

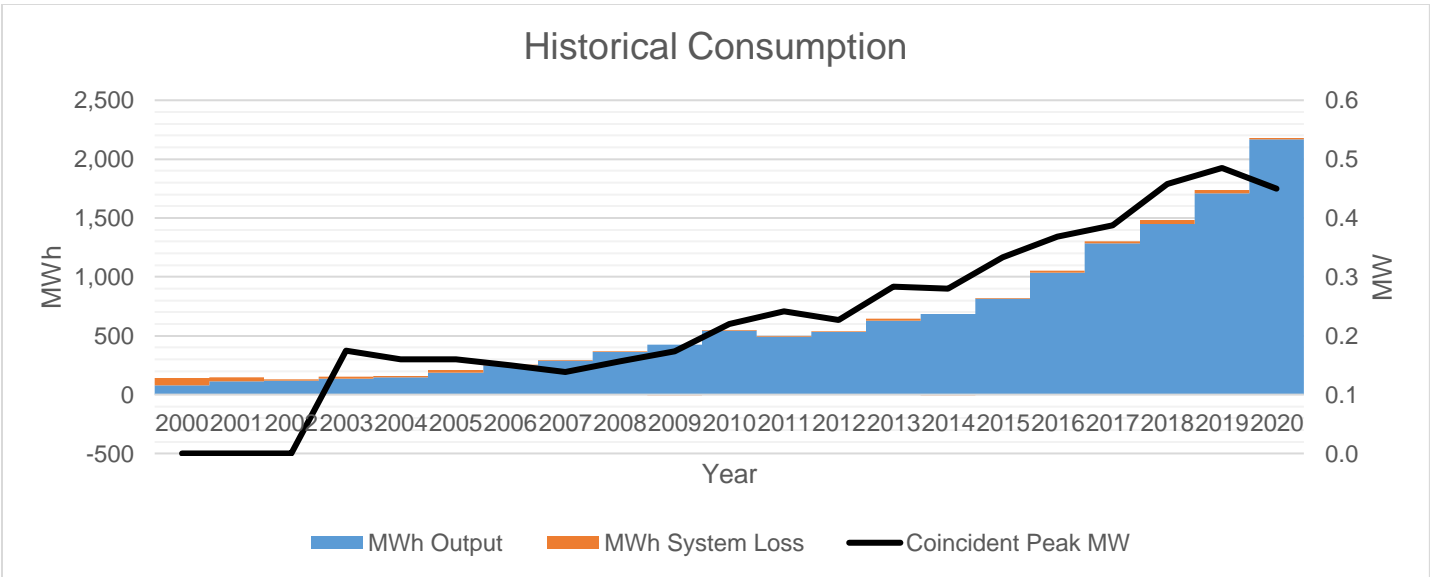
Power Supply Procurement Plan [2021]

[CARABAO ISLAND]

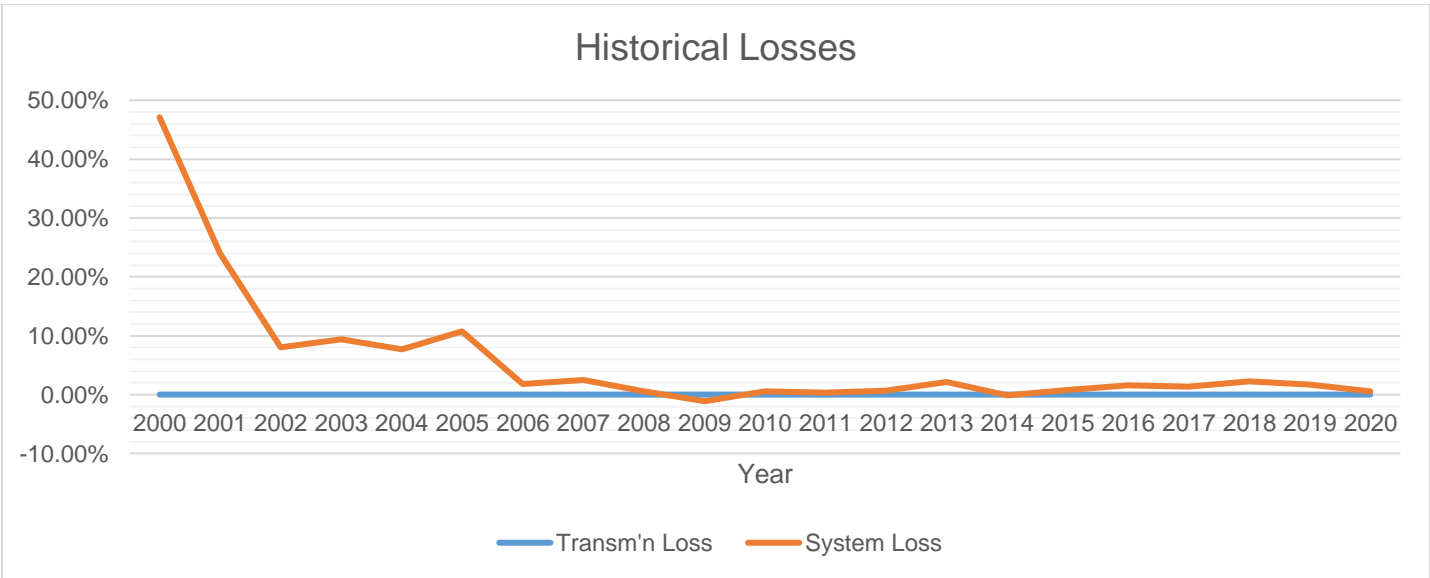
Historical Consumption Data

	Coincident Peak MW	MWh Offtake	MWh Input	MWh Output	MWh System Loss	Load Factor	System Loss
2000	0.00	144	144	76	68	#DIV/0!	47.10%
2001	0.00	149	149	113	36	#DIV/0!	23.94%
2002	0.00	130	130	120	10	#DIV/0!	7.99%
2003	0.18	152	152	138	14	10%	9.41%
2004	0.16	159	159	147	12	11%	7.68%
2005	0.16	209	209	186	22	15%	10.73%
2006	0.15	250	250	246	4	19%	1.79%
2007	0.14	295	295	288	7	24%	2.48%
2008	0.16	366	366	364	2	27%	0.51%
2009	0.17	420	420	424	-5	28%	-1.13%
2010	0.22	546	546	544	3	28%	0.52%
2011	0.24	495	495	493	1	23%	0.30%
2012	0.23	536	536	532	3	27%	0.64%
2013	0.28	643	643	630	14	26%	2.11%
2014	0.28	682	682	683	-1	28%	-0.09%
2015	0.33	821	821	815	6	28%	0.73%
2016	0.37	1,054	1,054	1,038	16	33%	1.52%
2017	0.39	1,302	1,302	1,285	18	38%	1.36%
2018	0.46	1,485	1,485	1,452	33	37%	2.22%
2019	0.49	1,741	1,741	1,711	29	41%	1.68%
2020	0.45	2,180	2,180	2,169	11	55%	0.53%

Peak Demand decreased from 0.49 MW in 2019 to 0.45 MW in 2020 at a rate of 8.16% due to the limited operation of resorts and commercial establishments. MWh Offtake increased from 1,741 MWh in 2019 to 2,180 MWh in 2020 at a rate of 25% due to the extended operating hours of NPC from 16 Hours on Year 2019 to 24 Hours on Year 2020. Within the same period, Load Factor ranged from 41% to 55%.

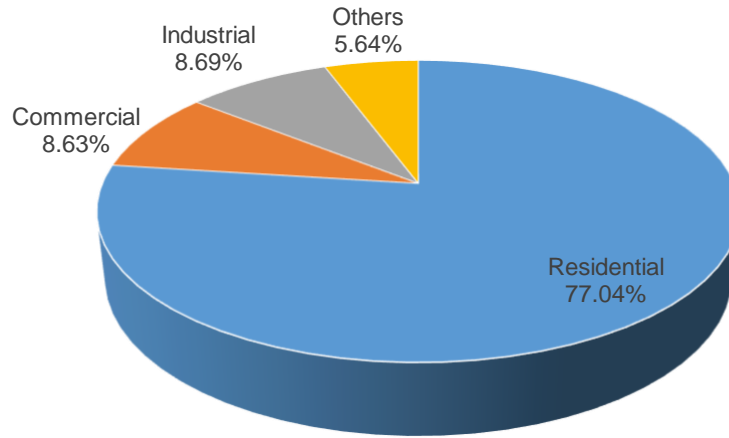


MWh Output increased from year 2019 to year 2020 at a rate of 26.77%, while MWh System Loss decreased at a rate of 0.53% within the same period.



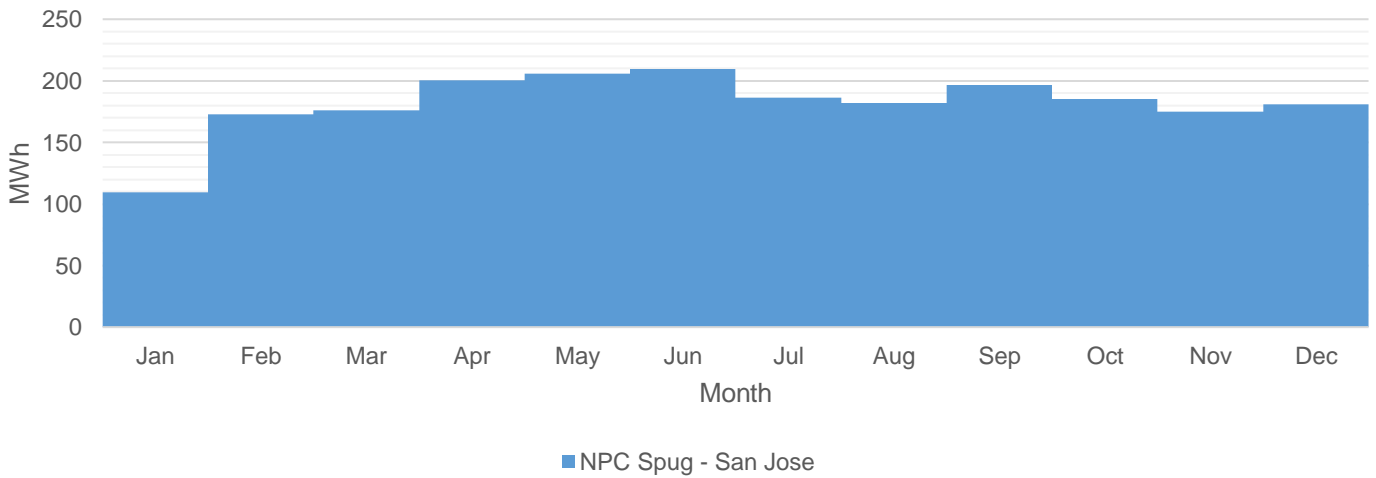
The historical system Loss ranged from 0.73% to 10.73% and the highest recorded systems loss is on year 2005. Moreover, the Technical and Non-technical systems loss is the results of simulation using DSAS segregation software.

Previous Year's Shares of Energy Sales



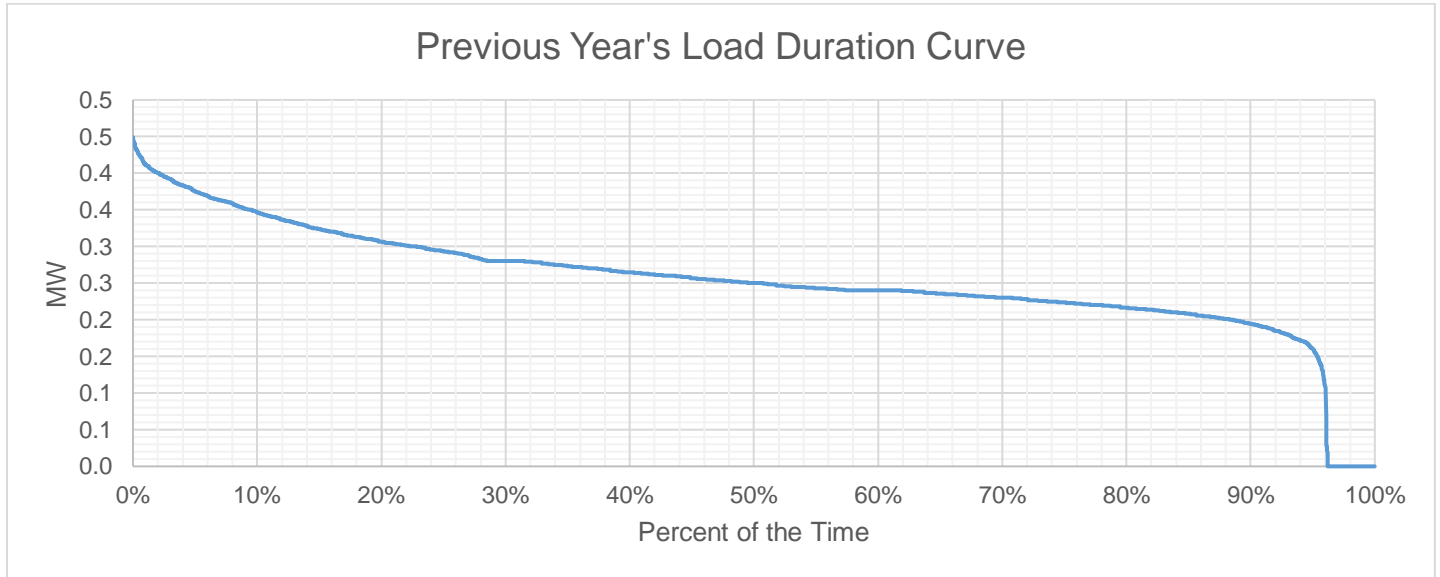
Residential customers account for the bulk of energy sales at 77.04% due to the high number of connections. In contrast, other customers accounted for only 5.64% of energy sales due to the low number of connections.

MWh Offtake for Last Historical Year

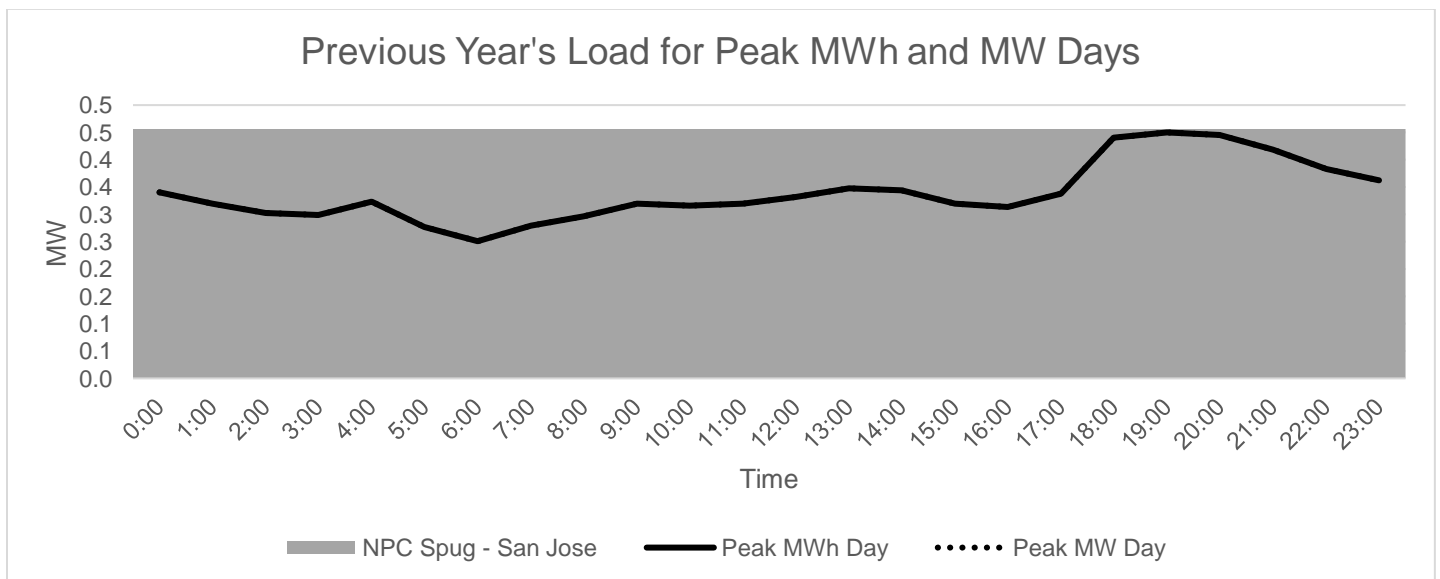


For 2020, the total Offtake for the last historical year is lower than the quantity stipulated in the Letter of Agreement.

Previous Year's Load Profile

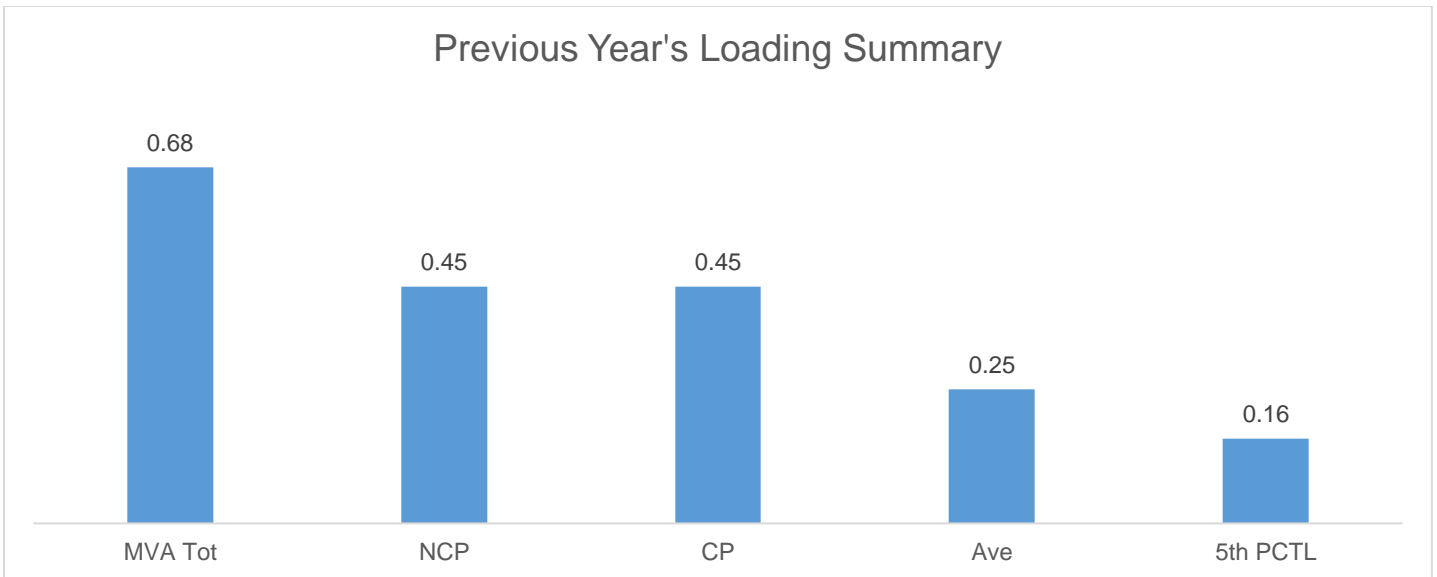


Based on the Load Duration Curve, the minimum load is 0.25 MW and the maximum load is 0.45 MW for the last historical year.



Peak MW occurred on 18:00 due to residential consumer. Peak daily MWh occurred on 18:00 due to residential consumer. 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 0.45 MW, which is around 66.17% of the total substation capacity of 0.68 MVA at a power factor of 95.71%. The load factor or the ratio between the Average Load of 0.25 MW and the Non-coincident Peak Demand is 55.55% of. A safe estimate of the true minimum load is the fifth percentile load of 0.16 MW which is 35.55% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
NPC	0.676	0.450

The installed capacity of NAPACOR in the island has a very thin reserve, thus as a consequence, when generating machines encounter defect, longer period of time in terms of load shedding are scheduled in most areas of the island during peak periods.

Forecasted Consumption Data

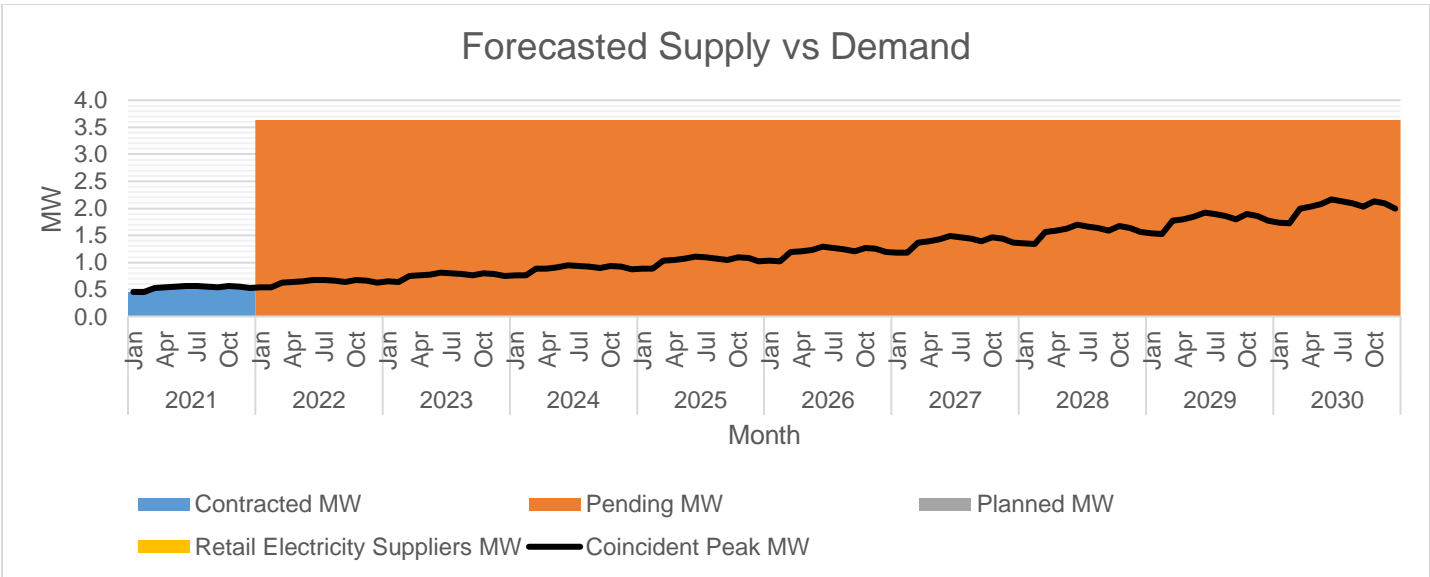
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2021	Jan	0.46	0.46	0.00	0.000	100%	100%	0.00
	Feb	0.45	0.45	0.00	0.000	100%	100%	0.00
	Mar	0.53	0.53	0.00	0.000	100%	100%	0.00
	Apr	0.53	0.53	0.00	0.000	100%	100%	0.00
	May	0.55	0.55	0.00	0.000	100%	100%	0.00
	Jun	0.57	0.57	0.00	0.000	100%	100%	0.00
	Jul	0.56	0.56	0.00	0.000	100%	100%	0.00
	Aug	0.55	0.55	0.00	0.000	100%	100%	0.00
	Sep	0.54	0.54	0.00	0.000	100%	100%	0.00
	Oct	0.56	0.56	0.00	0.000	100%	100%	0.00
	Nov	0.55	0.55	0.00	0.000	100%	100%	0.00
	Dec	0.53	0.53	0.00	0.000	100%	100%	0.00
2022	Jan	0.54	0.00	3.64	0.000	0%	669%	3.10
	Feb	0.54	0.00	3.64	0.000	0%	674%	3.10
	Mar	0.63	0.00	3.64	0.000	0%	579%	3.01
	Apr	0.64	0.00	3.64	0.000	0%	572%	3.00
	May	0.65	0.00	3.64	0.000	0%	558%	2.99
	Jun	0.68	0.00	3.64	0.000	0%	535%	2.96
	Jul	0.67	0.00	3.64	0.000	0%	544%	2.97
	Aug	0.66	0.00	3.64	0.000	0%	553%	2.98
	Sep	0.64	0.00	3.64	0.000	0%	570%	3.00
	Oct	0.67	0.00	3.64	0.000	0%	543%	2.97
	Nov	0.66	0.00	3.64	0.000	0%	552%	2.98
	Dec	0.63	0.00	3.64	0.000	0%	581%	3.01
2023	Jan	0.65	0.00	3.64	0.000	0%	563%	2.99
	Feb	0.64	0.00	3.64	0.000	0%	568%	3.00
	Mar	0.75	0.00	3.64	0.000	0%	488%	2.89
	Apr	0.76	0.00	3.64	0.000	0%	482%	2.88
	May	0.77	0.00	3.64	0.000	0%	470%	2.87
	Jun	0.81	0.00	3.64	0.000	0%	451%	2.83
	Jul	0.79	0.00	3.64	0.000	0%	458%	2.85
	Aug	0.78	0.00	3.64	0.000	0%	466%	2.86
	Sep	0.76	0.00	3.64	0.000	0%	481%	2.88
	Oct	0.80	0.00	3.64	0.000	0%	457%	2.84
	Nov	0.78	0.00	3.64	0.000	0%	465%	2.86
	Dec	0.74	0.00	3.64	0.000	0%	489%	2.90
2024	Jan	0.76	0.00	3.64	0.000	0%	478%	2.88
	Feb	0.76	0.00	3.64	0.000	0%	482%	2.88
	Mar	0.88	0.00	3.64	0.000	0%	414%	2.76
	Apr	0.89	0.00	3.64	0.000	0%	409%	2.75
	May	0.91	0.00	3.64	0.000	0%	399%	2.73
	Jun	0.95	0.00	3.64	0.000	0%	383%	2.69

	Jul	0.94	0.00	3.64	0.000	0%	389%	2.70
	Aug	0.92	0.00	3.64	0.000	0%	396%	2.72
	Sep	0.89	0.00	3.64	0.000	0%	408%	2.75
	Oct	0.94	0.00	3.64	0.000	0%	388%	2.70
	Nov	0.92	0.00	3.64	0.000	0%	395%	2.72
	Dec	0.88	0.00	3.64	0.000	0%	415%	2.76
2025	Jan	0.89	0.00	3.64	0.000	0%	409%	2.75
	Feb	0.88	0.00	3.64	0.000	0%	412%	2.76
	Mar	1.03	0.00	3.64	0.000	0%	354%	2.61
	Apr	1.04	0.00	3.64	0.000	0%	350%	2.60
	May	1.07	0.00	3.64	0.000	0%	341%	2.57
	Jun	1.11	0.00	3.64	0.000	0%	327%	2.53
	Jul	1.09	0.00	3.64	0.000	0%	333%	2.55
	Aug	1.08	0.00	3.64	0.000	0%	339%	2.56
	Sep	1.04	0.00	3.64	0.000	0%	349%	2.60
	Oct	1.10	0.00	3.64	0.000	0%	332%	2.54
	Nov	1.08	0.00	3.64	0.000	0%	338%	2.56
	Dec	1.02	0.00	3.64	0.000	0%	355%	2.62
2026	Jan	1.03	0.00	3.64	0.000	0%	353%	2.61
	Feb	1.02	0.00	3.64	0.000	0%	356%	2.62
	Mar	1.19	0.00	3.64	0.000	0%	306%	2.45
	Apr	1.21	0.00	3.64	0.000	0%	302%	2.43
	May	1.24	0.00	3.64	0.000	0%	295%	2.40
	Jun	1.29	0.00	3.64	0.000	0%	282%	2.35
	Jul	1.27	0.00	3.64	0.000	0%	287%	2.37
	Aug	1.25	0.00	3.64	0.000	0%	292%	2.39
	Sep	1.21	0.00	3.64	0.000	0%	301%	2.43
	Oct	1.27	0.00	3.64	0.000	0%	286%	2.37
	Nov	1.25	0.00	3.64	0.000	0%	291%	2.39
	Dec	1.19	0.00	3.64	0.000	0%	306%	2.45
2027	Jan	1.19	0.00	3.64	0.000	0%	307%	2.45
	Feb	1.18	0.00	3.64	0.000	0%	309%	2.46
	Mar	1.37	0.00	3.64	0.000	0%	266%	2.27
	Apr	1.39	0.00	3.64	0.000	0%	262%	2.25
	May	1.42	0.00	3.64	0.000	0%	256%	2.22
	Jun	1.48	0.00	3.64	0.000	0%	245%	2.16
	Jul	1.46	0.00	3.64	0.000	0%	250%	2.18
	Aug	1.43	0.00	3.64	0.000	0%	254%	2.21
	Sep	1.39	0.00	3.64	0.000	0%	262%	2.25
	Oct	1.46	0.00	3.64	0.000	0%	249%	2.18
	Nov	1.44	0.00	3.64	0.000	0%	253%	2.20
	Dec	1.37	0.00	3.64	0.000	0%	266%	2.27
2028	Jan	1.36	0.00	3.64	0.000	0%	269%	2.28
	Feb	1.34	0.00	3.64	0.000	0%	271%	2.30
	Mar	1.56	0.00	3.64	0.000	0%	233%	2.08
	Apr	1.59	0.00	3.64	0.000	0%	230%	2.05
	May	1.62	0.00	3.64	0.000	0%	224%	2.02
	Jun	1.69	0.00	3.64	0.000	0%	215%	1.95

	Jul	1.67	0.00	3.64	0.000	0%	218%	1.97
	Aug	1.64	0.00	3.64	0.000	0%	222%	2.00
	Sep	1.59	0.00	3.64	0.000	0%	229%	2.05
	Oct	1.67	0.00	3.64	0.000	0%	218%	1.97
	Nov	1.64	0.00	3.64	0.000	0%	222%	2.00
	Dec	1.56	0.00	3.64	0.000	0%	233%	2.08
2029	Jan	1.54	0.00	3.64	0.000	0%	237%	2.10
	Feb	1.53	0.00	3.64	0.000	0%	239%	2.11
	Mar	1.77	0.00	3.64	0.000	0%	205%	1.87
	Apr	1.80	0.00	3.64	0.000	0%	202%	1.84
	May	1.84	0.00	3.64	0.000	0%	198%	1.80
	Jun	1.92	0.00	3.64	0.000	0%	189%	1.72
	Jul	1.89	0.00	3.64	0.000	0%	193%	1.75
	Aug	1.86	0.00	3.64	0.000	0%	196%	1.78
	Sep	1.80	0.00	3.64	0.000	0%	202%	1.84
	Oct	1.89	0.00	3.64	0.000	0%	192%	1.75
	Nov	1.86	0.00	3.64	0.000	0%	195%	1.78
	Dec	1.77	0.00	3.64	0.000	0%	206%	1.87
2030	Jan	1.73	0.00	3.64	0.000	0%	210%	1.91
	Feb	1.72	0.00	3.64	0.000	0%	212%	1.92
	Mar	2.00	0.00	3.64	0.000	0%	182%	1.64
	Apr	2.03	0.00	3.64	0.000	0%	180%	1.61
	May	2.08	0.00	3.64	0.000	0%	175%	1.56
	Jun	2.17	0.00	3.64	0.000	0%	168%	1.47
	Jul	2.13	0.00	3.64	0.000	0%	171%	1.51
	Aug	2.09	0.00	3.64	0.000	0%	174%	1.55
	Sep	2.03	0.00	3.64	0.000	0%	179%	1.61
	Oct	2.13	0.00	3.64	0.000	0%	171%	1.51
	Nov	2.10	0.00	3.64	0.000	0%	173%	1.54
	Dec	2.00	0.00	3.64	0.000	0%	182%	1.64

The Peak Demand was forecasted using regression analysis and was assumed to occur on the month of May to June due to Hot Weather. Monthly Peak Demand is at its lowest on the month of January to March due to Cold Weather. In general, Peak Demand is expected to grow at a rate of 16% annually.

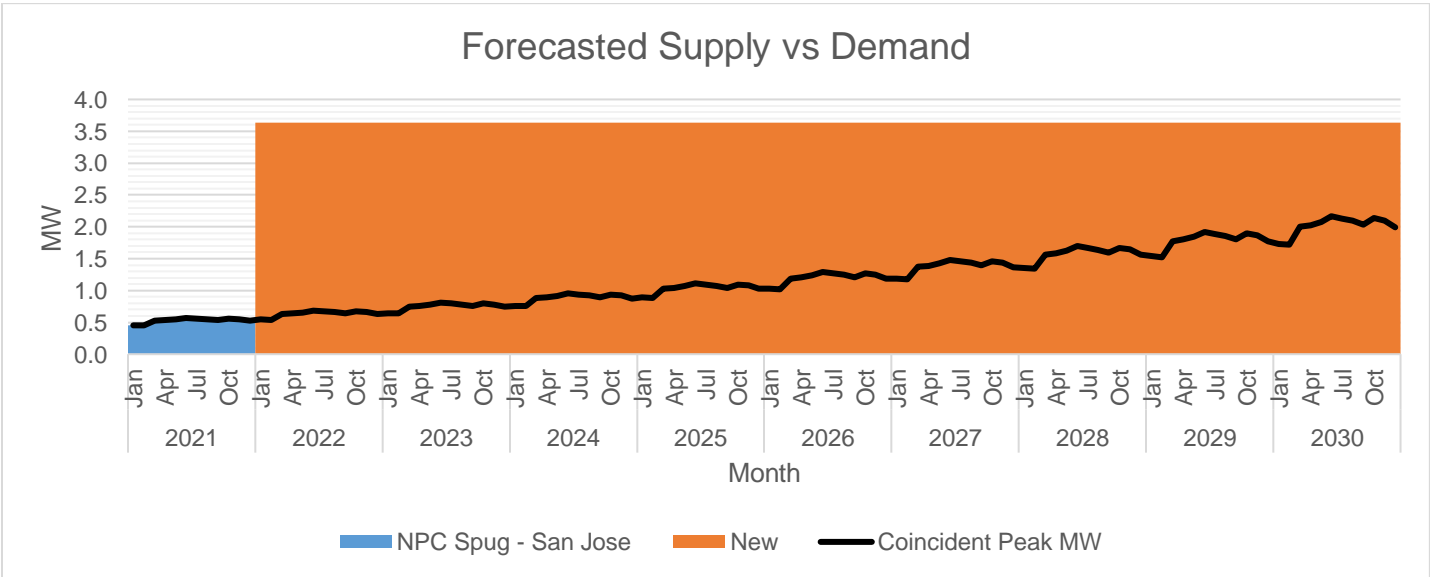
The forecasted demand was considered on a 24 hours operation and said operating time is stipulated to be the operating time immediately after the occurrence of the Commercial Operating Period of the New Power Provider.



The available supply is generally [above/below] the Peak Demand.

This graph would illustrate the following:

1. Blue – the currently contracted supply with NPC that will end in year 2020.
2. Black – the expected coincident peak annually.
3. Orange (2021) – contracted supply with NPC that will start in 2021.
4. Orange (2022 onwards) – the forecasted supply that will be contracted through a CSP process under a straight contract.

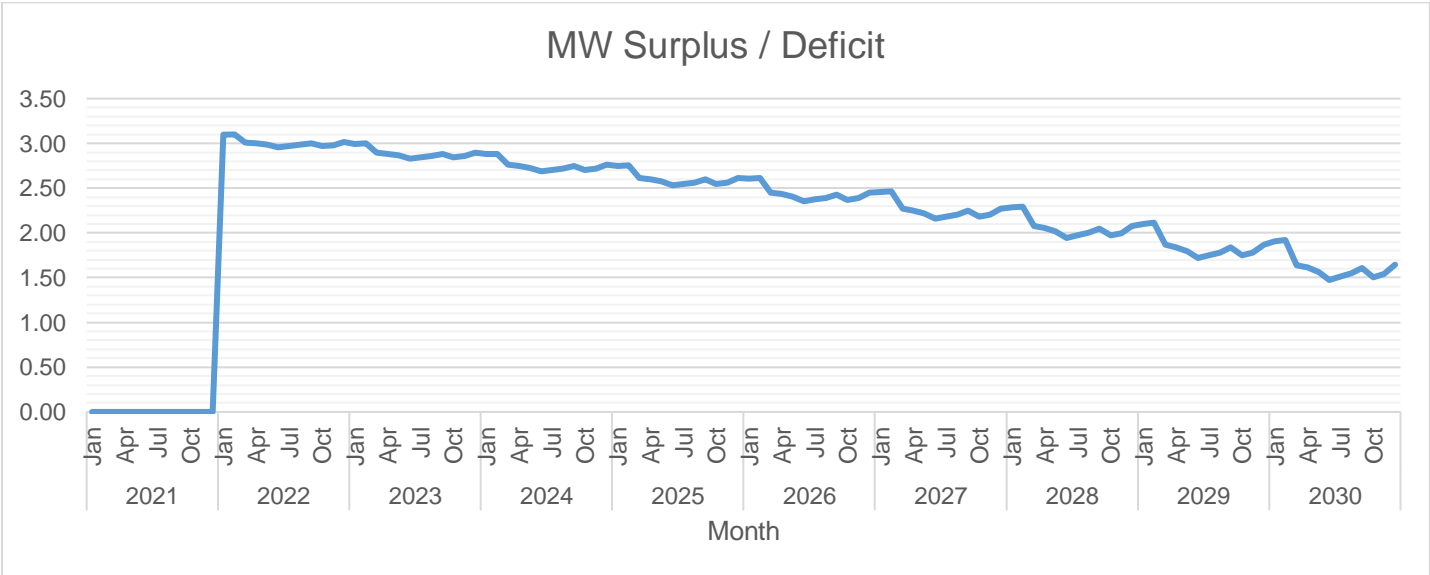


The contracted demand on our current supplier is 0.570MW that will expire on December 2021. TIELCO has already conducted the competitive selection process for a fifteen (15) year 3.640MW load requirement of the Island. The expected Commercial Operation Date of the New IPP is on December 2021.



Currently, there is no under or over-contracting. The highest target contracting level is 674% which is expected to occur on February 2022. The lowest target contracting level is 100% which is expected to occur on Year 2021.

The graph shows that the contracting level in year 2022 has a sufficient reserve and it will gradually decrease based on the yearly increase in demand for the next 15 years.



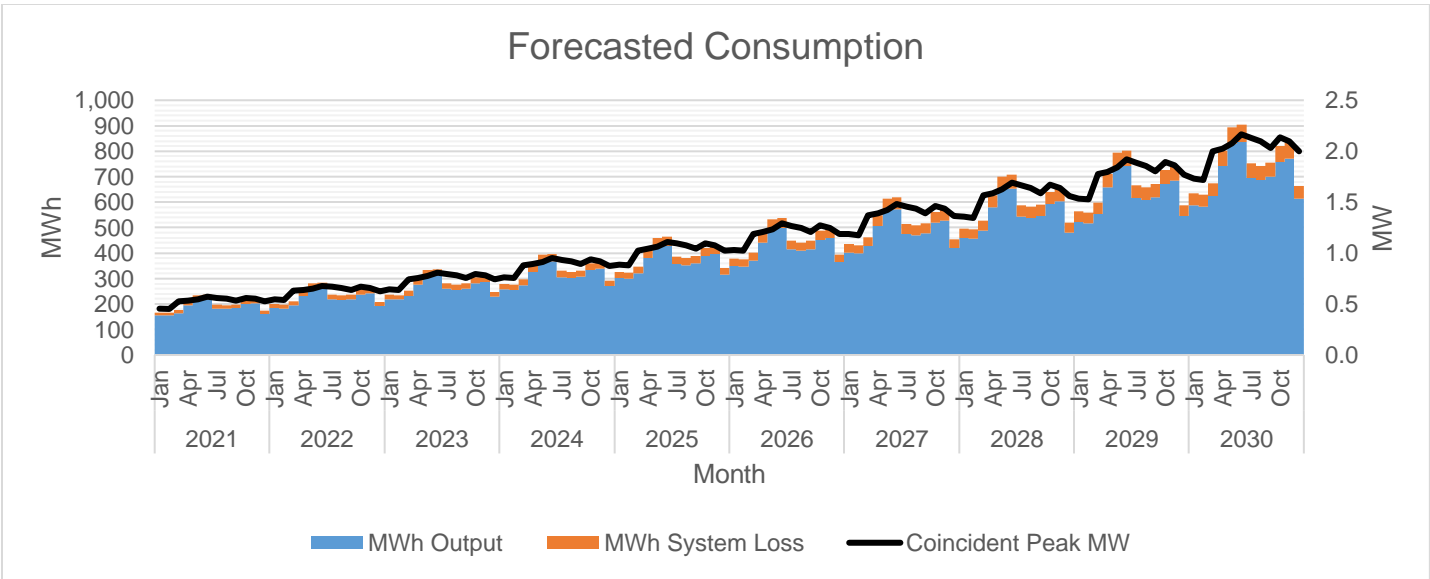
Currently, there is no under or over-contracting. The highest surplus is 3.10 MW which is expected to occur on the month of January 2022. The lowest surplus/deficit is 0 MW which is expected to occur on Year 2021.

		MWh Offtake	MWh Output	MWh System Loss	System Loss
2021	Jan	167	155	13	7.50%
	Feb	167	155	13	7.50%
	Mar	177	164	13	7.50%
	Apr	211	195	16	7.50%
	May	235	218	18	7.50%
	Jun	238	220	18	7.50%
	Jul	198	183	15	7.50%
	Aug	195	181	15	7.50%
	Sep	199	184	15	7.50%
	Oct	216	199	16	7.50%
	Nov	219	203	16	7.50%
	Dec	175	161	13	7.50%
2022	Jan	199	185	15	7.50%
	Feb	198	183	15	7.50%
	Mar	212	196	16	7.50%
	Apr	252	233	19	7.50%
	May	281	260	21	7.50%
	Jun	284	263	21	7.50%
	Jul	236	218	18	7.50%
	Aug	233	216	18	7.50%
	Sep	237	220	18	7.50%
	Oct	257	238	19	7.50%
	Nov	262	242	20	7.50%
	Dec	208	193	16	7.50%
2023	Jan	237	219	18	7.50%
	Feb	235	217	18	7.50%
	Mar	251	233	19	7.50%
	Apr	299	276	22	7.50%
	May	334	308	25	7.50%
	Jun	337	312	25	7.50%
	Jul	280	259	21	7.50%
	Aug	277	256	21	7.50%
	Sep	282	261	21	7.50%
	Oct	306	283	23	7.50%
	Nov	311	288	23	7.50%
	Dec	247	229	19	7.50%
2024	Jan	279	258	21	7.50%
	Feb	277	256	21	7.50%
	Mar	296	274	22	7.50%
	Apr	352	326	26	7.50%
	May	393	363	29	7.50%
	Jun	397	367	30	7.50%
	Jul	330	306	25	7.50%
	Aug	326	302	24	7.50%
	Sep	332	307	25	7.50%

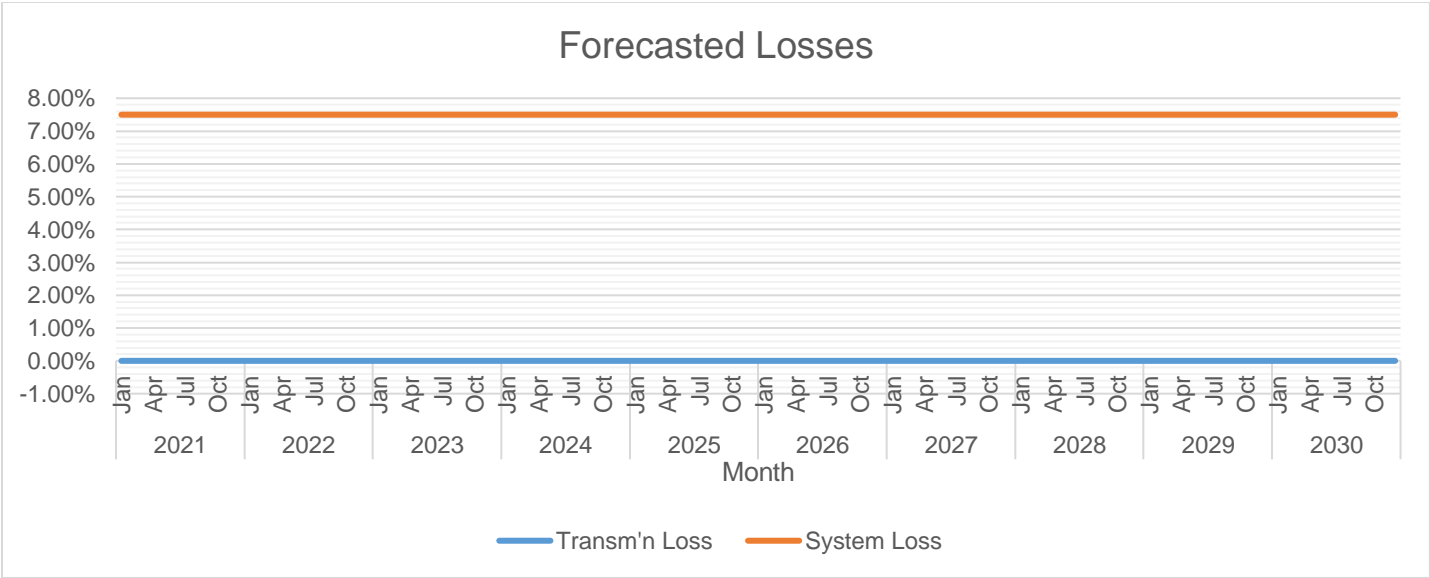
	Oct	360	333	27	7.50%
	Nov	366	339	27	7.50%
	Dec	292	270	22	7.50%
2025	Jan	326	302	24	7.50%
	Feb	324	299	24	7.50%
	Mar	346	320	26	7.50%
	Apr	411	381	31	7.50%
	May	459	425	34	7.50%
	Jun	464	429	35	7.50%
	Jul	386	357	29	7.50%
	Aug	381	353	29	7.50%
	Sep	388	359	29	7.50%
	Oct	421	389	32	7.50%
	Nov	428	396	32	7.50%
	Dec	341	315	26	7.50%
2026	Jan	378	350	28	7.50%
	Feb	375	347	28	7.50%
	Mar	401	371	30	7.50%
	Apr	477	441	36	7.50%
	May	532	492	40	7.50%
	Jun	538	498	40	7.50%
	Jul	448	414	34	7.50%
	Aug	442	409	33	7.50%
	Sep	450	416	34	7.50%
	Oct	488	451	37	7.50%
	Nov	496	459	37	7.50%
	Dec	395	365	30	7.50%
2027	Jan	435	402	33	7.50%
	Feb	432	399	32	7.50%
	Mar	462	427	35	7.50%
	Apr	549	508	41	7.50%
	May	613	567	46	7.50%
	Jun	619	572	46	7.50%
	Jul	515	476	39	7.50%
	Aug	509	471	38	7.50%
	Sep	517	479	39	7.50%
	Oct	561	519	42	7.50%
	Nov	571	528	43	7.50%
	Dec	454	420	34	7.50%
2028	Jan	497	459	37	7.50%
	Feb	493	456	37	7.50%
	Mar	527	488	40	7.50%
	Apr	627	580	47	7.50%
	May	700	647	52	7.50%
	Jun	707	654	53	7.50%
	Jul	588	544	44	7.50%
	Aug	581	538	44	7.50%
	Sep	591	547	44	7.50%

	Oct	641	593	48	7.50%
	Nov	652	603	49	7.50%
	Dec	519	480	39	7.50%
2029	Jan	563	521	42	7.50%
	Feb	559	517	42	7.50%
	Mar	598	553	45	7.50%
	Apr	711	658	53	7.50%
	May	794	734	60	7.50%
	Jun	802	742	60	7.50%
	Jul	667	617	50	7.50%
	Aug	659	610	49	7.50%
	Sep	670	620	50	7.50%
	Oct	727	672	55	7.50%
	Nov	740	684	55	7.50%
	Dec	589	545	44	7.50%
2030	Jan	635	588	48	7.50%
	Feb	630	583	47	7.50%
	Mar	674	624	51	7.50%
	Apr	801	741	60	7.50%
	May	895	827	67	7.50%
	Jun	904	836	68	7.50%
	Jul	752	696	56	7.50%
	Aug	743	687	56	7.50%
	Sep	756	699	57	7.50%
	Oct	819	758	61	7.50%
	Nov	834	771	63	7.50%
	Dec	664	614	50	7.50%

MWh Offtake was forecasted using regression analysis.



MWh Output was expected to grow at a rate of 16% annually. In our forecasting, we consider the significant entry of many commercial and government establishment that needs safe, efficient and more reliable supply.



System Loss is expected to range from 7% to 8%.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
NPC Spug - San Jose	Base	National Power Corporation	0.57	2,397	12/26/2020	12/25/2021

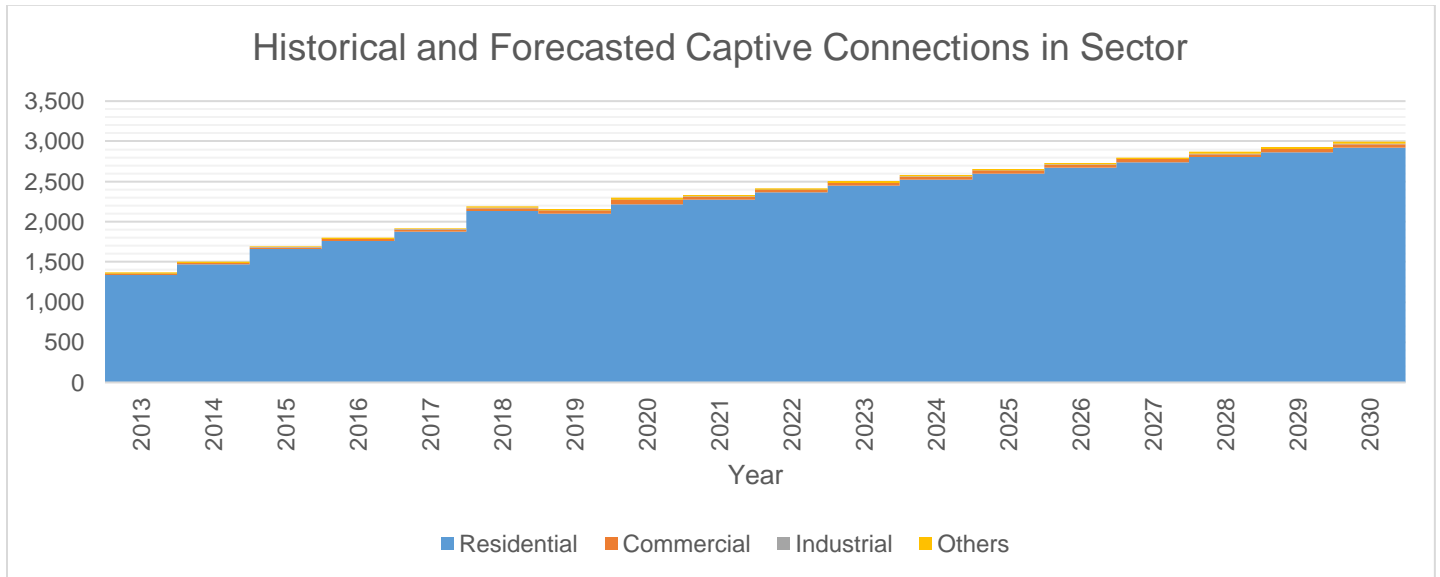
The current power supplier in Carabao Island is only NPC – Spug that will end our PSA in December 25, 2021.

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
New	Base	Sunwest Water and Electric Company, Inc.	3.64			

Technology is Hybrid Diesel and Solar Power Plant.

We have completed a Competitive Selection Process to select a New Power Provider for Carabao Island, and a Notice of Award has been issued accordingly, we are still awaiting the joint signing of said PSA, but however constrained of an earliest date due to COVID 19 movement restriction. Eventually when signed, jointly, winning NPP and TIELCO will file its application for approval of the PSA with ERC.

Captive Customer Connections



The number of residential connections is expected to grow at a rate of 3.34% annually. Said customer class is expected to account for 79% of the total consumption.