

Power Supply Procurement Plan 2021

**SURIGAO DELNORTE ELECTRIC COOPERATIVE, INC.
(SURNECO)
SALE FOR RE-SALE**

Historical Consumption Data

For years 2014 downwards, the seven (7) barangays of NONOC island were being energized through diesel-fueled Generating Sets and Solar Power units owned by the respective barangays, wherein the inhabitants have to bear with a four-hour electricity per day at a cost of P300.00 per month per bulb in Brgy. Talisay and various charges and conditions in the other barangays.

Said barangays have availed of the Sitio Energization Program (SEP) and Barangay Line Enhancement Program (BLEP) of President Benigno Simeon C. Aquino III and as such, would have to be served by SURNECO;

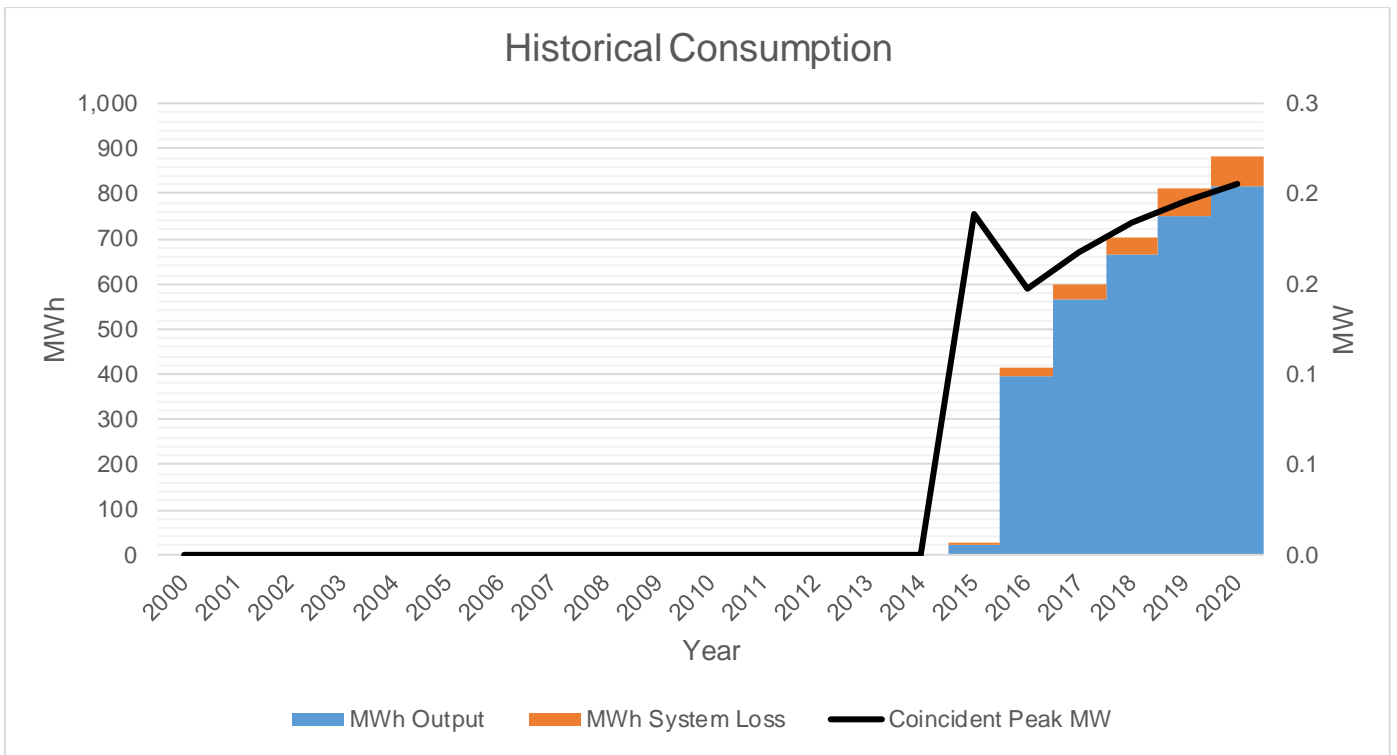
However, SURNECO found it impractical to put up six (6) kilometers submarine cable and three (3) kilometers distribution lines to connect said island barangays to the Grid since its ideal tapping point which is in Brgy. Aurora, is only two hundred (200) meters away from the nearest tapping point, which is the neighboring sitio, Sto. Niño of Barangay Tigbao, Cagdianao, Dinagat Islands, which is within the franchise area of the DIELCO.

Considering the foregoing, on June 23, 2013, SURNECO and DIELCO entered into a Sale and Resale agreement. The Joint Application was then filed with the Energy Regulatory Commission (ERC) on July 23, 2013. Decision on the joint application with ERC Case No 2013-149RC was docketed on December 13, 2013. The sale for re-sale started its initial operation in the year 2015 thus, the data recorded started in the year 2015.

Table below is the Historical Consumption of Nonoc Island.

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2015	0.19	25	0	25	24	1	2%	0.00%	0.00%	4.34%
2016	0.15	415	0	415	394	21	32%	0.00%	0.00%	5.00%
2017	0.17	601	0	601	565	36	41%	0.00%	0.00%	5.98%
2018	0.18	702	0	702	664	38	44%	0.00%	0.00%	5.35%
2019	0.20	810	0	810	749	61	47%	0.00%	0.00%	7.58%
2020	0.21	883	0	883	816	67	49%	0.00%	0.00%	7.61%

Peak Demand increased from 0.19 MW in 2015 to 0.21 MW in 2020 at a rate of 6.77% due to increase in energy consumption in sale for re-sale area. MWh Offtake increased from 25 MWh in 2015 to 883 MWh in 2020 at a rate of 46% due to increase in energy consumption in sale for re-sale area. Within the same period, Load Factor ranged from 2% to 49%. There was an abrupt change in consumption on 2016 due to start of full implementation of sale for re-sale.

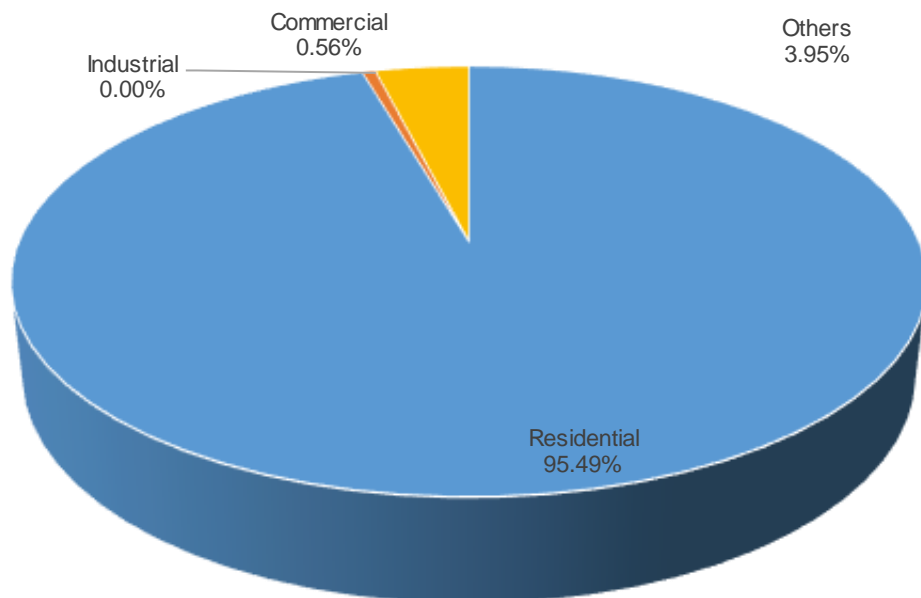


MWh Output increased from year 2015 to year 2020 at a rate of 31.73 %, while MWh System Loss increased at a rate of 37.77% within the same period.



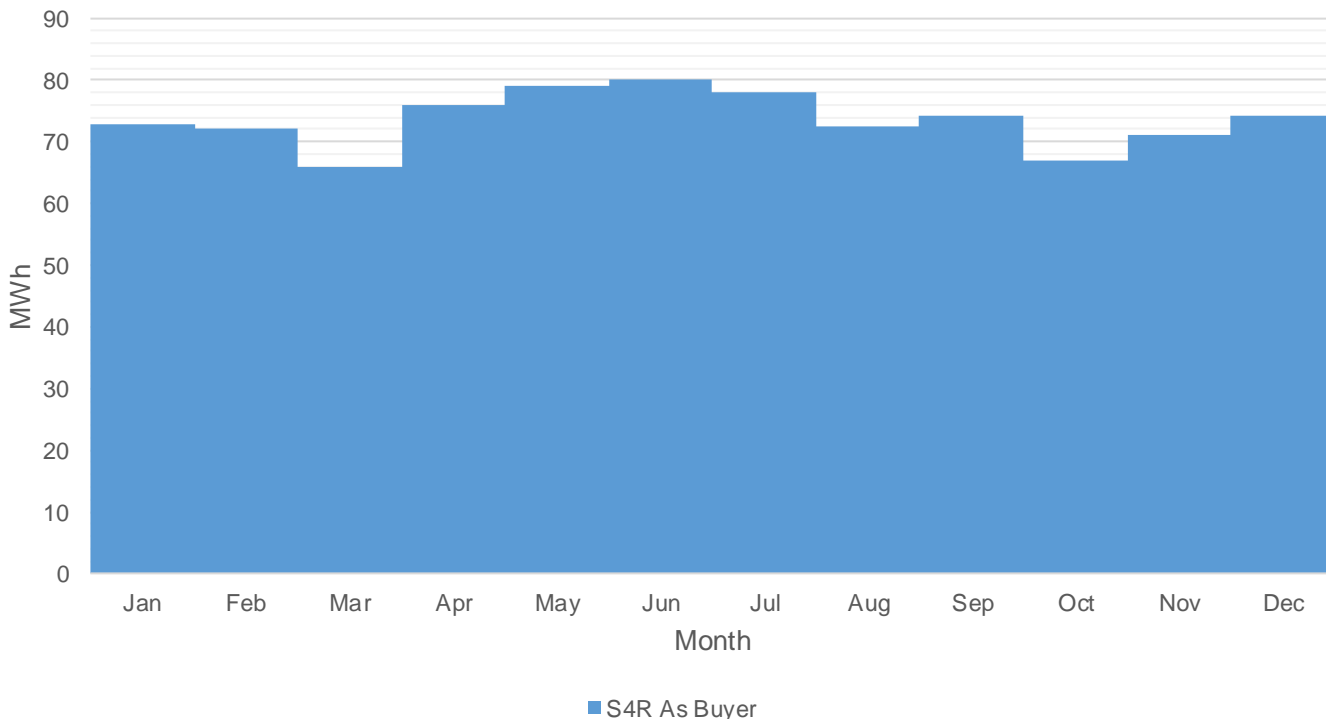
Historically, Transmission Loss is at 0% while System Loss ranged from 4.34% to 7.61%. No Transmission Loss. System Loss peaked at 7.61% on year 2020 because of increasing energy consumption.

Previous Year's Shares of Energy Sales



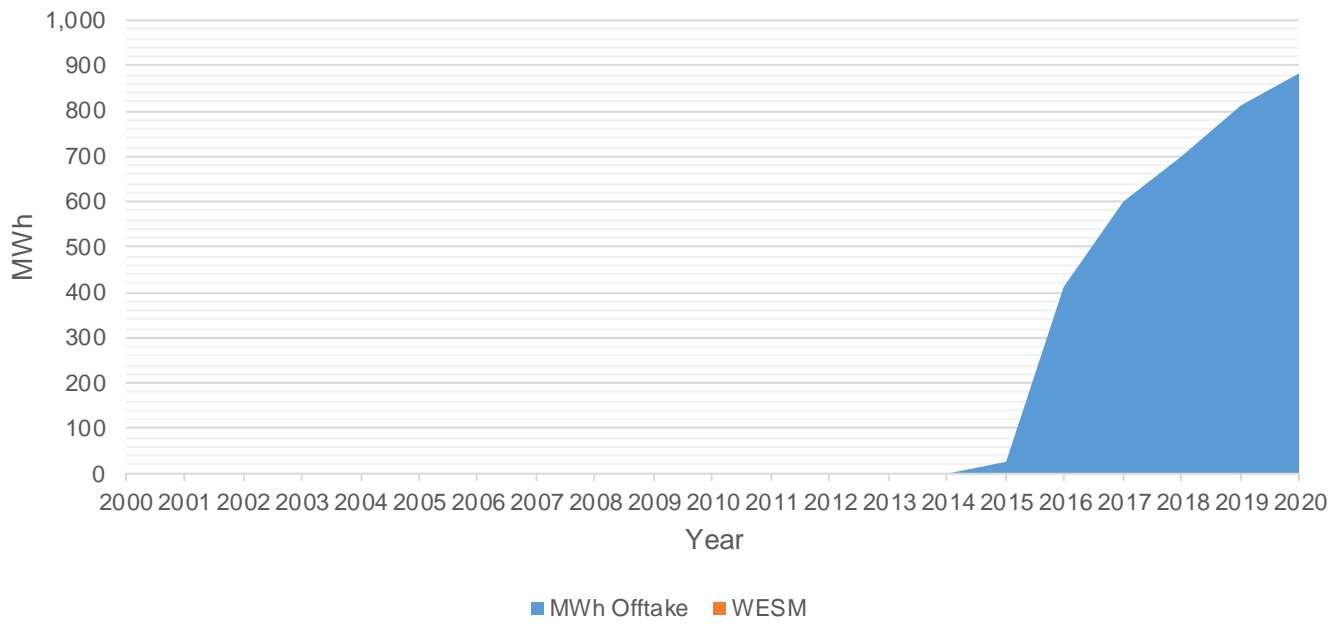
Residential customers account for the bulk of energy sales at 95.49% due to the high number of connections. In contrast, Commercial customers accounted for only 0.56% of energy sales due to the low number of connections.

MWh Offtake for Last Historical Year



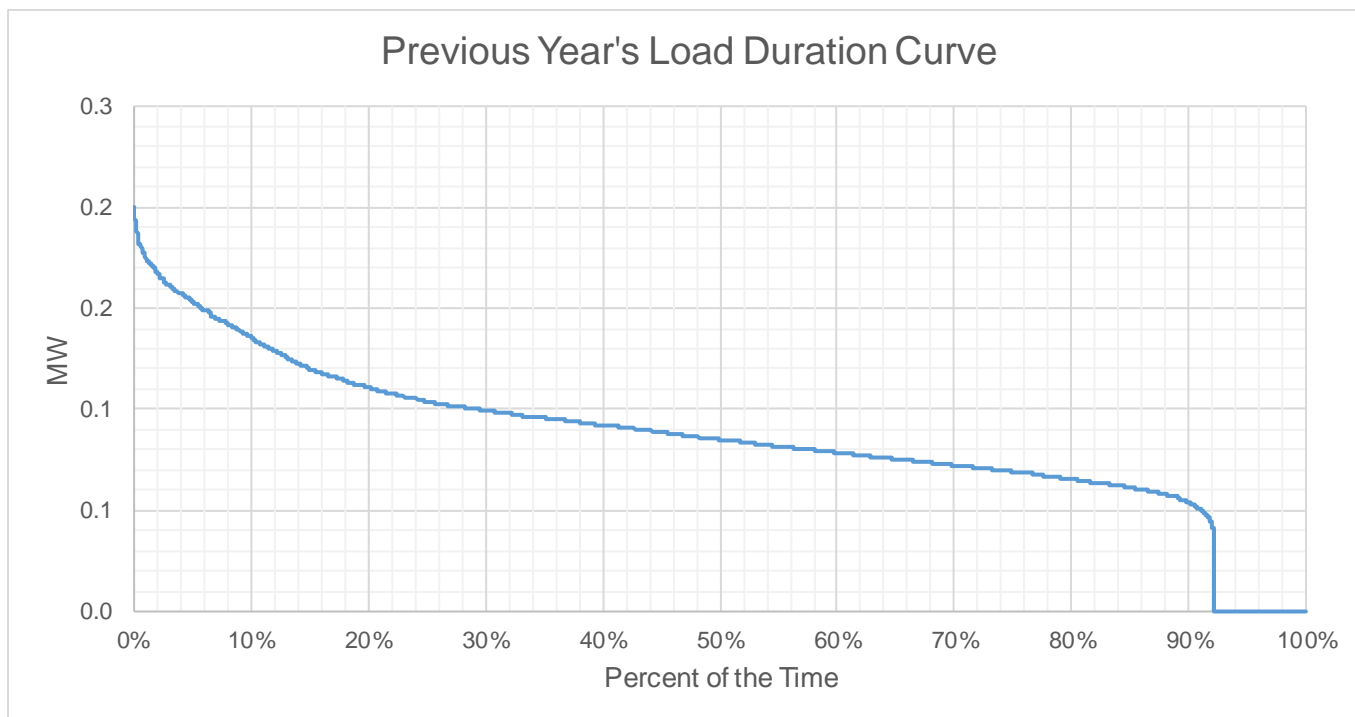
For 2020, the total Offtake for the last historical year is equal than the quantity stipulated in the PSA. The PSA with sale for re-sale accounts for the bulk of MWh Offtake.

WESM Share Over Time

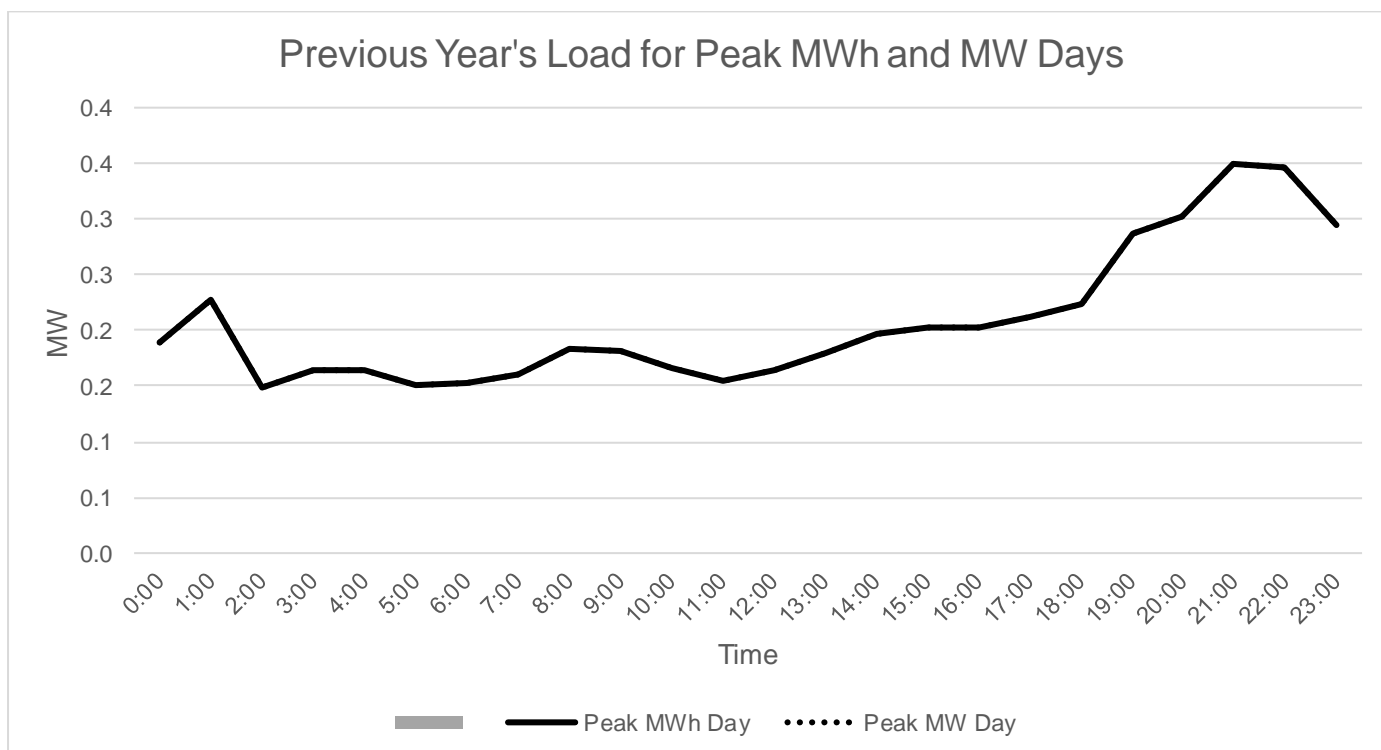


No WESM is in operation yet.

Previous Year's Load Profile

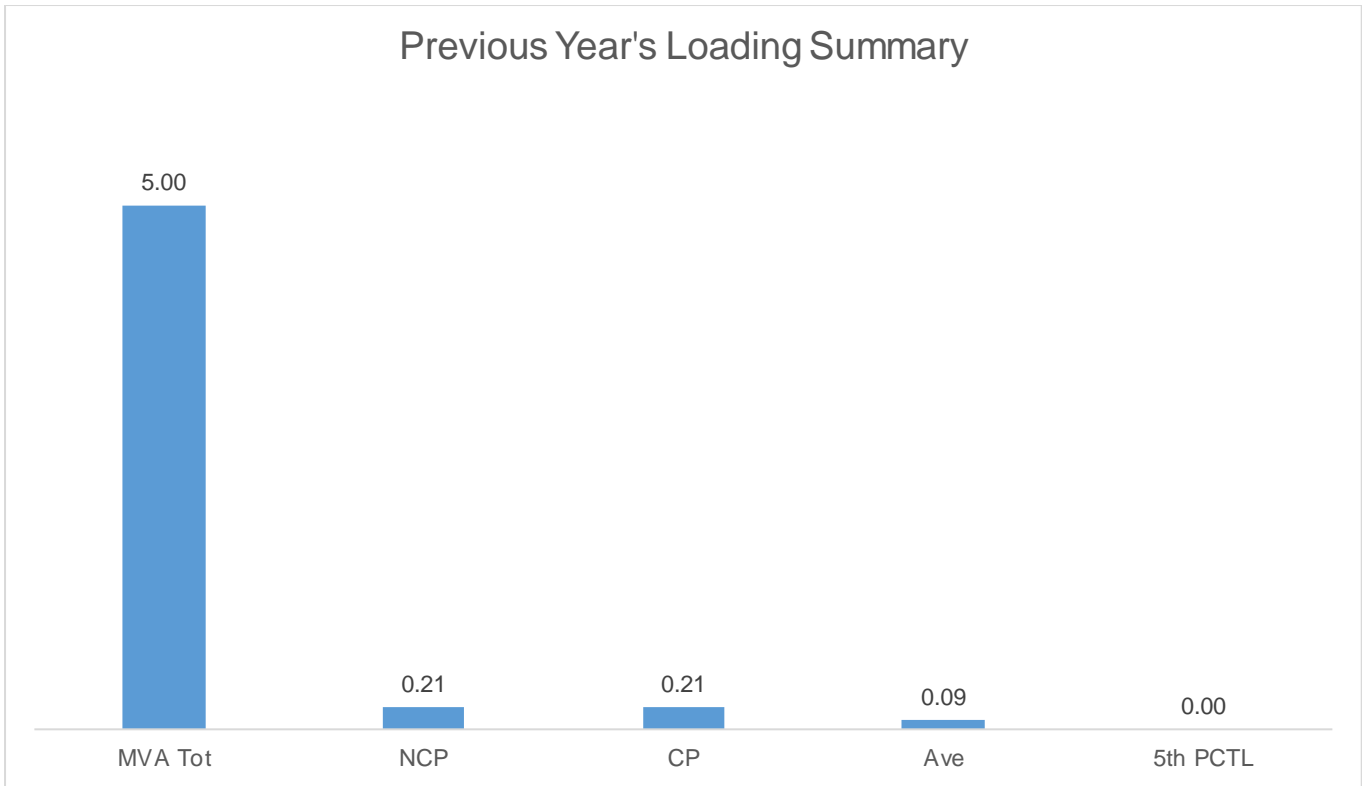


Based on the Load Duration Curve, the minimum load is 0 MW and the maximum load is 0.20538 MW for the last historical year.



Peak MW occurred on 8:15 PM due to energy consumption in the area. Peak daily MWh occurred on 9:00 PM due to energy consumption in the area. As shown in the Load Curves, the available supply is lower than the Peak Demand.

Previous Year's Loading Summary



The Non-coincident Peak Demand is 0.21 MW, which is around 4.2% of the total substation capacity of 5 MVA at a power factor of 0.042. The load factor or the ratio between the Average Load of 0.09 MW and the Non-coincident Peak Demand is 42.85% of. A safe estimate of the true minimum load is the fifth percentile load of 0 MW which is 0% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
DIELCO	5	0.205

The substation is owned by DIELCO.

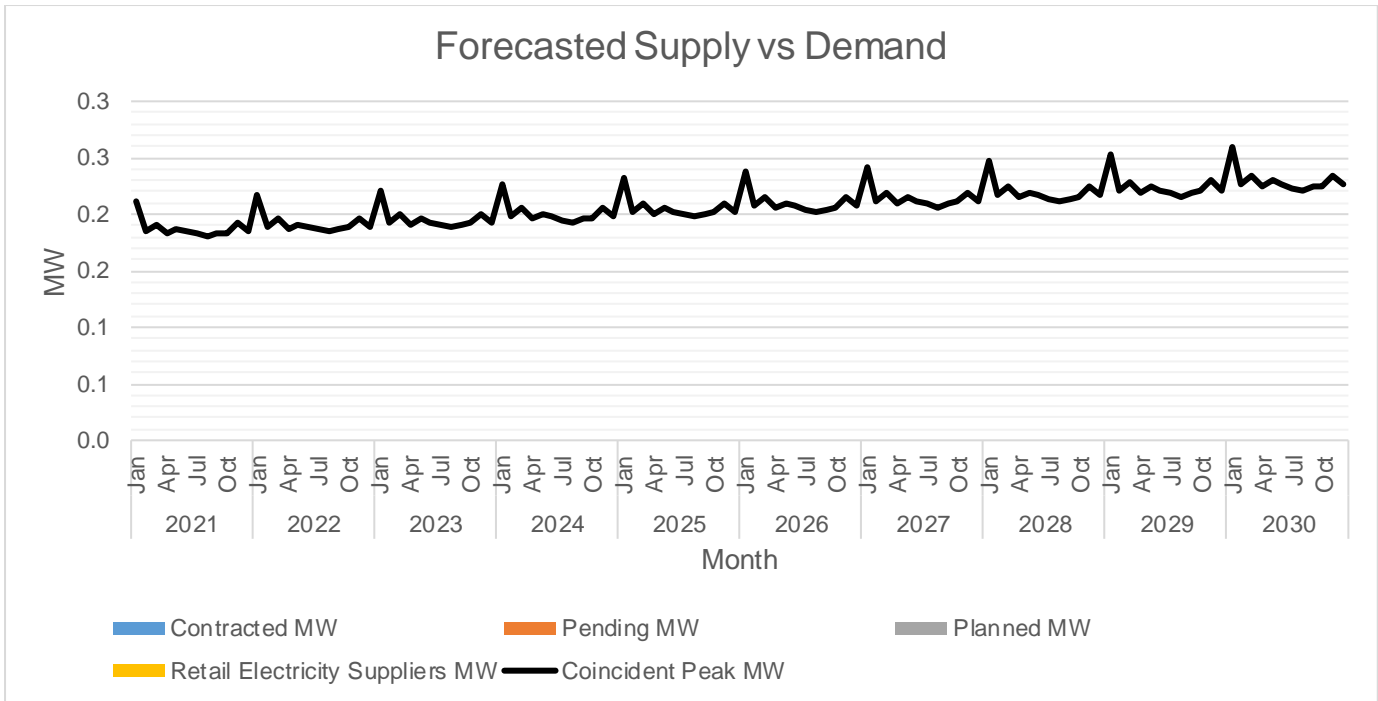
Forecasted Consumption Data

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2021	Jan	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Feb	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Mar	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Apr	0.18	0.00	0.00	0.000		0%	0%	-0.18
	May	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Jun	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Jul	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Aug	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Sep	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Oct	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Nov	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Dec	0.18	0.00	0.00	0.000		0%	0%	-0.18
2022	Jan	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Feb	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Mar	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Apr	0.19	0.00	0.00	0.000		0%	0%	-0.19
	May	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Jun	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Jul	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Aug	0.18	0.00	0.00	0.000		0%	0%	-0.18
	Sep	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Oct	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Nov	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Dec	0.19	0.00	0.00	0.000		0%	0%	-0.19
2023	Jan	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Feb	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Mar	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Apr	0.19	0.00	0.00	0.000		0%	0%	-0.19
	May	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Jun	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Jul	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Aug	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Sep	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Oct	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Nov	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Dec	0.19	0.00	0.00	0.000		0%	0%	-0.19
2024	Jan	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Feb	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Mar	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Apr	0.20	0.00	0.00	0.000		0%	0%	-0.20
	May	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Jun	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Jul	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Aug	0.19	0.00	0.00	0.000		0%	0%	-0.19
	Sep	0.20	0.00	0.00	0.000		0%	0%	-0.20

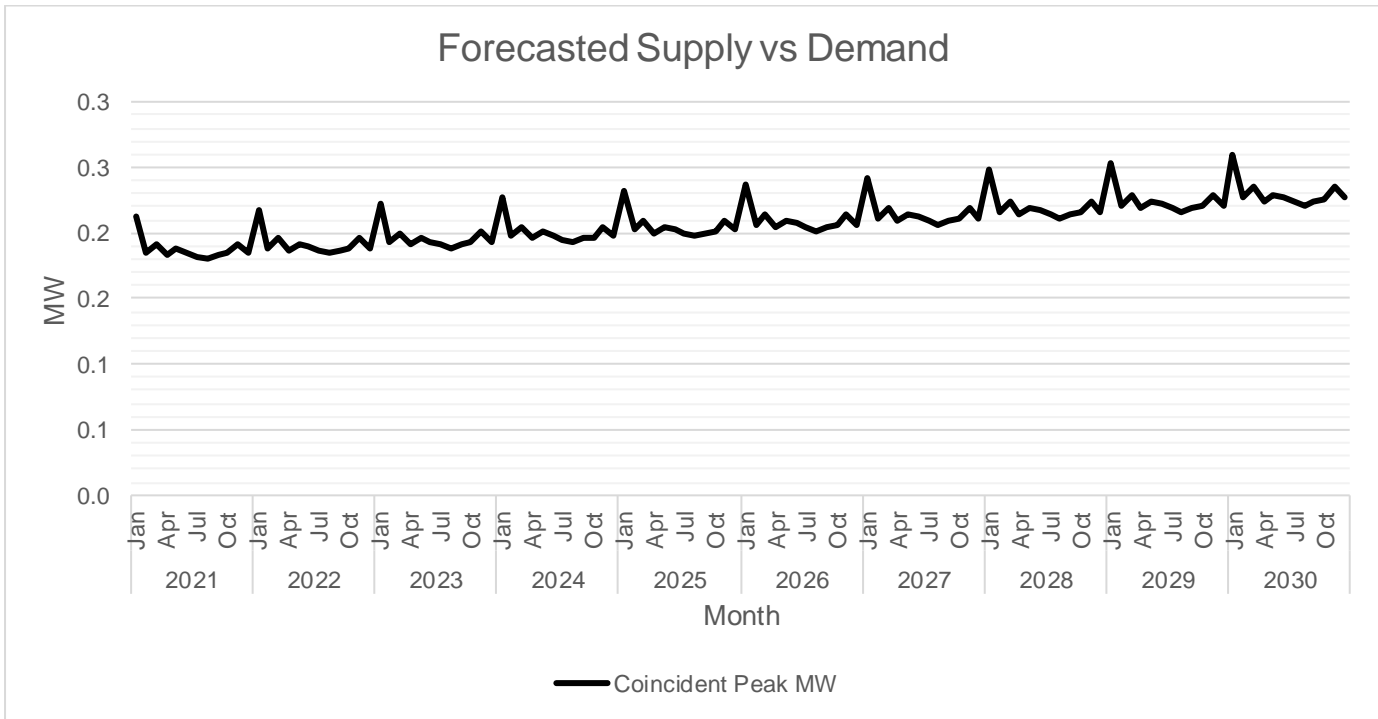
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Oct	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Nov	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Dec	0.20	0.00	0.00	0.000		0%	0%	-0.20
2025	Jan	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Feb	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Mar	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Apr	0.20	0.00	0.00	0.000		0%	0%	-0.20
	May	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Jun	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Jul	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Aug	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Sep	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Oct	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Nov	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Dec	0.20	0.00	0.00	0.000		0%	0%	-0.20
2026	Jan	0.24	0.00	0.00	0.000		0%	0%	-0.24
	Feb	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Mar	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Apr	0.20	0.00	0.00	0.000		0%	0%	-0.20
	May	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Jun	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Jul	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Aug	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Sep	0.20	0.00	0.00	0.000		0%	0%	-0.20
	Oct	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Nov	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Dec	0.21	0.00	0.00	0.000		0%	0%	-0.21
2027	Jan	0.24	0.00	0.00	0.000		0%	0%	-0.24
	Feb	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Mar	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Apr	0.21	0.00	0.00	0.000		0%	0%	-0.21
	May	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Jun	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Jul	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Aug	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Sep	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Oct	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Nov	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Dec	0.21	0.00	0.00	0.000		0%	0%	-0.21
2028	Jan	0.25	0.00	0.00	0.000		0%	0%	-0.25
	Feb	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Mar	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Apr	0.21	0.00	0.00	0.000		0%	0%	-0.21
	May	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Jun	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Jul	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Aug	0.21	0.00	0.00	0.000		0%	0%	-0.21
	Sep	0.21	0.00	0.00	0.000		0%	0%	-0.21

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Oct	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Nov	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Dec	0.22	0.00	0.00	0.000		0%	0%	-0.22
2029	Jan	0.25	0.00	0.00	0.000		0%	0%	-0.25
	Feb	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Mar	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Apr	0.22	0.00	0.00	0.000		0%	0%	-0.22
	May	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Jun	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Jul	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Aug	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Sep	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Oct	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Nov	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Dec	0.22	0.00	0.00	0.000		0%	0%	-0.22
2030	Jan	0.26	0.00	0.00	0.000		0%	0%	-0.26
	Feb	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Mar	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Apr	0.22	0.00	0.00	0.000		0%	0%	-0.22
	May	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Jun	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Jul	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Aug	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Sep	0.22	0.00	0.00	0.000		0%	0%	-0.22
	Oct	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Nov	0.23	0.00	0.00	0.000		0%	0%	-0.23
	Dec	0.23	0.00	0.00	0.000		0%	0%	-0.23

The Peak Demand was forecasted using trend analysis forecasting and was assumed to occur on the month of January due to the trend in consumption of the area. Monthly Peak Demand is at its lowest on the month of February due to trend of energy consumption in the area. In general, Peak Demand is expected to grow at a rate of 2.32% annually.

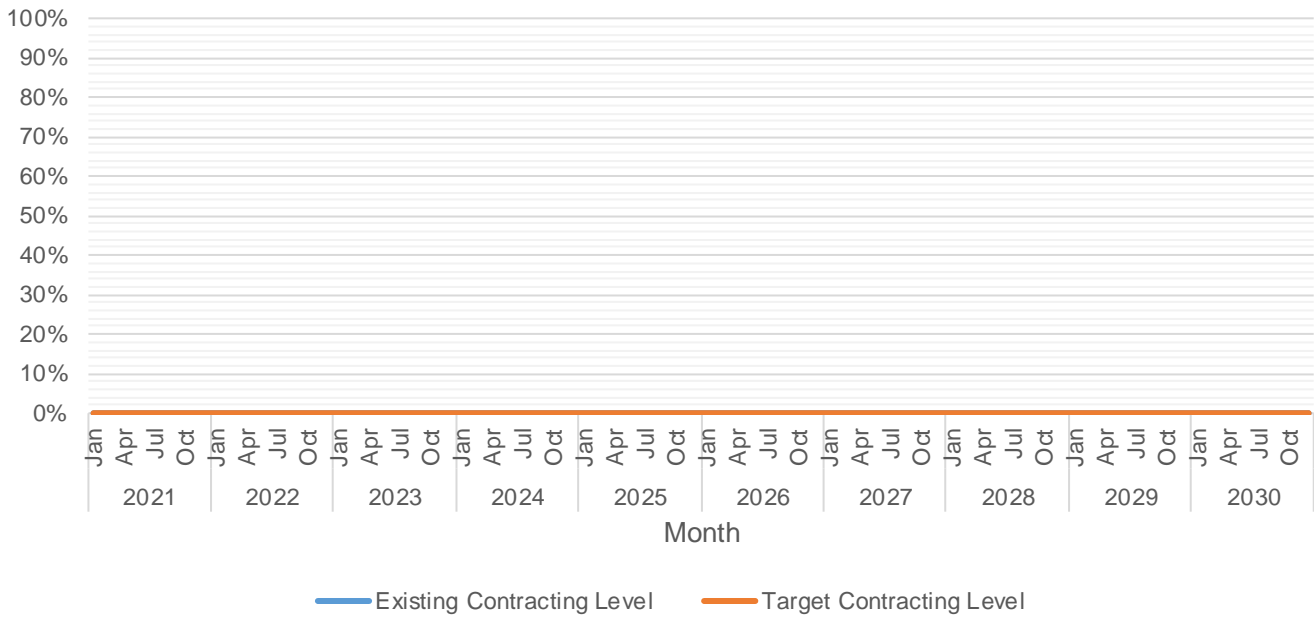


The available supply is generally equal to the Peak Demand. This is because the demand is the same of the energy consumption as stated in the contract.



The sale for re-sale is supplied by DIELCO only.

Contracting Levels



Currently, there is no over/under contracting. The highest and lowest target contracting level is 100% to occur in 2021-2030 duration.

MW Surplus/ Deficit



Currently, there is under-contacting/over-contacting by 0 MW.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2021	Jan	76	70	6	0.00%	8.17%
	Feb	76	64	11	0.00%	14.91%
	Mar	69	65	4	0.00%	5.83%
	Apr	80	76	3	0.00%	3.98%
	May	83	72	10	0.00%	12.69%
	Jun	84	79	4	0.00%	5.32%

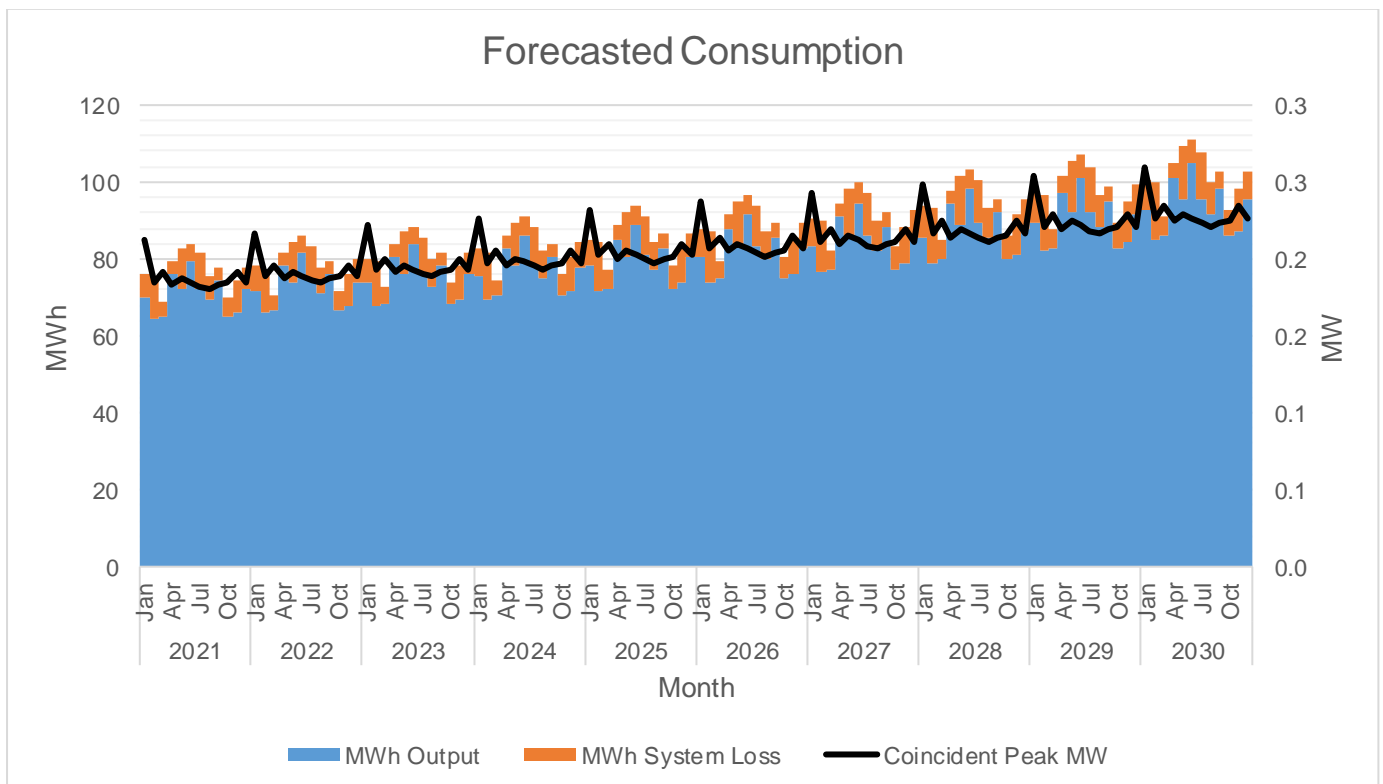
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Jul	81	72	9	0.00%	11.11%
	Aug	76	69	7	0.00%	8.61%
	Sep	78	74	3	0.00%	4.10%
	Oct	70	65	5	0.00%	7.37%
	Nov	74	66	8	0.00%	10.91%
	Dec	78	72	6	0.00%	7.34%
2022	Jan	78	72	6	0.00%	8.17%
	Feb	77	66	12	0.00%	14.91%
	Mar	71	67	4	0.00%	5.83%
	Apr	82	78	3	0.00%	3.98%
	May	85	74	11	0.00%	12.69%
	Jun	86	81	5	0.00%	5.32%
	Jul	84	74	9	0.00%	11.11%
	Aug	78	71	7	0.00%	8.61%
	Sep	79	76	3	0.00%	4.10%
	Oct	72	67	5	0.00%	7.37%
	Nov	76	68	8	0.00%	10.91%
	Dec	80	74	6	0.00%	7.34%
2023	Jan	80	74	7	0.00%	8.17%
	Feb	80	68	12	0.00%	14.92%
	Mar	73	68	4	0.00%	5.83%
	Apr	84	80	3	0.00%	3.98%
	May	87	76	11	0.00%	12.69%
	Jun	88	84	5	0.00%	5.32%
	Jul	86	76	10	0.00%	11.11%
	Aug	80	73	7	0.00%	8.61%
	Sep	82	78	3	0.00%	4.10%
	Oct	74	68	5	0.00%	7.37%
	Nov	78	70	9	0.00%	10.91%
	Dec	82	76	6	0.00%	7.34%
2024	Jan	83	76	7	0.00%	8.17%
	Feb	82	70	12	0.00%	14.92%
	Mar	75	70	4	0.00%	5.83%
	Apr	86	83	3	0.00%	3.98%
	May	89	78	11	0.00%	12.69%
	Jun	91	86	5	0.00%	5.32%
	Jul	88	78	10	0.00%	11.11%
	Aug	82	75	7	0.00%	8.61%
	Sep	84	81	3	0.00%	4.10%
	Oct	76	70	6	0.00%	7.37%
	Nov	80	72	9	0.00%	10.91%
	Dec	84	78	6	0.00%	7.34%
2025	Jan	85	78	7	0.00%	8.17%
	Feb	84	72	13	0.00%	14.92%
	Mar	77	72	4	0.00%	5.83%
	Apr	89	85	4	0.00%	3.99%
	May	92	80	12	0.00%	12.69%
	Jun	94	89	5	0.00%	5.32%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Jul	91	81	10	0.00%	11.11%
	Aug	85	77	7	0.00%	8.62%
	Sep	87	83	4	0.00%	4.10%
	Oct	78	72	6	0.00%	7.37%
	Nov	83	74	9	0.00%	10.91%
	Dec	87	80	6	0.00%	7.34%
2026	Jan	88	81	7	0.00%	8.17%
	Feb	87	74	13	0.00%	14.92%
	Mar	79	75	5	0.00%	5.83%
	Apr	92	88	4	0.00%	3.99%
	May	95	83	12	0.00%	12.69%
	Jun	97	91	5	0.00%	5.32%
	Jul	94	83	10	0.00%	11.11%
	Aug	87	80	8	0.00%	8.62%
	Sep	89	86	4	0.00%	4.10%
	Oct	81	75	6	0.00%	7.37%
	Nov	85	76	9	0.00%	10.91%
	Dec	90	83	7	0.00%	7.34%
2027	Jan	91	83	7	0.00%	8.17%
	Feb	90	77	13	0.00%	14.92%
	Mar	82	77	5	0.00%	5.83%
	Apr	95	91	4	0.00%	3.99%
	May	98	86	12	0.00%	12.69%
	Jun	100	95	5	0.00%	5.32%
	Jul	97	86	11	0.00%	11.11%
	Aug	90	82	8	0.00%	8.62%
	Sep	92	88	4	0.00%	4.11%
	Oct	83	77	6	0.00%	7.37%
	Nov	88	79	10	0.00%	10.91%
	Dec	93	86	7	0.00%	7.34%
2028	Jan	94	86	8	0.00%	8.64%
	Feb	93	79	14	0.00%	15.27%
	Mar	85	80	5	0.00%	5.72%
	Apr	98	94	4	0.00%	3.70%
	May	102	89	13	0.00%	12.53%
	Jun	103	98	5	0.00%	5.07%
	Jul	100	89	11	0.00%	10.92%
	Aug	93	85	8	0.00%	8.61%
	Sep	95	92	3	0.00%	3.64%
	Oct	86	80	6	0.00%	7.25%
	Nov	91	81	10	0.00%	11.01%
	Dec	96	88	8	0.00%	8.07%
2029	Jan	97	89	8	0.00%	8.18%
	Feb	96	82	14	0.00%	14.92%
	Mar	88	83	5	0.00%	5.83%
	Apr	101	97	4	0.00%	3.99%
	May	105	92	13	0.00%	12.69%
	Jun	107	101	6	0.00%	5.32%

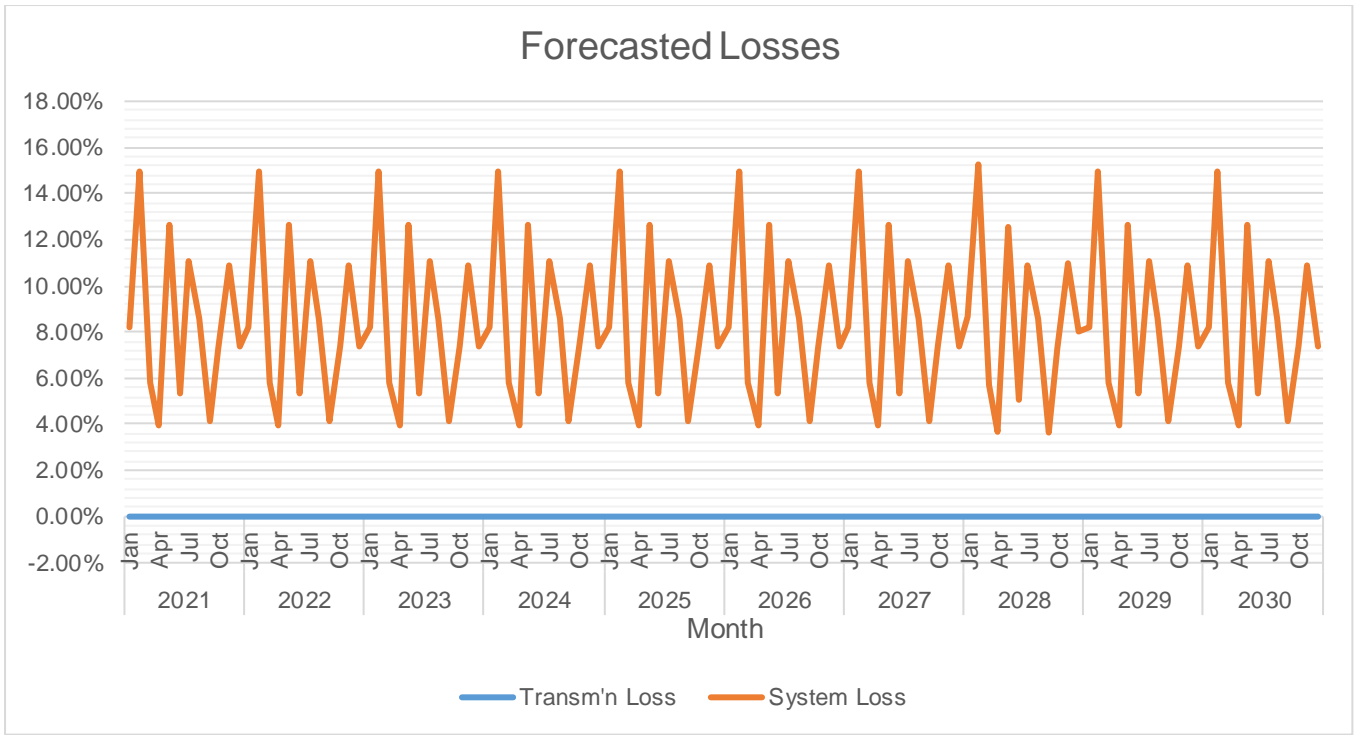
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Jul	104	92	12	0.00%	11.11%
	Aug	97	88	8	0.00%	8.62%
	Sep	99	95	4	0.00%	4.11%
	Oct	89	83	7	0.00%	7.37%
	Nov	95	84	10	0.00%	10.91%
	Dec	99	92	7	0.00%	7.35%
2030	Jan	101	93	8	0.00%	8.18%
	Feb	100	85	15	0.00%	14.92%
	Mar	91	86	5	0.00%	5.84%
	Apr	105	101	4	0.00%	3.99%
	May	109	95	14	0.00%	12.69%
	Jun	111	105	6	0.00%	5.32%
	Jul	108	96	12	0.00%	11.11%
	Aug	100	92	9	0.00%	8.62%
	Sep	103	98	4	0.00%	4.11%
	Oct	93	86	7	0.00%	7.37%
	Nov	98	87	11	0.00%	10.91%
	Dec	103	95	8	0.00%	7.35%

MWh Offtake was forecasted using trend analysis. The assumed load factor is 57.3%.

System Loss was calculated through a Load Flow Study conducted by Technical Services Department using ETAP 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 3.11% annually.



Transmission Loss is expected to range from 0% to 0% while System Loss is expected to range from 3.64% to 15.27%.

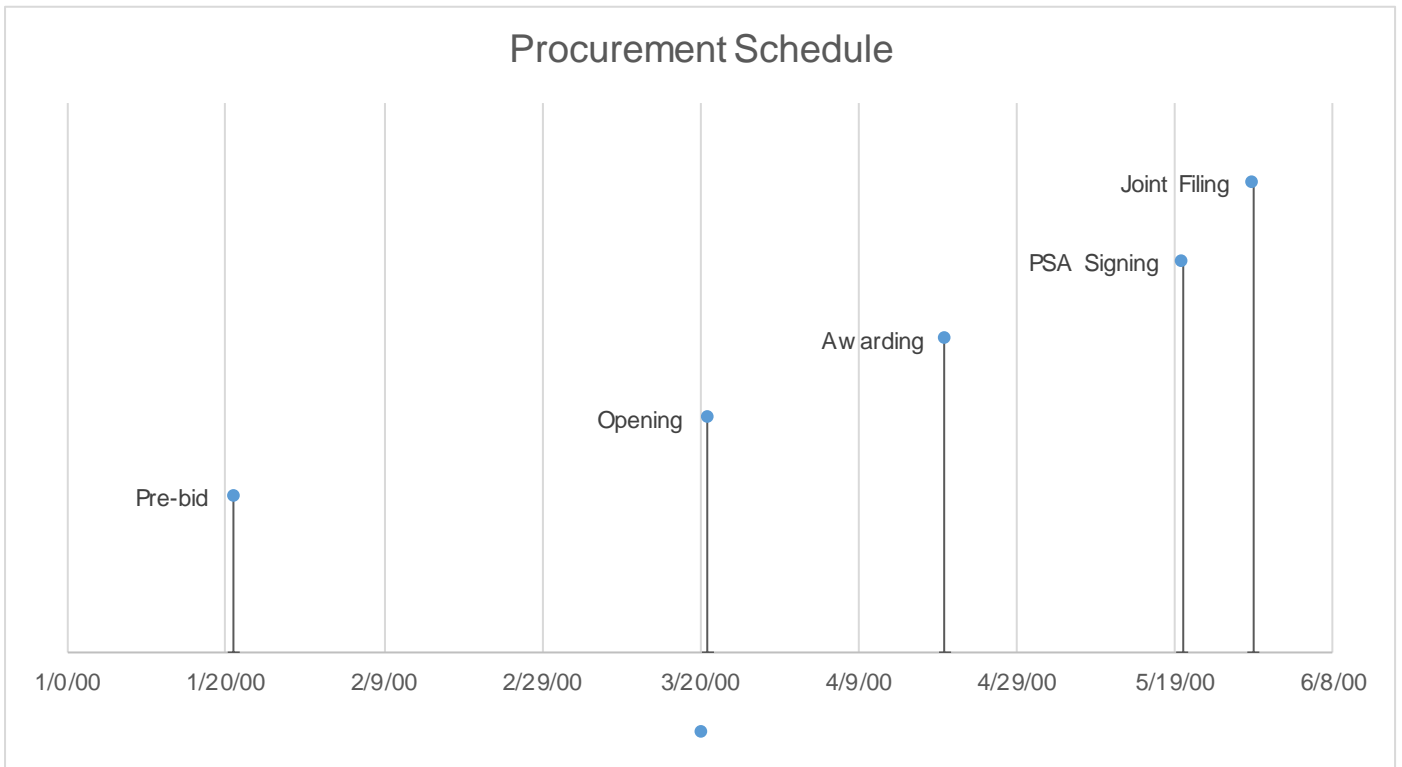
Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
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The **PSA with DIELCO filed with ERC under Case No. 2013-149** was procured through Sale for Resale Agreement. It was selected to provide for base requirements to provide electricity service in Nonoc Island, Surigao City. Historically, the utilization of the PSA is 100%. Outages of the plant led to unserved energy of around 0 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 5.1245 P/kWh to 5.4993 P/kWh in the same period. There is no minimum MW and MWhr in the PSA of Sale for Re-sale. The actual sales consumed is billed.

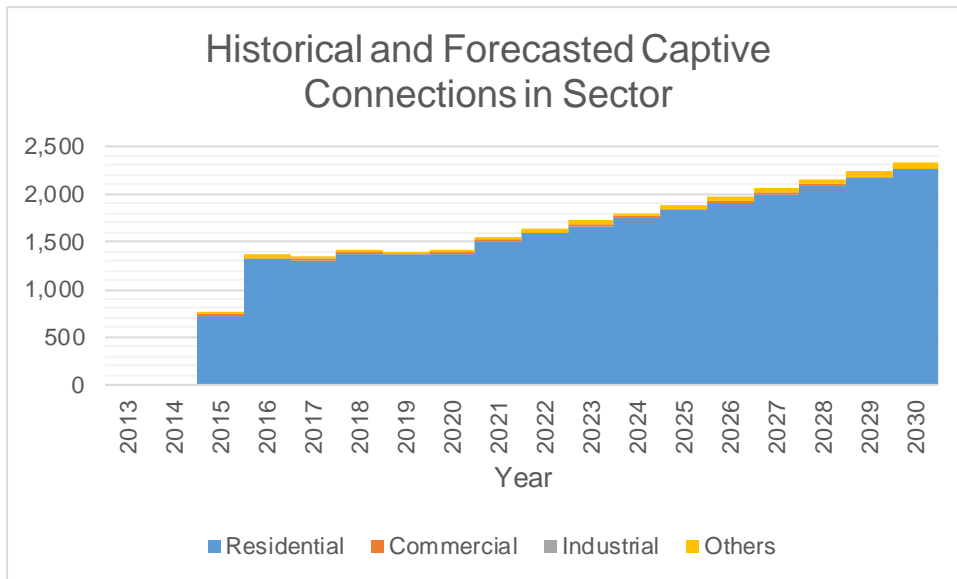
Type
Minimum MW
Minimum MWh/yr
PSA Start
PSA End
Publication

- Pre-bid
- Opening
- Awarding
- PSA Signing
- Joint Filing



SURNECO has no requirement for additional Supply subject for Competitive Selection Process of our Sale for Resale supplier- DIELCO.

Captive Customer Connections



The number residential captive connections is expected to grow at a rate of 4.37% annually. Said customer class is expected to account for 100% of the total consumption.