

**LA UNION ELECTRIC COMPANY, INC**

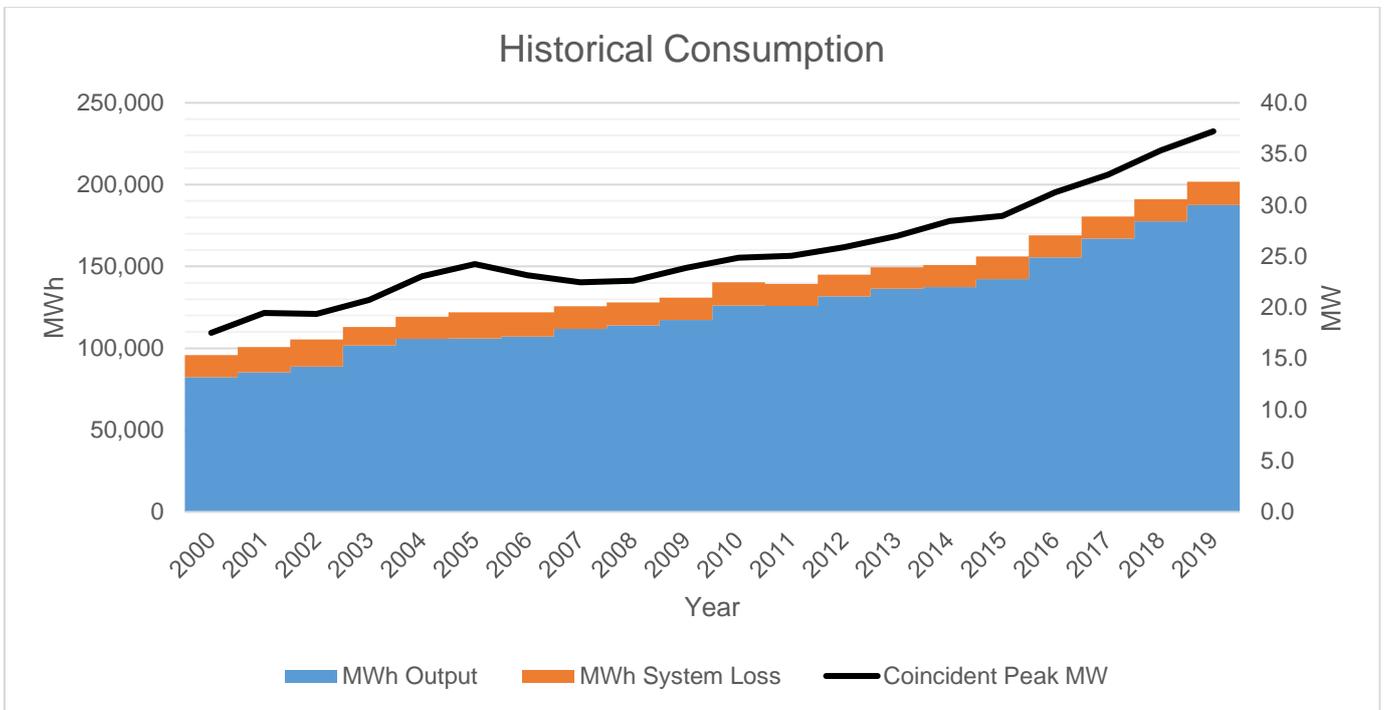


**Power Supply Procurement Plan  
2020**

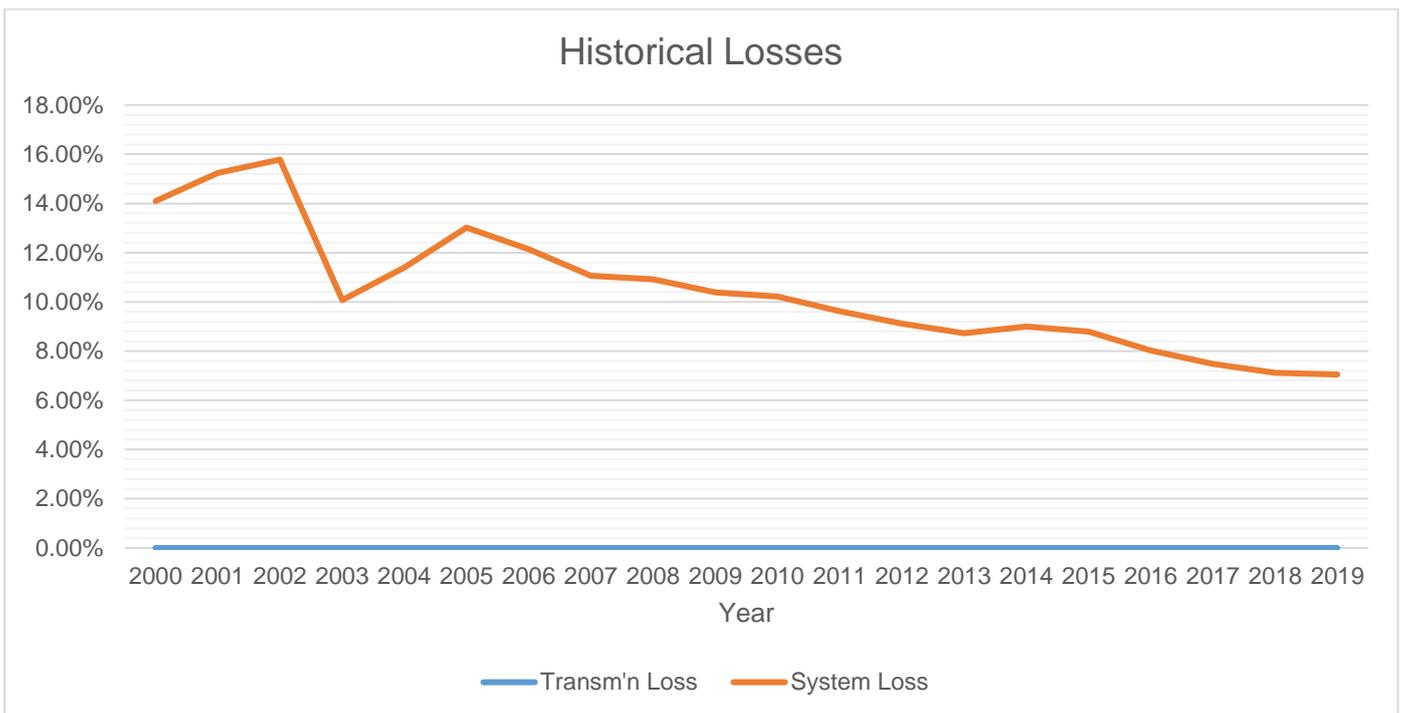
## Historical Consumption Data

	Coincident Peak MW	MWh Offtake	MWh Input	MWh Output	MWh System Loss	Load Factor	Transm'n Loss	System Loss
2000	17.51	95,778	95,778	82,277	13,502	62%	0.00%	14.10%
2001	19.46	100,622	100,622	85,282	15,339	59%	0.00%	15.24%
2002	19.36	105,454	105,454	88,809	16,645	62%	0.00%	15.78%
2003	20.74	112,975	112,975	101,595	11,381	62%	0.00%	10.07%
2004	23.03	119,297	119,297	105,693	13,604	59%	0.00%	11.40%
2005	24.23	121,923	121,923	106,039	15,883	57%	0.00%	13.03%
2006	23.14	121,928	121,928	107,124	14,804	60%	0.00%	12.14%
2007	22.46	125,690	125,690	111,783	13,907	64%	0.00%	11.06%
2008	22.60	127,983	127,983	114,002	13,981	65%	0.00%	10.92%
2009	23.84	130,972	130,972	117,375	13,598	63%	0.00%	10.38%
2010	24.86	140,350	140,350	126,000	14,350	64%	0.00%	10.22%
2011	25.03	139,257	139,257	125,863	13,395	64%	0.00%	9.62%
2012	25.87	144,908	144,908	131,694	13,214	64%	0.00%	9.12%
2013	26.96	149,438	149,438	136,387	13,050	63%	0.00%	8.73%
2014	28.45	150,921	150,921	137,339	13,582	61%	0.00%	9.00%
2015	28.94	156,082	156,082	142,353	13,728	62%	0.00%	8.80%
2016	31.26	169,045	169,045	155,470	13,575	62%	0.00%	8.03%
2017	32.98	180,494	180,494	166,990	13,503	62%	0.00%	7.48%
2018	35.35	191,106	191,106	177,507	13,599	62%	0.00%	7.12%
2019	37.21	201,775	201,775	187,553	14,222	62%	0.00%	7.05%

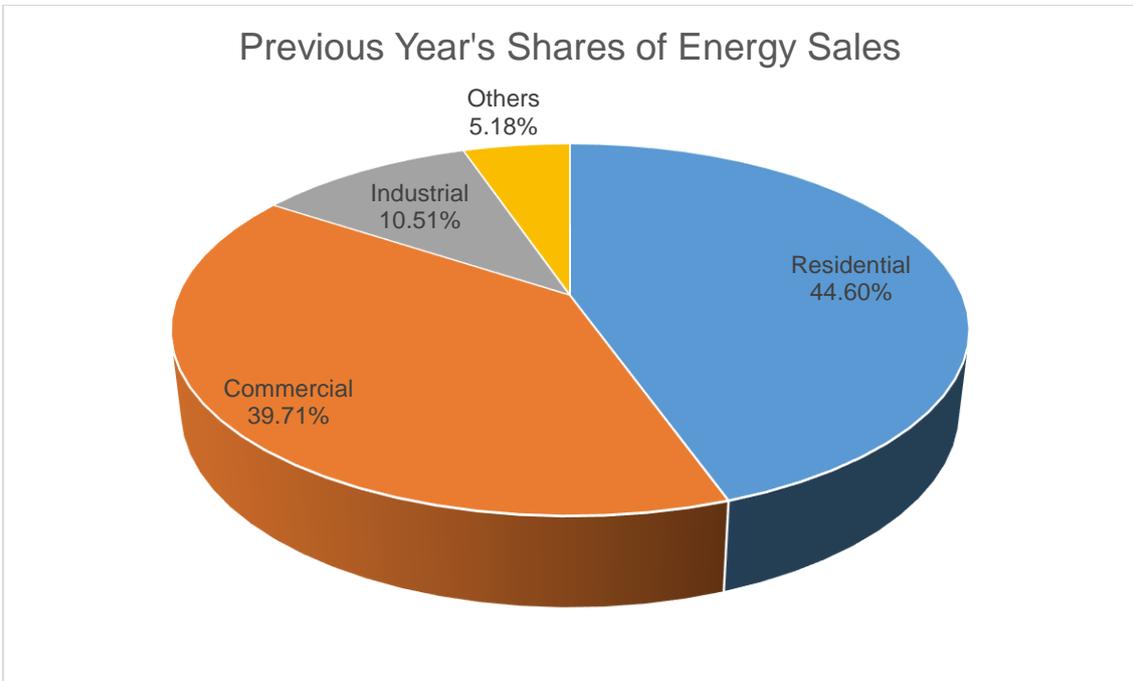
Peak Demand increased from 17.51 MW in year 2000 to 37.21 MW in year 2019 at a rate of 4% due to new customers and increased in consumptions. MWh Offtake increased from 95,778 MWh in year 2000 to 201,775 MWh in year 2019 at a rate of 4.2 % for the same reason. Within the same period, Load Factor ranged from 57% to 64%.



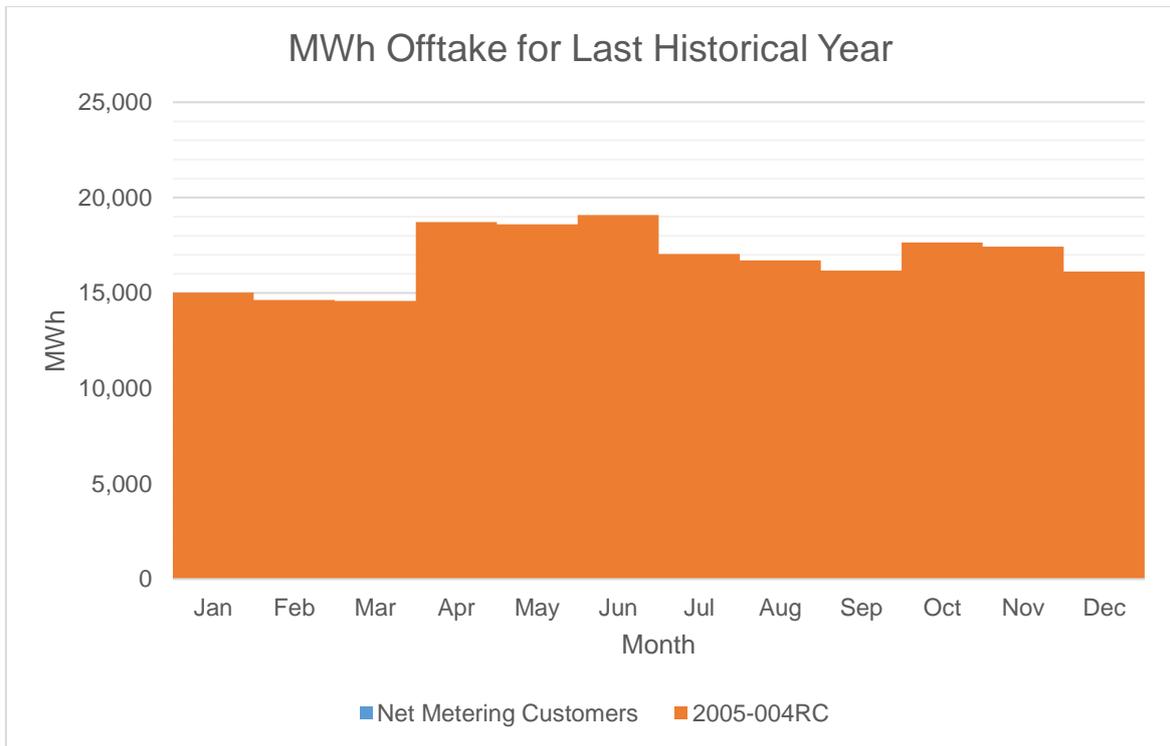
MWh Output increased from year 2000 to year 2019 at a rate of 4.67%, while MWh System Loss decreased at a rate of 4% within the same period.



Historically, System Loss ranged from 15.78% to 7.05%. System Loss has decreased over the years due to system loss reduction programs and anti-pilferage campaigns.

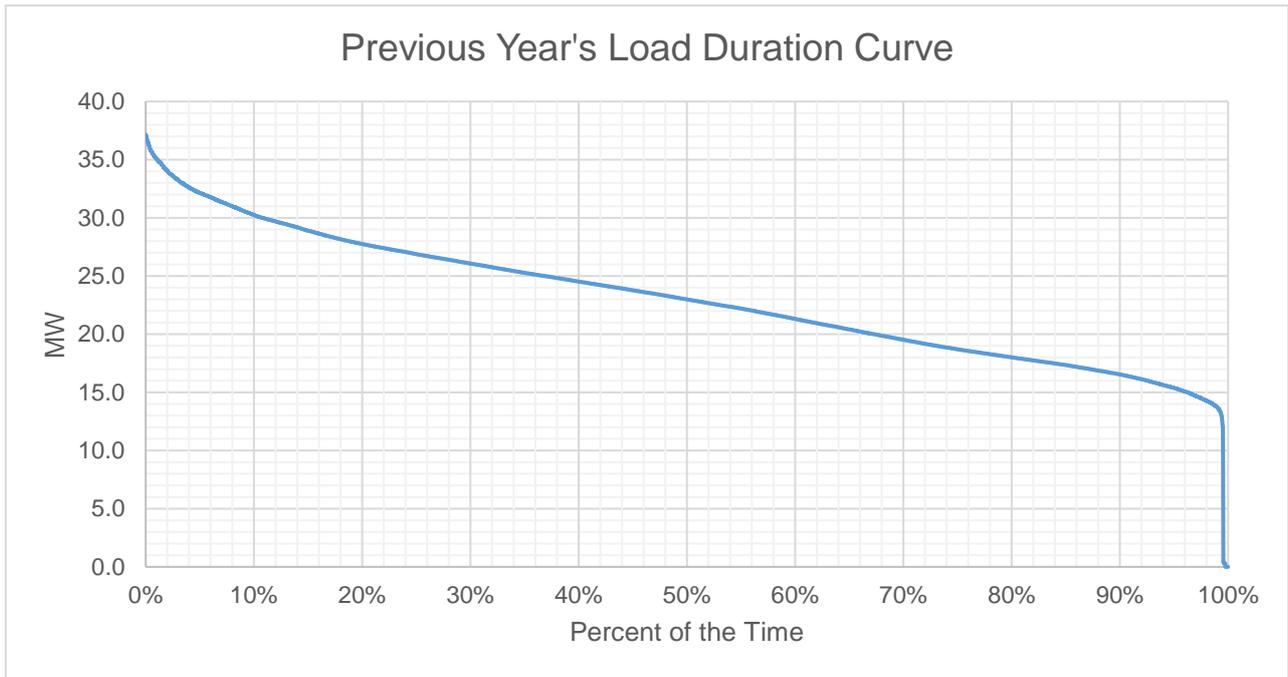


Residential customers account for the bulk of energy sales at 44.60% due to the high number of connections. In contrast, Industrial customers accounted for only 10.51% of energy sales due to the low number of connections.

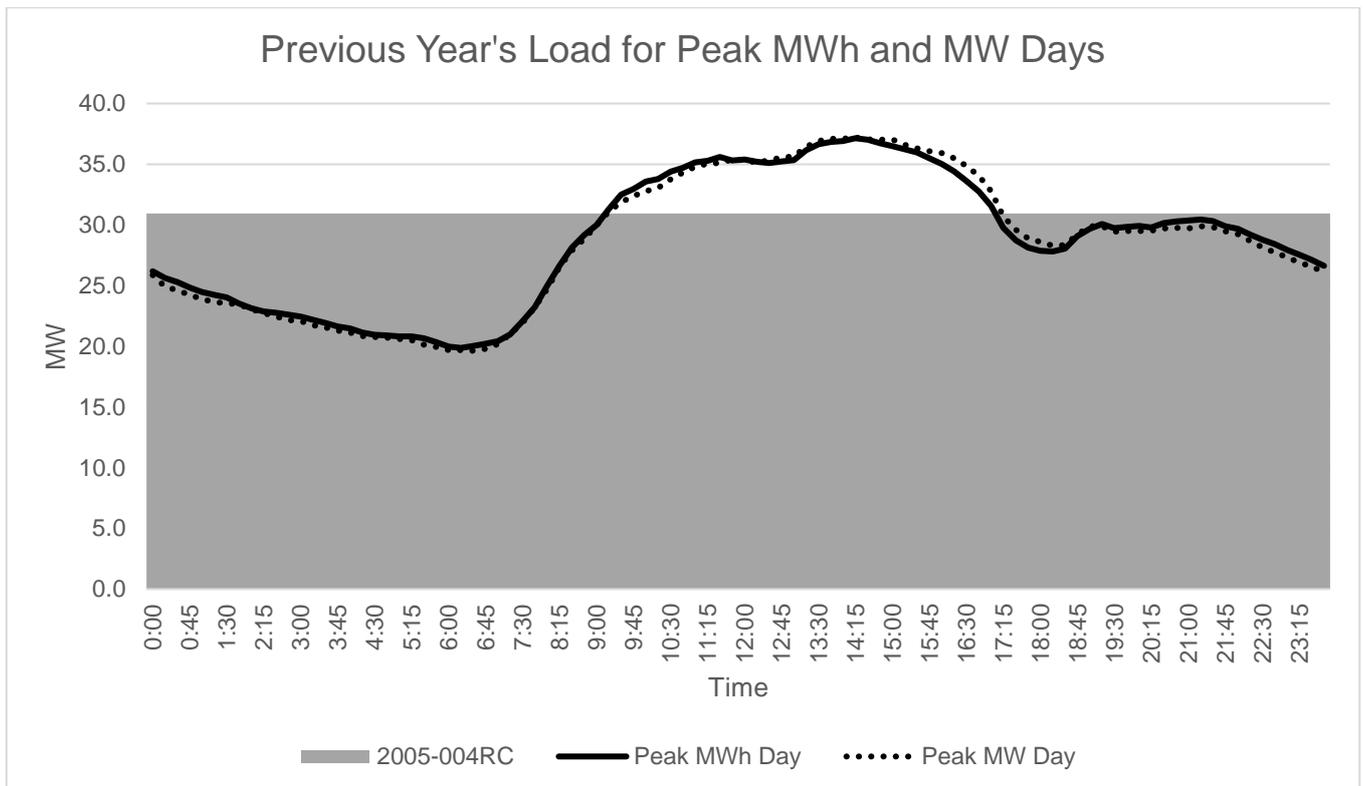


The total Offtake for the last historical year is same than the quantity stipulated in the PSA since its load-following.

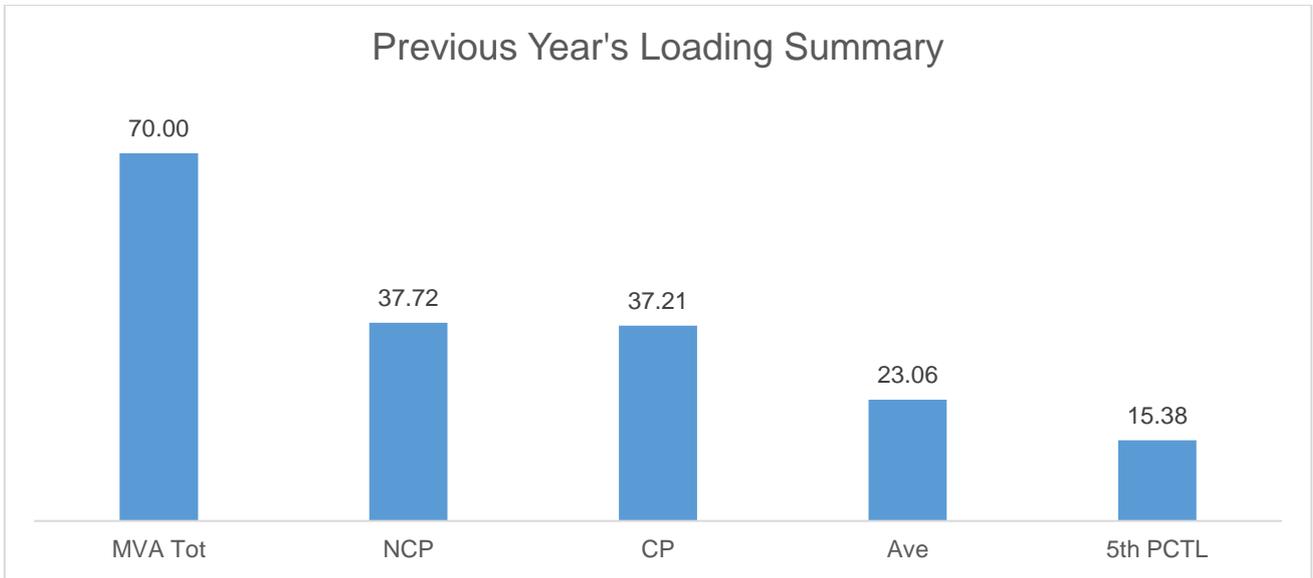
# Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 13.5 MW and the maximum load is 37.72 MW for the last historical year.



Peak MW occurred on May 20, 2019 due to hot weather. Peak daily MWh occurred on May 20, 2019 due to hot weather. As shown in the Load Curves, the available supply is lower than the Peak Demand.



The Non-coincident Peak Demand is 37.75 MW, which is around 62% of the total substation capacity of 60 MVA at a power factor of 98%. The load factor or the ratio between the Average Load of 60 MW and the Non-coincident Peak Demand is 61.13% of. A safe estimate of the true minimum load is the fifth percentile load of 15.38 MW which is 40.77% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
69kV	60	36.817
115kV	5	0.905

The 69kV/13.2kV substations loaded at above 70% are Poro Substation and Bauang Substation last June 2020. This loading problem will be solved by the additional 30 MVA, 115kV/13.2kV in 2021. The 5 MVA, 115kV/4.16kV caters exclusively to 4.16kV loads with maximum demand of less than 1MW.

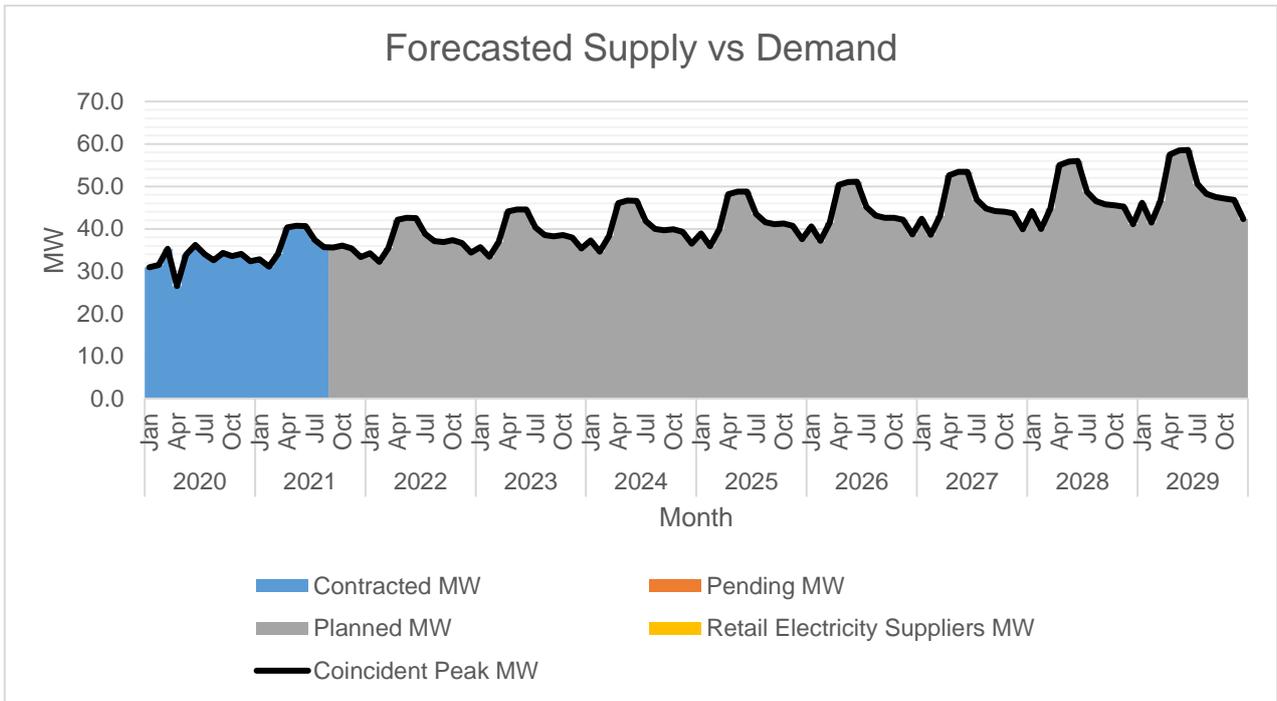
## Forecasted Consumption Data

		Coincident Peak MW	Contracted MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2020	Jan	30.95	30.95	0.000	100%	100%	0.00
	Feb	31.43	31.43	0.000	100%	100%	0.00
	Mar	35.29	35.29	0.000	100%	100%	0.00
	Apr	26.51	26.51	0.000	100%	100%	0.00
	May	33.84	33.84	0.000	100%	100%	0.00
	Jun	36.20	36.20	0.000	100%	100%	0.00
	Jul	34.02	34.02	0.000	100%	100%	0.00
	Aug	32.60	32.60	0.000	100%	100%	0.00
	Sep	34.33	34.33	0.000	100%	100%	0.00
	Oct	33.54	33.54	0.000	100%	100%	0.00
	Nov	34.13	34.13	0.000	100%	100%	0.00
	Dec	32.39	32.39	0.000	100%	100%	0.00
2021	Jan	32.78	32.78	0.000	100%	100%	0.00
	Feb	31.06	31.06	0.000	100%	100%	0.00
	Mar	34.10	34.10	0.000	100%	100%	0.00
	Apr	40.35	40.35	0.000	100%	100%	0.00
	May	40.73	40.73	0.000	100%	100%	0.00
	Jun	40.63	40.63	0.000	100%	100%	0.00
	Jul	37.39	37.39	0.000	100%	100%	0.00
	Aug	35.70	35.70	0.000	100%	100%	0.00
	Sep	35.57	0.00	35.571	0%	100%	0.00
	Oct	36.09	0.00	36.087	0%	100%	0.00
	Nov	35.35	0.00	35.352	0%	100%	0.00
	Dec	33.36	0.00	33.360	0%	100%	0.00
2022	Jan	34.21	0.00	34.211	0%	100%	0.00
	Feb	32.20	0.00	32.198	0%	100%	0.00
	Mar	35.46	0.00	35.459	0%	100%	0.00
	Apr	42.18	0.00	42.179	0%	100%	0.00
	May	42.61	0.00	42.609	0%	100%	0.00
	Jun	42.53	0.00	42.533	0%	100%	0.00
	Jul	38.83	0.00	38.831	0%	100%	0.00
	Aug	37.07	0.00	37.073	0%	100%	0.00
	Sep	36.88	0.00	36.876	0%	100%	0.00
	Oct	37.31	0.00	37.306	0%	100%	0.00
	Nov	36.62	0.00	36.618	0%	100%	0.00
	Dec	34.36	0.00	34.364	0%	100%	0.00
2023	Jan	35.70	0.00	35.703	0%	100%	0.00
	Feb	33.38	0.00	33.383	0%	100%	0.00
	Mar	36.87	0.00	36.866	0%	100%	0.00
	Apr	44.09	0.00	44.085	0%	100%	0.00
	May	44.58	0.00	44.578	0%	100%	0.00
	Jun	44.52	0.00	44.524	0%	100%	0.00
	Jul	40.32	0.00	40.322	0%	100%	0.00
	Aug	38.50	0.00	38.496	0%	100%	0.00

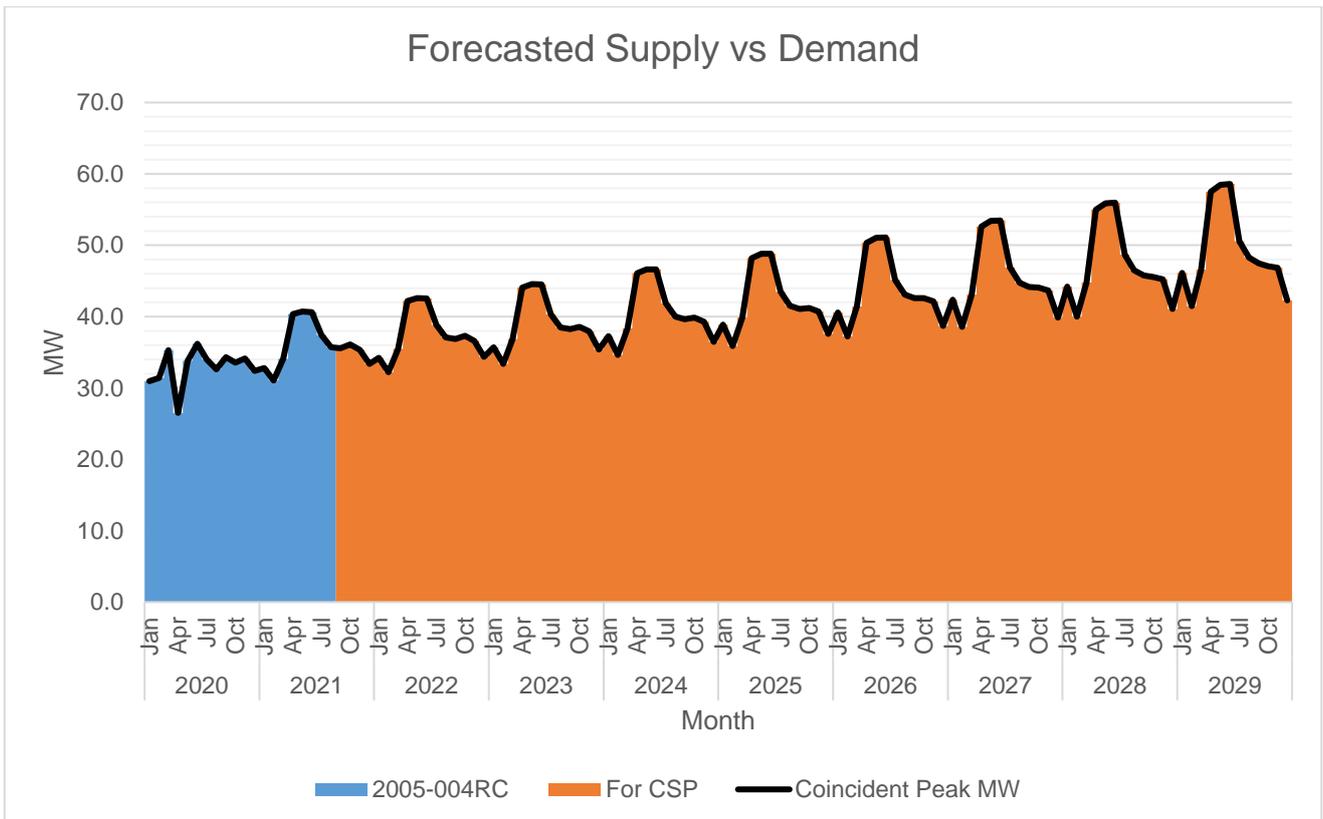
		Coincident Peak MW	Contracted MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Sep	38.23	0.00	38.230	0%	100%	0.00
	Oct	38.57	0.00	38.567	0%	100%	0.00
	Nov	37.93	0.00	37.929	0%	100%	0.00
	Dec	35.40	0.00	35.399	0%	100%	0.00
2024	Jan	37.26	0.00	37.259	0%	100%	0.00
	Feb	34.61	0.00	34.612	0%	100%	0.00
	Mar	38.33	0.00	38.330	0%	100%	0.00
	Apr	46.08	0.00	46.078	0%	100%	0.00
	May	46.64	0.00	46.637	0%	100%	0.00
	Jun	46.61	0.00	46.608	0%	100%	0.00
	Jul	41.87	0.00	41.870	0%	100%	0.00
	Aug	39.97	0.00	39.974	0%	100%	0.00
	Sep	39.63	0.00	39.633	0%	100%	0.00
	Oct	39.87	0.00	39.871	0%	100%	0.00
	Nov	39.29	0.00	39.287	0%	100%	0.00
	Dec	36.46	0.00	36.464	0%	100%	0.00
2025	Jan	38.88	0.00	38.884	0%	100%	0.00
	Feb	35.89	0.00	35.885	0%	100%	0.00
	Mar	39.85	0.00	39.852	0%	100%	0.00
	Apr	48.16	0.00	48.161	0%	100%	0.00
	May	48.79	0.00	48.792	0%	100%	0.00
	Jun	48.79	0.00	48.789	0%	100%	0.00
	Jul	43.48	0.00	43.478	0%	100%	0.00
	Aug	41.51	0.00	41.509	0%	100%	0.00
	Sep	41.09	0.00	41.087	0%	100%	0.00
	Oct	41.22	0.00	41.218	0%	100%	0.00
	Nov	40.69	0.00	40.693	0%	100%	0.00
	Dec	37.56	0.00	37.562	0%	100%	0.00
2026	Jan	40.58	0.00	40.579	0%	100%	0.00
	Feb	37.21	0.00	37.206	0%	100%	0.00
	Mar	41.43	0.00	41.434	0%	100%	0.00
	Apr	50.34	0.00	50.338	0%	100%	0.00
	May	51.05	0.00	51.046	0%	100%	0.00
	Jun	51.07	0.00	51.072	0%	100%	0.00
	Jul	45.15	0.00	45.147	0%	100%	0.00
	Aug	43.10	0.00	43.103	0%	100%	0.00
	Sep	42.60	0.00	42.595	0%	100%	0.00
	Oct	42.61	0.00	42.612	0%	100%	0.00
	Nov	42.15	0.00	42.150	0%	100%	0.00
	Dec	38.69	0.00	38.692	0%	100%	0.00
2027	Jan	42.35	0.00	42.349	0%	100%	0.00
	Feb	38.58	0.00	38.575	0%	100%	0.00
	Mar	43.08	0.00	43.079	0%	100%	0.00
	Apr	52.61	0.00	52.613	0%	100%	0.00
	May	53.40	0.00	53.404	0%	100%	0.00
	Jun	53.46	0.00	53.463	0%	100%	0.00

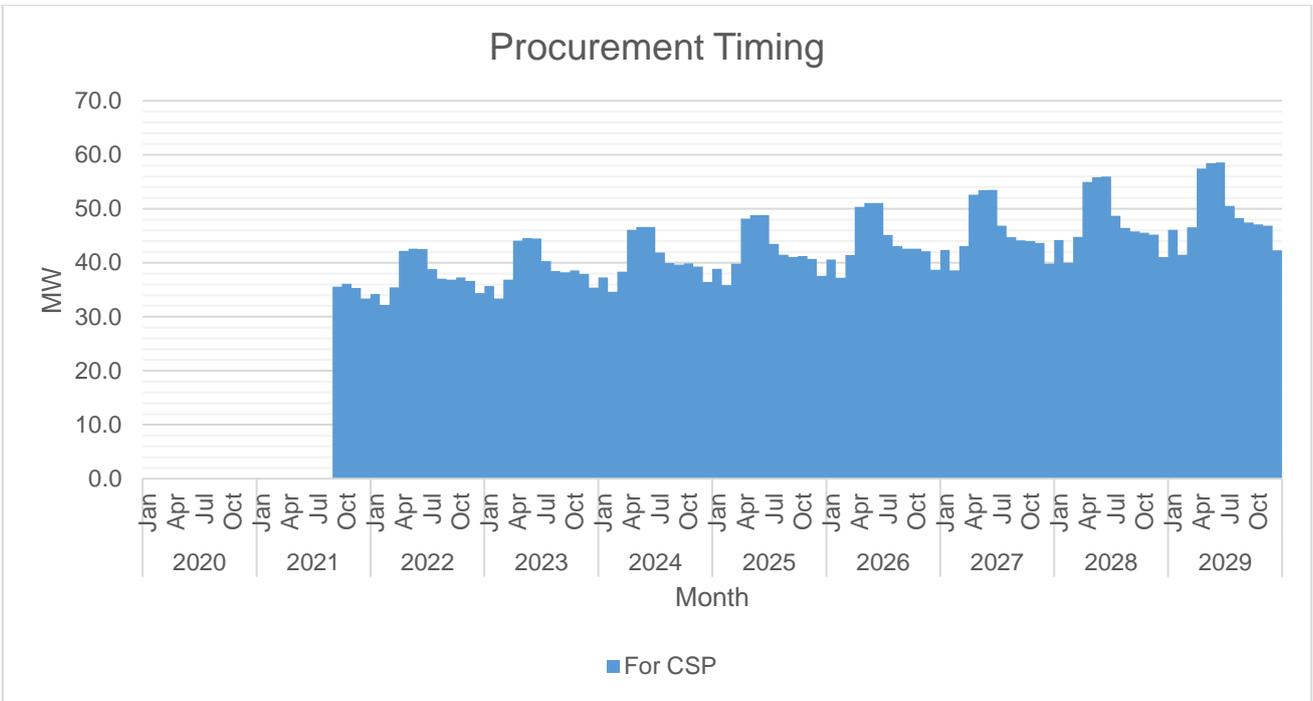
		Coincident Peak MW	Contracted MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Jul	46.88	0.00	46.881	0%	100%	0.00
	Aug	44.76	0.00	44.759	0%	100%	0.00
	Sep	44.16	0.00	44.158	0%	100%	0.00
	Oct	44.05	0.00	44.052	0%	100%	0.00
	Nov	43.66	0.00	43.659	0%	100%	0.00
	Dec	39.86	0.00	39.857	0%	100%	0.00
2028	Jan	44.19	0.00	44.195	0%	100%	0.00
	Feb	39.99	0.00	39.995	0%	100%	0.00
	Mar	44.79	0.00	44.789	0%	100%	0.00
	Apr	54.99	0.00	54.991	0%	100%	0.00
	May	55.87	0.00	55.872	0%	100%	0.00
	Jun	55.96	0.00	55.965	0%	100%	0.00
	Jul	48.68	0.00	48.681	0%	100%	0.00
	Aug	46.48	0.00	46.477	0%	100%	0.00
	Sep	45.78	0.00	45.779	0%	100%	0.00
	Oct	45.54	0.00	45.541	0%	100%	0.00
	Nov	45.22	0.00	45.222	0%	100%	0.00
	Dec	41.06	0.00	41.057	0%	100%	0.00
2029	Jan	46.12	0.00	46.122	0%	100%	0.00
	Feb	41.47	0.00	41.467	0%	100%	0.00
	Mar	46.57	0.00	46.567	0%	100%	0.00
	Apr	57.48	0.00	57.477	0%	100%	0.00
	May	58.45	0.00	58.453	0%	100%	0.00
	Jun	58.58	0.00	58.584	0%	100%	0.00
	Jul	50.55	0.00	50.551	0%	100%	0.00
	Aug	48.26	0.00	48.262	0%	100%	0.00
	Sep	47.46	0.00	47.459	0%	100%	0.00
	Oct	47.08	0.00	47.080	0%	100%	0.00
	Nov	46.84	0.00	46.841	0%	100%	0.00
	Dec	42.29	0.00	42.292	0%	100%	0.00

The Peak Demand was forecasted using historical data and was assumed to occur on the months of May or June due to hot weather. Monthly Peak Demand is at its lowest on the months of January or February due to cold weather. In general, Peak Demand is expected to grow at a rate of 4.5% annually.

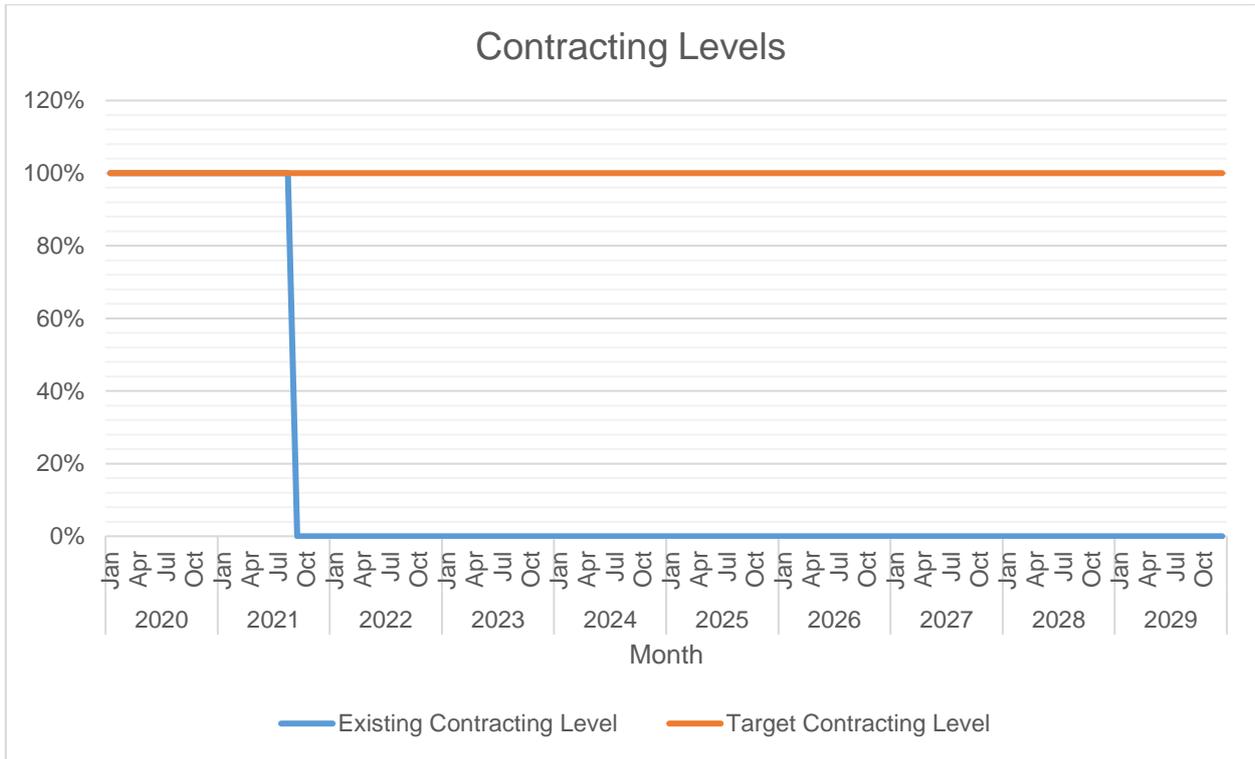


The available supply is generally equal to the Peak Demand. This is because the PSA is load-following.





The initial demand supply procurement will be for 43 MW planned to be available by the month of August 26, 2021.



Currently, there is no under-contracting or over-contracting since PSA is load-following.

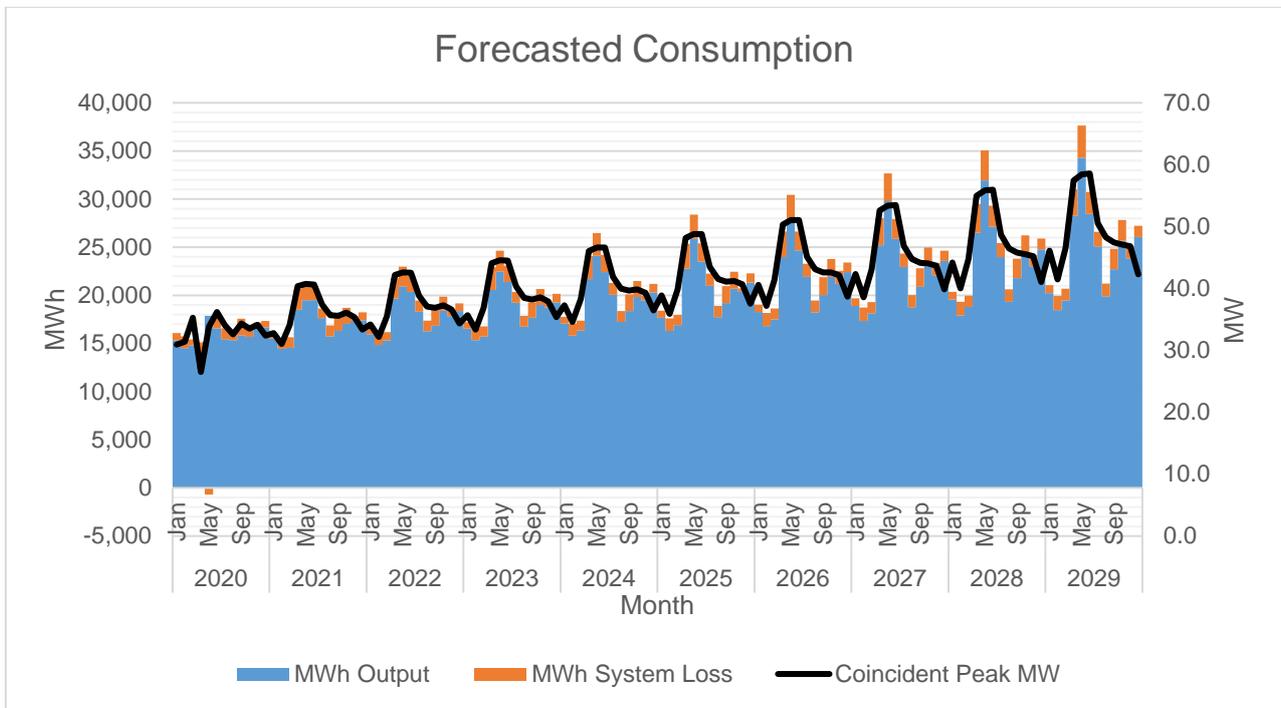
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2020	Jan	16,074	15,317	757	0.00%	4.71%
	Feb	15,758	14,534	1,225	0.00%	7.77%
	Mar	15,426	14,822	603	0.00%	3.91%
	Apr	15,132	13,830	1,302	0.00%	8.60%
	May	17,178	17,869	-690	0.00%	-4.02%
	Jun	18,038	16,565	1,473	0.00%	8.17%
	Jul	16,590	15,462	1,128	0.00%	6.80%
	Aug	16,271	15,343	928	0.00%	5.70%
	Sep	17,584	15,860	1,724	0.00%	9.80%
	Oct	16,642	15,699	943	0.00%	5.67%
	Nov	17,173	16,799	374	0.00%	2.18%
	Dec	17,344	16,688	656	0.00%	3.78%
2021	Jan	16,072	15,506	567	0.00%	3.52%
	Feb	15,573	14,444	1,129	0.00%	7.25%
	Mar	15,643	14,548	1,094	0.00%	7.00%
	Apr	20,703	18,508	2,195	0.00%	10.60%
	May	21,414	19,497	1,917	0.00%	8.95%
	Jun	20,993	19,505	1,488	0.00%	7.09%
	Jul	18,631	17,654	976	0.00%	5.24%
	Aug	16,870	15,766	1,104	0.00%	6.54%
	Sep	17,708	16,320	1,388	0.00%	7.84%
	Oct	18,693	17,045	1,648	0.00%	8.81%
	Nov	17,833	17,331	502	0.00%	2.82%
	Dec	18,235	17,406	829	0.00%	4.54%
2022	Jan	16,625	15,940	684	0.00%	4.12%
	Feb	16,062	14,855	1,207	0.00%	7.51%
	Mar	16,199	15,314	885	0.00%	5.46%
	Apr	21,774	19,650	2,124	0.00%	9.76%
	May	22,977	20,942	2,035	0.00%	8.86%
	Jun	22,017	20,347	1,670	0.00%	7.59%
	Jul	19,478	18,314	1,164	0.00%	5.98%
	Aug	17,360	16,296	1,064	0.00%	6.13%
	Sep	18,473	16,844	1,629	0.00%	8.82%
	Oct	19,856	18,400	1,456	0.00%	7.33%
	Nov	18,519	17,840	679	0.00%	3.67%
	Dec	19,171	18,371	800	0.00%	4.17%
2023	Jan	17,196	16,538	658	0.00%	3.83%
	Feb	16,566	15,343	1,223	0.00%	7.38%
	Mar	16,775	15,732	1,043	0.00%	6.22%
	Apr	22,901	20,572	2,329	0.00%	10.17%
	May	24,654	22,459	2,195	0.00%	8.90%
	Jun	23,091	21,395	1,696	0.00%	7.34%
	Jul	20,365	19,221	1,144	0.00%	5.62%
	Aug	17,865	16,733	1,131	0.00%	6.33%
	Sep	19,271	17,664	1,607	0.00%	8.34%
	Oct	20,655	18,992	1,663	0.00%	8.05%
	Nov	19,231	18,750	481	0.00%	2.50%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Dec	20,156	19,278	878	0.00%	4.35%
2024	Jan	17,787	17,081	706	0.00%	3.97%
	Feb	17,087	15,814	1,272	0.00%	7.45%
	Mar	17,372	16,356	1,016	0.00%	5.85%
	Apr	24,085	21,684	2,401	0.00%	9.97%
	May	26,454	24,105	2,349	0.00%	8.88%
	Jun	24,217	22,410	1,807	0.00%	7.46%
	Jul	21,291	20,058	1,233	0.00%	5.79%
	Aug	18,384	17,238	1,146	0.00%	6.23%
	Sep	20,103	18,379	1,724	0.00%	8.57%
	Oct	21,489	19,835	1,654	0.00%	7.70%
	Nov	19,971	19,460	511	0.00%	2.56%
	Dec	21,191	20,287	904	0.00%	4.27%
2025	Jan	18,398	17,681	717	0.00%	3.90%
	Feb	17,623	16,316	1,307	0.00%	7.42%
	Mar	17,989	16,905	1,085	0.00%	6.03%
	Apr	25,331	22,781	2,550	0.00%	10.07%
	May	28,385	25,861	2,524	0.00%	8.89%
	Jun	25,398	23,518	1,881	0.00%	7.40%
	Jul	22,260	20,990	1,270	0.00%	5.71%
	Aug	18,918	17,730	1,188	0.00%	6.28%
	Sep	20,971	19,197	1,774	0.00%	8.46%
	Oct	22,456	20,689	1,767	0.00%	7.87%
	Nov	20,738	20,350	388	0.00%	1.87%
	Dec	22,279	21,319	960	0.00%	4.31%
2026	Jan	19,030	18,282	748	0.00%	3.93%
	Feb	18,177	16,826	1,351	0.00%	7.43%
	Mar	18,629	17,523	1,107	0.00%	5.94%
	Apr	26,641	23,972	2,669	0.00%	10.02%
	May	30,457	27,751	2,707	0.00%	8.89%
	Jun	26,637	24,657	1,980	0.00%	7.43%
	Jul	23,273	21,935	1,338	0.00%	5.75%
	Aug	19,468	18,250	1,218	0.00%	6.26%
	Sep	21,877	20,014	1,863	0.00%	8.52%
	Oct	23,786	21,934	1,852	0.00%	7.79%
	Nov	22,536	21,200	1,336	0.00%	5.93%
	Dec	23,423	22,418	1,004	0.00%	4.29%
2027	Jan	19,684	18,914	771	0.00%	3.92%
	Feb	18,747	17,356	1,392	0.00%	7.42%
	Mar	19,292	18,137	1,154	0.00%	5.98%
	Apr	28,019	25,206	2,814	0.00%	10.04%
	May	32,681	29,776	2,905	0.00%	8.89%
	Jun	27,936	25,864	2,073	0.00%	7.42%
	Jul	24,332	22,939	1,394	0.00%	5.73%
	Aug	20,034	18,778	1,256	0.00%	6.27%
	Sep	22,822	20,885	1,937	0.00%	8.49%
	Oct	24,969	23,015	1,954	0.00%	7.83%

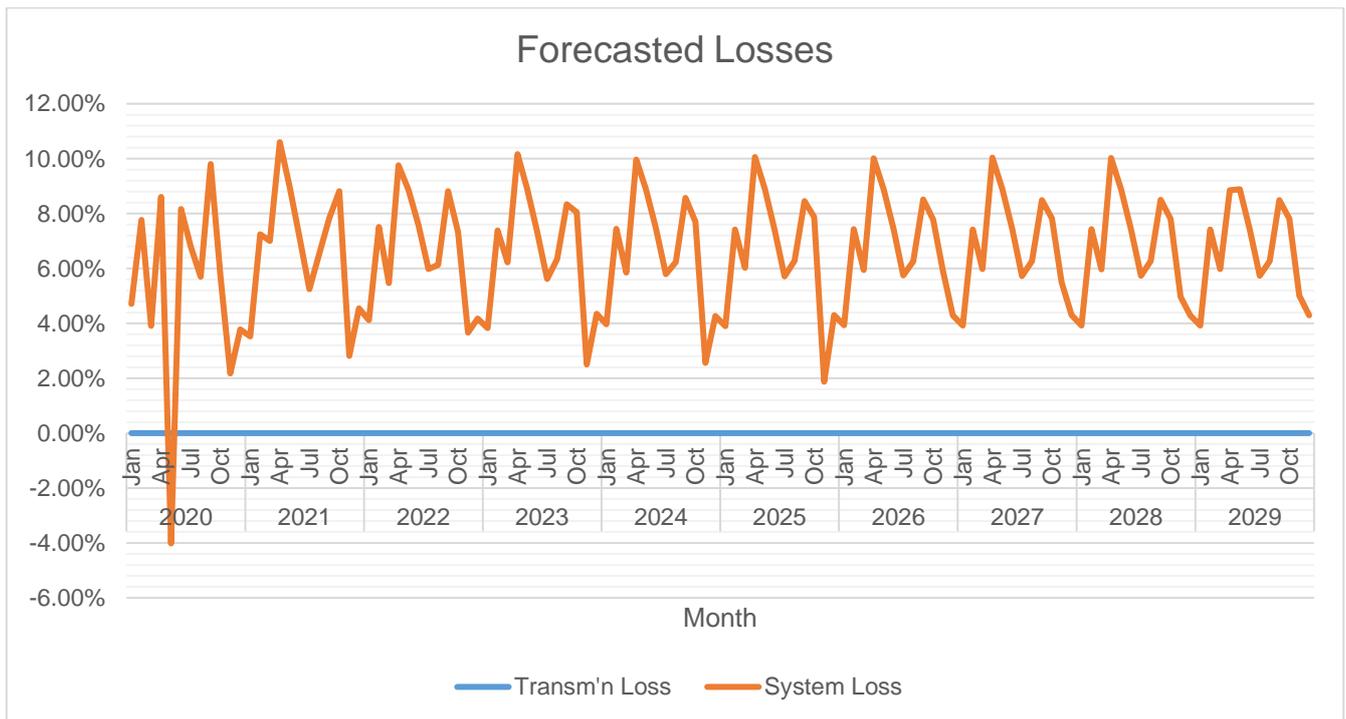
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Nov	23,364	22,080	1,284	0.00%	5.50%
	Dec	24,625	23,567	1,058	0.00%	4.30%
2028	Jan	20,361	19,562	799	0.00%	3.92%
	Feb	19,336	17,900	1,436	0.00%	7.43%
	Mar	19,978	18,787	1,191	0.00%	5.96%
	Apr	29,469	26,513	2,956	0.00%	10.03%
	May	35,067	31,950	3,117	0.00%	8.89%
	Jun	29,299	27,123	2,176	0.00%	7.43%
	Jul	25,440	23,980	1,460	0.00%	5.74%
	Aug	20,616	19,325	1,291	0.00%	6.26%
	Sep	23,808	21,784	2,024	0.00%	8.50%
	Oct	26,217	24,170	2,047	0.00%	7.81%
	Nov	24,224	23,020	1,204	0.00%	4.97%
	Dec	25,890	24,778	1,111	0.00%	4.29%
2029	Jan	21,061	20,235	826	0.00%	3.92%
	Feb	19,943	18,463	1,481	0.00%	7.43%
	Mar	20,688	19,452	1,236	0.00%	5.97%
	Apr	30,993	28,250	2,743	0.00%	8.85%
	May	37,627	34,282	3,344	0.00%	8.89%
	Jun	30,728	28,447	2,281	0.00%	7.42%
	Jul	26,597	25,072	1,525	0.00%	5.73%
	Aug	21,215	19,886	1,330	0.00%	6.27%
	Sep	24,836	22,726	2,110	0.00%	8.49%
	Oct	27,835	25,659	2,176	0.00%	7.82%
	Nov	25,117	23,859	1,258	0.00%	5.01%
	Dec	27,219	26,050	1,169	0.00%	4.30%

MWh Offtake was forecasted using historical data. The assumed average load factor is 60%.

System Loss was calculated through a Load Flow Study conducted using Synergi software. Based on the same study, the Distribution System can adequately convey electricity to customers.



MWh Output was expected to grow at a rate of 4.7% annually.



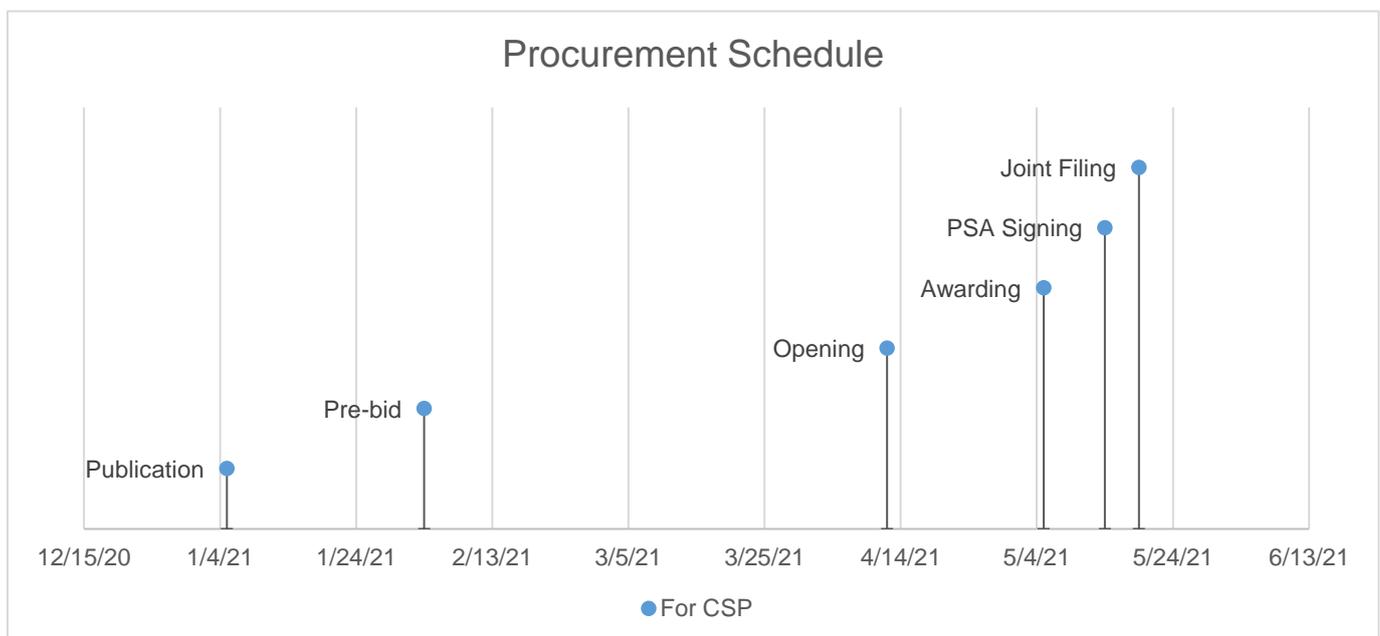
System Loss (monthly) is expected to range from 2.0% to 10%.

# Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2005-004RC	Base	TeaM Sual Corporation	38.30	188,702	08/26/2009	08/25/2020

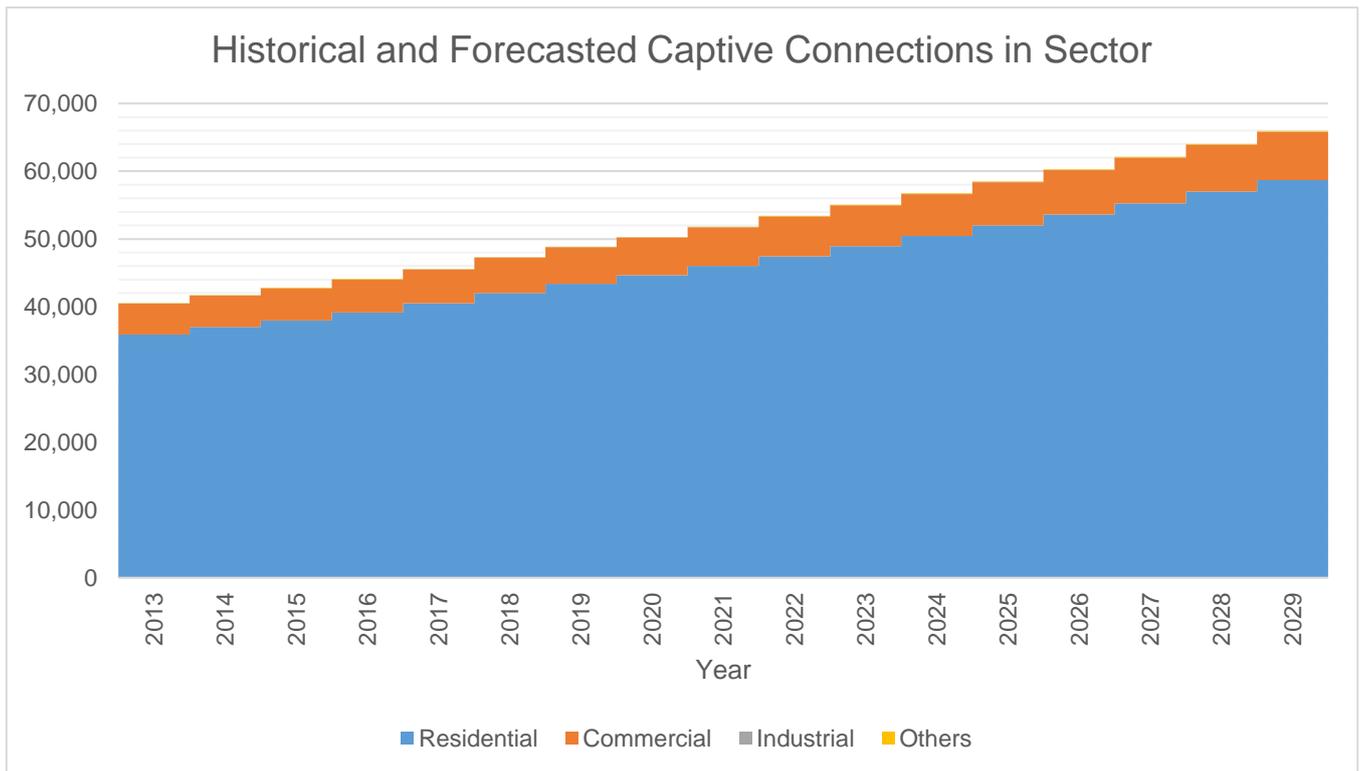
The PSA with Team Sual Corporation filed with ERC under Case No. 2005-004RC was procured through negotiation. It was selected to provide for base, intermediate, peaking requirements. Historically, the utilization of the PSA is 100% since its load-following. All Outages of the plant are covered with 100% backup at same rate. The actual billed overall monthly charge under the PSA averaged 4.7435 P/kWh in 2019.

	For CSP
Type	Base
Minimum MW	43.00
Minimum MWh/yr	224,962
PSA Start	8/26/2021
PSA End	2/25/2032
Publication	1/05/2021
Pre-bid	2/03/2021
Opening	4/12/2021
Awarding	5/05/2021
PSA Signing	5/14/2021
Joint Filing	5/19/2021



For the procurement of 43 MW of supply which is planned to be available on August 26, 2021, the first publication of CSP will be on January 5, 2021. Joint filing is planned on May 19, 2021, or 134 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 3% annually. Said customer class is expected to account for 44% of the total consumption.