

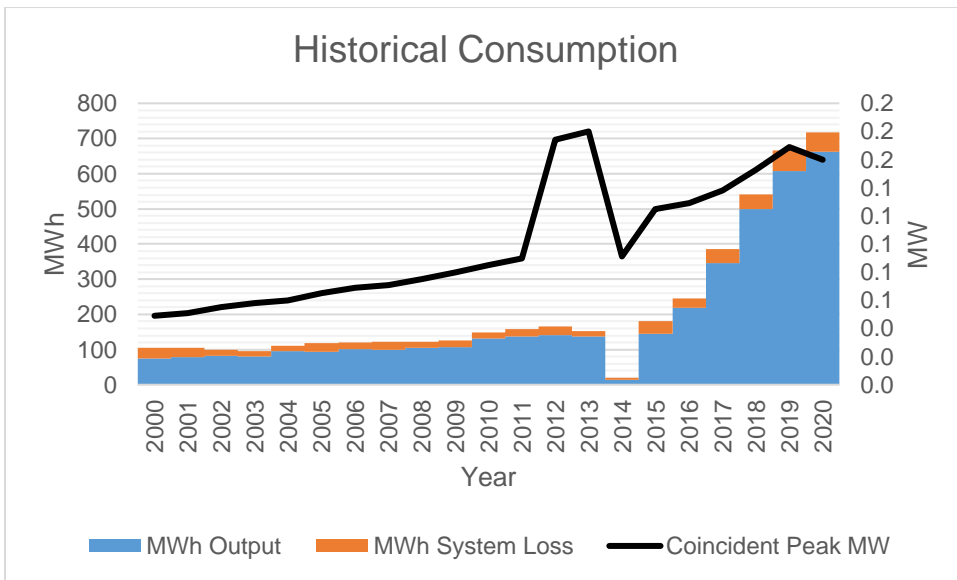
Power Supply Procurement Plan 2021

**Guintarcan Area
Bantayan Island Electric Cooperative, Inc.
(BANELCO)**

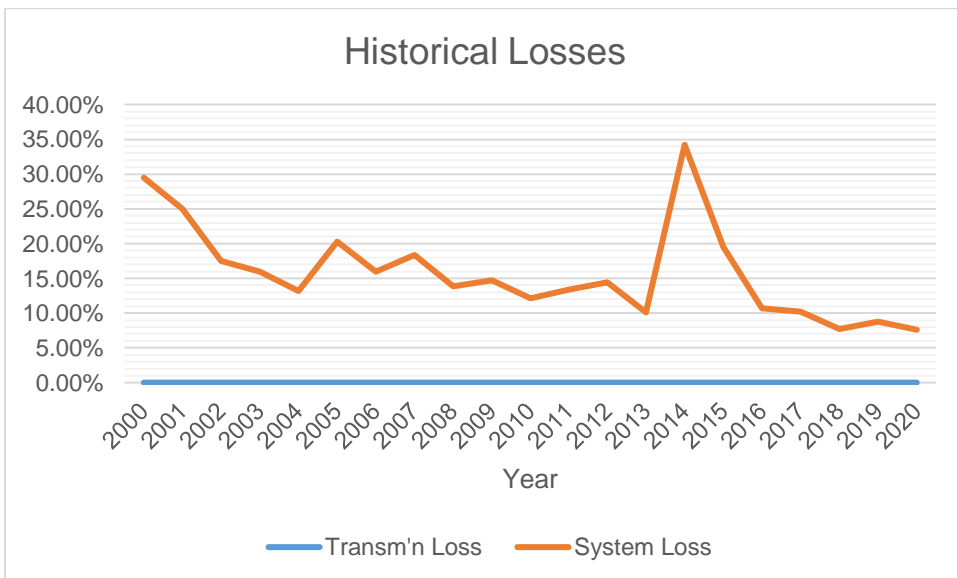
Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	0.05	105	0	105	74	31	24%	0.00%	0.00%	29.44%
2001	0.05	104	0	104	78	26	23%	0.00%	0.00%	25.02%
2002	0.06	99	0	99	82	17	21%	0.00%	0.00%	17.45%
2003	0.06	95	0	95	80	15	19%	0.00%	0.00%	15.97%
2004	0.06	110	0	110	95	14	21%	0.00%	0.00%	13.16%
2005	0.07	118	0	118	94	24	21%	0.00%	0.00%	20.27%
2006	0.07	119	0	119	100	19	20%	0.00%	0.00%	15.94%
2007	0.07	122	0	122	99	22	20%	0.00%	0.00%	18.39%
2008	0.08	122	0	122	105	17	19%	0.00%	0.00%	13.85%
2009	0.08	126	0	126	107	18	18%	0.00%	0.00%	14.70%
2010	0.09	149	0	149	131	18	20%	0.00%	0.00%	12.08%
2011	0.09	158	0	158	137	21	20%	0.00%	0.00%	13.37%
2012	0.17	165	0	165	141	24	11%	0.00%	0.00%	14.38%
2013	0.18	153	0	153	138	15	10%	0.00%	0.00%	10.09%
2014	0.09	21	0	21	13	7	3%	0.00%	0.00%	34.19%
2015	0.13	180	0	180	145	35	16%	0.00%	0.00%	19.55%
2016	0.13	245	0	245	219	26	22%	0.00%	0.00%	10.72%
2017	0.14	386	0	386	347	39	32%	0.00%	0.00%	10.20%
2018	0.15	542	0	542	500	42	40%	0.00%	0.00%	7.70%
2019	0.17	666	0	666	608	58	45%	0.00%	0.00%	8.72%
2020	0.16	718	0	718	663	55	51%	0.00%	0.00%	7.60%

Peak Demand decreased from 0.17 MW in year 2019 to 0.16 MW in year 2020 at a rate of -5.88% due to no big activities in the Islet like fiesta. MWh Offtake increased from 666 MWh in 2019 to 718 MWh in 2019 at a rate of 7.81% due to quarantine period. Within the same period, Load Factor ranged from 45% to 51%. There was an abrupt change in consumption on 2020 due to pandemic, an increase in residential consumption.

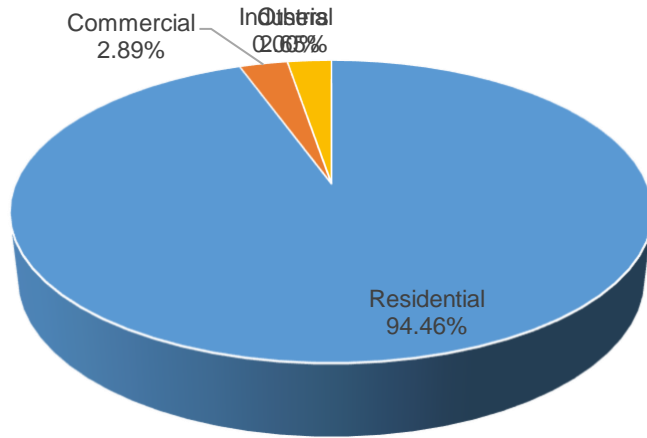


MWh Output increased from year 2019 to year 2020 at a rate of 7.81%, while MWh System Loss decreased at a rate of -12.84% within the same period.



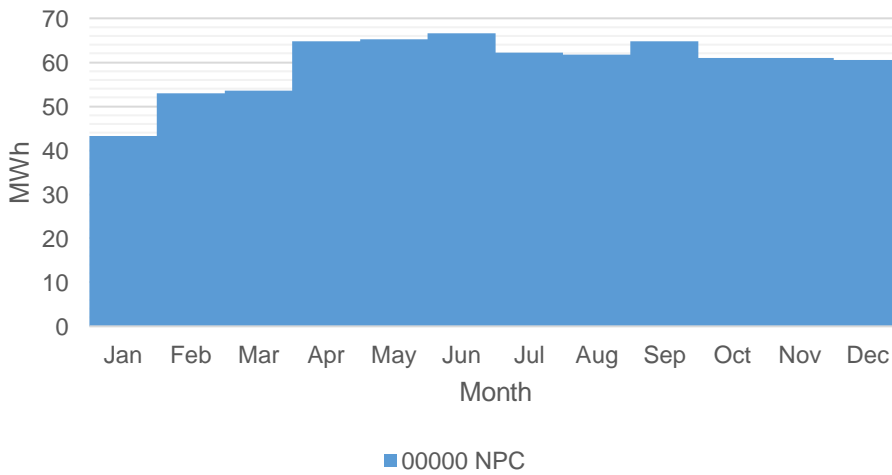
Historically, System Loss ranged from 7.60% to 34.19%. System Loss peaked at 34.19% on year 2014 because of unbalance system, the NPC SPUG used dummy load to balance the system because during that year, restoration was ongoing due to typhoon Yolanda.

Previous Year's Shares of Energy Sales



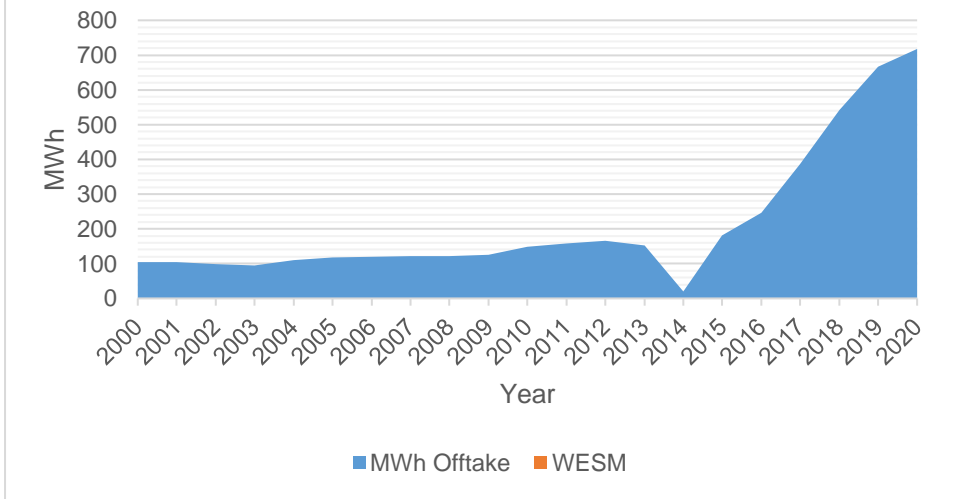
Residential customers account for the bulk of energy sales at 94.46% despite of the low number of connections. In contrast, commercial customers accounted for only 2.89% of energy sales due to the low number of connections.

MWh Offtake for Last Historical Year



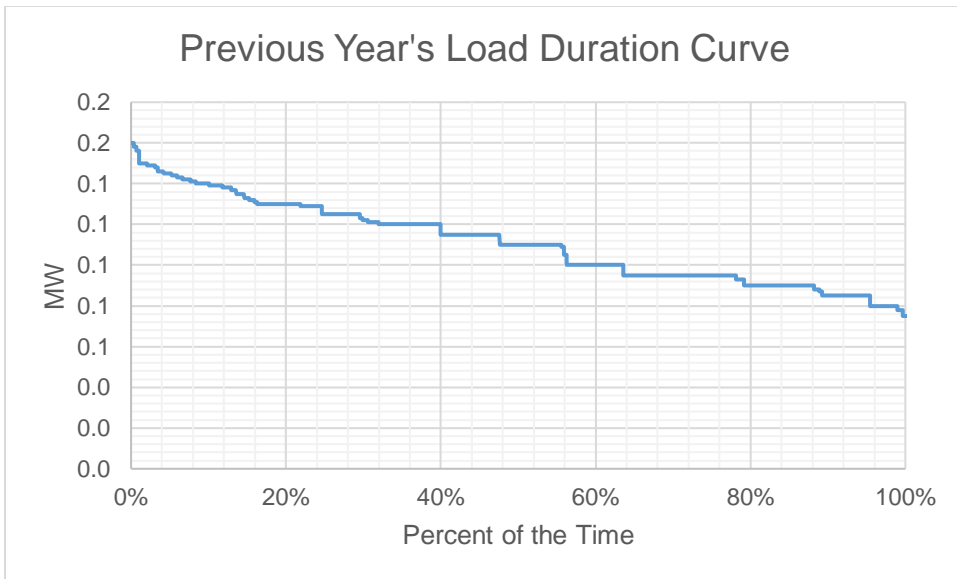
For Guintarcan Island, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with 00000 NPC accounts for the bulk of MWh Offtake.

WESM Share Over Time

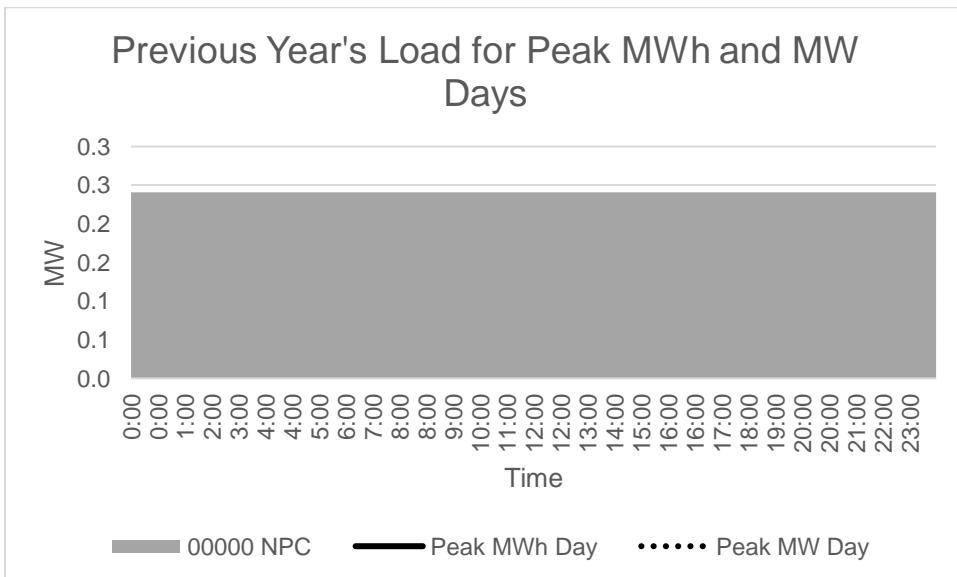


N/A

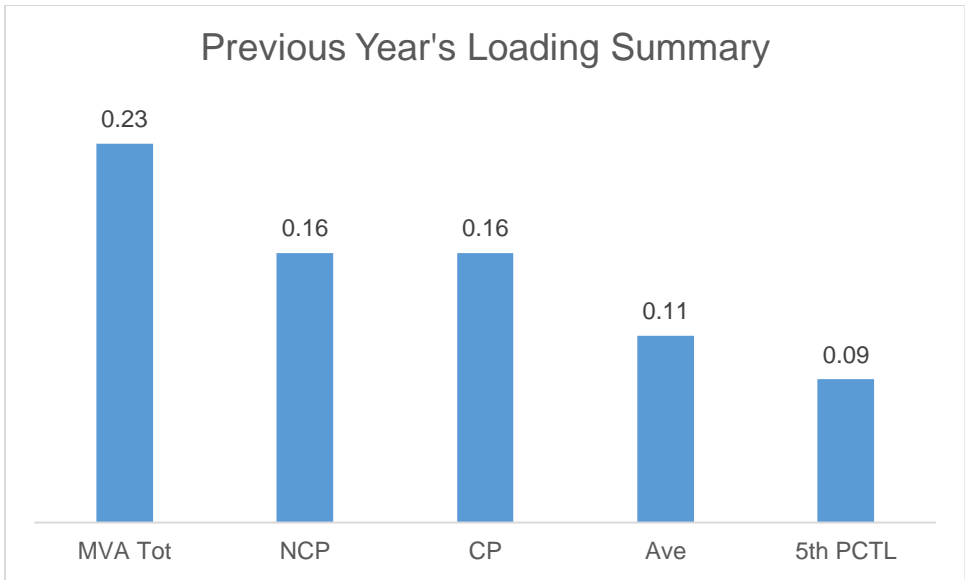
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0.075 MW and the maximum load is 0.16 MW for the last historical year.



Peak MW and daily MWH occurred on 7:00 o'clock in the evening due to dinner time, also it's the time were mostly of the fishermen where at home. As shown in the Load Curves, the available supply is lower than the Peak Demand.



The Non-coincident Peak Demand is 0.16 MW, which is around 70% of the total substation capacity of .23 MVA at a power factor of 0.95. The load factor or the ratio between the Average Load of 0.11 MW and the Non-coincident Peak Demand is 70% of. A safe estimate of the true minimum load is the fifth percentile load of .09 MW which is 57% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
1	0.225	0.160

The substations loaded at 70%. This loading problem will be solved by adding new transformer.

Forecasted Consumption Data

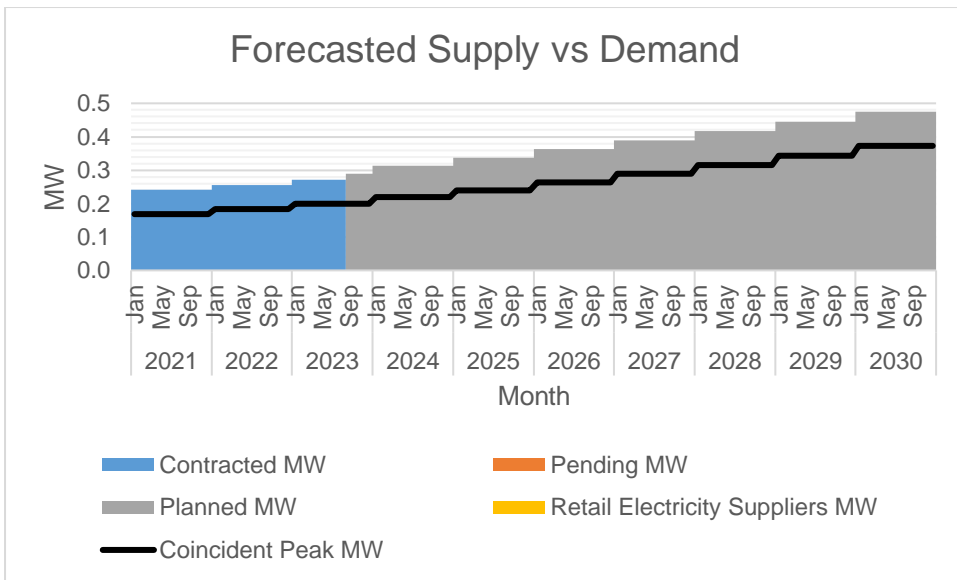
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2021	Jan	0.17	0.24	0.00	0.000		143%	143%	0.07
	Feb	0.17	0.24	0.00	0.000		143%	143%	0.07
	Mar	0.17	0.24	0.00	0.000		143%	143%	0.07
	Apr	0.17	0.24	0.00	0.000		143%	143%	0.07
	May	0.17	0.24	0.00	0.000		143%	143%	0.07
	Jun	0.17	0.24	0.00	0.000		143%	143%	0.07
	Jul	0.17	0.24	0.00	0.000		143%	143%	0.07
	Aug	0.17	0.24	0.00	0.000		143%	143%	0.07
	Sep	0.17	0.24	0.00	0.000		143%	143%	0.07
	Oct	0.17	0.24	0.00	0.000		143%	143%	0.07
	Nov	0.17	0.24	0.00	0.000		143%	143%	0.07
	Dec	0.17	0.24	0.00	0.000		143%	143%	0.07
2022	Jan	0.18	0.26	0.00	0.000		140%	140%	0.07
	Feb	0.18	0.26	0.00	0.000		140%	140%	0.07
	Mar	0.18	0.26	0.00	0.000		140%	140%	0.07
	Apr	0.18	0.26	0.00	0.000		140%	140%	0.07
	May	0.18	0.26	0.00	0.000		140%	140%	0.07
	Jun	0.18	0.26	0.00	0.000		140%	140%	0.07
	Jul	0.18	0.26	0.00	0.000		140%	140%	0.07
	Aug	0.18	0.26	0.00	0.000		140%	140%	0.07
	Sep	0.18	0.26	0.00	0.000		140%	140%	0.07
	Oct	0.18	0.26	0.00	0.000		140%	140%	0.07
	Nov	0.18	0.26	0.00	0.000		140%	140%	0.07
	Dec	0.18	0.26	0.00	0.000		140%	140%	0.07
2023	Jan	0.20	0.27	0.00	0.000		136%	136%	0.07
	Feb	0.20	0.27	0.00	0.000		136%	136%	0.07
	Mar	0.20	0.27	0.00	0.000		136%	136%	0.07
	Apr	0.20	0.27	0.00	0.000		136%	136%	0.07

	May	0.20	0.27	0.00	0.000		136%	136%	0.07
	Jun	0.20	0.27	0.00	0.000		136%	136%	0.07
	Jul	0.20	0.27	0.00	0.000		136%	136%	0.07
	Aug	0.20	0.27	0.00	0.000		136%	136%	0.07
	Sep	0.20	0.00	0.00	0.290		0%	145%	0.09
	Oct	0.20	0.00	0.00	0.290		0%	145%	0.09
	Nov	0.20	0.00	0.00	0.290		0%	145%	0.09
	Dec	0.20	0.00	0.00	0.290		0%	145%	0.09
2024	Jan	0.22	0.00	0.00	0.313		0%	143%	0.09
	Feb	0.22	0.00	0.00	0.313		0%	143%	0.09
	Mar	0.22	0.00	0.00	0.313		0%	143%	0.09
	Apr	0.22	0.00	0.00	0.313		0%	143%	0.09
	May	0.22	0.00	0.00	0.313		0%	143%	0.09
	Jun	0.22	0.00	0.00	0.313		0%	143%	0.09
	Jul	0.22	0.00	0.00	0.313		0%	143%	0.09
	Aug	0.22	0.00	0.00	0.313		0%	143%	0.09
	Sep	0.22	0.00	0.00	0.313		0%	143%	0.09
	Oct	0.22	0.00	0.00	0.313		0%	143%	0.09
	Nov	0.22	0.00	0.00	0.313		0%	143%	0.09
	Dec	0.22	0.00	0.00	0.313		0%	143%	0.09
2025	Jan	0.24	0.00	0.00	0.338		0%	141%	0.10
	Feb	0.24	0.00	0.00	0.338		0%	141%	0.10
	Mar	0.24	0.00	0.00	0.338		0%	141%	0.10
	Apr	0.24	0.00	0.00	0.338		0%	141%	0.10
	May	0.24	0.00	0.00	0.338		0%	141%	0.10
	Jun	0.24	0.00	0.00	0.338		0%	141%	0.10
	Jul	0.24	0.00	0.00	0.338		0%	141%	0.10
	Aug	0.24	0.00	0.00	0.338		0%	141%	0.10
	Sep	0.24	0.00	0.00	0.338		0%	141%	0.10
	Oct	0.24	0.00	0.00	0.338		0%	141%	0.10
	Nov	0.24	0.00	0.00	0.338		0%	141%	0.10
	Dec	0.24	0.00	0.00	0.338		0%	141%	0.10
2026	Jan	0.26	0.00	0.00	0.363		0%	138%	0.10

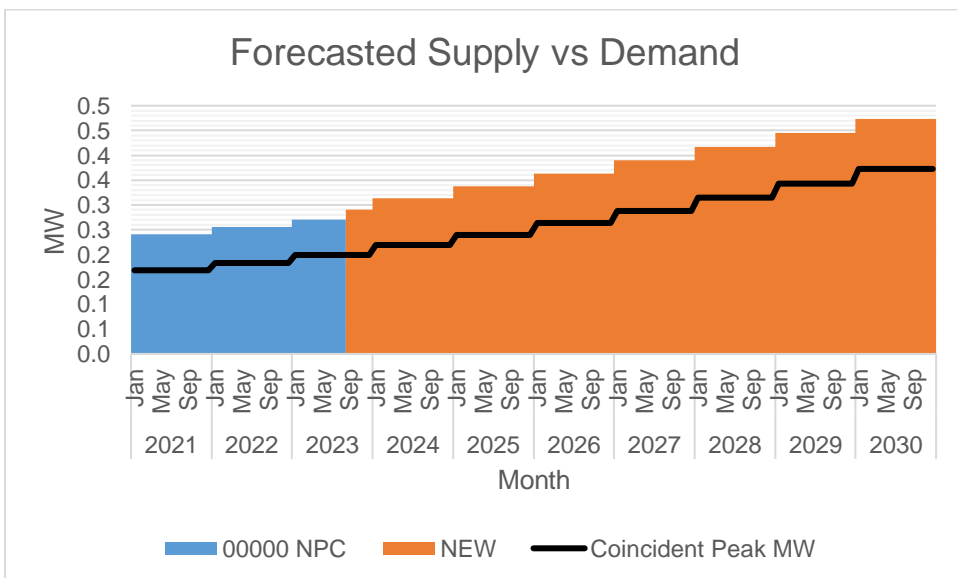
	Feb	0.26	0.00	0.00	0.363		0%	138%	0.10
	Mar	0.26	0.00	0.00	0.363		0%	138%	0.10
	Apr	0.26	0.00	0.00	0.363		0%	138%	0.10
	May	0.26	0.00	0.00	0.363		0%	138%	0.10
	Jun	0.26	0.00	0.00	0.363		0%	138%	0.10
	Jul	0.26	0.00	0.00	0.363		0%	138%	0.10
	Aug	0.26	0.00	0.00	0.363		0%	138%	0.10
	Sep	0.26	0.00	0.00	0.363		0%	138%	0.10
	Oct	0.26	0.00	0.00	0.363		0%	138%	0.10
	Nov	0.26	0.00	0.00	0.363		0%	138%	0.10
	Dec	0.26	0.00	0.00	0.363		0%	138%	0.10
2027	Jan	0.29	0.00	0.00	0.390		0%	135%	0.10
	Feb	0.29	0.00	0.00	0.390		0%	135%	0.10
	Mar	0.29	0.00	0.00	0.390		0%	135%	0.10
	Apr	0.29	0.00	0.00	0.390		0%	135%	0.10
	May	0.29	0.00	0.00	0.390		0%	135%	0.10
	Jun	0.29	0.00	0.00	0.390		0%	135%	0.10
	Jul	0.29	0.00	0.00	0.390		0%	135%	0.10
	Aug	0.29	0.00	0.00	0.390		0%	135%	0.10
	Sep	0.29	0.00	0.00	0.390		0%	135%	0.10
	Oct	0.29	0.00	0.00	0.390		0%	135%	0.10
	Nov	0.29	0.00	0.00	0.390		0%	135%	0.10
	Dec	0.29	0.00	0.00	0.390		0%	135%	0.10
2028	Jan	0.32	0.00	0.00	0.417		0%	132%	0.10
	Feb	0.32	0.00	0.00	0.417		0%	132%	0.10
	Mar	0.32	0.00	0.00	0.417		0%	132%	0.10
	Apr	0.32	0.00	0.00	0.417		0%	132%	0.10
	May	0.32	0.00	0.00	0.417		0%	132%	0.10
	Jun	0.32	0.00	0.00	0.417		0%	132%	0.10
	Jul	0.32	0.00	0.00	0.417		0%	132%	0.10
	Aug	0.32	0.00	0.00	0.417		0%	132%	0.10
	Sep	0.32	0.00	0.00	0.417		0%	132%	0.10
	Oct	0.32	0.00	0.00	0.417		0%	132%	0.10

	Nov	0.32	0.00	0.00	0.417		0%	132%	0.10
	Dec	0.32	0.00	0.00	0.417		0%	132%	0.10
2029	Jan	0.34	0.00	0.00	0.445		0%	130%	0.10
	Feb	0.34	0.00	0.00	0.445		0%	130%	0.10
	Mar	0.34	0.00	0.00	0.445		0%	130%	0.10
	Apr	0.34	0.00	0.00	0.445		0%	130%	0.10
	May	0.34	0.00	0.00	0.445		0%	130%	0.10
	Jun	0.34	0.00	0.00	0.445		0%	130%	0.10
	Jul	0.34	0.00	0.00	0.445		0%	130%	0.10
	Aug	0.34	0.00	0.00	0.445		0%	130%	0.10
	Sep	0.34	0.00	0.00	0.445		0%	130%	0.10
	Oct	0.34	0.00	0.00	0.445		0%	130%	0.10
	Nov	0.34	0.00	0.00	0.445		0%	130%	0.10
	Dec	0.34	0.00	0.00	0.445		0%	130%	0.10
2030	Jan	0.37	0.00	0.00	0.474		0%	127%	0.10
	Feb	0.37	0.00	0.00	0.474		0%	127%	0.10
	Mar	0.37	0.00	0.00	0.474		0%	127%	0.10
	Apr	0.37	0.00	0.00	0.474		0%	127%	0.10
	May	0.37	0.00	0.00	0.474		0%	127%	0.10
	Jun	0.37	0.00	0.00	0.474		0%	127%	0.10
	Jul	0.37	0.00	0.00	0.474		0%	127%	0.10
	Aug	0.37	0.00	0.00	0.474		0%	127%	0.10
	Sep	0.37	0.00	0.00	0.474		0%	127%	0.10
	Oct	0.37	0.00	0.00	0.474		0%	127%	0.10
	Nov	0.37	0.00	0.00	0.474		0%	127%	0.10
	Dec	0.37	0.00	0.00	0.474		0%	127%	0.10

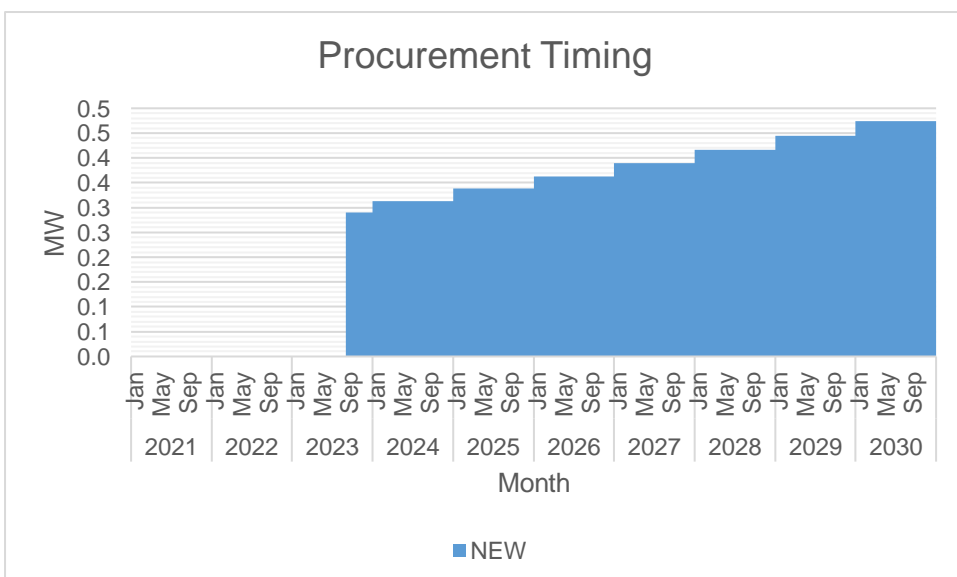
The Peak Demand was forecasted using Cubic Logarithmic with Smoothing & Horizon: $Y=e(t)-1+d\ln(t)^3+c\ln(t)^2+b\ln(t)+a$ and was assumed to occur on the month of May due to summer season and mostly some fiesta in the Island celebrated on this month. Monthly Peak Demand is at its lowest on the month of February due to cold weather. In general, Peak Demand is expected to grow at a rate of 8.46% annually.



The available supply is generally above the Peak Demand. The Data is based on the forecasted result.



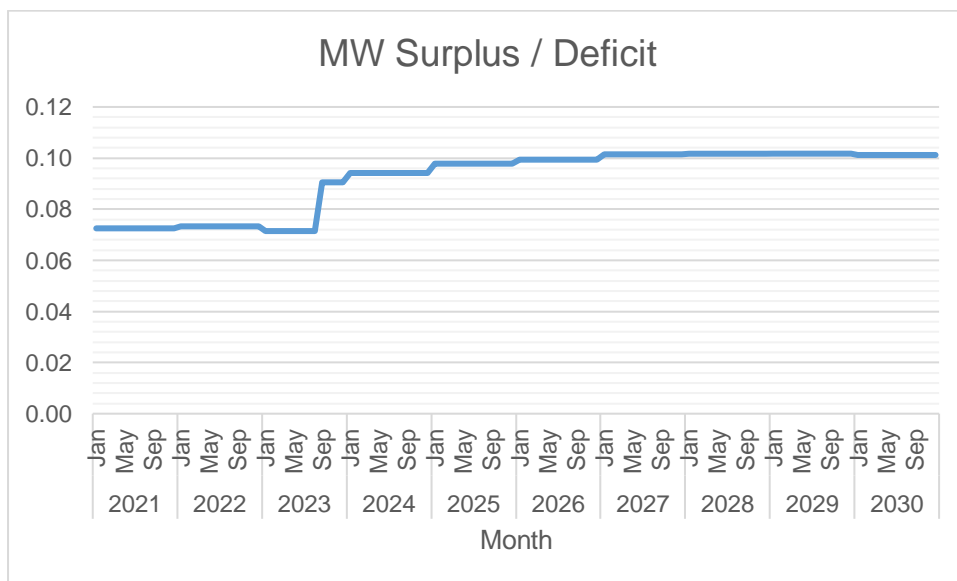
Of the available supply, the largest is 0.47 MW from NEW. This is followed by 0.27 MW from NPC.



The first wave of supply procurement will be for 0.29 MW planned to be available by the month of September 2023.



Currently, there is no under-contacting/over-contacting. The highest target contracting level is 145% which is expected to occur on September 2023. The lowest target contracting level is 127% which is expected to occur on January 2030.



Currently, no under-contacting/over-contacting in terms of MW. The highest surplus is 0.1 MW which is expected to occur on the month of January 2025. The lowest [surplus/deficit] is 0.07 MW which is expected to occur on the month of January 2021.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2021	Jan	76	69	7	0.00%	8.98%
	Feb	76	69	7	0.00%	8.98%
	Mar	76	69	7	0.00%	8.98%
	Apr	76	69	7	0.00%	8.98%
	May	76	69	7	0.00%	8.98%
	Jun	76	69	7	0.00%	8.98%
	Jul	76	69	7	0.00%	8.98%

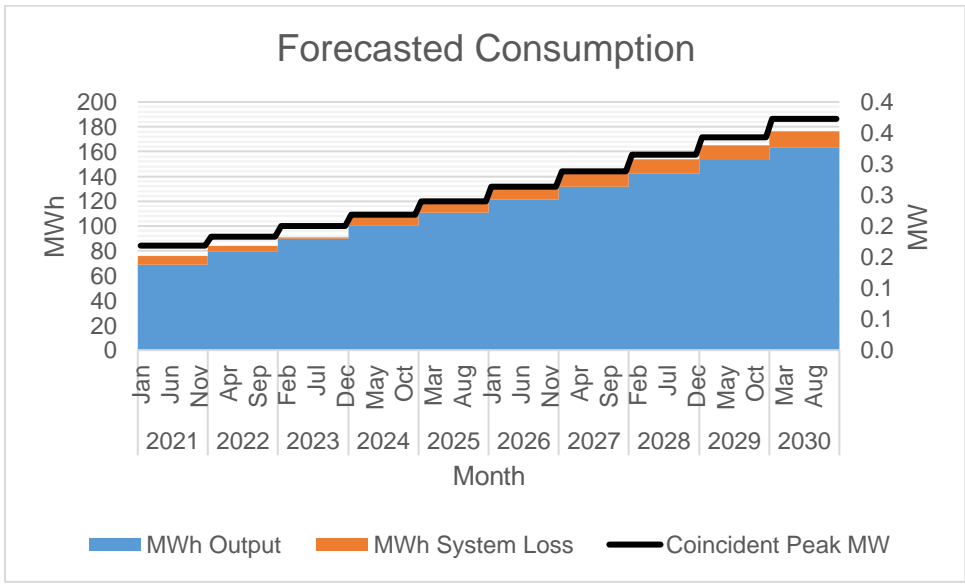
	Aug	76	69	7	0.00%	8.98%
	Sep	76	69	7	0.00%	8.98%
	Oct	76	69	7	0.00%	8.98%
	Nov	76	69	7	0.00%	8.98%
	Dec	76	69	7	0.00%	8.98%
2022	Jan	84	79	5	0.00%	5.55%
	Feb	84	79	5	0.00%	5.55%
	Mar	84	79	5	0.00%	5.55%
	Apr	84	79	5	0.00%	5.55%
	May	84	79	5	0.00%	5.55%
	Jun	84	79	5	0.00%	5.55%
	Jul	84	79	5	0.00%	5.55%
	Aug	84	79	5	0.00%	5.55%
	Sep	84	79	5	0.00%	5.55%
	Oct	84	79	5	0.00%	5.55%
	Nov	84	79	5	0.00%	5.55%
	Dec	84	79	5	0.00%	5.55%
2023	Jan	91	90	1	0.00%	1.20%
	Feb	91	90	1	0.00%	1.20%
	Mar	91	90	1	0.00%	1.20%
	Apr	91	90	1	0.00%	1.20%
	May	91	90	1	0.00%	1.20%
	Jun	91	90	1	0.00%	1.20%
	Jul	91	90	1	0.00%	1.20%
	Aug	91	90	1	0.00%	1.20%
	Sep	91	90	1	0.00%	1.20%
	Oct	91	90	1	0.00%	1.20%
	Nov	91	90	1	0.00%	1.20%
	Dec	91	90	1	0.00%	1.20%
2024	Jan	109	100	8	0.00%	7.59%
	Feb	109	100	8	0.00%	7.59%
	Mar	109	100	8	0.00%	7.59%
	Apr	109	100	8	0.00%	7.59%
	May	109	100	8	0.00%	7.59%
	Jun	109	100	8	0.00%	7.59%
	Jul	109	100	8	0.00%	7.59%
	Aug	109	100	8	0.00%	7.59%
	Sep	109	100	8	0.00%	7.59%
	Oct	109	100	8	0.00%	7.59%
	Nov	109	100	8	0.00%	7.59%
	Dec	109	100	8	0.00%	7.59%
2025	Jan	120	111	9	0.00%	7.50%
	Feb	120	111	9	0.00%	7.50%
	Mar	120	111	9	0.00%	7.50%
	Apr	120	111	9	0.00%	7.50%
	May	120	111	9	0.00%	7.50%
	Jun	120	111	9	0.00%	7.50%
	Jul	120	111	9	0.00%	7.50%
	Aug	120	111	9	0.00%	7.50%

	Sep	120	111	9	0.00%	7.50%
	Oct	120	111	9	0.00%	7.50%
	Nov	120	111	9	0.00%	7.50%
	Dec	120	111	9	0.00%	7.50%
2026	Jan	131	121	10	0.00%	7.43%
	Feb	131	121	10	0.00%	7.43%
	Mar	131	121	10	0.00%	7.43%
	Apr	131	121	10	0.00%	7.43%
	May	131	121	10	0.00%	7.43%
	Jun	131	121	10	0.00%	7.43%
	Jul	131	121	10	0.00%	7.43%
	Aug	131	121	10	0.00%	7.43%
	Sep	131	121	10	0.00%	7.43%
	Oct	131	121	10	0.00%	7.43%
	Nov	131	121	10	0.00%	7.43%
	Dec	131	121	10	0.00%	7.43%
2027	Jan	142	132	10	0.00%	7.37%
	Feb	142	132	10	0.00%	7.37%
	Mar	142	132	10	0.00%	7.37%
	Apr	142	132	10	0.00%	7.37%
	May	142	132	10	0.00%	7.37%
	Jun	142	132	10	0.00%	7.37%
	Jul	142	132	10	0.00%	7.37%
	Aug	142	132	10	0.00%	7.37%
	Sep	142	132	10	0.00%	7.37%
	Oct	142	132	10	0.00%	7.37%
	Nov	142	132	10	0.00%	7.37%
	Dec	142	132	10	0.00%	7.37%
2028	Jan	154	142	11	0.00%	7.32%
	Feb	154	142	11	0.00%	7.32%
	Mar	154	142	11	0.00%	7.32%
	Apr	154	142	11	0.00%	7.32%
	May	154	142	11	0.00%	7.32%
	Jun	154	142	11	0.00%	7.32%
	Jul	154	142	11	0.00%	7.32%
	Aug	154	142	11	0.00%	7.32%
	Sep	154	142	11	0.00%	7.32%
	Oct	154	142	11	0.00%	7.32%
	Nov	154	142	11	0.00%	7.32%
	Dec	154	142	11	0.00%	7.32%
2029	Jan	165	153	12	0.00%	7.01%
	Feb	165	153	12	0.00%	7.01%
	Mar	165	153	12	0.00%	7.01%
	Apr	165	153	12	0.00%	7.01%
	May	165	153	12	0.00%	7.01%
	Jun	165	153	12	0.00%	7.01%
	Jul	165	153	12	0.00%	7.01%
	Aug	165	153	12	0.00%	7.01%
	Sep	165	153	12	0.00%	7.01%

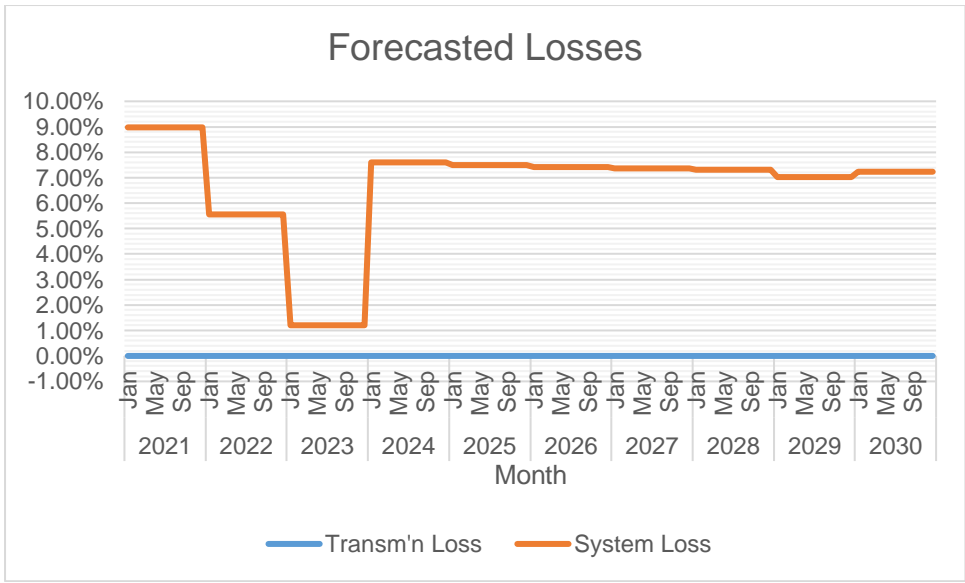
	Oct	165	153	12	0.00%	7.01%
	Nov	165	153	12	0.00%	7.01%
	Dec	165	153	12	0.00%	7.01%
2030	Jan	176	164	13	0.00%	7.23%
	Feb	176	164	13	0.00%	7.23%
	Mar	176	164	13	0.00%	7.23%
	Apr	176	164	13	0.00%	7.23%
	May	176	164	13	0.00%	7.23%
	Jun	176	164	13	0.00%	7.23%
	Jul	176	164	13	0.00%	7.23%
	Aug	176	164	13	0.00%	7.23%
	Sep	176	164	13	0.00%	7.23%
	Oct	176	164	13	0.00%	7.23%
	Nov	176	164	13	0.00%	7.23%
	Dec	176	164	13	0.00%	7.23%

MWh Offtake was forecasted using Linear with Smoothing & Horizon: $Y=e(t)-1+b(t)+a$. The assumed load factor is 54.3%.

System Loss is known but cannot be segregated further. System loss was calculated through manual computation base on the results of the forecasted purchase and the forecasted sales. Based on the same study, the Distribution System can adequately convey electricity to customers.



MWh Output was expected to grow at an average rate of 9.14% annually.



System Loss is expected to range from 1.2% to 8.98%.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
00000 NPC	Base	National Power Corporation	0.211	709	8/26/2018	8/26/2023

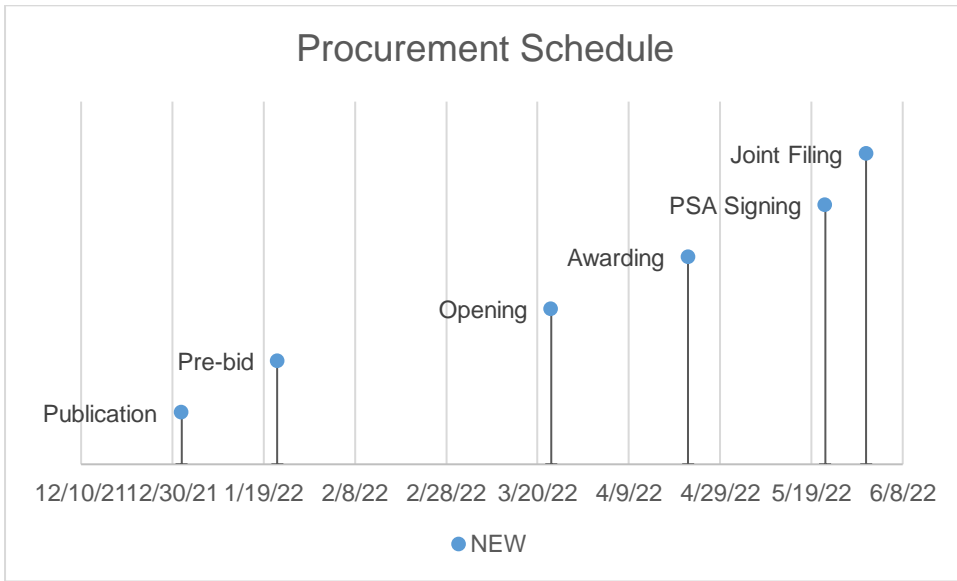
The PSA with NPC filed with ERC under Case No. 00000 was procured through RA 9136, the Small Power Utilities Group (SPUG) of NPC is responsible for providing power generation and its associated power delivery system in areas that are not connected to the transmission system. It was selected to provide for base requirements. Historically, the utilization of the PSA is 100%. Outages of the plant led to unserved energy of around 0.636 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 5.6404 P/kWh in the same period.

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
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The PSA with ___ filed with ERC under Case No. ___ was procured through ____. It was selected to provide for [base/intermediate/peaking] requirements due to ____. Historically, the utilization of the PSA is ___%. Outages of the plant led to unserved energy of around ___ MWh in the past year. The actual billed overall monthly charge under the PSA ranged from ___ P/kWh to ___ P/kWh in the same period.

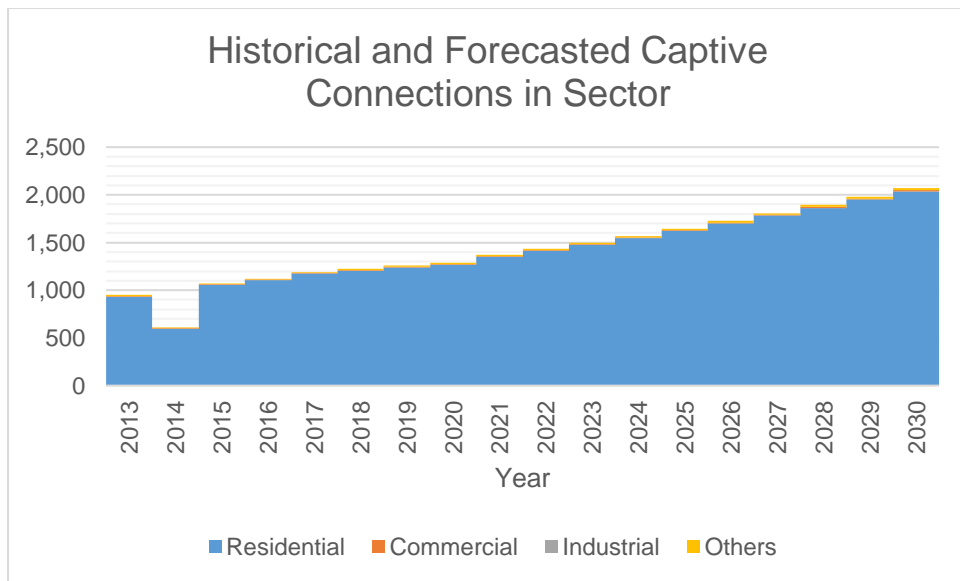
[Repeat as needed]

	NEW
Type	Base
Minimum MW	0.29
Minimum MWh/yr	1,304
PSA Start	8/26/2023
PSA End	8/26/2038
Publication	1/1/2022
Pre-bid	1/22/2022
Opening	3/23/2022
Awarding	4/22/2022
PSA Signing	5/22/2022
Joint Filing	5/31/2022



For the procurement of 0.29 MW of supply which is planned to be available on August 26, 2023, the first publication or launch of CSP will be on January 1, 2022. Joint filing is planned on May 31, 2022, or 150 days later, in accordance with DOE’s 2018 CSP Policy.

Captive Customer Connections



The number of Residential connections is expected to grow at a rate of 2.13% annually. Said customer class is expected to account for 94.46% of the total consumption.