Power Supply Procurement Plan 2021

Camiguin Electric Cooperative, Inc. (CAMELCO)

Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2001	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2002	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2003	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2004	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2005	0.00	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2006	3.16	13,201	0	13,201	11,078	2,123	48%	0.00%	0.00%	16.08%
2007	3.25	14,063	0	14,063	11,728	2,335	49%	0.00%	0.00%	16.60%
2008	3.43	14,856	0	14,856	12,409	2,447	49%	0.00%	0.00%	16.47%
2009	3.54	15,646	0	15,646	13,046	2,600	51%	0.00%	0.00%	16.62%
2010	3.71	16,903	0	16,903	13,597	3,306	52%	0.00%	0.00%	19.56%
2011	3.73	17,695	0	17,695	14,396	3,299	54%	0.00%	0.00%	18.64%
2012	3.92	18,413	0	18,413	15,172	3,241	54%	0.00%	0.00%	17.60%
2013	3.95	19,277	0	19,277	15,725	3,552	56%	0.00%	0.00%	18.43%
2014	3.97	19,366	0	19,366	16,042	3,324	56%	0.00%	0.00%	17.16%
2015	3.94	20,064	0	20,064	16,959	3,105	58%	0.00%	0.00%	15.48%
2016	4.33	21,909	0	21,909	19,228	2,681	58%	0.00%	0.00%	12.24%
2017	4.20	22,399	0	22,399	19,024	3,375	61%	0.00%	0.00%	15.07%
2018	4.63	25,815	0	25,815	21,376	4,439	64%	0.00%	0.00%	17.19%
2019	4.76	27,130	0	27,130	23,377	3,753	65%	0.00%	0.00%	13.83%
2020	4.71	26,574	0	26,574	22,528	4,046	64%	0.00%	0.00%	15.23%

Peak Demand decreased from 4.76 MW in 2019 to 4.71 MW in 2020 at a rate of 1.05 % due to Pandemic of COVID 19 that occur in the country. Camiguin tourism suffer greatly during the inception of pandemic. MWh Offtake decreased from 27,130 MWh in 2019 to 26,574 MWh in 2020 at a rate of 2.05% due to pandemic. Within the same period, Load Factor ranged from 64% to 65%. There was an abrupt change in consumption on year 2019 to 2020 due to pandemic. Resorts and some commercial establishments in the island force to closed thus affecting the load of CAMELCO. Whereas also CAMELCO own use are all being metered, office use, motor pool, tender guard house and sub-office.



MWh Output decreased from year 2019 to year 2020 at a rate of 3.64%, while MWh System Loss increased at a rate of 7.81% within the same period.



Historically, CAMELCO Transmission Loss was not yet accounted for since our connection point with NGCP at that time is in Esperanza, Kinoguitan, Misamis Oriental where our new 10 MVA substation previously 5 MVA is located. It was then last December 2018 our connection point in Cogon, Balingasag as per guide lines of PDC. But it was then early in the third quarter of year 2020 conducted feeder metering at Esperanza, Kinoguitan where 2 kWh meters are installed and Liong Switchyard in Camiguin where 2 kWh meters are installed. Historically, System Loss ranged from 19% to 12%.



Residential customers account for the bulk of energy sales at 64.34% due to the high number of connections. In contrast, Public Building and Street Light customers accounted for only 13.58% of energy sales due to the low number of connections.



For energy purchased, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with 2015-068 RC accounts for the bulk of MWh Offtake.



WESM in Mindanao is not yet operational since the Mindanao Grid is not connected to the Visayas and Luzon Gird. As regards to CAMELCO status, registration to WESM is still on-going. But since CAMELCO had bilateral contract and it cannot be denied that there's excess power contract and even almost electric cooperatives in Mindanao had excess power supply.

Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 0.001 MW and the maximum load is around 4.71MW for the last historical year.



Peak MW occurred on December 31, 2019 at 6:45pm due to New Year celebration in the island. Peak daily MWh occurred on month of January 2020 due to New Year activities. As shown in the Load Curves, the available supply is higher than the Peak Demand.



The Non-coincident Peak Demand is 4.71 MW, which is around 47.10% of the total substation capacity of 10MVA at a power factor of 100%. The load factor or the ratio between the Average Load of 2.80MW and the Non-coincident Peak Demand is 59.45% of. A safe estimate of the true minimum load is the fifth percentile load of 2.09MW which is 44.37% of the Non-coincident Peak Demand.

Metering	Substation	Substation
Point	MVA	Peak MW
1	10	4.710

The substations loaded at below 70%, therefor there's no problem in transformer capacity.

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	4.34	11.73	0.00	0.000		270%	270%	7.39
	Feb	4.01	11.73	0.00	0.000		293%	293%	7.72
	Mar	4.01	11.73	0.00	0.000		293%	293%	7.72
	Apr	4.40	11.73	0.00	0.000		266%	266%	7.33
	May	4.76	11.73	0.00	0.000		246%	246%	6.97
	Jun	4.75	11.73	0.00	0.000		247%	247%	6.98
	Jul	4.30	11.73	0.00	0.000		273%	273%	7.43
	Aug	4.64	11.73	0.00	0.000		253%	253%	7.09
	Sep	4.54	11.73	0.00	0.000		258%	258%	7.19
	Oct	4.72	11.73	0.00	0.000		249%	249%	7.01
	Nov	4.82	11.73	0.00	0.000		243%	243%	6.91
	Dec	3.91	11.73	0.00	0.000		300%	300%	7.82
2022	Jan	4.50	11.73	0.00	0.000		261%	261%	7.23
	Feb	4.15	11.73	0.00	0.000		282%	282%	7.58
	Mar	4.15	11.73	0.00	0.000		282%	282%	7.58
	Apr	4.56	11.73	0.00	0.000		257%	257%	7.17
	May	4.93	11.73	0.00	0.000		238%	238%	6.80
	Jun	4.92	11.73	0.00	0.000		238%	238%	6.81
	Jul	4.45	11.73	0.00	0.000		263%	263%	7.28
	Aug	4.81	11.73	0.00	0.000		244%	244%	6.92
	Sep	4.71	11.73	0.00	0.000		249%	249%	7.02
	Oct	4.89	11.73	0.00	0.000		240%	240%	6.84
	Nov	4.99	11.73	0.00	0.000		235%	235%	6.74
	Dec	4.05	11.73	0.00	0.000		290%	290%	7.68
2023	Jan	4.66	11.73	0.00	0.000		252%	252%	7.07
	Feb	4.30	11.73	0.00	0.000		273%	273%	7.43
	Mar	4.30	11.73	0.00	0.000		273%	273%	7.43
	Apr	4.73	11.73	0.00	0.000		248%	248%	7.00

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	May	5.11	11.73	0.00	0.000		230%	230%	6.62
	Jun	5.10	11.73	0.00	0.000		230%	230%	6.63
	Jul	4.61	11.73	0.00	0.000		254%	254%	7.12
	Aug	4.98	11.73	0.00	0.000		236%	236%	6.75
	Sep	4.87	11.73	0.00	0.000		241%	241%	6.86
	Oct	5.07	11.73	0.00	0.000		232%	232%	6.66
	Nov	5.17	11.73	0.00	0.000		227%	227%	6.56
	Dec	4.19	11.73	0.00	0.000		280%	280%	7.54
2024	Jan	4.82	10.73	0.00	0.000		223%	223%	5.91
	Feb	4.45	10.73	0.00	0.000		241%	241%	6.28
	Mar	4.45	10.73	0.00	0.000		241%	241%	6.28
	Apr	4.89	10.73	0.00	0.000		220%	220%	5.84
	May	5.28	10.73	0.00	0.000		203%	203%	5.45
	Jun	5.27	10.73	0.00	0.000		203%	203%	5.46
	Jul	4.77	10.73	0.00	0.000		225%	225%	5.96
	Aug	5.15	10.73	0.00	0.000		208%	208%	5.58
	Sep	5.04	10.73	0.00	0.000		213%	213%	5.69
	Oct	5.24	10.73	0.00	0.000		205%	205%	5.49
	Nov	5.35	10.73	0.00	0.000		201%	201%	5.38
	Dec	4.34	10.73	0.00	0.000		247%	247%	6.39
2025	Jan	4.98	6.73	0.00	0.000		135%	135%	1.75
	Feb	4.59	6.73	0.00	0.000		146%	146%	2.14
	Mar	4.60	6.73	0.00	0.000		146%	146%	2.13
	Apr	5.05	6.73	0.00	0.000		133%	133%	1.68
	May	5.46	6.73	0.00	0.000		123%	123%	1.27
	Jun	5.45	6.73	0.00	0.000		124%	124%	1.28
	Jul	4.93	6.73	0.00	0.000		137%	137%	1.80
	Aug	5.32	6.73	0.00	0.000		127%	127%	1.41
	Sep	5.21	6.73	0.00	0.000		129%	129%	1.52
	Oct	5.41	6.73	0.00	0.000		124%	124%	1.32

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Nov	5.52	6.73	0.00	0.000		122%	122%	1.21
	Dec	4.48	6.73	0.00	0.000		150%	150%	2.25
2026	Jan	5.14	6.73	0.00	0.000		131%	131%	1.59
	Feb	4.74	6.73	0.00	0.000		142%	142%	1.99
	Mar	4.74	6.73	0.00	0.000		142%	142%	1.99
	Apr	5.21	6.73	0.00	0.000		129%	129%	1.52
	May	5.63	6.73	0.00	0.000		119%	119%	1.10
	Jun	5.62	6.73	0.00	0.000		120%	120%	1.11
	Jul	5.08	6.73	0.00	0.000		132%	132%	1.65
	Aug	5.49	6.73	0.00	0.000		123%	123%	1.24
	Sep	5.37	6.73	0.00	0.000		125%	125%	1.36
	Oct	5.58	6.73	0.00	0.000		121%	121%	1.15
	Nov	5.70	6.73	0.00	0.000		118%	118%	1.03
	Dec	4.62	6.73	0.00	0.000		146%	146%	2.11
2027	Jan	5.30	6.73	0.00	0.000		127%	127%	1.43
	Feb	4.89	6.73	0.00	0.000		138%	138%	1.84
	Mar	4.89	6.73	0.00	0.000		138%	138%	1.84
	Apr	5.37	6.73	0.00	0.000		125%	125%	1.36
	May	5.81	6.73	0.00	0.000		116%	116%	0.92
	Jun	5.80	6.73	0.00	0.000		116%	116%	0.93
	Jul	5.24	6.73	0.00	0.000		128%	128%	1.49
	Aug	5.66	6.73	0.00	0.000		119%	119%	1.07
	Sep	5.54	6.73	0.00	0.000		121%	121%	1.19
	Oct	5.76	6.73	0.00	0.000		117%	117%	0.97
	Nov	5.88	6.73	0.00	0.000		114%	114%	0.85
	Dec	4.77	6.73	0.00	0.000		141%	141%	1.96
2028	Jan	5.46	6.73	0.00	0.000		123%	123%	1.27
	Feb	5.04	6.73	0.00	0.000		134%	134%	1.69
	Mar	5.04	6.73	0.00	0.000		134%	134%	1.69
	Apr	5.53	6.73	0.00	0.000		122%	122%	1.20

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	May	5.98	6.73	0.00	0.000		113%	113%	0.75
	Jun	5.97	6.73	0.00	0.000		113%	113%	0.76
	Jul	5.40	6.73	0.00	0.000		125%	125%	1.33
	Aug	5.83	6.73	0.00	0.000		116%	116%	0.90
	Sep	5.71	6.73	0.00	0.000		118%	118%	1.02
	Oct	5.93	6.73	0.00	0.000		113%	113%	0.80
	Nov	6.05	6.73	0.00	0.000		111%	111%	0.68
	Dec	4.91	6.73	0.00	0.000		137%	137%	1.82
2029	Jan	5.62	6.73	0.00	0.000		120%	120%	1.11
	Feb	5.18	6.73	0.00	0.000		130%	130%	1.55
	Mar	5.18	6.73	0.00	0.000		130%	130%	1.55
	Apr	5.69	6.73	0.00	0.000		118%	118%	1.04
	May	6.16	6.73	0.00	0.000		109%	109%	0.57
	Jun	6.14	6.73	0.00	0.000		110%	110%	0.59
	Jul	5.56	6.73	0.00	0.000		121%	121%	1.17
	Aug	6.00	6.73	0.00	0.000		112%	112%	0.73
	Sep	5.87	6.73	0.00	0.000		115%	115%	0.86
	Oct	6.10	6.73	0.00	0.000		110%	110%	0.63
	Nov	6.23	6.73	0.00	0.000		108%	108%	0.50
	Dec	5.05	6.73	0.00	0.000		133%	133%	1.68
2030	Jan	5.78	6.73	0.00	0.000		117%	117%	0.95
	Feb	5.33	6.73	0.00	0.000		126%	126%	1.40
	Mar	5.33	6.73	0.00	0.000		126%	126%	1.40
	Apr	5.86	6.73	0.00	0.000		115%	115%	0.87
	May	6.33	6.73	0.00	0.000		106%	106%	0.40
	Jun	6.32	6.73	0.00	0.000		107%	107%	0.41
	Jul	5.71	6.73	0.00	0.000		118%	118%	1.02
	Aug	6.17	6.73	0.00	0.000		109%	109%	0.56
	Sep	6.04	6.73	0.00	0.000		111%	111%	0.69
	Oct	6.28	6.73	0.00	0.000		107%	107%	0.45

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Retail Electricity Suppliers MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Nov	6.41	6.73	0.00	0.000		105%	105%	0.32
	Dec	5.20	6.73	0.00	0.000		130%	130%	1.53

The Peak Demand was forecasted using $Y=at^2 + c$ (Quadratic Trending) and was assumed to occur on the month of May due to summer seasons if the covid 19 pandemic will be totally eradicated. Monthly Peak Demand is at its lowest on the month of December due to lot holidays/no office days. In general, Peak Demand is expected to grow at a rate of 1% annually.

CAMELCO ACTUAL AND FORECASTED COINCIDENT PEAK DEMAND 2021

Year	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021
		Actual Peak Demand							Forecasted Peak Demand			
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Coincident Peak MW	4.3806	3.723	3.9962	3.8643	4.0634	4.0586	4.1392	4.265	4.5414	4.7196	4.818	3.9067

CAMELCO coincident peak demand is based on NGCP monthly load profile and it is being emailed to CAMELCO in a monthly basis. NGCP meter is located at Cogon, Balingasag, Misamis Oriental. It is the connection point between CAMELCO and NGCP, please see attach file of CAMELCO one line diagram. Base on the above table, CAMELCO coincident peak is erratic and base on the data highest demand occur in the month of January and lowest demand occur in the month of April.



The available supply is generally above the Peak Demand. This is because of over contracting but it is approved by ERC.



Of the available supply, the largest is 4MW from 2014-119 RC. This is followed by 4MW from 2015-068 RC.



Currently, there is over-contracting by 68.71%.



Currently, there is over-contracting by 3.7 MW. The highest surplus is 7.72MW which is expected to occur on the month of March 2021. The lowest surplus is 0.32 MW which is expected to occur on the month of November 2030.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2021	Jan	6,139	1,960	408	61.42%	17.23%
	Feb	6,139	1,982	417	60.91%	17.39%
	Mar	6,139	2,004	425	60.45%	17.49%
	Apr	6,139	2,024	431	60.02%	17.55%
	May	6,139	2,043	436	59.62%	17.58%
	Jun	6,139	2,062	440	59.25%	17.58%
	Jul	6,139	2,079	443	58.91%	17.56%
	Aug	6,139	2,096	445	58.59%	17.52%
	Sep	6,139	2,113	447	58.29%	17.47%
	Oct	6,139	2,129	449	58.01%	17.41%

Nov 6,139 2,144 450 57.75% 17.349 Dec 6,139 2,159 450 57.50% 17.269 2022 Jan 6,139 2,173 450 57.26% 17.179 Feb 6,139 2,187 450 57.04% 17.089 Mar 6,139 2,201 450 56.82% 16.989 Mar 6,139 2,212 464 56.41% 17.349 May 6,139 2,223 467 56.19% 17.369 Jun 6,139 2,233 469 55.97% 17.379 Jul 6,139 2,244 472 55.77% 17.389
Dec 6,139 2,159 450 57.50% 17.26% 2022 Jan 6,139 2,173 450 57.26% 17.17% Feb 6,139 2,187 450 57.04% 17.08% Mar 6,139 2,201 450 56.82% 16.98% Mar 6,139 2,212 464 56.41% 17.36% May 6,139 2,223 467 56.19% 17.36% Jun 6,139 2,233 469 55.97% 17.37% Jul 6,139 2,244 472 55.77% 17.38%
2022 Jan 6,139 2,173 450 57.26% 17.179 Feb 6,139 2,187 450 57.04% 17.089 Mar 6,139 2,201 450 56.82% 16.989 Apr 6,139 2,212 464 56.41% 17.349 May 6,139 2,223 467 56.19% 17.369 Jun 6,139 2,233 469 55.97% 17.379 Jul 6,139 2,244 472 55.77% 17.389
Feb 6,139 2,187 450 57.04% 17.089 Mar 6,139 2,201 450 56.82% 16.989 Apr 6,139 2,212 464 56.41% 17.349 May 6,139 2,223 467 56.19% 17.369 Jun 6,139 2,233 469 55.97% 17.379 Jul 6,139 2,244 472 55.77% 17.389
Mar 6,139 2,201 450 56.82% 16.98% Apr 6,139 2,212 464 56.41% 17.34% May 6,139 2,223 467 56.19% 17.36% Jun 6,139 2,233 469 55.97% 17.37% Jul 6,139 2,244 472 55.77% 17.38%
Apr 6,139 2,212 464 56.41% 17.349 May 6,139 2,223 467 56.19% 17.369 Jun 6,139 2,233 469 55.97% 17.379 Jul 6,139 2,244 472 55.77% 17.389
May 6,139 2,223 467 56.19% 17.36% Jun 6,139 2,233 469 55.97% 17.37% Jul 6,139 2,244 472 55.77% 17.38%
Jun 6,139 2,233 469 55.97% 17.37% Jul 6,139 2,244 472 55.77% 17.38%
Jul 6,139 2,244 472 55.77% 17.38%
Aug 6,139 2,253 474 55.57% 17.38%
Sep 6,139 2,262 476 55.39% 17.39%
Oct 6,139 2,271 478 55.21% 17.40%
Nov 6,139 2,280 480 55.03% 17.40%
Dec 6,139 2,288 482 54.87% 17.41%
2023 Jan 6,139 2,296 484 54.71% 17.41%
Feb 6,139 2,304 486 54.55% 17.41%
Mar 6,139 2,312 487 54.40% 17.41%
Apr 6,139 2,319 489 54.25% 17.41%
May 6,139 2,327 491 54.11% 17.41%
Jun 6,139 2,334 492 53.97% 17.41%
Jul 6,139 2,340 493 53.85% 17.40%
Aug 6,139 2,346 494 53.73% 17.40%
Sep 6,139 2,352 495 53.61% 17.40%
Oct 6,139 2,358 497 53.49% 17.40%
Nov 6,139 2,364 498 53.38% 17.419
Dec 6,139 2,369 500 53.27% 17.41%
2024 Jan 5,139 2,375 501 44.04% 17.42%
Feb 5,139 2,380 503 43.90% 17.43%
Mar 5,139 2,386 504 43.77% 17.44%
Apr 5,139 2,391 506 43.64% 17.46%
May 5,139 2,396 507 43.50% 17.47%
Jun 5,139 2,401 509 43.37% 17.49%
Jul 5,139 2,406 511 43.24% 17.519
Aug 5,139 2,411 513 43.10% 17.53% Aug 5,139 2,411 513 43.10% 17.53%
Sep 5,139 2,416 514 42.97% 17.56%
UCL 5,139 2,420 516 42.87% 17.56%
Nov 5,139 2,425 517 42.74% 17.57%
Dec 5,139 2,431 519 42.60% 17.589
2020 Jan 5,139 2,437 520 42.46% 17.599
Feb 5,138 2,443 521 42.31% 17.59% Mor 5,130 2,450 532 43.46% 47.50%
Ividi 0,138 2,430 523 42.10% 17.58% Apr 5.130 2.457 524 44.00% 47.59%
Apr 3,138 2,437 324 41.99% 17.58% May 5.130 2.465 535 44.949/ 47.579
lun 5 130 2 473 526 41.01% 17.57%
Jul 5,139 2,473 520 41.02% 17.537 Jul 5,130 2,483 529 41.02% 17.537
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Nug 5,135 2,435 523 41.2076 17.307 Sep 5,139 2,503 530 40,97% 17,47%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Oct	5,139	2,515	531	40.73%	17.43%
	Nov	5,139	2,528	532	40.46%	17.38%
	Dec	5,139	2,541	533	40.18%	17.33%
2026	Jan	4,205	2,550	534	26.68%	17.32%
	Feb	4,205	2,560	535	26.39%	17.29%
	Mar	4,205	2,571	537	26.11%	17.27%
	Apr	4,205	2,581	538	25.83%	17.26%
	May	4,205	2,591	540	25.55%	17.24%
	Jun	4,205	2,601	542	25.28%	17.23%
	Jul	4,205	2,611	543	25.00%	17.23%
	Aug	4,205	2,620	545	24.73%	17.22%
	Sep	4,205	2,630	547	24.45%	17.22%
	Oct	4,205	2,639	549	24.18%	17.22%
	Nov	4,205	2,649	551	23.91%	17.23%
	Dec	4,205	2,658	554	23.64%	17.24%
2027	Jan	4,205	2,667	556	23.36%	17.25%
	Feb	4,205	2,676	558	23.09%	17.26%
	Mar	4,205	2,685	561	22.82%	17.28%
	Apr	4,205	2,692	563	22.58%	17.31%
	May	4,205	2,700	565	22.36%	17.31%
	Jun	4,205	2,707	567	22.14%	17.31%
	Jul	4,205	2,714	568	21.94%	17.31%
	Aug	4,205	2,721	570	21.74%	17.32%
	Sep	4,205	2,728	571	21.54%	17.31%
	Oct	4,205	2,735	573	21.35%	17.31%
	Nov	4,205	2,741	574	21.16%	17.31%
	Dec	4,205	2,748	575	20.98%	17.31%
2028	Jan	4,205	2,754	576	20.80%	17.30%
	Feb	4,205	2,761	578	20.62%	17.30%
	Mar	4,205	2,767	579	20.44%	17.30%
	Apr	4,205	2,773	580	20.26%	17.29%
	May	4,205	2,780	581	20.09%	17.29%
	Jun	4,205	2,786	582	19.91%	17.28%
	Jul	4,205	2,793	583	19.72%	17.27%
	Aug	4,205	2,801	584	19.52%	17.25%
	Sep	4,205	2,809	585	19.30%	17.23%
	Oct	4,205	2,818	586	19.07%	17.21%
	Nov	4,205	2,827	586	18.83%	17.18%
	Dec	4,205	2,838	587	18.56%	17.15%
2029	Jan	4,205	2,849	588	18.28%	17.11%
	Feb	4,205	2,861	589	17.97%	17.06%
	Mar	4,205	2,874	589	17.64%	17.02%
	Apr	4,205	2,888	590	17.29%	16.96%
	May	4,205	2,904	591	16.90%	16.90%
	Jun	4,205	2,921	591	16.49%	16.84%
	Jul	4,205	2,939	592	16.05%	16.77%
	Aug	4,205	2,958	593	15.57%	16.69%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	Sep	4,205	2,979	593	15.06%	16.60%
	Oct	4,205	2,993	592	14.74%	16.52%
	Nov	4,205	3,010	592	14.34%	16.43%
	Dec	4,205	3,028	591	13.95%	16.34%
2030	Jan	4,205	3,044	591	13.56%	16.25%
	Feb	4,205	3,061	590	13.18%	16.15%
	Mar	4,205	3,078	589	12.81%	16.05%
	Apr	4,205	3,095	587	12.45%	15.95%
	May	4,205	3,111	586	12.09%	15.84%
	Jun	4,205	3,128	584	11.73%	15.73%
	Jul	4,205	3,145	582	11.39%	15.62%
	Aug	4,205	3,161	580	11.05%	15.50%
	Sep	4,205	3,177	578	10.71%	15.38%
	Oct	4,205	3,194	575	10.38%	15.26%
	Nov	4,205	3,210	572	10.06%	15.14%
	Dec	4,205	3,226	570	9.74%	15.01%

MWh Offtake was forecasted using $Y=at^2 + c$ (Quadratic Trending). The assumed load factor is 56.0% on the average basis. As regard of over contracting of power supply, final decision of ERC with regards to EPPA entered by CAMELCO and FDC was to reduce 4MW contracted capacity to 2MW.

System Loss was calculated through a Load Flow Study conducted on December 2020 by CAMELCO TSD Department using Synergi and 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 0.42% annually on the average basis.



Transmission Loss is expected to range from 9.74% to 61.42% while System Loss is expected to range from 15.01% to 17.59%.

Power Supply

Case No.	Туре	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2018-054 RC	Base	Power Sector Assets and Liabilities Management Corporation	1.00	400	1/1/2021	12/31/2023
2015-068 RC	Intermediate	FDC Misamis Power Corporation	1.60	1,168	6/1/2018	12/30/2033
2014-119 RC	Peaking	King Energy Generation, Inc.	1.00	373	1/1/2014	12/30/2024
2014-011 RC	Base	GN Power Kauswagan Ltd.	1.09	514	1/1/2020	12/30/2040

The PSA with PA filed with ERC under Case No. 2018-054 RC was procured through CSP. It was selected to provide for base requirements due to lower rate. Historically, the utilization of the PSA is 25%. Outages of the plant led to unserved energy of around 566 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 2.60 P/kWh to 3.00 P/KWh in the same period.

Case No.	Туре	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2018-054 RC	Base	Power Sector Assets and Liabilities Management Corporation	1.00	400	1/1/2021	12/31/2023
2015-068 RC	Intermediate	FDC Misamis Power Corporation	1.60	1,168	6/1/2018	12/30/2033
2014-119 RC	Peaking	King Energy Generation, Inc.	1.00	373	1/1/2014	12/30/2024
2014-011 RC	Base	GN Power Kauswagan Ltd.	1.09	514	1/1/2020	12/30/2040

The PSA with PA filed with ERC under Case No. 2015-068 RC was procured through CSP. It was selected to provide for intermediate requirements due to growing energy consumption. Historically, the utilization of the PSA is 68%. Outages of the plant led to unserved energy of around 1,542 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 5.60 P/kWh to 6.00 P/KWh in the same period.

Case No.	Туре	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2018-054 RC	Base	Power Sector Assets and Liabilities Management Corporation	1.00	400	1/1/2021	12/31/2023
2015-068 RC	Intermediate	FDC Misamis Power Corporation	1.60	1,168	6/1/2018	12/30/2033
2014-119 RC	Peaking	King Energy Generation, Inc.	1.00	373	1/1/2014	12/30/2024
2014-011 RC	Base	GN Power Kauswagan Ltd.	1.09	514	1/1/2020	12/30/2040

The PSA with PA filed with ERC under Case No. 2014-119 RC was procured through CSP. It was selected to provide for peaking requirements due to growing energy consumption and under voltage case during peak loads. Historically, the utilization of the PSA is 6.6%. Outages of the plant led to unserved energy of around 154 MWh in the past year. The actual billed overall monthly charge under the PSA ranged from 13.5 P/kWh to 15 P/KWh in the same period.



As stated earlier CAMELCO has over contracted power supply. Although RPS is a government mandate but it's very difficult for CAMELCO to enter another power supply agreement since it will have a great impact for the rate increase thus will lead our member consumer owner will only suffer the said consequences. However, CAMELCO may consider future renewal of CSEE with PSALM to augment supply requirements and also with the compliance of RPS requirements.

Captive Customer Connections



The number of residential connections is expected to grow at a rate of 3.02% annually on the average basis. Said customer class is expected to account for 64.34% of the total consumption.