Power Supply Procurement Plan 2024-2033

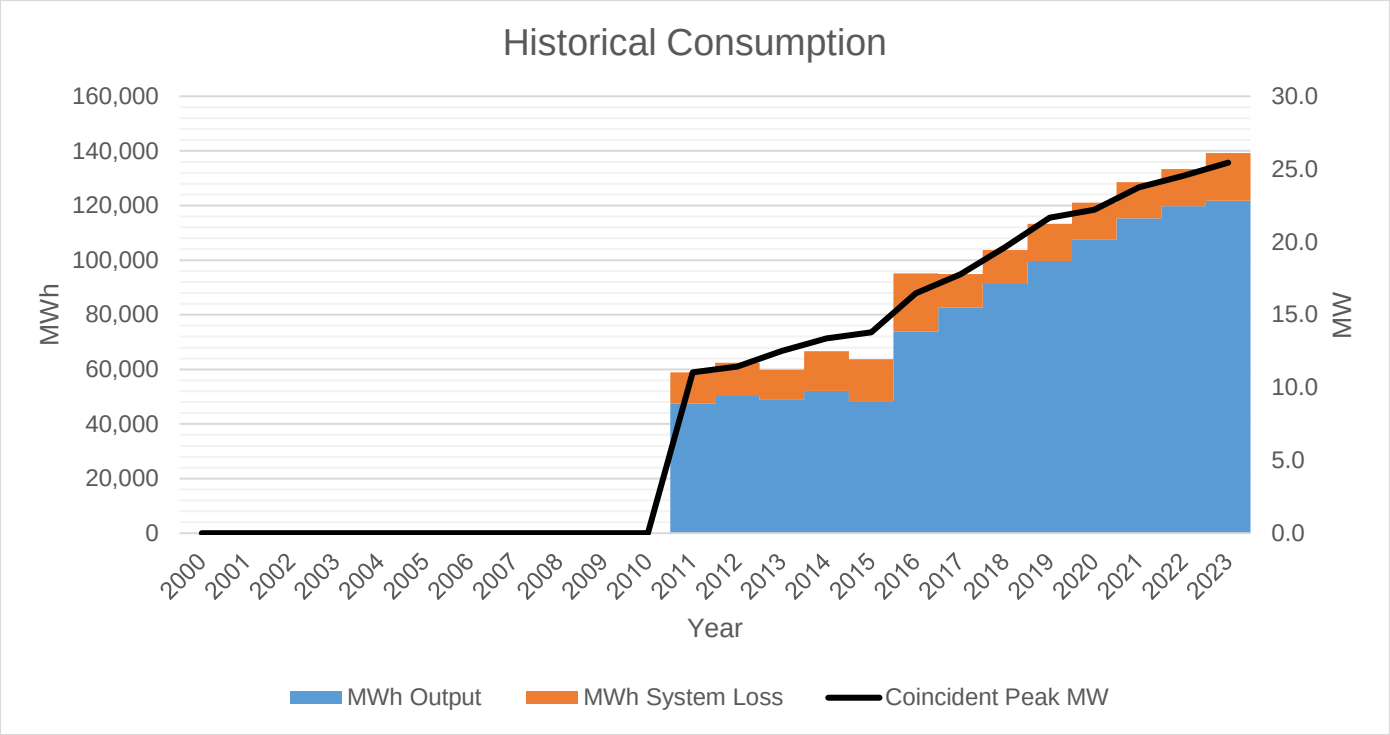
Cotabato Electric Cooperative, Inc. PPALMA
(COTELCO PPALMA)

Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2011	11.04	61,611	0	61,611	47,528	11,358	64%	-4.42%	0.00%	18.44%
2012	11.44	61,053	0	61,053	50,253	12,220	61%	2.33%	0.00%	20.02%
2013	12.53	63,120	0	63,120	48,833	10,980	58%	-5.24%	0.00%	17.40%
2014	13.37	62,836	0	62,836	52,140	14,459	54%	5.99%	0.00%	23.01%
2015	13.80	70,091	0	70,091	48,377	15,371	58%	-9.05%	0.00%	21.93%
2016	16.48	88,721	0	88,721	73,776	21,420	61%	7.30%	0.00%	24.14%
2017	17.78	94,976	0	94,976	82,596	12,317	61%	-0.07%	0.00%	12.97%
2018	19.64	103,771	0	103,771	91,290	12,441	60%	-0.04%	0.00%	11.99%
2019	21.66	113,428	0	113,428	99,753	13,578	60%	-0.09%	0.00%	11.97%
2020	22.21	123,018	0	121,076	107,501	13,567	62%	-0.01%	1.58%	11.21%
2021	23.76	130,609	0	128,510	115,271	13,239	62%	0.00%	1.61%	10.30%
2022	24.54	135,666	0	133,416	119,803	13,613	62%	0.00%	1.66%	10.20%
2023	25.45	142,486	0	139,272	121,809	17,463	62%	0.00%	2.26%	12.54%

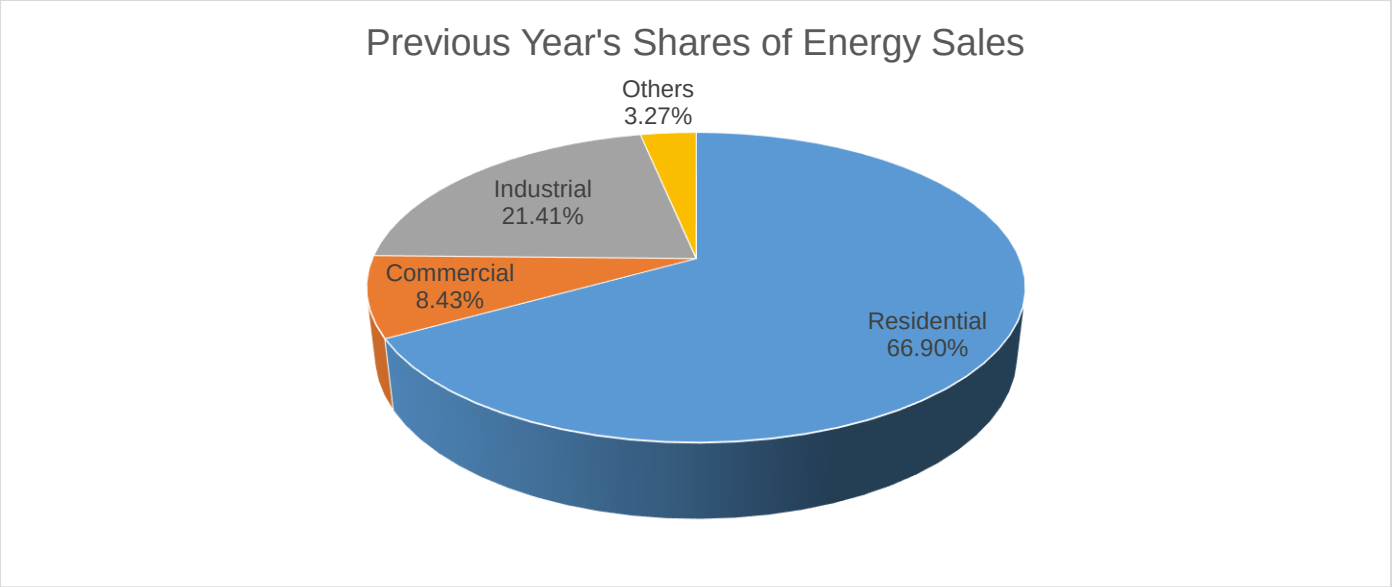
Coincident peak MW and MWh offtake have grown steadily, showing increased electricity demand over the years. Since the 11.04 MW peak in 2011, COTELCO-PPALMA has had a peak demand of 25.45MW in 2023. That is approximately a 130% increase in the past twelve years. This increase is mainly due to the rise in household connections as well as the significant progress in the business centers in the PPALMA area.

System losses (both in MWh and as a percentage) have generally decreased over time, suggesting improvements in the system's overall efficiency, though a rise in 2023. Based on the simulation of the Technical Working Group, the system loss increase in 2023 is due to the increasing number of electricity thefts in the area as well as other power quality problems. For the 2024-2028 e-ICPM and CAPEX Application, COTELCO-PPALMA has proposed projects to improve the efficiency of its distribution. As regards the compliance of COTELCO-PPALMA to the System Loss Segregation as mandated by the Energy Regulatory Commission, it has only started its compliance in 2023 considering that the cooperative has only acquired its juridical personality in 2019. In 2022, COTELCO-PPALMA received a show cause order from the commission for its non-compliance and was able to address the same with a commitment to start its compliance in 2023. As of 2023, COTELCO-PPALMA is yet to complete the full data gathering of its distribution system with already 90% gathered data of its primary distribution lines. The data gathering for the secondary distribution lines as well as the customer data will start early in 2025.

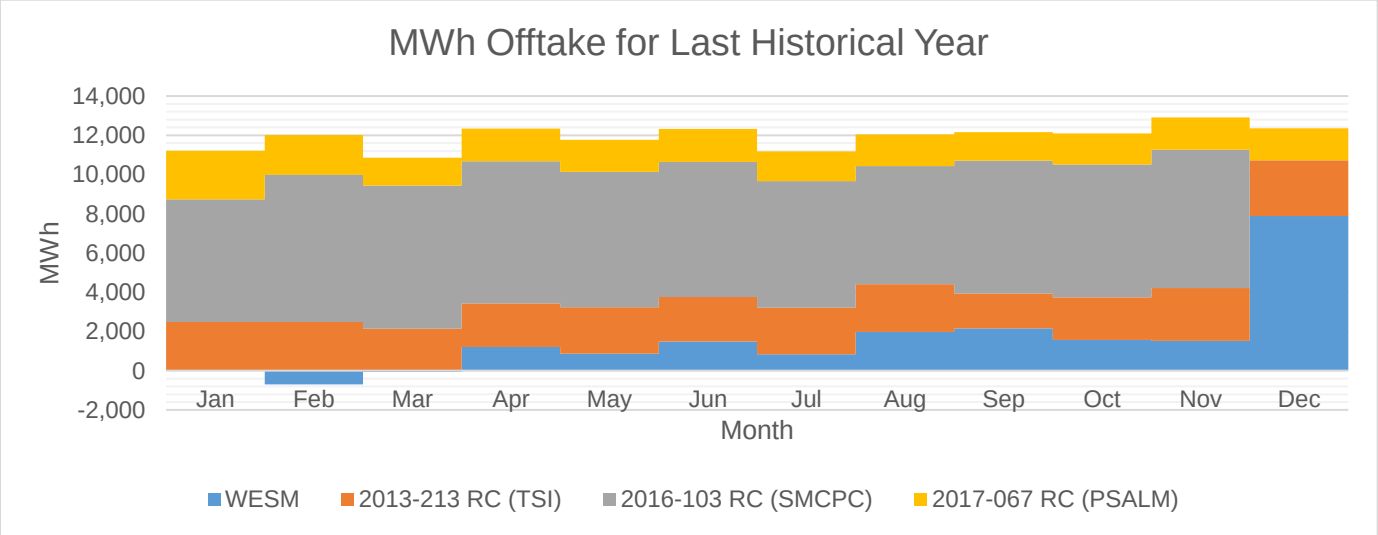


The total energy consumption of the cooperative in 2010 is 61,611MWh. With the average annual growth rate of 4% the MWh input has now reach to 121,076 which ha an increase of about 96% of year 2010. Base on the historical data, during the year of 2016 and 2017 which rapidly increased from 70,000MWh at the end of 2015 up to 94,976MWh at the end of 2017. For 2023, the total Energy Input of the cooperative has now reached to 137,703MWh.

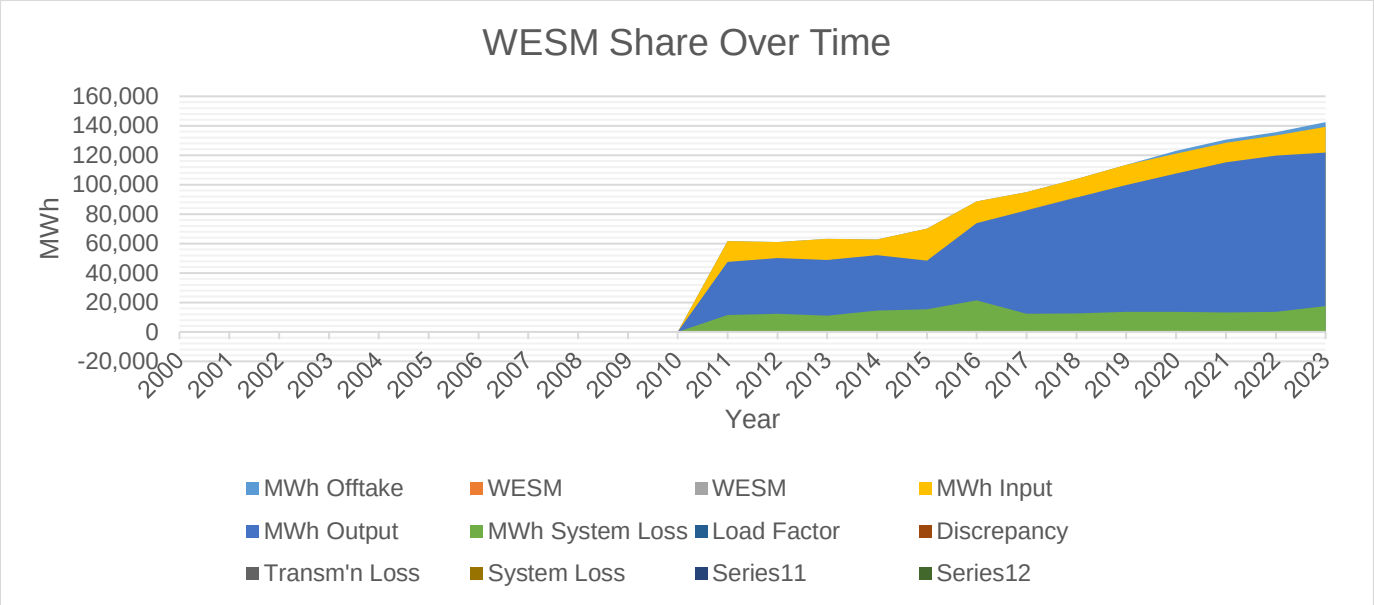
Historically, the Average System Loss of COTELCO-PPALMA has reach its highest point on 2016 of about 24%. With the projects implemented by the cooperative from its approved capital expenditure, the Average System Loss decreased to below the system loss cap set by the Energy Regulatory Commission (ERC). Unfortunately, for the year 2023, the average system loss of COTELCO-PPALMA has increased to 12.54%, a level of system loss above the cap set by ERC. The cooperative is set file its CAPEX for the year 2024-2028 with projects mainly to improve the efficiency of the distribution system as well as its service to the Member-Consumer-Owners (MCOs).



The consumer type with the biggest consumption for the year 2023 is still the Residential Type Customers since the operation of COTELCO-PPALMA has started in the area, the same with the historical energy consumption. In the near future, COTELCO-PPALMA is expecting an increase in consumption from Industrial and Commercial customers with the upcoming industrial loads such as food processing plants and other businesses within the areas of Midsayap and Libugan.

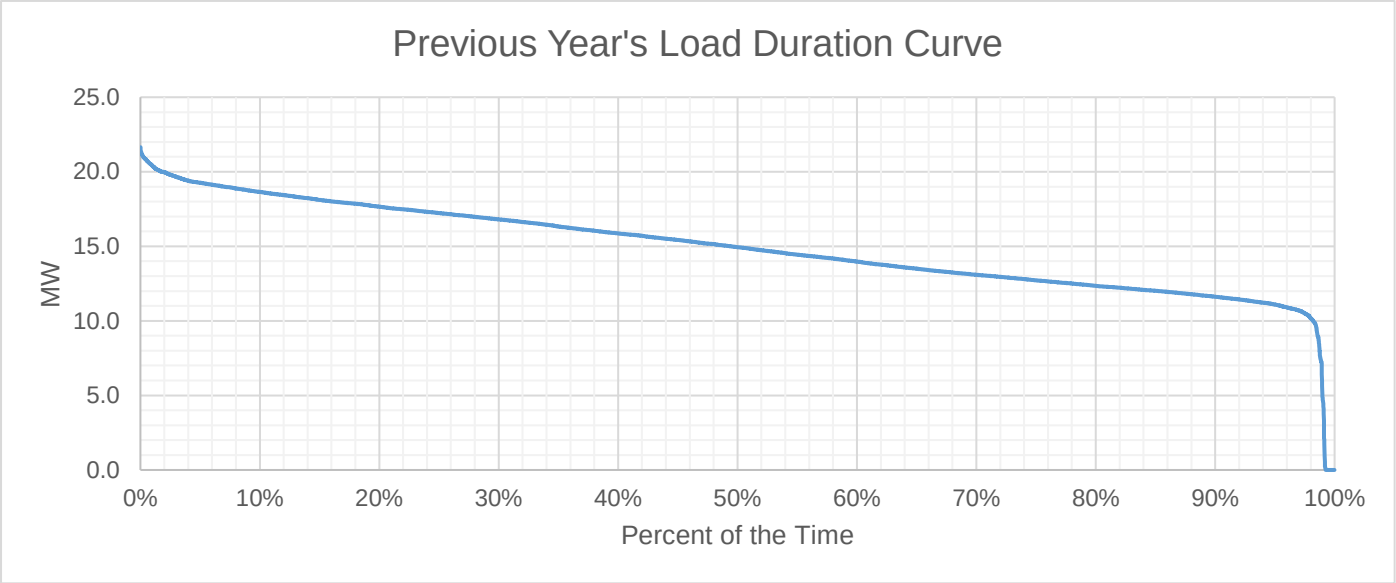


SMCPC is the biggest power supplier of the cooperative with a total contracted capacity of 10MW followed by TSI with a contracted capacity of 4MW and by PSALM for Peaking at a maximum of 5MW and minimum of 1 MW for the year 2023. Unfortunately, with the issuance of an order by the Energy Regulatory Commission, the interim relief granted for the 10MW Power Supply by the SMCPC has been terminated.

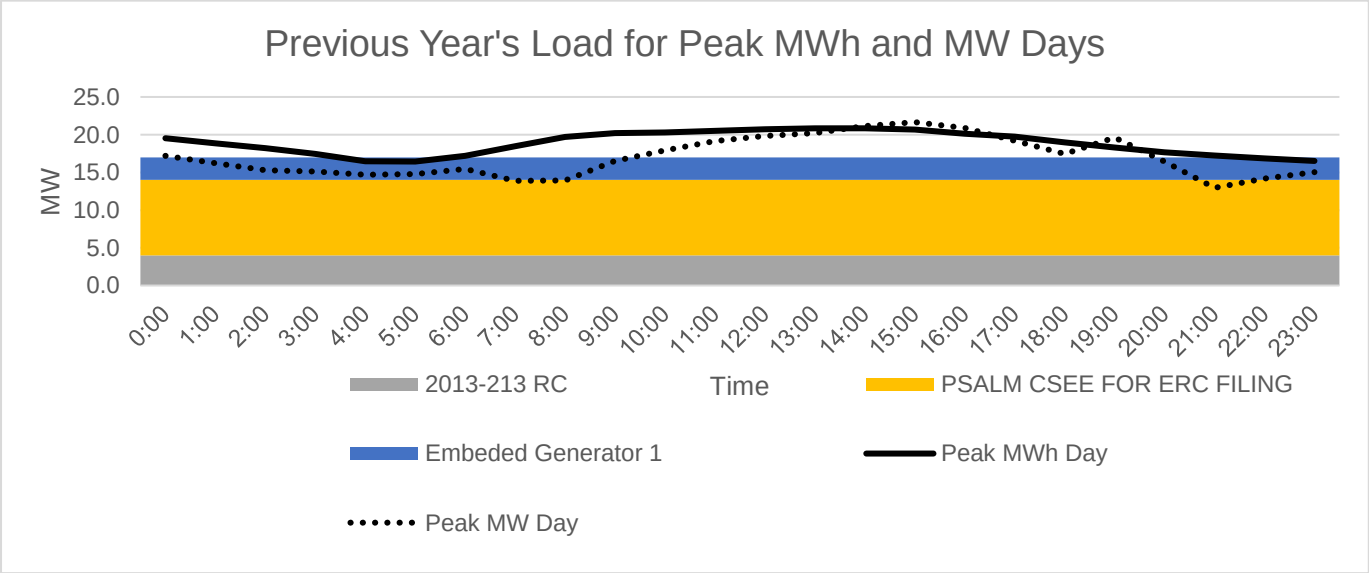


With the current Power Supply contract of the Cooperative, it is expected to be exposed in the Spot market without any additional PSA. But in line with the RPS and the increasing demand of the cooperative, it is expected to enter into a base contract with other IPPs as well as with future renewable energy supply by the year 2025.

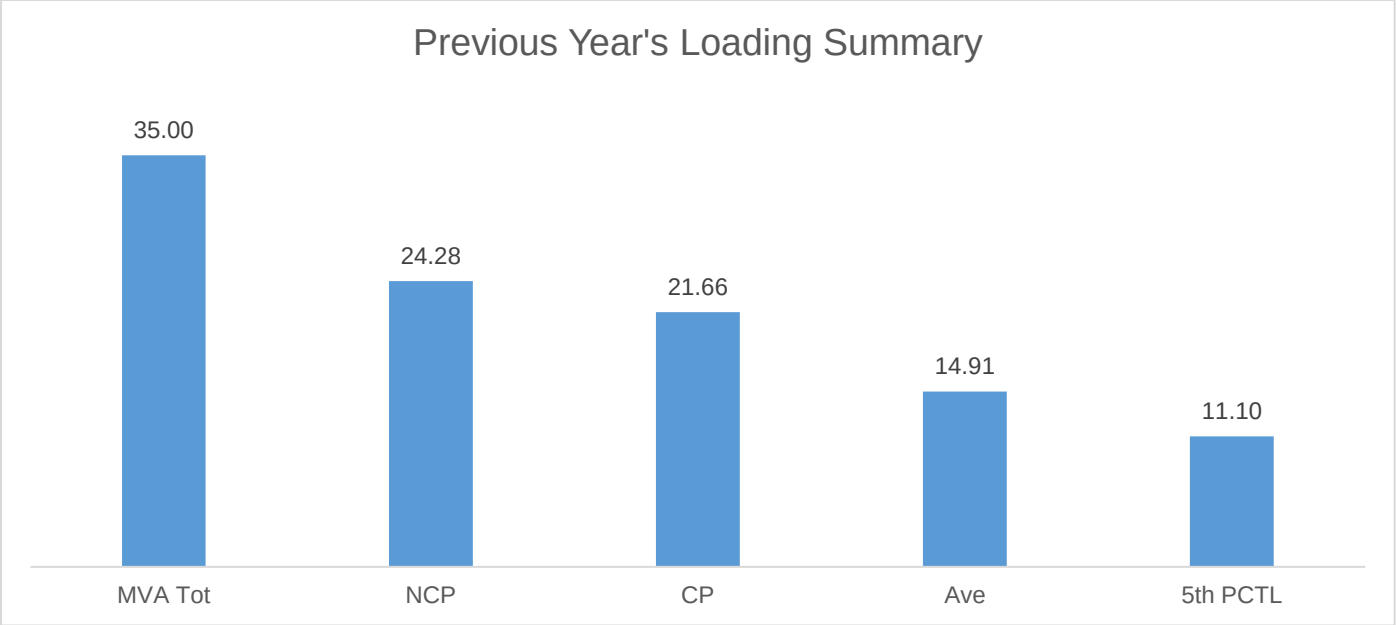
Previous Year's Load Profile



For the year 2022, the peak demand took place on the month of October with 23.66MW. On first quarter of 2020, the demand of COTELCO-PPALMA has already reached a peak of 22MW but has decreased due to the Pandemic. With the demand for 2023 which has reached to 25.45MW, it is a clear indication that the demand of the franchise area has been increasing with the increasing number of customers. The cooperative is looking forward to the continued increase in demand in the succeeding years.



For 2023, the energy (kWh) consumption of the entire franchise area is different from its previous consumption. There was a decrease in the peak but a significantly increase in the off peak. With this scenario, COTELCO-PPALMA's demand has decreased in its peak hours but the demand in off-peak has increased.



The Non-coincident Peak Demand is 24.28 MW, which is around 69.37% of the total substation capacity of 35MW. The load factor or the ratio between the Average Load of 14.91 MW and the Non-coincident Peak Demand is 61.40%.

Metering Point	Substation MVA	Substation Peak MW
Villarica (Villarica, Midsayap)	10	6.592
Gumaga (Gumaga, Libungan)	10	8.399
Dualing (Dualing, Aleosan)	15	9.291

As shown above, the substation with above 70% loading is the Gumaga Subsation. In light of the future energization of a 10MVA Tubon Substation in Tubon, Pigcawayan, the Libungan Substation will be unloaded with approximately 3MW. The said Tubon Substation is expected to be energized in the first quarter of 2025.

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	26.01	4.00	13.00	0.000		15%	65%	-9.01
	Feb	26.56	4.00	13.00	0.000		15%	64%	-9.56
	Mar	26.96	4.00	13.00	0.000		15%	63%	-9.96
	Apr	27.03	4.00	13.00	0.000		15%	63%	-10.03
	May	27.65	4.00	13.00	0.000		14%	61%	-10.65
	Jun	27.11	4.00	13.00	0.000		15%	63%	-10.11
	Jul	26.56	4.00	13.00	0.000		15%	64%	-9.56
	Aug	27.30	4.00	13.00	0.000		15%	62%	-10.30
	Sep	26.44	4.00	13.00	0.000		15%	64%	-9.44
	Oct	28.19	4.00	13.00	0.000		14%	60%	-11.19
	Nov	27.53	4.00	13.00	0.000		15%	62%	-10.53
	Dec	29.19	4.00	13.00	0.000		14%	58%	-12.19
2025	Jan	28.31	4.00	13.00	0.000		14%	60%	-11.31
	Feb	28.91	4.00	13.00	0.000		14%	59%	-11.91
	Mar	29.34	4.00	13.00	0.000		14%	58%	-12.34
	Apr	29.42	4.00	13.00	0.000		14%	58%	-12.42
	May	30.09	4.00	13.00	0.000		13%	57%	-13.09
	Jun	29.51	4.00	13.00	0.000		14%	58%	-12.51
	Jul	28.91	4.00	13.00	15.000		14%	111%	3.09
	Aug	29.71	4.00	13.00	15.000		13%	108%	2.29
	Sep	28.78	4.00	13.00	15.000		14%	111%	3.22
	Oct	30.69	4.00	13.00	15.000		13%	104%	1.31
	Nov	29.96	4.00	13.00	15.000		13%	107%	2.04
	Dec	31.77	4.00	13.00	15.000		13%	101%	0.23
2026	Jan	30.86	4.00	3.00	20.000		13%	87%	-3.86
	Feb	31.51	4.00	3.00	20.000		13%	86%	-4.51
	Mar	31.99	4.00	3.00	20.000		13%	84%	-4.99
	Apr	32.07	4.00	3.00	20.000		12%	84%	-5.07

	May	32.80	4.00	3.00	20.000		12%	82%	-5.80
	Jun	32.16	4.00	3.00	20.000		12%	84%	-5.16
	Jul	31.51	4.00	3.00	20.000		13%	86%	-4.51
	Aug	32.38	4.00	3.00	20.000		12%	83%	-5.38
	Sep	31.37	4.00	3.00	20.000		13%	86%	-4.37
	Oct	33.45	4.00	3.00	20.000		12%	81%	-6.45
	Nov	32.66	4.00	3.00	20.000		12%	83%	-5.66
	Dec	34.63	4.00	3.00	20.000		12%	78%	-7.63
2027	Jan	34.82	4.00	3.00	20.000		11%	78%	-7.82
	Feb	35.55	4.00	3.00	20.000		11%	76%	-8.55
	Mar	36.09	4.00	3.00	20.000		11%	75%	-9.09
	Apr	36.19	4.00	3.00	20.000		11%	75%	-9.19
	May	37.00	4.00	3.00	20.000		11%	73%	-10.00
	Jun	36.29	4.00	3.00	20.000		11%	74%	-9.29
	Jul	35.55	4.00	3.00	20.000		11%	76%	-8.55
	Aug	36.54	4.00	3.00	20.000		11%	74%	-9.54
	Sep	35.39	4.00	3.00	20.000		11%	76%	-8.39
	Oct	37.74	4.00	3.00	20.000		11%	72%	-10.74
	Nov	36.85	4.00	3.00	20.000		11%	73%	-9.85
	Dec	37.29	4.00	3.00	20.000		11%	72%	-10.29
2028	Jan	36.60	4.00	3.00	25.000		11%	87%	-4.60
	Feb	37.38	4.00	3.00	25.000		11%	86%	-5.38
	Mar	37.94	4.00	3.00	25.000		11%	84%	-5.94
	Apr	38.05	4.00	3.00	25.000		11%	84%	-6.05
	May	38.60	4.00	3.00	25.000		10%	83%	-6.60
	Jun	38.15	4.00	3.00	25.000		10%	84%	-6.15
	Jul	37.38	4.00	3.00	25.000		11%	86%	-5.38
	Aug	38.42	4.00	3.00	25.000		10%	83%	-6.42
	Sep	37.21	4.00	3.00	25.000		11%	86%	-5.21
	Oct	39.68	4.00	3.00	25.000		10%	81%	-7.68
	Nov	38.74	4.00	3.00	25.000		10%	83%	-6.74
	Dec	41.08	4.00	3.00	25.000		10%	78%	-9.08
2029	Jan	39.74	4.00	3.00	25.000		10%	81%	-7.74
	Feb	40.58	4.00	3.00	25.000		10%	79%	-8.58

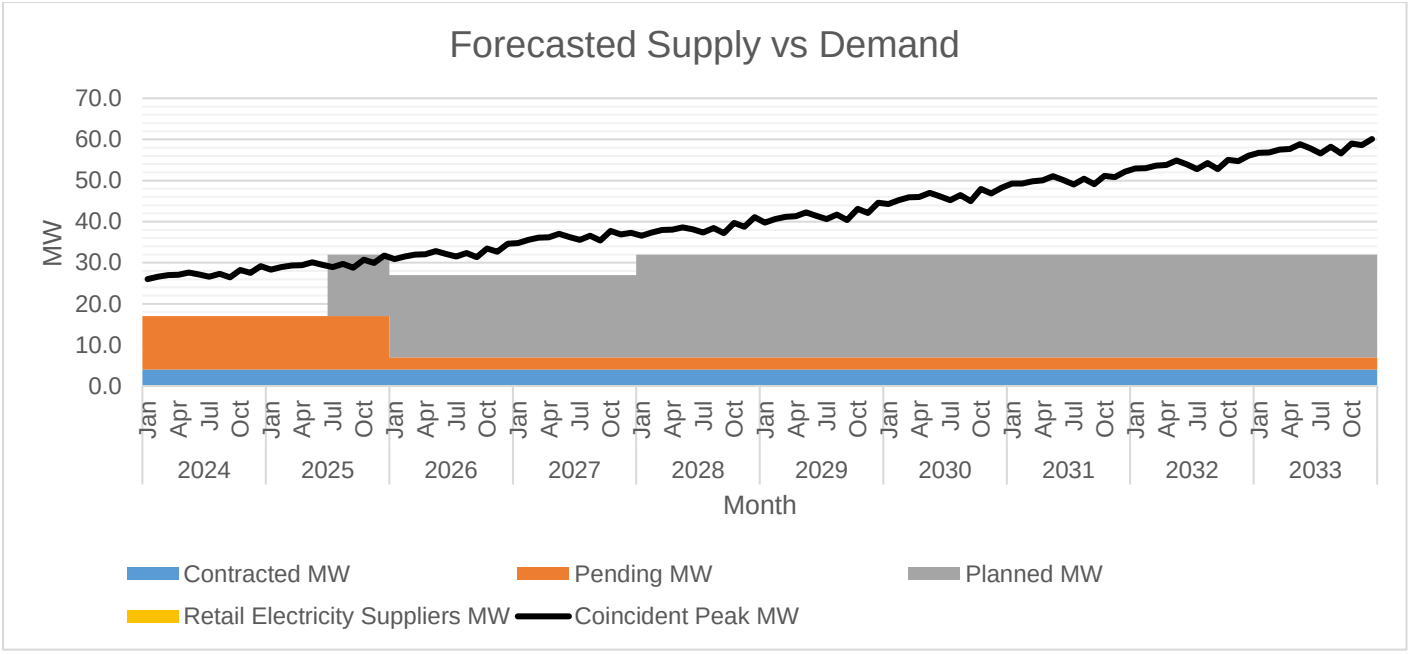
	Mar	41.20	4.00	3.00	25.000		10%	78%	-9.20
	Apr	41.31	4.00	3.00	25.000		10%	77%	-9.31
	May	42.24	4.00	3.00	25.000		9%	76%	-10.24
	Jun	41.42	4.00	3.00	25.000		10%	77%	-9.42
	Jul	40.58	4.00	3.00	25.000		10%	79%	-8.58
	Aug	41.71	4.00	3.00	25.000		10%	77%	-9.71
	Sep	40.40	4.00	3.00	25.000		10%	79%	-8.40
	Oct	43.08	4.00	3.00	25.000		9%	74%	-11.08
	Nov	42.06	4.00	3.00	25.000		10%	76%	-10.06
	Dec	44.61	4.00	3.00	25.000		9%	72%	-12.61
2030	Jan	44.26	4.00	3.00	25.000		9%	72%	-12.26
	Feb	45.20	4.00	3.00	25.000		9%	71%	-13.20
	Mar	45.88	4.00	3.00	25.000		9%	70%	-13.88
	Apr	46.01	4.00	3.00	25.000		9%	70%	-14.01
	May	47.04	4.00	3.00	25.000		9%	68%	-15.04
	Jun	46.13	4.00	3.00	25.000		9%	69%	-14.13
	Jul	45.20	4.00	3.00	25.000		9%	71%	-13.20
	Aug	46.45	4.00	3.00	25.000		9%	69%	-14.45
	Sep	44.99	4.00	3.00	25.000		9%	71%	-12.99
	Oct	47.98	4.00	3.00	25.000		8%	67%	-15.98
	Nov	46.84	4.00	3.00	25.000		9%	68%	-14.84
	Dec	48.29	4.00	3.00	25.000		8%	66%	-16.29
2031	Jan	49.23	4.00	3.00	25.000		8%	65%	-17.23
	Feb	49.24	4.00	3.00	25.000		8%	65%	-17.24
	Mar	49.85	4.00	3.00	25.000		8%	64%	-17.85
	Apr	50.02	4.00	3.00	25.000		8%	64%	-18.02
	May	51.04	4.00	3.00	25.000		8%	63%	-19.04
	Jun	50.15	4.00	3.00	25.000		8%	64%	-18.15
	Jul	49.06	4.00	3.00	25.000		8%	65%	-17.06
	Aug	50.46	4.00	3.00	25.000		8%	63%	-18.46
	Sep	49.10	4.00	3.00	25.000		8%	65%	-17.10
	Oct	51.17	4.00	3.00	25.000		8%	63%	-19.17
	Nov	50.84	4.00	3.00	25.000		8%	63%	-18.84
	Dec	52.11	4.00	3.00	25.000		8%	61%	-20.11

2032	Jan	52.95	4.00	3.00	25.000		8%	60%	-20.95
	Feb	52.97	4.00	3.00	25.000		8%	60%	-20.97
	Mar	53.61	4.00	3.00	25.000		7%	60%	-21.61
	Apr	53.80	4.00	3.00	25.000		7%	59%	-21.80
	May	54.90	4.00	3.00	25.000		7%	58%	-22.90
	Jun	53.95	4.00	3.00	25.000		7%	59%	-21.95
	Jul	52.76	4.00	3.00	25.000		8%	61%	-20.76
	Aug	54.28	4.00	3.00	25.000		7%	59%	-22.28
	Sep	52.81	4.00	3.00	25.000		8%	61%	-20.81
	Oct	55.04	4.00	3.00	25.000		7%	58%	-23.04
	Nov	54.68	4.00	3.00	25.000		7%	59%	-22.68
	Dec	56.05	4.00	3.00	25.000		7%	57%	-24.05
2033	Jan	56.77	4.00	3.00	25.000		7%	56%	-24.77
	Feb	56.79	4.00	3.00	25.000		7%	56%	-24.79
	Mar	57.49	4.00	3.00	25.000		7%	56%	-25.49
	Apr	57.69	4.00	3.00	25.000		7%	55%	-25.69
	May	58.86	4.00	3.00	25.000		7%	54%	-26.86
	Jun	57.84	4.00	3.00	25.000		7%	55%	-25.84
	Jul	56.57	4.00	3.00	25.000		7%	57%	-24.57
	Aug	58.20	4.00	3.00	25.000		7%	55%	-26.20
	Sep	56.62	4.00	3.00	25.000		7%	57%	-24.62
	Oct	59.01	4.00	3.00	25.000		7%	54%	-27.01
	Nov	58.63	4.00	3.00	25.000		7%	55%	-26.63
	Dec	60.10	4.00	3.00	25.000		7%	53%	-28.10

Comparing the historical growth rate to the forecasted growth rate from the first five years and the 6th-15th year forecast. The selected model has an equation of Y = a(t)3 +ct+bt+a, with an R2 statistic of 1.000; adjusted R2 is 0.999. The Mean Absolute Percentage Error (MAPE) is 1.41%. Also, the System Energy Sales requirement was forecasted from 2024 to 2038, with an average growth rate of 8.80% for the first 5 years and 6th to 15th year 15.69%.

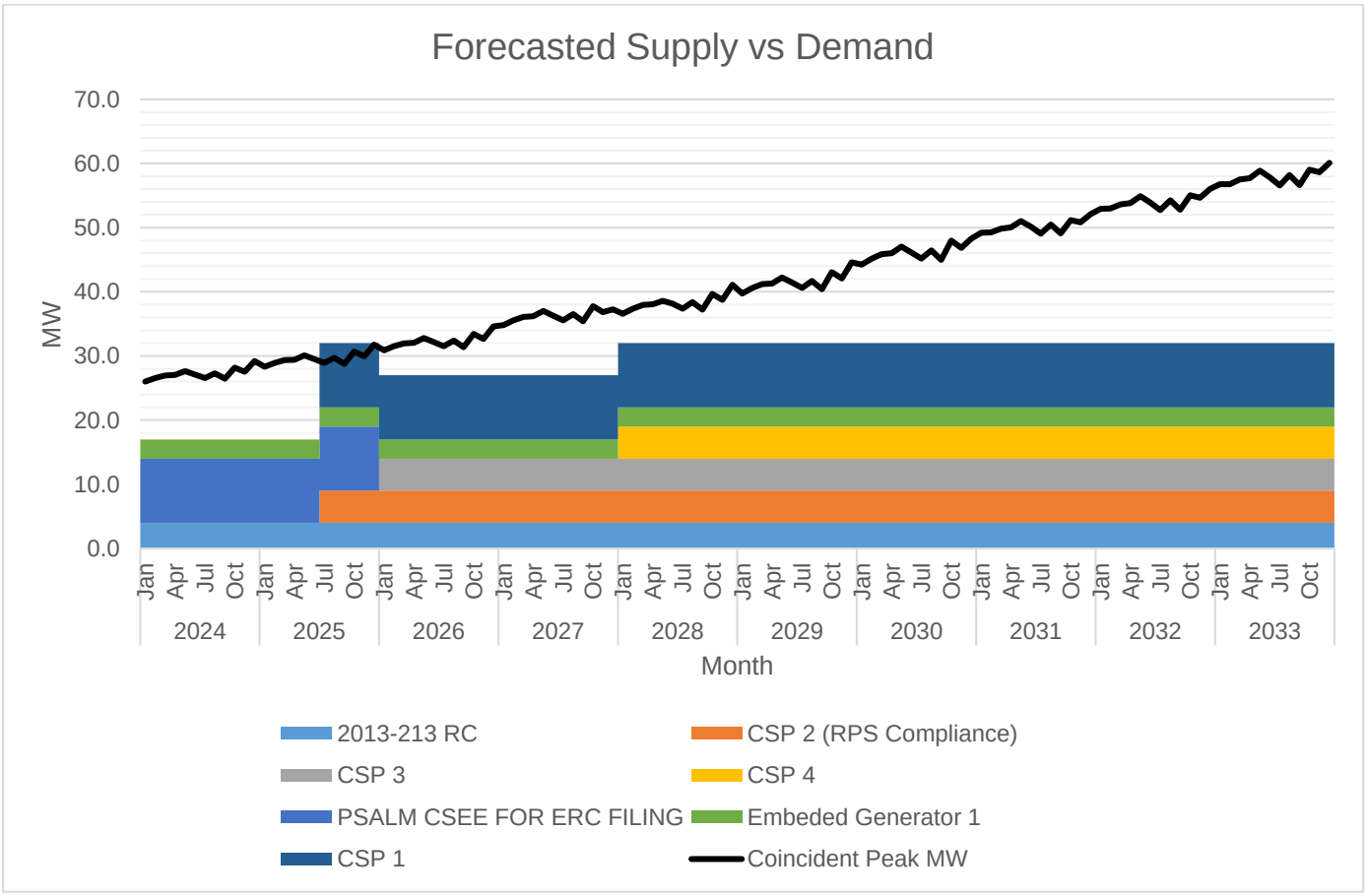
Forecasted energy sales will be used to simulate the yearly budget. This data will also help COTELCO PPALMA in managing the cash flow, securing financing, and setting rates that reflect anticipated costs and revenue. The funds for capital expenditure (CAPEX) will be determined based on forecasted energy sales and the deficit for debt servicing. The deficit in capital expenditure will be the basis for the computation of possible rate increases.

The forecast of system energy sales utilizes seven (7) years of historical data. The seven (7) years of historical data are examined and evaluated to come up with the best data to formulate a forecast model. As a result, after reviewing historical data using trend line analysis and data analysis, having a horizon is the most feasible way to attain better and more accurate forecast data.

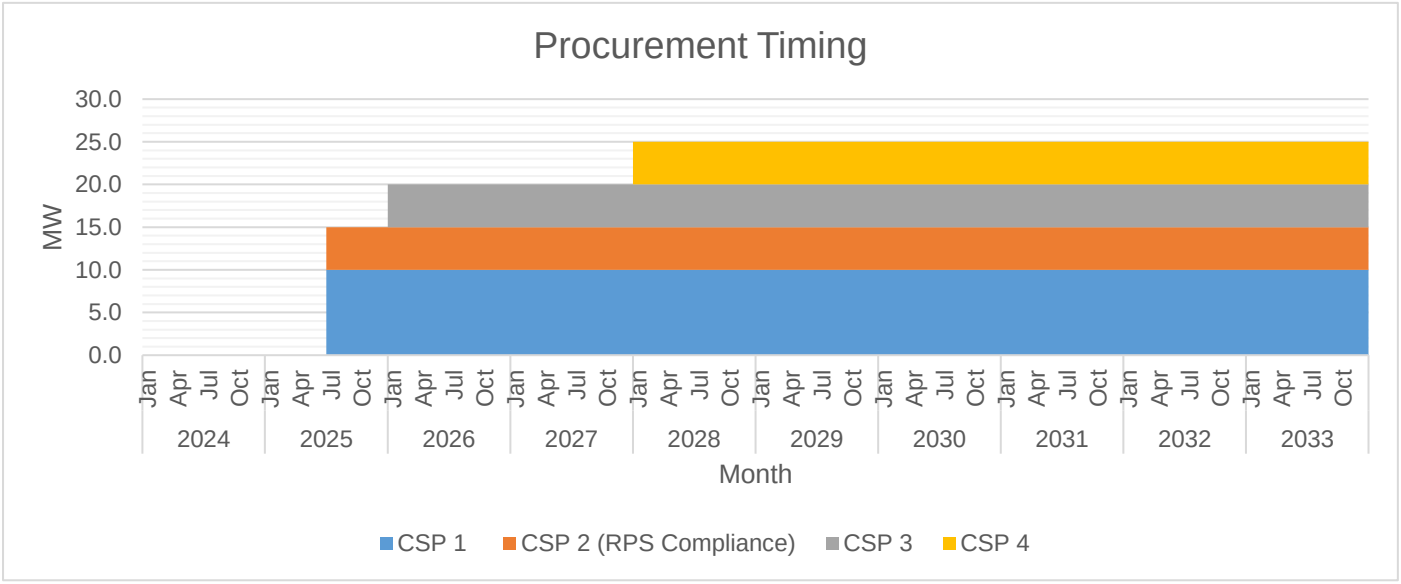


The available supply is generally Below the Peak Demand. This will result in exposure to the spot market. Nevertheless, the cooperative is planning for additional capacity in the near future with preference to RE Eligible plants.

Of the available supply, the largest is 10 MW from PSALM CSEE. This is followed by 4MW from TSI. With the contracting forecast of the cooperative, it is projected that four (4) different CSP are scheduled

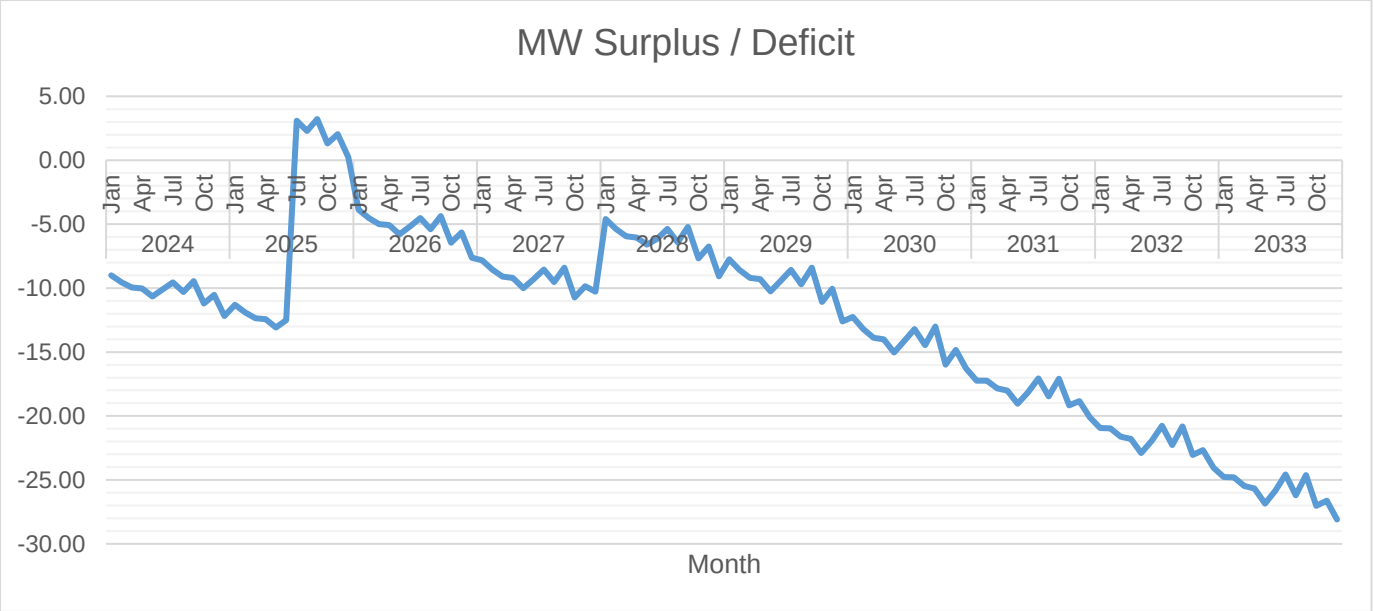


.



As shown above, COTELCO-PPALMA is scheduled to conduct CSP 1 and CSP 2 in the first quarter of 2025 and start by July. The CSP1 is in 10MW base load while the CSP 2 is at 5MW RE Eligible power plant for RPS Compliance. The next two remaining scheduled CSPs will occur in 2026 and 2028 respectively. Currently, COTELCO-PPALMA is already in coordination with the Regulatory Affairs Office (RAO) of the National Electrification Administration (NEA) in compliance with the existing CSP Guidelines on the proper conduct of CSP.

Based on the data forecast of the cooperative the difference between the demand and supply contact is significantly high, this is due to the early termination of the 10MW PSA with San Miguel Consolidated Power Corp. Hence, the total of 15MW CSP for 2025.



Currently, there is under-contacting by approximately 11MW with a peak demand in 2023 of about 25MW and with only 14MW contracted supply from PSALM and Therma South, Inc.

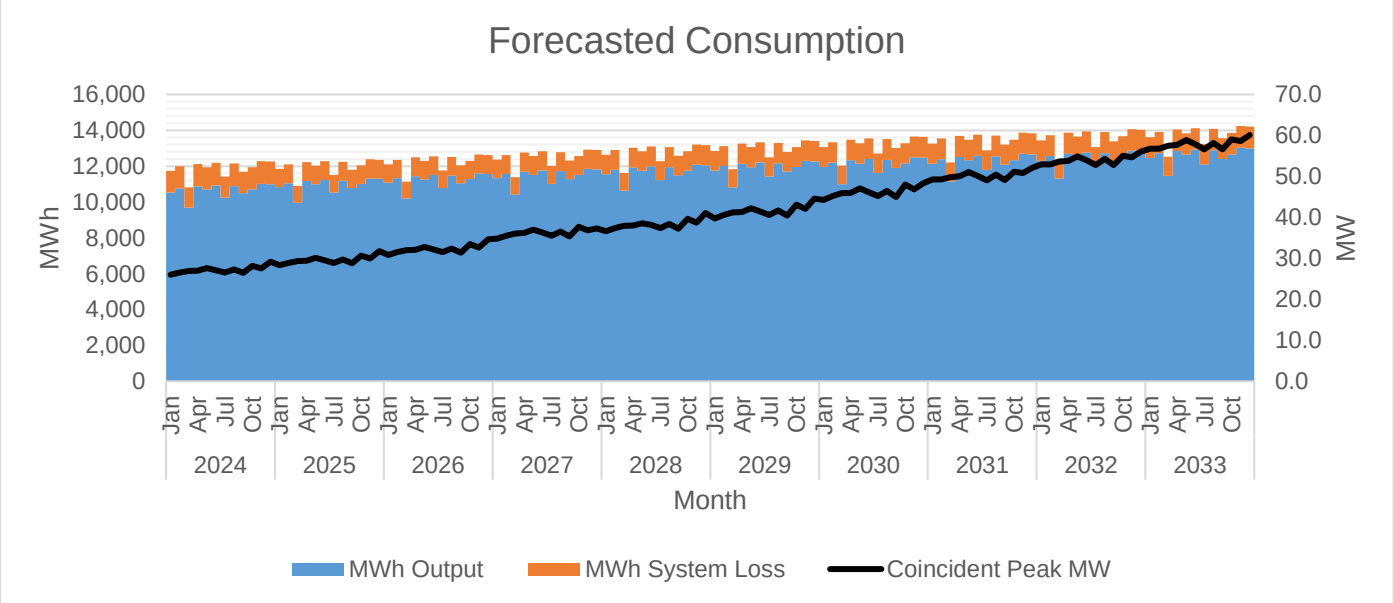
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	11,746	10,535	1,211	0.00%	10.31%
	Feb	11,993	10,756	1,237	0.00%	10.31%
	Mar	10,808	9,693	1,115	0.00%	10.31%
	Apr	12,122	10,872	1,250	0.00%	10.31%
	May	11,934	10,703	1,231	0.00%	10.31%
	Jun	12,184	10,928	1,256	0.00%	10.31%
	Jul	11,416	10,239	1,177	0.00%	10.31%
	Aug	12,145	10,893	1,252	0.00%	10.31%
	Sep	11,692	10,487	1,206	0.00%	10.31%
	Oct	11,939	10,708	1,231	0.00%	10.31%
	Nov	12,283	11,016	1,267	0.00%	10.31%
	Dec	12,254	10,990	1,264	0.00%	10.31%
2025	Jan	11,844	10,827	1,018	0.00%	8.59%
	Feb	12,094	11,054	1,039	0.00%	8.59%
	Mar	10,899	9,962	937	0.00%	8.59%
	Apr	12,224	11,173	1,050	0.00%	8.59%
	May	12,034	11,000	1,034	0.00%	8.59%
	Jun	12,286	11,230	1,056	0.00%	8.59%
	Jul	11,512	10,523	989	0.00%	8.59%
	Aug	12,247	11,195	1,052	0.00%	8.59%
	Sep	11,790	10,777	1,013	0.00%	8.59%
	Oct	12,040	11,005	1,035	0.00%	8.59%
	Nov	12,386	11,321	1,064	0.00%	8.59%
	Dec	12,357	11,295	1,062	0.00%	8.59%
2026	Jan	12,102	11,091	1,011	0.00%	8.35%
	Feb	12,356	11,324	1,032	0.00%	8.35%
	Mar	11,135	10,205	930	0.00%	8.35%
	Apr	12,489	11,446	1,043	0.00%	8.35%
	May	12,295	11,268	1,027	0.00%	8.35%
	Jun	12,553	11,504	1,049	0.00%	8.35%
	Jul	11,762	10,780	982	0.00%	8.35%
	Aug	12,513	11,468	1,045	0.00%	8.35%
	Sep	12,046	11,040	1,006	0.00%	8.35%
	Oct	12,301	11,274	1,027	0.00%	8.35%
	Nov	12,655	11,598	1,057	0.00%	8.35%
	Dec	12,625	11,571	1,055	0.00%	8.35%
2027	Jan	12,365	11,332	1,032	0.00%	8.35%

	Feb	12,625	11,571	1,054	0.00%	8.35%
	Mar	11,377	10,427	950	0.00%	8.35%
	Apr	12,761	11,695	1,066	0.00%	8.35%
	May	12,563	11,514	1,049	0.00%	8.35%
	Jun	12,826	11,755	1,071	0.00%	8.35%
	Jul	12,018	11,014	1,004	0.00%	8.35%
	Aug	12,785	11,718	1,068	0.00%	8.35%
	Sep	12,308	11,280	1,028	0.00%	8.35%
	Oct	12,568	11,519	1,049	0.00%	8.35%
	Nov	12,930	11,850	1,080	0.00%	8.35%
	Dec	12,899	11,822	1,077	0.00%	8.35%
2028	Jan	12,631	11,554	1,077	0.00%	8.52%
	Feb	12,897	11,797	1,099	0.00%	8.52%
	Mar	11,622	10,631	991	0.00%	8.52%
	Apr	13,035	11,924	1,111	0.00%	8.52%
	May	12,833	11,739	1,094	0.00%	8.52%
	Jun	13,102	11,985	1,117	0.00%	8.52%
	Jul	12,276	11,230	1,046	0.00%	8.52%
	Aug	13,060	11,947	1,113	0.00%	8.52%
	Sep	12,573	11,501	1,072	0.00%	8.52%
	Oct	12,839	11,745	1,094	0.00%	8.52%
	Nov	13,208	12,082	1,126	0.00%	8.52%
	Dec	13,177	12,054	1,123	0.00%	8.52%
2029	Jan	12,855	11,760	1,096	0.00%	8.52%
	Feb	13,126	12,007	1,119	0.00%	8.52%
	Mar	11,829	10,820	1,008	0.00%	8.52%
	Apr	13,267	12,136	1,131	0.00%	8.52%
	May	13,061	11,948	1,113	0.00%	8.52%
	Jun	13,335	12,198	1,137	0.00%	8.52%
	Jul	12,495	11,430	1,065	0.00%	8.52%
	Aug	13,293	12,160	1,133	0.00%	8.52%
	Sep	12,797	11,706	1,091	0.00%	8.52%
	Oct	13,067	11,953	1,114	0.00%	8.52%
	Nov	13,443	12,297	1,146	0.00%	8.52%
	Dec	13,412	12,268	1,143	0.00%	8.52%
2030	Jan	13,065	11,951	1,114	0.00%	8.53%
	Feb	13,340	12,202	1,137	0.00%	8.53%
	Mar	12,021	10,996	1,025	0.00%	8.53%
	Apr	13,483	12,334	1,150	0.00%	8.53%
	May	13,274	12,142	1,132	0.00%	8.53%
	Jun	13,552	12,397	1,155	0.00%	8.53%
	Jul	12,698	11,615	1,083	0.00%	8.53%
	Aug	13,509	12,357	1,152	0.00%	8.53%
	Sep	13,005	11,896	1,109	0.00%	8.53%
	Oct	13,280	12,148	1,132	0.00%	8.53%
	Nov	13,662	12,497	1,165	0.00%	8.53%
	Dec	13,630	12,468	1,162	0.00%	8.53%
2031	Jan	13,261	12,130	1,131	0.00%	8.53%
	Feb	13,540	12,385	1,155	0.00%	8.53%
	Mar	12,202	11,161	1,041	0.00%	8.53%
	Apr	13,685	12,518	1,167	0.00%	8.53%
	May	13,473	12,324	1,149	0.00%	8.53%
	Jun	13,755	12,582	1,173	0.00%	8.53%
	Jul	12,888	11,789	1,099	0.00%	8.53%
	Aug	13,712	12,542	1,169	0.00%	8.53%
	Sep	13,200	12,074	1,126	0.00%	8.53%
	Oct	13,479	12,330	1,149	0.00%	8.53%
	Nov	13,867	12,684	1,183	0.00%	8.53%
	Dec	13,834	12,654	1,180	0.00%	8.53%
2032	Jan	13,445	12,298	1,147	0.00%	8.53%
	Feb	13,728	12,557	1,171	0.00%	8.53%
	Mar	12,371	11,316	1,055	0.00%	8.53%
	Apr	13,875	12,692	1,184	0.00%	8.53%
	May	13,660	12,495	1,165	0.00%	8.53%

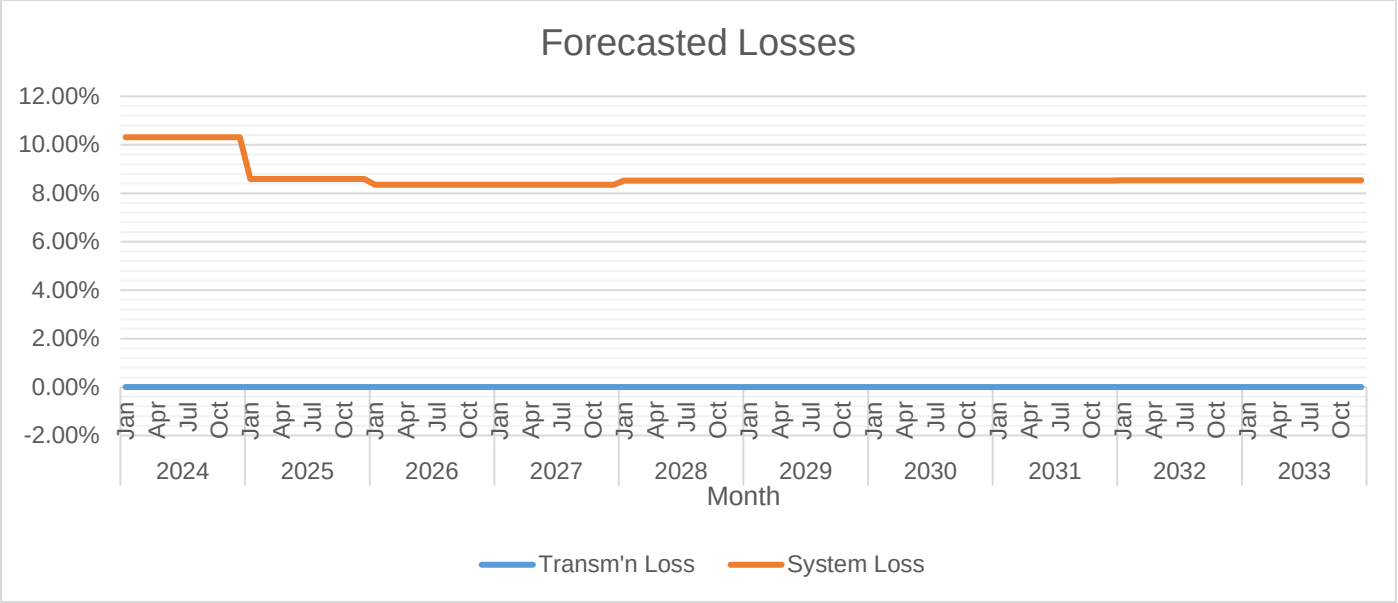
	Jun	13,946	12,756	1,190	0.00%	8.53%
	Jul	13,067	11,953	1,115	0.00%	8.53%
	Aug	13,902	12,716	1,186	0.00%	8.53%
	Sep	13,383	12,242	1,142	0.00%	8.53%
	Oct	13,666	12,501	1,166	0.00%	8.53%
	Nov	14,059	12,860	1,199	0.00%	8.53%
	Dec	14,026	12,830	1,196	0.00%	8.53%
2033	Jan	13,618	12,456	1,162	0.00%	8.53%
	Feb	13,905	12,718	1,186	0.00%	8.53%
	Mar	12,531	11,462	1,069	0.00%	8.53%
	Apr	14,055	12,855	1,199	0.00%	8.53%
	May	13,836	12,656	1,181	0.00%	8.53%
	Jun	14,126	12,921	1,205	0.00%	8.53%
	Jul	13,236	12,107	1,129	0.00%	8.53%
	Aug	14,082	12,880	1,201	0.00%	8.53%
	Sep	13,556	12,399	1,157	0.00%	8.53%
	Oct	13,843	12,662	1,181	0.00%	8.53%
	Nov	14,241	13,026	1,215	0.00%	8.53%
	Dec	14,207	12,995	1,212	0.00%	8.53%

The selected model has an equation of Y = a(t)3 +ct+bt+a, with an R2 statistic of 1.000; adjusted R2 is 0.999. The Mean Absolute Percentage Error (MAPE) is 1.41%. Also, the System Energy Sales requirement was forecasted from 2024 to 2038, with an average growth rate of 8.80% for the first 5 years and 6th to 15th year 15.69%.

Based on the table as a result of the forecast, it is projected that the coincidental peak for these years will take place in December of each year. This is due to the holiday season in which the demand of the industrial and commercial consumers will rise along with the demand of the residential type of consumers.



MWh Output was expected to grow at a rate of 8% annually from 2024 to 2033. This is the result of the annual forecasted number of consumers as well as the forecasted demand and energy consumption.



Transmission Loss is expected to range from 1% to about 2%. With the operation of WESM and considering the geographical location of COTELCO-PPALMA and limited access to the grid, COTELCO-PPALMA is expected to have 1% to 2% transmission loss depending on the line congestions.

For the System Loss of the distribution system of COTELCO-PPALMA, for the year 2023, it has exceeded the system loss cap set by ERC at 10.25% with an average 12% system loss.

Power Supply

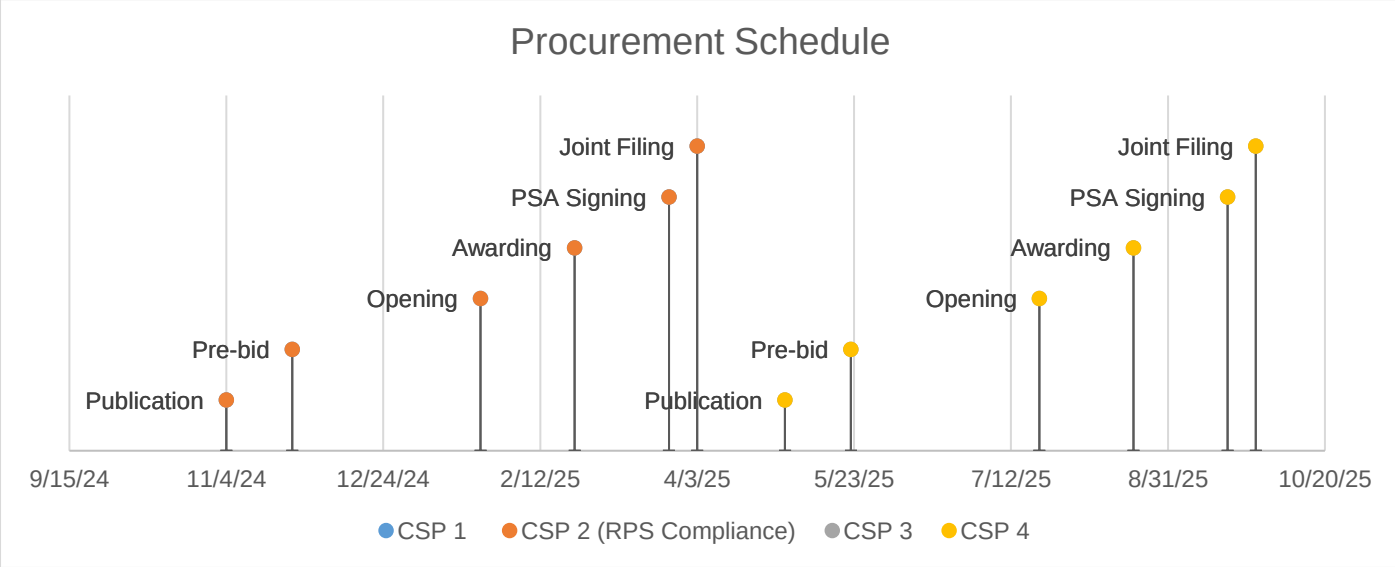
Case No.	Type	GenCo	Minimum MW	Maximum MW	Minimum MWh/yr	Maximum MWh/yr	PSA Start	PSA End
2013-213 RC	Base	Therma South, Inc.	1.60	4.00	12,096	34,560	2/1/2014	2/1/2039

The PSA with Therma South Inc. filed with ERC under Case No. 2013-213 RC was procured in 2014. It was selected to provide for base requirements due to a lack of supply when COTELCO-PPALMA initially operated as a separate entity. Historically, the utilization of the PSA is at 90%.

Case No.	Type	GenCo	Minimum MW	Maximum MW	Minimum MWh/yr	Maximum MWh/yr	PSA Start	PSA End
PSALM CSEE FOR ERC FILING	Intermediate	Power Sector Assets and Liabilities Management Corporation	1.00	10.00	43,200	69,120	12/26/2023	12/25/2025
Embeded Generator 1	Intermediate	Other	0.50	1.00	7,200	8,640	2/26/2023	1/25/2033

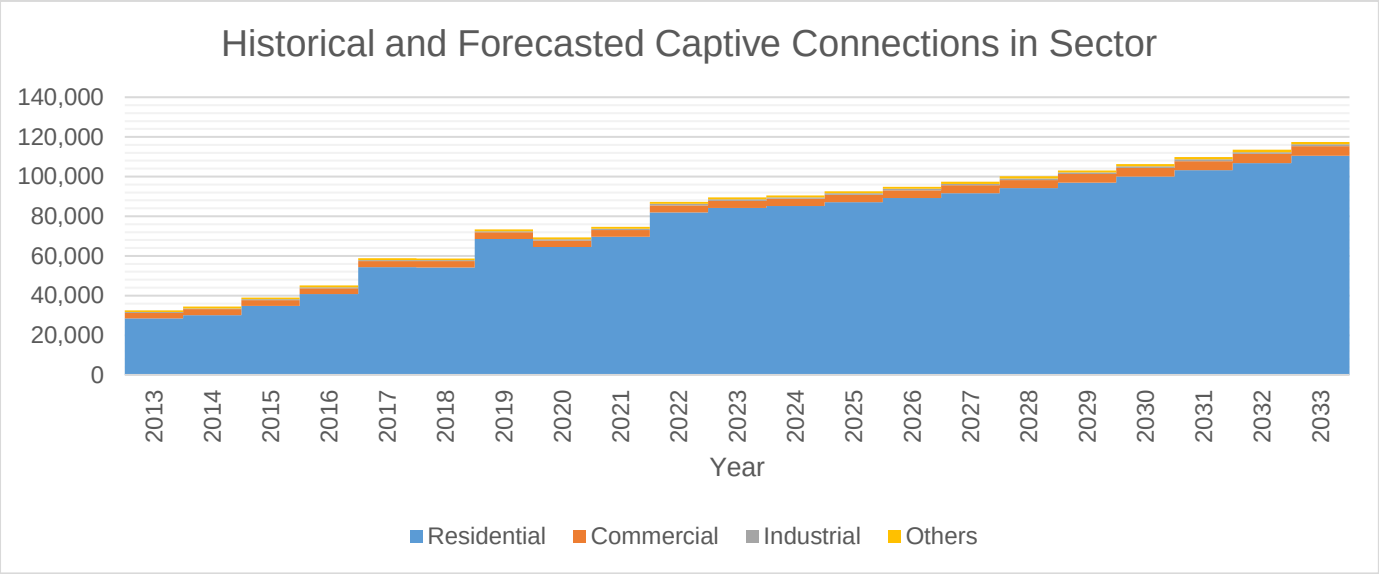
COTELCO-PPALMA was able to renew its contract with PSALM has increased the contracted capacity to 10MW and is currently filing with the ERC. The Embedded Generator is the 3.0MW Alamada Mini Hydro Power Plant by Eurohydro and is still pending approval by the ERC.

	CSP 1	CSP 2 (RPS Compliance)	CSP 3	CSP 4
Type	Intermediate	Base	Base	Base
Minimum MW	5.00	2.00	2.00	2.00
Maximum MW	10.00	5.00	5.00	5.00
Minimum MWh/yr	48,384	17,230	17,230	17,230
Maximum MWh/yr	69,120	30,240	34,560	34,560
PSA Start	07/26/2025	07/26/2025	12/26/2025	12/26/2028
PSA End	7/26/2034	7/26/2034	12/26/2035	12/25/2038
Publication	11/4/2024	11/4/2024	5/1/2025	5/1/2025
Pre-bid	11/25/2024	11/25/2024	5/22/2025	5/22/2025
Opening	1/24/2025	1/24/2025	7/21/2025	7/21/2025
Awarding	2/23/2025	2/23/2025	8/20/2025	8/20/2025
PSA Signing	3/25/2025	3/25/2025	9/19/2025	9/19/2025
Joint Filing	4/3/2025	4/3/2025	9/28/2025	9/28/2025



Above is the indicative schedule for the power supply that is projected to materialize in the future. The solar, hydro, and extension in our PSALM contract (CSEE) are projected for our Peaking, and the Coal Fired Power Plant for the intermediate. Also shown in the table is the Minimum Energy per year per supplier that the cooperative will draw based on its forecasted energy consumption.

Captive Customer Connections



The forecast of the system's number of customers was done using seven (7) years of historical data. The seven (7) years of historical data are extensively examined and evaluated to come up with the best data to formulate a forecast model. As a result, after reviewing historical data using trend line analysis and data analysis, having a horizon is the most feasible way to attain better and more accurate forecast data. This forecasted date, the same as the forecast method for demand and energy consumption is based on the forecasted method used in the e-ICPM as approved by NEA.