Power Supply Procurement Plan 2021

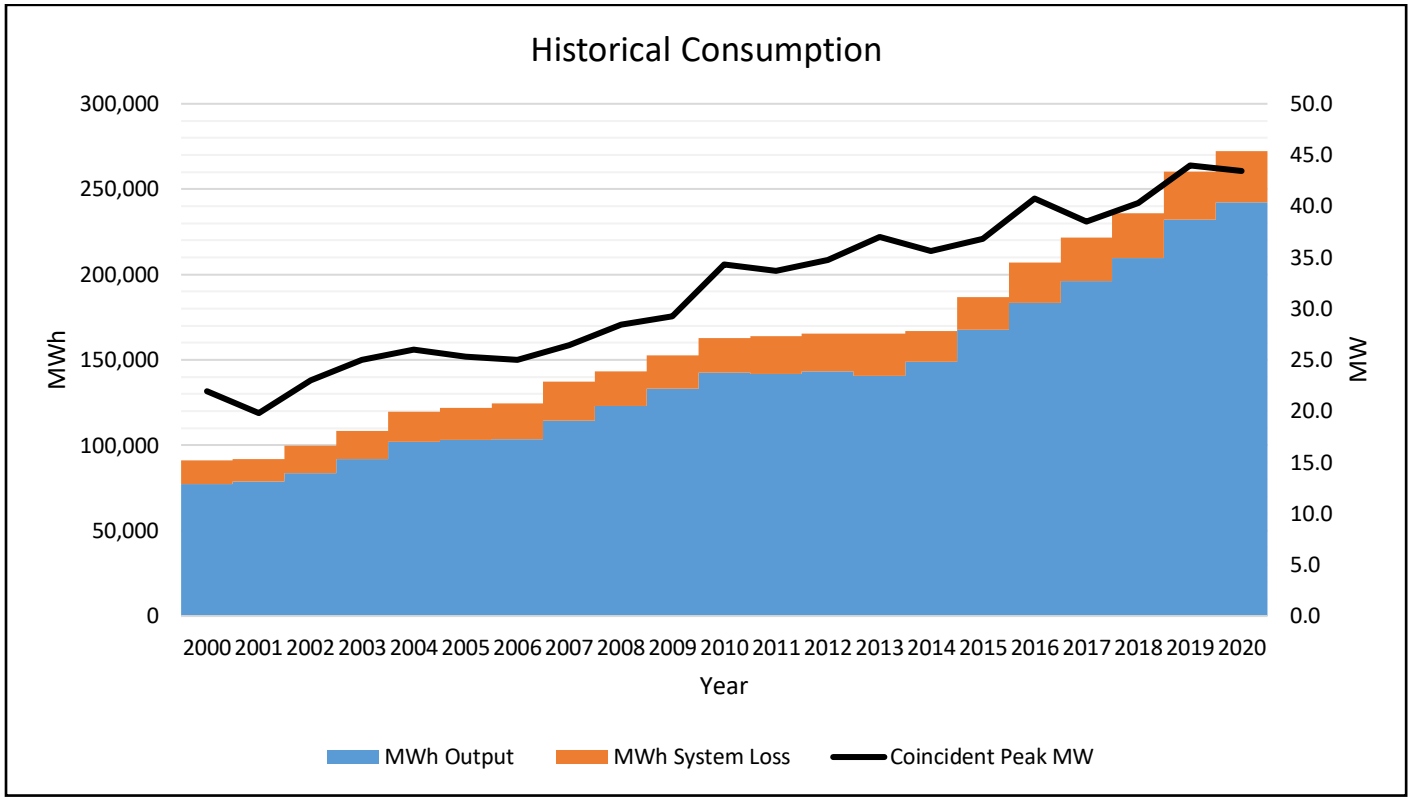
NORTHERN NEGROS ELECTRIC COOPERATIVE, INC.

(NONECO)

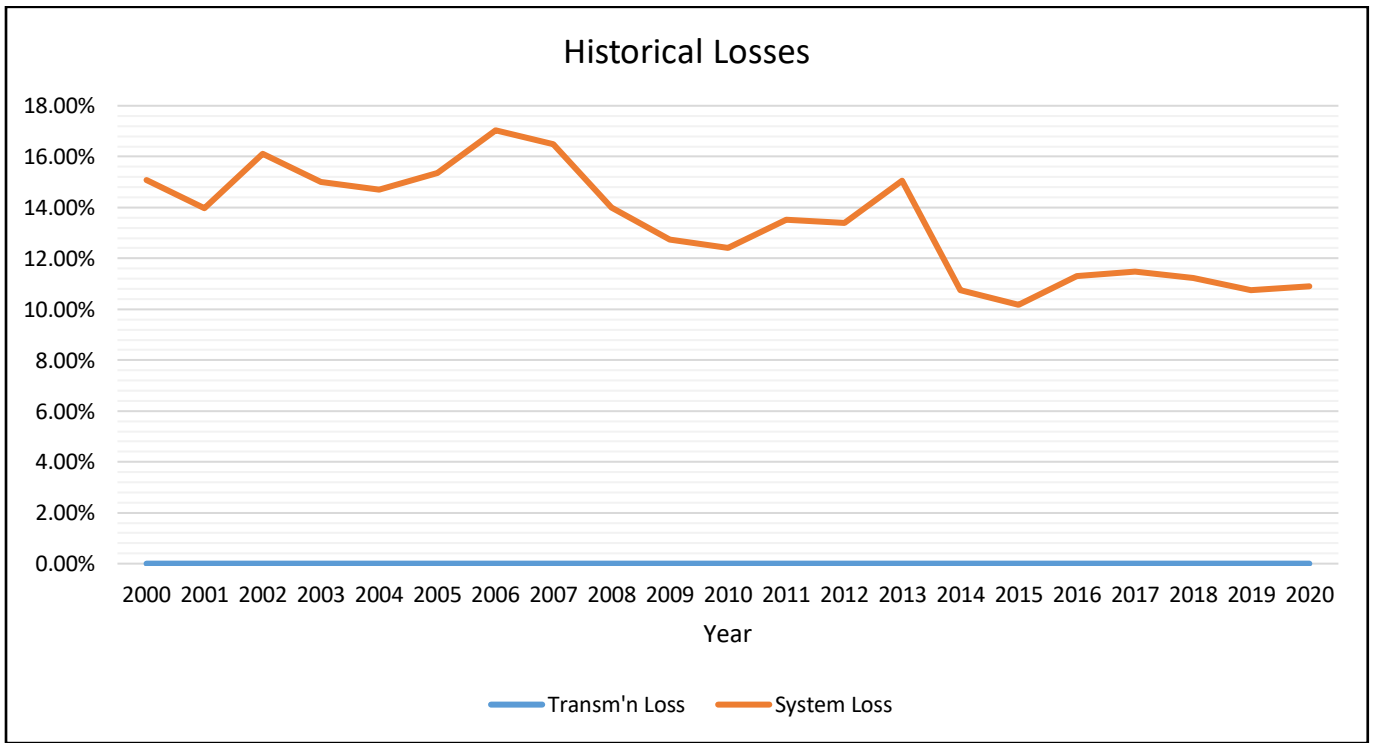
Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	21.97	91,028	0	91,028	77,296	13,733	47%	0.00%	0.00%	15.09%
2001	19.81	91,784	0	91,784	78,963	12,821	53%	0.00%	0.00%	13.97%
2002	23.00	99,722	0	99,722	83,658	16,064	49%	0.00%	0.00%	16.11%
2003	25.00	108,305	0	108,305	92,055	16,250	49%	0.00%	0.00%	15.00%
2004	26.00	119,588	0	119,588	102,003	17,585	53%	0.00%	0.00%	14.70%
2005	25.35	121,792	0	121,792	103,079	18,713	55%	0.00%	0.00%	15.36%
2006	25.00	124,633	0	124,633	103,401	21,232	57%	0.00%	0.00%	17.04%
2007	26.46	137,201	0	137,201	114,576	22,625	59%	0.00%	0.00%	16.49%
2008	28.43	143,223	0	143,223	123,175	20,047	58%	0.00%	0.00%	14.00%
2009	29.25	152,658	0	152,658	133,227	19,432	60%	0.00%	0.00%	12.73%
2010	34.34	162,704	0	162,704	142,502	20,201	54%	0.00%	0.00%	12.42%
2011	33.69	163,942	-18,911	163,942	141,779	22,163	56%	0.00%	0.00%	13.52%
2012	34.77	165,422	-21,234	165,422	143,251	22,172	54%	0.00%	0.00%	13.40%
2013	37.01	165,451	-17,917	165,451	140,527	24,924	51%	0.00%	0.00%	15.06%
2014	35.60	166,886	-12,904	166,886	148,928	17,958	54%	0.00%	0.00%	10.76%
2015	36.82	186,722	18,834	186,722	167,722	19,000	58%	0.00%	0.00%	10.18%
2016	40.74	206,989	46,480	206,989	183,588	23,401	58%	0.00%	0.00%	11.31%
2017	38.51	221,748	30,681	221,748	196,304	25,443	66%	0.00%	0.00%	11.47%
2018	40.31	235,964	46,956	235,964	209,489	26,475	67%	0.00%	0.00%	11.22%
2019	43.98	260,113	65,478	260,113	232,156	27,957	68%	0.00%	0.00%	10.75%
2020	43.44	272,086	79,944	272,086	242,392	29,694	71%	0.00%	0.00%	10.91%

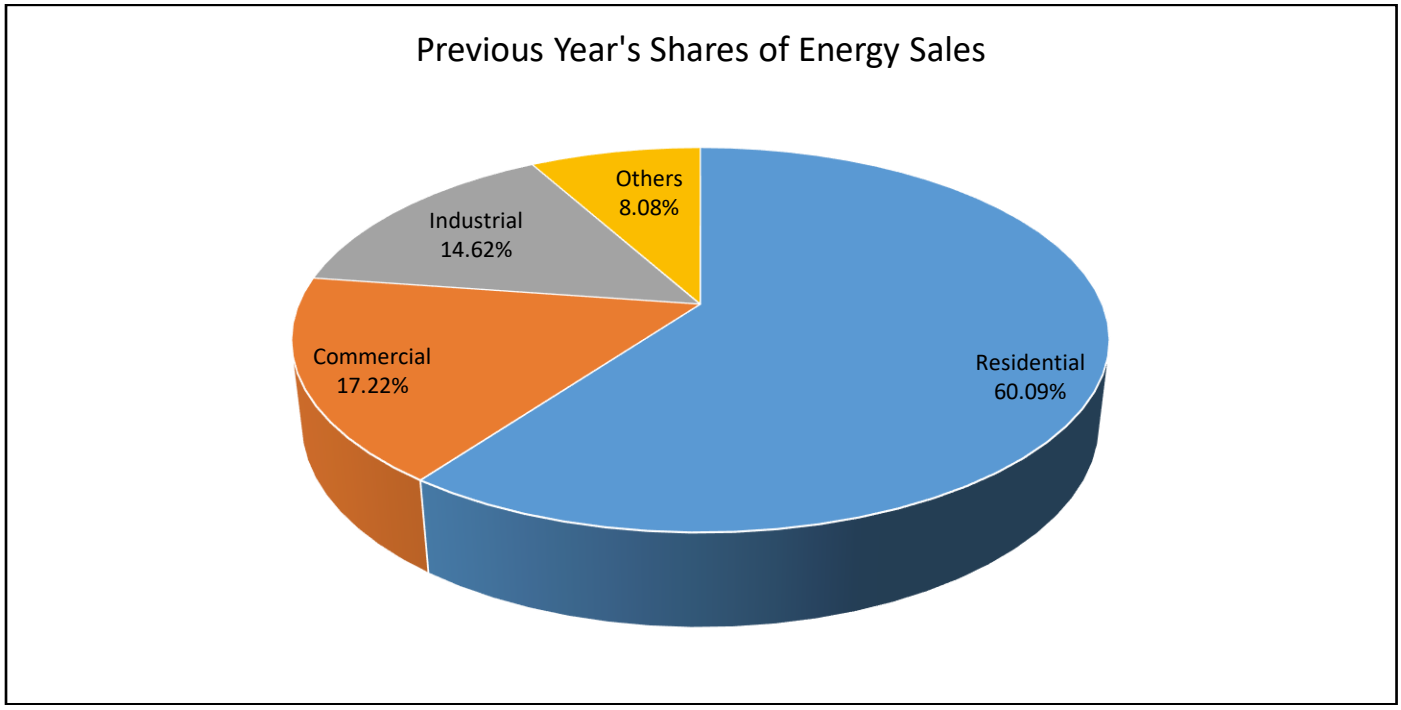
Peak Demand increased from 21.97 MW in 2000 to 43.44 MW in 2020 at a rate of 3.69% due to on-going programs of Local Government Units (LGUs) to develop the way of living of consumers primarily in the northern part of Negros. Commercial buildings, revitalization of prawn farms and fishponds, and increasing consumption for residential consumers that increase our demand. MWh Offtake increased from 91,028 MWh in 2000 to 272,086 MWh in 2020 at a rate of 5.70%, which highlights the entrant of new commercial establishments. Within the same period, the Load Factor ranged from 47% to 71%. There was an abrupt change in consumption from 2019 to 2020 is due to decrease of demand brought by the recent COVID-19 Pandemic.



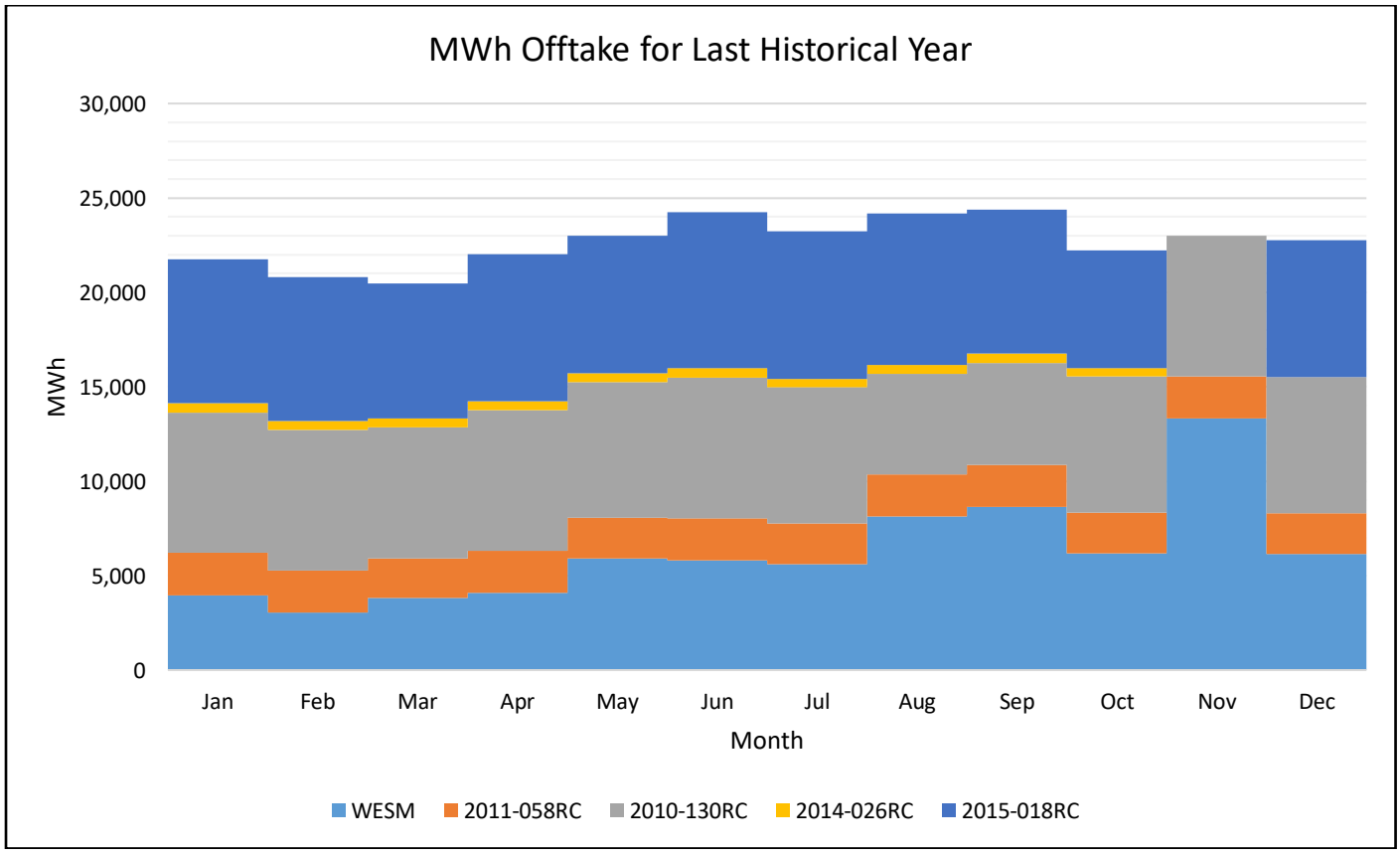
MWh Output increased from the year 2000 to the year 2020 at a rate of 5.97%, but for the past five (5) years, it records an average increase of 7.67%. While MWh System Loss abruptly decreased from 15.06% of 2013 to 10.76% of 2014 with a decrease of 4.30%. During the past five (5) years, NONECO system loss is below the cap, with an average of 10.91%.



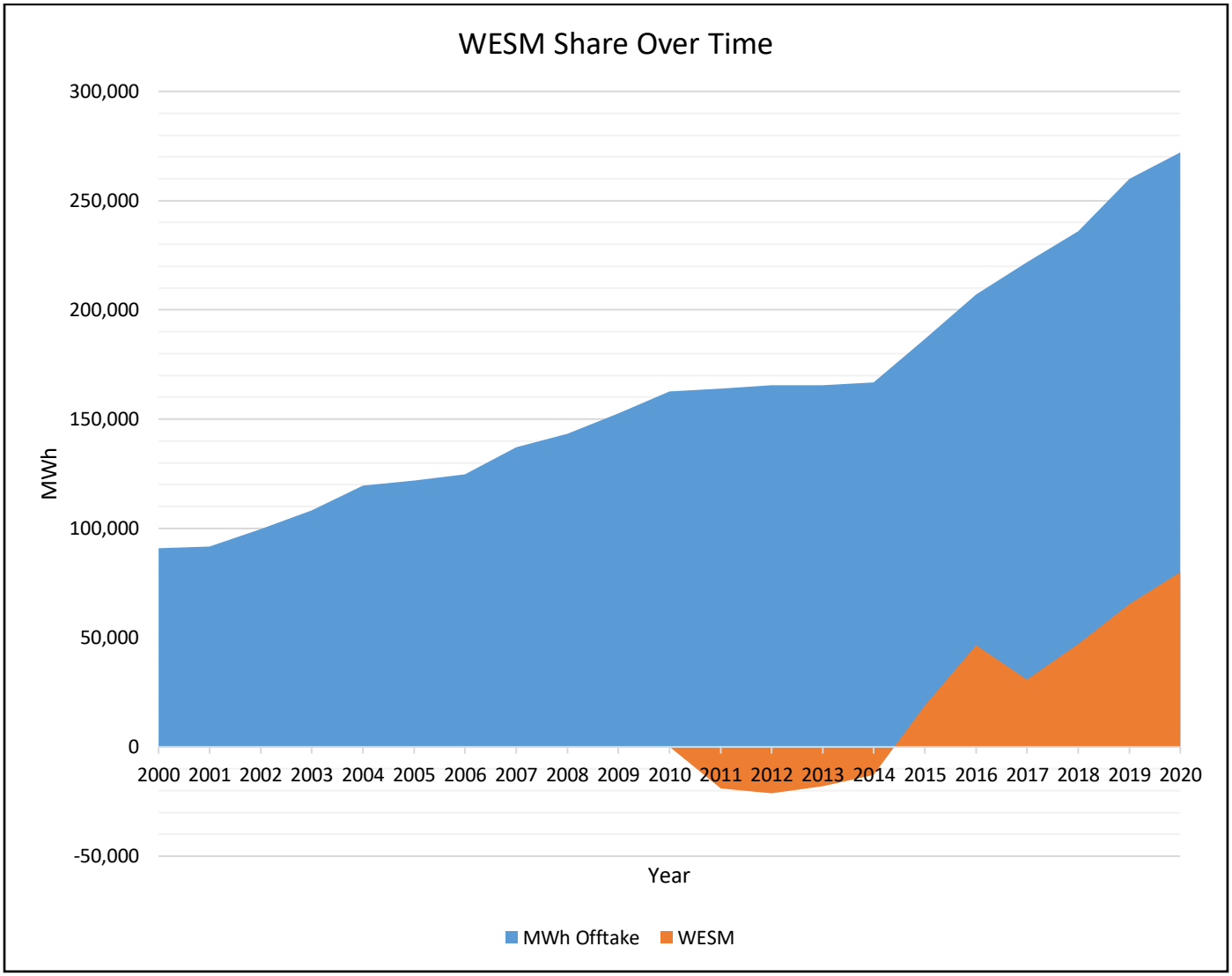
NONECO did not compute the Sub-Transmission Loss because the NGCP Metering Points are located in the substations. Site-Specific Loss Adjustment (SSLA) will not be considered as a Transmission loss because IEMOP already includes it in the Wholesale Electricity Spot Market (WESM) billing computations.



Residential customers account for the bulk of energy sales at 60.09% due to the high number of connections. In contrast, Commercial and Industrial customers accounted for 31.84% of energy sales despite the low number of connections.



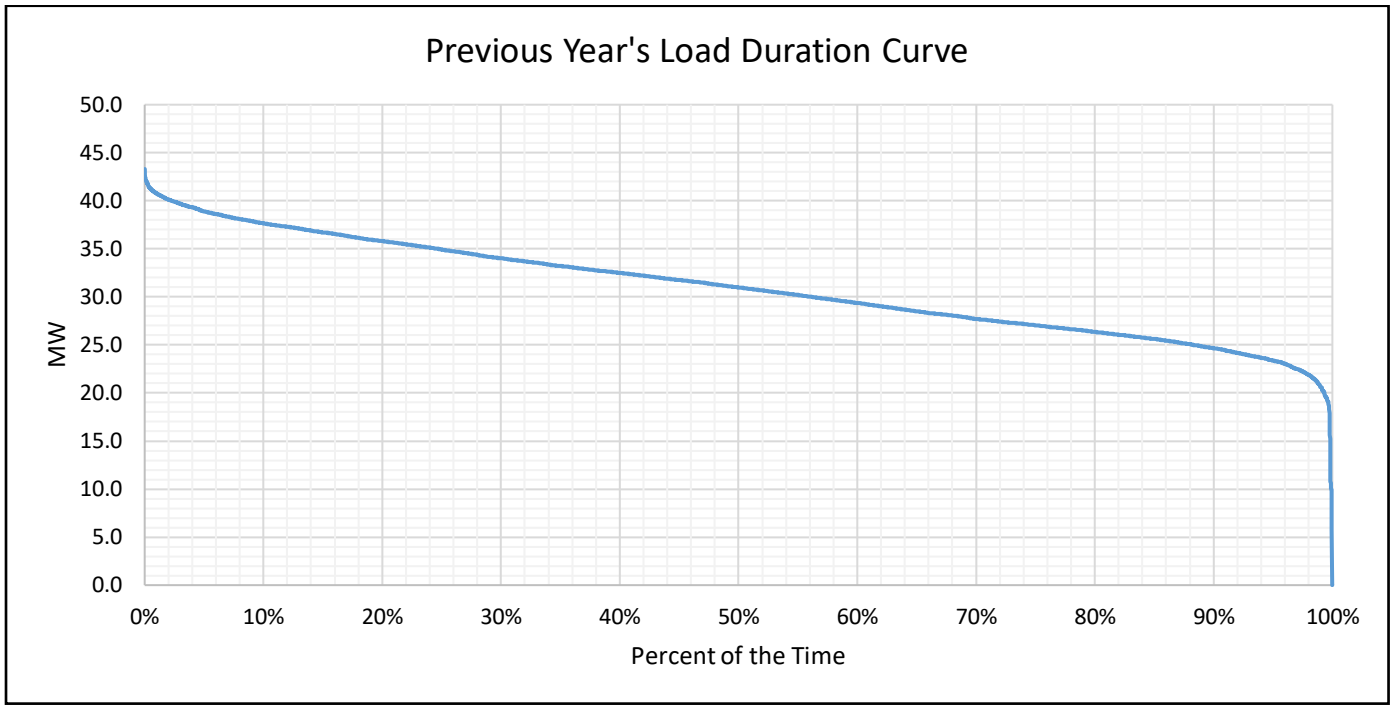
For 2020, the total Offtake for the last historical year is higher than the quantity stipulated in the PSA. The PSA with Palm Concepcion Power Corporation accounts for the bulk of MWh Offtake.



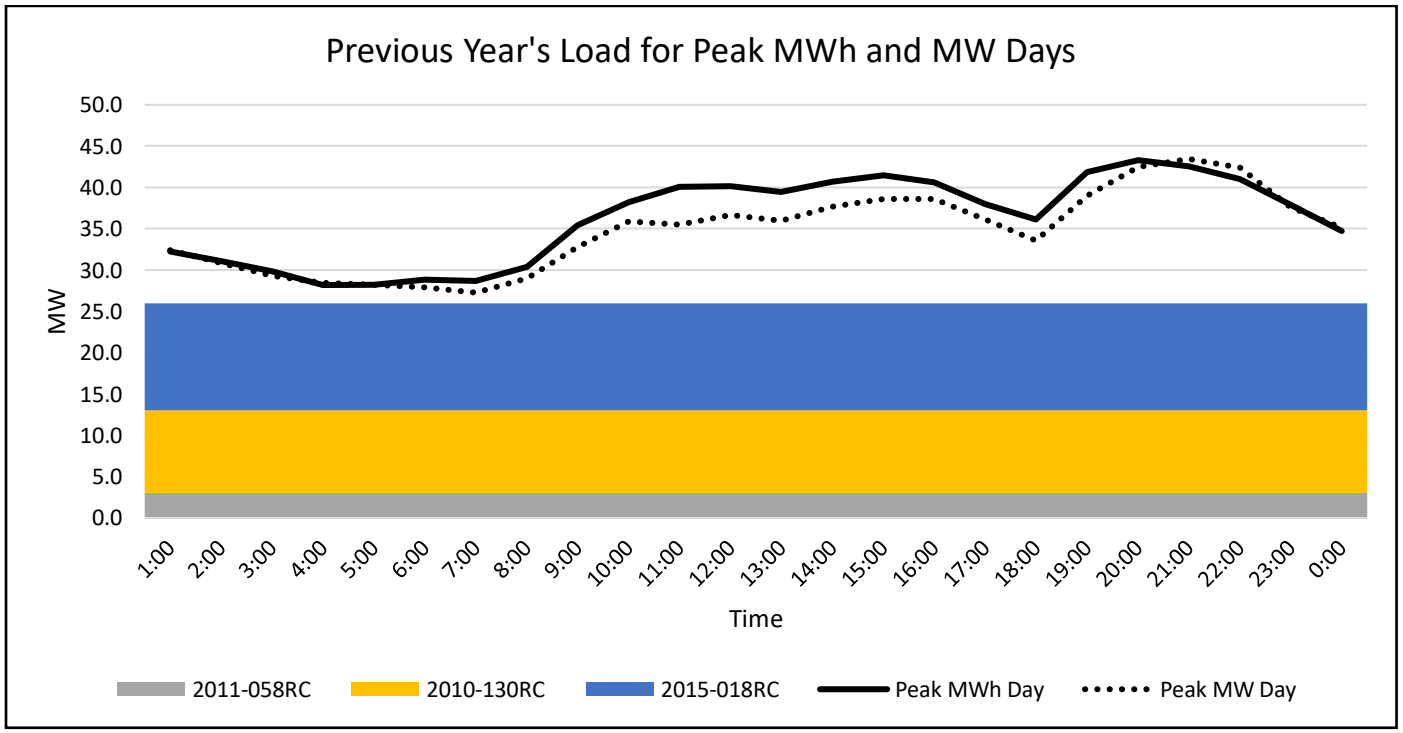
WESM Offtake increased from -18,911 MWh in 2011 to 79,944 MWh in 2020 which consumes 29.38% of the MWh Input due to on-going programs of Local Government Units (LGUs) to develop the way of living consumers primarily in the northern part of Negros. Commercial buildings, revitalization of prawn farms and fishponds, and increasing consumption for residential consumers that improves the system demand. The share of WESM in the total Offtake ranged from 10.09% to 29.38%.

Indicated the graph that there's a negative exposure in WESM from 2011 to 2014 because of the manageable power supply contract in Power Sector Asset and Liability Management (PSALM). During the nominations, zero Bilateral Contract Quantity (BCQ) nomination from 0100H to 0800H intervals and the un-nominated BCQ will be proportionally added to BCQ from 0900H up to 1600H intervals for us, NONECO, will have an opportunity of selling energy in WESM.

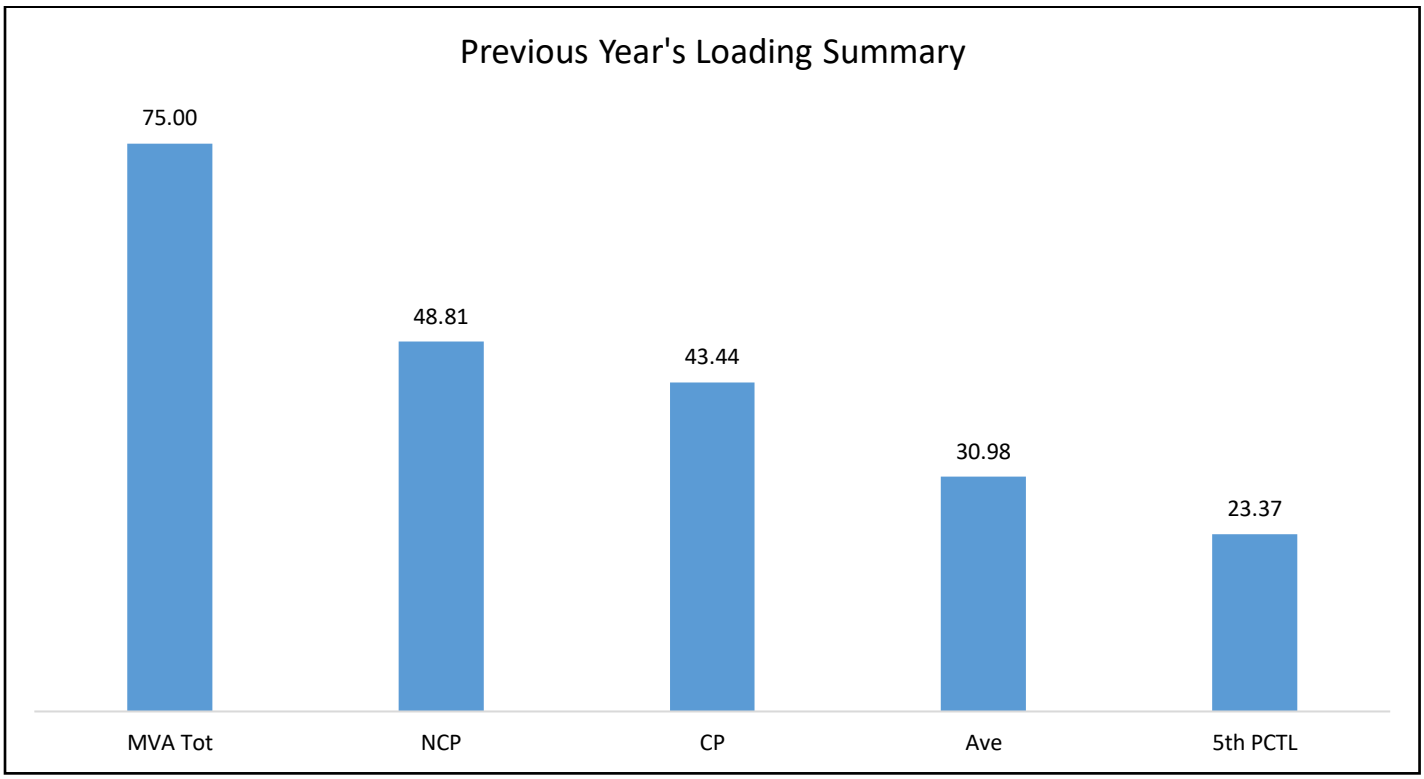
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0 MW due to the power interruptions. But that is not the actual minimum demand of NONECO. Based on the 5th percentile load, most likely, the minimum is at 23.37 MW, and the maximum load is 43.44 MW for the last historical year.



Peak MW occurred at nine o'clock in the evening of 23 June 2020 due to increased demand during the development of the economy in Negros when the quarantine moved from Enhanced Community Quarantine (ECQ) to Modified Enhanced Community Quarantine (MECQ). Peak daily MWh occurred on 11 August 2020 due to the increase of demand during the opening of classes. As shown in the Load Curves, the available supply is lower than the Peak Demand.



The Non-coincident Peak Demand is 48.81 MW, which is around 65.08% of the total substation capacity of 75 MVA at a power factor of 71.31%. The load factor or the ratio between the Average Load of 30.98 MW and the Non-coincident Peak Demand is 63.47%. A safe estimate of the actual minimum load is the fifth percentile load of 23.37 MW, which is 47.87% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
Victorias	15	11.507
Cadiz	10	8.309
Sagay	10	6.792
San Carlos	20	9.754
Escalante	10	4.956
Lopez	5	3.401
Manapla	5	4.093

The substations loaded at above 70% are Victorias Substation, Cadiz Substation, and Manapla Substation. This loading problem will be solved by 2021.

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	45.09	26.00	0.00	0.000		58%	58%	-19.09
	Feb	43.39	26.00	0.00	0.000		60%	60%	-17.39
	Mar	42.47	26.00	0.00	0.000		61%	61%	-16.47
	Apr	43.11	26.00	0.00	0.000		60%	60%	-17.11
	May	47.40	26.00	0.00	0.000		55%	55%	-21.40
	Jun	46.85	26.00	0.00	0.000		55%	55%	-20.85
	Jul	44.95	26.00	0.00	0.000		58%	58%	-18.95
	Aug	46.66	26.00	0.00	0.000		56%	56%	-20.66
	Sep	45.84	26.00	0.00	0.000		57%	57%	-19.84
	Oct	45.93	26.00	0.00	0.000		57%	57%	-19.93
	Nov	45.29	26.00	0.00	0.000		57%	57%	-19.29
	Dec	45.25	26.00	0.00	0.000		57%	57%	-19.25
2022	Jan	48.28	26.00	0.00	0.000		54%	54%	-22.28
	Feb	46.46	26.00	0.00	0.000		56%	56%	-20.46
	Mar	45.47	26.00	0.00	0.000		57%	57%	-19.47
	Apr	46.15	26.00	0.00	0.000		56%	56%	-20.15
	May	50.75	26.00	0.00	0.000		51%	51%	-24.75
	Jun	50.17	16.00	0.00	25.000		32%	82%	-9.17
	Jul	48.13	16.00	0.00	25.000		33%	85%	-7.13
	Aug	49.96	16.00	0.00	25.000		32%	82%	-8.96
	Sep	49.08	16.00	0.00	25.000		33%	84%	-8.08
	Oct	49.17	16.00	0.00	25.000		33%	83%	-8.17
	Nov	48.49	16.00	0.00	25.000		33%	85%	-7.49
	Dec	48.45	16.00	0.00	25.000		33%	85%	-7.45
2023	Jan	51.45	16.00	0.00	30.000		31%	89%	-5.45

NONECO Power Supply Plan 2021

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Feb	49.51	16.00	0.00	30.000		32%	93%	-3.51
	Mar	48.46	16.00	0.00	30.000		33%	95%	-2.46
	Apr	49.19	16.00	0.00	30.000		33%	94%	-3.19
	May	54.08	16.00	0.00	30.000		30%	85%	-8.08
	Jun	53.46	16.00	0.00	30.000		30%	86%	-7.46
	Jul	51.29	16.00	0.00	30.000		31%	90%	-5.29
	Aug	53.25	16.00	0.00	30.000		30%	86%	-7.25
	Sep	52.30	16.00	0.00	30.000		31%	88%	-6.30
	Oct	52.41	16.00	0.00	30.000		31%	88%	-6.41
	Nov	51.68	16.00	0.00	30.000		31%	89%	-5.68
	Dec	51.64	16.00	0.00	30.000		31%	89%	-5.64
2024	Jan	54.49	16.00	0.00	30.000		29%	84%	-8.49
	Feb	52.44	16.00	0.00	30.000		31%	88%	-6.44
	Mar	51.33	16.00	0.00	30.000		31%	90%	-5.33
	Apr	52.09	16.00	0.00	30.000		31%	88%	-6.09
	May	57.28	16.00	0.00	30.000		28%	80%	-11.28
	Jun	56.62	16.00	0.00	30.000		28%	81%	-10.62
	Jul	54.32	16.00	0.00	30.000		29%	85%	-8.32
	Aug	56.39	16.00	0.00	30.000		28%	82%	-10.39
	Sep	55.39	16.00	0.00	30.000		29%	83%	-9.39
	Oct	55.50	16.00	0.00	30.000		29%	83%	-9.50
	Nov	54.74	16.00	0.00	30.000		29%	84%	-8.74
	Dec	54.69	16.00	0.00	30.000		29%	84%	-8.69
2025	Jan	57.69	16.00	0.00	30.000		28%	80%	-11.69
	Feb	55.51	16.00	0.00	30.000		29%	83%	-9.51
	Mar	54.34	16.00	0.00	30.000		29%	85%	-8.34
	Apr	55.15	16.00	0.00	30.000		29%	83%	-9.15

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	May	60.64	16.00	0.00	30.000		26%	76%	-14.64
	Jun	59.95	16.00	0.00	30.000		27%	77%	-13.95
	Jul	57.51	16.00	0.00	30.000		28%	80%	-11.51
	Aug	59.70	16.00	0.00	30.000		27%	77%	-13.70
	Sep	58.64	16.00	0.00	30.000		27%	78%	-12.64
	Oct	58.76	16.00	0.00	30.000		27%	78%	-12.76
	Nov	57.95	16.00	0.00	30.000		28%	79%	-11.95
	Dec	57.90	16.00	0.00	30.000		28%	79%	-11.90
2026	Jan	60.74	13.00	0.00	35.000		21%	79%	-12.74
	Feb	58.45	13.00	0.00	35.000		22%	82%	-10.45
	Mar	57.22	13.00	0.00	35.000		23%	84%	-9.22
	Apr	58.07	13.00	0.00	35.000		22%	83%	-10.07
	May	63.85	13.00	0.00	35.000		20%	75%	-15.85
	Jun	63.12	13.00	0.00	35.000		21%	76%	-15.12
	Jul	60.56	13.00	0.00	35.000		21%	79%	-12.56
	Aug	62.86	13.00	0.00	35.000		21%	76%	-14.86
	Sep	61.75	13.00	0.00	35.000		21%	78%	-13.75
	Oct	61.87	13.00	0.00	35.000		21%	78%	-13.87
	Nov	61.02	13.00	0.00	35.000		21%	79%	-13.02
	Dec	60.96	13.00	0.00	35.000		21%	79%	-12.96
2027	Jan	63.75	13.00	0.00	35.000		20%	75%	-15.75
	Feb	61.34	13.00	0.00	35.000		21%	78%	-13.34
	Mar	60.05	13.00	0.00	35.000		22%	80%	-12.05
	Apr	60.94	13.00	0.00	35.000		21%	79%	-12.94
	May	67.01	13.00	0.00	35.000		19%	72%	-19.01
	Jun	66.24	13.00	0.00	35.000		20%	72%	-18.24
	Jul	63.55	13.00	0.00	35.000		20%	76%	-15.55

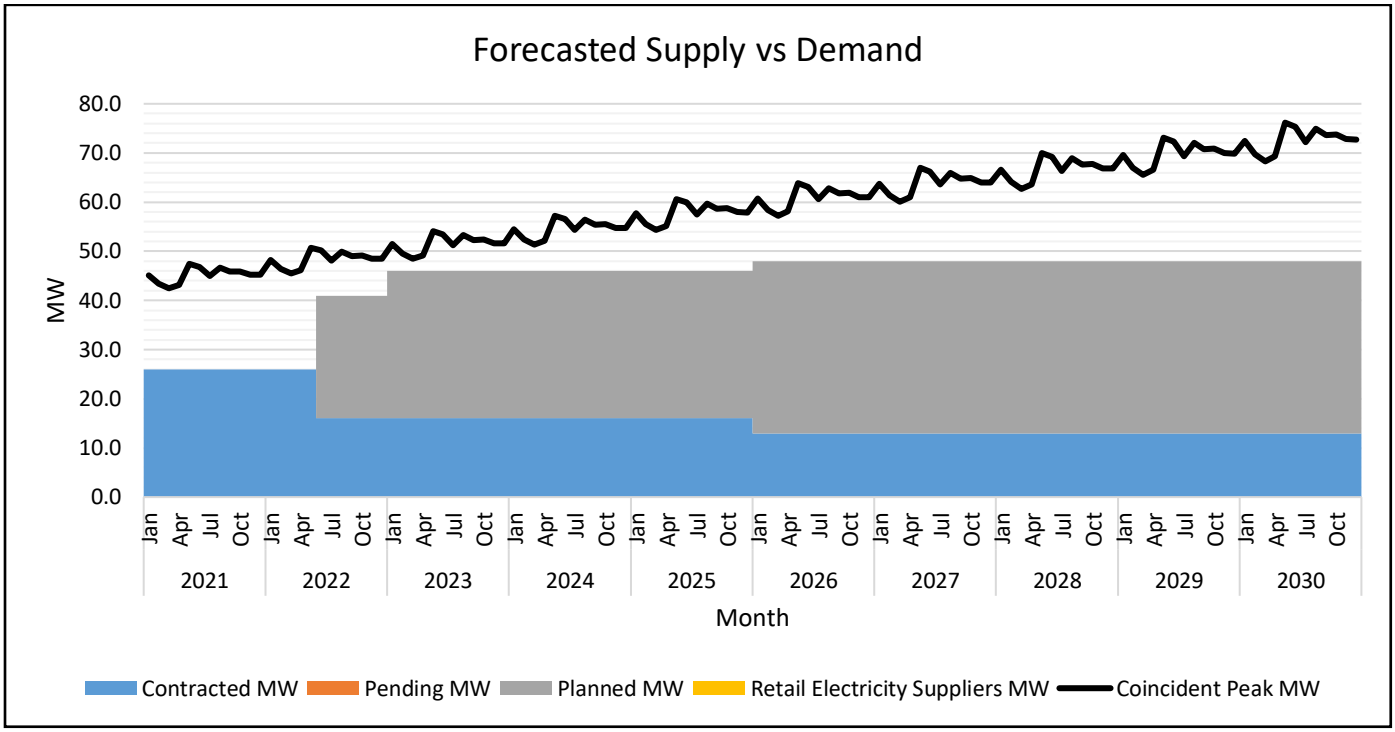
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Aug	65.97	13.00	0.00	35.000		20%	73%	-17.97
	Sep	64.80	13.00	0.00	35.000		20%	74%	-16.80
	Oct	64.93	13.00	0.00	35.000		20%	74%	-16.93
	Nov	64.03	13.00	0.00	35.000		20%	75%	-16.03
	Dec	63.98	13.00	0.00	35.000		20%	75%	-15.98
2028	Jan	66.58	13.00	0.00	35.000		20%	72%	-18.58
	Feb	64.07	13.00	0.00	35.000		20%	75%	-16.07
	Mar	62.71	13.00	0.00	35.000		21%	77%	-14.71
	Apr	63.65	13.00	0.00	35.000		20%	75%	-15.65
	May	69.99	13.00	0.00	35.000		19%	69%	-21.99
	Jun	69.19	13.00	0.00	35.000		19%	69%	-21.19
	Jul	66.37	13.00	0.00	35.000		20%	72%	-18.37
	Aug	68.91	13.00	0.00	35.000		19%	70%	-20.91
	Sep	67.68	13.00	0.00	35.000		19%	71%	-19.68
	Oct	67.82	13.00	0.00	35.000		19%	71%	-19.82
	Nov	66.88	13.00	0.00	35.000		19%	72%	-18.88
	Dec	66.82	13.00	0.00	35.000		19%	72%	-18.82
2029	Jan	69.60	13.00	0.00	35.000		19%	69%	-21.60
	Feb	66.98	13.00	0.00	35.000		19%	72%	-18.98
	Mar	65.56	13.00	0.00	35.000		20%	73%	-17.56
	Apr	66.54	13.00	0.00	35.000		20%	72%	-18.54
	May	73.17	13.00	0.00	35.000		18%	66%	-25.17
	Jun	72.33	13.00	0.00	35.000		18%	66%	-24.33
	Jul	69.39	13.00	0.00	35.000		19%	69%	-21.39
	Aug	72.03	13.00	0.00	35.000		18%	67%	-24.03
	Sep	70.75	13.00	0.00	35.000		18%	68%	-22.75
	Oct	70.90	13.00	0.00	35.000		18%	68%	-22.90

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Nov	69.92	13.00	0.00	35.000		19%	69%	-21.92
	Dec	69.86	13.00	0.00	35.000		19%	69%	-21.86
2030	Jan	72.45	13.00	0.00	35.000		18%	66%	-24.45
	Feb	69.72	13.00	0.00	35.000		19%	69%	-21.72
	Mar	68.25	13.00	0.00	35.000		19%	70%	-20.25
	Apr	69.27	13.00	0.00	35.000		19%	69%	-21.27
	May	76.16	13.00	0.00	35.000		17%	63%	-28.16
	Jun	75.29	13.00	0.00	35.000		17%	64%	-27.29
	Jul	72.23	13.00	0.00	35.000		18%	66%	-24.23
	Aug	74.99	13.00	0.00	35.000		17%	64%	-26.99
	Sep	73.65	13.00	0.00	35.000		18%	65%	-25.65
	Oct	73.80	13.00	0.00	35.000		18%	65%	-25.80
	Nov	72.78	13.00	0.00	35.000		18%	66%	-24.78
	Dec	72.72	13.00	0.00	35.000		18%	66%	-24.72

The System Energy requirement for 2020 to 2034 was forecasted using cubic & logarithmic trend forecast method and an equation of Y = a + blogt3 + at-3, R2 statistic is 0.992738586314611 with Adjusted R2 is 0.999970922 and the Mean Absolute Percentage Error (MAPE) is 0.50%The average historical growth rate of energy purchased for seven (7) years is 6.17% and was forecasted increases to average of 4.87% for the year 2019 to 2033. The increases of demand for energy requirement relies on the augment of number of customers and expansion projects considering the economic development of NONECO franchise area.

Monthly Peak Demand is at its lowest in March and November due to the Lenten season and All Saints and All Souls day. In general, Peak Demand is theoretically to grow at a rate of 5% annually.

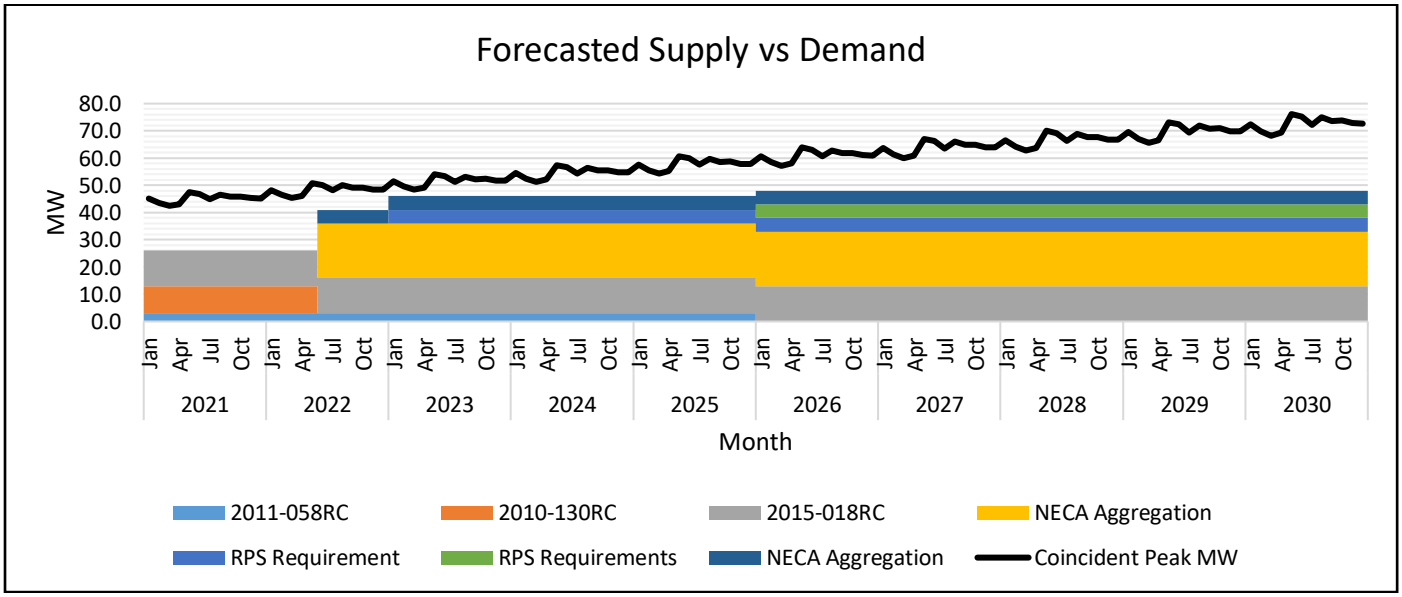
There's a high growth rate when we compare the 2020 historical data and the forecasted data of 2021. The historical data in 2020 was affected by the current pandemic COVID-19 when some of the commercial, industrials, and public building consumers of NONECO closed due to the declaration of Enhanced Community Quarantine (ECQ) by the government.



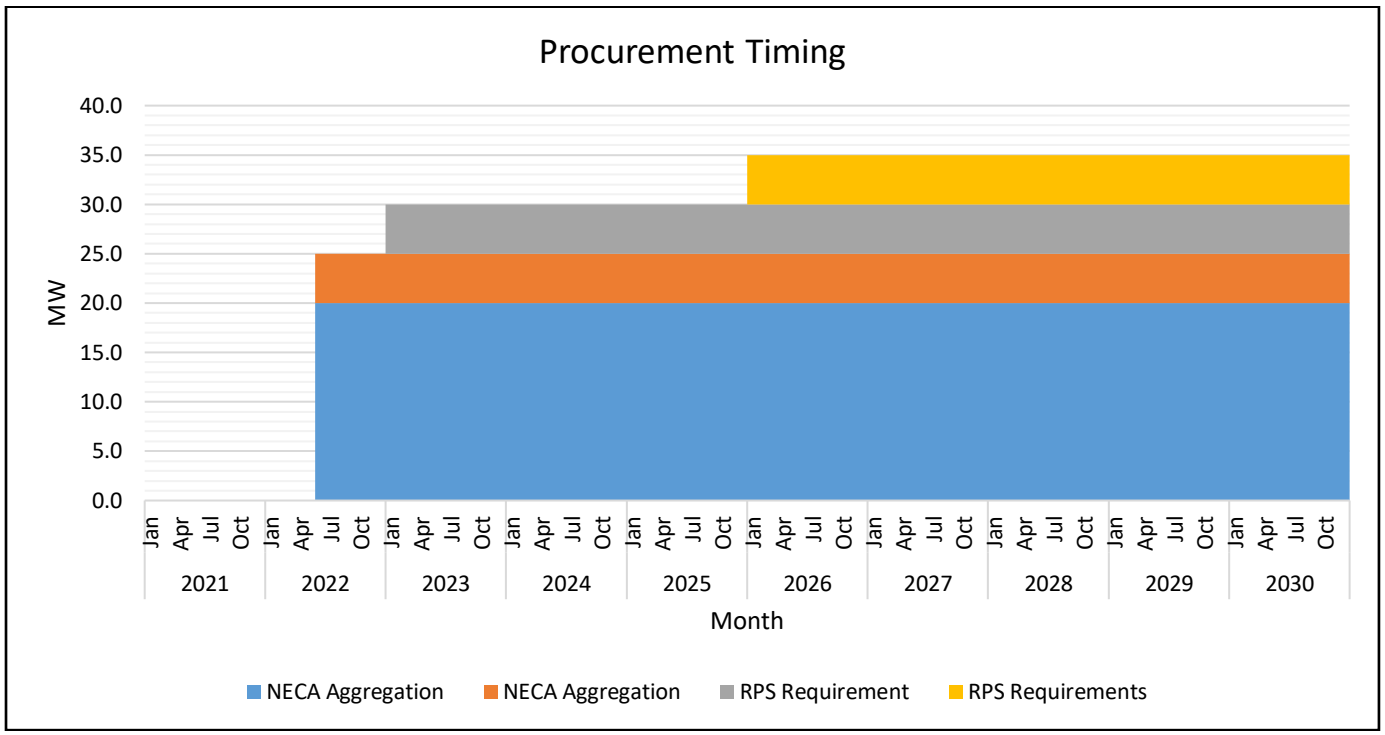
The available supply is generally below the Peak Demand because the Distribution Utility mandated to have a power supply contract 70% to 90% of its demand to avoid exposure to the electricity market.

An under-contract is spotted in the year 2021 up to the year 2022 because of the significant and abrupt increase of NONECO's demand, especially on Residential and Commercial consumers' demand.

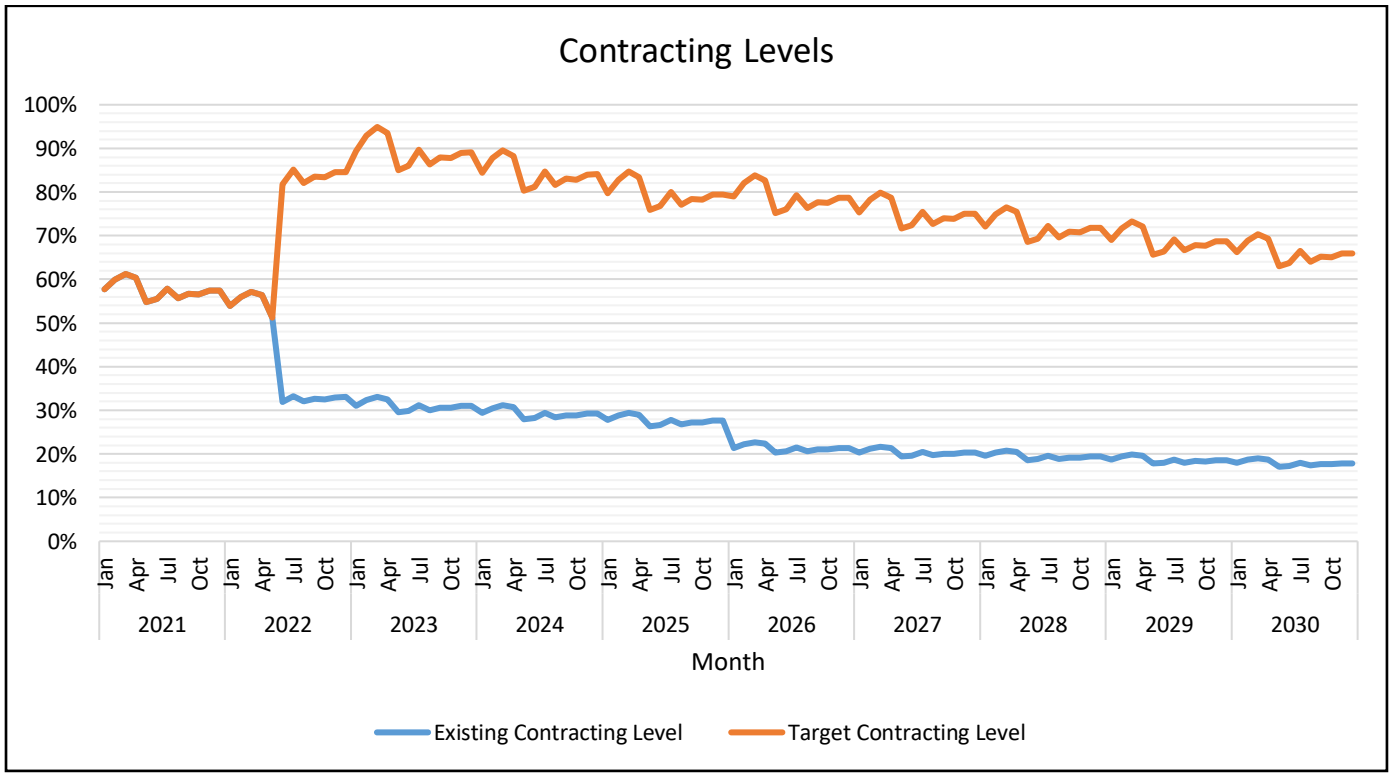
Last year 2020, one of our power suppliers, which during peaking, is expire, but we will conduct a CSP for our baseload and peaking demand, and the target date of delivery is on the 2nd quarter of 2022.



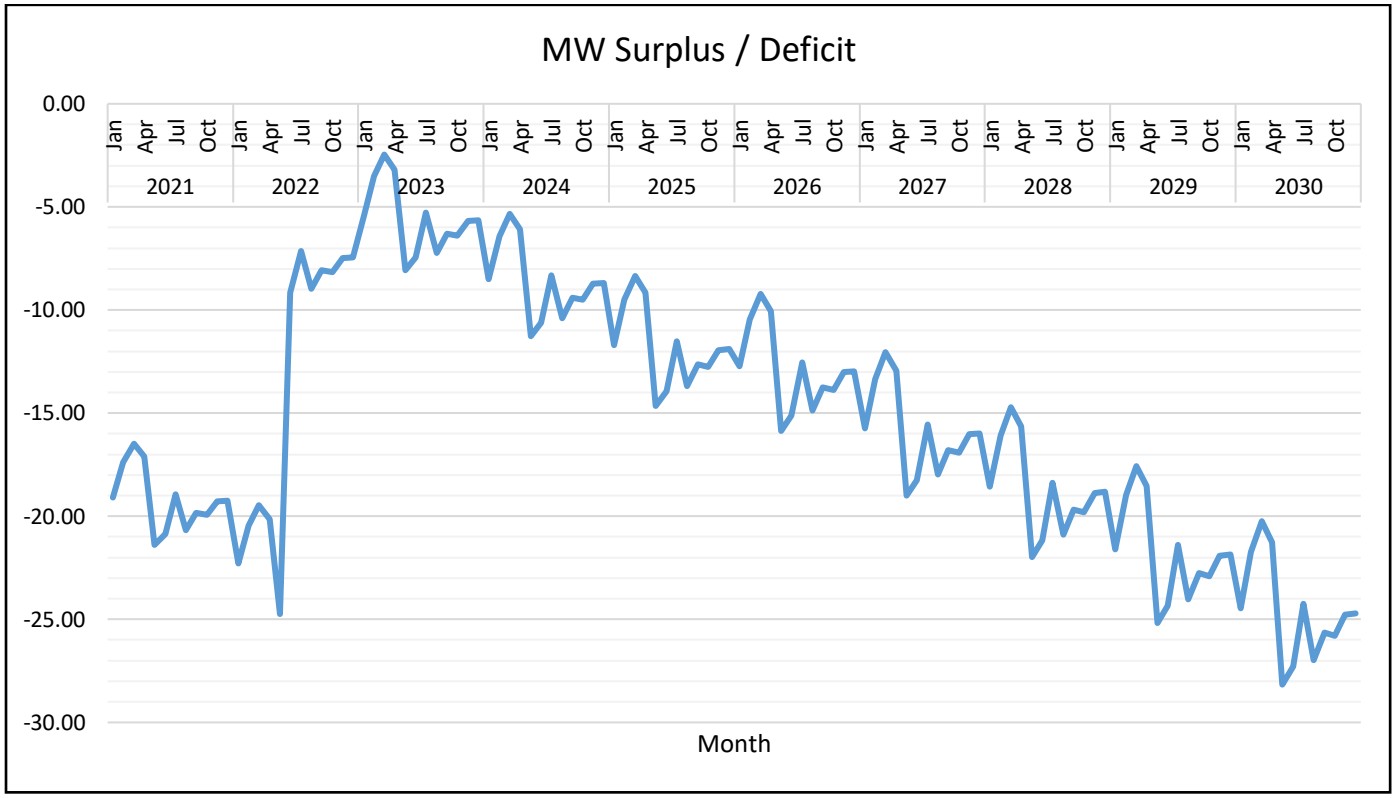
Of the available supply, the largest is 13 MW from a contract with ERC Case No. 2015-018 RC, followed by 10 MW with ERC Case No. 2010-130 RC. Negros Island Electric Cooperative Association (NECA) initiates to have a power supply aggregation for the un-contracted baseload and peaking demand of every ECs to conduct CSP starting 2022. NECA Board forms a Technical Working Group to facilitate that aggregation.



The first wave of supply procurement will be for 20 MW Base and 5 MW Peaking contract for NECA Aggregation which expecting for a delay in conducting of CSP, followed by a 2 MW planned to be available by January 2022 for our Renewable Portfolio Standard (RPS) requirement.



Currently, there is under-contacting by 45.15%. The highest target contracting level is 99.73%, which is expected to occur in July of 2022. The lowest target contracting level is 54.85%, which is expected to occur in May of 2021.



Currently, there is under-contacting by 19 MW. The highest deficit is 21 MW, which is expected to occur in May of 2021. The lowest deficit is 16 MW, which is expected to happen in March 2021.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2021	Jan	24,230	21,177	3,053	0.00%	12.60%
	Feb	23,309	20,927	2,383	0.00%	10.22%
	Mar	22,792	20,489	2,303	0.00%	10.10%
	Apr	24,107	21,397	2,711	0.00%	11.24%
	May	25,285	22,415	2,870	0.00%	11.35%
	Jun	26,697	23,773	2,923	0.00%	10.95%
	Jul	25,663	22,944	2,718	0.00%	10.59%
	Aug	26,806	24,171	2,635	0.00%	9.83%
	Sep	26,972	24,319	2,653	0.00%	9.84%
	Oct	24,636	22,443	2,193	0.00%	8.90%
	Nov	25,420	22,832	2,587	0.00%	10.18%
	Dec	25,218	23,249	1,969	0.00%	7.81%
2022	Jan	25,925	22,724	3,201	0.00%	12.35%
	Feb	24,954	22,456	2,498	0.00%	10.01%
	Mar	24,401	21,987	2,415	0.00%	9.90%
	Apr	25,802	22,960	2,842	0.00%	11.01%
	May	27,062	24,053	3,009	0.00%	11.12%
	Jun	28,576	25,511	3,065	0.00%	10.73%
	Jul	27,471	24,621	2,850	0.00%	10.37%
	Aug	28,700	25,937	2,763	0.00%	9.63%

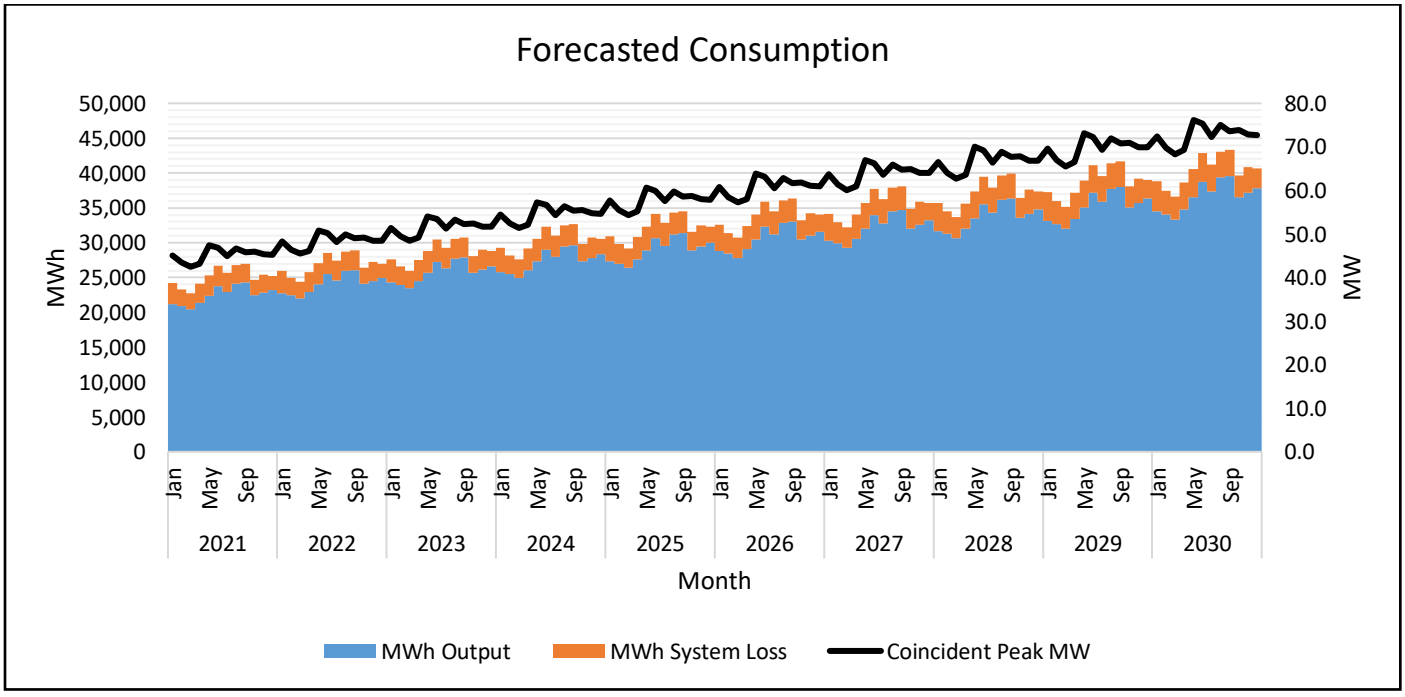
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Sep	28,878	26,096	2,782	0.00%	9.63%
	Oct	26,383	24,083	2,299	0.00%	8.72%
	Nov	27,214	24,501	2,713	0.00%	9.97%
	Dec	27,013	24,949	2,064	0.00%	7.64%
2023	Jan	27,613	24,265	3,348	0.00%	12.12%
	Feb	26,591	23,979	2,613	0.00%	9.83%
	Mar	26,003	23,477	2,525	0.00%	9.71%
	Apr	27,489	24,517	2,972	0.00%	10.81%
	May	28,831	25,683	3,148	0.00%	10.92%
	Jun	30,446	27,240	3,206	0.00%	10.53%
	Jul	29,271	26,290	2,981	0.00%	10.18%
	Aug	30,585	27,695	2,890	0.00%	9.45%
	Sep	30,775	27,865	2,910	0.00%	9.45%
	Oct	28,121	25,716	2,405	0.00%	8.55%
	Nov	28,999	26,162	2,837	0.00%	9.78%
	Dec	28,799	26,640	2,159	0.00%	7.50%
2024	Jan	29,284	25,790	3,493	0.00%	11.93%
	Feb	28,212	25,486	2,726	0.00%	9.66%
	Mar	27,588	24,953	2,635	0.00%	9.55%
	Apr	29,159	26,057	3,102	0.00%	10.64%
	May	30,582	27,297	3,284	0.00%	10.74%
	Jun	32,297	28,952	3,345	0.00%	10.36%
	Jul	31,053	27,943	3,111	0.00%	10.02%
	Aug	32,451	29,436	3,016	0.00%	9.29%
	Sep	32,653	29,617	3,036	0.00%	9.30%
	Oct	29,841	27,332	2,509	0.00%	8.41%
	Nov	30,767	27,806	2,961	0.00%	9.62%
	Dec	30,567	28,314	2,253	0.00%	7.37%
2025	Jan	30,933	27,296	3,637	0.00%	11.76%
	Feb	29,812	26,974	2,838	0.00%	9.52%
	Mar	29,153	26,410	2,743	0.00%	9.41%
	Apr	30,807	27,578	3,229	0.00%	10.48%
	May	32,310	28,890	3,419	0.00%	10.58%
	Jun	34,124	30,642	3,483	0.00%	10.21%
	Jul	32,812	29,573	3,238	0.00%	9.87%
	Aug	34,293	31,154	3,139	0.00%	9.15%
	Sep	34,507	31,346	3,161	0.00%	9.16%
	Oct	31,540	28,927	2,613	0.00%	8.28%
	Nov	32,511	29,429	3,082	0.00%	9.48%
	Dec	32,312	29,967	2,345	0.00%	7.26%
2026	Jan	32,557	28,779	3,778	0.00%	11.61%
	Feb	31,388	28,439	2,949	0.00%	9.39%
	Mar	30,695	27,845	2,850	0.00%	9.29%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Apr	32,431	29,076	3,355	0.00%	10.34%
	May	34,012	30,460	3,552	0.00%	10.44%
	Jun	35,924	32,307	3,618	0.00%	10.07%
	Jul	34,544	31,180	3,364	0.00%	9.74%
	Aug	36,108	32,846	3,261	0.00%	9.03%
	Sep	36,332	33,049	3,284	0.00%	9.04%
	Oct	33,213	30,499	2,714	0.00%	8.17%
	Nov	34,230	31,028	3,202	0.00%	9.36%
	Dec	34,032	31,595	2,436	0.00%	7.16%
2027	Jan	34,156	30,238	3,918	0.00%	11.47%
	Feb	32,938	29,881	3,057	0.00%	9.28%
	Mar	32,211	29,256	2,955	0.00%	9.17%
	Apr	34,028	30,550	3,478	0.00%	10.22%
	May	35,687	32,004	3,683	0.00%	10.32%
	Jun	37,695	33,944	3,751	0.00%	9.95%
	Jul	36,249	32,761	3,488	0.00%	9.62%
	Aug	37,893	34,511	3,382	0.00%	8.92%
	Sep	38,129	34,724	3,404	0.00%	8.93%
	Oct	34,859	32,045	2,814	0.00%	8.07%
	Nov	35,921	32,600	3,320	0.00%	9.24%
	Dec	35,723	33,197	2,526	0.00%	7.07%
2028	Jan	35,728	31,674	4,054	0.00%	11.35%
	Feb	34,464	31,300	3,164	0.00%	9.18%
	Mar	33,704	30,646	3,058	0.00%	9.07%
	Apr	35,600	32,001	3,599	0.00%	10.11%
	May	37,335	33,523	3,812	0.00%	10.21%
	Jun	39,438	35,556	3,882	0.00%	9.84%
	Jul	37,926	34,316	3,610	0.00%	9.52%
	Aug	39,650	36,150	3,500	0.00%	8.83%
	Sep	39,897	36,373	3,523	0.00%	8.83%
	Oct	36,479	33,566	2,912	0.00%	7.98%
	Nov	37,585	34,149	3,436	0.00%	9.14%
	Dec	37,388	34,773	2,614	0.00%	6.99%
2029	Jan	37,273	33,084	4,189	0.00%	11.24%
	Feb	35,962	32,693	3,269	0.00%	9.09%
	Mar	35,170	32,010	3,160	0.00%	8.98%
	Apr	37,144	33,425	3,719	0.00%	10.01%
	May	38,953	35,015	3,938	0.00%	10.11%
	Jun	41,150	37,139	4,011	0.00%	9.75%
	Jul	39,573	35,844	3,730	0.00%	9.42%
	Aug	41,375	37,759	3,616	0.00%	8.74%
	Sep	41,633	37,992	3,640	0.00%	8.74%
	Oct	38,069	35,060	3,009	0.00%	7.90%

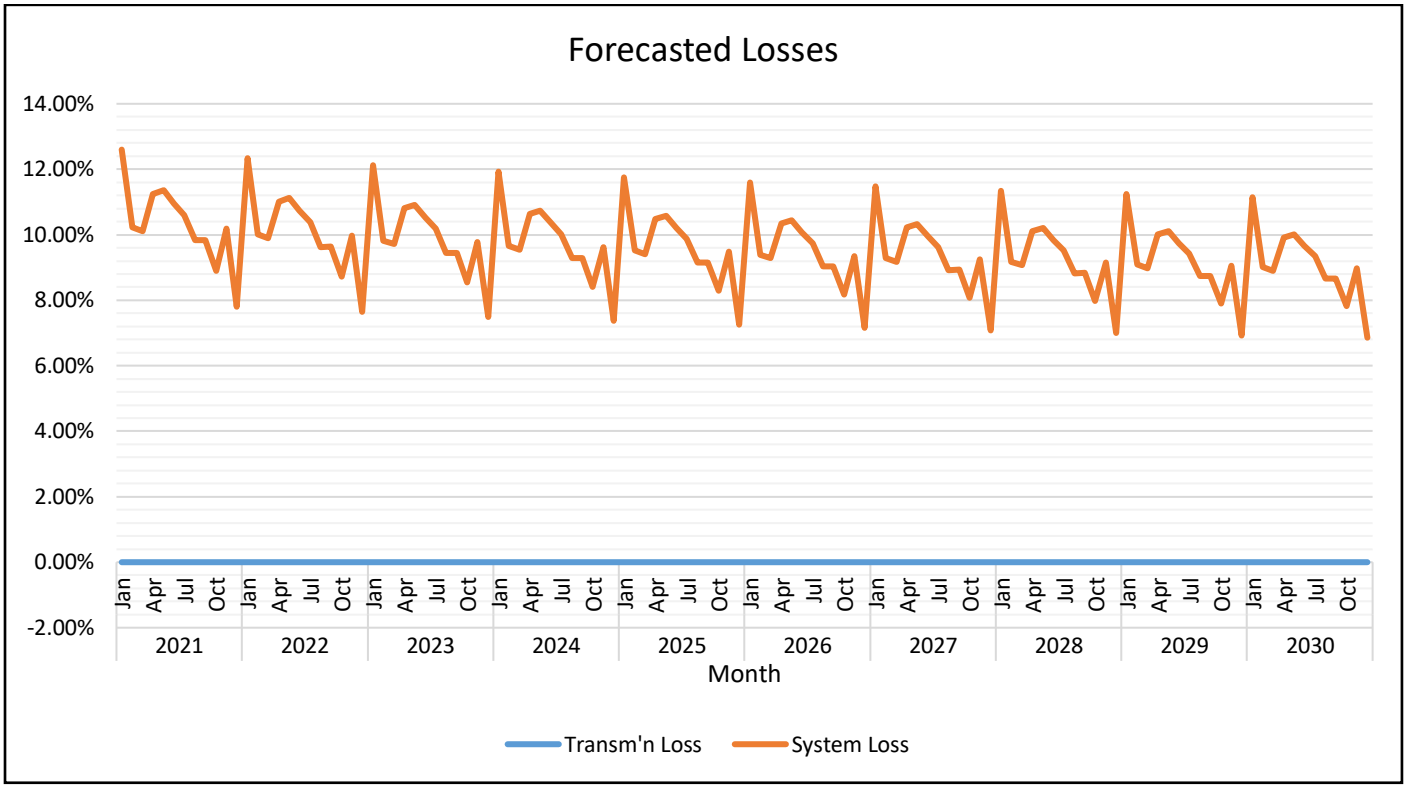
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Nov	39,218	35,669	3,550	0.00%	9.05%
	Dec	39,022	36,321	2,701	0.00%	6.92%
2030	Jan	38,790	34,470	4,321	0.00%	11.14%
	Feb	37,434	34,062	3,372	0.00%	9.01%
	Mar	36,610	33,351	3,259	0.00%	8.90%
	Apr	38,661	34,825	3,836	0.00%	9.92%
	May	40,544	36,482	4,062	0.00%	10.02%
	Jun	42,831	38,694	4,137	0.00%	9.66%
	Jul	41,192	37,345	3,847	0.00%	9.34%
	Aug	43,070	39,340	3,730	0.00%	8.66%
	Sep	43,338	39,584	3,755	0.00%	8.66%
	Oct	39,632	36,528	3,104	0.00%	7.83%
	Nov	40,824	37,162	3,662	0.00%	8.97%
	Dec	40,629	37,842	2,786	0.00%	6.86%

MWh Offtake was forecasted using cubic & logarithmic trend forecast method and an equation of Y = a + blogt3 + at-3, R2 statistic is 0.992738586314611 with Adjusted R2 is 0.999970922 and the Mean Absolute Percentage Error (MAPE) is 0.50%

System Loss was calculated through a Load Flow Study conducted by the Engineers specialized in Load Flow Analysis using the Distribution System Application Software Package 1.0 of PowerSolv, Inc. Based on the same study, the Distribution System can adequately convey electricity to customers.



MWh Output is expected to grow at a rate of 4.87% annually and targeting system loss of 9.07% in the year 2030, with an average decrease per year of 1.12%. Moreover, NONECO is determined to meet the system loss cap for 2020, which 10.50% as per ERC Resolution No. 20, Series of 2017.



NONECO did not compute the Transmission Loss because the NGCP Metering Points are located in the substations. Site-Specific Loss Adjustment (SSLA) will not be considered as a Transmission loss because IEMOP includes it in the Wholesale Electricity Spot Market (WESM) billing computations. System Loss is expected to range from 10.85% to 9.07%.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2011-058RC	Base	Green Core Geothermal, Inc.	3.00	26,280	12-25-2010	12-25-2025
2010-130RC	Base	KEPCO SPC Power Corporation	10.00	87,600	5-26-2011	5-25-2022
2015-018RC	Base	Palm Concepcion Power Corporation	13.00	103,368	1-26-2017	1-25-2032

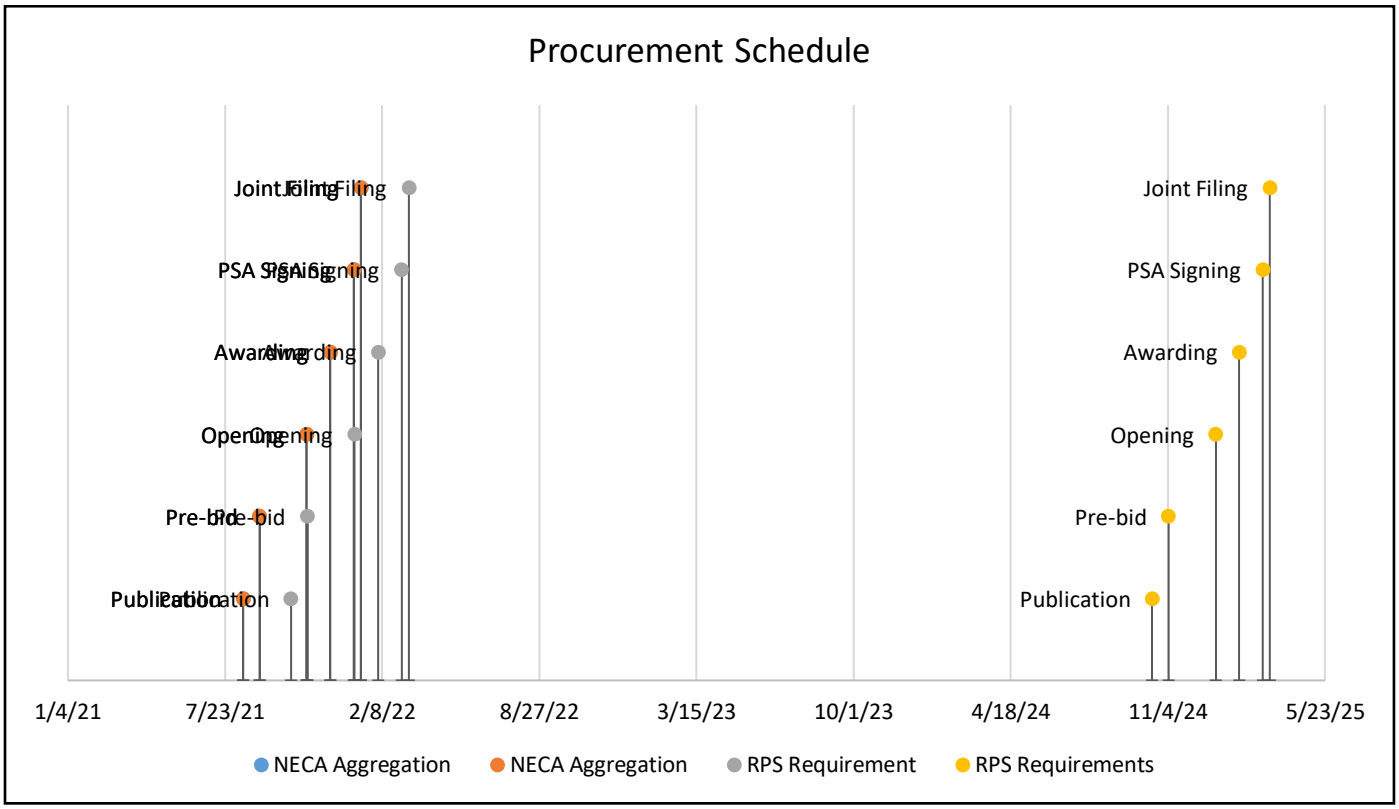
The PSA with 3 MW Base contract filed with ERC under Case No. 2011-058 RC was procured through negotiation. It was selected to provide for base requirements due to the expiration of CSEE to National Power Corporation (NPC) last 25 December 2010. Historically, the utilization of the PSA is 8.78%. Outages of the plant led to unserved energy of around 67 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 5.4912 P/kWh in the same period.

The 10 MW baseload contract with ERC under Case No. 2010-130 RC was procured because of the Joint Sales Agreement of National Power Corporation (NPC) and KECPOS SPC Power Corporation (KSPC) which is KSPC shall supply the baseload contract quantities of the DUs. Historically, the utilization of the PSA is 29.27%. Outages of the plant led to unserved energy of around 10,039 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 6.3960 P/kWh to 7.1532 P/KWh in the same period.

The PSA with 13 MW Base and Intermediate contract with ERC Case No. 2015-018 RC was procured through the Competitive Selection Process. Historically, the utilization of the PSA is 29.91%. Outages of the plant led to unserved energy of around 8.073 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 5.3932 P/kWh to 6.3780 P/KWh in the same period for baseload contract and raged from 5.6758 P/kWh to 7.8204 P/KWh in the same period for the intermediate contract.

The PSA with 6 MW Peaking Contract with four (4) hours of operation filed with ERC under Case No. 2014-026 RC was expired last October 2020.

	NECA Aggregation	NECA Aggregation	RPS Requirement	RPS Requirement (2)
Type	Base	Peaking	Base	Base
Minimum MW	20.00	5.00	5.00	5.00
Minimum MWh/yr	175,200	7,300	26,280	26,280
PSA Start	5-26-2022	5-26-2022	12-26-2022	12-26-2025
PSA End	6-25-2032	6-25-2032	12-25-2031	12-25-2035
Publication	8-15-2021	8-15-2021	10-15-2021	10-15-2024
Pre-bid	9-5-2021	9-5-2021	11-5-2021	11-5-2024
Opening	11-4-2021	11-4-2021	1-4-2022	1-4-2025
Awarding	12-4-2021	12-4-2021	2-3-2022	2-3-2025
PSA Signing	1-3-2022	1-3-2022	3-5-2022	3-5-2025
Joint Filing	1-12-2022	1-12-2022	3-14-2022	3-14-2025

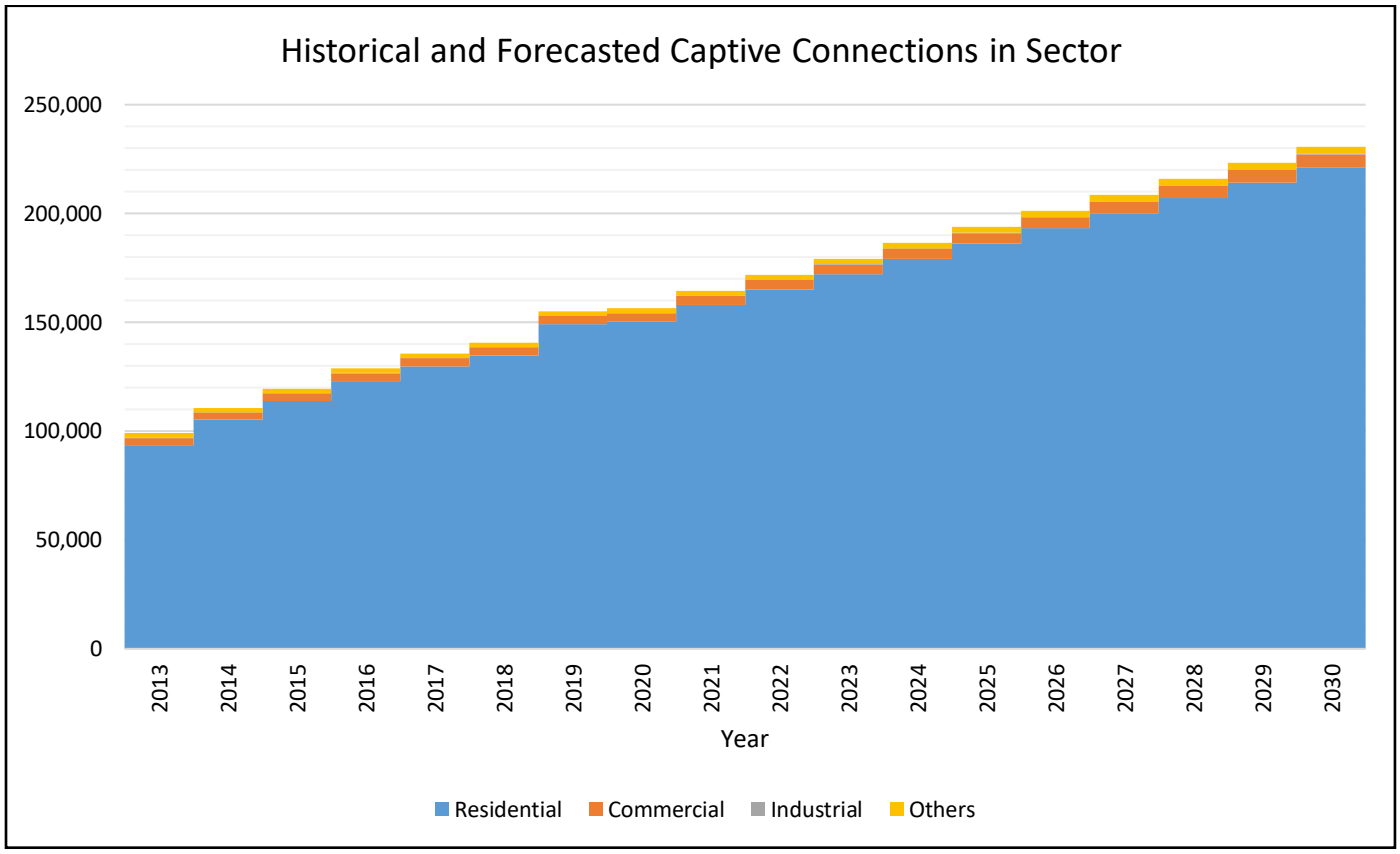


For the procurement of 20 MW Based Load and 10 MW Peaking of supply is planned to be available in June 2022, the first publication or launch of CSP will be on August 2021. Joint filing will be on January, 2022, or 150 days later, per DOE's 2018 CSP Policy.

For the first procurement of 2 MW baseload of supply for our Renewable Portfolio Standard (RPS) requirements, which is planned to be available on January 2023, the first publication or launch of CSP will be on October 2021. Joint filing will be on March 2022, or 150 days later, under DOE's 2018 CSP Policy.

For the second procurement of 2 MW baseload of supply for our Renewable Portfolio Standard (RPS) requirements, which is planned to be available on January 2027, the first publication or launch of CSP will be on October 2025. Joint filing will be on March 2026, or 150 days later, under DOE's 2018 CSP Policy.

Captive Customer Connections



The number of Residential connections forecasted to grow at a rate of 3.94% annually. Said customer class is expected to account for 55% of the total consumption.

Also, the Commercial connections will grow at a rate of 4.31% annually with a 20% total consumption share.