

**PSPP A**  
**Power Supply Procurement Plan**  
**2021**

**Grid**

## Historical Consumption Data

Table 1: Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	System Loss
2000	37.54	187,181	0	187,181	158,470	28,888	57%	0.09%	15.43%
2001	38.92	208,287	0	208,287	176,926	32,257	61%	0.43%	15.49%
2002	44.24	228,114	0	228,114	194,709	33,570	59%	0.07%	14.72%
2003	52.11	252,600	0	252,600	218,143	34,664	55%	0.08%	13.72%
2004	56.70	282,682	0	282,682	249,032	33,837	57%	0.07%	11.97%
2005	56.08	282,763	0	282,763	250,660	32,324	58%	0.08%	11.43%
2006	56.37	287,559	0	287,559	251,000	36,545	58%	0.00%	12.71%
2007	57.47	298,760	0	298,760	262,337	36,408	59%	0.00%	12.19%
2008	58.16	276,736	37,110	313,847	280,308	33,524	62%	0.00%	10.68%
2009	67.52	267,853	63,118	330,970	295,304	35,576	56%	-0.03%	10.75%
2010	64.76	321,199	23,487	344,686	311,994	32,596	61%	-0.03%	9.46%
2011	67.47	285,489	68,308	353,797	318,948	34,752	60%	-0.03%	9.82%
2012	75.83	281,685	84,711	366,396	326,582	39,714	55%	-0.03%	10.84%
2013	67.20	265,305	112,376	377,681	341,910	35,665	64%	-0.03%	9.44%
2014	71.82	312,648	80,752	393,400	355,637	37,289	63%	-0.12%	9.48%
2015	73.91	272,505	132,666	405,171	366,577	38,481	63%	-0.03%	9.50%
2016	79.11	148,745	279,569	428,314	389,312	38,883	62%	-0.03%	9.08%
2017	77.57	383,099	63,692	446,790	408,214	38,451	66%	-0.03%	8.61%
2018	78.92	420,720	36,763	457,483	418,227	39,127	66%	-0.03%	8.55%
2019	82.67	436,848	37,786	474,634	434,028	40,474	66%	-0.03%	8.53%
2020	83.28	397,325	38,811	436,136	403,647	32,467	60%	-0.01%	7.44%

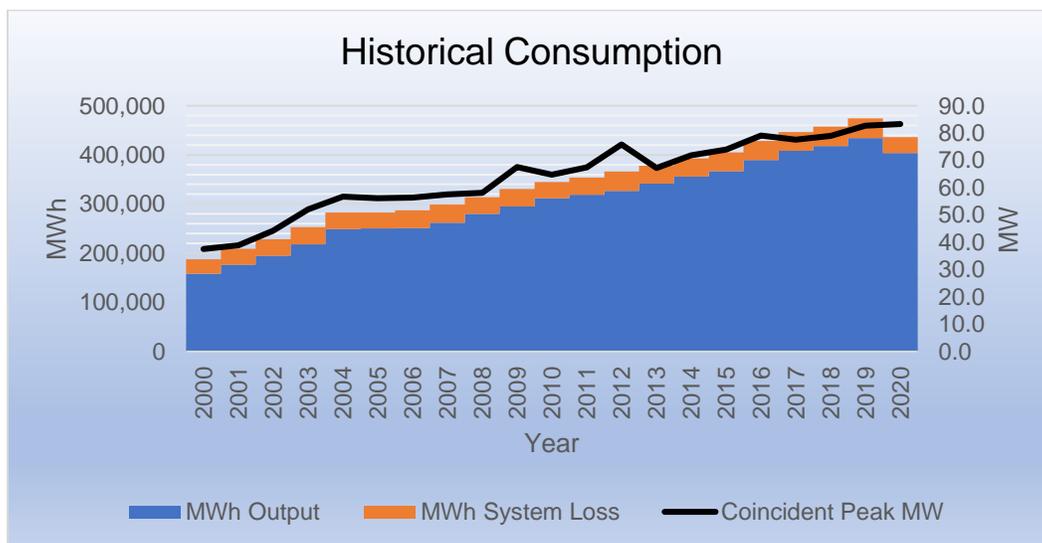
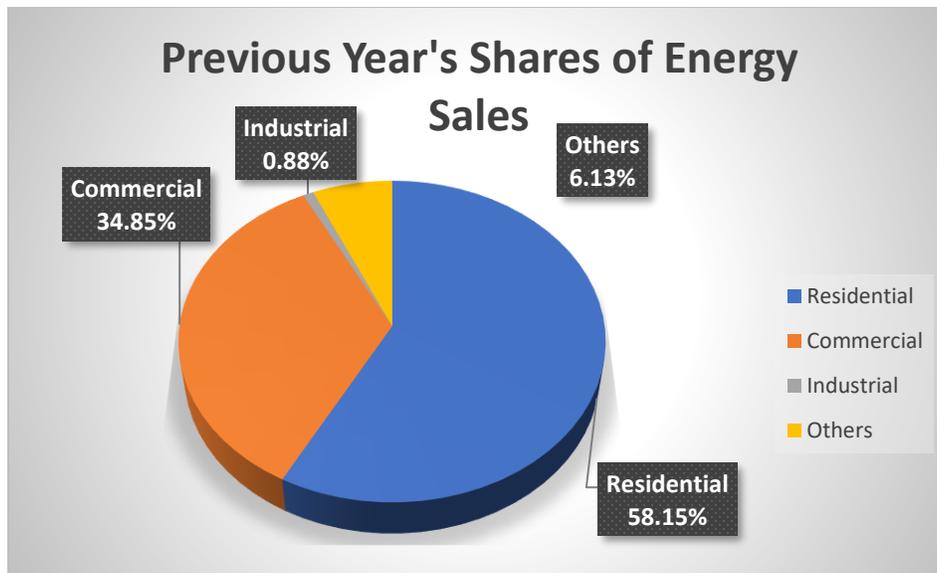


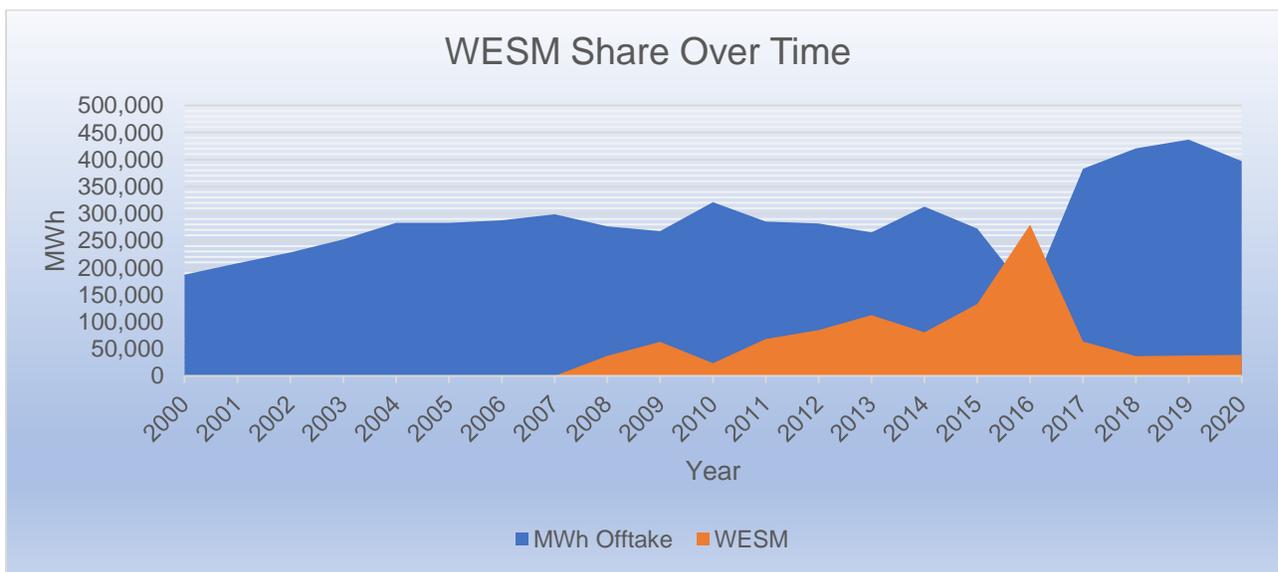
Figure 1: Historical Consumption Data

Through the past years, the energy consumption gradually increases not until the year 2020, Figure 1 illustrates the decrease of the energy consumption as compared from the year 2019. While the energy consumption gradually increases as the years passed by (except on the year 2020), the peak demand changes unpredictably.



**Figure 2: 2020 Shares of Energy Sales**

The largest share of energy sales is the residential customers followed by the commercial customers. The commercial customers connected at the 23kV and 230V voltage level are combined in Figure 2 graphical presentation.

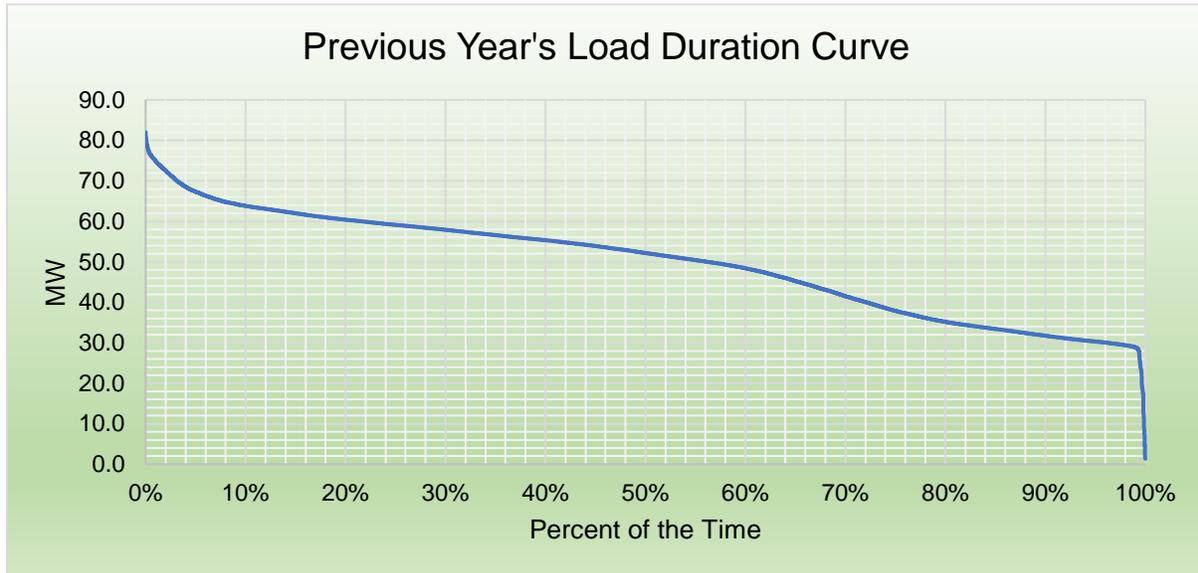


**Figure 3: Historical WESM Share**

The contracted existing power supply contract of BENECO with Team Energy Corporation is 55 MW demand. Beyond the contracted capacity of 55 MW, the excess will be sourced from the WESM.

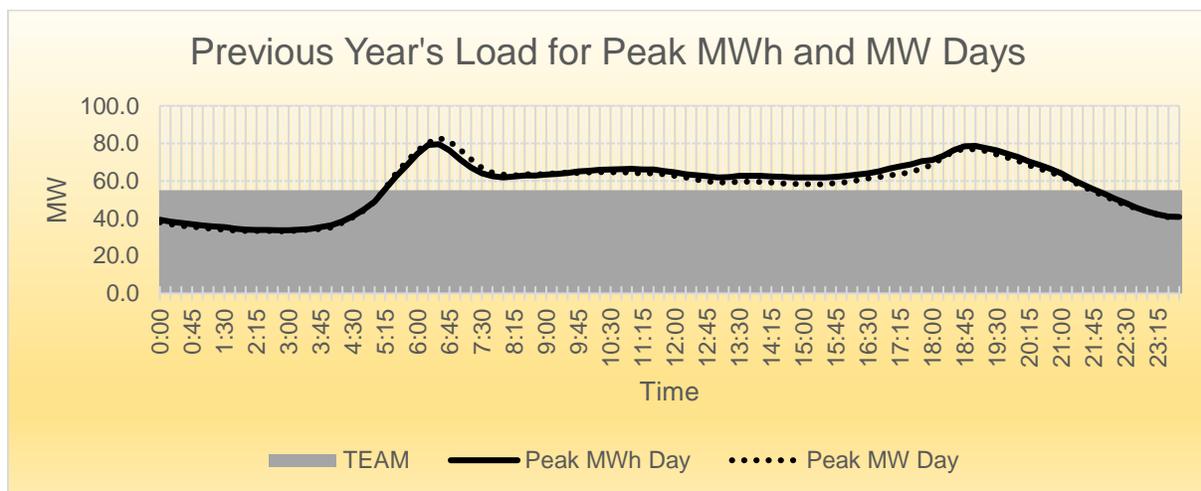
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## Previous Year's Load Profile



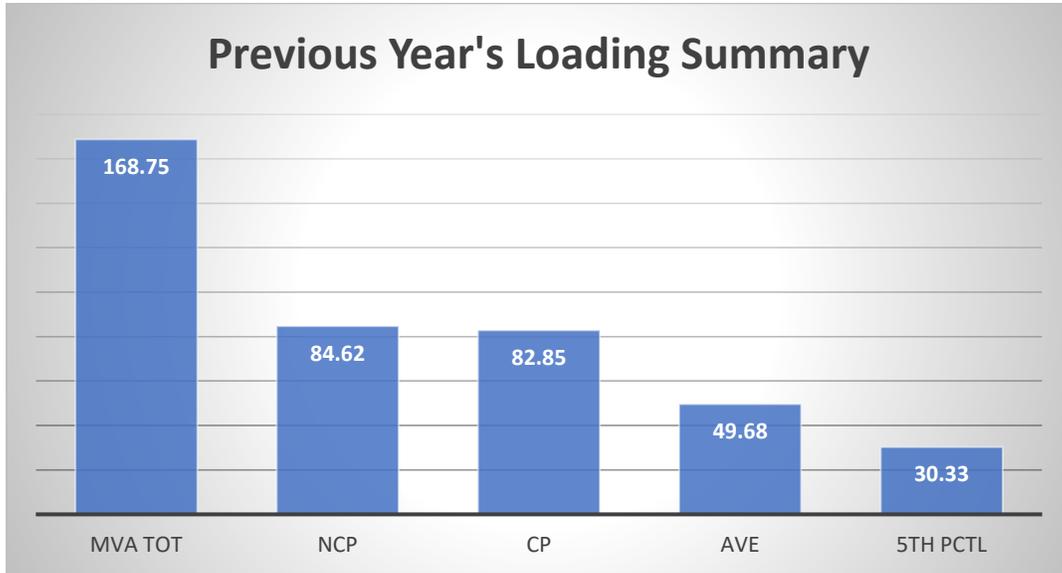
**Figure 4: 2020 Load Profile**

The peak demand occurs at most 0% of the time, 55 MW demand occurred at 40 % of the time and 30 MW demand almost reached at 100 % of the time. Figure 4 shows that most of the time, the demand is 30 MW.



**Figure 5: 2020 Load for Peak Energy and Demand Days**

Based from the year 2020 load profile, the peak demand happened at 6:30 am in the morning and 7:00 pm in the evening. In this case, the peak hours of energy and demand occurs almost at the same time. This implicates the simultaneous use of energy by the member-consumer-owners in a certain time.



**Figure 6: 2020 Loading Summary**

The 5<sup>th</sup> PCTL is the 95 % of time, this implies that almost 95% of time the demand is 30.33 MW. The coincident peak is lower by 2.14 % compared from the non-coincident peak demand.

**Table 2: Substation Peak Demand**

Metering Point	Substation MVA	Substation Peak MW
Irisan	20	9.327
Lamut	30	18.962
Mankayan	3.75	4.172
Atok	5	3.916
Tapsan		0.055
North Sanitary	100	46.099
Sinipsip	10	0.093
Itogon		1.999

The North Sanitary metering point has the largest peak demand having 54.48% from the total substation peak demand among the metering points. Followed by the Lamut metering point with 22.41% peak demand from the total substation peak demand.

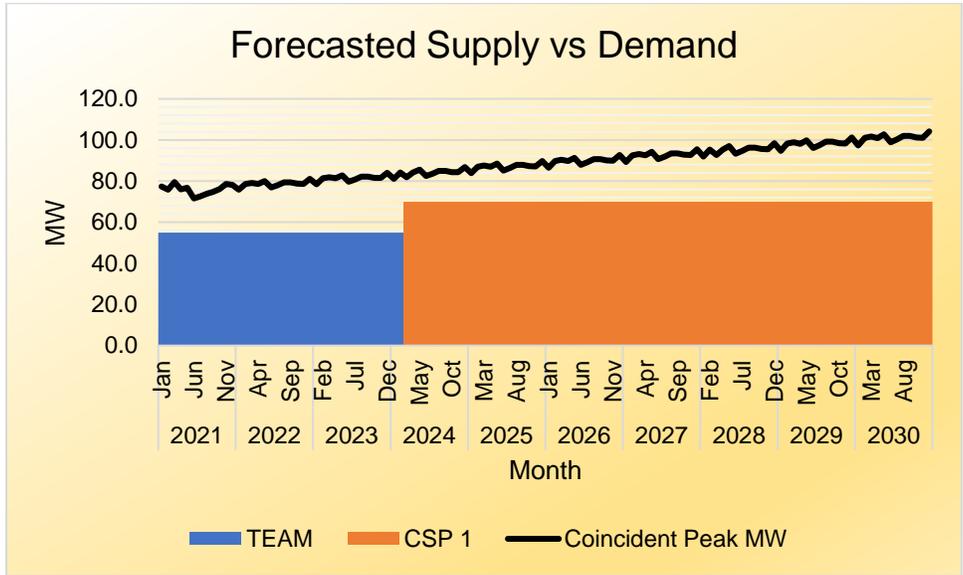
# Forecasted Consumption Data

Table 3: Forecasted Distribution Data

		Peak MW	Contracted MW	Pending MW	Planned MW	MWh Offtake	MWh Output	MWh System Loss	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit	System Loss
2021	Jan	77.35	55.00	0.00	0.000	37,036	36,054	1,159	71%	71%	-22.35	3.11%
	Feb	75.90	55.00	0.00	0.000	38,428	36,580	2,029	72%	72%	-20.90	5.25%
	Mar	79.54	55.00	0.00	0.000	34,932	33,801	1,317	69%	69%	-24.54	3.75%
	Apr	76.05	55.00	0.00	0.000	38,408	35,756	2,860	72%	72%	-21.05	7.41%
	May	76.82	55.00	0.00	0.000	37,823	35,648	2,420	72%	72%	-21.82	6.36%
	Jun	71.56	55.00	0.00	0.000	37,615	35,113	2,717	77%	77%	-16.56	7.18%
	Jul	72.52	55.00	0.00	0.000	36,920	33,280	3,848	76%	76%	-17.52	10.36%
	Aug	73.82	55.00	0.00	0.000	38,795	35,492	3,519	75%	75%	-18.82	9.02%
	Sep	74.79	55.00	0.00	0.000	38,792	34,843	4,154	74%	74%	-19.79	10.65%
	Oct	76.16	55.00	0.00	0.000	37,280	34,202	3,300	72%	72%	-21.16	8.80%
	Nov	78.62	55.00	0.00	0.000	38,461	35,528	3,123	70%	70%	-23.62	8.08%
	Dec	78.21	55.00	0.00	0.000	38,356	35,423	3,145	70%	70%	-23.21	8.16%
2022	Jan	75.76	55.00	0.00	0.000	38,403	37,375	1,210	73%	73%	-20.76	3.14%
	Feb	78.60	55.00	0.00	0.000	39,845	37,920	2,112	70%	70%	-23.60	5.28%
	Mar	79.11	55.00	0.00	0.000	36,221	35,040	1,374	70%	70%	-24.11	3.77%
	Apr	78.57	55.00	0.00	0.000	39,825	37,067	2,974	70%	70%	-23.57	7.43%
	May	79.95	55.00	0.00	0.000	39,218	36,955	2,518	69%	69%	-24.95	6.38%
	Jun	76.94	55.00	0.00	0.000	39,003	36,400	2,826	71%	71%	-21.94	7.20%
	Jul	78.04	55.00	0.00	0.000	38,282	34,500	3,998	70%	70%	-23.04	10.38%
	Aug	79.36	55.00	0.00	0.000	40,226	36,793	3,658	69%	69%	-24.36	9.04%
	Sep	79.35	55.00	0.00	0.000	40,224	36,120	4,316	69%	69%	-24.35	10.67%
	Oct	78.80	55.00	0.00	0.000	38,656	35,455	3,430	70%	70%	-23.80	8.82%
	Nov	78.67	55.00	0.00	0.000	39,880	36,830	3,247	70%	70%	-23.67	8.10%
	Dec	81.07	55.00	0.00	0.000	39,771	36,721	3,270	68%	68%	-26.07	8.18%
2023	Jan	78.45	55.00	0.00	0.000	39,769	38,697	1,262	70%	70%	-23.45	3.16%
	Feb	81.40	55.00	0.00	0.000	41,263	39,261	2,196	68%	68%	-26.40	5.30%
	Mar	81.93	55.00	0.00	0.000	37,510	36,279	1,431	67%	67%	-26.93	3.79%
	Apr	81.36	55.00	0.00	0.000	41,243	38,377	3,088	68%	68%	-26.36	7.45%
	May	82.79	55.00	0.00	0.000	40,614	38,262	2,616	66%	66%	-27.79	6.40%
	Jun	79.68	55.00	0.00	0.000	40,391	37,687	2,935	69%	69%	-24.68	7.22%
	Jul	80.82	55.00	0.00	0.000	39,645	35,720	4,148	68%	68%	-25.82	10.40%
	Aug	82.18	55.00	0.00	0.000	41,658	38,094	3,796	67%	67%	-27.18	9.06%
	Sep	82.17	55.00	0.00	0.000	41,655	37,397	4,478	67%	67%	-27.17	10.69%
	Oct	81.60	55.00	0.00	0.000	40,031	36,709	3,560	67%	67%	-26.60	8.84%
	Nov	81.47	55.00	0.00	0.000	41,299	38,133	3,371	68%	68%	-26.47	8.12%
	Dec	83.96	55.00	0.00	0.000	41,187	38,019	3,395	66%	66%	-28.96	8.20%
2024	Jan	81.15	55.00	0.00	0.000	41,136	40,018	1,313	68%	68%	-26.15	3.18%
	Feb	84.20	55.00	0.00	0.000	42,681	40,602	2,280	65%	65%	-29.20	5.32%
	Mar	81.82	0.00	0.00	70.000	38,799	37,518	1,487	0%	86%	-11.82	3.81%
	Apr	84.16	0.00	0.00	70.000	42,660	39,688	3,203	0%	83%	-14.16	7.47%
	May	85.64	0.00	0.00	70.000	42,010	39,568	2,714	0%	82%	-15.64	6.42%
	Jun	82.42	0.00	0.00	70.000	41,779	38,974	3,044	0%	85%	-12.42	7.24%
	Jul	83.59	0.00	0.00	70.000	41,007	36,940	4,298	0%	84%	-13.59	10.42%
	Aug	85.00	0.00	0.00	70.000	43,089	39,395	3,935	0%	82%	-15.00	9.08%
	Sep	85.00	0.00	0.00	70.000	43,086	38,674	4,639	0%	82%	-15.00	10.71%
	Oct	84.40	0.00	0.00	70.000	41,407	37,962	3,690	0%	83%	-14.40	8.86%
	Nov	84.27	0.00	0.00	70.000	42,718	39,435	3,495	0%	83%	-14.27	8.14%
	Dec	86.84	0.00	0.00	70.000	42,602	39,318	3,519	0%	81%	-16.84	8.22%
2025	Jan	83.85	0.00	0.00	70.000	42,502	41,340	1,365	0%	83%	-13.85	3.20%
	Feb	87.00	0.00	0.00	70.000	44,099	41,943	2,364	0%	80%	-17.00	5.34%
	Mar	87.56	0.00	0.00	70.000	40,088	38,757	1,544	0%	80%	-17.56	3.83%
	Apr	86.95	0.00	0.00	70.000	44,077	40,998	3,317	0%	81%	-16.95	7.48%
	May	88.48	0.00	0.00	70.000	43,405	40,875	2,812	0%	79%	-18.48	6.44%
	Jun	85.16	0.00	0.00	70.000	43,167	40,261	3,153	0%	82%	-15.16	7.26%
	Jul	86.37	0.00	0.00	70.000	42,369	38,160	4,448	0%	81%	-16.37	10.44%
	Aug	87.83	0.00	0.00	70.000	44,521	40,696	4,073	0%	80%	-17.83	9.10%
	Sep	87.82	0.00	0.00	70.000	44,518	39,952	4,801	0%	80%	-17.82	10.73%
	Oct	87.21	0.00	0.00	70.000	42,783	39,216	3,820	0%	80%	-17.21	8.88%
	Nov	87.07	0.00	0.00	70.000	44,137	40,737	3,619	0%	80%	-17.07	8.16%
	Dec	89.73	0.00	0.00	70.000	44,017	40,616	3,644	0%	78%	-19.73	8.23%
2026	Jan	86.54	0.00	0.00	70.000	43,869	42,661	1,416	0%	81%	-16.54	3.21%

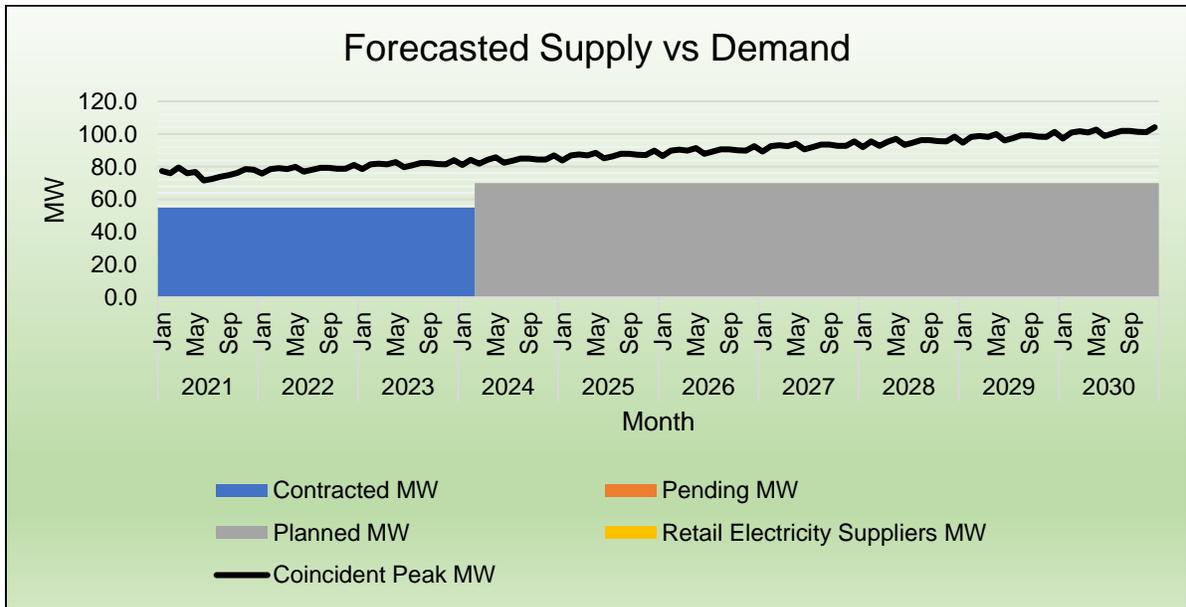
		Peak MW	Contracted MW	Pending MW	Planned MW	MWh Offtake	MWh Output	MWh System Loss	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit	System Loss
	Feb	89.79	0.00	0.00	70.000	45,517	43,283	2,448	0%	78%	-19.79	5.35%
	Mar	90.38	0.00	0.00	70.000	41,377	39,996	1,601	0%	77%	-20.38	3.85%
	Apr	89.75	0.00	0.00	70.000	45,494	42,309	3,431	0%	78%	-19.75	7.50%
	May	91.33	0.00	0.00	70.000	44,801	42,182	2,910	0%	77%	-21.33	6.45%
	Jun	87.90	0.00	0.00	70.000	44,555	41,548	3,261	0%	80%	-17.90	7.28%
	Jul	89.15	0.00	0.00	70.000	43,732	39,380	4,598	0%	79%	-19.15	10.46%
	Aug	90.65	0.00	0.00	70.000	45,952	41,997	4,212	0%	77%	-20.65	9.11%
	Sep	90.65	0.00	0.00	70.000	45,949	41,229	4,963	0%	77%	-20.65	10.74%
	Oct	90.01	0.00	0.00	70.000	44,158	40,470	3,950	0%	78%	-20.01	8.89%
	Nov	89.87	0.00	0.00	70.000	45,556	42,039	3,743	0%	78%	-19.87	8.18%
	Dec	92.61	0.00	0.00	70.000	45,432	41,915	3,769	0%	76%	-22.61	8.25%
2027	Jan	89.24	0.00	0.00	70.000	45,236	43,983	1,468	0%	78%	-19.24	3.23%
	Feb	92.59	0.00	0.00	70.000	46,935	44,624	2,531	0%	76%	-22.59	5.37%
	Mar	93.19	0.00	0.00	70.000	42,666	41,235	1,658	0%	75%	-23.19	3.87%
	Apr	92.54	0.00	0.00	70.000	46,911	43,619	3,545	0%	76%	-22.54	7.52%
	May	94.17	0.00	0.00	70.000	46,197	43,488	3,008	0%	74%	-24.17	6.47%
	Jun	90.63	0.00	0.00	70.000	45,943	42,835	3,370	0%	77%	-20.63	7.29%
	Jul	91.92	0.00	0.00	70.000	45,094	40,600	4,748	0%	76%	-21.92	10.47%
	Aug	93.48	0.00	0.00	70.000	47,384	43,298	4,350	0%	75%	-23.48	9.13%
	Sep	93.47	0.00	0.00	70.000	47,381	42,506	5,125	0%	75%	-23.47	10.76%
	Oct	92.82	0.00	0.00	70.000	45,534	41,723	4,080	0%	75%	-22.82	8.91%
	Nov	92.67	0.00	0.00	70.000	46,976	43,342	3,867	0%	76%	-22.67	8.19%
	Dec	95.50	0.00	0.00	70.000	46,848	43,213	3,894	0%	73%	-25.50	8.27%
2028	Jan	91.93	0.00	0.00	70.000	46,602	45,304	1,519	0%	76%	-21.93	3.24%
	Feb	95.39	0.00	0.00	70.000	48,353	45,965	2,615	0%	73%	-25.39	5.38%
	Mar	92.70	0.00	0.00	70.000	43,955	42,474	1,715	0%	76%	-22.70	3.88%
	Apr	95.34	0.00	0.00	70.000	48,329	44,930	3,660	0%	73%	-25.34	7.53%
	May	97.02	0.00	0.00	70.000	47,592	44,795	3,106	0%	72%	-27.02	6.48%
	Jun	93.37	0.00	0.00	70.000	47,331	44,122	3,479	0%	75%	-23.37	7.31%
	Jul	94.70	0.00	0.00	70.000	46,456	41,819	4,899	0%	74%	-24.70	10.49%
	Aug	96.30	0.00	0.00	70.000	48,815	44,599	4,489	0%	73%	-26.30	9.14%
	Sep	96.29	0.00	0.00	70.000	48,812	43,783	5,286	0%	73%	-26.29	10.77%
	Oct	95.62	0.00	0.00	70.000	46,909	42,977	4,210	0%	73%	-25.62	8.92%
	Nov	95.47	0.00	0.00	70.000	48,395	44,644	3,991	0%	73%	-25.47	8.21%
	Dec	98.38	0.00	0.00	70.000	48,263	44,511	4,018	0%	71%	-28.38	8.28%
2029	Jan	94.63	0.00	0.00	70.000	47,969	46,626	1,571	0%	74%	-24.63	3.26%
	Feb	98.18	0.00	0.00	70.000	49,771	47,306	2,699	0%	71%	-28.18	5.40%
	Mar	98.82	0.00	0.00	70.000	45,244	43,713	1,772	0%	71%	-28.82	3.90%
	Apr	98.14	0.00	0.00	70.000	49,746	46,241	3,774	0%	71%	-28.14	7.55%
	May	99.86	0.00	0.00	70.000	48,988	46,102	3,204	0%	70%	-29.86	6.50%
	Jun	96.11	0.00	0.00	70.000	48,719	45,409	3,588	0%	73%	-26.11	7.32%
	Jul	97.48	0.00	0.00	70.000	47,818	43,039	5,049	0%	72%	-27.48	10.50%
	Aug	99.12	0.00	0.00	70.000	50,247	45,900	4,627	0%	71%	-29.12	9.16%
	Sep	99.12	0.00	0.00	70.000	50,243	45,060	5,448	0%	71%	-29.12	10.79%
	Oct	98.42	0.00	0.00	70.000	48,285	44,230	4,341	0%	71%	-28.42	8.94%
	Nov	98.27	0.00	0.00	70.000	49,814	45,946	4,115	0%	71%	-28.27	8.22%
	Dec	101.27	0.00	0.00	70.000	49,678	45,810	4,143	0%	69%	-31.27	8.29%
2030	Jan	97.32	0.00	0.00	70.000	49,335	47,948	1,622	0%	72%	-27.32	3.27%
	Feb	100.98	0.00	0.00	70.000	51,189	48,647	2,783	0%	69%	-30.98	5.41%
	Mar	101.64	0.00	0.00	70.000	46,533	44,951	1,828	0%	69%	-31.64	3.91%
	Apr	100.93	0.00	0.00	70.000	51,163	47,551	3,888	0%	69%	-30.93	7.56%
	May	102.71	0.00	0.00	70.000	50,384	47,408	3,302	0%	68%	-32.71	6.51%
	Jun	98.85	0.00	0.00	70.000	50,107	46,696	3,697	0%	71%	-28.85	7.34%
	Jul	100.25	0.00	0.00	70.000	49,181	44,259	5,199	0%	70%	-30.25	10.51%
	Aug	101.95	0.00	0.00	70.000	51,678	47,201	4,766	0%	69%	-31.95	9.17%
	Sep	101.94	0.00	0.00	70.000	51,675	46,337	5,610	0%	69%	-31.94	10.80%
	Oct	101.23	0.00	0.00	70.000	49,661	45,484	4,471	0%	69%	-31.23	8.95%
	Nov	101.07	0.00	0.00	70.000	51,233	47,248	4,239	0%	69%	-31.07	8.23%
	Dec	104.16	0.00	0.00	70.000	51,094	47,108	4,268	0%	67%	-34.16	8.31%

The average existing contracting level is 69.79% supplied by the Team Energy, the remaining percentage will be sourced from the WESM. The proposed / target contracting level to suffice the forecasted energy and demand has an average percentage of 75.67%, higher by 5.88% from the existing contract. The MW Surplus / Deficit means that this is the excess from the contracted / planned MW which will be sourced from the WESM.



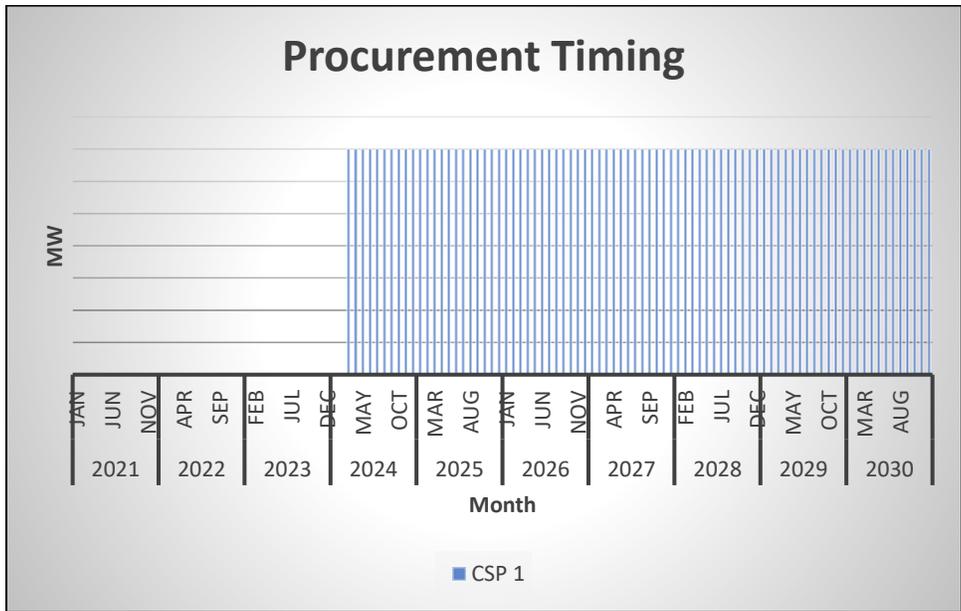
**Figure 7: Forecasted Supply versus Contracted Demand**

Figure illustrates the difference of the forecasted demand as compared to the existing and proposed power supply. The existing power supply at 55 MW demand and proposed power supply at 70 MW.



**Figure 8: Forecasted Peak Demand versus Contracted and Planned Demand**

The contracted demand is 55 MW and the planned demand is 70 MW. The difference from the coincident peak demand from the contracted and planned demand will be sourced from the WESM.



**Figure 9: Power Supply Procurement Timing**

The procurement of the new CSP shall be in order years before the expiration of the existing contract. Delayed procurement of new CSP might have adverse effect in terms of peso value. Arranging the new CSP ahead of time is encouraged since the process for approval may take time.



**Figure 10: Existing and Planned Contracting Levels**

Figure 10 shows the increase of target contracting level compared to the existing contracting level. While the proposed MW contract is higher by 15MW from the existing contract, the forecasted demand is increasing as the time passed by but the contracted MW is fixed, thereby the target contracting level decreases.

## Power Supply

**Table 4: Existing Power Supply Agreement**

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
TEAM	Base	TeaM Energy Corporation	55.00	328,329	3/13/2004	3/12/2024

The existing power supply agreement of BENECO is with Team Energy with a contracted capacity of 55 MW categorized as base and will expire on March 2024.

**Table 5: Proposed Competitive Selection Process**

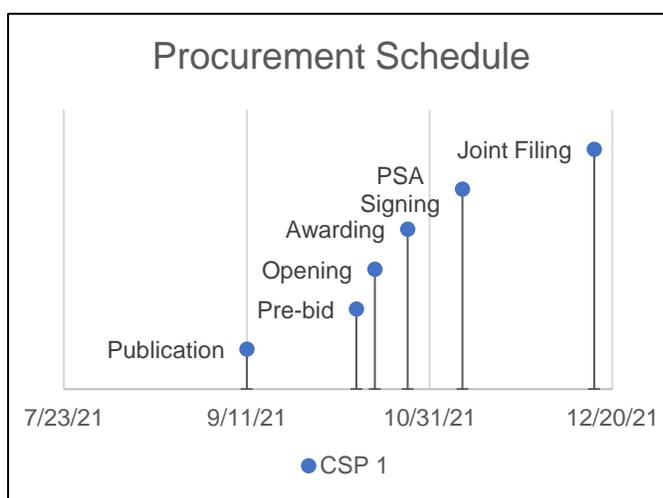
Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
CSP 1	Base		70.00	389,060	3/13/2024	12/25/2025

The proposed CSP 1 shall start on March 13, 2024 since the existing PSA with Team Energy will expire on March 12, 2024. The proposed base energy requirement to be bid out from March 13, 2024 to December 25, 2024 is 389,060 MWh. However, this will be increased to 509,487 MWh from December 26, 2024 to December 25, 2025. This requirement is already inclusive of the Renewable Portfolio Standards (RPS) requirements. The cooperative participated in the Short Term R1+CAR+S1 Power Supply Aggregation and committed the latter base energy requirement.

The cooperative is also venturing renewable energy within the coverage area, this includes the on-going 3MW Mini-Hydro project at the municipality of Buguias. The cooperative aim to register the 3MW Mini-Hydro project to Feed-In-Tariff (FIT) system. However, if not qualified in the FIT system, the 3MW Mini-Hydro will serve the power requirement beyond the contracted supply of the cooperative.

**Table 6: Procurement Schedule**

Type	CSP 1	
	Base	Base
Minimum MW	70.00	70.00
Minimum MWh/y	389,060	509,487
PSA Start	3/13/2024	12/26/2024
PSA End	12/25/2024	12/25/2025
Publication	9/11/2021	9/11/2021
Pre-bid	10/11/2021	10/11/2021
Opening	10/16/2021	10/16/2021
Awarding	10/25/2021	10/25/2021
PSA Signing	11/9/2021	11/9/2021
Joint Filing	12/15/2021	12/15/2021

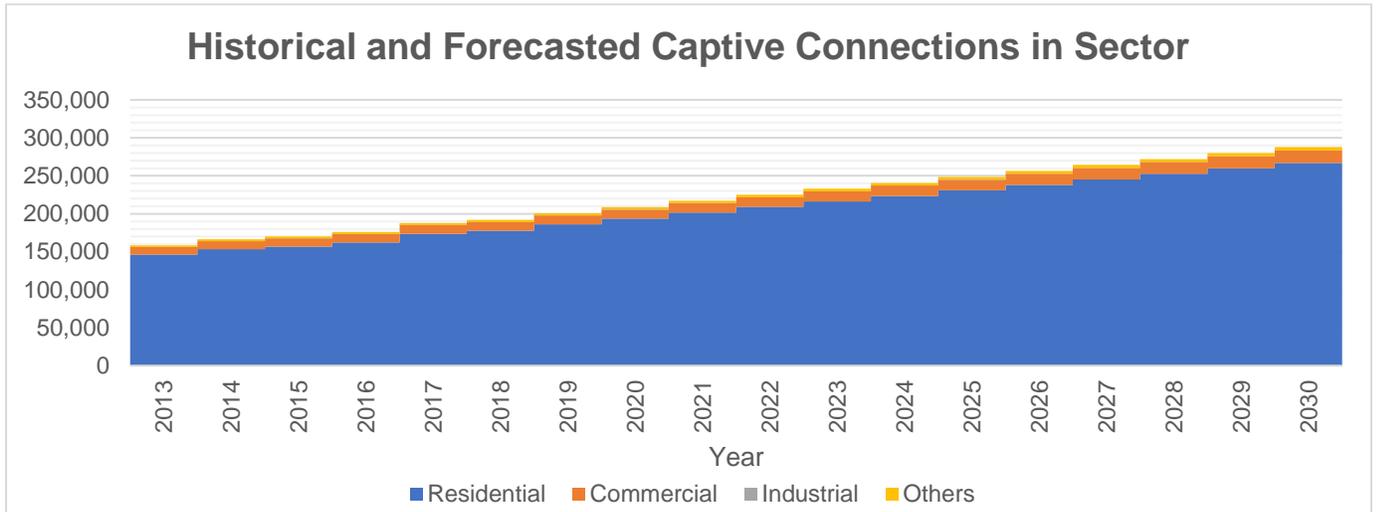


**Figure 11: Power Supply Procurement Schedule**

The new CSPs shall be prepared and processed on time in order that the new CSP will be ready before the expiration of the existing contract.

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## Captive Customer Connections



**Figure 12: Historical and Forecasted Captive Connections**

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**PSPP B**  
**Power Supply Procurement Plan**  
**2021**

**POWER SECTOR ASSETS AND LIABILITIES**  
**MANAGEMENT CORPORATION (PSALM)**  
**BENECO (SALE FOR RESALE – BUYER)**

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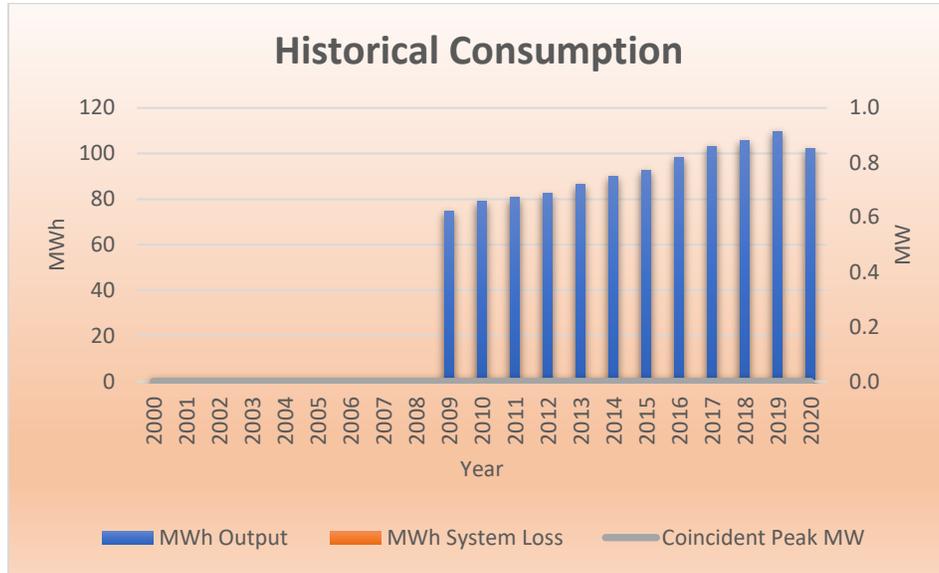
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## Historical Consumption Data

The Power Sector Assets and Liabilities Management Corporation has been the power supplier of the existing member-consumer-owners of BENECA located at the remote areas in the municipalities of Kibungan and Bakun. The share of the energy purchased from PSALM in the overall Energy Purchase of the cooperative is at least 0.03%.

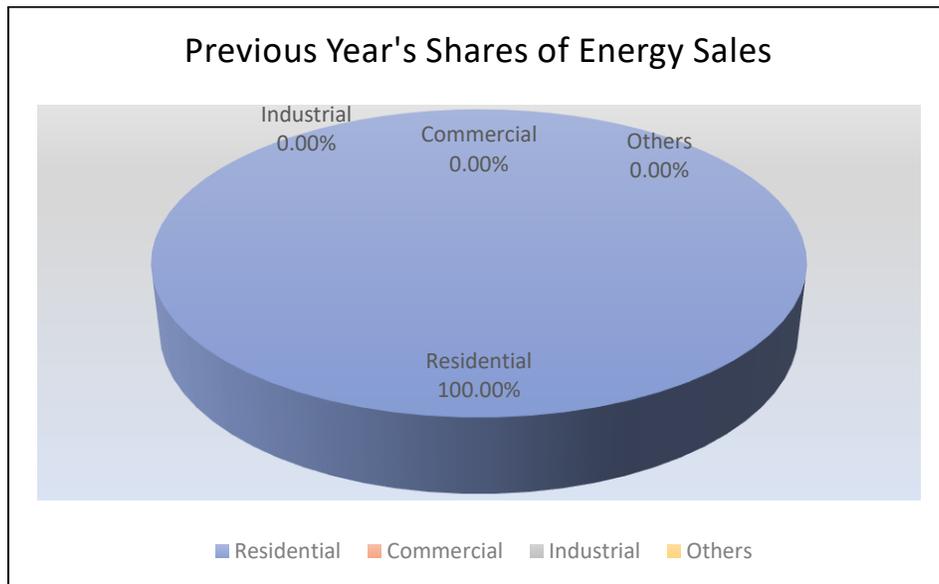
**Table 1: Historical Energy and Demand**

	<b>Coincident Peak MW</b>	<b>MWh Offtake</b>	<b>WESM</b>	<b>MWh Input</b>	<b>MWh Output</b>
2000	0.00	0	0	0	0
2001	0.00	0	0	0	0
2002	0.00	0	0	0	0
2003	0.00	0	0	0	0
2004	0.00	0	0	0	0
2005	0.00	0	0	0	0
2006	0.00	0	0	0	0
2007	0.00	0	0	0	0
2008	0.00	0	0	0	0
2009	0.00	35	0	35	75
2010	0.00	10	0	10	79
2011	0.00	110	0	110	81
2012	0.00	114	0	114	83
2013	0.00	117	0	117	86
2014	0.00	122	0	122	90
2015	0.00	126	0	126	93
2016	0.00	98	0	98	98
2017	0.00	98	0	98	103
2018	0.00	98	0	98	106
2019	0.00	133	0	133	110
2020	0.00	135	0	135	102



**Figure 1: Historical Energy and Demand**

The historical energy consumption from 2009 to 2020 is averaging to 92MWH yearly.



**Figure 2: 2020 Share of Energy Sales**

All of the connected customers are purely residential.

# Forecasted Consumption Data

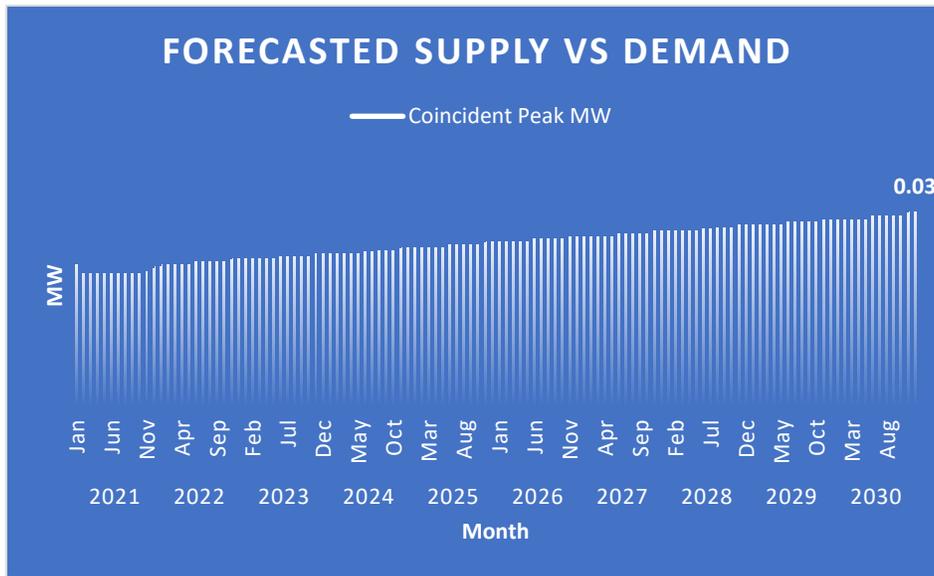
Table 2: Forecasted Energy and Demand

		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
2021	Jan	0.02	12	9	0
	Feb	0.02	12	10	0
	Mar	0.02	11	8	0
	Apr	0.02	12	9	0
	May	0.02	12	7	0
	Jun	0.02	11	8	0
	Jul	0.02	11	8	0
	Aug	0.02	12	8	0
	Sep	0.02	12	10	0
	Oct	0.02	10	10	0
	Nov	0.02	13	10	0
	Dec	0.02	12	10	0
2022	Jan	0.02	12	9	0
	Feb	0.02	13	10	0
	Mar	0.02	12	8	0
	Apr	0.02	13	9	0
	May	0.02	13	8	0
	Jun	0.02	11	9	0
	Jul	0.02	11	8	0
	Aug	0.02	12	8	0
	Sep	0.02	12	10	0
	Oct	0.02	11	10	0
	Nov	0.02	13	10	0
	Dec	0.03	13	11	0
2023	Jan	0.02	13	10	0
	Feb	0.03	13	10	0
	Mar	0.03	12	8	0
	Apr	0.03	13	9	0
	May	0.03	13	8	0
	Jun	0.02	12	9	0
	Jul	0.03	11	8	0
	Aug	0.03	13	8	0
	Sep	0.03	12	11	0
	Oct	0.03	11	10	0
	Nov	0.03	14	11	0
	Dec	0.03	13	11	0

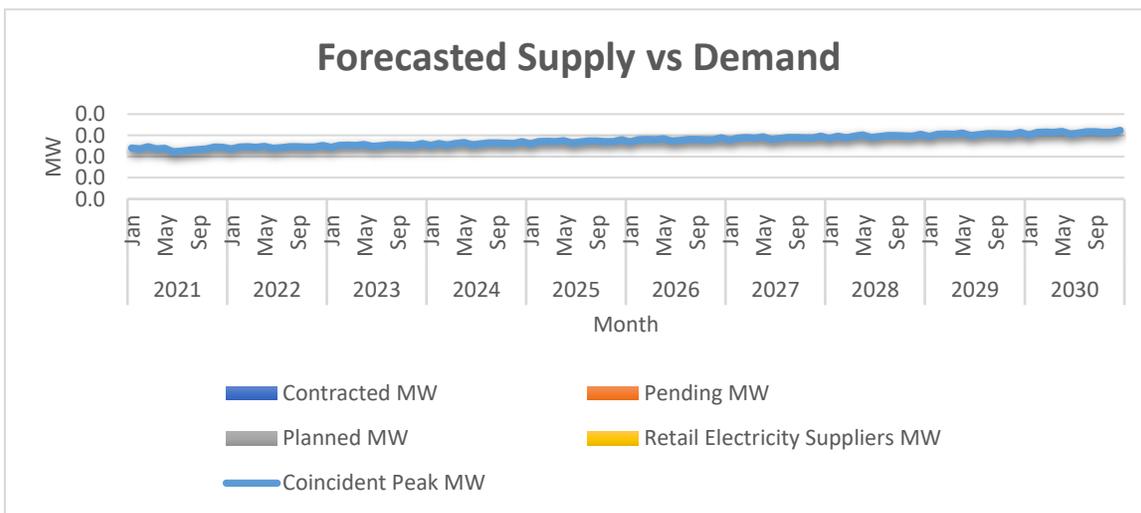
		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
2024	Jan	0.03	13	10	0
	Feb	0.03	14	11	0
	Mar	0.03	13	9	0
	Apr	0.03	14	10	0
	May	0.03	13	8	0
	Jun	0.03	12	9	0
	Jul	0.03	12	9	0
	Aug	0.03	13	9	0
	Sep	0.03	13	11	0
	Oct	0.03	11	11	0
	Nov	0.03	14	11	0
	Dec	0.03	14	11	0
2025	Jan	0.03	14	10	0
	Feb	0.03	14	11	0
	Mar	0.03	13	9	0
	Apr	0.03	14	10	0
	May	0.03	14	8	0
	Jun	0.03	13	10	0
	Jul	0.03	12	9	0
	Aug	0.03	14	9	0
	Sep	0.03	13	11	0
	Oct	0.03	12	11	0
	Nov	0.03	15	11	0
	Dec	0.03	14	12	0
2026	Jan	0.03	14	11	0
	Feb	0.03	15	11	0
	Mar	0.03	13	9	0
	Apr	0.03	15	10	0
	May	0.03	14	9	0
	Jun	0.03	13	10	0
	Jul	0.03	13	9	0
	Aug	0.03	14	9	0
	Sep	0.03	14	12	0
	Oct	0.03	12	12	0
	Nov	0.03	15	12	0
	Dec	0.03	14	12	0
2027	Jan	0.03	14	11	0
	Feb	0.03	15	12	0
	Mar	0.03	14	9	0

		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
	Apr	0.03	15	11	0
	May	0.03	15	9	0
	Jun	0.03	14	10	0
	Jul	0.03	13	10	0
	Aug	0.03	14	9	0
	Sep	0.03	14	12	0
	Oct	0.03	12	12	0
	Nov	0.03	16	12	0
	Dec	0.03	15	12	0
2028	Jan	0.03	15	11	0
	Feb	0.03	16	12	0
	Mar	0.03	14	10	0
	Apr	0.03	16	11	0
	May	0.03	15	9	0
	Jun	0.03	14	11	0
	Jul	0.03	13	10	0
	Aug	0.03	15	10	0
	Sep	0.03	15	13	0
	Oct	0.03	13	12	0
	Nov	0.03	16	12	0
	Dec	0.03	15	13	0
2029	Jan	0.03	15	12	0
	Feb	0.03	16	12	0
	Mar	0.03	15	10	0
	Apr	0.03	16	11	0
	May	0.03	16	9	0
	Jun	0.03	14	11	0
	Jul	0.03	14	10	0
	Aug	0.03	15	10	0
	Sep	0.03	15	13	0
	Oct	0.03	13	13	0
	Nov	0.03	17	13	0
	Dec	0.03	16	13	0
2030	Jan	0.03	16	12	0
	Feb	0.03	16	13	0
	Mar	0.03	15	10	0
	Apr	0.03	16	12	0
	May	0.03	16	10	0
	Jun	0.03	15	11	0

		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
	Jul	0.03	14	10	0
	Aug	0.03	16	10	0
	Sep	0.03	15	13	0
	Oct	0.03	14	13	0
	Nov	0.03	17	13	0
	Dec	0.03	16	13	0



**Figure 3: Forecasted Supply versus Demand**



**Figure 4: Forecasted Demand versus Contracted and Planned Demand**

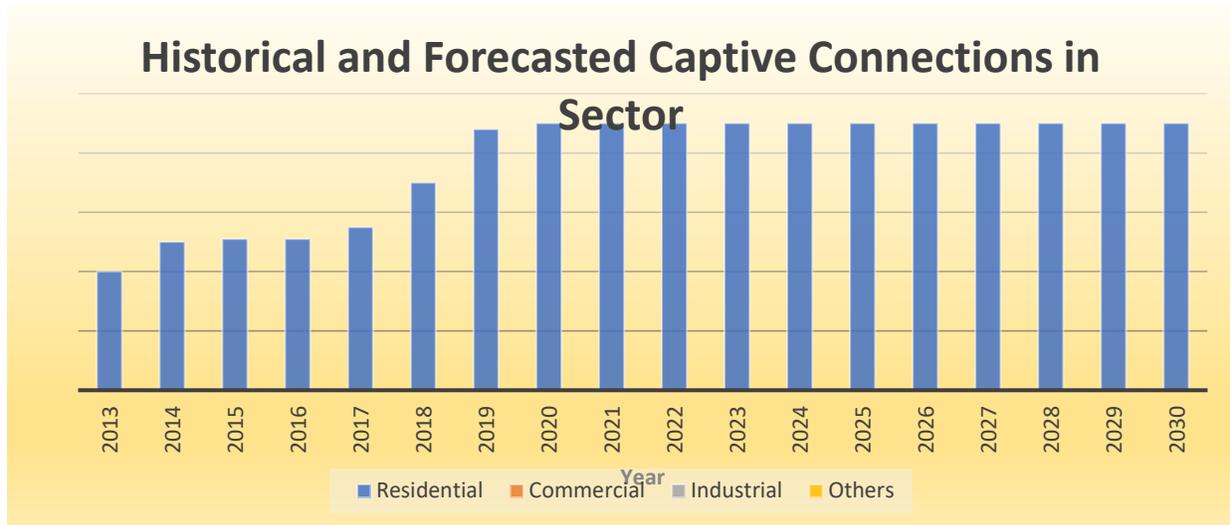
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## Power Supply

The existing connected consumers in the area are purely residential and due to its geographical location, the existing set-up with the PSALM will be utilized. Power interruptions due to Power Supplier in the area will be dependent from PSALM and it is beyond the control of BENEKO.

## Captive Customer Connections



**Figure 5: Historical and Forecasted Captive Customer Connection**

The historical customer connections from 2013 to 2020 supplied by the PSALM is averaging to 522 which is equivalent 0.36% from the total residential customers of the cooperative.

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**PSPP C**  
**Power Supply Procurement Plan**  
**2021**

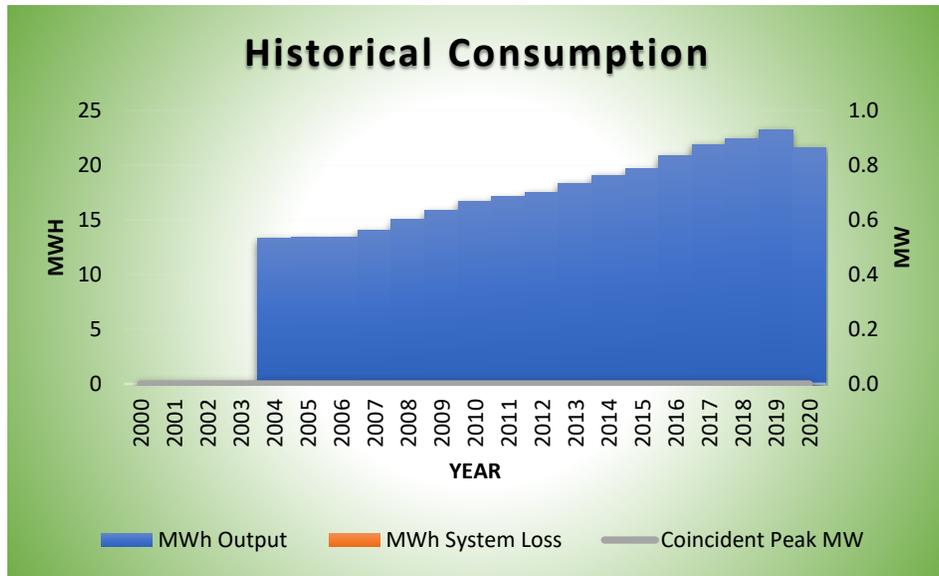
**LA UNION ELECTRIC COOPERATIVE (LUELCO)**  
**BENECO (SALE FOR RESALE – BUYER)**

## Historical Consumption Data

Table 1: Historical Energy and Demand

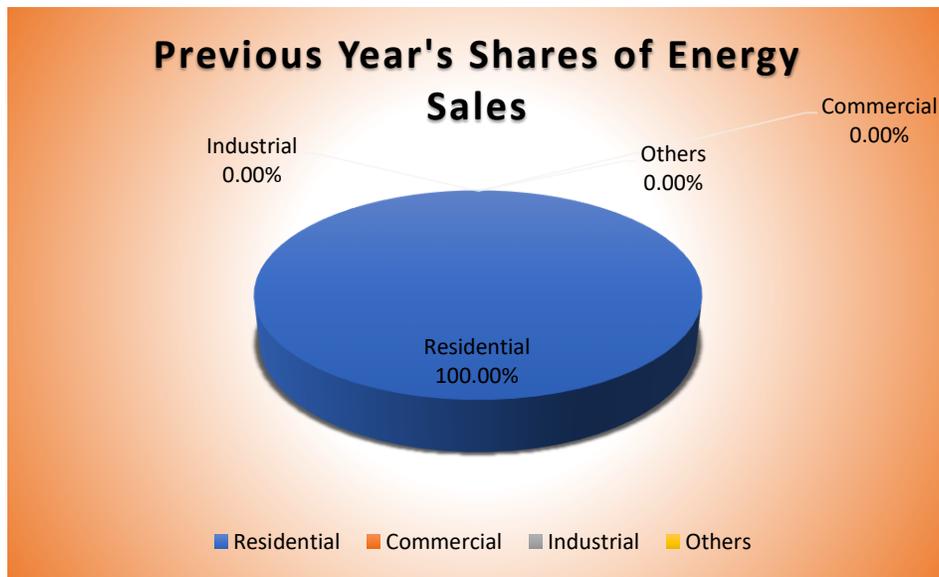
	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output
2000	0.00	0	0	0	0
2001	0.00	0	0	0	0
2002	0.00	0	0	0	0
2003	0.00	0	0	0	0
2004	0.00	21	0	21	13
2005	0.00	21	0	21	13
2006	0.00	21	0	21	13
2007	0.00	22	0	22	14
2008	0.00	23	0	23	15
2009	0.00	25	0	25	16
2010	0.00	26	0	26	17
2011	0.00	26	0	26	17
2012	0.00	27	0	27	18
2013	0.00	28	0	28	18
2014	0.00	29	0	29	19
2015	0.00	30	0	30	20
2016	0.00	23	0	23	21
2017	0.00	25	0	25	22
2018	0.00	27	0	27	22
2019	0.00	28	0	28	23
2020	0.00	33	0	33	22
2018	0.00	98	0	98	106
2019	0.00	133	0	133	110
2020	0.00	135	0	135	102

The La Union Electric Cooperative has been the power supplier of the existing member-consumer-owners of BENECO located at the remote areas in the municipality of Tuba. The share of the energy purchase from LUELCO in the overall Energy Purchase of the cooperative is at least 0.01%.



**Figure 1: Historical Energy and Demand**

The historical energy consumption of the connected consumer was gradually increasing until 2019. It could be observed that the energy consumption on 2020 has slightly decreased. This could possibly be the effect of the COVID-19 pandemic.



**Figure 2: 2020 Shares of Energy Sales**

All of the energy consumption was from residential customer. The area being serve was purely residential consumer.

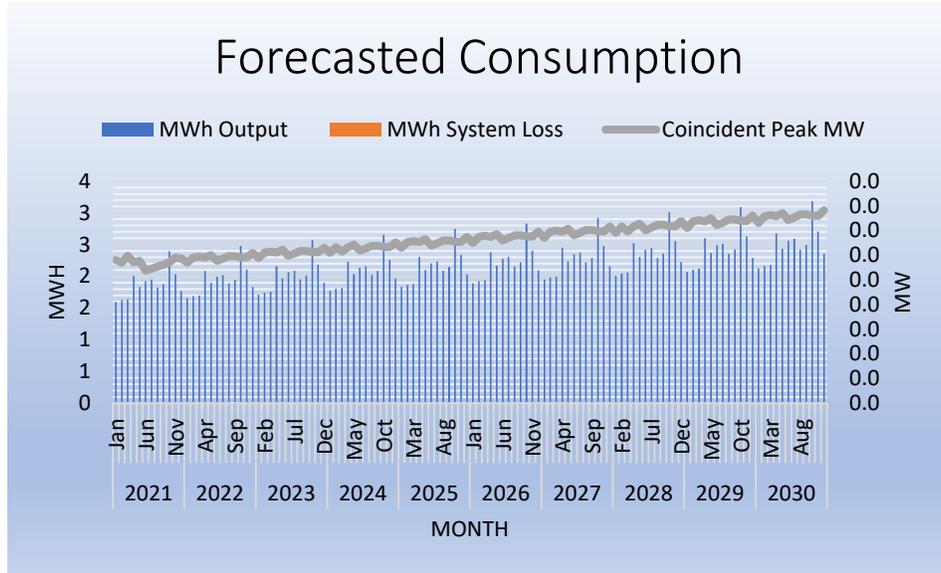
# Forecasted Consumption Data

Table 2: Forecasted Energy and Demand

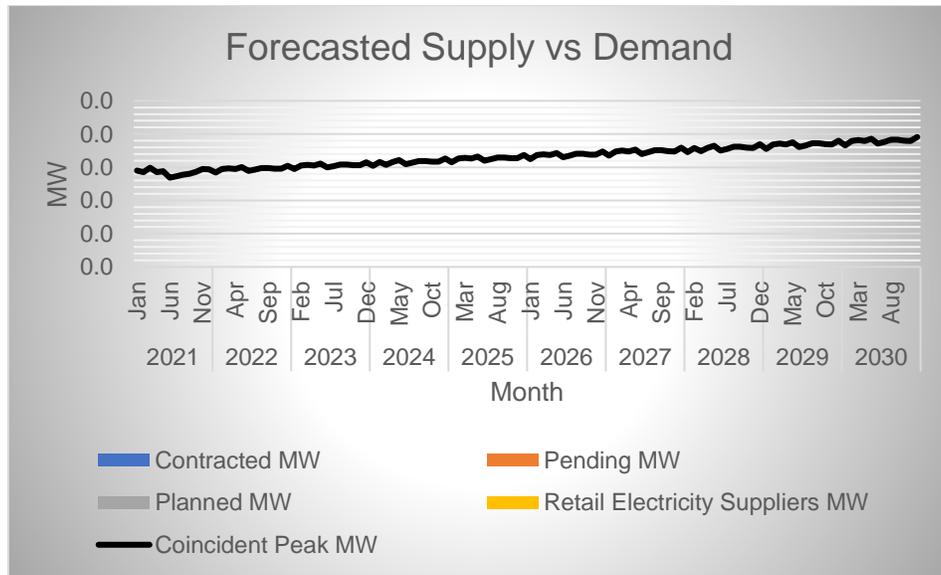
		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
2021	Jan	0.01	2	2	0
	Feb	0.01	2	2	0
	Mar	0.01	4	2	0
	Apr	0.01	2	2	0
	May	0.01	3	2	0
	Jun	0.01	3	2	0
	Jul	0.01	3	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	2	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2022	Jan	0.01	2	2	0
	Feb	0.01	2	2	0
	Mar	0.01	4	2	0
	Apr	0.01	2	2	0
	May	0.01	4	2	0
	Jun	0.01	3	2	0
	Jul	0.01	3	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	2	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2023	Jan	0.01	2	2	0
	Feb	0.01	2	2	0
	Mar	0.01	4	2	0
	Apr	0.01	3	2	0
	May	0.01	4	2	0
	Jun	0.01	3	2	0
	Jul	0.01	4	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	3	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2024	Jan	0.01	2	2	0
	Feb	0.01	2	2	0

		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
	Mar	0.01	4	2	0
	Apr	0.01	3	2	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	3	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2025	Jan	0.01	2	2	0
	Feb	0.01	2	2	0
	Mar	0.01	4	2	0
	Apr	0.01	3	2	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	3	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2026	Jan	0.01	2	2	0
	Feb	0.01	3	2	0
	Mar	0.01	4	2	0
	Apr	0.01	3	2	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	2	0
	Aug	0.01	3	2	0
	Sep	0.01	3	2	0
	Oct	0.01	3	3	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2027	Jan	0.01	2	2	0
	Feb	0.01	3	2	0
	Mar	0.01	4	2	0
	Apr	0.01	3	2	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	2	0

		Coincident Peak MW	MWh Offtake	MWh Output	MWh System Loss
	Aug	0.01	4	2	0
	Sep	0.01	4	2	0
	Oct	0.01	3	3	0
	Nov	0.01	3	2	0
	Dec	0.01	3	2	0
2028	Jan	0.01	2	2	0
	Feb	0.01	3	2	0
	Mar	0.01	4	2	0
	Apr	0.01	3	3	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	2	0
	Aug	0.01	4	2	0
	Sep	0.01	4	2	0
	Oct	0.01	3	3	0
	Nov	0.01	4	3	0
	Dec	0.01	3	2	0
2029	Jan	0.01	2	2	0
	Feb	0.01	3	2	0
	Mar	0.01	5	2	0
	Apr	0.01	3	3	0
	May	0.01	4	2	0
	Jun	0.01	4	2	0
	Jul	0.01	4	3	0
	Aug	0.01	4	2	0
	Sep	0.01	4	2	0
	Oct	0.01	3	3	0
	Nov	0.01	4	3	0
	Dec	0.01	4	2	0
2030	Jan	0.01	3	2	0
	Feb	0.01	3	2	0
	Mar	0.01	5	2	0
	Apr	0.01	3	3	0
	May	0.01	5	2	0
	Jun	0.01	4	3	0
	Jul	0.01	4	3	0
	Aug	0.01	4	2	0
	Sep	0.01	4	2	0
	Oct	0.01	4	3	0
	Nov	0.01	4	3	0
	Dec	0.01	4	2	0



**Figure 3: Forecasted Energy and Demand**



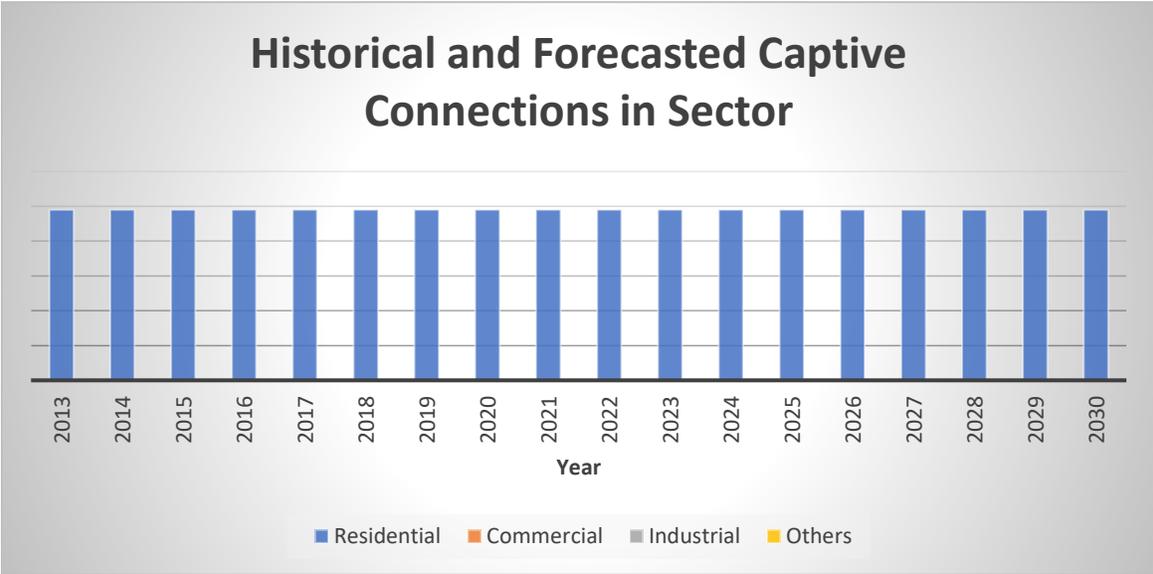
**Figure 4: Forecasted Supply versus Demand**

## Power Supply

The existing connected consumers in the area are purely residential and due to its geographical location, the existing set-up with the LUELCO will be utilized until such time that BENECO will be able to construct new distribution system to connect in its existing distribution system.

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# Captive Customer Connections



**Figure 5: Historical and Forecasted Captive Customer Connections**

The historical customer connections of BENECO from 2013 to 2020 supplied by the LUELCO is averaging to 49 which is equivalent 0.03% from the total residential customers of the cooperative.