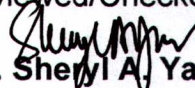# Power Supply Procurement Plan 2024

Sorsogon II Electric Cooperative
(SORECO II)

Prepared by:

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ENGR. JOSEF ERWIN R. TABUENA
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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	8.38	44,039	0	44,039	32,486	12,077	60%	1.19%	0.00%	27.42%
2001	11.08	48,159	0	48,159	35,732	13,175	50%	1.55%	0.00%	27.36%
2002	10.51	50,730	0	50,730	39,963	11,621	55%	1.68%	0.00%	22.91%
2003	12.40	56,141	0	56,141	45,198	10,394	52%	-0.98%	0.00%	18.51%
2004	12.43	59,554	0	59,554	48,684	11,107	55%	0.40%	0.00%	18.65%
2005	12.65	60,821	0	59,804	48,275	11,529	54%	0.00%	1.67%	19.28%
2006	11.49	51,716	0	49,655	40,084	9,571	49%	0.00%	3.99%	19.27%
2007	11.40	58,718	0	56,432	44,649	11,783	57%	0.00%	3.89%	20.88%
2008	12.74	63,046	0	61,407	48,677	12,730	55%	0.00%	2.60%	20.73%
2009	12.79	65,923	0	65,056	53,520	11,536	58%	0.00%	1.31%	17.73%
2010	14.75	73,181	0	72,231	60,502	11,729	56%	0.00%	1.30%	16.24%
2011	13.96	72,340	0	70,928	59,416	11,512	58%	0.00%	1.95%	16.23%
2012	14.59	77,646	0	75,684	65,384	10,300	59%	0.00%	2.53%	13.61%
2013	17.78	86,558	0	84,168	72,934	11,234	54%	0.00%	2.76%	13.35%
2014	17.65	85,054	0	82,839	71,528	11,310	54%	0.00%	2.60%	13.65%
2015	19.48	99,549	0	96,650	84,866	11,783	57%	0.00%	2.91%	12.19%
2016	21.62	112,929	35,072	109,771	96,362	13,410	58%	0.00%	2.80%	12.22%
2017	21.99	125,517	42,604	121,378	107,527	13,852	63%	0.00%	3.30%	11.41%
2018	23.18	134,508	49,585	129,960	114,398	15,562	64%	0.00%	3.38%	11.97%
2019	25.87	140,445	70,581	135,169	118,950	16,219	60%	0.00%	3.76%	12.00%
2020	23.39	142,740	30,789	137,631	121,760	15,870	67%	0.00%	3.58%	11.53%
2021	25.49	159,452	41,204	153,395	135,508	17,887	69%	0.00%	3.80%	11.66%
2022	29.54	171,794	54,784	164,514	145,751	18,763	64%	0.00%	4.24%	11.41%
2023	30.36	190,008	91,915	180,638	161,013	19,626	68%	0.00%	4.93%	10.86%

From a system loss of 27.42% two decades ago, SORECO II has now improved and maintained its system loss below the 12% cap for the last six years. Despite the occurrence of natural calamities that hit its franchise area, like the Typhoon 'Tisoy' last 2019 and followed by the Covid-19 pandemic, SORECO II was able to weather through those and is continuously increasing its sales and demand.

The effect of pandemic was felt hardly by SORECO II in 2020, when its demand decreased by 2.5 MW and its sales recorded a low growth rate compared to the previous years. As businesses, schools, and offices are now back to normal hours of operations, SORECO II's demand and sales has increased significantly.

Historical Consumption
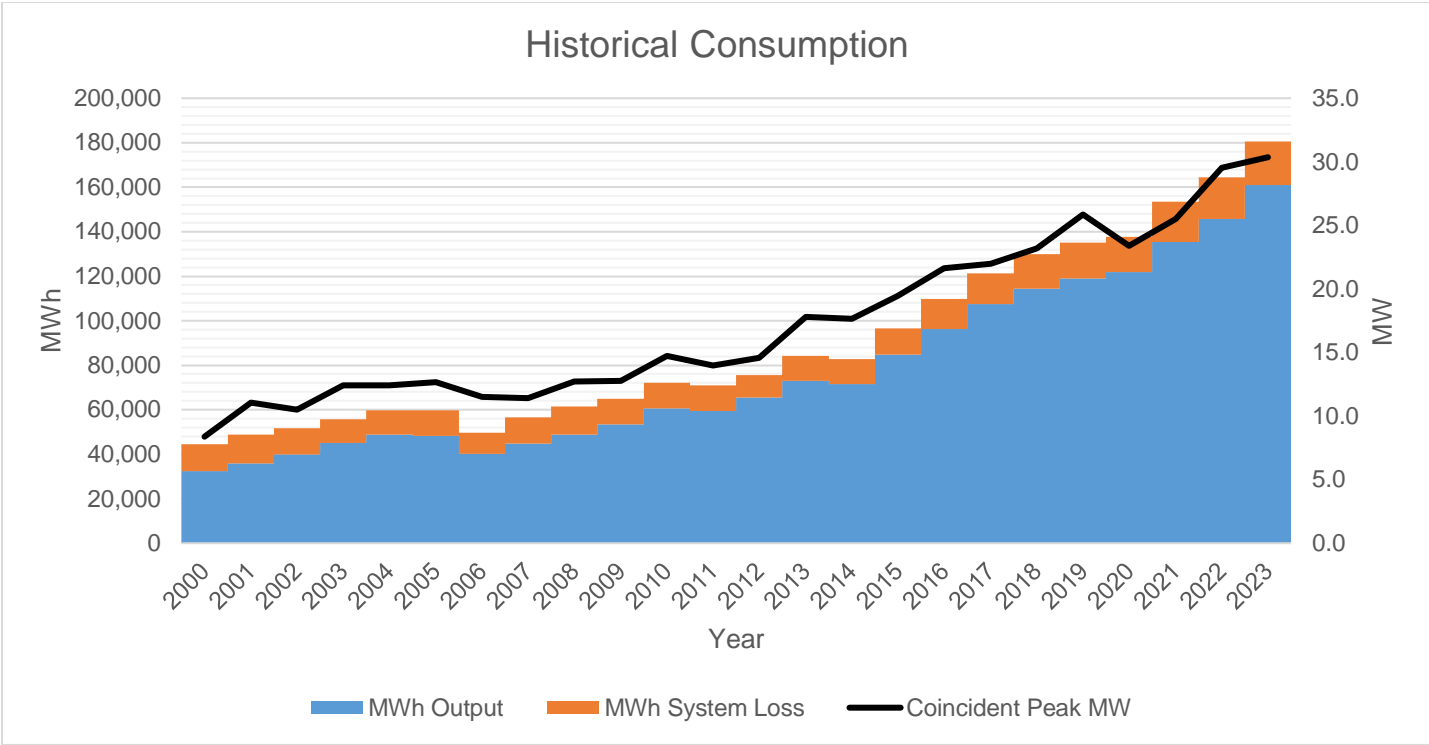
As seen in the graph above, SORECO II's growth in demand has slowed down. SORECO II's offtake energy and sales has increased significantly due to the longer business, school, and office hours resulting to more energy consumption.

Historical Losses
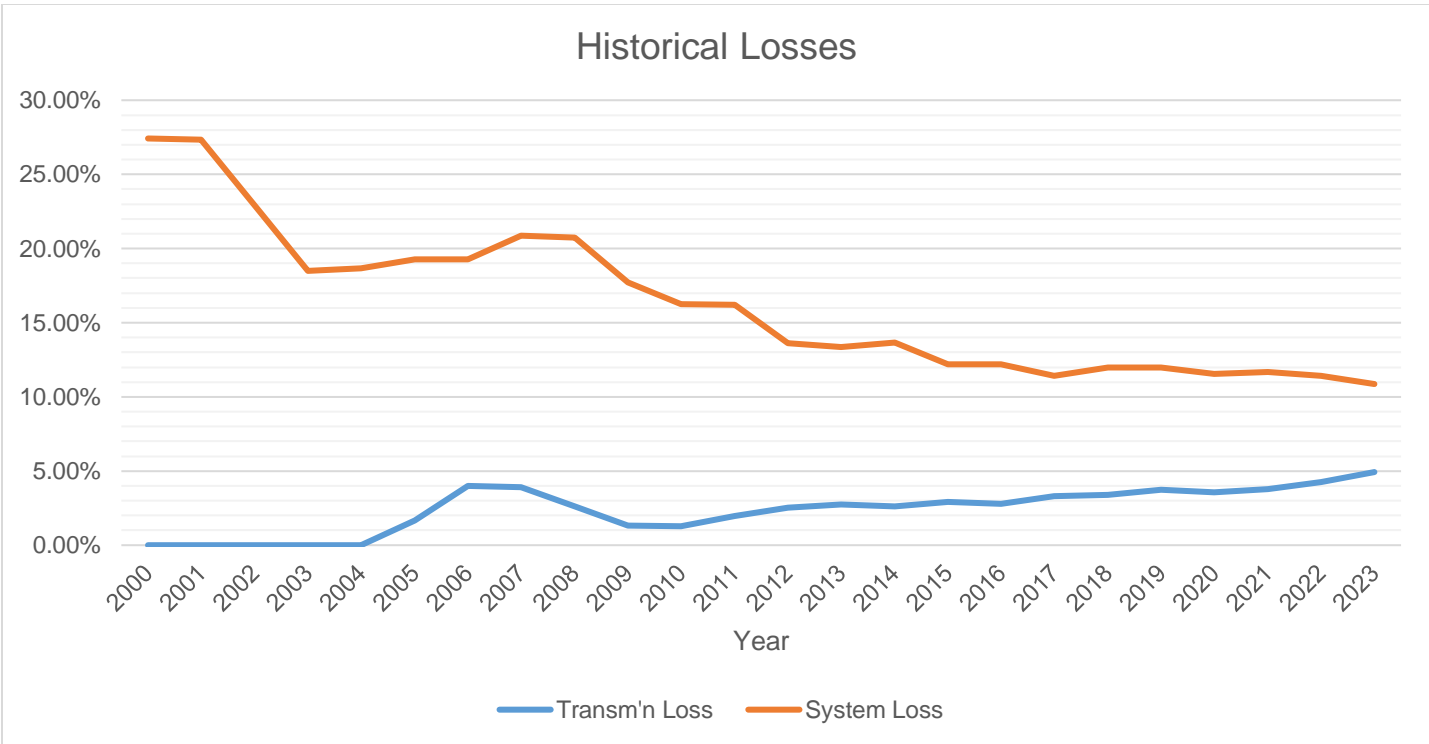
SORECO II's system loss, as seen in the above graph, has been improved dramatically for the last two decades. While transmission losses are kept at around 5%.

Previous Year's Shares of Energy Sales
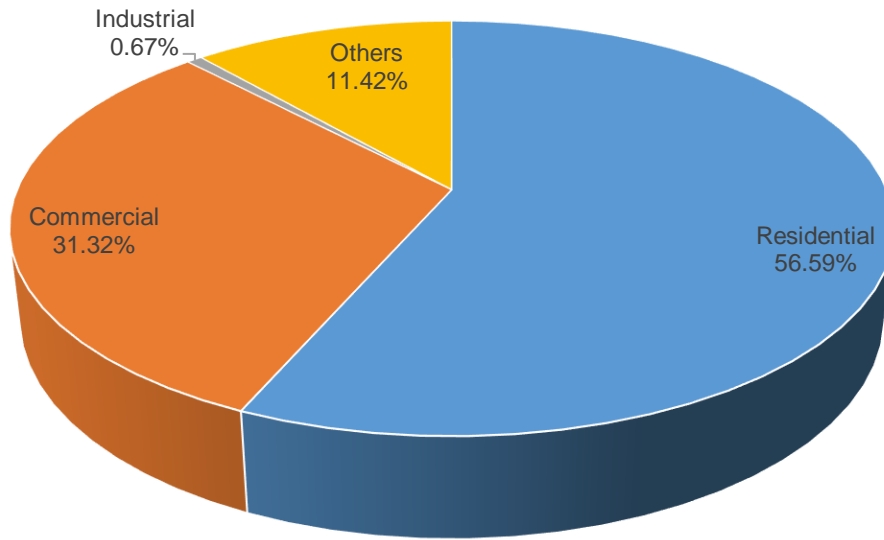
Residential customers account for the bulk of energy sales last year at 56.58%. Commercial customers accounted for 31.32% of SORECO II's customers while industrial customers were only 0.67%.

MWh Offtake for Last Historical Year
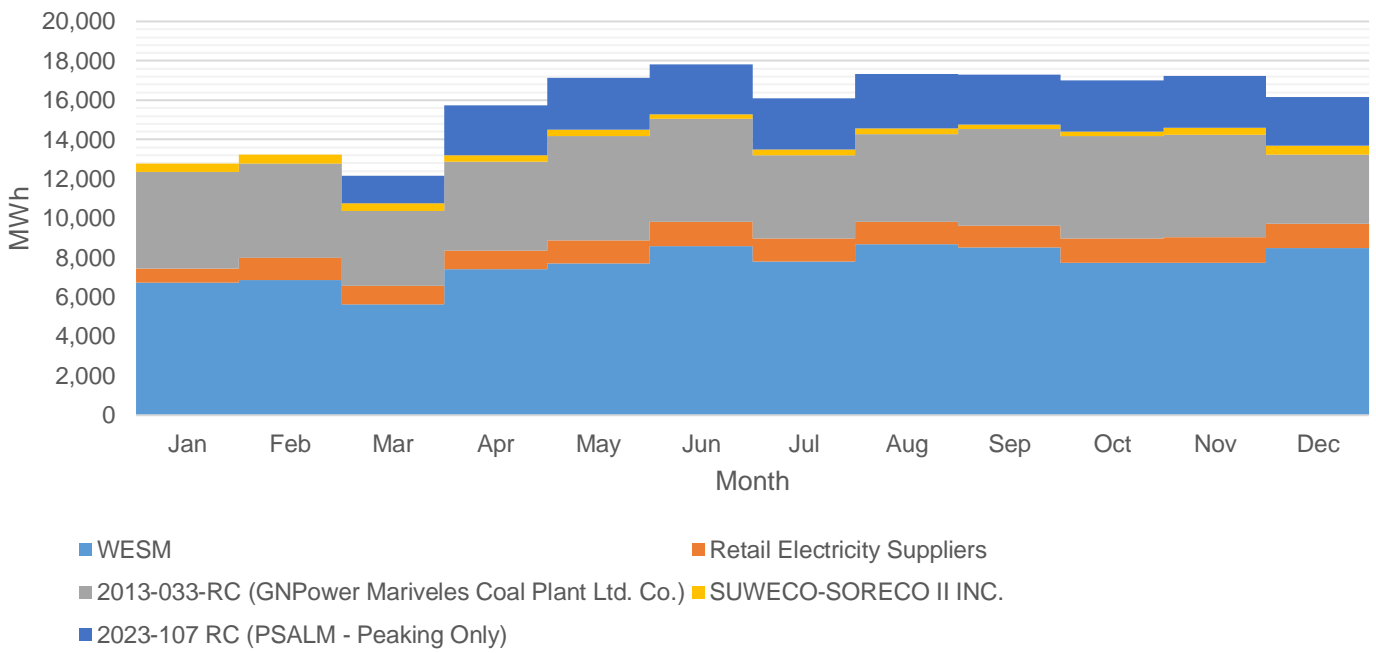
Thirty-one (31) percent of SORECO II's purchased energy was from GNPower Mariveles Coal Plant Ltd. Co (GMCP) or 56,030,936.42 MWh. WESM was the major supplier of SORECO II which amounted to 91,915,240.00 MWh or 50.88% of SORECO II's total purchased energy. The rest was from PSALM (13.66%) and SUWECO-SORECO II, Inc. (2.23%).

WESM Share Over Time
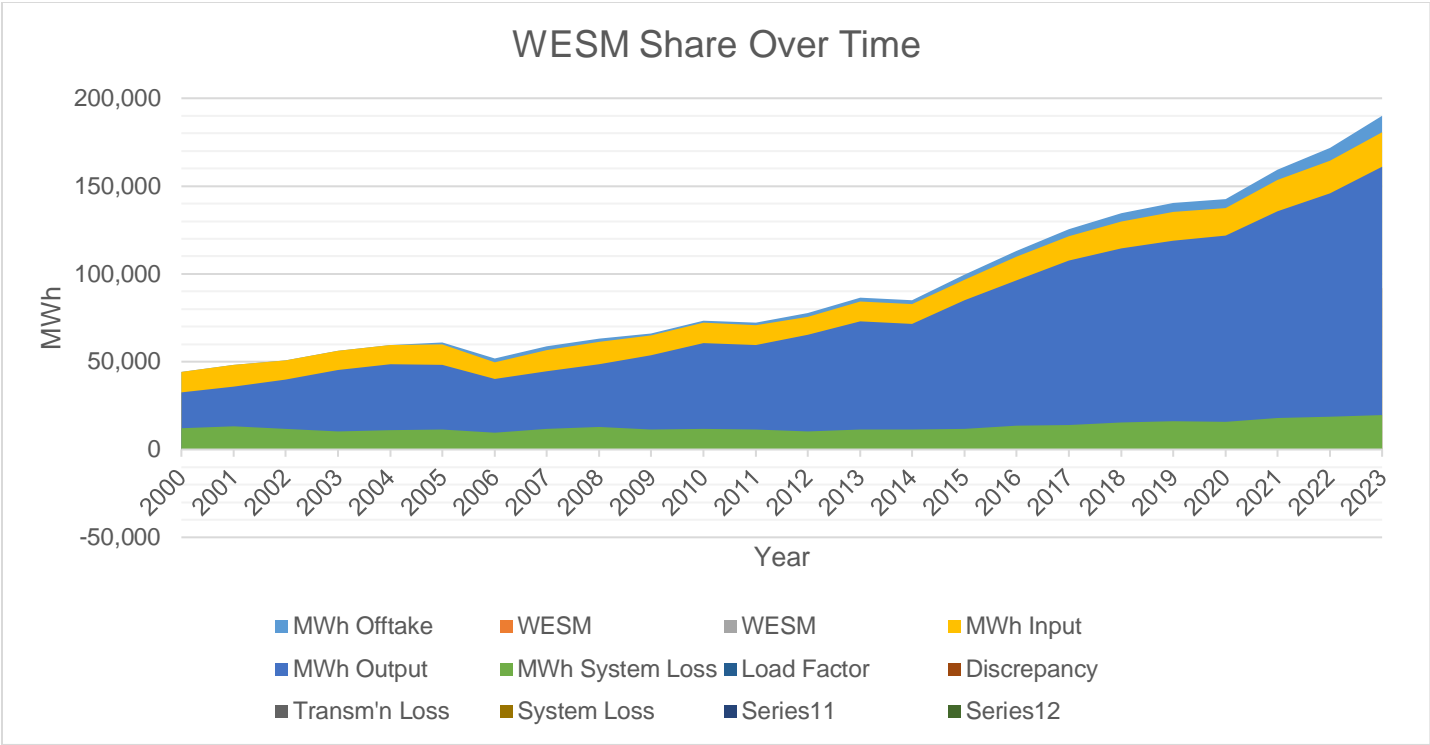
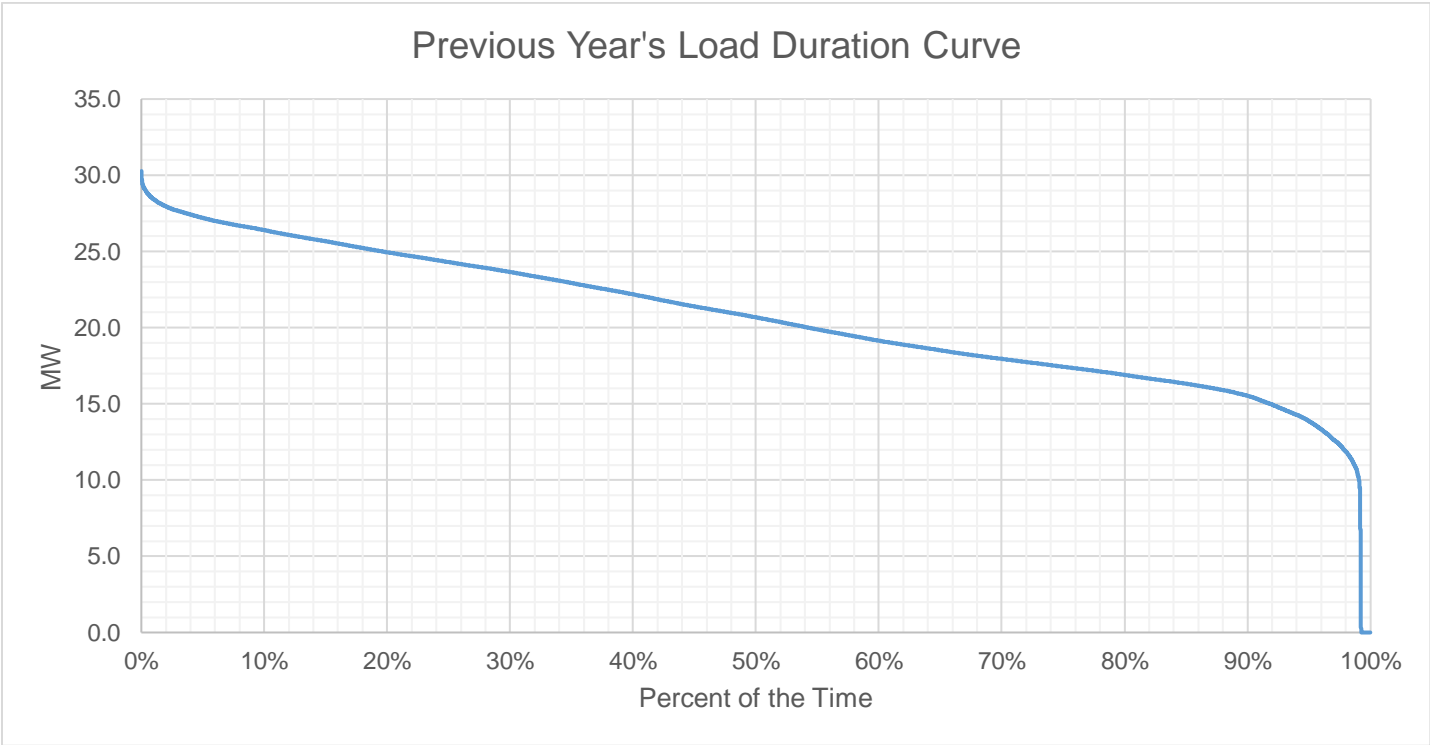As compared to last 2022's data, SORECO II's WESM offtake has increased last 2023 by 37,130.78 MWh. It shows that SORECO II has purchased 50.88% of its power supply last 2023 from the market.

Previous Year's Load Profile

Based on the Load Duration Curve, SORECO II's demand of more than 15 MW happened for more than 90% of the previous year. It is primarily due to its customer types wherein residential class comprises 94.74% of its total. SORECO II's total contracted capacity last December 2023 was 20.6 MW.

Previous Year's Load for Peak MWh and MW Days
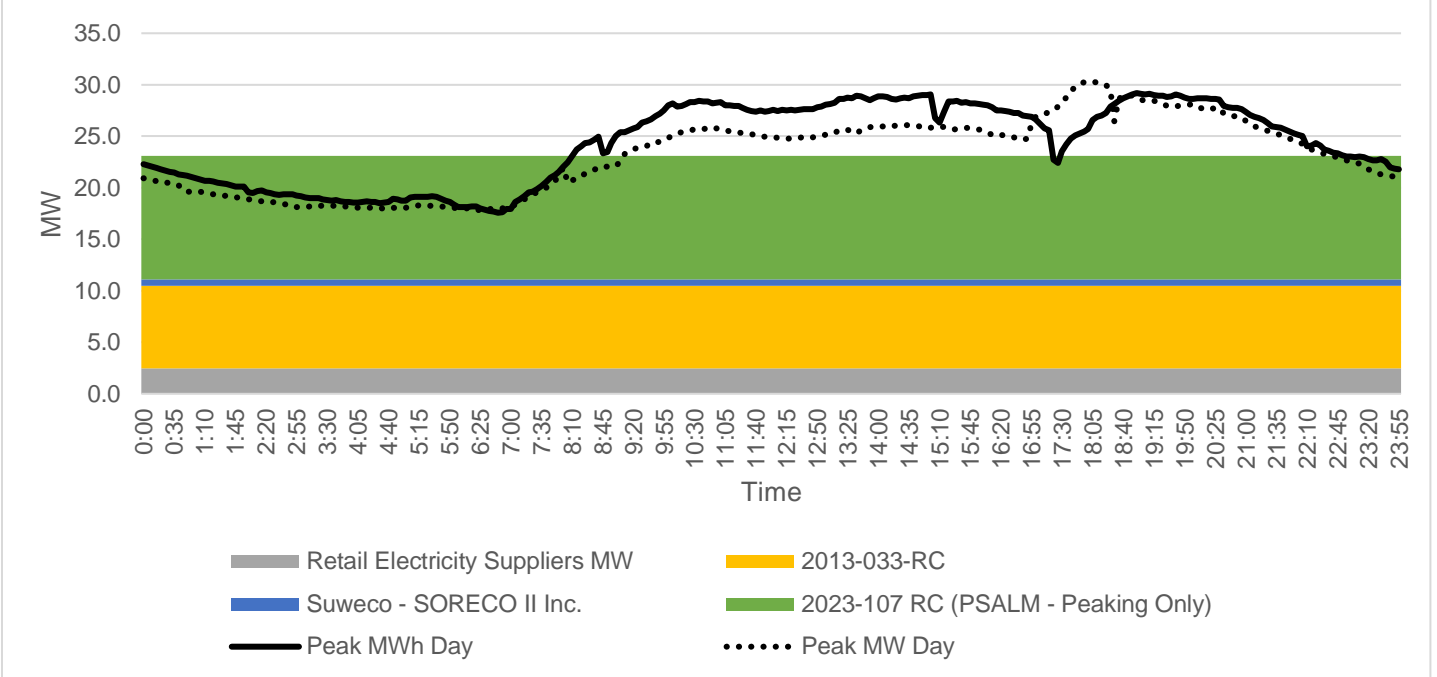
Peak MW occurred between 5:30 pm to 7:15 pm due to the fact that majority of SORECO II's customers are residential type. Peak hours due to commercial and other activities within SORECO II's franchise area happen around 9:00 am to 11:00 am and 1:45 pm to 3:00 pm.

Previous Year's Loading Summary

The Non-Coincident Peak Demand is 30.90 MW, which is around 60% of the total substation capacity of 50 MVA at a power factor of 0.96. The load factor or the ratio between the A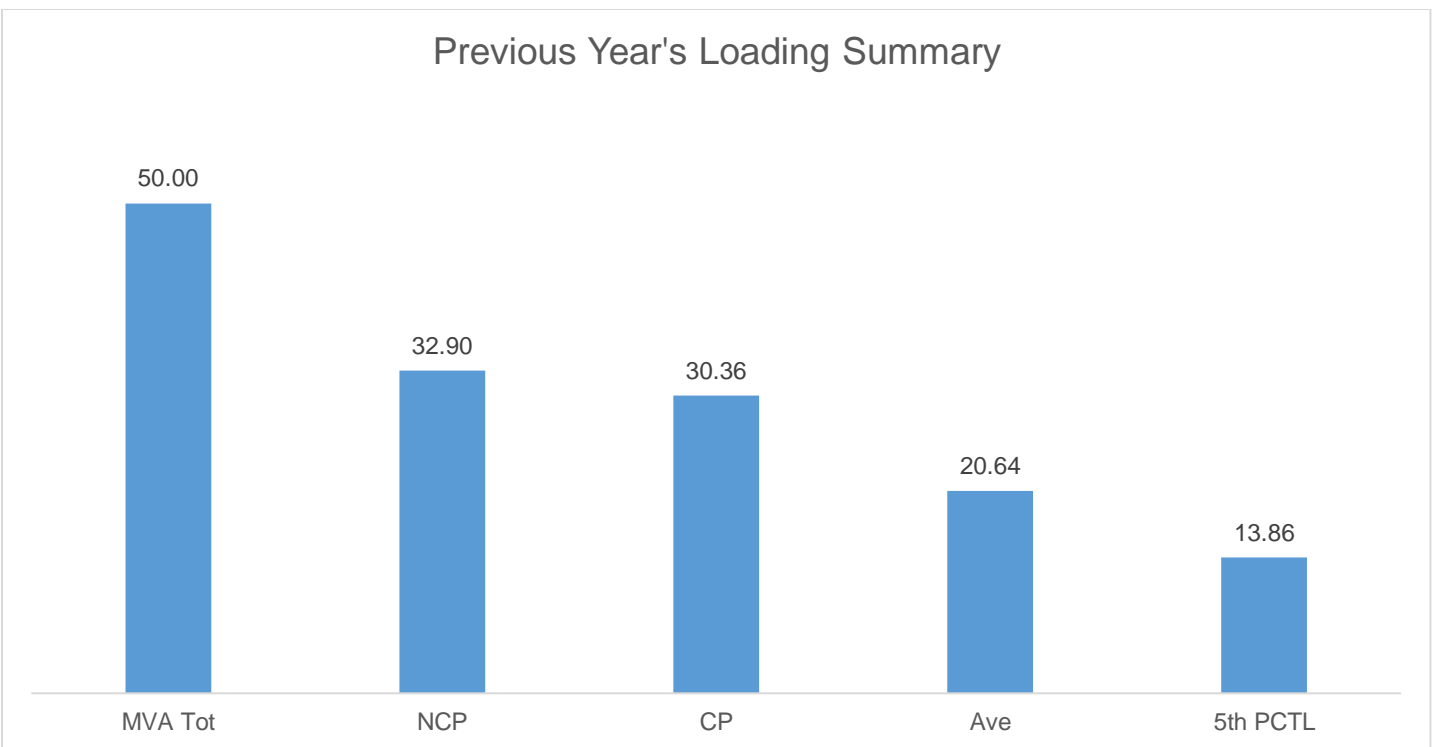verage Load of 20.64 MW and the Non-Coincident Peak Demand is 60.75%. A safe estimate of the true minimum load is the fifth percentile load of 12.73 MW which is 42.10% of the Non-Coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
Balogo Substation T1	20	13.492
Gubat Substation	10	4.857
Balogo Substation T2	10	7.145
Danlog Substation	10	7.405

As seen in the table above, both Balogo Substation T2 and Danlog Substation are near to exceed the ideal loading conditions. SORECO II has already proposed to install additional 10 MVA power

transformer at Danlog Substation to prevent any loading problems and it has plans to transfer load from Balogo T2 to Balogo T1 in case ideal loading has been exceeded.

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	24.71	20.60	0.00	0.000	2.50	93%	93%	-1.61
	Feb	25.08	20.60	0.00	0.000	2.50	91%	91%	-1.98
	Mar	25.47	20.60	0.00	0.000	2.50	90%	90%	-2.37
	Apr	29.05	20.60	0.00	0.000	2.50	78%	78%	-5.95
	May	30.40	20.60	0.00	0.000	2.50	74%	74%	-7.30
	Jun	30.16	20.60	0.00	0.000	2.50	74%	74%	-7.06
	Jul	29.34	20.60	0.00	0.000	2.50	77%	77%	-6.24
	Aug	29.81	20.60	0.00	0.000	2.50	75%	75%	-6.71
	Sep	30.23	20.60	0.00	0.000	2.50	74%	74%	-7.13
	Oct	30.70	20.60	10.00	0.000	2.50	73%	109%	2.40
	Nov	31.00	20.60	10.00	0.000	2.50	72%	107%	2.10
	Dec	29.06	20.60	10.00	0.000	2.50	78%	115%	4.04
2025	Jan	26.05	20.60	10.00	0.000	2.50	87%	130%	7.05
	Feb	26.43	20.60	10.00	0.000	2.50	86%	128%	6.67
	Mar	26.84	8.60	10.00	0.000	2.50	35%	76%	-5.74
	Apr	30.62	8.60	10.00	6.000	2.50	31%	87%	-3.52
	May	32.04	8.60	10.00	6.000	2.50	29%	83%	-4.94
	Jun	31.79	8.60	10.00	6.000	2.50	29%	84%	-4.69
	Jul	30.93	8.60	10.00	6.000	2.50	30%	87%	-3.83
	Aug	31.42	8.60	10.00	6.000	2.50	30%	85%	-4.32
	Sep	31.87	8.60	10.00	6.000	2.50	29%	84%	-4.77
	Oct	32.36	8.60	10.00	6.000	2.50	29%	82%	-5.26
	Nov	32.67	8.60	10.00	6.000	2.50	29%	82%	-5.57
	Dec	30.63	8.60	10.00	6.000	2.50	31%	87%	-3.53
2026	Jan	27.52	8.60	10.00	6.000	2.50	34%	98%	-0.42
	Feb	27.92	8.60	10.00	6.000	2.50	34%	97%	-0.82
	Mar	28.36	8.60	10.00	6.000	2.50	33%	95%	-1.26
	Apr	32.35	8.60	10.00	6.000	2.50	29%	82%	-5.25
	May	33.85	8.60	10.00	6.000	2.50	27%	78%	-6.75
	Jun	33.59	8.60	10.00	6.000	2.50	28%	79%	-6.49
	Jul	32.68	8.60	10.00	8.000	2.50	28%	88%	-3.58
	Aug	33.19	8.60	10.00	8.000	2.50	28%	87%	-4.09
	Sep	33.66	8.60	10.00	8.000	2.50	28%	85%	-4.56
	Oct	34.19	8.60	10.00	8.000	2.50	27%	84%	-5.09
	Nov	34.51	8.60	10.00	8.000	2.50	27%	83%	-5.41
	Dec	32.36	8.60	10.00	8.000	2.50	29%	89%	-3.26
2027	Jan	29.14	8.60	10.00	8.000	2.50	32%	100%	-0.04
	Feb	29.57	8.60	10.00	8.000	2.50	32%	98%	-0.47
	Mar	30.03	8.60	10.00	8.000	2.50	31%	97%	-0.93
	Apr	34.26	8.60	10.00	8.000	2.50	27%	84%	-5.16
	May	35.85	8.60	10.00	8.000	2.50	26%	80%	-6.75
	Jun	35.57	8.60	10.00	8.000	2.50	26%	80%	-6.47
	Jul	34.60	8.60	10.00	8.000	2.50	27%	83%	-5.50
	Aug	35.15	8.60	10.00	8.000	2.50	26%	81%	-6.05
	Sep	35.65	8.60	10.00	8.000	2.50	26%	80%	-6.55
	Oct	36.20	8.60	10.00	8.000	2.50	26%	79%	-7.10
	Nov	36.55	8.60	10.00	8.000	2.50	25%	78%	-7.45

	Dec	34.27	8.60	10.00	8.000	2.50	27%	84%	-5.17
2028	Jan	30.94	8.60	10.00	8.000	2.50	30%	94%	-1.84
	Feb	31.40	8.60	10.00	8.000	2.50	30%	92%	-2.30
	Mar	31.89	8.60	10.00	8.000	2.50	29%	91%	-2.79
	Apr	36.37	8.60	10.00	8.000	2.50	25%	79%	-7.27
	May	38.07	8.60	10.00	8.000	2.50	24%	75%	-8.97
	Jun	37.77	8.60	10.00	8.000	2.50	24%	75%	-8.67
	Jul	36.74	8.60	10.00	8.000	2.50	25%	78%	-7.64
	Aug	37.32	8.60	10.00	8.000	2.50	25%	76%	-8.22
	Sep	37.85	8.60	10.00	8.000	2.50	24%	75%	-8.75
	Oct	38.44	8.60	10.00	8.000	2.50	24%	74%	-9.34
	Nov	38.81	8.60	10.00	8.000	2.50	24%	73%	-9.71
	Dec	36.39	8.60	10.00	8.000	2.50	25%	78%	-7.29
2029	Jan	32.94	8.60	10.00	8.000	2.50	28%	87%	-3.84
	Feb	33.43	8.60	10.00	8.000	2.50	28%	86%	-4.33
	Mar	33.95	0.60	10.00	17.000	2.50	2%	88%	-3.85
	Apr	38.72	0.60	10.00	17.000	2.50	2%	76%	-8.62
	May	40.53	0.60	10.00	17.000	2.50	2%	73%	-10.43
	Jun	40.21	0.60	10.00	17.000	2.50	2%	73%	-10.11
	Jul	39.12	0.60	10.00	17.000	2.50	2%	75%	-9.02
	Aug	39.73	0.60	10.00	17.000	2.50	2%	74%	-9.63
	Sep	40.30	0.60	10.00	17.000	2.50	2%	73%	-10.20
	Oct	40.93	0.60	10.00	17.000	2.50	2%	72%	-10.83
	Nov	41.32	0.60	10.00	17.000	2.50	2%	71%	-11.22
	Dec	38.74	0.60	10.00	17.000	2.50	2%	76%	-8.64
2030	Jan	35.16	0.60	0.00	36.000	2.50	2%	112%	3.94
	Feb	35.68	0.60	0.00	36.000	2.50	2%	110%	3.42
	Mar	36.24	0.60	0.00	36.000	2.50	2%	108%	2.86
	Apr	41.33	0.60	0.00	36.000	2.50	2%	94%	-2.23
	May	43.26	0.60	0.00	36.000	2.50	1%	90%	-4.16
	Jun	42.91	0.60	0.00	36.000	2.50	1%	91%	-3.81
	Jul	41.75	0.60	0.00	36.000	2.50	2%	93%	-2.65
	Aug	42.41	0.60	0.00	36.000	2.50	2%	92%	-3.31
	Sep	43.01	0.60	0.00	36.000	2.50	1%	90%	-3.91
	Oct	43.68	0.60	0.00	36.000	2.50	1%	89%	-4.58
	Nov	44.10	0.60	0.00	36.000	2.50	1%	88%	-5.00
	Dec	41.35	0.60	0.00	36.000	2.50	2%	94%	-2.25
2031	Jan	37.62	0.60	0.00	36.000	2.50	2%	104%	1.48
	Feb	38.18	0.60	0.00	36.000	2.50	2%	103%	0.92
	Mar	38.77	0.60	0.00	36.000	2.50	2%	101%	0.33
	Apr	44.22	0.60	0.00	36.000	2.50	1%	88%	-5.12
	May	46.28	0.60	0.00	36.000	2.50	1%	84%	-7.18
	Jun	45.92	0.60	0.00	36.000	2.50	1%	84%	-6.82
	Jul	44.67	0.60	0.00	36.000	2.50	1%	87%	-5.57
	Aug	45.38	0.60	0.00	36.000	2.50	1%	85%	-6.28
	Sep	46.02	0.60	0.00	36.000	2.50	1%	84%	-6.92
	Oct	46.74	0.60	0.00	36.000	2.50	1%	83%	-7.64
	Nov	47.19	0.60	0.00	36.000	2.50	1%	82%	-8.09
	Dec	44.25	0.60	0.00	36.000	2.50	1%	88%	-5.15
2032	Jan	40.34	0.60	0.00	36.000	2.50	2%	97%	-1.24
	Feb	40.94	0.60	0.00	36.000	2.50	2%	95%	-1.84
	Mar	41.58	0.60	0.00	36.000	2.50	2%	94%	-2.48
	Apr	47.42	0.60	0.00	36.000	2.50	1%	81%	-8.32
	May	49.63	0.60	0.00	36.000	2.50	1%	78%	-10.53
	Jun	49.24	0.60	0.00	36.000	2.50	1%	78%	-10.14

Year	Month								
	Jul	47.91	0.60	0.00	36.000	2.50	1%	81%	-8.81
	Aug	48.66	0.60	0.00	36.000	2.50	1%	79%	-9.56
	Sep	49.36	0.60	0.00	36.000	2.50	1%	78%	-10.26
	Oct	50.12	0.60	0.00	36.000	2.50	1%	77%	-11.02
	Nov	50.60	0.60	0.00	36.000	2.50	1%	76%	-11.50
	Dec	47.45	0.60	0.00	36.000	2.50	1%	81%	-8.35
2033	Jan	43.35	0.60	0.00	36.000	2.50	1%	90%	-4.25
	Feb	43.99	0.60	0.00	36.000	2.50	1%	88%	-4.89
	Mar	44.68	0.60	0.00	36.000	2.50	1%	87%	-5.58
	Apr	50.96	0.60	0.00	36.000	2.50	1%	76%	-11.86
	May	53.33	0.60	0.00	36.000	2.50	1%	72%	-14.23
	Jun	52.91	0.60	0.00	36.000	2.50	1%	73%	-13.81
	Jul	51.48	0.60	0.00	36.000	2.50	1%	75%	-12.38
	Aug	52.29	0.60	0.00	36.000	2.50	1%	74%	-13.19
	Sep	53.04	0.60	0.00	36.000	2.50	1%	72%	-13.94
	Oct	53.86	0.60	0.00	36.000	2.50	1%	71%	-14.76
	Nov	54.38	0.60	0.00	36.000	2.50	1%	71%	-15.28
	Dec	50.99	0.60	0.00	36.000	2.50	1%	75%	-11.89

The table above shows SORECO II's forecasted demand and its existing, pending, and planned PSAs. SORECO II has conducted its first competitive selection process last 2019 for its base load requirement. However, only this January 2024 did SORECO II finally got its clearance from NEA-RAO to proceed in the EVOSS System in order to process the signing and approval of the PSA between SORECO II and GNP. SORECO II has also conducted its first round of CSP for its renewable supply last 2022 but unfortunately no bid was received by the TP-BAC. The cooperative has also conducted negotiated procurement for its renewable energy requirement unfortunately it also has failed. This year, 2024, SORECO II is planning to conducted another CSP for renewable energy requirement with higher contract capacity of 6 MW baseload and is expected to start its PSA on April 2025, if successful.


Forecasted Supply vs Demand
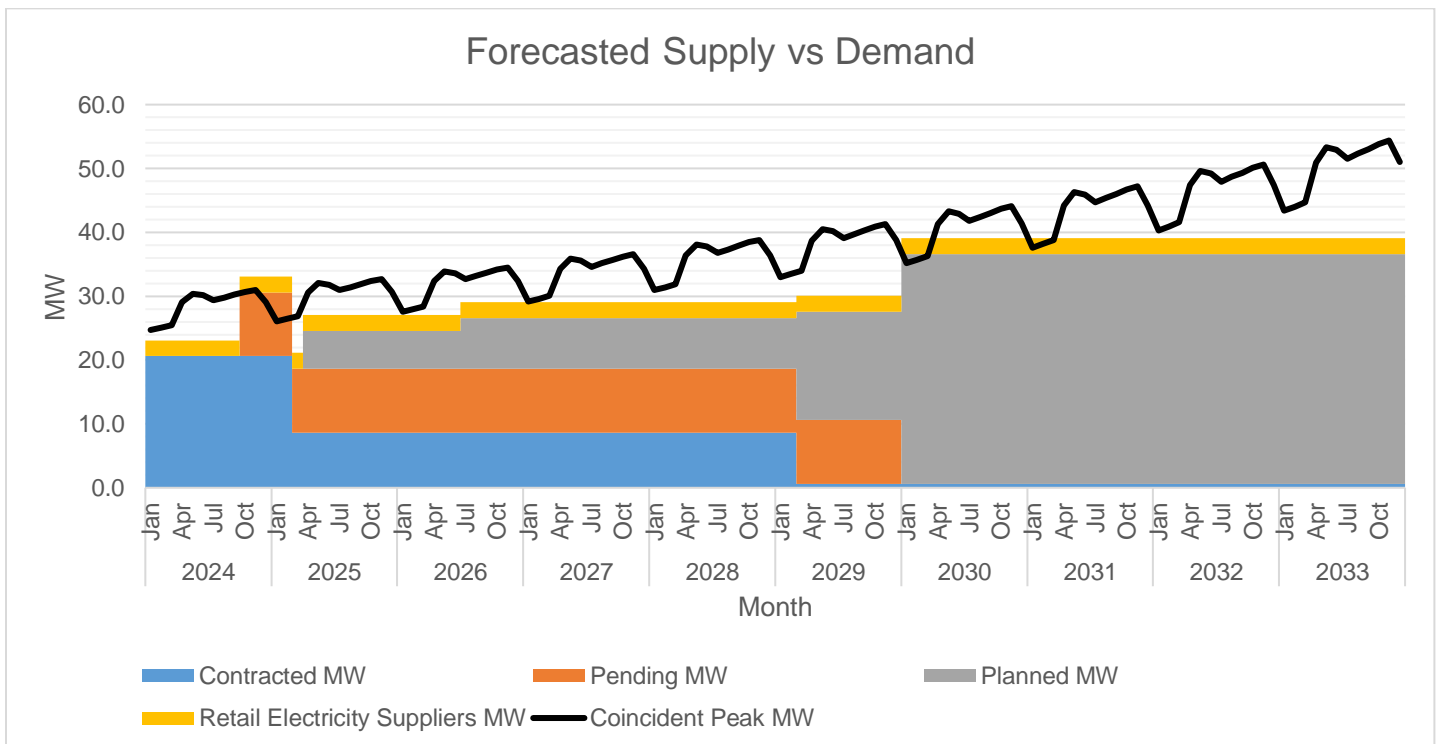
The available supply is generally below the peak demand. It is because SORECO II's customers are primarily residential customers in which peak demand happens only for a short period of time, usually at about 6 to 8 hours per day. Also seen in the figure is that SORECO II's existing power supply agreement ends in 2029 as well as plans to secure new PSAs both from Renewable and Conventional sources of energy.

Forecasted Supply vs Demand
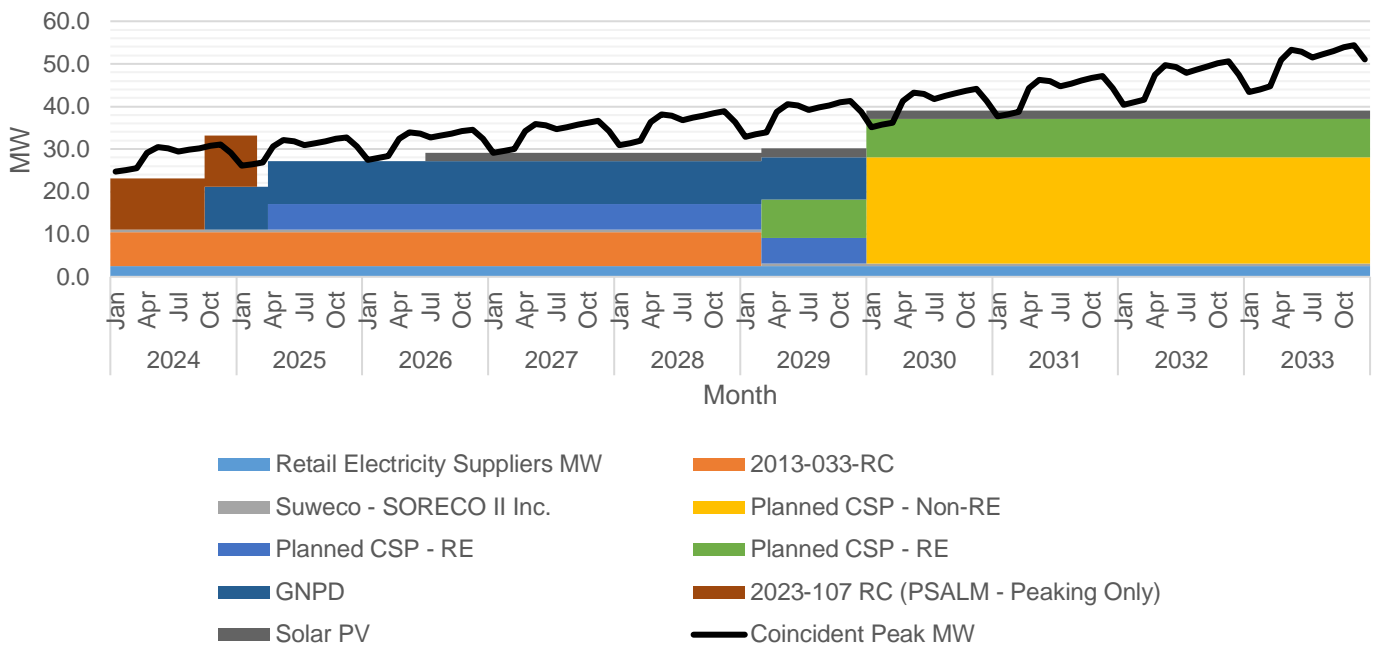
SORECO II's existing contracted power supply is 8 MW from GNPower Mariveles Coal Plant. Ltd. Co. (GMCP) which will end in 2029. There is also a pending 10-MW contract GNPD as a result of a competitive selection process conducted last 2019 and will also end in 2029. SORECO II is also being supplied by an embedded 0.60 MW hydroelectric power plant. Also seen in the above chart, SORECO II is planning to conduct CSP (base load) to secure power supply from 2025 to 2029. It will also be in compliance with the RPS. There is also a plan to install a 2-MW Solar PV in SORECO II's main office which is estimated to be operational on mid-2026. Also, there are plans to secure new PSAs in 2030 wherein almost all of its existing PSAs will expire are in place.


Procurement Timing
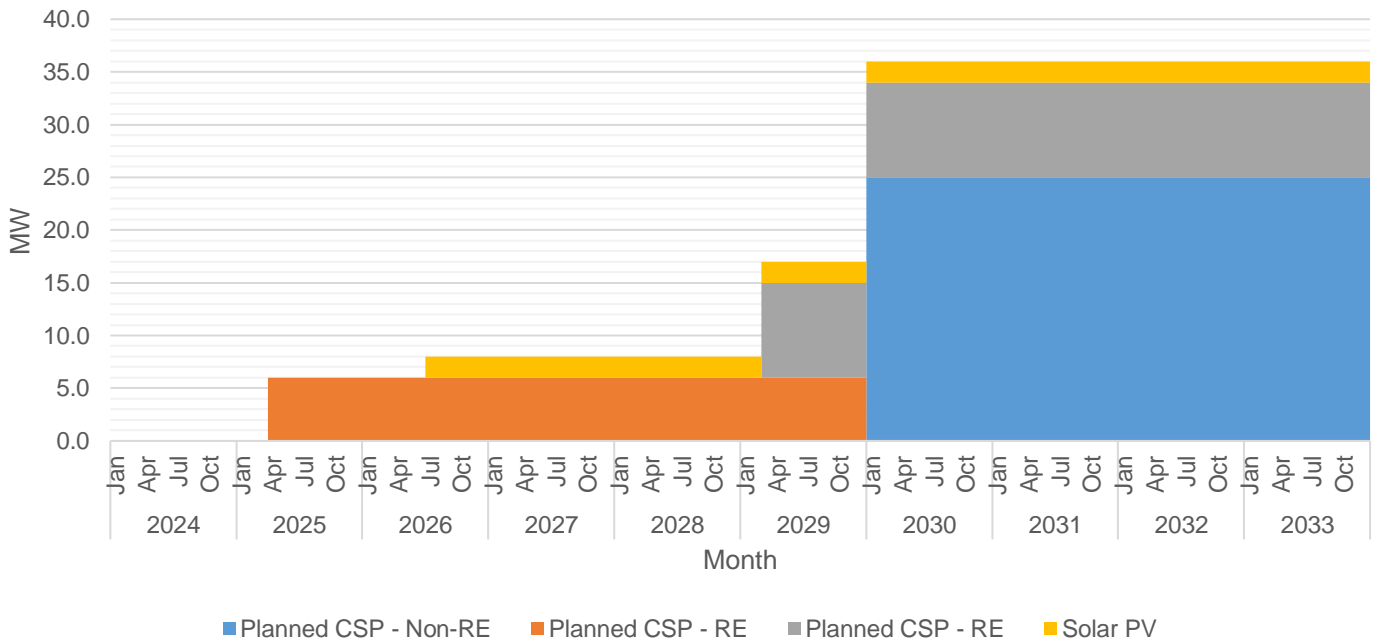
The above chart shows SORECO II's plan to procure its 6-MW power supply from the second quarter of 2025 to December 2029. The CSP will be from renewable sources in compliance of the RPS. Due to the failed CSP and negotiated procurement last 2023 for the planned 2-MW baseload and 2-MW peaking supplies, SORECO II has opted to increase the contract capacity in order to attract more bidders for its renewable power supply requirement starting this 2025.

Contracting Levels
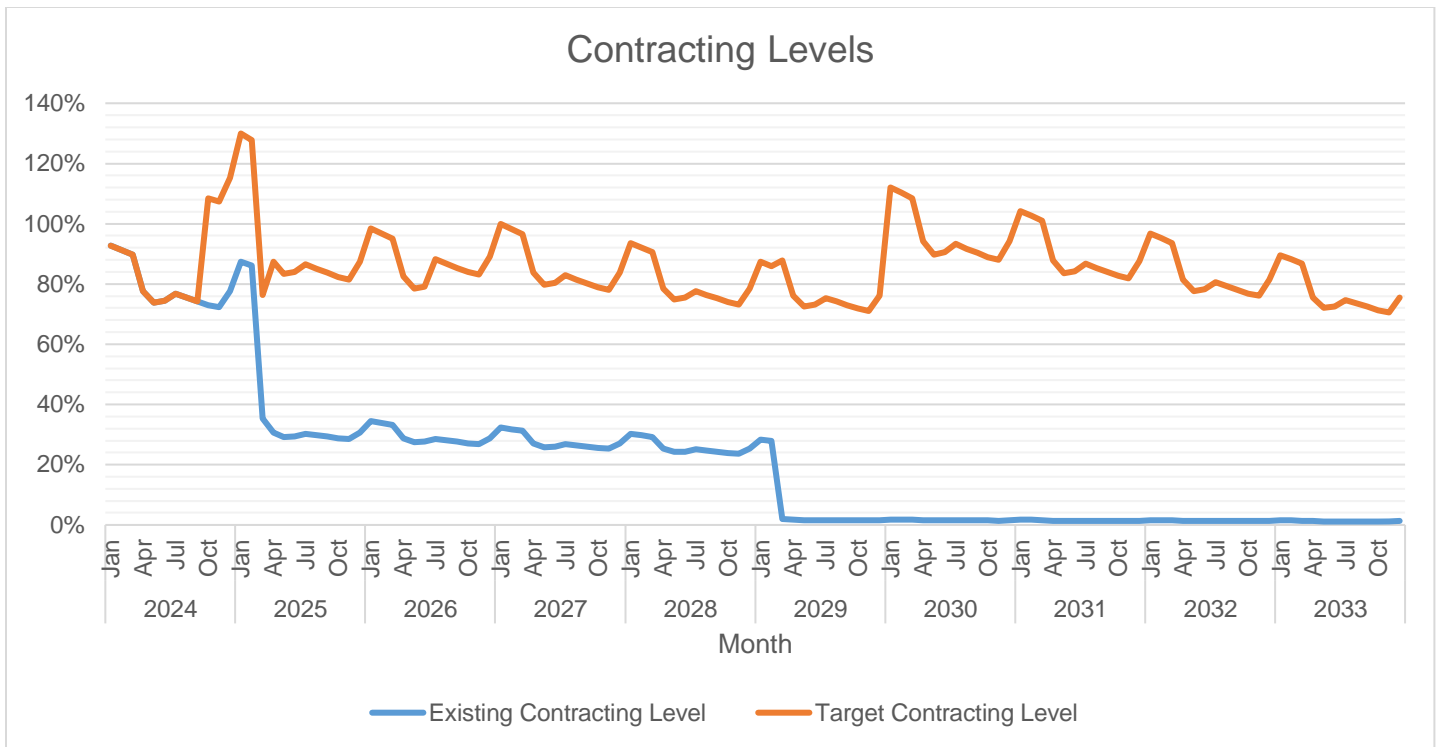
As seen in the above chart, there is a significant discrepancy between SORECO II's existing and target contracting levels. This is due to the fact the SORECO II has a pending PSA and also SORECO II is planning to conduct CSP this 2025, install 2-MW Solar PV in 2026, conduct CSPs in 2029.

MW Surplus / Deficit
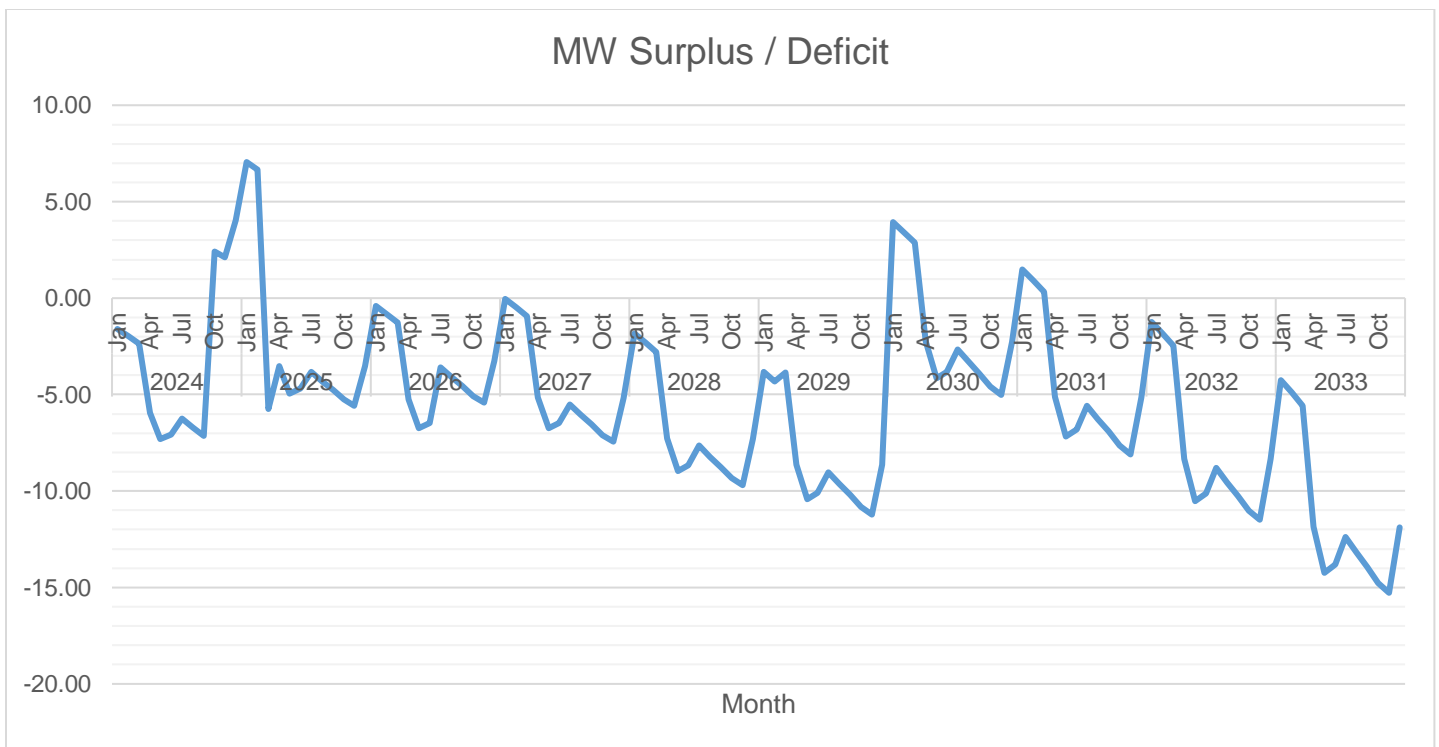
As seen the figure above, SORECO II is forecasted to have a deficit of about 8 MW in May of 2024. This is due to the failure of CSP and negotiated procurement last 2023. To compensate for this, SORECO II is planning to conduct again a CSP with higher contract capacity and better TOR in order to attract more bidders.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	13,250	11,716	1,534	0.00%	11.58%
	Feb	13,707	12,309	1,398	0.00%	10.20%
	Mar	12,786	11,399	1,387	0.00%	10.85%
	Apr	15,905	14,380	1,525	0.00%	9.59%
	May	17,585	15,571	2,014	0.00%	11.45%
	Jun	18,223	16,135	2,087	0.00%	11.45%
	Jul	16,433	14,637	1,796	0.00%	10.93%

	Aug	17,593	15,718	1,874	0.00%	10.65%
	Sep	17,568	15,748	1,820	0.00%	10.36%
	Oct	17,043	15,317	1,726	0.00%	10.13%
	Nov	16,899	15,377	1,522	0.00%	9.01%
	Dec	16,285	15,155	1,131	0.00%	6.94%
2025	Jan	14,366	12,715	1,651	0.00%	11.49%
	Feb	14,860	13,355	1,505	0.00%	10.13%
	Mar	13,864	12,371	1,493	0.00%	10.77%
	Apr	17,235	15,593	1,642	0.00%	9.52%
	May	19,052	16,884	2,168	0.00%	11.38%
	Jun	19,736	17,489	2,247	0.00%	11.39%
	Jul	17,802	15,869	1,933	0.00%	10.86%
	Aug	19,056	17,038	2,018	0.00%	10.59%
	Sep	19,028	17,069	1,959	0.00%	10.30%
	Oct	18,468	16,610	1,858	0.00%	10.06%
	Nov	18,312	16,673	1,639	0.00%	8.95%
	Dec	17,645	16,428	1,217	0.00%	6.90%
2026	Jan	15,591	13,806	1,785	0.00%	11.45%
	Feb	16,127	14,500	1,626	0.00%	10.08%
	Mar	15,050	13,436	1,614	0.00%	10.72%
	Apr	18,692	16,918	1,774	0.00%	9.49%
	May	20,661	18,318	2,343	0.00%	11.34%
	Jun	21,397	18,968	2,429	0.00%	11.35%
	Jul	19,305	17,216	2,090	0.00%	10.82%
	Aug	20,660	18,479	2,181	0.00%	10.56%
	Sep	20,629	18,511	2,118	0.00%	10.27%
	Oct	20,030	18,022	2,008	0.00%	10.03%
	Nov	19,860	18,089	1,772	0.00%	8.92%
	Dec	19,135	17,819	1,316	0.00%	6.88%
2027	Jan	16,932	14,997	1,936	0.00%	11.43%
	Feb	17,516	15,752	1,764	0.00%	10.07%
	Mar	16,350	14,599	1,751	0.00%	10.71%
	Apr	20,285	18,360	1,925	0.00%	9.49%
	May	22,423	19,882	2,542	0.00%	11.34%
	Jun	23,213	20,578	2,635	0.00%	11.35%
	Jul	20,950	18,683	2,267	0.00%	10.82%
	Aug	22,414	20,049	2,366	0.00%	10.55%
	Sep	22,379	20,082	2,297	0.00%	10.27%
	Oct	21,741	19,562	2,179	0.00%	10.02%
	Nov	21,555	19,633	1,922	0.00%	8.91%
	Dec	20,762	19,335	1,427	0.00%	6.87%
2028	Jan	18,397	16,291	2,106	0.00%	11.45%
	Feb	19,037	17,117	1,919	0.00%	10.08%
	Mar	17,772	15,867	1,905	0.00%	10.72%
	Apr	22,022	19,928	2,094	0.00%	9.51%
	May	24,347	21,582	2,765	0.00%	11.36%
	Jun	25,196	22,329	2,866	0.00%	11.38%
	Jul	22,745	20,280	2,466	0.00%	10.84%
	Aug	24,328	21,754	2,573	0.00%	10.58%
	Sep	24,289	21,789	2,499	0.00%	10.29%
	Oct	23,608	21,238	2,370	0.00%	10.04%
	Nov	23,404	21,314	2,090	0.00%	8.93%
	Dec	22,537	20,984	1,553	0.00%	6.89%
2029	Jan	19,992	17,696	2,296	0.00%	11.49%
	Feb	20,695	18,603	2,092	0.00%	10.11%

	Mar	19,323	17,246	2,077	0.00%	10.75%
	Apr	23,911	21,628	2,283	0.00%	9.55%
	May	26,442	23,428	3,015	0.00%	11.40%
	Jun	27,354	24,229	3,125	0.00%	11.42%
	Jul	24,701	22,013	2,688	0.00%	10.88%
	Aug	26,410	23,604	2,806	0.00%	10.62%
	Sep	26,366	23,641	2,725	0.00%	10.34%
	Oct	25,641	23,057	2,584	0.00%	10.08%
	Nov	25,418	23,139	2,279	0.00%	8.97%
	Dec	24,467	22,774	1,693	0.00%	6.92%
2030	Jan	21,725	19,217	2,508	0.00%	11.54%
	Feb	22,501	20,215	2,285	0.00%	10.16%
	Mar	21,011	18,743	2,268	0.00%	10.80%
	Apr	25,961	23,467	2,494	0.00%	9.60%
	May	28,719	25,426	3,293	0.00%	11.47%
	Jun	29,699	26,285	3,413	0.00%	11.49%
	Jul	26,826	23,889	2,936	0.00%	10.95%
	Aug	28,671	25,606	3,065	0.00%	10.69%
	Sep	28,621	25,645	2,976	0.00%	10.40%
	Oct	27,851	25,028	2,822	0.00%	10.13%
	Nov	27,605	25,115	2,489	0.00%	9.02%
	Dec	26,561	24,712	1,849	0.00%	6.96%
2031	Jan	23,603	20,860	2,742	0.00%	11.62%
	Feb	24,461	21,962	2,499	0.00%	10.22%
	Mar	22,844	20,363	2,480	0.00%	10.86%
	Apr	28,180	25,453	2,727	0.00%	9.68%
	May	31,186	27,586	3,601	0.00%	11.55%
	Jun	32,239	28,507	3,732	0.00%	11.58%
	Jul	29,128	25,917	3,211	0.00%	11.02%
	Aug	31,119	27,768	3,351	0.00%	10.77%
	Sep	31,062	27,808	3,254	0.00%	10.48%
	Oct	30,245	27,159	3,086	0.00%	10.20%
	Nov	29,974	27,252	2,722	0.00%	9.08%
	Dec	28,829	26,807	2,022	0.00%	7.01%
2032	Jan	25,633	22,632	3,001	0.00%	11.71%
	Feb	26,584	23,849	2,735	0.00%	10.29%
	Mar	24,828	22,114	2,714	0.00%	10.93%
	Apr	30,577	27,593	2,984	0.00%	9.76%
	May	33,854	29,914	3,940	0.00%	11.64%
	Jun	34,985	30,901	4,084	0.00%	11.67%
	Jul	31,618	28,104	3,514	0.00%	11.11%
	Aug	33,764	30,097	3,667	0.00%	10.86%
	Sep	33,700	30,139	3,561	0.00%	10.57%
	Oct	32,834	29,457	3,377	0.00%	10.29%
	Nov	32,536	29,557	2,979	0.00%	9.16%
	Dec	31,278	29,065	2,212	0.00%	7.07%
2033	Jan	27,822	24,538	3,285	0.00%	11.81%
	Feb	28,877	25,884	2,993	0.00%	10.37%
	Mar	26,971	24,000	2,971	0.00%	11.02%
	Apr	33,159	29,893	3,266	0.00%	9.85%
	May	36,732	32,419	4,313	0.00%	11.74%
	Jun	37,946	33,475	4,471	0.00%	11.78%
	Jul	34,303	30,457	3,846	0.00%	11.21%
	Aug	36,615	32,601	4,014	0.00%	10.96%
	Sep	36,543	32,645	3,898	0.00%	10.67%

|						
	Oct	35,627	31,930	3,697	0.00%	10.38%
	Nov	35,298	32,038	3,261	0.00%	9.24%
	Dec	33,917	31,496	2,422	0.00%	7.14%

The forecasting approach and methodology that we used was the Trend Analysis which requires the latest historical data. The forecasting models formulated were being tested for validity. These statistics were used in the assessment whether the addition of independent variable is valid or not. For trend models, the Adjusted R2 statistic should be at least 99% for the model to be valid. Predictors or independent variables were also being tested for their validity using at least the p-value and t-statistic. For the variable to be valid, the p-value should be lower than 0.1 while the t-statistic should be greater than 2 or less than -2. For all the valid forecasting models formulated, the Mean Absolute Percentage Error (MAPE) was also computed. The MAPE of the final forecasting model should not exceed ±3%. Moreover, the growth rate was also considered significantly in determining the best and final forecast result.

For the other data that passed the statistical criteria using the cubic trend with horizon and/or double horizon by regression, the Adjusted R2, t-statistics and P-value were again computed without the set horizon using matrix and ms-excel solver. In our case, most of our data failed in the computed Adjusted R2. What we did was just get optimum value of Adjusted R2 by using ms-excel solver while the t-statistics and P-value should pass as the minimum requirement. The MAPE and growth rate were also taken into significant considerations.

One of the outputs of the forecasts conducted are in the table above. It would be seen in the table that SORECO II's system loss is on the down trend considering that the growth rate of forecasted energy sales is higher than that of energy offtake.

SORECO II based its forecasted purchased energy (MWh Offtake) on its existing and proposed bilateral contracts from PSAs (including those for CSP). The contracted demand is multiplied by the number of days in a billing month multiplied by the number of hours of utilization. The sum of these purchased energy from bilateral contracts is then subtracted by the MWh Output. The result is then inputted in the MWh purchased from the WESM. This enables SORECO II to simulate the energy to be purchased from its bilateral contracts as well as the possible kwh rates per month.

With this method of forecasting the MWh offtake resulted in the zero-transmission loss in the forecast. SORECO II does not conduct forecasting for transmission loss due to unavailability of data (e.g. plant data from power suppliers).
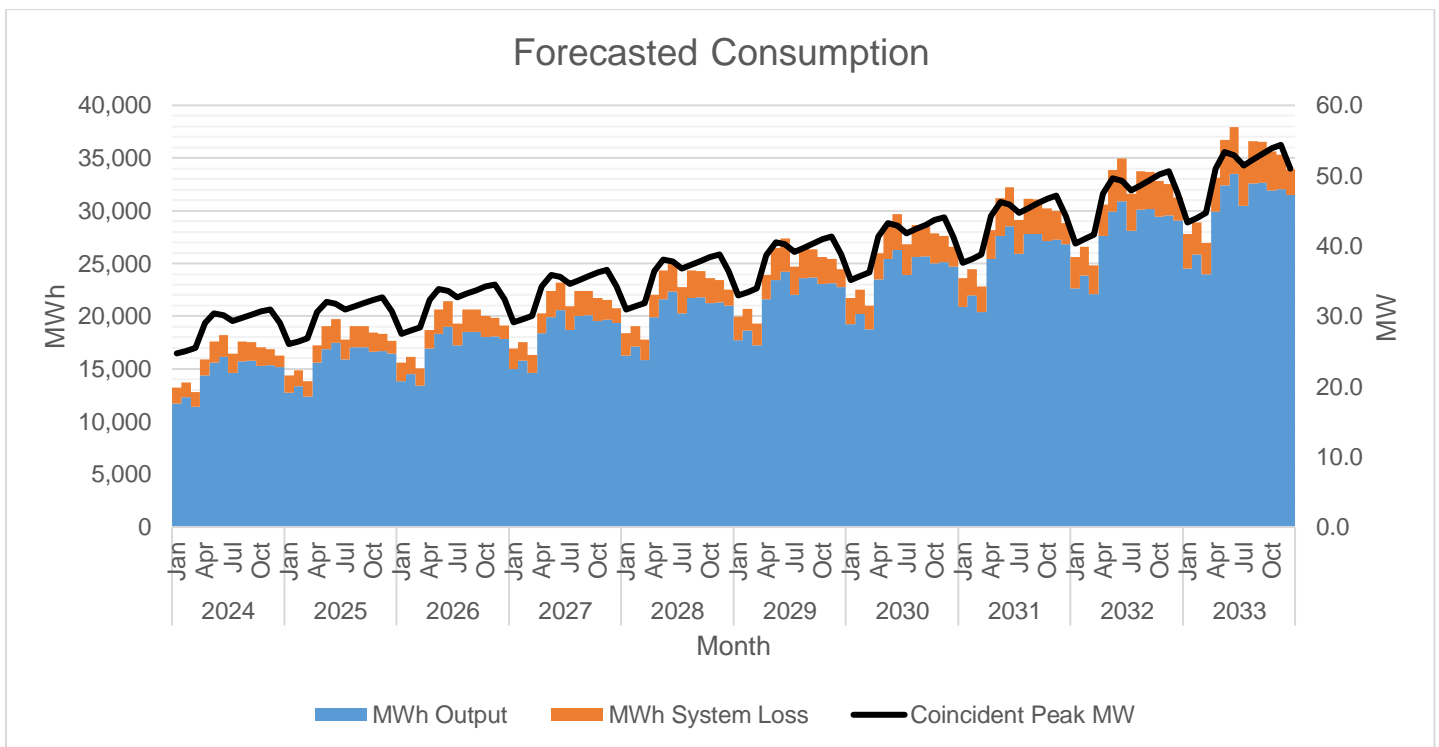
MWh Output was expected to grow at a rate of 8% annually.
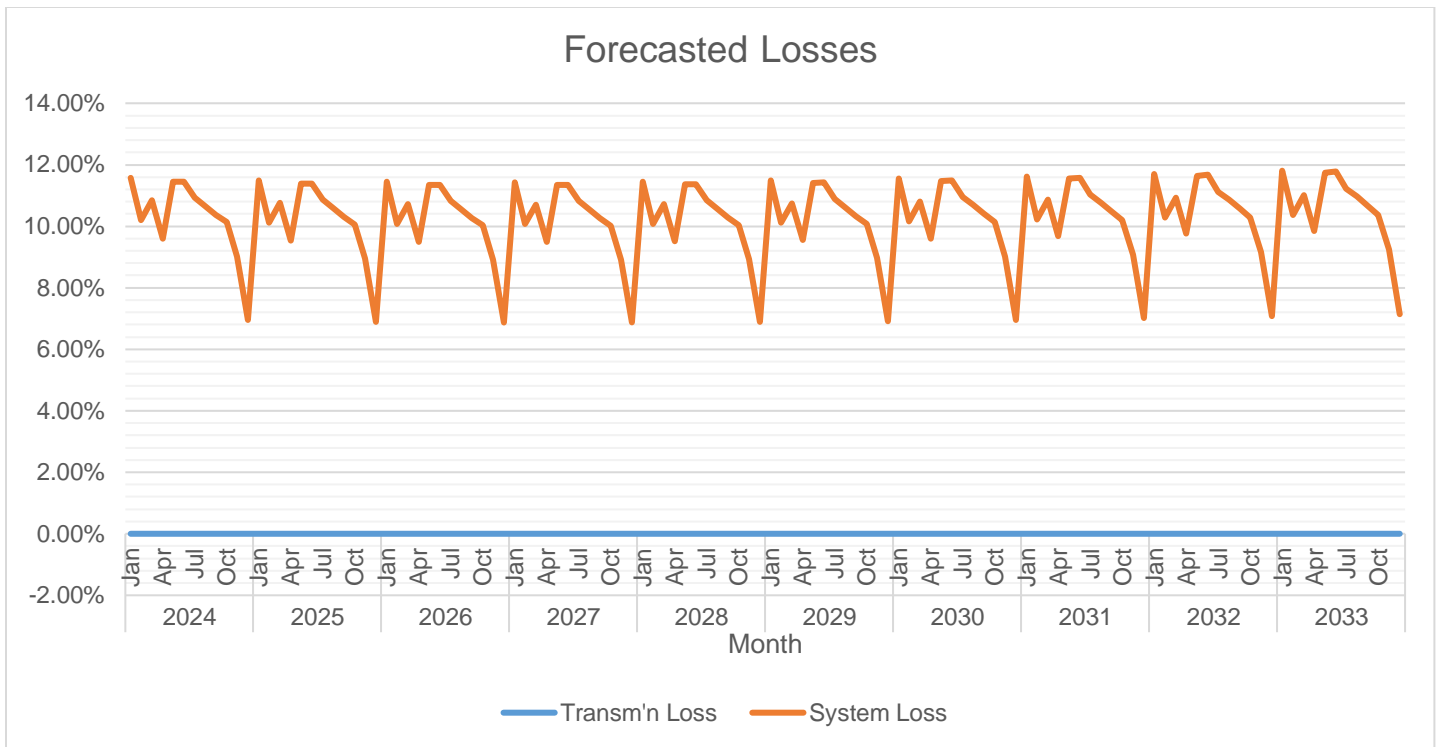
Forecasted Losses

System loss is forecasted to be on down trend which will be about 10.26% in 2024. However, based on the historical data, it is projected that SORECO II's system loss will be above 11% in at least 3 months for 2024. For the rest of the year, SORECO II's system loss is below 12% with its lowest at 6.94%. SORECO II does not forecast transmission loss due to the unavailability of data (e.g. plant data from power suppliers).

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2013-033-RC	Base	GN Power Mariveles Coal Plant Ltd.	4.30	53,865	12-26-2012	2-25-2029
Suweco - SORECO II Inc.	Intermediate	SUWECO - SORECO II, Inc.	0.00	0	9-26-2013	12-26-2033
2023-107 RC	Peaking	Power Sector Assets and Liabilities Management Corporation	0.00	0	2-26-2023	2-25-2025

SORECO II's Power Supply Agreement (2013-033RC) with GNPower Mariveles Coal Plant Ltd. Co. (GMCP) started last December 26, 2012 with tariff structure and capacity factor pricing table. It will end on February 25, 2029. This 11-MW baseload PSA diminished to 8 MW last 2019 until 2029 as part of the contract, however while SORECO II was conducting its Competitive Selection Process (CSP), it was able to negotiate additional 8 MW of contracted capacity to minimize SORECO II's exposure to the spot market. SORECO II pays SUWECO – SORECO II, Inc. Php7.00/kWhr. There is no indicated contract end for the electricity supply of SOWECO – SORECO II, Inc., based on its Memorandum of Agreement.

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
GNPD	Base	GN Power Dinginin	0.00	0	9-26-2024	12-25-2029

The table above shows SORECO II's pending PSA as a result of the conducted CSP. The price per kwhr is based on the capacity factor pricing table as provided in the bid documents. There is no required minimum energy offtake in the Terms of Reference during the conduct of the CSP.

	Aggregation	Planned CSP - RE	Planned CSP - RE	Solar PV
Type	Base	Base	Base	Peaking
Maximum MW	25.00	6.00	9.00	2.00
Maximum MWh/yr	219,000	52,560	78,840	5,840
Minimum MW	12.50	4.50	4.50	1.50
Minimum MWh/yr	109,500	39,420	39,420	4,380
PSA Start	12-26-2029	3-26-2025	3-26-2029	6-26-2026
PSA End	12-25-2039	12-25-2029	12-25-2039	6-25-2046
Publication	6-1-2029	11-1-2024	9-1-2028	12-1-2025
Pre-bid	6-22-2029	11-22-2024	9-22-2028	12-22-2025
Opening	8-21-2029	1-21-2025	11-21-2028	2-20-2026
Awarding	9-20-2029	2-20-2025	12-21-2028	3-22-2026
PSA Signing	10-20-2029	3-22-2025	1-20-2029	4-21-2026
Joint Filing	10-29-2029	3-31-2025	1-29-2029	4-30-2026

Procurement Schedule
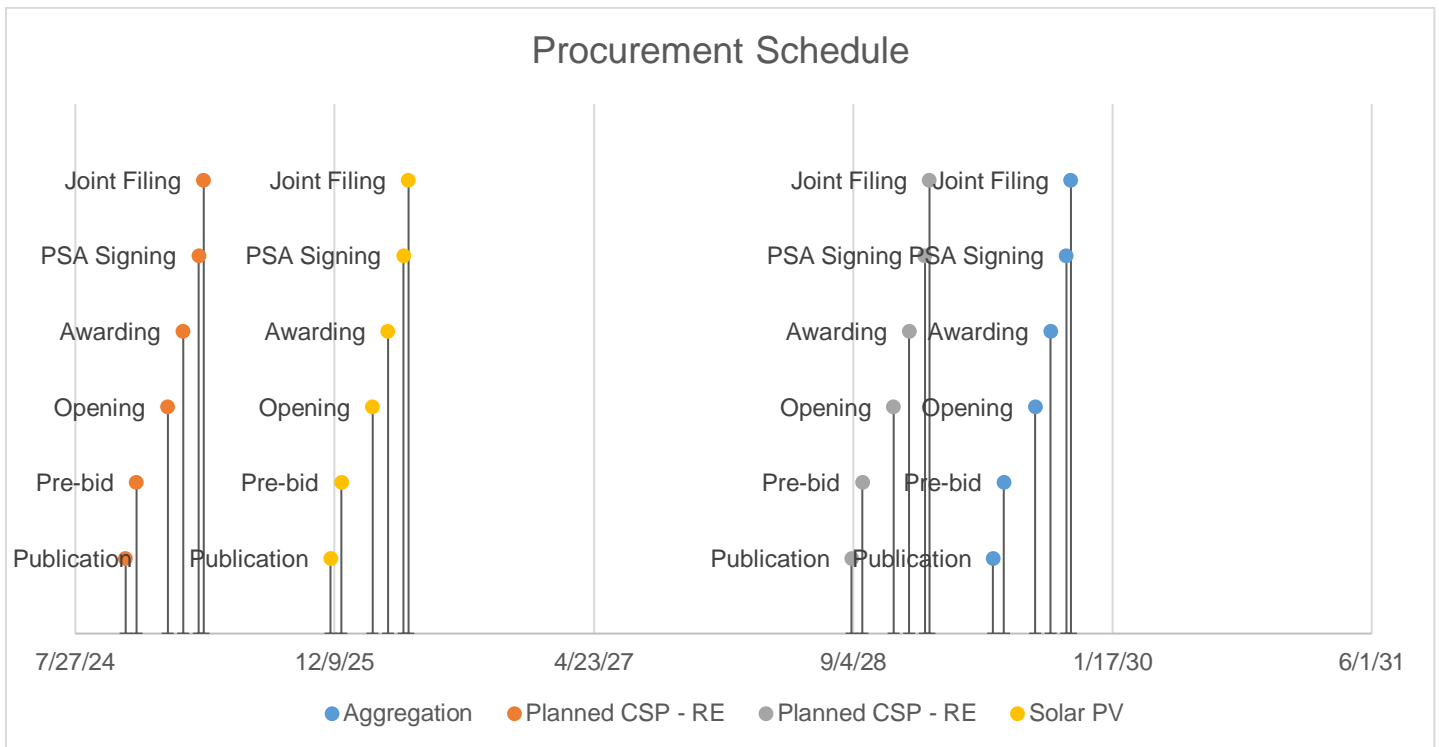
The above table shows the tentative timeline of SORECO II's planned Competitive Selection Process. SORECO II plans to conduct CSP this 2025 for a 5 – year 6-MW RE supply and another CSP will be conducted before the end of 2029 for a 10 – year 25-MW Conventional supply and 9-MW RE supply.

Captive Customer Connections

Historical and Forecasted Captive Connections in Sector
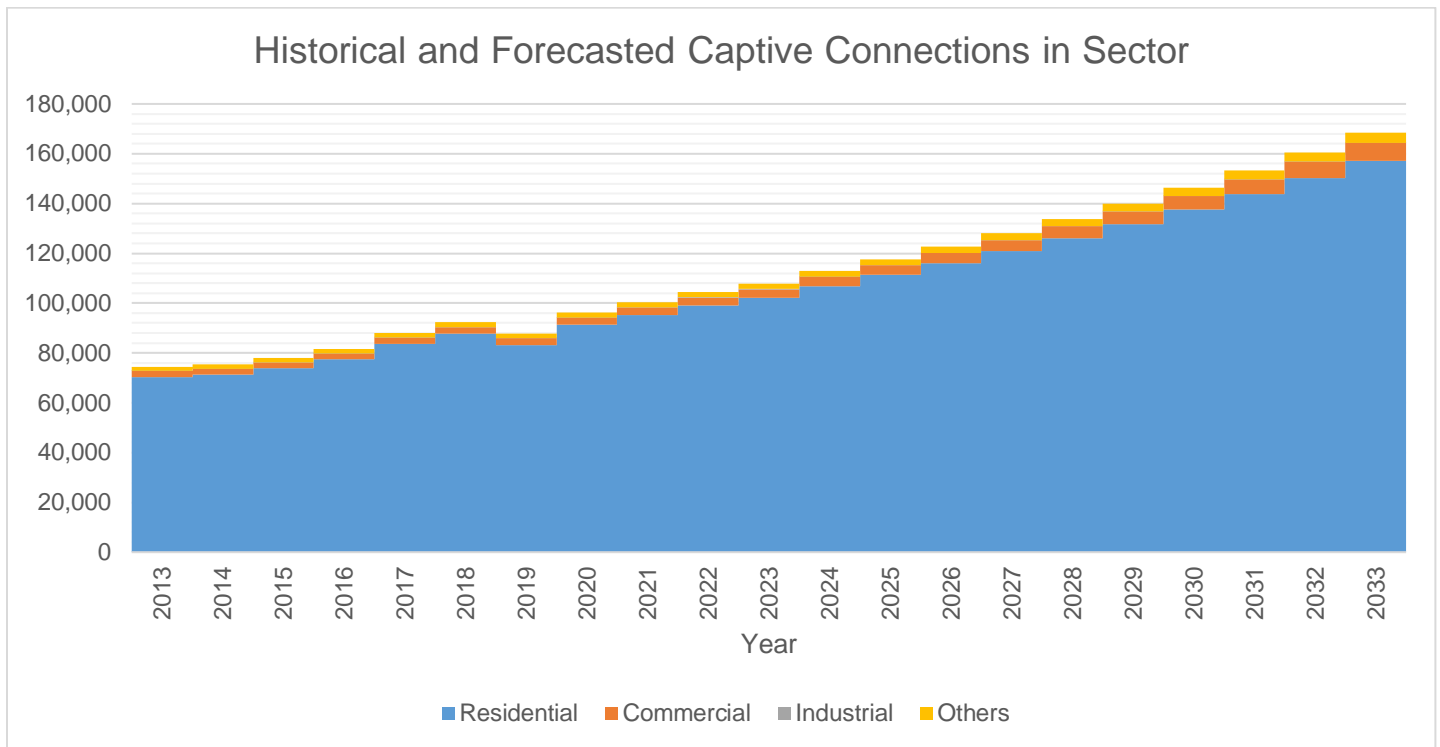
As seen in the chart above, SORECO II's captive customer is comprised mainly of residential customers which are expected to further increase in the coming years. The growth rate of residential customers is about 4.72% annually while commercial customers are projected with a growth rate of 6.98% annually. The rest of customer types have 4% to 8% projected growth rate.