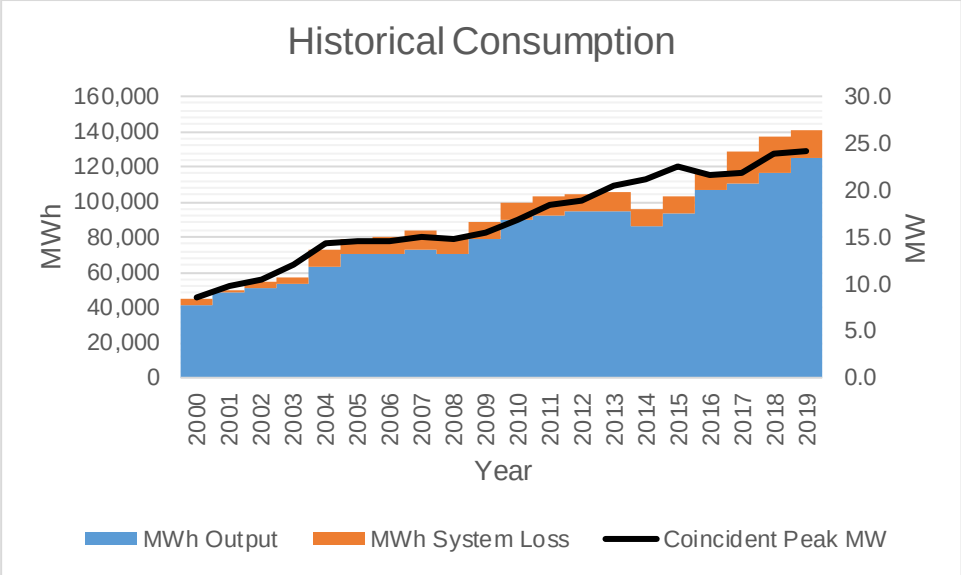
Power Supply Procurement Plan 2020

Misamis Oriental II Electric Service Cooperative, Inc.
MORESCO II

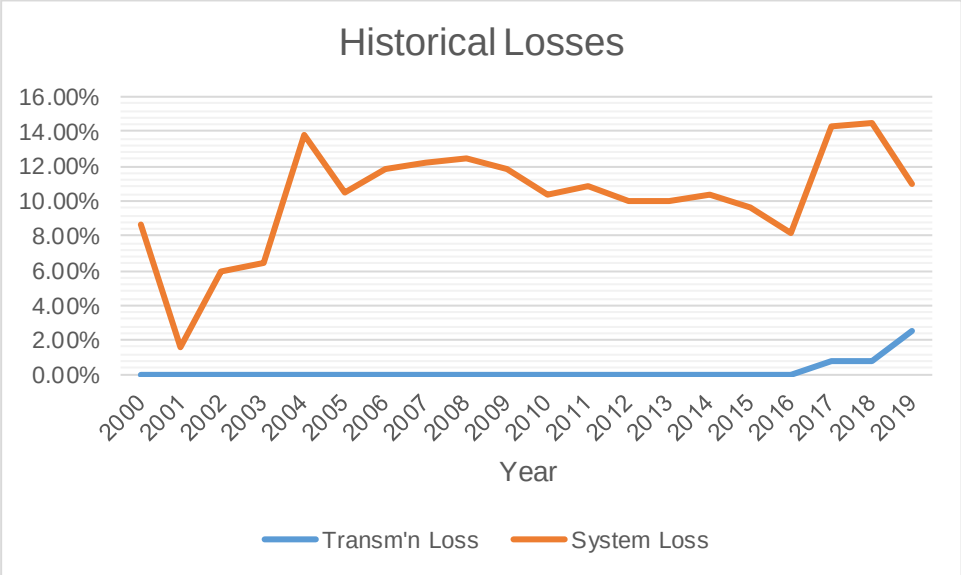
Historical Consumption Data

	Coincident Peak MW	MWh Offtake	WESM	MWh Input	MWh Output	MWh System Loss	Load Factor	Discrepancy	Transm'n Loss	System Loss
2000	8.56	44,777	0	44,777	41,220	3,877	60%	0.72%	0.00%	8.66%
2001	9.68	48,956	0	48,956	48,366	778	58%	0.38%	0.00%	1.59%
2002	10.42	53,863	0	53,863	50,903	3,171	59%	0.39%	0.00%	5.89%
2003	11.95	56,208	0	56,208	52,837	3,589	54%	0.39%	0.00%	6.39%
2004	14.43	73,163	0	73,163	63,283	10,099	58%	0.30%	0.00%	13.80%
2005	14.67	78,128	0	78,128	70,117	8,242	61%	0.30%	0.00%	10.55%
2006	14.56	79,524	0	79,524	70,360	9,398	62%	0.29%	0.00%	11.82%
2007	15.00	82,938	0	82,938	73,131	10,113	63%	0.37%	0.00%	12.19%
2008	14.83	80,264	0	80,264	70,512	10,007	62%	0.32%	0.00%	12.47%
2009	15.51	86,259	0	86,259	78,508	10,194	63%	2.83%	0.00%	11.82%
2010	16.73	99,638	0	99,638	89,319	10,318	68%	0.00%	0.00%	10.36%
2011	18.47	103,192	0	103,192	91,939	11,253	64%	0.00%	0.00%	10.90%
2012	18.92	104,785	0	104,785	94,319	10,466	63%	0.00%	0.00%	9.99%
2013	20.56	105,677	0	105,677	95,133	10,544	59%	0.00%	0.00%	9.98%
2014	21.24	96,376	0	96,376	86,333	10,043	52%	0.00%	0.00%	10.42%
2015	22.52	103,191	0	103,191	93,222	9,970	52%	0.00%	0.00%	9.66%
2016	21.62	116,234	0	116,234	106,745	9,490	61%	0.00%	0.00%	8.16%
2017	21.83	129,379	0	128,292	109,896	18,396	67%	0.00%	0.84%	14.34%
2018	23.90	137,988	0	136,911	117,074	19,836	65%	0.00%	0.78%	14.49%
2019	24.16	144,486	0	140,835	125,400	15,435	67%	0.00%	2.53%	10.96%

The increase of MORESCO II's Peak Demand for the last 20 years has a rate of 5.6%. Its increase is due to the emergence of large industrials in its franchise area. The demand from these companies contributed to the increasing MWh Offtake of MORESCO II, aside from the increasing demand from the fast developing urban areas. The MWh Offtake growth rate is 6.36%. Load Factor ranged from 52% to 68% from year 2000 to 2019.

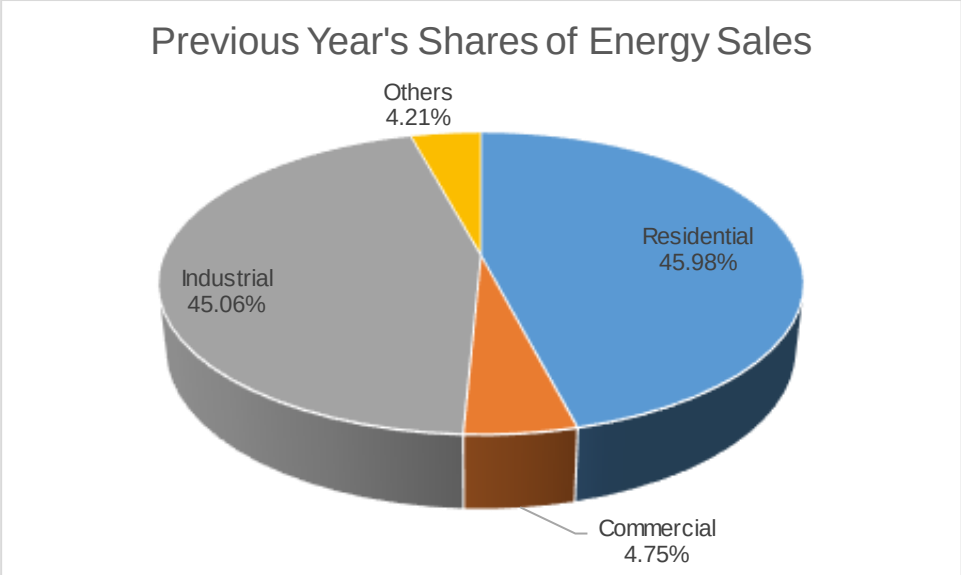


MWh Output increased from year 2000 to year 2019 at a rate of 6%, while MWh System Loss on the same period has an average of 10.24%.

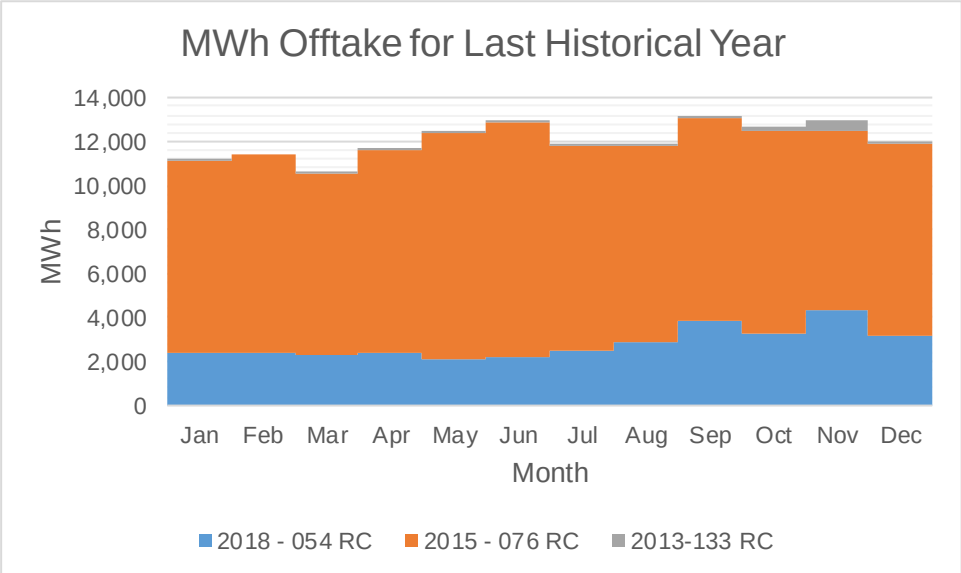


The Transmission Loss from year 2000 to 2016 is zero since at this time, all metering quantities of MORESCO II is read and billed at the connection point. MORESCO II started to consider the Transmission Loss after the commercial operation of FDC-MPC wherein the billing quantities from this IPP is based on their plant gate.

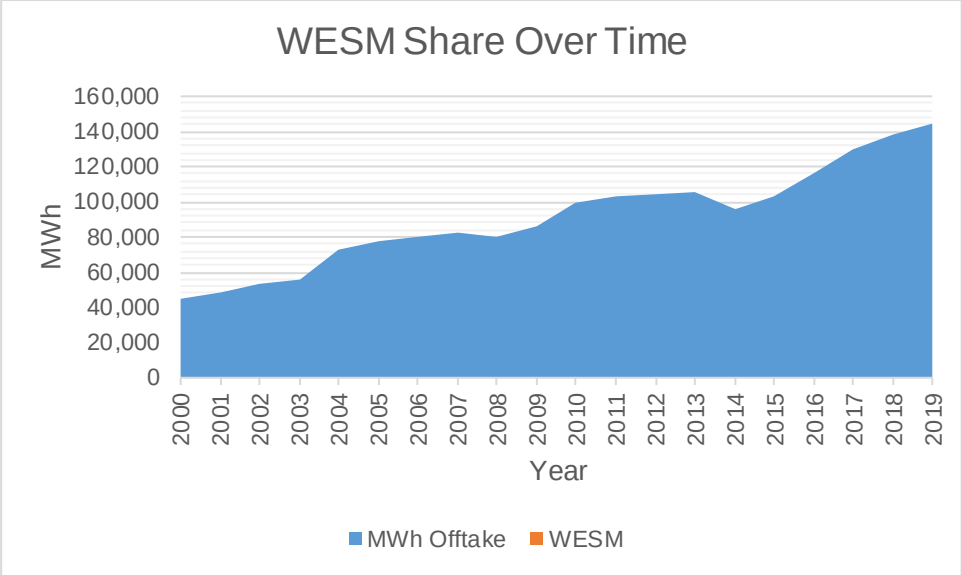
The System Loss of MORESCO II increased in year 2017 and 2018 since it includes the Transmission Loss which was later excluded in year 2019. The actual System Loss of MORESCO II in year 2017 and 2018 is 12.77% and 12.73% respectively.



Industrial customers account for the bulk of energy sales at 45.06% despite of the low number of connections. In contrast, Residential customers accounted for only 45.98% of energy sales despite of the high number of connections.

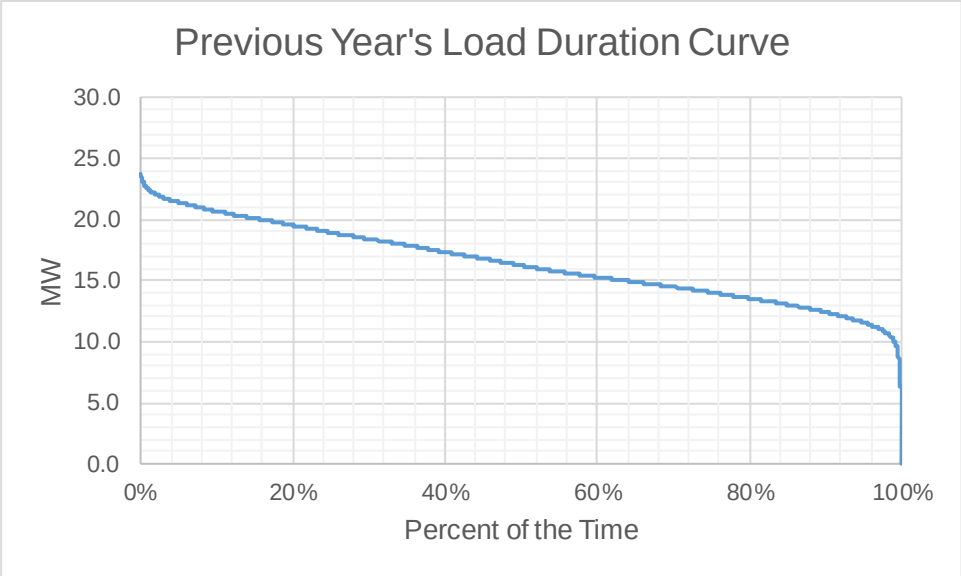


The total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSA with FDC-MPC accounts for the bulk of MWh Offtake.

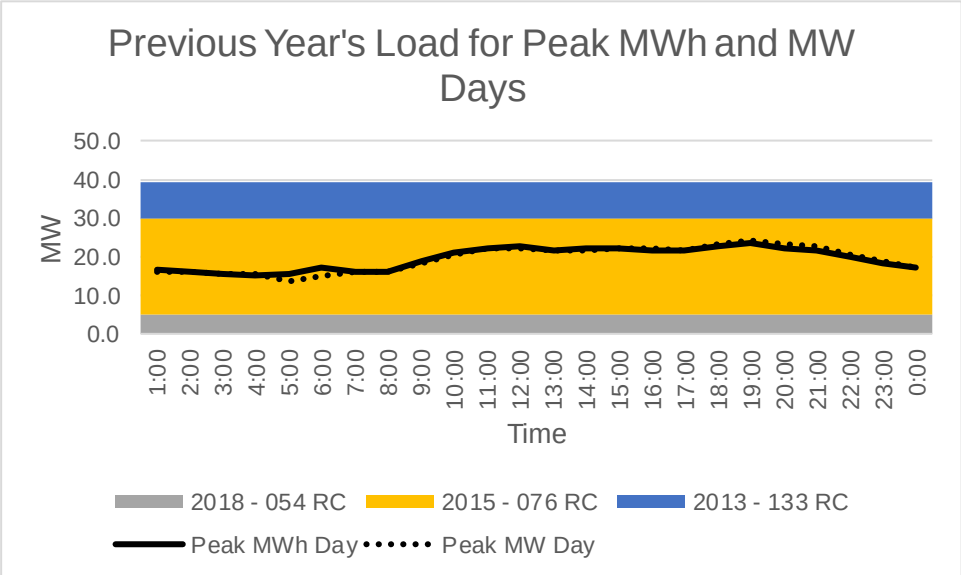


As to date, WESM is not yet implemented in the Mindanao Grid.

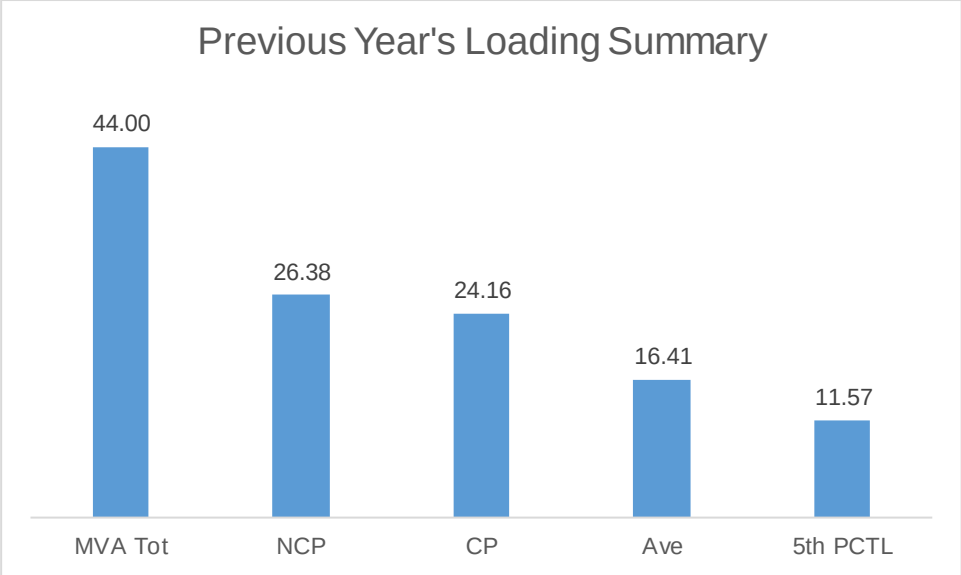
Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is at least 9.5 MW and the maximum load is 24.16 MW for the last historical year.



Peak MW and MWh occurred on 19:00 due to lightings from the households and street lights. As shown in the chart above, the available supply is higher than the Peak Demand. This is due to a contract from a fuel driven generating plant, which supplies the mid-merit and peaking requirement of MORESCO II before the commercial operation of FDC (2015-076 RC). It is now utilized as backup power when the power from the grid fails to travel into the system due to line faults. The PSA of ERC Case No. 2013-133 RC will expire on year 2023.



Based on the chart above, the non-coincidental peak demand of MORESCO II is 26.38MW, around 60% of the total substation capacity of 44MVA at a power factor of 0.9740. The load factor or the ratio between the Average Load of 16.41 MW and the non-coincident peak demand is 64.95%. A safe estimate of the true minimum load is the fifth percentile load of 11.57 MW which is 43.86% of the non-coincident peak demand

Metering Point	Substation MVA	Substation Peak MW
Magsaysay SS	5	1.439
Gingoog SS	10	6.308
Agay-ayan SS	10	6.387
Sugbongcogon SS	5	3.407
Balingasag SS	5	4.750
Claveria SS	5	2.008
WEOPI SS	4	2.081

The substation loaded at above 70% is the Balingasag Substation. To solve the problem, MORESCO II has procured a 10mVA Power Transformer through bidding on the last quarter of 2019.

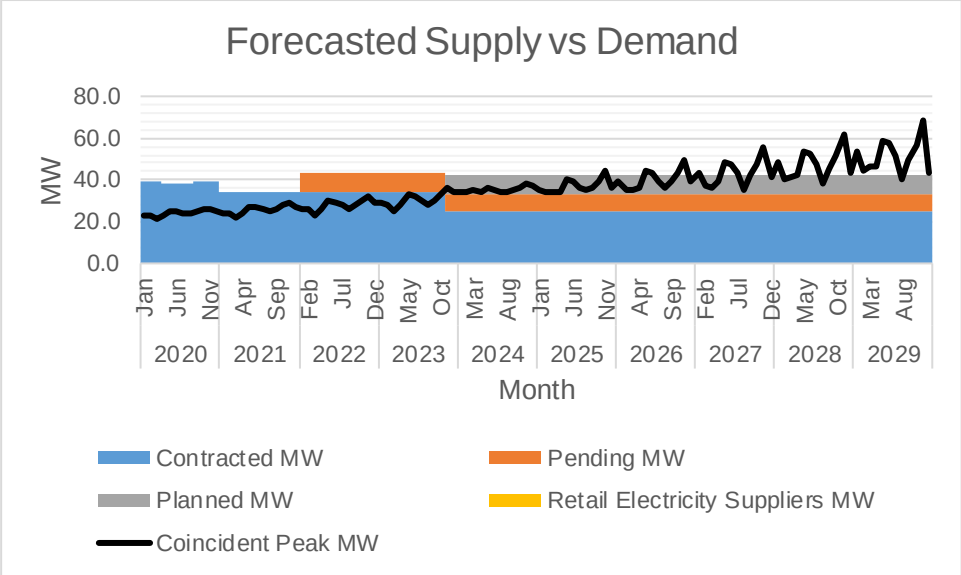
Forecasted Consumption Data

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
2020	Jan	22.76	39.31	0.00	0.000	173%	173%	16.55
	Feb	22.91	38.83	0.00	0.000	169%	169%	15.91
	Mar	21.29	39.15	0.00	0.000	184%	184%	17.86
	Apr	22.88	38.39	0.00	0.000	168%	168%	15.51
	May	25.11	38.38	0.00	0.000	153%	153%	13.27
	Jun	24.86	38.31	0.00	0.000	154%	154%	13.45
	Jul	24.07	38.52	0.00	0.000	160%	160%	14.45
	Aug	23.98	37.73	0.00	0.000	157%	157%	13.75
	Sep	24.61	39.25	0.00	0.000	159%	159%	14.64
	Oct	25.63	39.44	0.00	0.000	154%	154%	13.80
	Nov	26.17	39.40	0.00	0.000	151%	151%	13.24
	Dec	24.98	39.71	0.00	0.000	159%	159%	14.73
2021	Jan	24.28	34.40	0.00	0.000	142%	142%	10.12
	Feb	24.26	34.40	0.00	0.000	142%	142%	10.14
	Mar	22.15	34.40	0.00	0.000	155%	155%	12.25
	Apr	24.36	34.40	0.00	0.000	141%	141%	10.04
	May	27.28	34.40	0.00	0.000	126%	126%	7.12
	Jun	26.97	34.40	0.00	0.000	128%	128%	7.43
	Jul	25.83	34.40	0.00	0.000	133%	133%	8.57
	Aug	25.05	34.40	0.00	0.000	137%	137%	9.35
	Sep	26.24	34.40	0.00	0.000	131%	131%	8.16
	Oct	27.64	34.40	0.00	0.000	124%	124%	6.76
	Nov	28.89	34.40	0.00	0.000	119%	119%	5.51
	Dec	27.03	34.40	0.00	0.000	127%	127%	7.37
2022	Jan	26.27	34.40	8.50	0.000	131%	163%	16.63
	Feb	25.86	34.40	8.50	0.000	133%	166%	17.04
	Mar	23.35	34.40	8.50	0.000	147%	184%	19.55
	Apr	26.11	34.40	8.50	0.000	132%	164%	16.79
	May	29.83	34.40	8.50	0.000	115%	144%	13.07
	Jun	29.46	34.40	8.50	0.000	117%	146%	13.44
	Jul	27.90	34.40	8.50	0.000	123%	154%	15.00
	Aug	26.31	34.40	8.50	0.000	131%	163%	16.59
	Sep	28.16	34.40	8.50	0.000	122%	152%	14.74
	Oct	30.01	34.40	8.50	0.000	115%	143%	12.89
	Nov	32.10	34.40	8.50	0.000	107%	134%	10.80
	Dec	29.25	34.40	8.50	0.000	118%	147%	13.65
2023	Jan	28.74	34.40	8.50	0.000	120%	149%	14.16
	Feb	27.70	34.40	8.50	0.000	124%	155%	15.20
	Mar	24.94	34.40	8.50	0.000	138%	172%	17.96
	Apr	28.13	34.40	8.50	0.000	122%	153%	14.77
	May	32.78	34.40	8.50	0.000	105%	131%	10.12
	Jun	32.34	34.40	8.50	0.000	106%	133%	10.56
	Jul	30.30	34.40	8.50	0.000	114%	142%	12.60
	Aug	27.77	34.40	8.50	0.000	124%	155%	15.13
	Sep	30.37	34.40	8.50	0.000	113%	141%	12.53

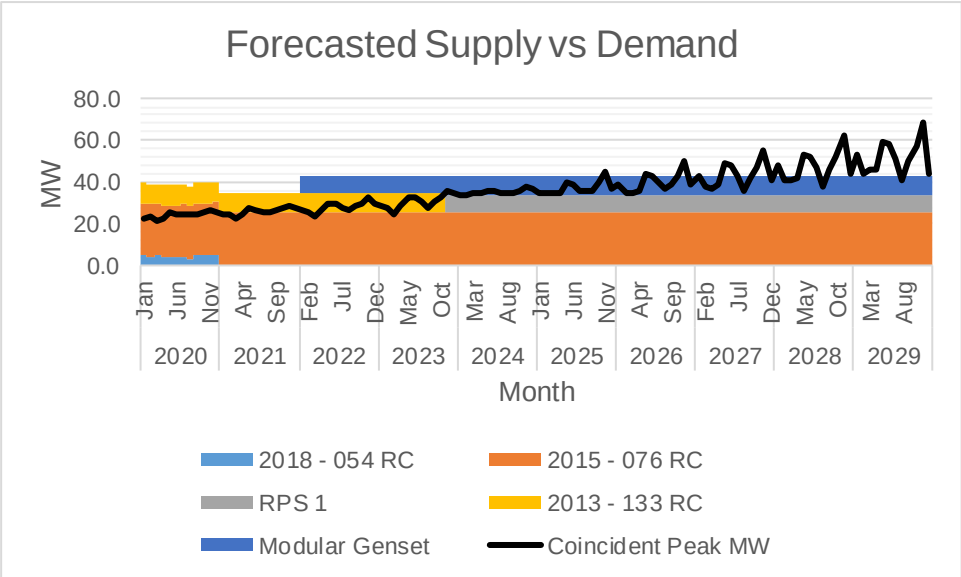
		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Oct	32.74	34.40	8.50	0.000	105%	131%	10.16
	Nov	35.81	25.00	8.50	9.000	70%	119%	6.69
	Dec	34.59	25.00	8.50	9.000	72%	123%	7.91
2024	Jan	34.13	25.00	8.50	9.000	73%	125%	8.37
	Feb	34.10	25.00	8.50	9.000	73%	125%	8.40
	Mar	34.89	25.00	8.50	9.000	72%	122%	7.61
	Apr	34.42	25.00	8.50	9.000	73%	123%	8.08
	May	36.13	25.00	8.50	9.000	69%	118%	6.37
	Jun	35.59	25.00	8.50	9.000	70%	119%	6.91
	Jul	34.51	25.00	8.50	9.000	72%	123%	7.99
	Aug	34.42	25.00	8.50	9.000	73%	123%	8.08
	Sep	34.99	25.00	8.50	9.000	71%	121%	7.51
	Oct	35.84	25.00	8.50	9.000	70%	119%	6.66
	Nov	38.01	25.00	8.50	9.000	66%	112%	4.49
	Dec	36.94	25.00	8.50	9.000	68%	115%	5.56
2025	Jan	35.08	25.00	8.50	9.000	71%	121%	7.42
	Feb	34.51	25.00	8.50	9.000	72%	123%	7.99
	Mar	34.25	25.00	8.50	9.000	73%	124%	8.25
	Apr	34.48	25.00	8.50	9.000	73%	123%	8.02
	May	39.87	25.00	8.50	9.000	63%	107%	2.63
	Jun	39.24	25.00	8.50	9.000	64%	108%	3.26
	Jul	36.05	25.00	8.50	9.000	69%	118%	6.45
	Aug	35.26	25.00	8.50	9.000	71%	121%	7.24
	Sep	35.69	25.00	8.50	9.000	70%	119%	6.81
	Oct	39.30	25.00	8.50	9.000	64%	108%	3.20
	Nov	44.71	25.00	8.50	9.000	56%	95%	-2.21
	Dec	36.34	25.00	8.50	9.000	69%	117%	6.16
2026	Jan	38.95	25.00	8.50	9.000	64%	109%	3.55
	Feb	34.68	25.00	8.50	9.000	72%	123%	7.82
	Mar	34.67	25.00	8.50	9.000	72%	123%	7.83
	Apr	35.81	25.00	8.50	9.000	70%	119%	6.69
	May	44.00	25.00	8.50	9.000	57%	97%	-1.50
	Jun	43.26	25.00	8.50	9.000	58%	98%	-0.76
	Jul	39.40	25.00	8.50	9.000	63%	108%	3.10
	Aug	36.30	25.00	8.50	9.000	69%	117%	6.20
	Sep	38.79	25.00	8.50	9.000	64%	110%	3.71
	Oct	43.13	25.00	8.50	9.000	58%	99%	-0.63
	Nov	49.90	25.00	8.50	9.000	50%	85%	-7.40
	Dec	38.76	25.00	8.50	9.000	65%	110%	3.74
2027	Jan	43.30	25.00	8.50	9.000	58%	98%	-0.80
	Feb	37.50	25.00	8.50	9.000	67%	113%	5.00
	Mar	36.41	25.00	8.50	9.000	69%	117%	6.09
	Apr	38.91	25.00	8.50	9.000	64%	109%	3.59
	May	48.52	25.00	8.50	9.000	52%	88%	-6.02
	Jun	47.67	25.00	8.50	9.000	52%	89%	-5.17
	Jul	43.07	25.00	8.50	9.000	58%	99%	-0.57
	Aug	35.54	25.00	8.50	9.000	70%	120%	6.96

		Coincident Peak MW	Contracted MW	Pending MW	Planned MW	Existing Contracting Level	Target Contracting Level	MW Surplus / Deficit
	Sep	42.18	25.00	8.50	9.000	59%	101%	0.32
	Oct	47.32	25.00	8.50	9.000	53%	90%	-4.82
	Nov	55.59	25.00	8.50	9.000	45%	76%	-13.09
	Dec	41.18	25.00	8.50	9.000	61%	103%	1.32
2028	Jan	48.12	25.00	8.50	9.000	52%	88%	-5.62
	Feb	40.57	25.00	8.50	9.000	62%	105%	1.93
	Mar	40.84	25.00	8.50	9.000	61%	104%	1.66
	Apr	42.27	25.00	8.50	9.000	59%	101%	0.23
	May	53.44	25.00	8.50	9.000	47%	80%	-10.94
	Jun	52.47	25.00	8.50	9.000	48%	81%	-9.97
	Jul	47.06	25.00	8.50	9.000	53%	90%	-4.56
	Aug	37.97	25.00	8.50	9.000	66%	112%	4.53
	Sep	45.87	25.00	8.50	9.000	54%	93%	-3.37
	Oct	51.87	25.00	8.50	9.000	48%	82%	-9.37
	Nov	61.77	25.00	8.50	9.000	40%	69%	-19.27
	Dec	43.58	25.00	8.50	9.000	57%	98%	-1.08
2029	Jan	53.41	25.00	8.50	9.000	47%	80%	-10.91
	Feb	43.88	25.00	8.50	9.000	57%	97%	-1.38
	Mar	46.00	25.00	8.50	9.000	54%	92%	-3.50
	Apr	45.91	25.00	8.50	9.000	54%	93%	-3.41
	May	58.75	25.00	8.50	9.000	43%	72%	-16.25
	Jun	57.64	25.00	8.50	9.000	43%	74%	-15.14
	Jul	51.38	25.00	8.50	9.000	49%	83%	-8.88
	Aug	40.59	25.00	8.50	9.000	62%	105%	1.91
	Sep	49.86	25.00	8.50	9.000	50%	85%	-7.36
	Oct	56.79	25.00	8.50	9.000	44%	75%	-14.29
	Nov	68.45	25.00	8.50	9.000	37%	62%	-25.95
	Dec	43.58	25.00	8.50	9.000	57%	98%	-1.08

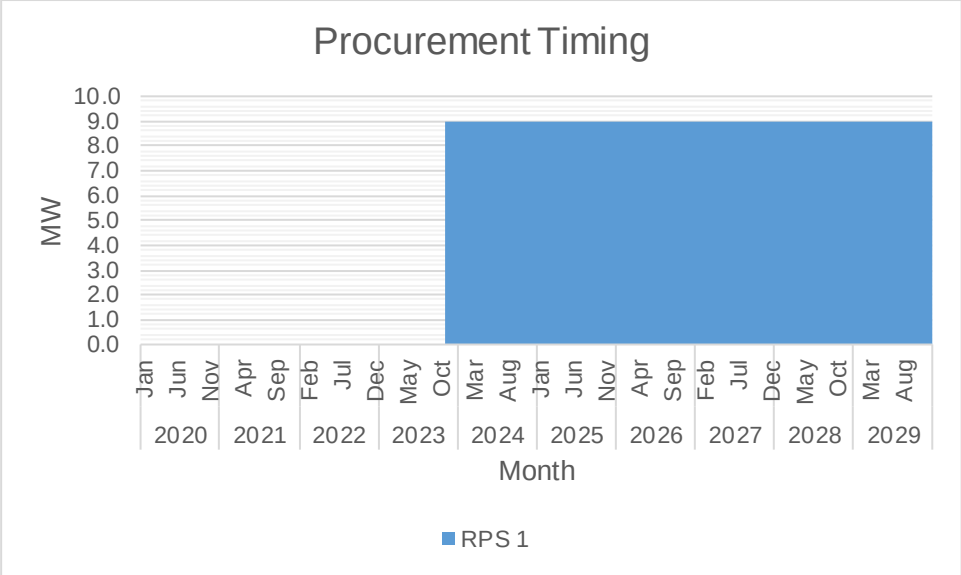
The Peak Demand was forecasted using scientific method and was assumed to occur on the month of November in every year. Monthly Peak Demand is at its lowest on the month of March. In general, Peak Demand is expected to grow at a rate of 4% annually.



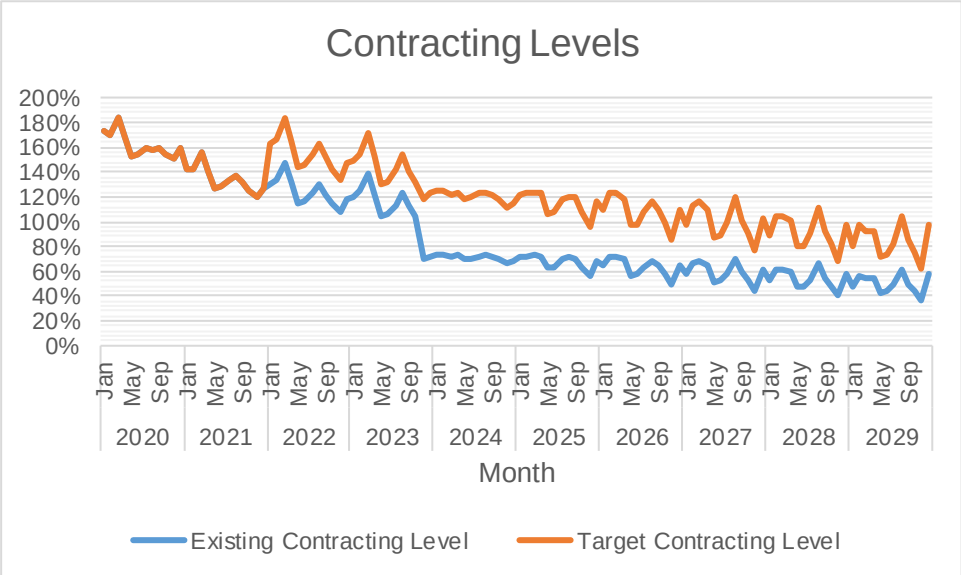
The available supply is generally above the Peak Demand until year 2023. However, if the planned supply will be realized in 2023, the deficit in supply will start in year 2025 or 2026. This can be addressed by a new PSA or can be sourced out from the electricity market.



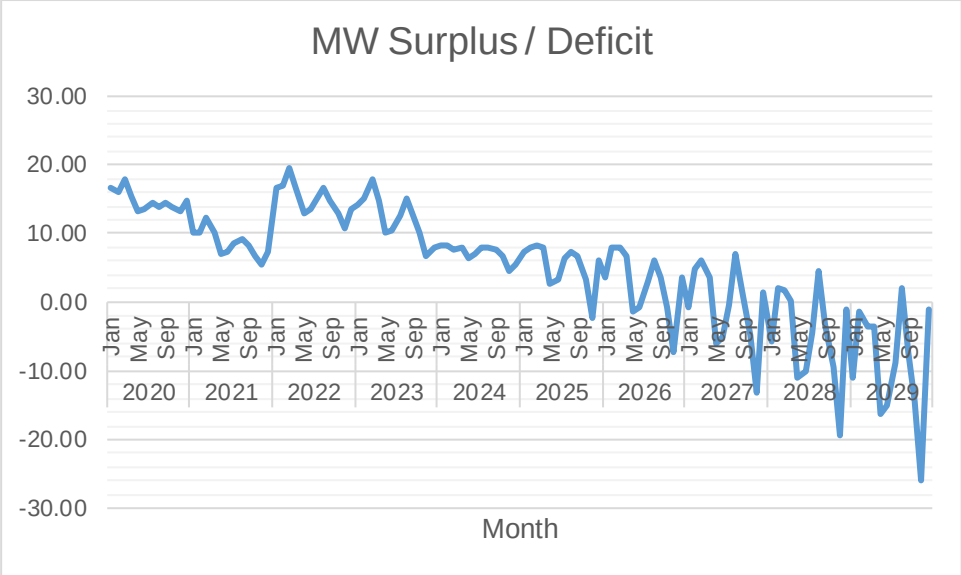
Of the available supply, the largest is 25 MW from the PSA with ERC Case No. 2015-076 RC. This is followed by 9.4 MW from the PSA with ERC Case No. 2013-133RC.



The first wave of supply procurement will be for 9 MW planned to be available by the month of November 2023.



Currently, there is over-contracting by 42%. The highest target contracting level is 173% which is expected to occur on January 2020. The lowest target contracting level is 62% which is expected to occur on November 2029



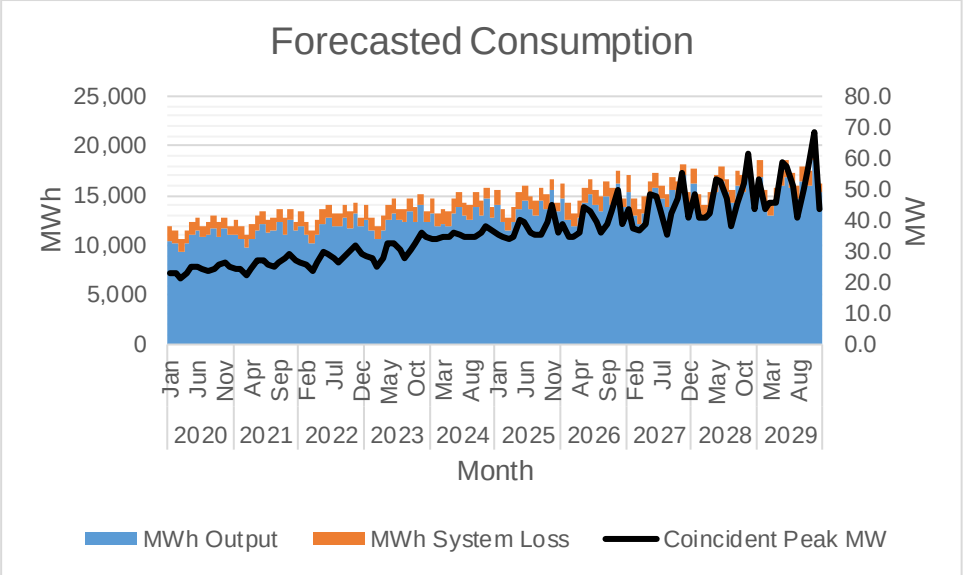
As of 2019, there is over-contracting by at least 14.72 MW. For the next ten years, the highest surplus will be 17.86MW in the month March 2020. The lowest surplus will be 1.62 MW in the month of May 2023. It is expected that the supply of MORESCO II will inadequate in the last quarter of 2023 if the planned supply will be delayed.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2020	Jan	12,022	10,428	1,396	1.65%	11.81%
	Feb	11,780	10,178	1,356	2.09%	11.75%
	Mar	10,873	9,405	1,274	1.79%	11.93%
	Apr	11,778	10,195	1,394	1.61%	12.03%
	May	12,635	10,977	1,413	1.95%	11.40%
	Jun	13,117	11,456	1,412	1.90%	10.97%
	Jul	12,201	10,803	1,213	1.51%	10.10%
	Aug	12,611	11,064	1,300	1.95%	10.52%
	Sep	13,332	11,726	1,347	1.94%	10.31%
	Oct	12,584	10,816	1,549	1.74%	12.53%
	Nov	13,064	11,777	1,071	1.65%	8.34%
	Dec	12,123	10,980	917	1.87%	7.70%
2021	Jan	12,824	11,144	1,424	2.00%	11.33%
	Feb	12,214	10,586	1,381	2.01%	11.54%
	Mar	11,311	9,808	1,296	1.82%	11.67%
	Apr	12,309	10,639	1,417	2.06%	11.75%
	May	13,206	11,529	1,433	1.85%	11.06%
	Jun	13,679	12,065	1,431	1.34%	10.60%
	Jul	12,787	11,362	1,228	1.54%	9.75%
	Aug	13,000	11,459	1,314	1.75%	10.29%
	Sep	13,807	12,259	1,360	1.36%	9.99%
	Oct	12,920	11,162	1,563	1.52%	12.28%
	Nov	13,838	12,526	1,079	1.67%	7.93%
	Dec	12,580	11,444	925	1.67%	7.48%
2022	Jan	13,556	11,862	1,452	1.78%	10.91%
	Feb	12,627	11,000	1,408	1.74%	11.35%
	Mar	11,738	10,212	1,319	1.76%	11.44%
	Apr	12,740	11,083	1,440	1.71%	11.50%

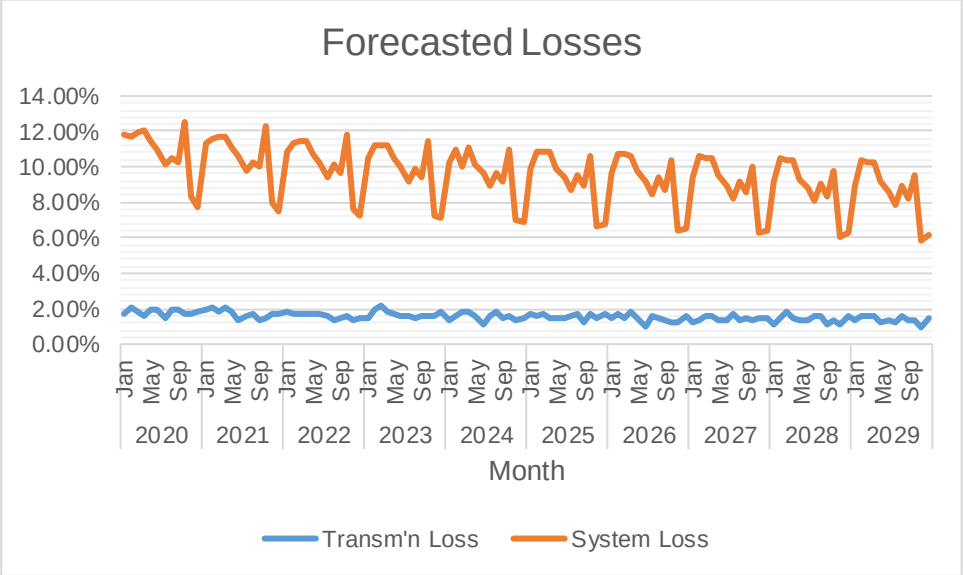
		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	May	13,777	12,081	1,454	1.76%	10.74%
	Jun	14,372	12,674	1,449	1.73%	10.26%
	Jul	13,373	11,921	1,243	1.56%	9.44%
	Aug	13,360	11,853	1,329	1.33%	10.08%
	Sep	14,382	12,793	1,374	1.50%	9.70%
	Oct	13,543	11,757	1,576	1.55%	11.82%
	Nov	14,551	13,276	1,088	1.29%	7.57%
	Dec	13,033	11,908	934	1.47%	7.27%
2023	Jan	14,278	12,580	1,481	1.51%	10.53%
	Feb	13,100	11,414	1,434	1.92%	11.16%
	Mar	12,224	10,615	1,343	2.18%	11.23%
	Apr	13,231	11,526	1,463	1.83%	11.26%
	May	14,349	12,634	1,475	1.67%	10.45%
	Jun	14,997	13,284	1,469	1.63%	9.95%
	Jul	13,959	12,481	1,258	1.58%	9.16%
	Aug	13,789	12,248	1,344	1.43%	9.88%
	Sep	14,959	13,328	1,387	1.63%	9.43%
	Oct	14,160	12,354	1,590	1.53%	11.40%
	Nov	15,365	14,025	1,096	1.59%	7.25%
	Dec	13,586	12,391	943	1.86%	7.07%
2024	Jan	15,020	13,299	1,511	1.40%	10.20%
	Feb	13,504	11,828	1,462	1.59%	11.00%
	Mar	13,831	12,219	1,367	1.77%	10.06%
	Apr	13,704	11,970	1,487	1.80%	11.05%
	May	14,921	13,187	1,496	1.60%	10.19%
	Jun	15,552	13,893	1,488	1.10%	9.67%
	Jul	14,546	13,040	1,273	1.60%	8.90%
	Aug	14,269	12,643	1,358	1.87%	9.70%
	Sep	15,493	13,862	1,401	1.49%	9.18%
	Oct	14,790	12,950	1,603	1.60%	11.02%
	Nov	16,099	14,775	1,105	1.36%	6.96%
	Dec	14,040	12,875	952	1.52%	6.88%
2025	Jan	15,822	14,017	1,541	1.67%	9.91%
	Feb	13,946	12,242	1,489	1.54%	10.85%
	Mar	13,037	11,423	1,391	1.71%	10.86%
	Apr	14,134	12,414	1,511	1.48%	10.85%
	May	15,491	13,739	1,517	1.52%	9.94%
	Jun	16,239	14,502	1,508	1.41%	9.42%
	Jul	15,132	13,598	1,289	1.62%	8.66%
	Aug	14,658	13,038	1,373	1.68%	9.53%
	Sep	16,009	14,396	1,415	1.24%	8.95%
	Oct	15,418	13,546	1,617	1.66%	10.67%
	Nov	16,893	15,524	1,114	1.51%	6.69%
	Dec	14,569	13,359	961	1.71%	6.71%
2026	Jan	16,545	14,736	1,572	1.43%	9.64%
	Feb	14,419	12,657	1,518	1.70%	10.71%
	Mar	13,444	11,827	1,416	1.49%	10.69%
	Apr	14,665	12,858	1,535	1.85%	10.67%

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
	May	16,064	14,292	1,539	1.45%	9.72%
	Jun	16,810	15,111	1,527	1.02%	9.18%
	Jul	15,718	14,157	1,304	1.63%	8.44%
	Aug	15,048	13,433	1,388	1.50%	9.37%
	Sep	16,584	14,930	1,428	1.36%	8.73%
	Oct	15,978	14,142	1,631	1.28%	10.34%
	Nov	17,607	16,274	1,122	1.20%	6.45%
	Dec	15,047	13,843	970	1.55%	6.55%
2027	Jan	17,266	15,454	1,603	1.20%	9.40%
	Feb	14,812	13,072	1,547	1.31%	10.58%
	Mar	13,900	12,231	1,441	1.64%	10.54%
	Apr	15,096	13,303	1,560	1.55%	10.50%
	May	16,635	14,844	1,561	1.38%	9.51%
	Jun	17,508	15,721	1,548	1.37%	8.96%
	Jul	16,304	14,716	1,320	1.65%	8.23%
	Aug	15,437	13,828	1,404	1.33%	9.22%
	Sep	17,160	15,464	1,442	1.47%	8.53%
	Oct	16,603	14,738	1,645	1.32%	10.04%
	Nov	18,421	17,024	1,131	1.45%	6.23%
	Dec	15,539	14,327	979	1.50%	6.40%
2028	Jan	18,017	16,173	1,635	1.16%	9.18%
	Feb	15,290	13,487	1,576	1.49%	10.46%
	Mar	14,357	12,636	1,467	1.77%	10.40%
	Apr	15,552	13,747	1,585	1.42%	10.34%
	May	17,205	15,397	1,583	1.31%	9.32%
	Jun	18,143	16,330	1,568	1.35%	8.76%
	Jul	16,872	15,274	1,336	1.55%	8.04%
	Aug	15,897	14,223	1,419	1.60%	9.07%
	Sep	17,655	15,999	1,457	1.13%	8.34%
	Oct	17,231	15,334	1,659	1.38%	9.76%
	Nov	19,135	17,773	1,140	1.16%	6.03%
	Dec	16,054	14,811	989	1.58%	6.26%
2029	Jan	18,809	16,892	1,668	1.32%	8.99%
	Feb	15,759	13,902	1,606	1.59%	10.36%
	Mar	14,763	13,041	1,493	1.56%	10.27%
	Apr	16,058	14,191	1,611	1.60%	10.20%
	May	17,776	15,950	1,606	1.24%	9.15%
	Jun	18,791	16,939	1,589	1.40%	8.57%
	Jul	17,397	15,832	1,352	1.22%	7.87%
	Aug	16,316	14,618	1,435	1.61%	8.94%
	Sep	18,260	16,533	1,471	1.40%	8.17%
	Oct	17,844	15,931	1,674	1.35%	9.51%
	Nov	19,860	18,523	1,149	0.95%	5.84%
	Dec	16,527	15,295	998	1.42%	6.13%

MWh Offtake was forecasted using scientific method. The assumed load factor is 64%.



MWh Output was expected to grow at a rate of 4.18% annually.



Transmission Loss is expected to range from 0.95% to 2.18% while System Loss is expected to range from 5.84% to 12.53% from year 2020 to 2029.

Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
2018 - 054 RC	Base	Power Sector Assets and Liabilities Management Corporation	4.47	32,034	12/26/2016	12/25/2020
2015 - 076 RC	Base	FDC Misamis Power Corporation	25.00	219,000	7/26/2016	7/25/2041
2013 - 133 RC	Peaking	King Energy Generation, Inc.	9.40	24,017	10/3/2013	10/3/2023

None of the current PSA's of MORESCO II undergone a CSP since the agreements were filed in ERC before the effectivity of Department Circular No. DC 2015-05-0008 of the DOE.

The supply from PSALM provides for the base requirement of MORESCO II. The PSALM provides monthly allocation of Energy and Demand throughout the contract year. The actual billed overall monthly charge under the PSA ranged from 2.53 P/kwh to 2.96 P/kWh in 2019. The utilization from the total requirement is 20% to 30%. The reduction in allocation does not affect much with the delivery of energy to the consumers since it can be covered with the other two power suppliers.

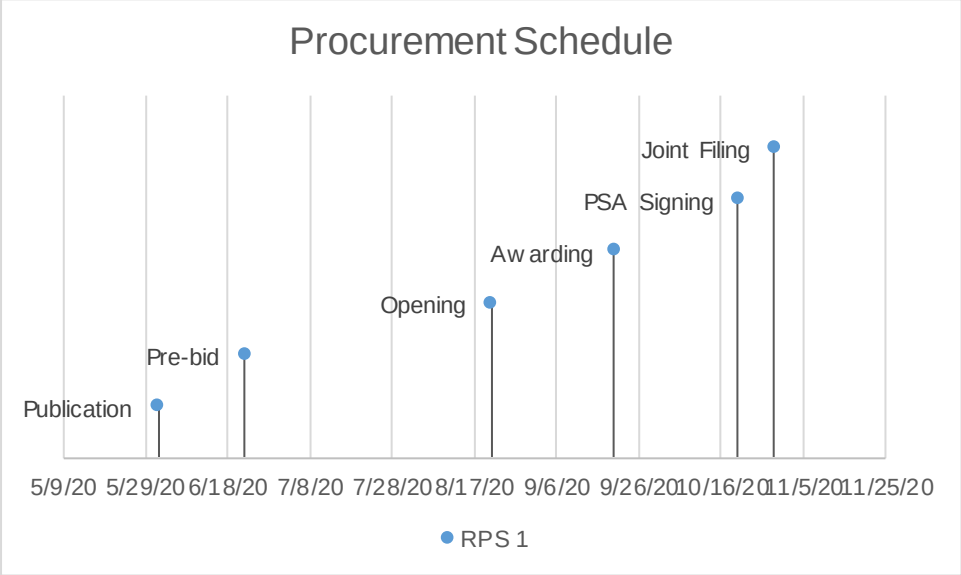
The supply from FDC-MPC provides for base to peaking requirement. Utilization from the total requirement is between 70% to 80%. Outages of the plant does not usually lead to unserved energy since the deficit can be drawn from KEGI and PSALM. The actual overall monthly charge under the PSA ranged from 6.33 P/kWh to 7.60 P/kWh with a variable cost that ranged from 2.16 P/kWh to 2.31 P/kWh.

The supply from KEGI provides for peaking requirement before the commercial operation of FDC-MPC. It is now utilized as replacement power and for island mode if the power from the grid cannot travel into the system due to line faults.

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	PSA Start	PSA End
Modular Genset	Peaking	DU-owned	8.50	6,205	1/20/2022	1/21/2042

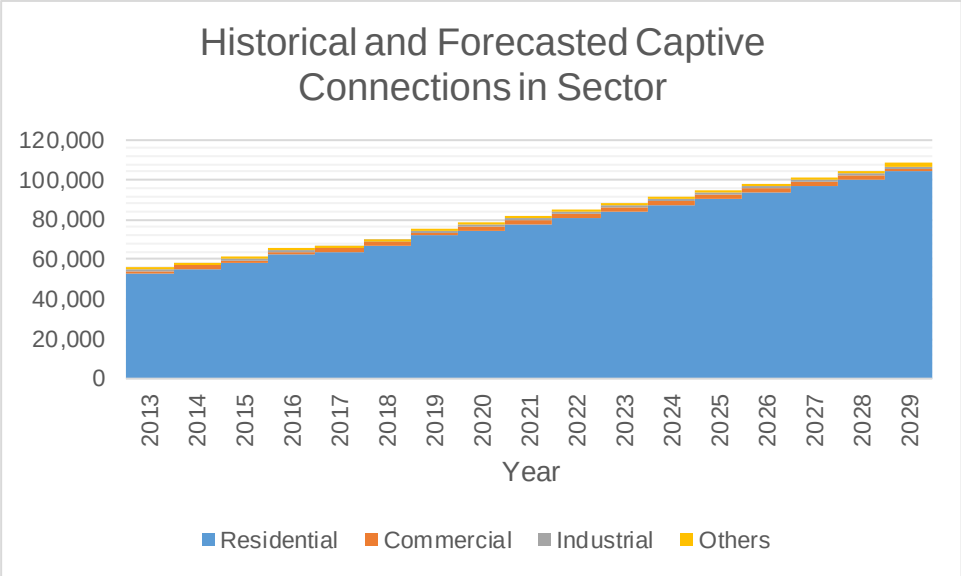
The Modular Genset is a DU-owned generating unit. It is intended to be used as back-up power.

	RPS 1
Type	Base
Minimum MW	9.00
Minimum MWh/yr	73,656
PSA Start	11/1/2023
PSA End	11/1/2043
Publication	6/1/2020
Pre-bid	6/22/2020
Opening	8/21/2020
Awarding	9/20/2020
PSA Signing	10/20/2020
Joint Filing	10/29/2020



The procurement of the 9 MW of supply which is planned to be available in 2023, the first publication or launching of CSP will be on June 2020. Joint filing is planned on November 2020 or 150 days later, in accordance with DOE's 2018 CSP Policy.

Captive Customer Connections



The number of Residential connections is expected to grow at a rate of 7.85% annually. Said customer class is expected to account for 45%% of the total consumption.