

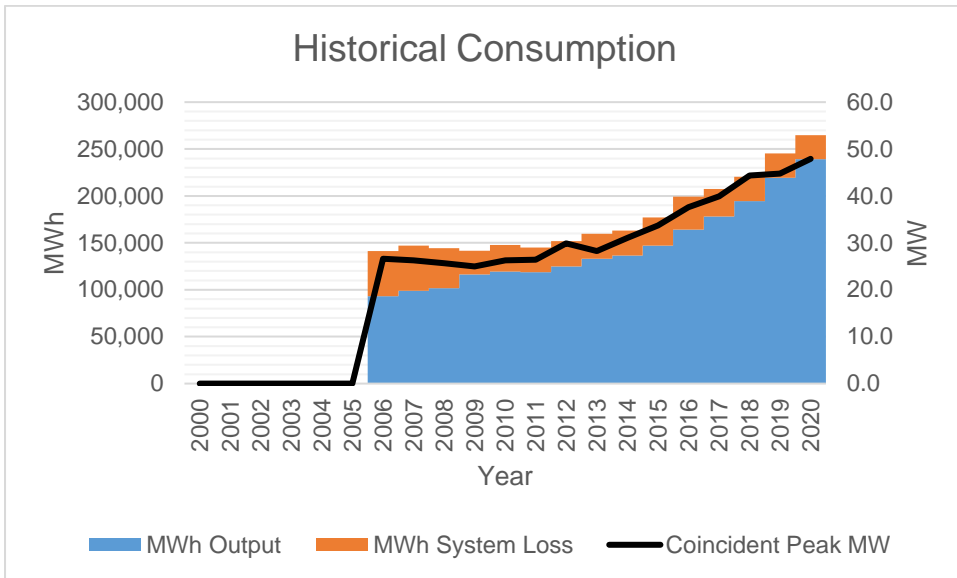
# **Power Supply Procurement Plan 2021**

**PAMPANGA III ELECTRIC COOPERATIVE, INC.**

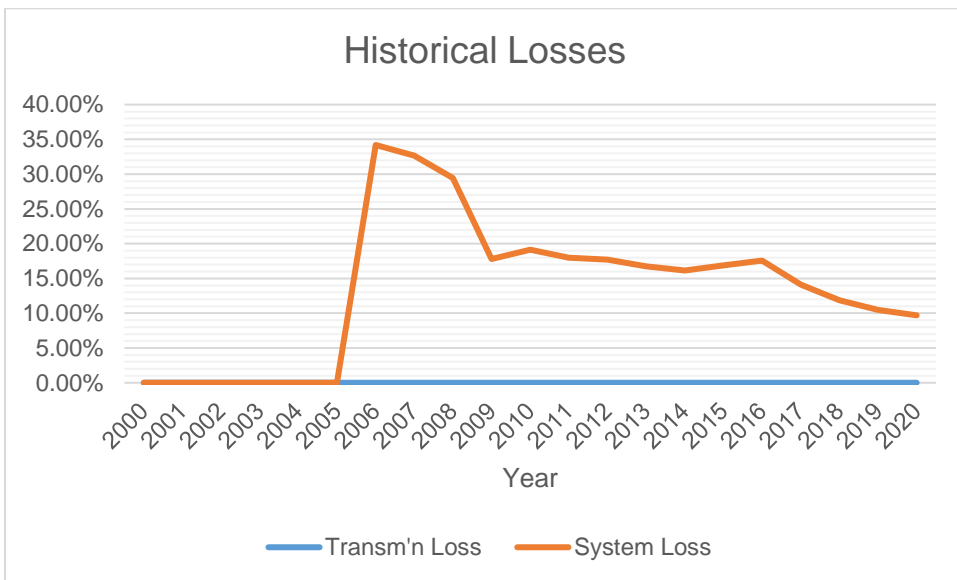
## Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2001	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2002	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2003	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2004	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2005	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2006	26.63	141,335	0	141,335	93,011	48,324	61%	0.00%	0.00%	34.19%
2007	26.27	147,082	0	147,082	99,021	48,060	64%	0.00%	0.00%	32.68%
2008	25.65	144,278	0	144,278	101,796	42,482	64%	0.00%	0.00%	29.44%
2009	24.98	141,529	0	141,529	116,350	25,179	65%	0.00%	0.00%	17.79%
2010	26.31	147,665	0	147,665	119,391	28,274	64%	0.00%	0.00%	19.15%
2011	26.38	144,920	0	144,920	118,842	26,078	63%	0.00%	0.00%	17.99%
2012	29.88	151,839	0	151,839	124,923	26,917	58%	0.00%	0.00%	17.73%
2013	28.24	159,828	0	159,828	133,070	26,758	65%	0.00%	0.00%	16.74%
2014	31.04	162,976	0	162,976	136,653	26,323	60%	0.00%	0.00%	16.15%
2015	33.68	177,179	0	177,179	147,239	29,940	60%	0.00%	0.00%	16.90%
2016	37.58	199,199	0	199,199	164,213	34,986	61%	0.00%	0.00%	17.56%
2017	39.92	207,591	0	207,591	178,281	29,309	59%	0.00%	0.00%	14.12%
2018	44.36	220,598	0	220,598	194,430	26,167	57%	0.00%	0.00%	11.86%
2019	44.79	245,292	0	245,292	219,546	25,746	63%	0.00%	0.00%	10.50%
2020	47.91	264,799	0	264,799	239,095	25,701	63%	0.00%	0.00%	9.71%

Coincident Peak increased from 26.63 MW in 2006 to 47.91MW in 2020 at a rate of 55.58% due to development of Commercial and Industrial establishments. MWh Off take increased from 144,920 MWh in 2011 to 264,799 MWh in 2020 at a rate of 54.73% due to development of Commercial and Industrial establishments. Within the same period, Load Factor ranged from 57% to 65%.

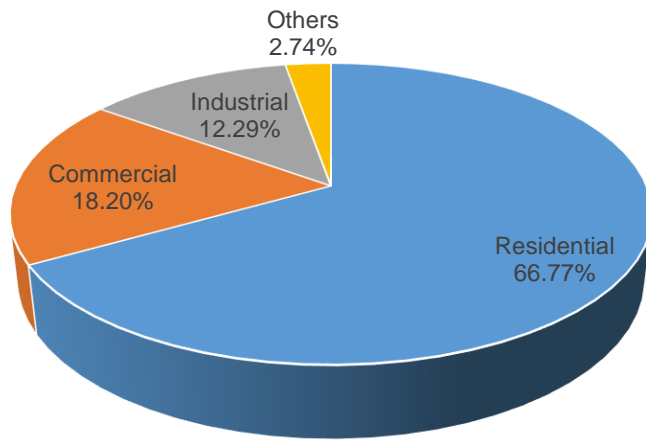


MWh Output increased from year 2016 to year 2020 at a rate of 38.90%, while MWh System Loss decreased at a rate of 53.18% within the same period.



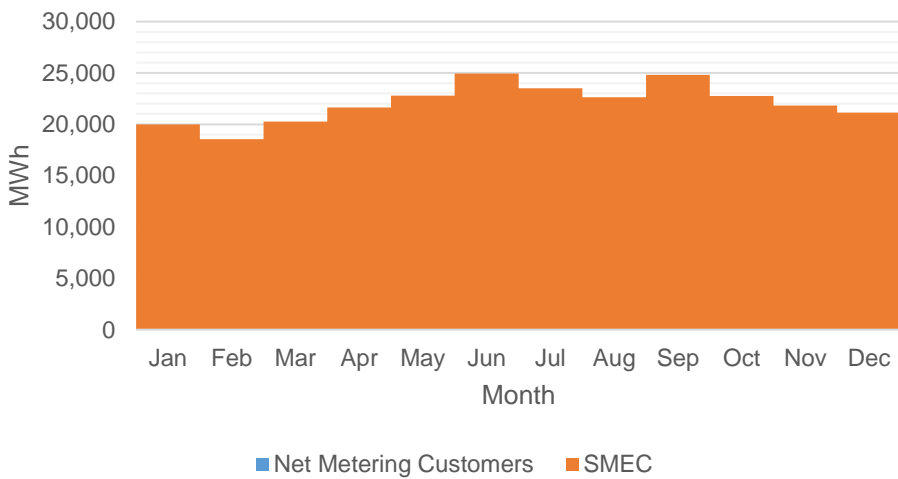
Historically, System Loss ranged from 34.19% to 9.71%. System Loss peaked at 34.19% on year 2006 because of technical and non-technical losses.

### Previous Year's Shares of Energy Sales

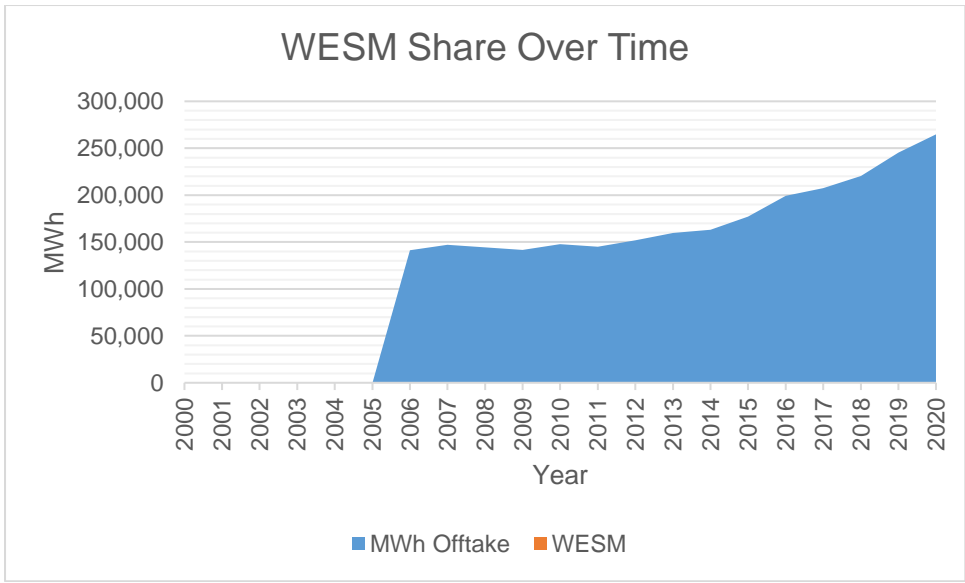


Residential customers account for the bulk of energy sales at 66.77% due to the high number of connections. In contrast, “others” customers accounted for only 2.74% of energy sales due to the low number of connections.

### MWh Offtake for Last Historical Year

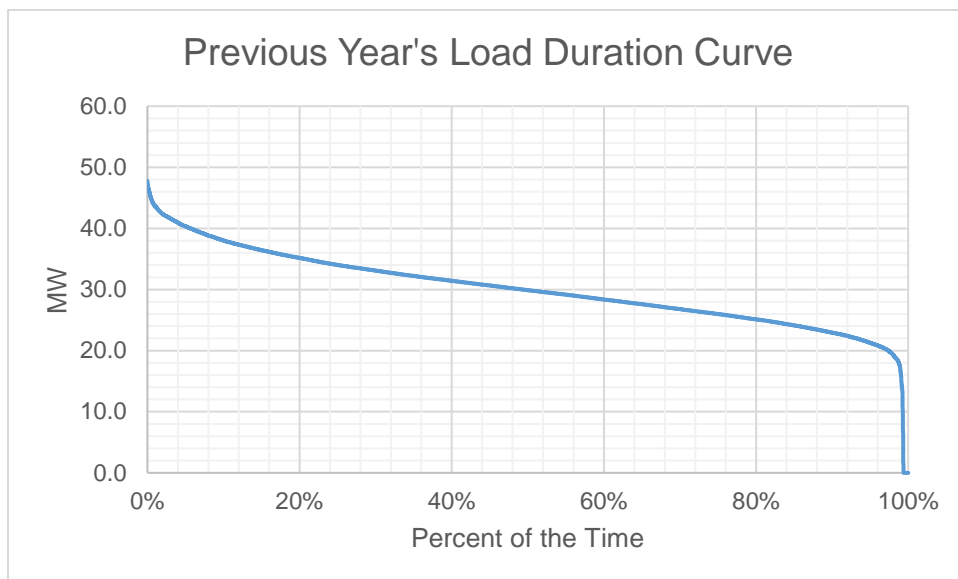


For 2020, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with SMEC accounts for the bulk of MWh Offtake.

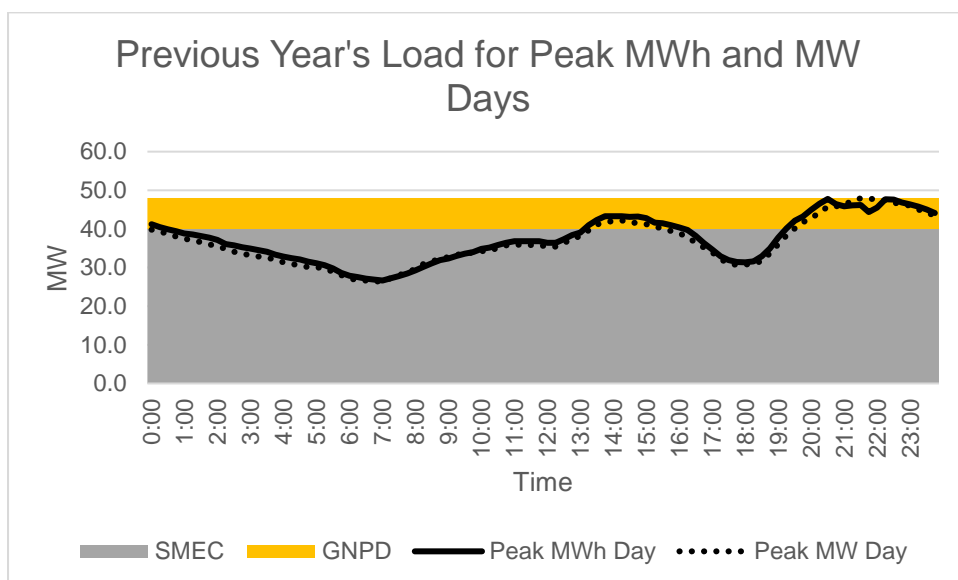


PELCO III is not yet WESM member thus exposure to market is thru Generation Company.

## Previous Year's Load Profile

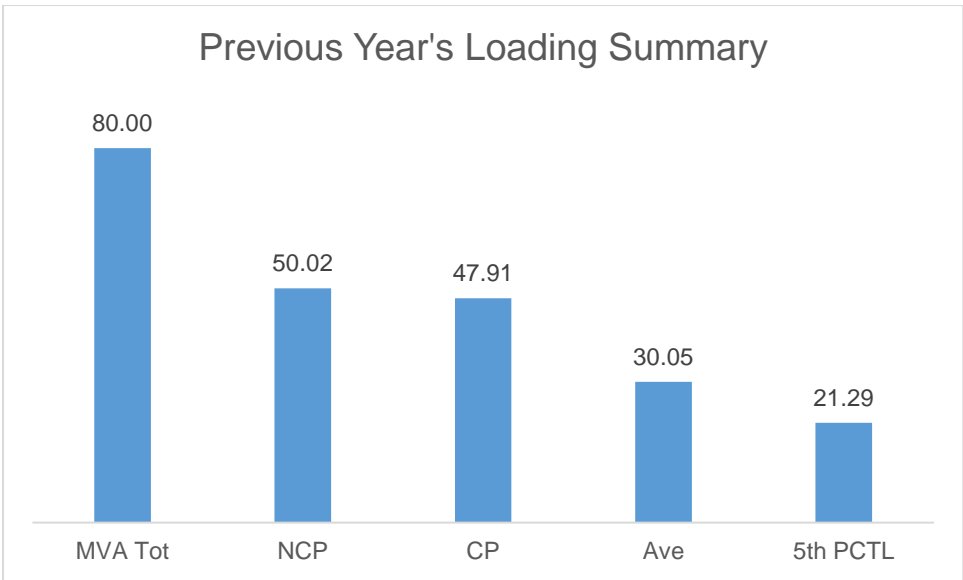


Based on the Load Duration Curve, the minimum load is 17 MW and the maximum load is 47.91 MW for the last historical year.



Peak MW occurred on 21:45 due to high consumption of customers at that time. Peak daily MWh occurred on 20:30 due to high consumption of customers at that time. As shown in the Load Curves, the available supply is higher than the Peak Demand.

### Previous Year's Loading Summary



The Non-coincident Peak Demand is 50.02 MW, which is around 62.53% of the total substation capacity of 80 MVA. The load factor or the ratio between the Average Load of 30.05 MW and the Non-coincident Peak Demand is 50.020% of. A safe estimate of the true minimum load is the fifth percentile load of 21.29 MW which is 42.56% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
MACABEBE/ MASANTOL	30.00	11.42
PAU	30.00	21.93
BALITE	20.00	16.68

The substation loaded up to 70% are Pau Substation with 73% loading and Balite Substation with 83% loading. This loading problem will be solved by upgrading the 10 MVA Power transformer at Pau substation and by the energization of the 40 MVA San Simon substation that will largely decrease the load of Pau substation. While in Balite substation, upgrading of the 2 units 10 MVA into 2 units 20 MVA power transformer will address the issue.

## 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
2021	Jan	38.29	0.00	48.00	0.000		0%	125%	9.71
	Feb	37.03	0.00	48.00	0.000		0%	130%	10.97
	Mar	44.52	0.00	48.00	0.000		0%	108%	3.48
	Apr	50.49	0.00	48.00	0.000		0%	95%	-2.49
	May	52.06	0.00	48.00	0.000		0%	92%	-4.06
	Jun	53.48	0.00	48.00	0.000		0%	90%	-5.48
	Jul	48.82	0.00	48.00	0.000		0%	98%	-0.82
	Aug	47.52	0.00	48.00	0.000		0%	101%	0.48
	Sep	47.48	0.00	48.00	0.000		0%	101%	0.52
	Oct	46.00	0.00	48.00	0.000		0%	104%	2.00
	Nov	45.06	0.00	48.00	0.000		0%	107%	2.94
	Dec	43.39	0.00	48.00	0.000		0%	111%	4.61
2022	Jan	39.02	0.00	48.00	0.000		0%	123%	8.98
	Feb	37.73	0.00	48.00	0.000		0%	127%	10.27
	Mar	45.37	0.00	48.00	0.000		0%	106%	2.63
	Apr	51.45	0.00	48.00	0.000		0%	93%	-3.45
	May	53.04	0.00	48.00	0.000		0%	90%	-5.04
	Jun	54.49	0.00	48.00	0.000		0%	88%	-6.49
	Jul	49.75	0.00	48.00	0.000		0%	96%	-1.75
	Aug	48.42	0.00	48.00	0.000		0%	99%	-0.42
	Sep	48.38	0.00	48.00	0.000		0%	99%	-0.38
	Oct	46.88	0.00	48.00	0.000		0%	102%	1.12
	Nov	45.91	0.00	48.00	0.000		0%	105%	2.09
	Dec	44.21	0.00	48.00	0.000		0%	109%	3.79
2023	Jan	39.76	0.00	48.00	0.000		0%	121%	8.24
	Feb	38.44	0.00	48.00	0.000		0%	125%	9.56
	Mar	46.23	0.00	48.00	0.000		0%	104%	1.77
	Apr	52.42	0.00	48.00	0.000		0%	92%	-4.42

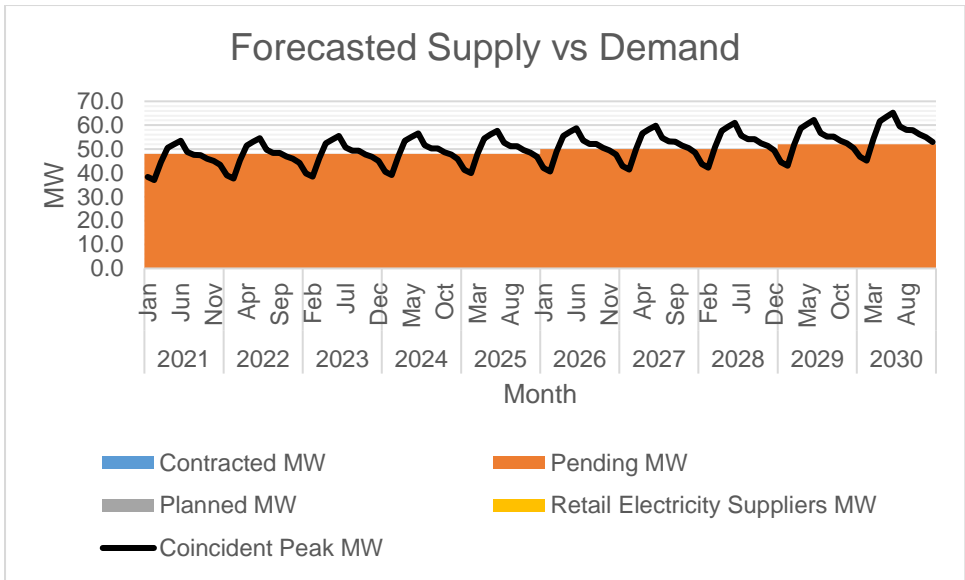


	May	54.05	0.00	48.00	0.000		0%	89%	-6.05
	Jun	55.52	0.00	48.00	0.000		0%	86%	-7.52
	Jul	50.69	0.00	48.00	0.000		0%	95%	-2.69
	Aug	49.34	0.00	48.00	0.000		0%	97%	-1.34
	Sep	49.30	0.00	48.00	0.000		0%	97%	-1.30
	Oct	47.76	0.00	48.00	0.000		0%	100%	0.24
	Nov	46.78	0.00	48.00	0.000		0%	103%	1.22
	Dec	45.05	0.00	48.00	0.000		0%	107%	2.95
2024	Jan	40.51	0.00	48.00	0.000		0%	118%	7.49
	Feb	39.17	0.00	48.00	0.000		0%	123%	8.83
	Mar	47.10	0.00	48.00	0.000		0%	102%	0.90
	Apr	53.42	0.00	48.00	0.000		0%	90%	-5.42
	May	55.07	0.00	48.00	0.000		0%	87%	-7.07
	Jun	56.58	0.00	48.00	0.000		0%	85%	-8.58
	Jul	51.65	0.00	48.00	0.000		0%	93%	-3.65
	Aug	50.27	0.00	48.00	0.000		0%	95%	-2.27
	Sep	50.23	0.00	48.00	0.000		0%	96%	-2.23
	Oct	48.67	0.00	48.00	0.000		0%	99%	-0.67
	Nov	47.67	0.00	48.00	0.000		0%	101%	0.33
	Dec	45.90	0.00	48.00	0.000		0%	105%	2.10
2025	Jan	41.28	0.00	48.00	0.000		0%	116%	6.72
	Feb	39.91	0.00	48.00	0.000		0%	120%	8.09
	Mar	47.99	0.00	48.00	0.000		0%	100%	0.01
	Apr	54.43	0.00	48.00	0.000		0%	88%	-6.43
	May	56.12	0.00	48.00	0.000		0%	86%	-8.12
	Jun	57.65	0.00	48.00	0.000		0%	83%	-9.65
	Jul	52.63	0.00	48.00	0.000		0%	91%	-4.63
	Aug	51.22	0.00	48.00	0.000		0%	94%	-3.22
	Sep	51.19	0.00	48.00	0.000		0%	94%	-3.19
	Oct	49.59	0.00	48.00	0.000		0%	97%	-1.59
	Nov	48.57	0.00	48.00	0.000		0%	99%	-0.57
	Dec	46.77	0.00	48.00	0.000		0%	103%	1.23
2026	Jan	42.06	0.00	50.00	0.000		0%	119%	7.94

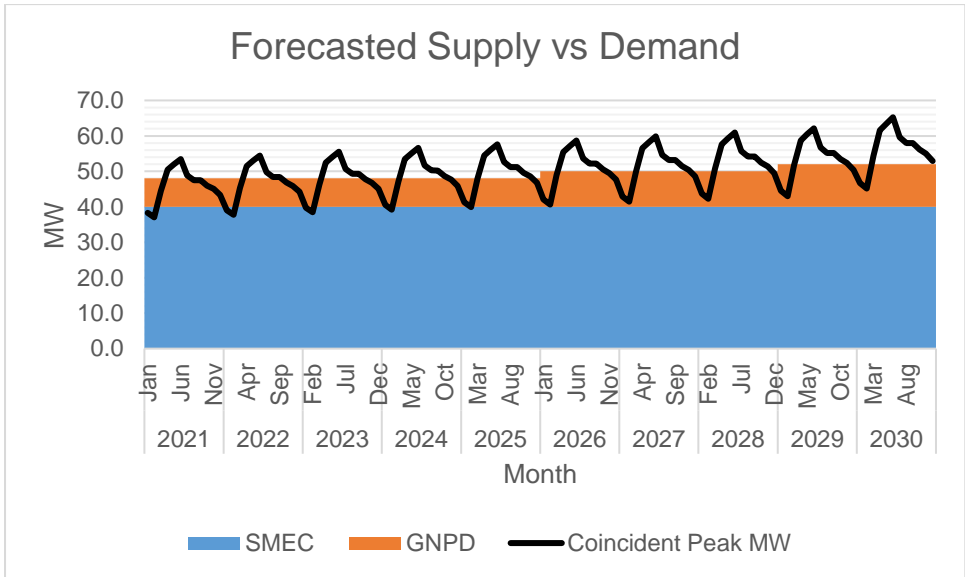
	Feb	40.67	0.00	50.00	0.000		0%	123%	9.33
	Mar	48.90	0.00	50.00	0.000		0%	102%	1.10
	Apr	55.46	0.00	50.00	0.000		0%	90%	-5.46
	May	57.18	0.00	50.00	0.000		0%	87%	-7.18
	Jun	58.74	0.00	50.00	0.000		0%	85%	-8.74
	Jul	53.62	0.00	50.00	0.000		0%	93%	-3.62
	Aug	52.19	0.00	50.00	0.000		0%	96%	-2.19
	Sep	52.16	0.00	50.00	0.000		0%	96%	-2.16
	Oct	50.53	0.00	50.00	0.000		0%	99%	-0.53
	Nov	49.49	0.00	50.00	0.000		0%	101%	0.51
	Dec	47.66	0.00	50.00	0.000		0%	105%	2.34
2027	Jan	42.85	0.00	50.00	0.000		0%	117%	7.15
	Feb	41.44	0.00	50.00	0.000		0%	121%	8.56
	Mar	49.83	0.00	50.00	0.000		0%	100%	0.17
	Apr	56.51	0.00	50.00	0.000		0%	88%	-6.51
	May	58.26	0.00	50.00	0.000		0%	86%	-8.26
	Jun	59.85	0.00	50.00	0.000		0%	84%	-9.85
	Jul	54.64	0.00	50.00	0.000		0%	92%	-4.64
	Aug	53.18	0.00	50.00	0.000		0%	94%	-3.18
	Sep	53.14	0.00	50.00	0.000		0%	94%	-3.14
	Oct	51.49	0.00	50.00	0.000		0%	97%	-1.49
	Nov	50.43	0.00	50.00	0.000		0%	99%	-0.43
	Dec	48.56	0.00	50.00	0.000		0%	103%	1.44
2028	Jan	43.67	0.00	50.00	0.000		0%	115%	6.33
	Feb	42.22	0.00	50.00	0.000		0%	118%	7.78
	Mar	50.77	0.00	50.00	0.000		0%	98%	-0.77
	Apr	57.58	0.00	50.00	0.000		0%	87%	-7.58
	May	59.36	0.00	50.00	0.000		0%	84%	-9.36
	Jun	60.99	0.00	50.00	0.000		0%	82%	-10.99
	Jul	55.68	0.00	50.00	0.000		0%	90%	-5.68
	Aug	54.19	0.00	50.00	0.000		0%	92%	-4.19
	Sep	54.15	0.00	50.00	0.000		0%	92%	-4.15
	Oct	52.46	0.00	50.00	0.000		0%	95%	-2.46

	Nov	51.39	0.00	50.00	0.000		0%	97%	-1.39
	Dec	49.48	0.00	50.00	0.000		0%	101%	0.52
2029	Jan	44.49	0.00	52.00	0.000		0%	117%	7.51
	Feb	43.02	0.00	52.00	0.000		0%	121%	8.98
	Mar	51.74	0.00	52.00	0.000		0%	101%	0.26
	Apr	58.67	0.00	52.00	0.000		0%	89%	-6.67
	May	60.49	0.00	52.00	0.000		0%	86%	-8.49
	Jun	62.14	0.00	52.00	0.000		0%	84%	-10.14
	Jul	56.73	0.00	52.00	0.000		0%	92%	-4.73
	Aug	55.22	0.00	52.00	0.000		0%	94%	-3.22
	Sep	55.18	0.00	52.00	0.000		0%	94%	-3.18
	Oct	53.46	0.00	52.00	0.000		0%	97%	-1.46
	Nov	52.36	0.00	52.00	0.000		0%	99%	-0.36
	Dec	50.42	0.00	52.00	0.000		0%	103%	1.58
2030	Jan	46.72	0.00	52.00	0.000		0%	111%	5.28
	Feb	45.17	0.00	52.00	0.000		0%	115%	6.83
	Mar	54.32	0.00	52.00	0.000		0%	96%	-2.32
	Apr	61.61	0.00	52.00	0.000		0%	84%	-9.61
	May	63.51	0.00	52.00	0.000		0%	82%	-11.51
	Jun	65.25	0.00	52.00	0.000		0%	80%	-13.25
	Jul	59.57	0.00	52.00	0.000		0%	87%	-7.57
	Aug	57.98	0.00	52.00	0.000		0%	90%	-5.98
	Sep	57.93	0.00	52.00	0.000		0%	90%	-5.93
	Oct	56.13	0.00	52.00	0.000		0%	93%	-4.13
	Nov	54.98	0.00	52.00	0.000		0%	95%	-2.98
	Dec	52.94	0.00	52.00	0.000		0%	98%	-0.94

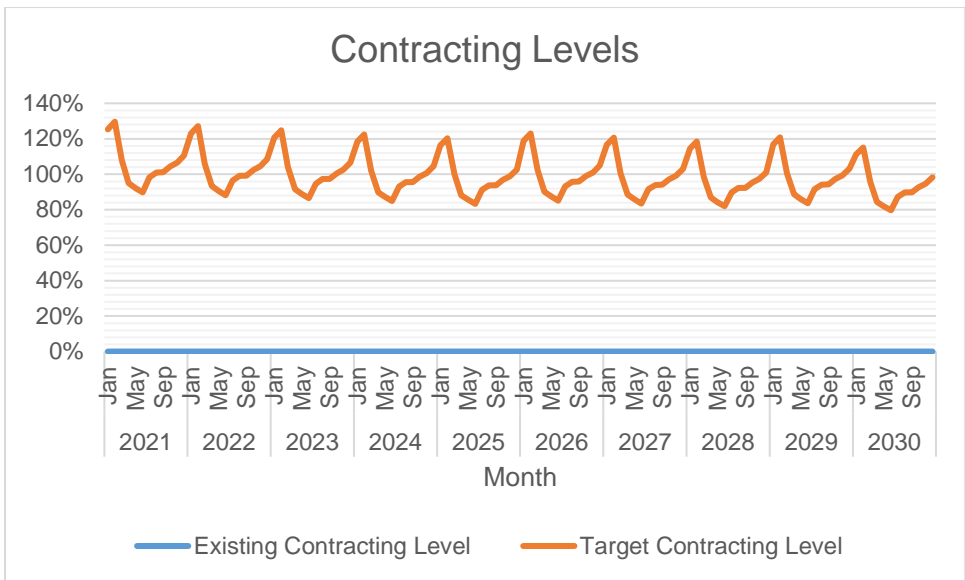
The Peak Demand was forecasted using regression method and was assumed to occur on the month of June due to high temperature. Monthly Peak Demand is at its lowest on the month of February due to cold temperature. In general, Peak Demand is expected to grow at a rate of 1.06% annually.



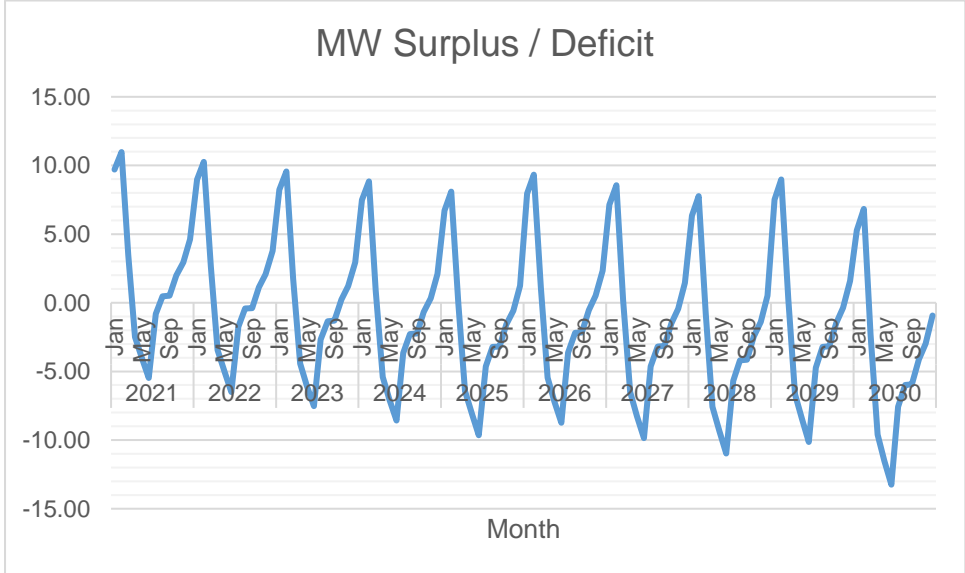
The available supply is generally below the Peak Demand. This is because pending PSA with SMEC and GNPD.



Of the available supply, the largest is 40 MW. This is followed by 18 MW from 8.



PSA with SMEC and GNPD are still in the process of approval to ERC.



There are some months that are under-contracted or over-contracted.

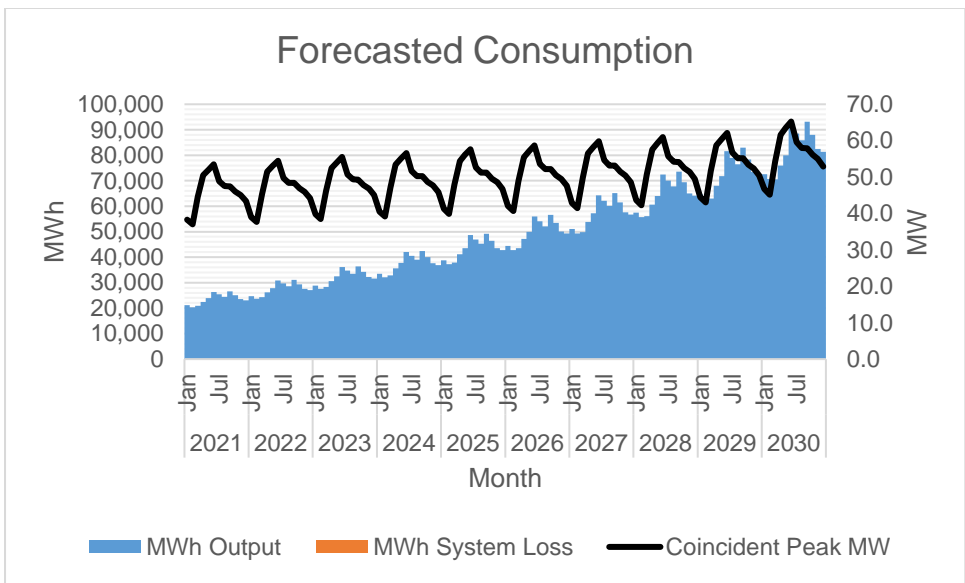
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2021	Jan	23,377	21,207	0	9.28%	0.00%
	Feb	21,694	20,270	0	6.56%	0.00%
	Mar	23,687	20,913	0	11.71%	0.00%
	Apr	25,293	22,433	0	11.31%	0.00%
	May	26,641	23,897	0	10.30%	0.00%
	Jun	29,181	26,312	0	9.83%	0.00%
	Jul	27,473	25,393	0	7.57%	0.00%
	Aug	26,451	24,392	0	7.79%	0.00%
	Sep	29,025	26,550	0	8.53%	0.00%
	Oct	26,582	25,005	0	5.93%	0.00%
	Nov	25,500	23,541	0	7.68%	0.00%
	Dec	24,719	23,093	0	6.58%	0.00%

2022	Jan	26,874	24,723	0	8.00%	0.00%
	Feb	24,940	23,655	0	5.15%	0.00%
	Mar	27,231	24,343	0	10.60%	0.00%
	Apr	29,077	26,208	0	9.87%	0.00%
	May	30,627	27,890	0	8.94%	0.00%
	Jun	33,547	30,809	0	8.16%	0.00%
	Jul	31,583	29,725	0	5.88%	0.00%
	Aug	30,408	28,573	0	6.04%	0.00%
	Sep	33,368	31,095	0	6.81%	0.00%
	Oct	30,559	29,285	0	4.17%	0.00%
	Nov	29,315	27,548	0	6.03%	0.00%
	Dec	28,417	27,033	0	4.87%	0.00%
2023	Jan	30,997	28,829	0	7.00%	0.00%
	Feb	28,766	27,618	0	3.99%	0.00%
	Mar	31,409	28,343	0	9.76%	0.00%
	Apr	33,539	30,604	0	8.75%	0.00%
	May	35,326	32,533	0	7.90%	0.00%
	Jun	38,694	36,060	0	6.81%	0.00%
	Jul	36,428	34,785	0	4.51%	0.00%
	Aug	35,074	33,465	0	4.59%	0.00%
	Sep	38,487	36,409	0	5.40%	0.00%
	Oct	35,247	34,292	0	2.71%	0.00%
	Nov	33,812	32,233	0	4.67%	0.00%
	Dec	32,778	31,646	0	3.45%	0.00%
2024	Jan	35,751	33,497	0	6.31%	0.00%
	Feb	33,178	32,143	0	3.12%	0.00%
	Mar	36,226	32,884	0	9.23%	0.00%
	Apr	38,682	35,578	0	8.03%	0.00%
	May	40,743	37,778	0	7.28%	0.00%
	Jun	44,628	42,025	0	5.83%	0.00%
	Jul	42,015	40,540	0	3.51%	0.00%
	Aug	40,453	39,036	0	3.50%	0.00%
	Sep	44,390	42,458	0	4.35%	0.00%
	Oct	40,653	39,996	0	1.62%	0.00%
	Nov	38,998	37,568	0	3.67%	0.00%
	Dec	37,804	36,906	0	2.38%	0.00%
2025	Jan	41,139	38,707	0	5.91%	0.00%
	Feb	37,117	37,216	0	-0.26%	0.00%
	Mar	40,527	37,940	0	6.38%	0.00%
	Apr	43,275	41,092	0	5.04%	0.00%
	May	45,581	43,579	0	4.39%	0.00%
	Jun	49,926	48,671	0	2.51%	0.00%
	Jul	47,004	46,960	0	0.09%	0.00%
	Aug	45,256	45,263	0	-0.02%	0.00%
	Sep	49,660	49,214	0	0.90%	0.00%
	Oct	45,480	46,373	0	-1.96%	0.00%
	Nov	43,628	43,532	0	0.22%	0.00%
	Dec	42,293	42,795	0	-1.19%	0.00%
2026	Jan	47,162	44,444	0	5.76%	0.00%

	Feb	43,768	42,829	0	2.15%	0.00%
	Mar	47,789	43,495	0	8.99%	0.00%
	Apr	51,029	47,117	0	7.67%	0.00%
	May	53,748	49,901	0	7.16%	0.00%
	Jun	58,872	55,971	0	4.93%	0.00%
	Jul	55,425	54,022	0	2.53%	0.00%
	Aug	53,364	52,128	0	2.32%	0.00%
	Sep	58,558	56,656	0	3.25%	0.00%
	Oct	53,629	53,407	0	0.41%	0.00%
	Nov	51,445	50,108	0	2.60%	0.00%
	Dec	49,871	49,299	0	1.15%	0.00%
2027	Jan	53,823	51,094	0	5.07%	0.00%
	Feb	49,949	49,330	0	1.24%	0.00%
	Mar	54,538	49,861	0	8.58%	0.00%
	Apr	58,236	53,861	0	7.51%	0.00%
	May	61,338	57,165	0	6.80%	0.00%
	Jun	67,186	64,276	0	4.33%	0.00%
	Jul	63,253	62,068	0	1.87%	0.00%
	Aug	60,901	60,070	0	1.37%	0.00%
	Sep	66,828	65,179	0	2.47%	0.00%
	Oct	61,203	61,469	0	-0.44%	0.00%
	Nov	58,711	57,645	0	1.82%	0.00%
	Dec	56,914	56,782	0	0.23%	0.00%
2028	Jan	61,122	57,459	0	5.99%	0.00%
	Feb	56,723	55,664	0	1.87%	0.00%
	Mar	61,934	56,046	0	9.51%	0.00%
	Apr	66,133	60,609	0	8.35%	0.00%
	May	69,657	63,998	0	8.12%	0.00%
	Jun	76,298	72,466	0	5.02%	0.00%
	Jul	71,831	70,023	0	2.52%	0.00%
	Aug	69,160	67,729	0	2.07%	0.00%
	Sep	75,891	73,550	0	3.08%	0.00%
	Oct	69,503	69,407	0	0.14%	0.00%
	Nov	66,673	65,064	0	2.41%	0.00%
	Dec	64,632	64,129	0	0.78%	0.00%
2029	Jan	69,061	64,730	0	6.27%	0.00%
	Feb	64,090	62,892	0	1.87%	0.00%
	Mar	69,978	63,030	0	9.93%	0.00%
	Apr	74,723	68,044	0	8.94%	0.00%
	May	78,704	71,734	0	8.86%	0.00%
	Jun	86,208	81,640	0	5.30%	0.00%
	Jul	81,161	78,946	0	2.73%	0.00%
	Aug	78,143	76,458	0	2.16%	0.00%
	Sep	85,748	82,992	0	3.21%	0.00%
	Oct	78,530	78,366	0	0.21%	0.00%
	Nov	75,333	73,438	0	2.52%	0.00%
	Dec	73,027	72,455	0	0.78%	0.00%
2030	Jan	77,640	72,512	0	6.61%	0.00%
	Feb	72,052	70,668	0	1.92%	0.00%

	Mar	78,671	70,484	0	10.41%	0.00%
	Apr	84,005	75,926	0	9.62%	0.00%
	May	88,481	79,909	0	9.69%	0.00%
	Jun	96,916	91,427	0	5.66%	0.00%
	Jul	91,242	88,484	0	3.02%	0.00%
	Aug	87,850	85,808	0	2.32%	0.00%
	Sep	96,400	93,099	0	3.42%	0.00%
	Oct	88,285	87,969	0	0.36%	0.00%
	Nov	84,690	82,412	0	2.69%	0.00%
	Dec	82,098	81,392	0	0.86%	0.00%

MWh Offtake was forecasted using Regression Method.



MWh Output was expected to grow at a rate of 1.15 annually.

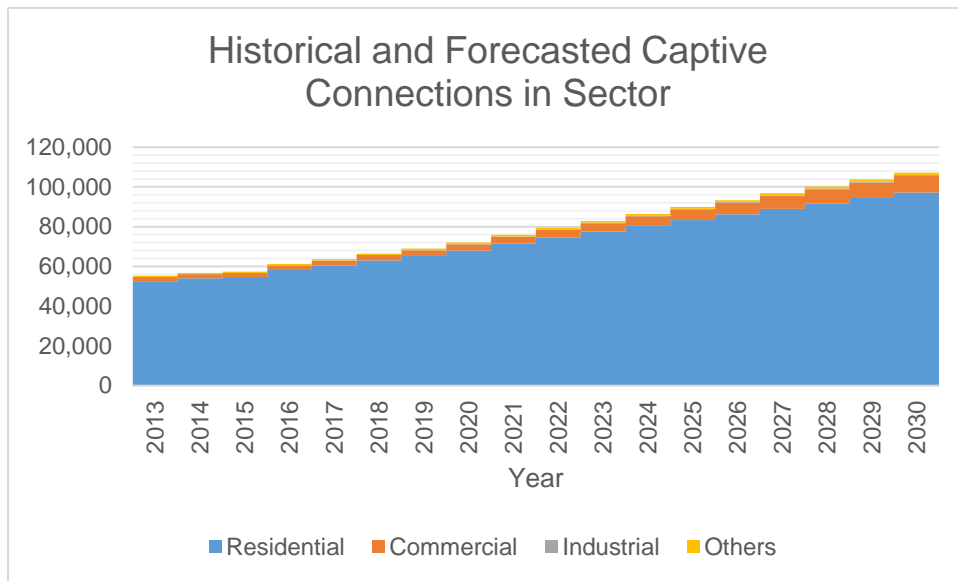


## Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
SMEC	Base	San Miguel Consolidated Power Corporation	40.00	18,720	12/2018	12/2038
2018-061RC	Intermediate	GN Power Mariveles Coal Plant Ltd.	8.00	3,744	12/2019	12/2039

Both PSA are executed through CSP with pending approval from ERC.

# Captive Customer Connections



The number of captive connections is expected to grow at a rate of 1% annually. Said customer class is expected to account for 61.09% of the total consumption.