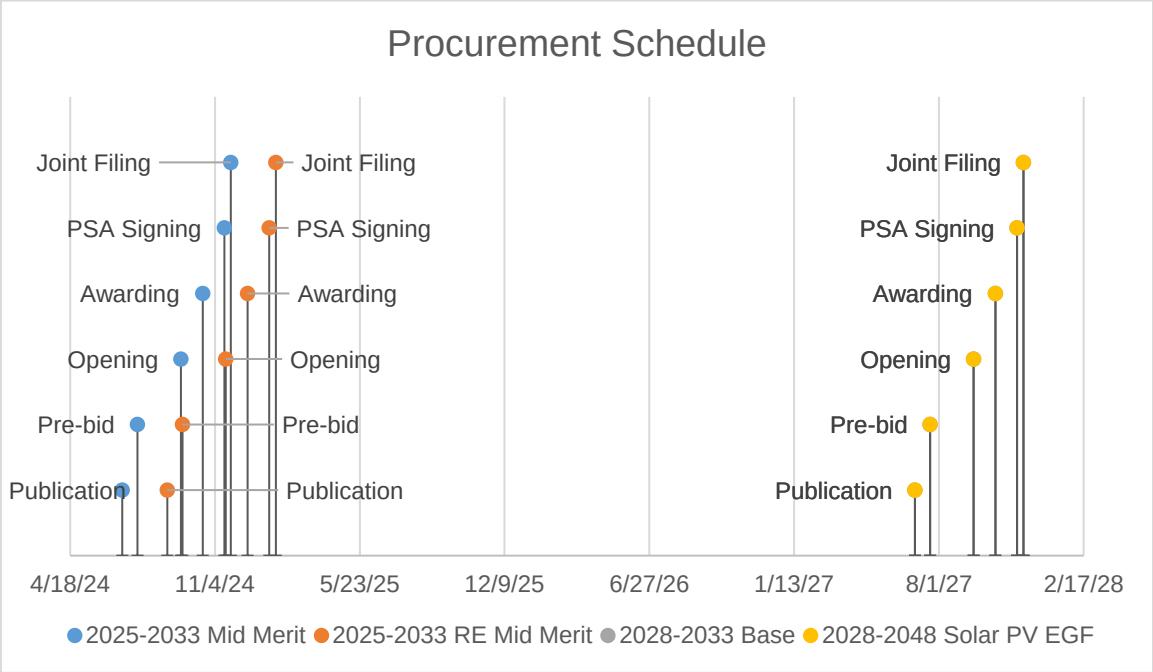
Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2017-084RC	Base	GN Power Dinginin	13.50	161,980	12/26/2019	12/25/2027
2023-107RC	Intermediate	Power Sector Assets and Liabilities Management Corporation	10.00	4,300	2/26/2023	2/25/2025

The PSA with **GNPower Dinginin** filed with ERC under **2017-084RC** was procured through Competitive Selection Process. It was selected to provide for base requirements due to the nature of customers of QUEZELCO I. Historically, the utilization of the PSA is **69.68%**. Outages of the plant led to **unserved energy** of around **10,207.20 MWh** in the past year. The actual billed overall monthly charge under the PSA ranged from **5.14 P/kWh** to **7.70 P/KWh** in the same period.

The same ERC case was granted a **Provisional Authority** last **August 9, 2017**. Then on **December 20, 2019**, **GNPower Dinginin** sent a proposal with the subject "**Supplement to the Power Purchase and Sale Agreement and Bridge Power Supply Contract**" and was accordingly granted and accepted. This resulted to a bridge contract with **Thermal Luzon Inc. (TLI)**.

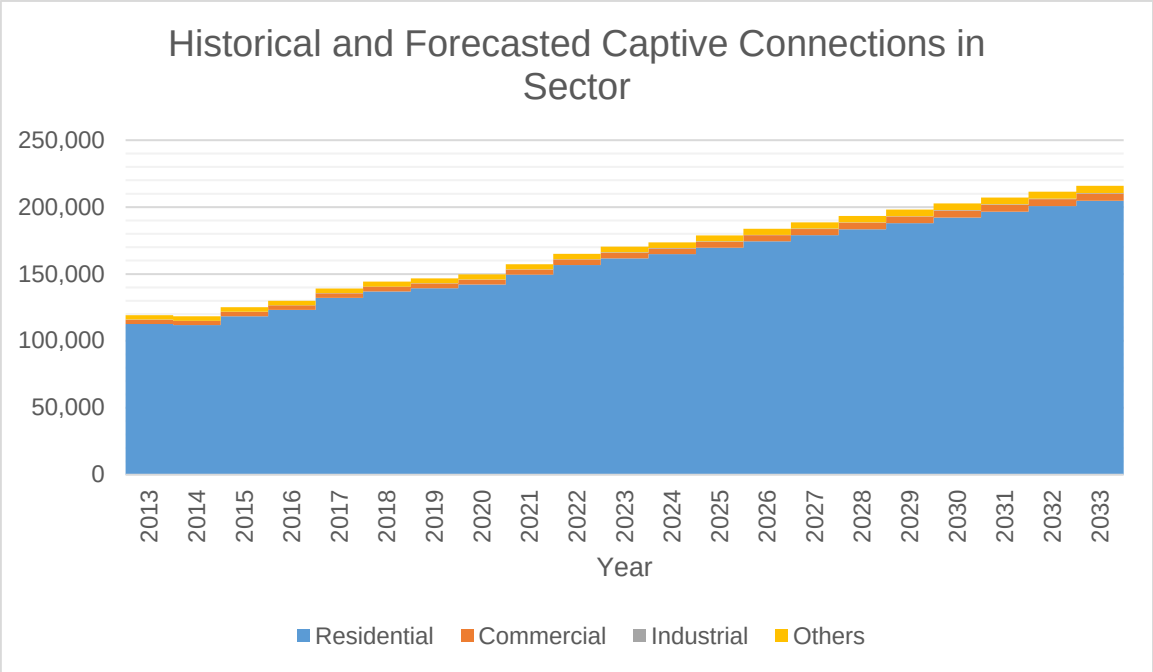
The CSEE with **PSALM** filed with ERC under **2023-107RC** was procured through **exemption** in conducting Competitive Selection Process certified by the Department of Energy. It was selected to provide for **mid-merit requirements** due to the nature of customers of QUEZELCO I. Historically, the utilization of the PSA is **95.12%**. Outages of the plant led to **unserved energy** of around **1,054.51 MWh** in the past year. The actual billed overall monthly charge under the PSA ranged from **5.39 P/kWh** to **6.42 P/KWh** in the same period.

	2025-2033 Mid Merit	2025-2033 RE Mid Merit	2028-2033 Base	2028-2048 Solar PV EGF
Type	Intermediate	Intermediate	Base	Base
Minimum MW	10.00	10.00	30.00	10.00
Maximum MW	10.00	10.00	35.00	10.00
Minimum MWh/yr	57,500	33,330	174,900	19,107
Maximum MWh/yr	60,200	40,150	223,840	19,107
PSA Start	12/26/2024	2/26/2025	12/26/2027	12/26/2027
PSA End	12/25/2033	12/25/2033	12/25/2033	12/25/2033
Publication	6/29/2024	8/30/2024	6/29/2027	6/29/2027
Pre-bid	7/20/2024	9/20/2024	7/20/2027	7/20/2027
Opening	9/18/2024	11/19/2024	9/18/2027	9/18/2027
Awarding	10/18/2024	12/19/2024	10/18/2027	10/18/2027
PSA Signing	11/17/2024	1/18/2025	11/17/2027	11/17/2027
Joint Filing	11/26/2024	1/27/2025	11/26/2027	11/26/2027



For the procurement of **10 MW load-following (open-technology)** and **10 MW RE mid-merit (from 11:00AM to 10:00PM)** planned to be available by the month of **January,** and **March 2025**, respectively, the first publication or launch of CSP will be on **August 30, 2024**. Joint filing is planned on **January 27, 2025** or **150 days later**, in accordance with **DOE's CSP Policy DC 2023-06-0021**. For the **2023-2024 power supply contract** with the **Power Sector Assets and Liabilities Management (PSALM) Corporation** will be **extended** until **February 2025**. Additionally, Quezelco1 is **planning** to have an **embedded generation (Solar PV)**. Documentary requirements for the NEA and DOE review are currently being prepared. Also, our team is currently working on the preparation for the three (3) planned CSP for the whole power requirement of QUEZELCO1 for 2028.

Captive Customer Connections



The number of **170,415 connections** is expected to grow at a rate of **2.79%** annually. Residential customer class is expected to account for **67.16%** of the total consumption.