

# Power Supply Procurement Plan 2024-2033

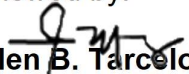
## Misamis Oriental – 1 Rural Electric Service Cooperative, Inc. MORESCO-1

Prepared by:

  
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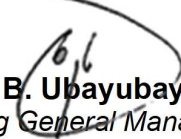
  
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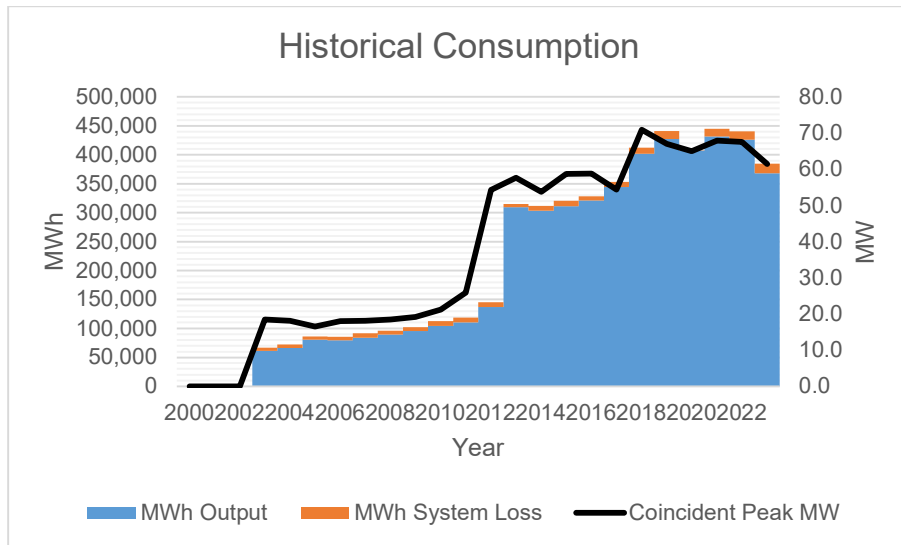
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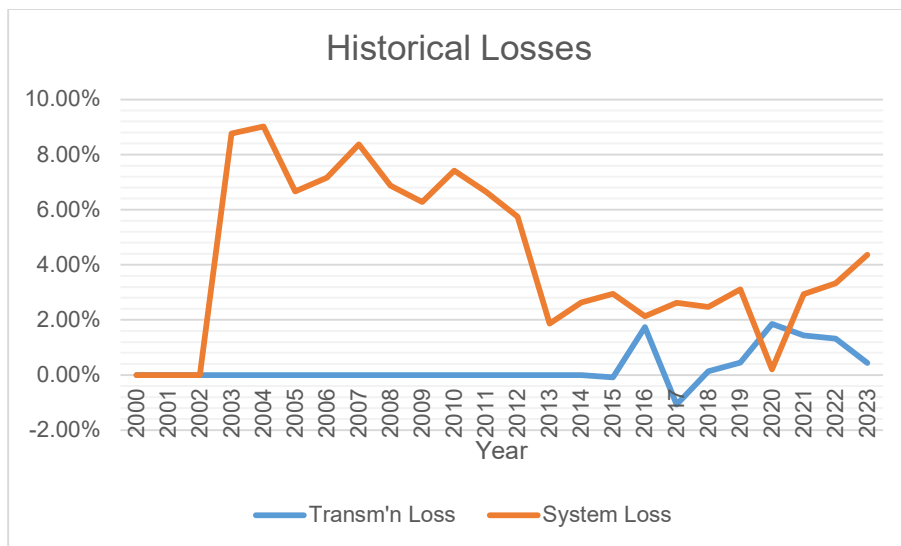
## Historical Consumption Data

	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	18.47	67,332	0	67,332	61,429	5,903	42%	0.00%	0.00%	8.77%
2004	18.12	72,457	0	72,457	65,921	6,536	46%	0.00%	0.00%	9.02%
2005	16.55	86,186	0	86,186	80,443	5,743	59%	0.00%	0.00%	6.66%
2006	18.07	85,841	0	85,841	79,694	6,147	54%	0.00%	0.00%	7.16%
2007	18.13	91,313	0	91,313	83,665	7,647	58%	0.00%	0.00%	8.37%
2008	18.46	96,299	0	96,299	89,675	6,624	60%	0.00%	0.00%	6.88%
2009	19.22	102,205	0	102,205	95,796	6,409	61%	0.00%	0.00%	6.27%
2010	21.22	112,679	0	112,679	104,321	8,359	61%	0.00%	0.00%	7.42%
2011	25.84	118,837	0	118,837	110,923	7,914	52%	0.00%	0.00%	6.66%
2012	54.29	145,583	0	145,583	137,221	8,362	31%	0.00%	0.00%	5.74%
2013	57.66	315,181	0	315,181	309,296	5,885	62%	0.00%	0.00%	1.87%
2014	53.83	311,945	0	311,945	303,737	8,208	66%	0.00%	0.00%	2.63%
2015	58.69	320,452	0	320,719	311,271	9,449	62%	0.00%	-0.08%	2.95%
2016	58.82	334,175	0	328,337	321,323	7,013	64%	0.00%	1.75%	2.14%
2017	54.40	349,512	0	353,264	344,004	9,260	74%	0.00%	-1.07%	2.62%
2018	70.89	412,516	0	411,953	401,752	10,201	66%	0.00%	0.14%	2.48%
2019	67.00	442,986	0	441,011	427,292	13,719	75%	0.00%	0.45%	3.11%
2020	65.06	415,752	0	408,037	407,191	847	72%	0.00%	1.86%	0.21%
2021	67.90	451,576	0	445,085	432,024	13,060	75%	0.00%	1.44%	2.93%
2022	67.59	446,721	0	440,817	426,134	14,683	74%	0.00%	1.32%	3.33%
2023	61.48	386,215	96,970	384,562	367,763	16,799	71%	0.00%	0.43%	4.37%

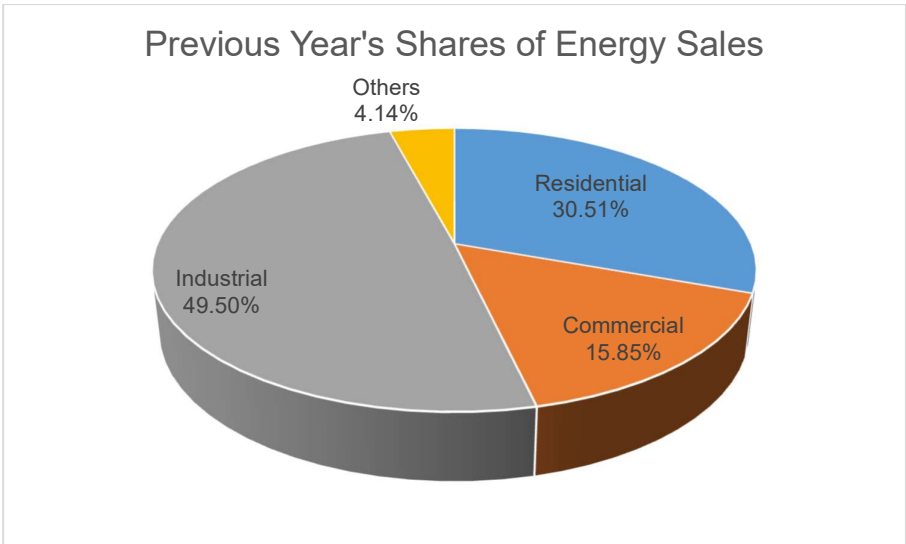
Peak Demand increased from 25.84 MW in 2011 to 54.29 MW in 2012 at a rate of 110% due to the Industrial load (HOLCIM-Lugait) as new customer. MWh Offtake significantly increased from 145,583 MWh in 2012 to 315,181 MWh in 2013 at a rate of 116% due to new industrial load is in full operation. Within the same period, Load Factor ranged from 31% to 62%. MORESCO-1 had its peak demand at 70.89 in 2018. Currently MORESCO-1 has a demand of 61.48 in 2023.



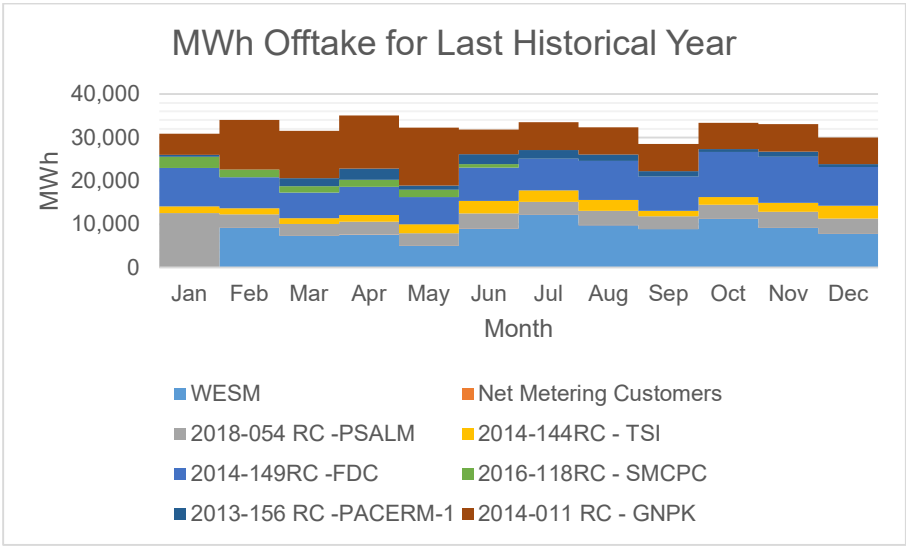
MWh Output increased from year 2012 to year 2013 at a rate of 128%, while MWh System Loss decreased at a rate of 70% within the same period. On February and March 2022, the MWh Input is greater than MWh Output based on the actual data that MORESCO-1 received from NGCP and its partner power suppliers. For Year 2022, there is a decrease of peak demand as compared to the previous year due to the pandemic that caused economic shutdowns to some of our commercial and industrial customers. Notably, one of our customer, Talakag Steel Corporation having an average demand of 10MW ceased its operation last September 2022. There were MWh transmission losses particularly during February and March 2022 due to the load transfer from Pagawan Substation (M2) to M21 at Patag, Opol, however NGCP haven't recorded the change in terms of Energy.



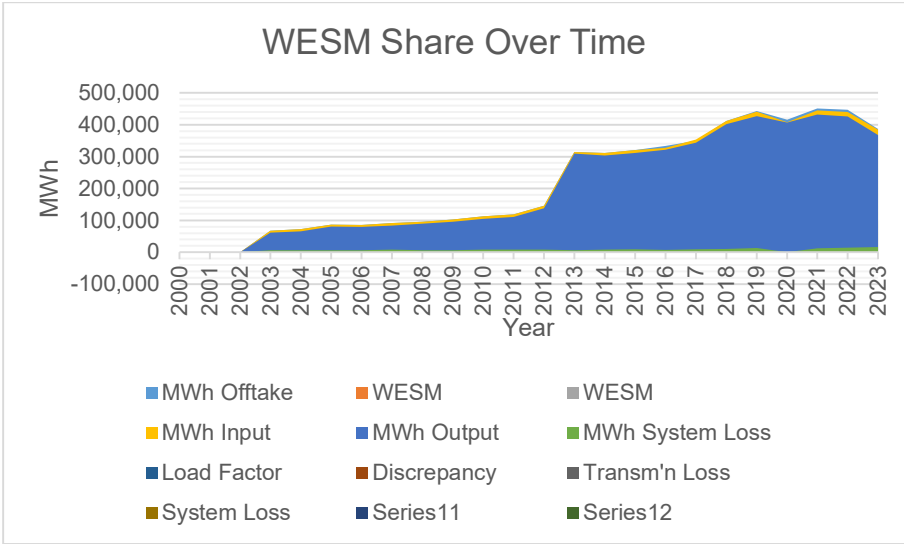
Historically, Transmission Loss ranged from -1.07% to 1.86% while System Loss ranged from 0.21% to 9.02%. Transmission Loss peaked at 1.86% on year 2020 because during that year particularly on the billing month of July to August the Quibonbon Substation, Taboc Substation, ABI Substation were transferred to a new NGCP totalizer metering point (M21) at Patag, Opol however the NGCP at that billing months wasn't able to record the transferred loads. This resulted to a lower recorded NGCP Billing MWh metered quantity which is why there has an increase of transmission system loss. As of writing, this is currently being settled with NGCP. The distribution system Loss peaked at 9.02% on year 2004 because during that time there is a limitation in technology making it difficult to bill customers on the proper billing cycle and during that time also meter reading is prone to error and the kWh is prone to tampering.



Industrial customers account for the bulk of energy sales at 49.50% despite of the low number of connections. In contrast, Residential customers accounted for only 30.51% of energy sales despite of the high number of connections. These figures are expected to drastically change in the following years due to rapid development within the franchise particularly on the Cagayan de Oro – Iligan Industrial Corridor.

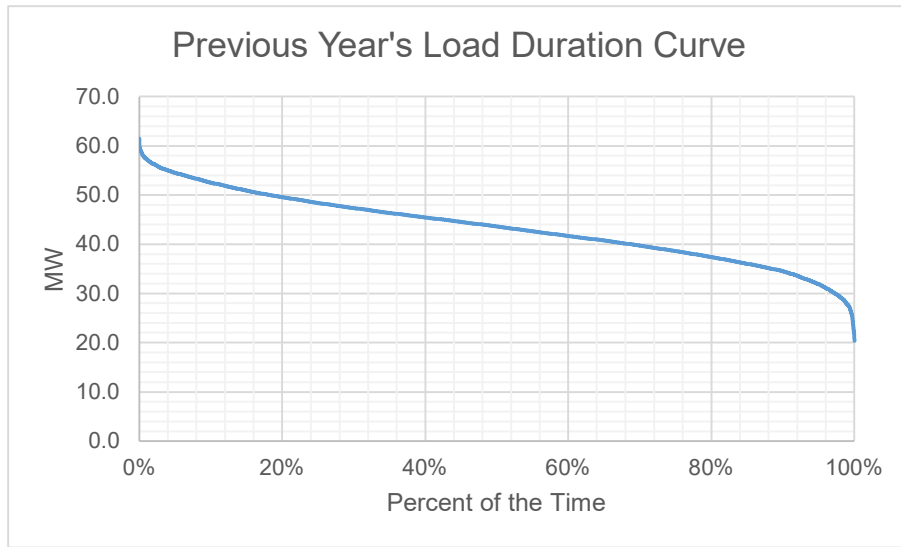


For 2023, the total Offtake for the last historical year is lower than the quantity stipulated in the PSA. The PSAs with Power Sector Assets and Liabilities Management Corporation (2023-013 RC), FDC Misamis Power Corporation (2014-149 RC), GN Power Kauswagan Ltd. Co. (2014-011 RC) and WESM account for the bulk of MWh Offtake.

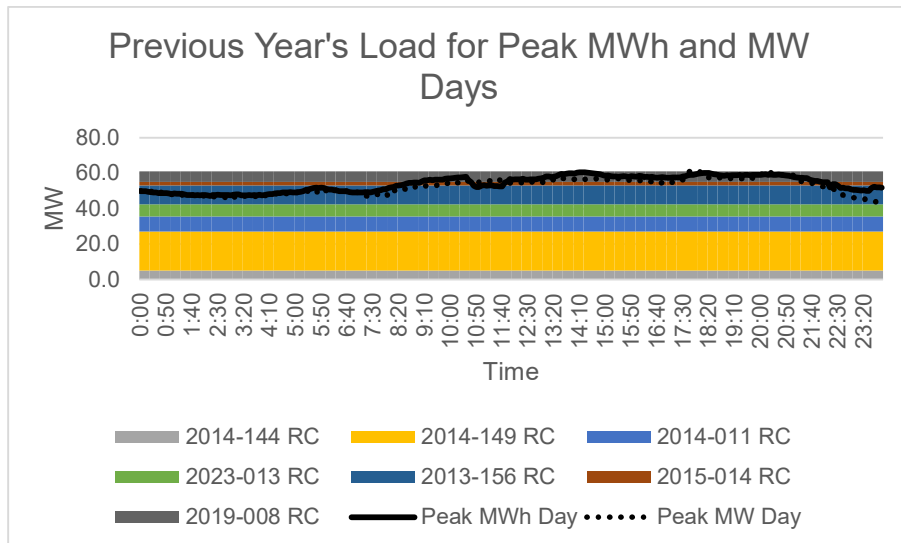


On January 26, 2023, the Commercial Operation of the Wholesale Electricity Spot Market (WESM) commenced in Mindanao. During this period, WESM prices were relatively cheaper than our Independent Power Producers (IPPs), hence, MORESCO-1 took advantage of the WESM with a total exposure of 25% in 2023.

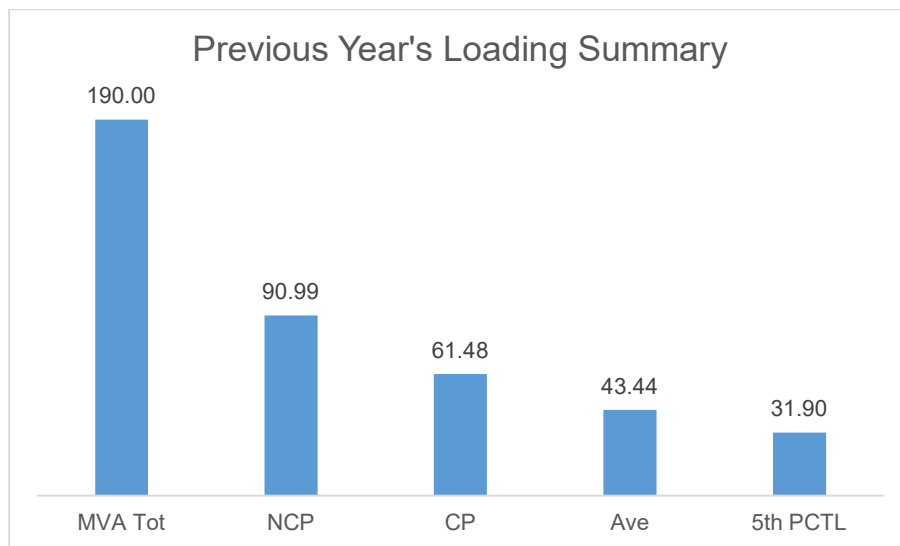
# Previous Year's Load Profile



Based on the Load Duration Curve, the minimum load is 40.65 MW and the maximum load is 61.48 MW for the last historical year.



Peak MW occurred on intervals 11-21. Peak daily MWh occurred on the same time due to high consumption of residential customers at this interval. As shown in the Load Curves, the available supply is higher than the Peak Demand.



The Non-coincident Peak Demand is 152.47 MW, which is around 92.41% of the total substation capacity of 165 MVA at a power factor of 87.9%. The load factor or the ratio between the Average Load of 86.88 MW and the Non-coincident Peak Demand is 56.98% of. A safe estimate of the true minimum load is the fifth percentile load of 63.80 MW which is 41.84% of the Non-coincident Peak Demand.

Metering Point	Substation MVA	Substation Peak MW
M13(CARMEN)	10	3.068
M2(PAGAWAN)	10	4.624
M6(OPOL)	10	4.404
M10(HOLCIM 69KV)	20	5.670
M11(HOLCIM 138KV)	35	20.076
M15(CANITUAN)	10	5.779
M17(HINIGDAAN)	40	18.370
M18(MAMBUAYA)	10	3.753
M19(TALAKAG)	10	1.740
M21(OPOL TOTALIZER)	35	23.509

The substation transformer at Canitoan Substation is expected to be loaded at 70% in 4 months. This will be addressed by the construction of the Additional 69/13.2kV 10/12.5MVA Substation at Canituan, Cagayan de Oro City which was completed last November 2022. This substation project is to be applied to the ERC by the cooperative through its Unplanned CAPEX 2022 application

The substation transformer at Pagawan Substation is expected to be loaded at 70% in 1 month. This will be addressed initially thru load transfer to San Isidro and Lumbo Substation until the planned construction of 69/13.2kV 15/18.75MVA Substation at Jampason Initao which would start its construction within the year of 2027. This substation project is to be applied to the ERC by the cooperative through its CAPEX 2027-2029 application

The substation transformer at Lumbo Substation is expected to be loaded at 70% in 25 months. This will be addressed by the construction of 69/13.2kV 15/18.75MVA Substation at Lourdes, Alubijid which would start its construction within the year of 2026. This substation project is to be applied to the ERC by the cooperative through its Unplanned CAPEX 2019 application.

The substation transformer at Taboc Substation is expected to be loaded at 70% in 34 months. This will be addressed by the construction of 69/13.2kV 15/18.75MVA Substation at Igpit, Opol which would start its construction within the year of 2027. This substation project is to be applied to the ERC by the cooperative through its CAPEX 2027-2029 application.

The substation transformer Mambuaya Substation is expected to be loaded at 70% in 16 months. This will be addressed by the load transfer of loads to Talakag Substation as the big load in the area have economic shutdown.

For Quibonbon Substations 1 and 2 is expected to reach 70% at 5 and 39 months respectively. This will be addressed by the construction of 69/13.2kV 15/18.75MVA Substation at Taytay, El Salvador City within 2027. This substation project is to be applied to the ERC by the cooperative through its CAPEX 2027-2029 application.



## 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
2024	Jan	58.67	55.00	6.00	0.000		94%	104%	2.33
	Feb	58.72	55.00	6.00	0.000		94%	104%	2.28
	Mar	59.08	55.00	6.00	0.000		93%	103%	1.92
	Apr	64.75	55.00	6.00	0.000		85%	94%	-3.75
	May	68.74	61.50	6.00	0.000		89%	98%	-1.24
	Jun	65.73	61.50	6.00	0.000		94%	103%	1.77
	Jul	63.33	55.00	6.00	0.000		87%	96%	-2.33
	Aug	64.10	55.00	6.00	0.000		86%	95%	-3.10
	Sep	65.69	55.00	6.00	0.000		84%	93%	-4.69
	Oct	67.87	61.50	6.00	0.000		91%	99%	-0.37
	Nov	63.38	55.00	6.00	0.000		87%	96%	-2.38
	Dec	60.24	55.00	6.00	0.000		91%	101%	0.76
2025	Jan	60.68	55.00	6.00	7.500		91%	113%	7.82
	Feb	69.95	58.50	6.00	7.500		84%	103%	2.05
	Mar	69.80	58.50	6.00	7.500		84%	103%	2.20
	Apr	73.50	60.50	6.00	7.500		82%	101%	0.50
	May	67.05	55.00	6.00	7.500		82%	102%	1.45
	Jun	64.71	55.00	6.00	7.500		85%	106%	3.79
	Jul	71.03	59.50	6.00	7.500		84%	103%	1.97
	Aug	66.59	55.00	6.00	7.500		83%	103%	1.91
	Sep	58.09	55.00	6.00	7.500		95%	118%	10.41
	Oct	70.24	58.50	6.00	7.50		83%	102%	1.76
	Nov	65.65	55.00	6.00	7.50		84%	104%	2.85
	Dec	62.92	55.00	6.00	7.50		87%	109%	5.58
2026	Jan	63.15	48.00	6.00	10.50		76%	102%	1.35
	Feb	72.16	56.50	6.00	10.50		78%	101%	0.84
	Mar	72.36	56.50	6.00	10.50		78%	101%	0.64
	Apr	74.28	56.50	6.00	10.50		76%	98%	-1.28

	May	70.11	56.50	6.00	10.50		81%	104%	2.89
	Jun	67.79	56.50	6.00	10.50		83%	108%	5.21
	Jul	73.74	56.50	6.00	10.50		77%	99%	-0.74
	Aug	69.51	56.50	6.00	10.50		81%	105%	3.49
	Sep	61.00	48.00	6.00	10.50		79%	106%	3.50
	Oct	73.17	56.50	6.00	10.50		77%	100%	-0.17
	Nov	68.44	56.50	6.00	10.50		83%	107%	4.56
	Dec	66.12	56.50	6.00	10.50		85%	110%	6.88
2027	Jan	66.17	56.50	6.00	17.50		85%	121%	13.83
	Feb	74.95	56.50	6.00	17.50		75%	107%	5.05
	Mar	75.55	56.50	6.00	17.50		75%	106%	4.45
	Apr	79.72	56.50	6.00	17.50		71%	100%	0.28
	May	73.81	56.50	6.00	17.50		77%	108%	6.19
	Jun	71.48	48.00	6.00	17.50		67%	100%	0.02
	Jul	77.09	56.50	6.00	17.50		73%	104%	2.91
	Aug	73.08	56.50	6.00	17.50		77%	109%	6.92
	Sep	64.51	56.50	6.00	17.50		88%	124%	15.49
	Oct	76.75	56.50	6.00	17.50		74%	104%	3.25
	Nov	71.86	56.50	6.00	17.50		79%	111%	8.14
	Dec	69.95	48.00	6.00	17.50		69%	102%	1.55
2028	Jan	69.84	48.00	6.00	24.50		69%	112%	8.66
	Feb	78.44	48.00	6.00	24.50		61%	100%	0.06
	Mar	79.50	49.50	6.00	24.50		62%	101%	0.50
	Apr	83.95	55.50	6.00	24.50		66%	102%	2.05
	May	78.27	48.00	6.00	24.50		61%	100%	0.23
	Jun	75.89	48.00	6.00	24.50		63%	103%	2.61
	Jul	81.21	52.00	6.00	24.50		64%	102%	1.29
	Aug	77.39	48.00	6.00	24.50		62%	101%	1.11
	Sep	68.69	48.00	6.00	24.50		70%	114%	9.81
	Oct	81.11	52.50	6.00	24.50		65%	102%	1.89
	Nov	76.02	48.00	6.00	24.50		63%	103%	2.48
	Dec	74.51	48.00	6.00	24.50		64%	105%	3.99
2029	Jan	74.26	48.00	6.00	34.50		65%	119%	14.24

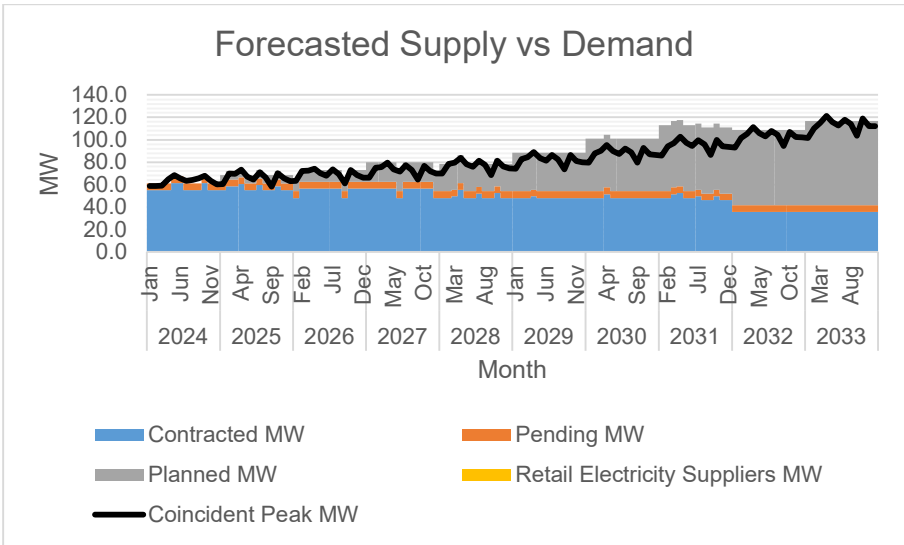
	Feb	82.72	48.00	6.00	34.50		58%	107%	5.78
	Mar	84.33	48.00	6.00	34.50		57%	105%	4.17
	Apr	89.09	49.50	6.00	34.50		56%	101%	0.91
	May	83.59	48.00	6.00	34.50		57%	106%	4.91
	Jun	81.12	48.00	6.00	34.50		59%	109%	7.38
	Jul	86.22	48.00	6.00	34.50		56%	103%	2.28
	Aug	82.56	48.00	6.00	34.50		58%	107%	5.94
	Sep	73.66	48.00	6.00	34.50		65%	120%	14.84
	Oct	86.37	48.00	6.00	34.50		56%	102%	2.13
	Nov	81.04	48.00	6.00	34.50		59%	109%	7.46
	Dec	79.90	48.00	6.00	34.50		60%	111%	8.60
2030	Jan	79.52	48.00	6.00	47.00		60%	127%	21.48
	Feb	87.92	48.00	6.00	47.00		55%	115%	13.08
	Mar	90.17	48.00	6.00	47.00		53%	112%	10.83
	Apr	95.26	51.50	6.00	47.00		54%	110%	9.24
	May	89.90	48.00	6.00	47.00		53%	112%	11.10
	Jun	87.28	48.00	6.00	47.00		55%	116%	13.72
	Jul	92.25	48.00	6.00	47.00		52%	109%	8.75
	Aug	88.71	48.00	6.00	47.00		54%	114%	12.29
	Sep	79.51	48.00	6.00	47.00		60%	127%	21.49
	Oct	92.66	48.00	6.00	47.00		52%	109%	8.34
	Nov	87.05	48.00	6.00	47.00		55%	116%	13.95
	Dec	86.24	48.00	6.00	47.00		56%	117%	14.76
2031	Jan	85.75	48.00	6.00	59.00		56%	132%	27.25
	Feb	94.16	48.00	6.00	59.00		51%	120%	18.84
	Mar	97.14	51.50	6.00	59.00		53%	120%	19.36
	Apr	102.61	52.50	6.00	59.00		51%	115%	14.89
	May	97.31	48.00	6.00	59.00		49%	116%	15.69
	Jun	94.48	48.00	6.00	59.00		51%	120%	18.52
	Jul	99.42	49.50	6.00	59.00		50%	115%	15.08
	Aug	95.96	46.00	6.00	59.00		48%	116%	15.04
	Sep	86.37	46.00	6.00	59.00		53%	129%	24.63
	Oct	100.11	49.50	6.00	59.00		49%	114%	14.39

	Nov	94.15	46.00	6.00	59.00		49%	118%	16.85
	Dec	93.64	46.00	6.00	59.00		49%	119%	17.36
2032	Jan	93.04	35.50	6.00	67.00		38%	117%	15.46
	Feb	101.54	35.50	6.00	67.00		35%	107%	6.96
	Mar	105.38	35.50	6.00	67.00		34%	103%	3.12
	Apr	111.25	35.50	6.00	67.00		32%	98%	-2.75
	May	105.95	35.50	6.00	67.00		34%	102%	2.55
	Jun	102.84	35.50	6.00	67.00		35%	106%	5.66
	Jul	107.86	35.50	6.00	67.00		33%	101%	0.64
	Aug	104.45	35.50	6.00	67.00		34%	104%	4.05
	Sep	94.34	35.50	6.00	67.00		38%	115%	14.16
	Oct	106.84	35.50	6.00	67.00		33%	102%	1.66
	Nov	102.49	35.50	6.00	67.00		35%	106%	6.01
	Dec	102.23	35.50	6.00	67.00		35%	106%	6.27
2033	Jan	101.50	35.50	6.00	75.00		35%	115%	15.00
	Feb	110.19	35.50	6.00	75.00		32%	106%	6.31
	Mar	115.01	35.50	6.00	75.00		31%	101%	1.49
	Apr	121.34	35.50	6.00	75.00		29%	96%	-4.84
	May	115.95	35.50	6.00	75.00		31%	100%	0.55
	Jun	112.47	35.50	6.00	75.00		32%	104%	4.03
	Jul	117.70	35.50	6.00	75.00		30%	99%	-1.20
	Aug	114.28	35.50	6.00	75.00		31%	102%	2.22
	Sep	103.53	35.50	6.00	75.00		34%	113%	12.97
	Oct	118.99	35.50	6.00	75.00		30%	98%	-2.49
	Nov	112.18	35.50	6.00	75.00		32%	104%	4.32
	Dec	112.11	35.50	6.00	75.00		32%	104%	4.39

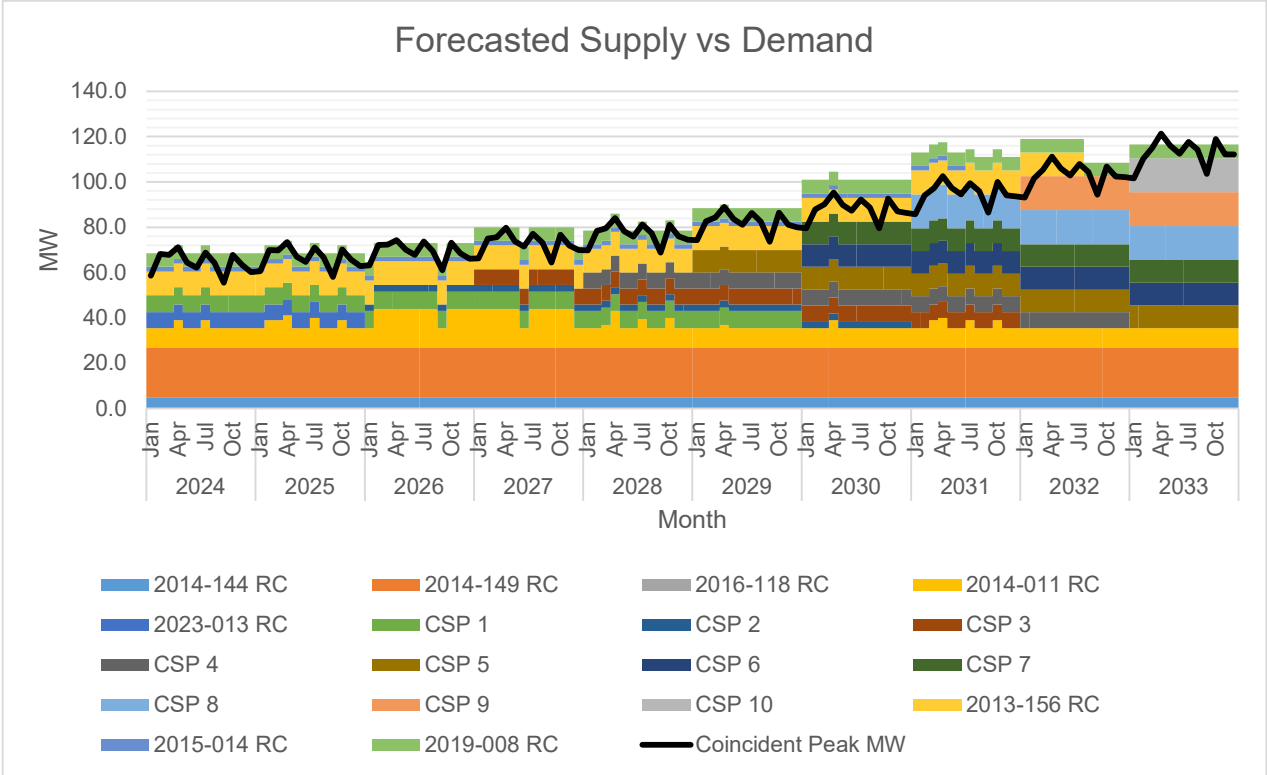
The Peak Demand was forecasted using annual demand/load forecast of per customer class per substation then using the 8760 metering load profiles of the cooperative to derive the monthly peak demand forecast and was assumed to occur on the month of January and May based on 8760 load profile of the cooperative. Monthly Peak Demand is at its lowest on the month of February based on the 8760 load profile of the cooperative. In general, Peak Demand is expected to grow at a rate of 6.83% annually.

However, in anticipation of the implementation of the Retail Competition and Open Access (RCOA) in Mindanao, the demand of the probable contestable customers of MORESCO-1 is at least 32 MW which comprises around forty percent (40%) of the total projected demand. This will

result to a significant surplus on MORESCO-1's contracted capacity once these contestable customers migrate. Knowing this risk, MORESCO-1 has employed several measures in order to ensure reliability and efficiency of the distribution services and to mitigate the impact of rate increase due to the possible stranded contracts such as negotiation with the contracted IPPs.

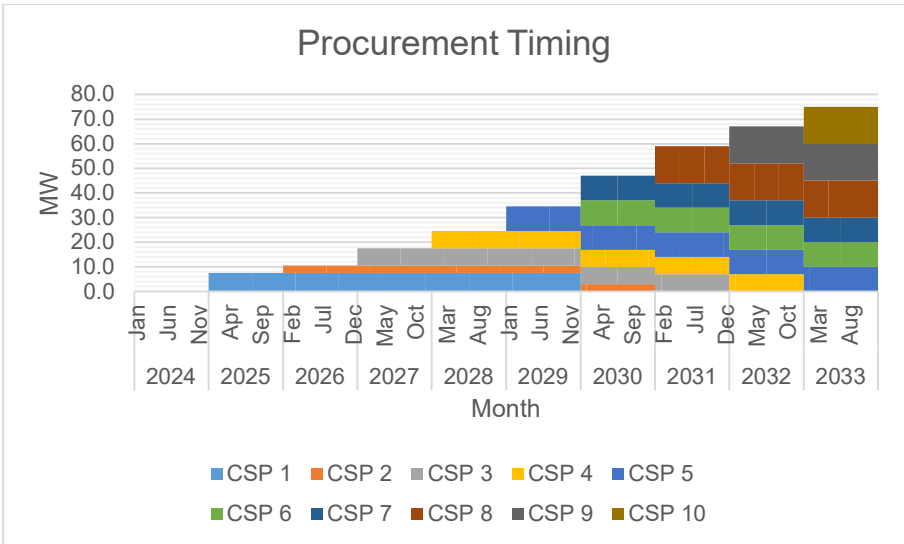


The available supply is generally above the Peak Demand. This is because of the procurement of the renewable energy supply which is assumed to be at 40% capacity factor only for the purpose of complying the RPS requirement growth of 1% annually and 2.52% starting year 2023.

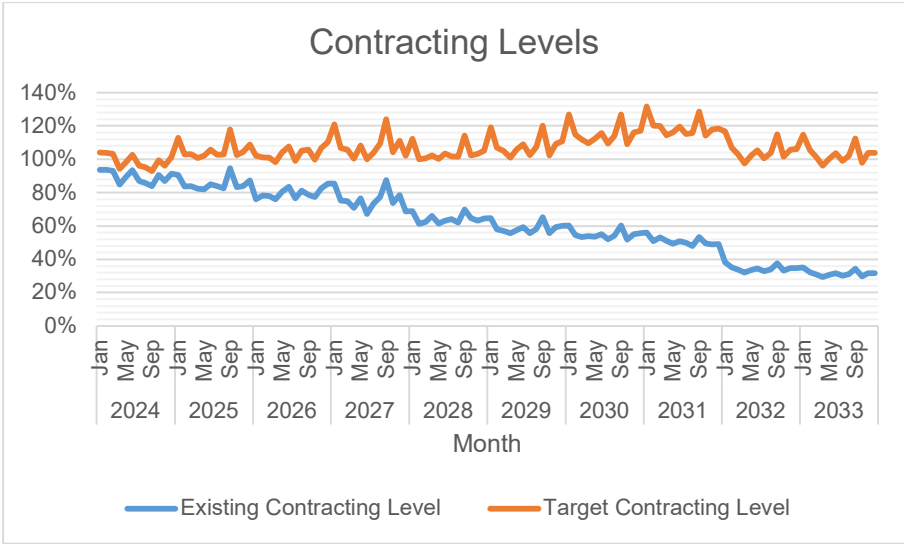


Of the available base load power supply, the largest is 34.05 MW from GN Power Kauswagan Ltd. (2014-011 RC), followed by FDC Misamis Power Corporation (2014-149 RC) with a 22 MW contract capacity, thirdly by PSALM with a 7MW contract capacity (2023-013 RC), and lastly by TSI (2014-144 RC), and SMCP (2016-118 RC) with both at 5MW.

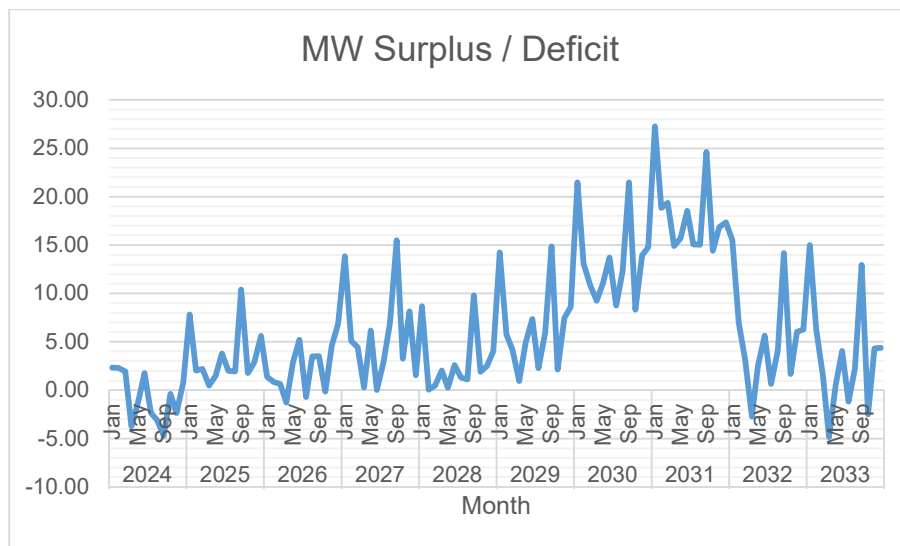
However, the Energy Regulatory Commission issued an Order with Cases no. 2014-011RC and 2014-011-K RC dated February 23, 2023 suspending the implementation of the Minimum Quantity of the PPSA with GNPK and modifying the implementation of the contract to a Take-And-Pay scheme. Further, the Commission also issued an Order with Case no. 2016-118 RC dated March 1, 2023 directing MORESCO-1 and SMCP to STOP implementing the PSC immediately upon receipt of the Order.



Due to the increasing demand as forecasted with a growth rate of 6.5%, MORESCO-1 will already have a deficit in terms of demand by the year 2026. To address this, MORESCO-1 has laid out the following power supply procurement plan. The first wave of supply procurement will be for 7.5 MW and 3 MW from any RE-eligible facilities which are planned to be procured by 2025. This will be followed by contracting supply of renewable energy for the RPS requirement of 7 MW, 10 MW, 10 MW, 10 MW, 15 MW, 15 MW, and 15 MW that is expected to be delivered on year 2027, 2028, 2029, 2030, 2031, and 2032, respectively. The said power supply procurement plan will also address the RPS requirement of MORESCO-1 in which REC shortfall will start in the year 2023. MORESCO-1 will have to manage its power supply contracts to avoid oversupply and to ensure the least-cost of power while balancing the consumers' needs and the RPS compliance.



Over the 10-year period, there is an over-contracting by an average of 4%. The highest target contracting level is 131.78% which is expected to occur on January 2031. The lowest target contracting level is 96.01% which is expected to occur on April 2033.



Over the 10-year period, there is over-contracting of an average of 7.20 MW. The highest surplus is 27.25 MW which is expected to occur on the month of January 2031. The lowest deficit is 0.31 MW which is expected to occur on the month of April 2033. Over contracting is due to the RPS compliance where there is a need to source out for RE technology from any RE-eligible facilities.

		MWh Offtake	MWh Output	MWh System Loss	Transm'n Loss	System Loss
2024	Jan	35,874	34,702	1,171	0.00%	3.26%
	Feb	42,230	40,335	1,896	0.00%	4.49%
	Mar	40,239	40,086	153	0.00%	0.38%
	Apr	43,492	42,147	1,344	0.00%	3.09%
	May	39,397	38,167	1,230	0.00%	3.12%
	Jun	37,914	36,786	1,128	0.00%	2.97%
	Jul	41,793	40,721	1,072	0.00%	2.56%
	Aug	39,304	37,978	1,326	0.00%	3.37%
	Sep	34,217	32,933	1,284	0.00%	3.75%
	Oct	41,291	40,171	1,120	0.00%	2.71%
	Nov	39,129	37,494	1,635	0.00%	4.18%
	Dec	36,855	35,641	1,214	0.00%	3.30%
2025	Jan	37,122	35,895	1,227	0.00%	3.31%
	Feb	43,350	41,364	1,986	0.00%	4.58%
	Mar	41,457	41,296	161	0.00%	0.39%
	Apr	44,886	43,472	1,413	0.00%	3.15%
	May	40,962	39,664	1,298	0.00%	3.17%
	Jun	39,487	38,306	1,181	0.00%	2.99%
	Jul	43,140	42,014	1,126	0.00%	2.61%
	Aug	40,795	39,403	1,392	0.00%	3.41%
	Sep	35,718	34,373	1,346	0.00%	3.77%
	Oct	42,761	41,583	1,178	0.00%	2.76%
	Nov	40,561	38,841	1,720	0.00%	4.24%
	Dec	38,502	37,227	1,275	0.00%	3.31%
2026	Jan	38,670	37,360	1,311	0.00%	3.39%
	Feb	44,798	42,676	2,121	0.00%	4.74%
	Mar	42,987	42,815	173	0.00%	0.40%



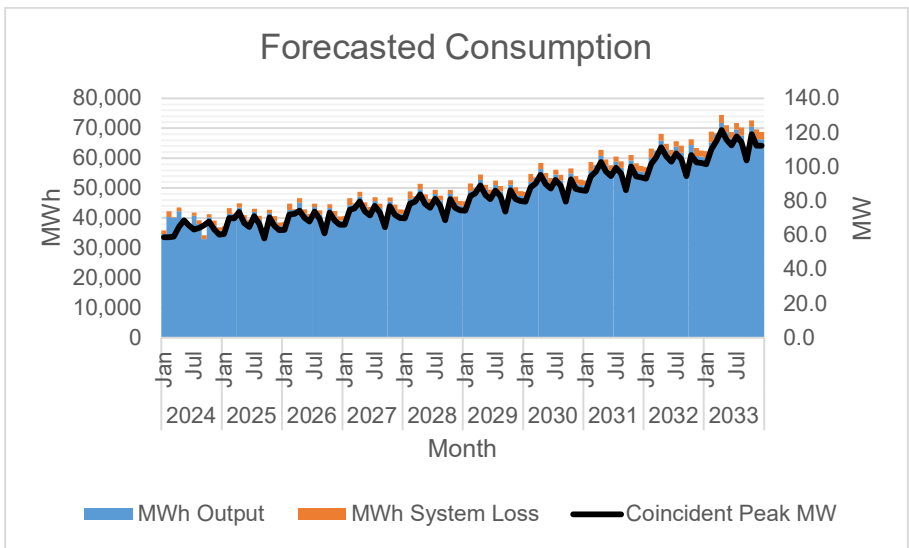
	Apr	46,635	45,121	1,515	0.00%	3.25%
	May	42,875	41,479	1,396	0.00%	3.26%
	Jun	41,396	40,134	1,262	0.00%	3.05%
	Jul	44,829	43,622	1,207	0.00%	2.69%
	Aug	42,630	41,141	1,490	0.00%	3.49%
	Sep	37,542	36,103	1,439	0.00%	3.83%
	Oct	44,582	43,319	1,263	0.00%	2.83%
	Nov	42,341	40,497	1,844	0.00%	4.35%
	Dec	40,491	39,126	1,365	0.00%	3.37%
2027	Jan	40,543	39,150	1,393	0.00%	3.44%
	Feb	46,587	44,332	2,255	0.00%	4.84%
	Mar	44,893	44,709	184	0.00%	0.41%
	Apr	48,775	47,161	1,615	0.00%	3.31%
	May	45,168	43,674	1,494	0.00%	3.31%
	Jun	43,667	42,325	1,342	0.00%	3.07%
	Jul	46,898	45,611	1,287	0.00%	2.74%
	Aug	44,840	43,253	1,587	0.00%	3.54%
	Sep	39,708	38,178	1,530	0.00%	3.85%
	Oct	46,792	45,445	1,347	0.00%	2.88%
	Nov	44,490	42,523	1,967	0.00%	4.42%
	Dec	42,849	41,395	1,454	0.00%	3.39%
2028	Jan	42,812	41,323	1,489	0.00%	3.48%
	Feb	48,807	46,396	2,411	0.00%	4.94%
	Mar	47,247	47,050	197	0.00%	0.42%
	Apr	51,395	49,664	1,731	0.00%	3.37%
	May	47,918	46,312	1,606	0.00%	3.35%
	Jun	46,372	44,938	1,434	0.00%	3.09%
	Jul	49,432	48,053	1,379	0.00%	2.79%
	Aug	47,505	45,806	1,699	0.00%	3.58%
	Sep	42,292	40,655	1,637	0.00%	3.87%
	Oct	49,475	48,030	1,445	0.00%	2.92%
	Nov	47,097	44,988	2,109	0.00%	4.48%
	Dec	45,651	44,093	1,558	0.00%	3.41%
2029	Jan	45,526	43,937	1,589	0.00%	3.49%
	Feb	51,505	48,933	2,572	0.00%	4.99%
	Mar	50,121	49,910	211	0.00%	0.42%
	Apr	54,557	52,705	1,853	0.00%	3.40%
	May	51,187	49,462	1,726	0.00%	3.37%
	Jun	49,565	48,035	1,530	0.00%	3.09%
	Jul	52,496	51,020	1,476	0.00%	2.81%
	Aug	50,685	48,868	1,817	0.00%	3.58%
	Sep	45,343	43,596	1,748	0.00%	3.85%
	Oct	52,694	51,147	1,547	0.00%	2.94%
	Nov	50,220	47,960	2,259	0.00%	4.50%
	Dec	48,951	47,285	1,666	0.00%	3.40%
2030	Jan	48,755	47,054	1,701	0.00%	3.49%
	Feb	54,765	52,010	2,755	0.00%	5.03%
	Mar	53,591	53,365	226	0.00%	0.42%
	Apr	58,348	56,358	1,990	0.00%	3.41%

	May	55,052	53,192	1,859	0.00%	3.38%
	Jun	53,319	51,681	1,639	0.00%	3.07%
	Jul	56,169	54,584	1,585	0.00%	2.82%
	Aug	54,458	52,509	1,949	0.00%	3.58%
	Sep	48,934	47,061	1,873	0.00%	3.83%
	Oct	56,533	54,871	1,662	0.00%	2.94%
	Nov	53,940	51,512	2,428	0.00%	4.50%
	Dec	52,824	51,036	1,788	0.00%	3.38%
2031	Jan	52,555	50,735	1,820	0.00%	3.46%
	Feb	58,644	55,697	2,947	0.00%	5.03%
	Mar	57,732	57,490	242	0.00%	0.42%
	Apr	62,838	60,702	2,136	0.00%	3.40%
	May	59,579	57,576	2,003	0.00%	3.36%
	Jun	57,694	55,941	1,753	0.00%	3.04%
	Jul	60,525	58,824	1,701	0.00%	2.81%
	Aug	58,890	56,801	2,090	0.00%	3.55%
	Sep	53,123	51,117	2,005	0.00%	3.77%
	Oct	61,062	59,278	1,784	0.00%	2.92%
	Nov	58,323	55,715	2,608	0.00%	4.47%
	Dec	57,331	55,415	1,917	0.00%	3.34%
2032	Jan	56,992	55,045	1,947	0.00%	3.42%
	Feb	63,216	60,063	3,153	0.00%	4.99%
	Mar	62,621	62,361	260	0.00%	0.42%
	Apr	68,108	65,815	2,293	0.00%	3.37%
	May	64,844	62,686	2,158	0.00%	3.33%
	Jun	62,761	60,885	1,875	0.00%	2.99%
	Jul	65,640	63,814	1,826	0.00%	2.78%
	Aug	64,058	61,817	2,241	0.00%	3.50%
	Sep	57,976	55,829	2,147	0.00%	3.70%
	Oct	66,360	64,444	1,916	0.00%	2.89%
	Nov	63,446	60,644	2,802	0.00%	4.42%
	Dec	62,546	60,490	2,056	0.00%	3.29%
2033	Jan	62,272	60,047	2,226	0.00%	3.57%
	Feb	68,782	65,177	3,606	0.00%	5.24%
	Mar	68,355	68,057	298	0.00%	0.44%
	Apr	74,406	71,776	2,630	0.00%	3.53%
	May	71,080	68,595	2,485	0.00%	3.50%
	Jun	68,725	66,581	2,144	0.00%	3.12%
	Jul	71,727	69,633	2,094	0.00%	2.92%
	Aug	70,199	67,632	2,568	0.00%	3.66%
	Sep	63,721	61,264	2,457	0.00%	3.86%
	Oct	72,646	70,448	2,199	0.00%	3.03%
	Nov	69,590	66,373	3,217	0.00%	4.62%
	Dec	68,689	66,333	2,356	0.00%	3.43%

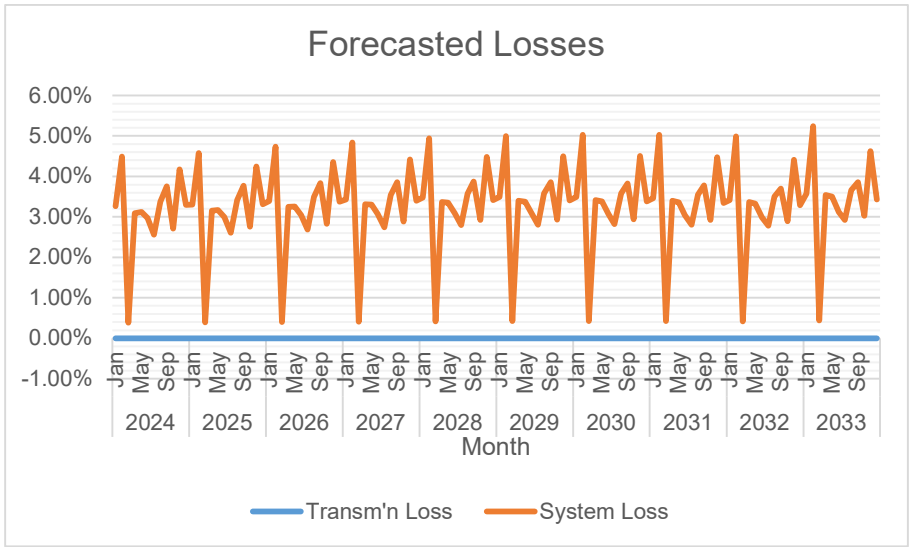
MWh Offtake was forecasted using the contracted energy capacity of IPP's PSA in consideration to its plant maintenance outages. The assumed load factor is 74.10%.

System Loss was calculated through a Load Flow Study conducted every 27<sup>th</sup> of the month for the system loss calculation of the previous month which is then compiled for the annual system loss

segregation requirement of ERC by Engr. Raff Shun Rhay M. Laput, REE, Planning and Design Section Head, using Synergy Electric Solution 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 6.64% annually.



Transmission Loss is at 0% while the overall System Loss ranged from 0.44% to 5.05%.

## Power Supply

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	Maximum MW	Maximum MWh/yr	PSA Start	PSA End
2014-149 RC	Intermediate	FDC Utilities, Inc.	8.80	77,088	22.00	192,720	12/26/2017	12/25/2041
2014-144 RC	Base	Therma South, Inc.	2.00	17,520	5.00	43,800	09/18/2015	09/25/2040
2014-011 RC	Base	GN Power Kauswagan Ltd.	8.50	74,460	34.05	298,278	06/26/2019	06/25/2049
2016-118 RC	Base	San Miguel Consolidated Power Corporation	2.00	17,520	5.00	43,800	10/26/2017	10/25/2027
2023-013 RC	Intermediate	Power Sector Assets and Liabilities Management Corporation	-	-	3.00	21,024	12/26/2020	12/25/2022
	Intermediate	Power Sector Assets and Liabilities Management Corporation	-	-	5.00	35,040	12/26/2022	12/25/2023
	Intermediate	Power Sector Assets and Liabilities Management Corporation	-	-	7.00	49,056	12/26/2023	12/25/2025
2013-156 RC	Peaking	PACERM 1 Energy Corporation	-	-	10.5	16,556.4	12/26/2016	12/25/2031
2015-014 RC	Base	DU-owned	-	-	2	2,803.2	06/13/2016	06/12/2031

The PSA with FDC Misamis Power Corporation filed with ERC under Case No. 2014-149 RC was procured through Emergency Power Purchase Agreement. It was selected to provide for base requirements due to supply deficiency experience by Mindanao since starting 2010 until 2015 because there was no new plant operating yet in Mindanao during that time and PSALM is curtailed. Historically, the utilization of the PSA is 51%. Outages of the plant led to unserved energy of around 8,338 MWh in the past year. The actual billed overall monthly charge under the PSA, in terms of variable cost ranged from 3.7759 P/kWh to 8.0991 P/KWh in the same period of year 2023.

The PSA with Therma South, Inc. filed with ERC under Case No. 2014-144 RC was procured through Emergency Supply Agreement. It was selected to provide for base requirements due to supply deficiency experience by Mindanao since starting 2010 until 2015 because there was no new plant operating yet in Mindanao during that time and PSALM is curtailed. Historically, the utilization of the PSA is 38%. Outages of the plant led to unserved energy of around 1,029 MWh in the past year. The actual billed overall monthly charge under the PSA, in terms of variable cost ranged from 3.9008 P/kWh to 7.8565 P/KWh in the same period of year 2023.

The PSA with GN Power Kauswagan Ltd. Filed with ERC under Case No. 2014-011 RC was procured to provide for base requirements due to supply deficiency experience by Mindanao since starting 2010 until 2015 because there was no new plant operating yet in Mindanao during that time and PSALM is curtailed. The actual billed overall monthly charge under the PSA, in terms of variable cost ranged from 3.7012 P/kWh to 7.7908 P/KWh in the same period of year 2023. However, on February 23, 2023, the Energy Regulatory Commission issued an order under ERC Case No. 2014-011-K RC modifying the PSA where MORESCO-1 will only be billed for its actual capacity utilization and that the Minimum Quantity is suspended.

The PSA with San Miguel Consolidated Power Corporation filed with ERC under Case No. 2016-118 RC was procured through competitive bidding. It was selected to provide for base requirements due for Interim Relief to supply the electricity requirements of MORESCO-1. Historically, the utilization of the PSA is 92%. Outages of the plant led to unserved energy of around 1,800 MWh in the past year. The actual billed overall monthly charge under the PSA, in terms of variable cost averaged to 5.1929 P/kWh in the same period of year 2023. On June 2023, the Energy Regulatory Commission issued an order that was promulgated on March 1, 2023, under ERC Order No. 2016-118 RC directing MORESCO-1 and SMCP to stop implementing the Power Supply Contract upon receipt of the Order.

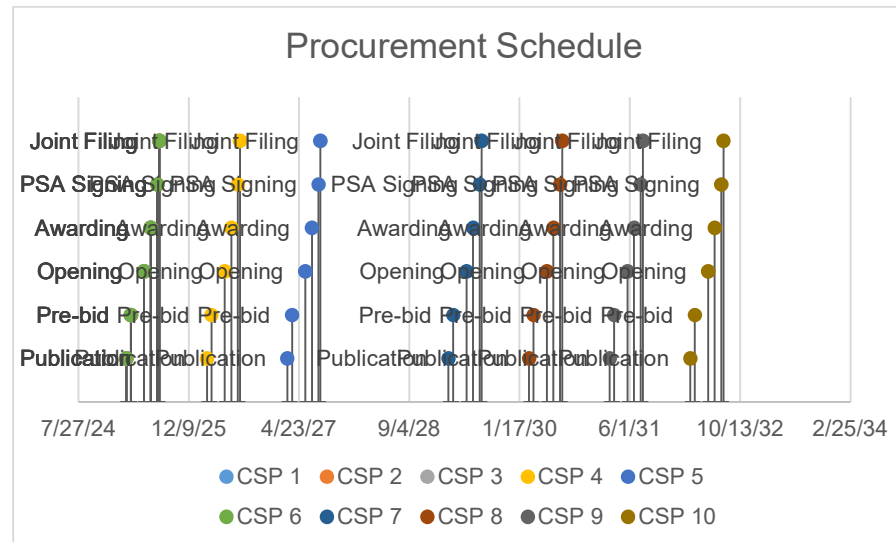
The PSA with PACERM-1 Energy Corporation filed with ERC under Case No. 2013-156 RC was procured through competitive bidding under the NEA Procurement Guidelines. It was selected to provide for peaking requirements due to supply deficiency experience by Mindanao since starting 2010 until 2015 because there was no new plant operating yet in Mindanao during that time and PSALM is curtailed. Historically, the utilization of the PSA is 83% for base load coal technology. Outages of the plant led to unserved energy of around 14,060 MWh in the past year. However with the sufficient supply in Mindanao, MORESCO-1 has able to negotiate with the existing Power Suppliers where it can accommodate for excess energy provision. The actual billed overall monthly charge under the PSA ranged from 5.2169P/kWh to 7.1458P/kWh exclusive of VAT in the same period of year 2023.

Case No.	Type	GenCo	Minimum MW	Minimum MWh/yr	Maximum MW	Maximum MWh/yr	PSA Start	PSA End
2019-008 RC	Peaking	DU-owned	0	0	6.00	8,409.6	12/01/2019	12/01/2034

MORESCO-1 has still a pending application before the ERC for its embedded generation, under ERC case no. 2019-008 RC. We have filed an Application for the Approval of the Generation Rate for the use of 3 Units 2 MW Modular Generation Set and the Corresponding Approval of the Loan from NEA and other Financial Institution. However, after a series of hearings, the Commission issued an Order last April 12, 2019 with an unfavourable decision. We have filed a Motion for Reconsideration on the said Order but there was no Decision on the MR yet up until now. This Modular Generator Set Project is government initiated and it was endorsed by the Department of Energy to augment the generation capacity of the Electric Cooperatives. The applied generator sets of MORESCO-1 have already been acquired, installed, tested and strategically located in areas where MORESCO-1 has substations.

	CSP 1	CSP 2	CSP 3	CSP 4	CSP 5	CSP 6	CSP 7	CSP 8	CSP 9	CSP 10
Type	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate
Minimum MW	7.50	3.00	7.00	7.00	10.00	10.00	10.00	15.00	15.00	15.00
Minimum MWh/yr	26,280	10,512	24,528	24,528	35,040	35,040	35,040	52,560	52,560	52,560
Maximum MW	7.50	3.00	7.00	7.00	10.00	10.00	10.00	15.00	15.00	15.00
Maximum MWh/yr	26,280	10,512	24,528	24,528	35,040	35,040	35,040	52,560	52,560	52,560
PSA Start	10/26/2025	12/26/2025	12/26/2026	12/26/2027	12/26/2028	12/26/2029	12/26/2029	12/26/2030	12/26/2031	12/26/2032
PSA End	10/25/2030	12/25/2030	12/25/2031	12/25/2032	12/25/2033	12/25/2034	12/25/2034	12/25/2036	12/25/2037	12/25/2038
Publication	03/01/2025	03/01/2025	03/01/2025	03/01/2026	03/01/2027	03/01/2025	03/01/2029	03/01/2030	03/01/2031	03/01/2032
Pre-bid	03/22/2025	03/22/2025	03/22/2025	03/22/2026	03/22/2027	03/22/2025	03/22/2029	03/22/2030	03/22/2031	03/22/2032
Opening	05/21/2025	05/21/2025	05/21/2025	05/21/2026	05/21/2027	05/21/2025	05/21/2029	05/21/2030	05/21/2031	05/21/2032
Awarding	06/20/2025	06/20/2025	06/20/2025	06/20/2026	06/20/2027	06/20/2025	06/20/2029	06/20/2030	06/20/2031	06/20/2032
PSA Signing	07/20/2025	07/20/2025	07/20/2025	07/20/2026	07/20/2027	07/20/2025	07/20/2029	07/20/2030	07/20/2031	07/20/2032
Joint Filing	07/29/2025	07/29/2025	07/29/2025	07/29/2026	07/29/2027	07/29/2025	07/29/2029	07/29/2030	07/29/2031	07/29/2032

To comply with the annual increment of 2.52% for the Renewable Portfolio Standards, MORESCO-1 has planned for the procurement of Renewable Energy supply that will undergo Competitive Selection Processes. Assuming that the Renewable Energy we will be procuring will come from a Hydro Facility, we assumed that there will be a load factor of 0.4 hence the computed minimum MWh/yr.



For the procurement of the 7.5 and 3 MW of supply which is planned to be available on October 26 and December 26, 2025 respectively, the first publication or launch of CSP will be on March 01, 2025. Joint filing is planned on July 29, 2029, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 7 MW of supply which is planned to be available on December 26, 2026, the first publication or launch of CSP will be on March 01, 2025. Joint filing is planned on July 29, 2025, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 7 MW of supply which is planned to be available on December 26, 2027, the first publication or launch of CSP will be on March 01, 2026. Joint filing is planned on July 29, 2026, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 10 MW of supply which is planned to be available on December 26, 2028, the first publication or launch of CSP will be on March 01, 2027. Joint filing is planned on July 29, 2027, or 150 days later, in accordance with DOE's 2018 CSP Policy.'

For the procurement of the 10 MW of supply which is planned to be available on December 26, 2029, the first publication or launch of CSP will be on March 01, 2025. Joint filing is planned on July 29, 2025, or 150 days later, in accordance with DOE's 2018 CSP Policy.\

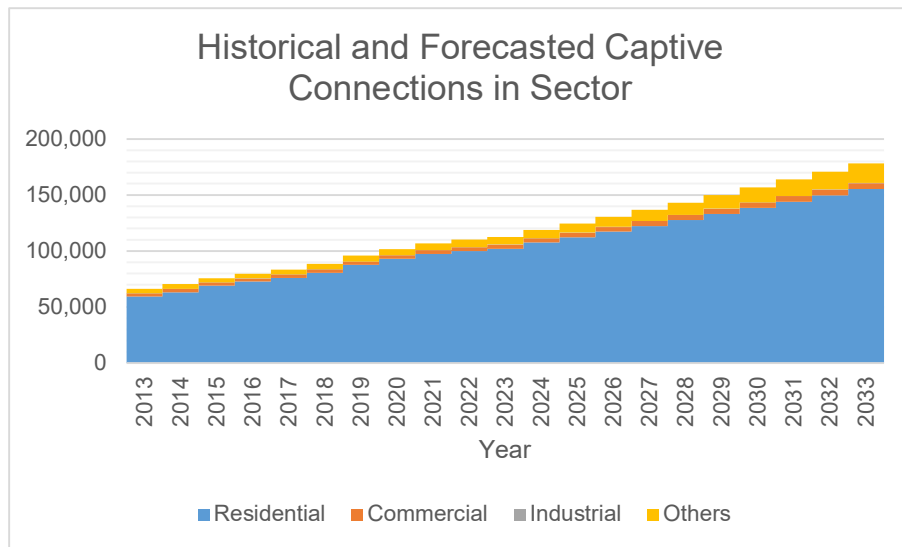
For the procurement of the 10 MW of supply which is planned to be available on December 26, 2029, the first publication or launch of CSP will be on March 01, 2029. Joint filing is planned on July 29, 2029, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 15 MW of supply which is planned to be available on December 26, 2030, the first publication or launch of CSP will be on March 01, 2030. Joint filing is planned on July 29, 2030, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 15 MW of supply which is planned to be available on December 26, 2031, the first publication or launch of CSP will be on March 01, 2031. Joint filing is planned on July 29, 2031, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of the 15 MW of supply which is planned to be available on December 26, 2032, the first publication or launch of CSP will be on March 01, 2032. Joint filing is planned on July 29, 2032, or 150 days later, in accordance with DOE's 2018 CSP Policy.

# Captive Customer Connections



The number of Residential connections, on average, is expected to grow at a rate of 6.94% annually. Said customer class is expected to account for 24.71% of the total energy consumption. On the PSPP template, on the "Capt sheet", there are no data on the captive customers for the Water System starting 2013 to 2018.