

Retail Market Assessment Report for 4th Quarter of 2023

26 September to 25 December 2023

MARCH 2023

This Report is prepared by the
Philippine Electricity Market Corporation –
Market Assessment Group
and approved by the
Market Surveillance Committee

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General Note:

No. of CCs and GEOP End-Users – Based on Cumulative Count at the End of any given Quarter
 CCs and GEOP End-Users Consumption – Based on Total Consumptions for the whole Quarter

1. RETAIL COMPETITION AND OPEN ACCESS

This portion provides the assessment on the implementation of the Retail Competition and Open Access (RCOA) for the 4th quarter of 2023 (26 September to 25 December 2023), based on the monitoring indices set forth in the Catalogue of Retail Market Monitoring Data and Indices (CRMMDI) Issue 1.

1.1. MARKET STRUCTURE

The market structure indices were used to assess the number of participants, market share, and level of market concentration.

1.1.1. Number of Participants

1.1.1.1. Contestable Customers

Over the billing quarter in review, there were twenty-eight (28) recorded initial switches¹ and two (2) cessations yielding to an additional twenty-six (26) registered Contestable Customers (CCs) that participated in the market, demonstrating an increase on the figures of the previous quarter, and a steady upward trend since 2022 as shown in **Figure 1**. A total of 1,991 Contestable Customers or about 61% of the entire population of eligible end-users² by the end of the 4th quarter of 2023 have registered in the Retail Market. Despite the continuous rise in the total number of registered Contestable Customers in the market, there has been a slight decrease in the overall share of eligible Contestable Customers. This indicates that although the number of registered Contestable Customers is increasing, the growth in number of eligible end-users surpasses it relatively.

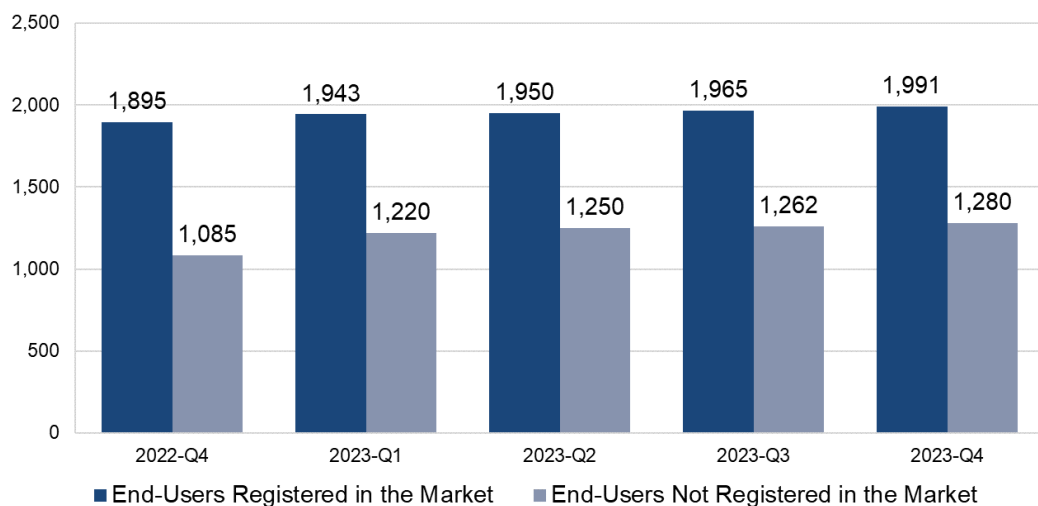


Figure 1. Cumulative Number of Eligible End-Users, 2022-Q4 to 2023-Q4

¹ Commercial transfer of Contestable Customer from the DU as its supplier under regulated service to a Supplier

² End-user that has met the eligibility threshold, as indicated by a single revenue meter and who has a choice to switch to the Retail Electricity Market

1.1.1.2. Per Threshold

This portion provides for the breakdown of the 1,991 Contestable Customers per contestability threshold. Out of the total registered Contestable Customers, 303 or 15% were registered in 500-749kW threshold and 429 or 22% were under the 750-999kW threshold. Meanwhile, majority or 1,259 (63%) belonged to the 1MW and above threshold.

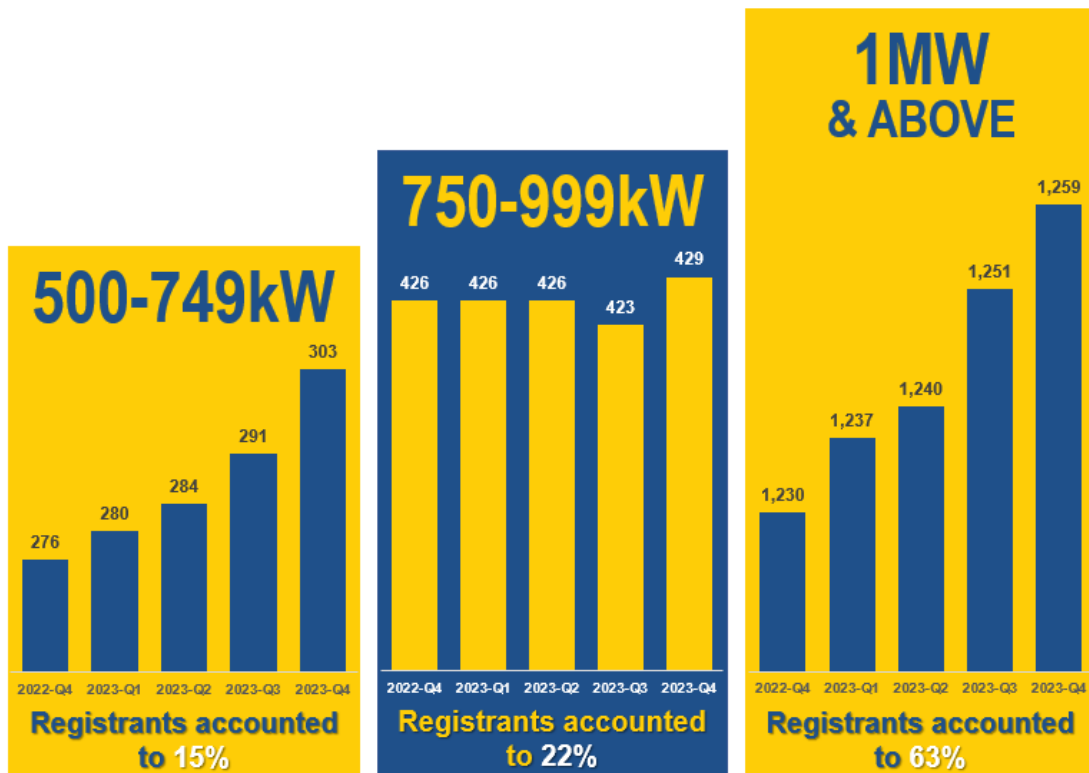


Figure 2. Cumulative Number of CCs per Threshold, 2022-Q4 to 2023-Q4

Figure 2 illustrates a sustained growth in registered Contestable Customers in the market in spite of the observed decline in the 750-999kW threshold last quarter, primarily attributed to the cessation of Contestable Customers.

1.1.1.3. Per Location

With regard to location, 87% or 1,742 Contestable Customers were located in Luzon while the remaining 13% or 249 were located in Visayas as shown in **Figure 3**. The percentage share was consistent in comparison to the previous quarter. Likewise, this implies that the Luzon is where Contestable Customers are concentrated.

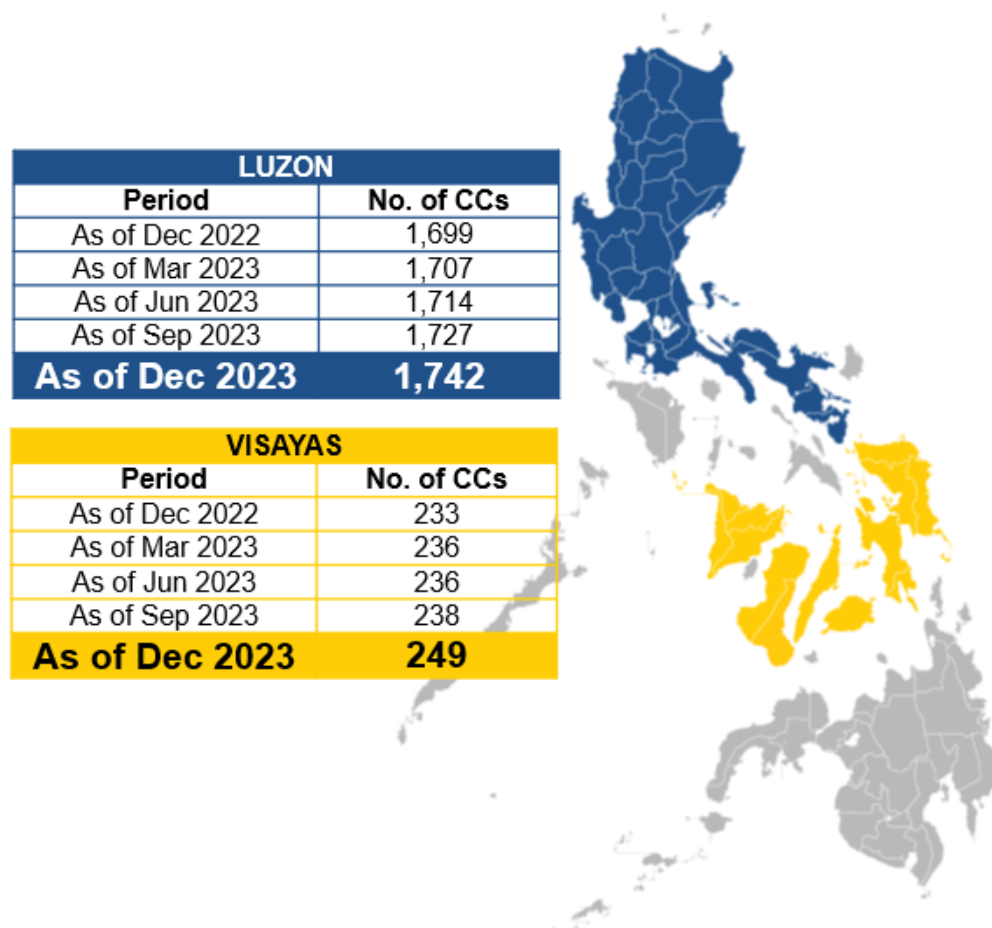


Figure 3. Cumulative Number of CCs Per Region, 2022-Q4 to 2023-Q4

Note: Retail market is only operational in the Luzon and Visayas grids. Commencement of retail market in the Mindanao will be determined by the DOE and ERC.

1.1.1.4. Per Retail Activity³

In terms of industry, for the preceding quarters, there was a consistent share of participation from commercial and industrial Contestable Customers. Around 53% of Contestable Customers were engaged in commercial activities, while the 47% remaining were engaged in industrial activities. Moreover, the percentage share remained unchanged when compared to previous quarters.

³ Retail activity is based on the available information provided under the specific business type, i.e. manufacturing, real estate, etc., in the IEMOP-Registration Data. If information is unavailable in the Registration Data, retail activity of the participant will be tagged based on the business description available online.

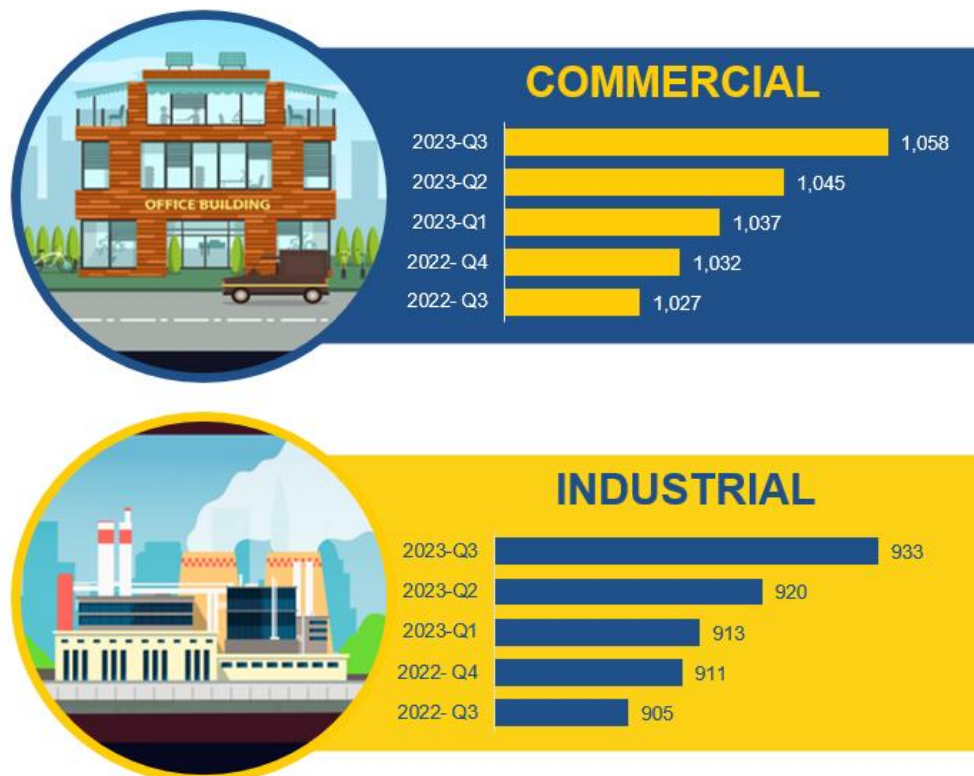


Figure 4. Cumulative Number of CCs Per Retail Activity, 2022-Q4 to 2023-Q4

1.1.1.5. Average Consumption

With respect to the energy consumption for Contestable Customers, **Table 1** shows the breakdown on the level of consumption based on the averaged metered quantity (MQ) for the 4th quarter of 2023. About 67.74% of the registered Contestable Customers had an average energy consumption of 1MWh and below. This is followed by customers that are in the 1MWh to 5MWh threshold taking about 28.45% of the total number, while 2.25% are in the 5MWh to 10MWh level. The rest of the Contestable Customers belonged to average consumption of 10MWh to 50MWh.

In summary, minimal changes were noted for thresholds monitored during the covered period when compared to the previous quarter. Moreover, the maximum average consumption recorded for the during the period covered is around 26.70MWh.

Table 1. Percentage Per Level of Average Energy Consumption, 2023-Q4

Region	1 MWh and below	Above 1 MWh to 5 MWh	Above 5 MWh to 10 MWh	Above 10 MWh to 15 MWh	Above 15 MWh to 20 MWh	Above 20 MWh to 50 MWh	Sub-Total Per Region
LUZON	58.45% ▼	25.29% ▼	2.21% ▼	0.95% ▼	0.45% ▲	0.15% ▼	87.51% ▼
VISAYAS	9.28% ▲	2.91% ▲	0.10% ▼	0.05% ▼	0.10% ▲	0.05% ▼	12.49% ▲
Sub-Total Per Level of Average Energy Consumption	67.74% ▲	28.20% ▼	2.31% ▼	1.00% ▼	0.55% ▲	0.20% ▼	100.00%
Percent Change from the previous quarter	0.39% ▲	0.25% ▼	0.13% ▼	0.06% ▼	0.15% ▲	0.10% ▼	-

1.1.1.6. Suppliers

Table 2 shows the cumulative number of Suppliers with License from ERC vis-à-vis registered Suppliers per category vis-à-vis the number of active Suppliers or those that are currently serving a registered Contestable Customer. Majority of the registered Retail Electricity Suppliers (RES) were actively participating in the market and serving registered Contestable Customers.

Table 2. Cumulative Number of Supplier

	Licensed/Authorized	Registered	With Active Contract
RES	47	40	33
LRES	29	15	3
SoLR	47	26	0

The complete list of all registered Suppliers per category is provided in *Annex A. List of Suppliers Per Category, as of 25 December 2023*.

Newly Registered RES and SoLR in 2023-Q4, respectively, are as follows:

- ACX3 Capital Holdings, Inc. (ACX3)
- Iloilo I Electric Cooperative, Inc. (ILECO I)

1.2. MARKET SHARE

1.2.1. Supplier Share

1.2.1.1. Share in terms of Number of Contestable Customer and Consumption

Figure 5 shows the quarterly share of Suppliers per major participant grouping⁴ in terms of the number of Contestable Customers registered in the market as of the December 2023 billing period.

Quarter-on-quarter review shows that the share of MERALCO group continued to decrease but still managed to be the top group with the highest share in terms of the number of Contestable Customers engaged in its services. The other major groups, namely Aboitiz and Ayala, generally retained their shares from the previous quarter.

Moreover, in the quarter being assessed, the San Miguel group stood out as the only group experiencing a growth in market share. This increase was primarily driven by the influx of new customers, constituting 29% of the total new Contestable Customers registered during the subject period in review.

⁴ Based on ERC's Competitive Retail Electricity Market (CREM) Report.

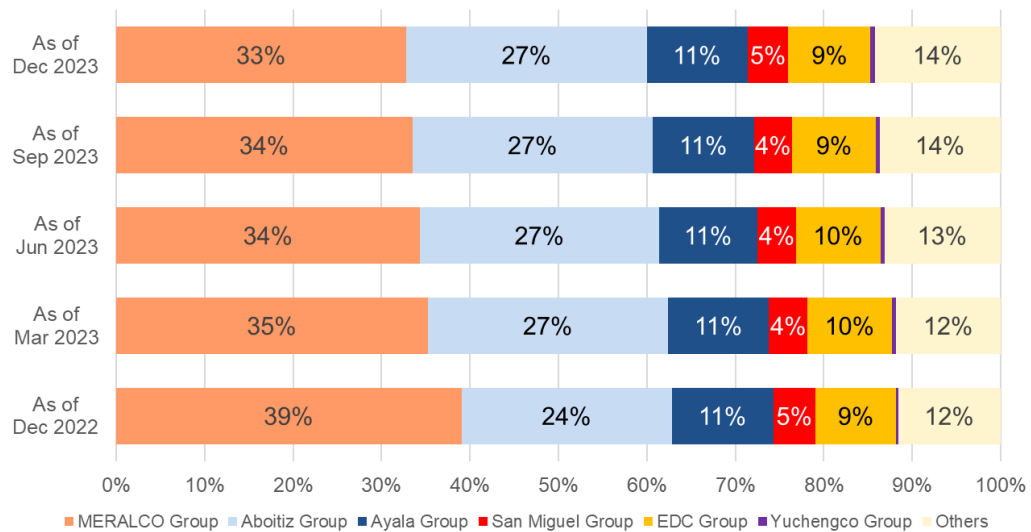


Figure 5. Share in Number of CCs Per Major Participant Grouping, 2022-Q4 to 2023-Q4

As regards the share with respect to retail served energy consumption, **Figure 6** shows that the Aboitiz group remained to be the group with the largest share, at 30%, surpassing the MERALCO group with the highest share in terms of number of Contestable Customer. This indicates the disparity in consumption scale present between the Suppliers' clienteles.

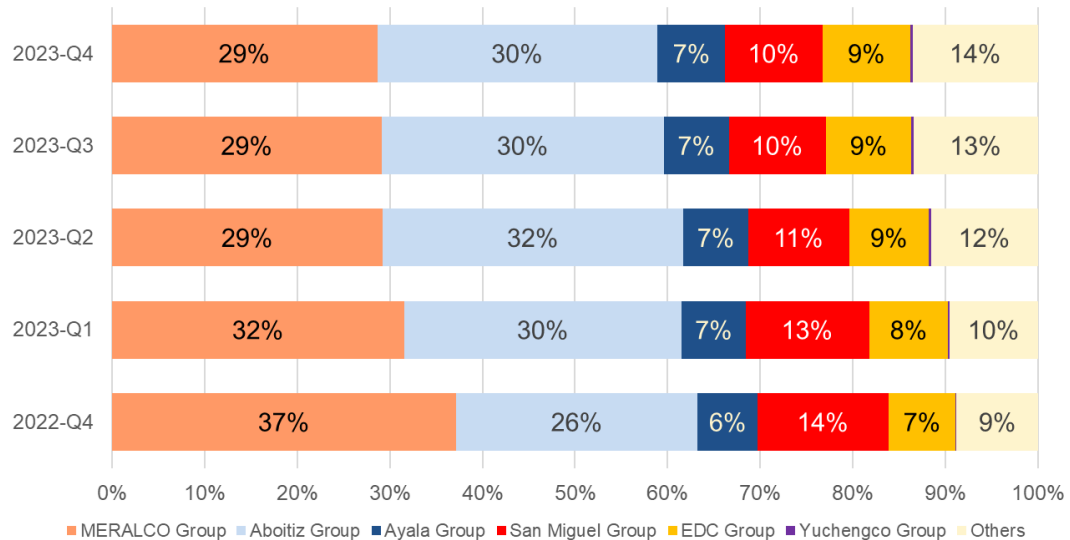


Figure 6. Share in CCs' Total Energy Consumption Per Major Participant Grouping, 2022-Q4 to 2023-Q4

Furthermore, it is also interesting to note that those Suppliers without affiliation(s) or do not belong to any major group demonstrated a continuous increase of about 1% in the shares for every quarter. This increase was mainly attributed to the high number of Contestable Customers (25% of the total number of switches) switch to the aforementioned Suppliers, coupled with the characteristics of these Contestable Customers belonging to high threshold capacity. This, among other things, serves as an indicator of improvement in competition within the retail market.

1.2.1.2. Consumption Per Franchise Area Location

Geographically, registered Contestable Customers were dispersed throughout the various economic zones and distribution utility franchise areas indicated in Appendix B: List of Distribution Utility Franchise Areas and Economic Zones.

About 71% of the registered Contestable Customers consumption, as shown in **Figure 7(a)**, were located in MERALCO's franchise area, 8% were directly connected to the transmission grid, 5% were within the VECO franchise, while the remaining 16% were scattered throughout the other franchise areas and economic zones. Moreover, it should be highlighted that not every Contestable Customer in the MERALCO franchise area was served by the MERALCO Group. As **Figure 7 (b)** illustrates, some of them subscribed to other Suppliers to meet their energy needs and only 34% of the total consumption inside the MERALCO franchise area was supplied by the MERALCO group.

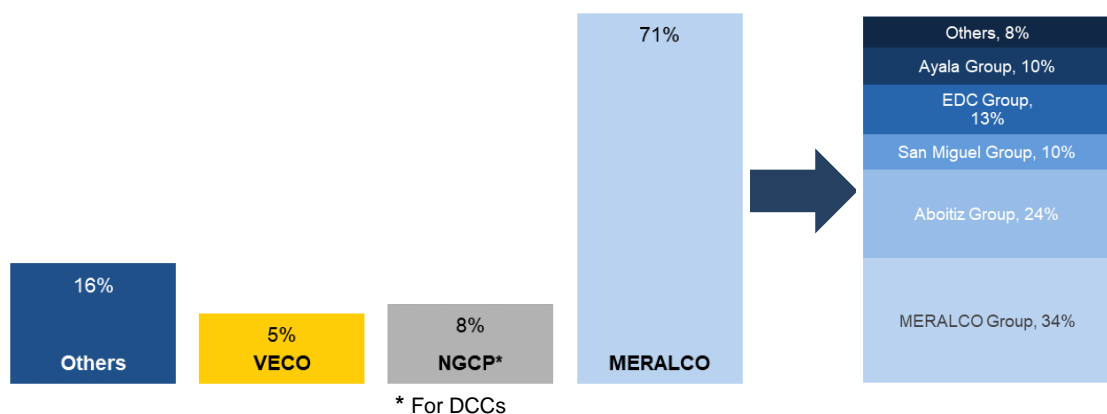


Figure 7. (a) Share in CCs' Energy Consumption by Franchise Area, 2020-Q4; (b) Share in CCs' Energy Consumption by Supplier within MERALCO Franchise Area, 2023-Q4

1.2.2. Market Concentration

1.2.2.1. Herfindahl–Hirschman Index (HHI)

This section discusses the market concentration by major participant grouping of the Suppliers, as determined by the Energy Regulatory Commission (ERC), based on the contracted number of Contestable Customers and based on the served energy consumption of these Contestable Customers. **Figure 8** shows the level of market concentration using the Herfindahl-Hirschman Index (HHI)⁵ using the shares determined in Section 1.2.1.1.

⁵ HHI measures the degree of market concentration. Defined as the sum of the Suppliers' market share, the HHI threshold are as follows:

HHI < 1000 - not concentrated
 Greater than 1000 up to 1800 - moderately concentrated
 Greater than 1800 up to 2500 - concentrated
 Greater than 2500 - highly concentrated

Both per major participant grouping and per supplier basis illustrate that the market was concentrated based on the results of the HHI, which is less than the values that emerged for the previous quarter. The continuous decline in the HHI values marked an improvement in the level of concentration and generally indicates better competition in the market.

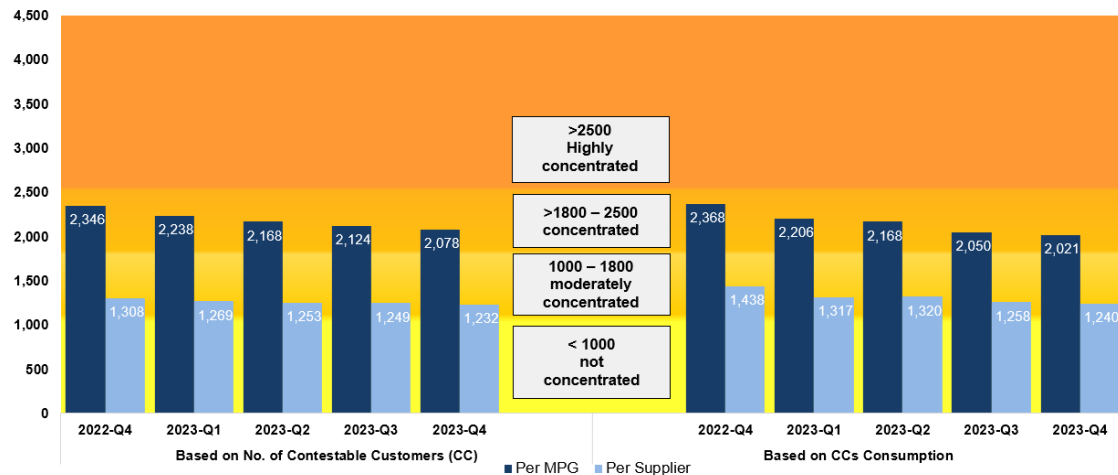


Figure 8. HHI Values, 2022-Q4 to 2023-Q4

1.2.2.2. Four-Firm Concentration Index (C4)⁶

The four-firm index or C4 was based both on the number of served Contestable Customers and their consumptions on a per major participant grouping. During the quarter in review, as shown in **Figure 9**, C4 values were still high at about 81% and 79%, respectively. Despite this, the resulting measures demonstrated a consistent decline starting from the 3rd quarter of 2022.

Moreover, in terms of per supplier basis, the market remains to be considered as an oligopoly having more than 50% share from only four (4) top suppliers.

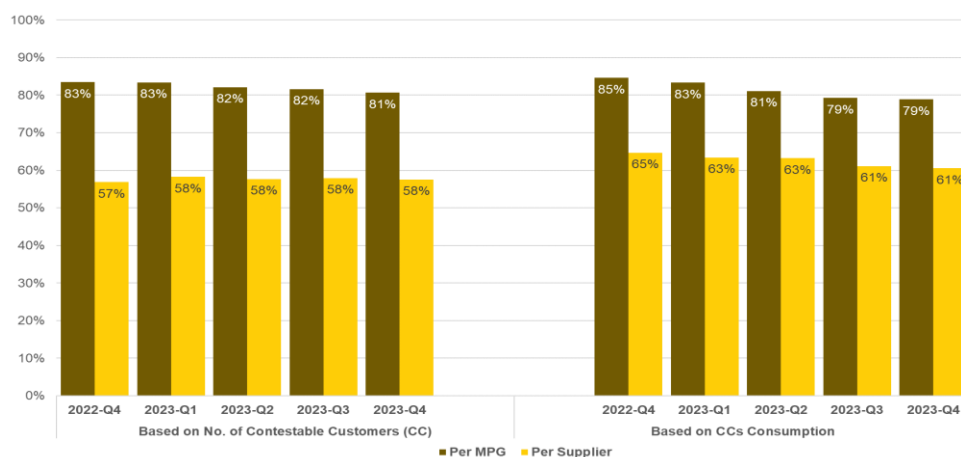


Figure 9. Four-Firm Index, 2022-Q4 to 2023-Q4

⁶ C4 measures the percentage of market share of the four largest firms in the market. Concentration levels are as follows: High: 80% to 100%; Medium: 50% to 80%; and Low: 0% to 50%.

1.2.3. Supplier Structure

1.2.3.1. Supplier Affiliate

Figure 10 shows the degree of integration among the Suppliers, Generation Companies, and Distribution Utilities as of 31 December 2023⁷. The Supplier structure shows that most of the RES are affiliated with Generation Companies. Additionally, some Suppliers had affiliations with other Suppliers, Distribution Utilities (DUs), or both.

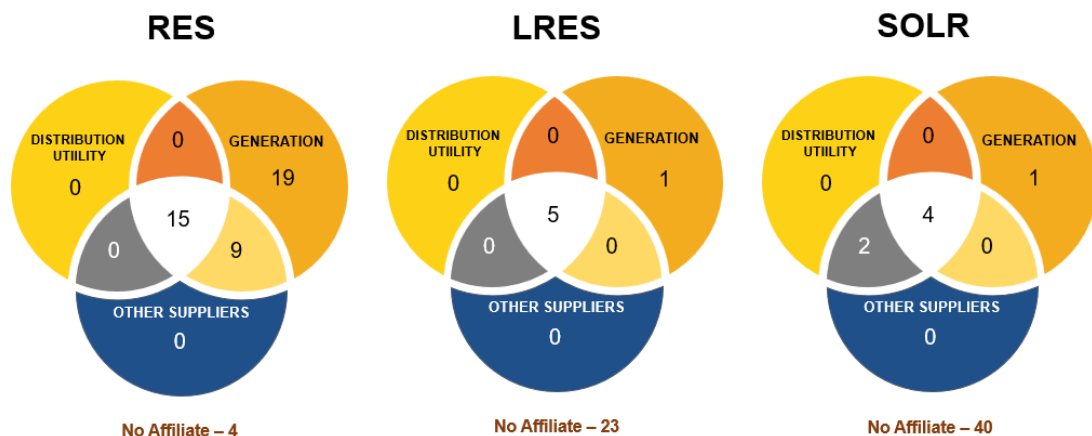


Figure 10. Summary of Suppliers with Affiliate Generation Companies, Suppliers and Distribution Utilities

Note that one Supplier may have multiple affiliate Generation Companies, Suppliers, and/or Distribution Utilities

These affiliations could be driven by a range of strategic factors, such as ensuring a more reliable electricity source, expanding business operations, or influencing the overall competitiveness in the market.

Not to be overlooked is the fact that two (2) of the four (4) independent RESes have active contracts with Contestable Customers. Notably, only three (3) RESes are registered in the market, suggesting that these unaffiliated entities, in spite of their lack of affiliation with other electricity players, have been successful in securing contracts with customers who have the freedom to choose their supplier. Moreover, for Local RES, only (1) out of the twenty-three (23) suppliers without affiliation has an active contract with Contestable Customer.

Overall, **Figure 10** showed no changes compared to the previous quarter.

1.2.3.2. Vertical Integration

This measures the vertical integration of the generation companies and their affiliated Suppliers in the RCOA Market. With regard to the generation and supply in terms of major participant grouping, **Figure 11** provides the comparison of the total generation per major participant grouping in the WESM as related to the total energy supplied by their affiliated Suppliers.

⁷ Based on latest available ERC data.

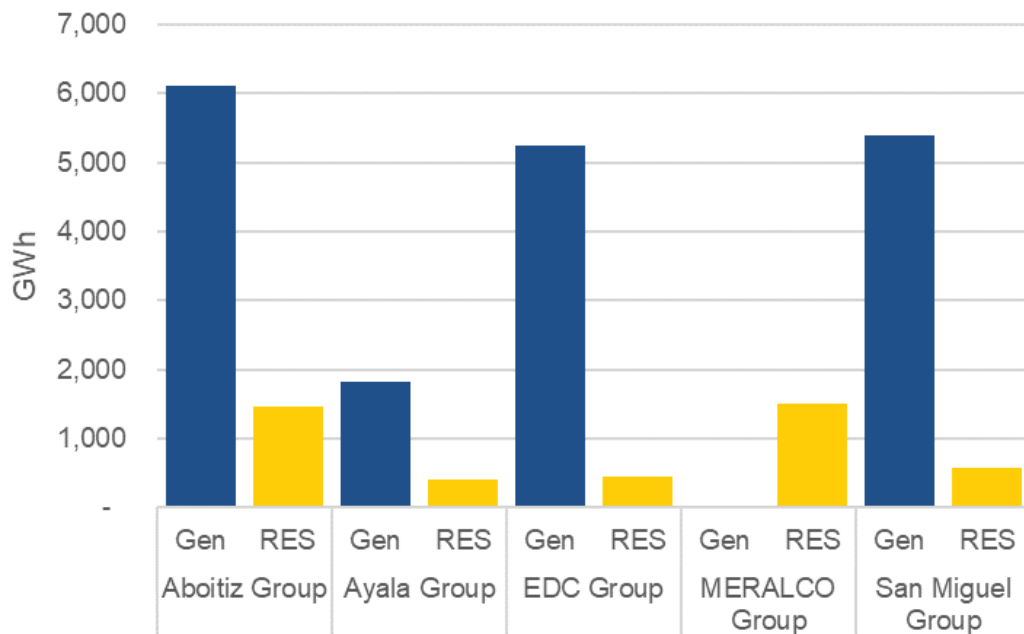


Figure 11. Generated Energy vs Supply Requirement, 2023-Q4

MERALCO, primarily established for the distribution of electricity to end-users, exhibited a substantial disparity in the ratio of generated energy from its generation subsidiary to its supply business. In contrast, the rest of the major participant groups, Aboitiz, Ayala, EDC, and San Miguel groups primarily engaged in energy generation, also displayed a notable difference, with their respective generated energy exponentially higher than the supplied energy to the retail market.

These analyses underscore distinctive patterns in energy dynamics among these entities in the sector. However, it should be noted that **Figure 11** does not necessarily translate that energy supplied by the supplier counterparts were directly sourced from their affiliates' generation.

1.3. MARKET PERFORMANCE

1.3.1. Energy Consumption

1.3.1.1. Total Energy Consumption

Figure 12 shows the total energy consumption on quarter-to-quarter basis for all End-users, including the Green Energy Option Program (GEOP) End-Users and registered Contestable Customers. The demand for electricity and the increase in the number of participants in the retail market are the two factors that affect these statistics.

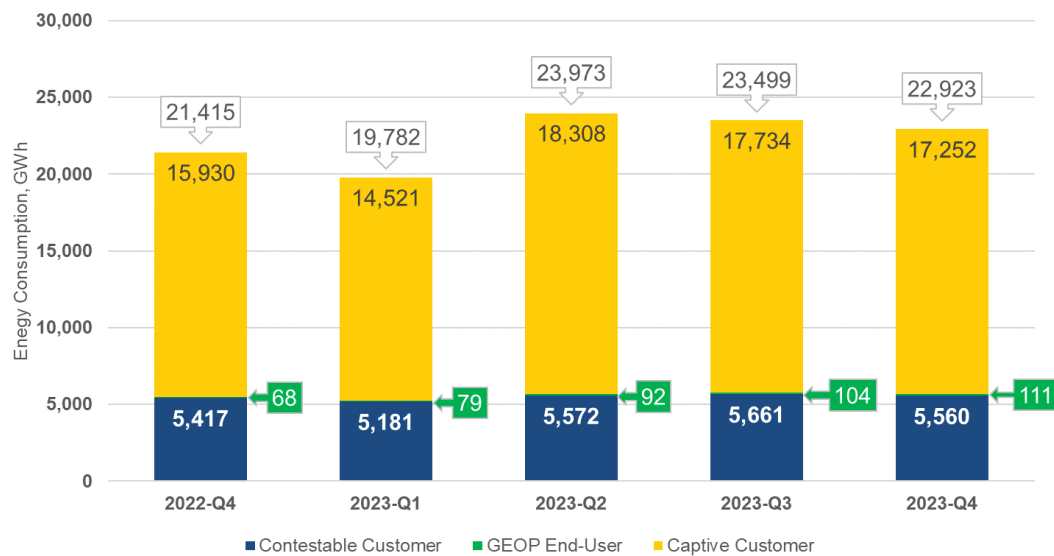


Figure 12. Total Energy Consumption (in GWh), 2022-Q4 to 2023-Q4

On a year-on-year basis, there is a noticeable upward trend in consumption across all customer groups due to the natural growth in demand. However, when examining the data on a quarter-on-quarter basis, it is observed that only the GEOP End-Users showed an increase in consumption. This observation can be primarily attributed to the high percentage of increase in the number of participants joining the program, as shown in **Table 3** below. Subsequently, for Contestable Customers' consumption, although there was an observed increase in the number of participants, their consumption was affected by the holiday season causing a slight decline, as well as the onset of cool dry season where demand is expected to decrease due to colder temperature. This observation is similar with the changes in the captive customers.

Table 3. Change in Consumption (in percentage), Year-on-Year and Quarter-on-Quarter

Change in Consumption		
Category	Year-on-Year, %	Quarter-on-Quarter, %
System	7.04%	-2.45%
Captive Consumer	8.30%	-2.72%
GEOP End-Users	64.50%	7.18%
Contestable Consumers	2.63%	-1.79%

1.3.1.2. Monthly Energy Consumption

Figure 13 shows the month-on-month consumption of consumers for the covered billing periods. It is evident that with the conclusion of the rainy season and with the onset of cool dry season, there was a slight decline in consumption for both the industrial and commercial sectors. Although with the continuous increase in the participants, majority of the trend in terms of consumption tends to be dependent based on the weather condition coupled with the activities from the customers.

Moreover, with regard to the industrial business sector, the decline can be primarily

attributed to the influence of holidays during the quarter under review. Notably, significant downturns were observed on 30 October, coinciding with the Barangay and Sangguniang Kabataan (SK) election, on 1 and 2 November for All Souls' and All Saints' Day, and on 24 and 25 December in observance of Christmas Eve to which also affected the Commercial establishments.

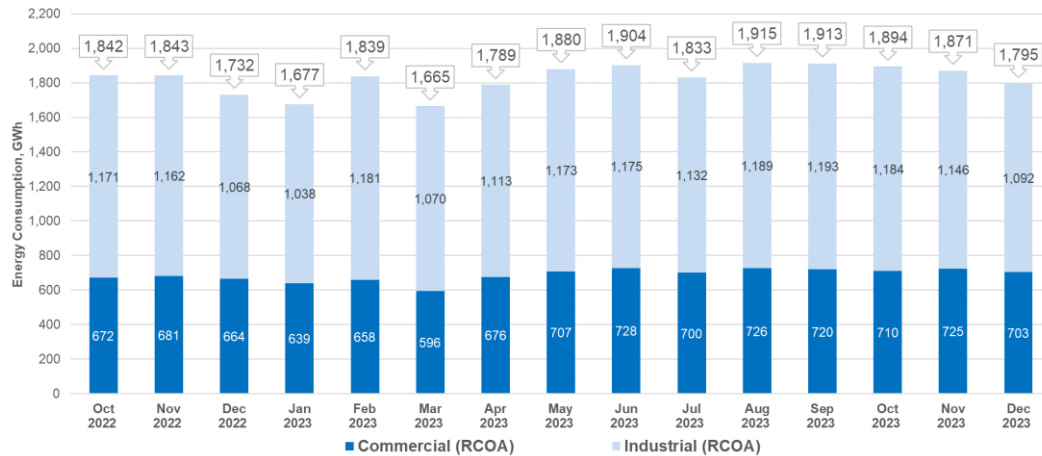


Figure 13. Total Energy Consumption by Industry Type (in GWh), Oct 2022 to Dec 2023

1.3.2. Load Profile

1.3.2.1. Hourly Energy Consumption Profile

Figures 14 and 15 show the hourly average consumption of registered industrial and commercial Contestable Customers, respectively, for the billing months of June to December 2023. The consumption profile demonstrates how electricity consumption of Contestable Customers varied over the course of a 24-hour period.

As depicted in **Figure 14**, the electricity consumption patterns of industrial Contestable Customers revealed no significant fluctuations between peak and off-peak periods. It consistently exhibited troughs during specific intervals at 0600h, 1300h, and 1900h for each series. This observation strongly suggests that these industrial customers operate on a three-shift schedule and/or breaktime.

In connection with the analysis presented in the earlier sections, it is evident that the load profiles of industrial consumers notably illustrate a variation in their average energy consumption having only the October billing period exhibiting higher consumption when compared to previous quarter, while the December billing period registering with the lowest average consumption when compared with the previous quarter. This just further establishes the previous discussions on the effects of the cooler temperature and the effects on the observance of the holiday season.

Furthermore, it is noteworthy that the consumption pattern of industrial customers offers a compelling opportunity to strategically shift their loads to off-peak hours, taking advantage of periods when prices from the Wholesale Electricity Spot Market (WESM) are noted to be at the lowest. This strategic load-shifting making their load factor more stable that could influence their price negotiation leading to cost savings for industrial consumers during times of more favorable pricing conditions.

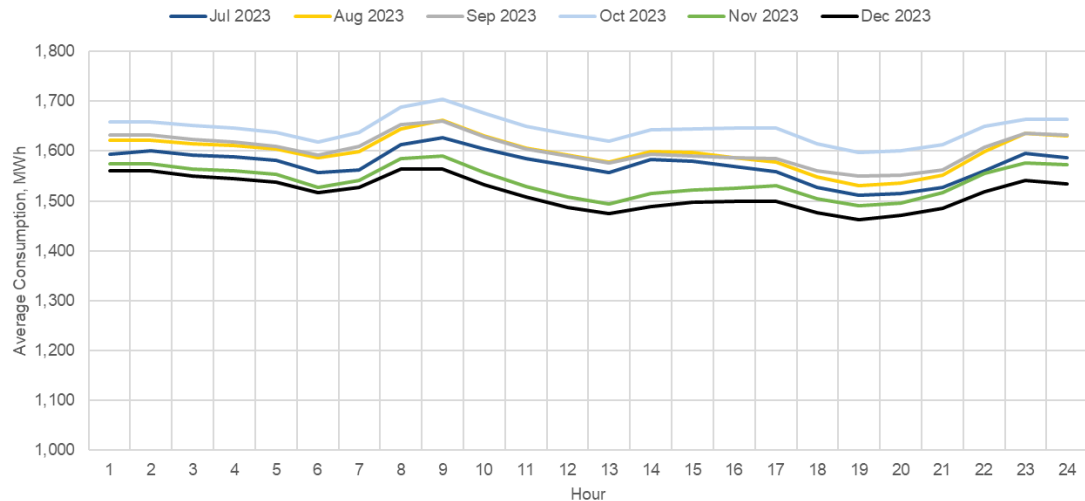


Figure 14. Hourly Average Energy Consumption (in MWh), Industrial, Jun to Dec 2023

Figure 15 illustrates the notable differences in consumption patterns between peak and off-peak periods among registered commercial Contestable Customers. For these customers, the hours between 1000h to 2000h were when peak consumption was observed. Compared with the preceding quarter, there was no significant variation in the demand for commercial Contestable Customers throughout the billing periods covered in this report. This is due to the fact that these commercial establishments tend to have continuous operations, or even extended operations, during holiday seasons.

Similar to the industrial businesses, the graph also illustrates that the month of October had the highest consumption and December being the lowest consumption across all six (6) billing periods in comparison. Moreover, during the billing period of December, which is typically associated with festivities, there was an observed increase in consumption, particularly evident from 2000h onwards due to extended operations of these establishments.

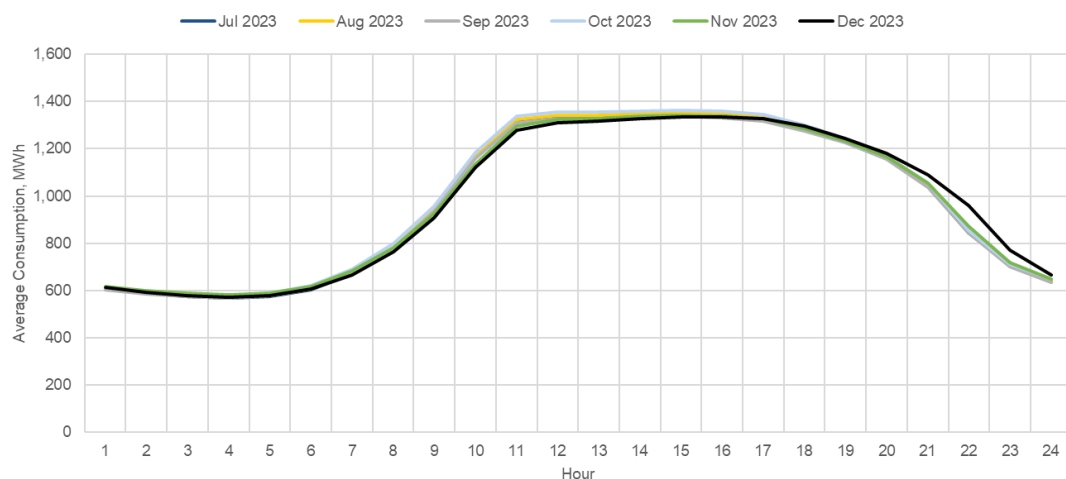


Figure 15. Hourly Average Energy Consumption (in MWh), Commercial, Jun to Dec 2023

1.3.2.2. Load Factor

Figure 16 shows the monthly load factor⁸ of registered Contestable Customers, which was calculated based on their actual electricity consumption (total consumption over the maximum consumption and the total number of hours for the billing period). The load factors of registered Contestable Customers were kept relatively high during the 4th quarter of 2023. However, the decline in load factor for the months of November and December was found to be normal due to the colder weather and the observance of the holiday season. Same observation was noted back on 2023 during these periods.

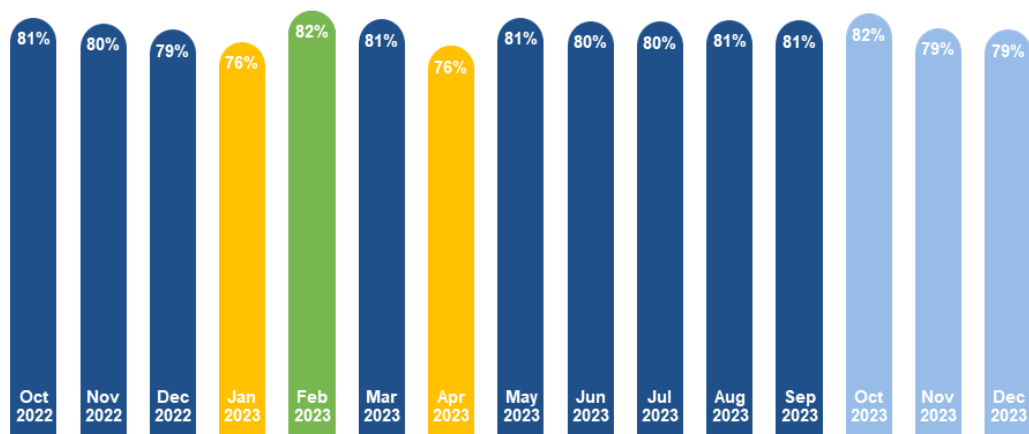


Figure 16. Load Factor, Oct 2022 to Dec 2023

1.4. RETAIL ACTIVITY

1.4.1. Market Transaction

This section provides a brief discussion on the share of market transaction in the retail market with respect to the Wholesale Electricity Spot Market (WESM). **Figure 17** shows that the Retail Market exhibited a significant level of bilateral contact quantities (BCQ), mirroring the pattern observed in the WESM. In terms of percent share, approximately 24% of the total traded energy in the WESM (Luzon and Visayas) was associated with the Retail Market, a little to no deviation pattern was observed throughout the months considered in this review. Overall, around 24% of the total energy consumption (Luzon and Visayas) was accounted to the Retail Market.

⁸ Based on Metered Quantity (MQ)

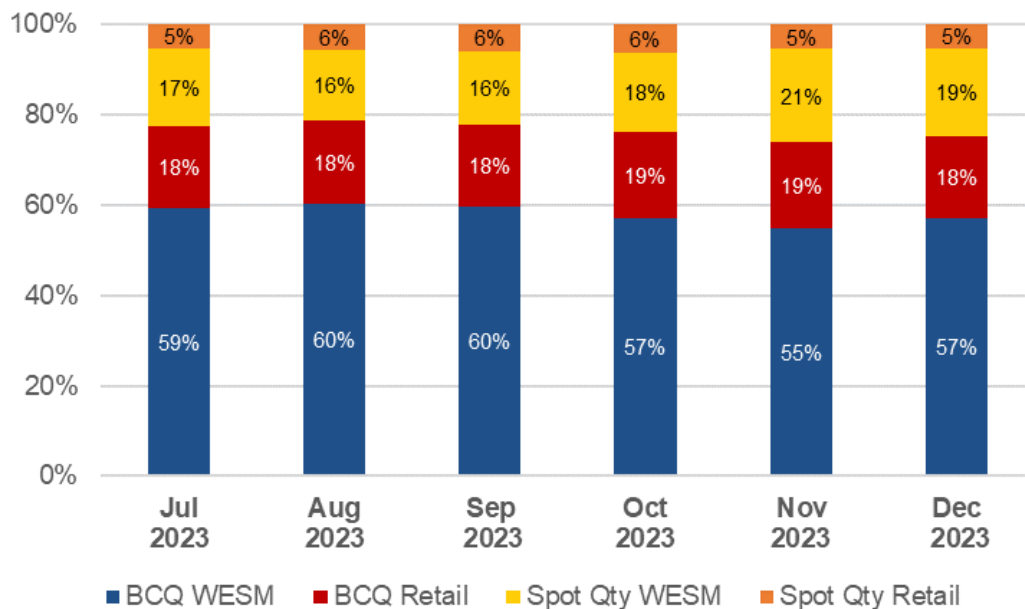


Figure 17. Market Transaction, Jun to Dec 2023

1.4.2. Customer Switching Rate

Figure 18 provides a historical switching rate among registered Contestable Customers. Based on the data, there were thirty-six (36) instances of customer switching from one supplier to another during the billing months of October to December 2023. Twenty-five (25) out of the thirty-six (36) switches was due to the expiry of contract and non-renewal of contract. However, the remaining eleven (11) observed trend for the initiation of switches stemmed from the termination of contracts, possibly influenced by factors like receiving a more competitive offer or the need for a more specific resource supply to meet the demand. Notably, the October billing month recorded the highest switching rate for the period under review, a pattern consistent with the same quarter of the previous year.

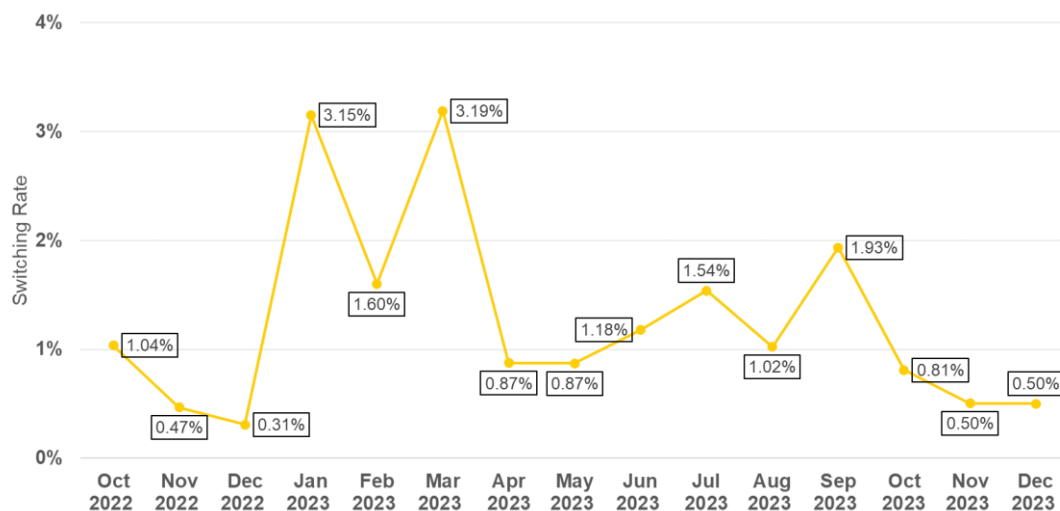


Figure 18. Switching Rate, Oct 2022 to Dec 2023

Table 4 provides a detailed historical switching information among registered Contestable Customers to other suppliers per category and per region.

Table 4. Switching Rate, Oct 2022 to Dec 2023

Particulars	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Switching Rate (Luzon)	0.82%	0.53%	0.35%	2.06%	1.70%	3.46%	0.94%	0.58%	0.76%	1.52%	0.93%	2.08%	0.64%	0.58%	0.46%
Total No. of CCs	1,697	1,696	1,699	1,701	1,702	1,707	1,709	1,716	1,714	1,714	1,717	1,727	1,731	1,736	1,742
Total No. of CCs that Switched	14	9	6	35	29	59	16	10	13	26	16	36	11	10	8
LRES to RES	10	1	3	5	5	29	4	2	1	5	2	10	3	2	5
RES to RES	4	8	3	1	0	0	0	0	0	2	2	26	8	8	3
SOLR to RES										1	1				
RES to SOLR									1	0					
Switching Rate (Visayas)	2.60%	0.00%	0.00%	11.06%	0.85%	1.27%	0.43%	2.97%	4.24%	1.69%	1.69%	0.84%	2.04%	0.00%	0.80%
Total No. of CCs	231	231	233	235	235	236	235	236	236	236	236	238	245	248	249
Total No. of CCs that Switched	6	0	0	26	2	3	1	7	10	4	4	2	5	0	2
LRES to RES															
RES to RES	6			26	2	3	1	7	10	4	4	2	5	0	2
Switching Rate (Luzon-Visayas)	1.04%	0.47%	0.31%	3.15%	1.60%	3.19%	0.87%	0.87%	1.18%	1.54%	1.02%	1.93%	0.81%	0.50%	0.50%
Total No. of CCs	1,928	1,927	1,932	1,936	1,937	1,943	1,944	1,952	1,950	1,950	1,953	1,965	1,976	1,984	1,991
Total No. of CCs that Switched	20	9	6	61	31	62	17	17	23	30	20	38	16	10	10

1.4.3. Retail Rate

Figure 19 shows that DU generation rates experience a rise during for the 2023-Q4, making the Weighted-Average Retail Generation Rates⁹ decreased by 1% and was 25% lower compared to DU¹⁰ Average Generation Rates. This rate reduction was experienced by the participants engaged with a Supplier in the RCOA.

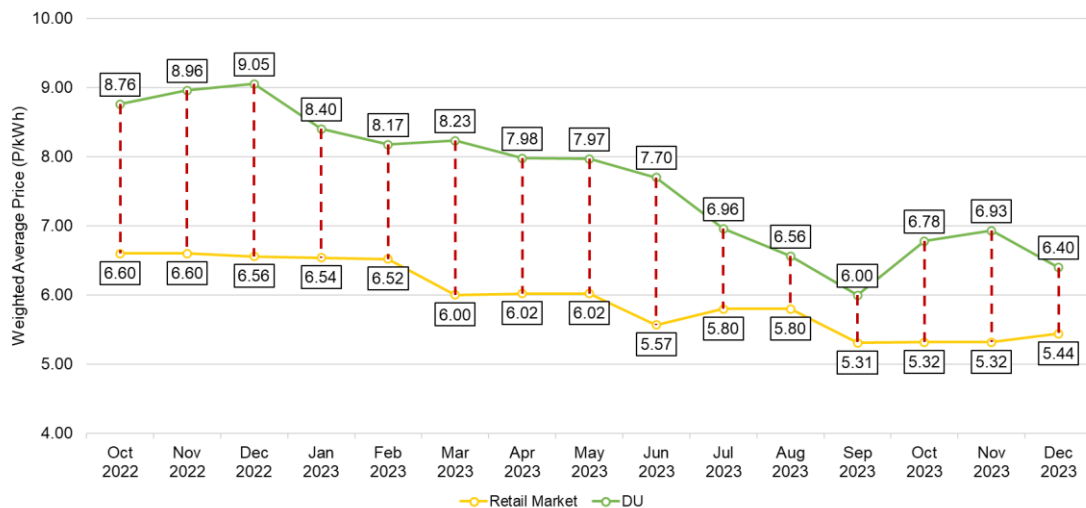


Figure 19. DU Average Generation Rate vs Retail Weighted Average Rate, Oct 2022 to Dec 2023

1.4.4. Estimated Savings

In continuation of the analysis provided in the preceding section, the assessment of estimated savings incurred by the Retail Market participants may likewise be undertaken. For the purpose of this report, monthly savings were calculated by determining the difference between the weighted-average retail rate and the DU average generation rates multiplied by the monthly consumption of Contestable Customers and were lumped in a quarterly manner. It is important to note that these calculations were based on the available data and are considered as estimates.

⁹ Based on ERC's CREM report

¹⁰ MERALCO, VECO, BATELEC II

Throughout the period under review, Contestable Customers in the market experienced an estimated total savings of 7.5 billion Philippine Pesos. However, this figure represents a 50% increase from the savings recorded in the previous quarter due to the significant decrease of the DU average generation rate during that period.

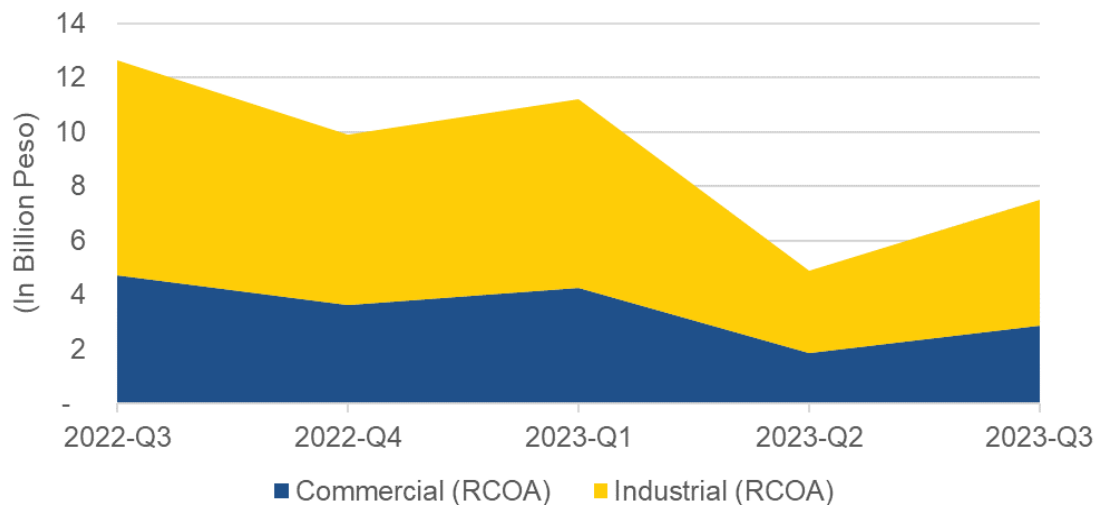


Figure 20. CC's Cumulative Estimated Savings, 2022-Q4 to 2023-Q4

2. GREEN ENERGY OPTION PROGRAM

This portion provides an assessment on the implementation of the Green Energy Option Program (GEOP) for the covered period, utilizing the RCOA indices as reference for the review of activities under this program.

2.1. MARKET STRUCTURE

2.1.1. Number of Participants

2.1.1.1. Per Threshold

Over the billing quarter in review, there were twenty-three (23) recorded initial switches undertaken by newly registered GEOP End-users that participated in the market, demonstrating a 9% increase from the previous quarter, tallying to a total of 286 registered GEOP End-users in the program. In terms of a per threshold category, 6% of the registered GEOP End-users were within the RCOA threshold but opted to participate in the GEOP as shown in **Figure 21**.

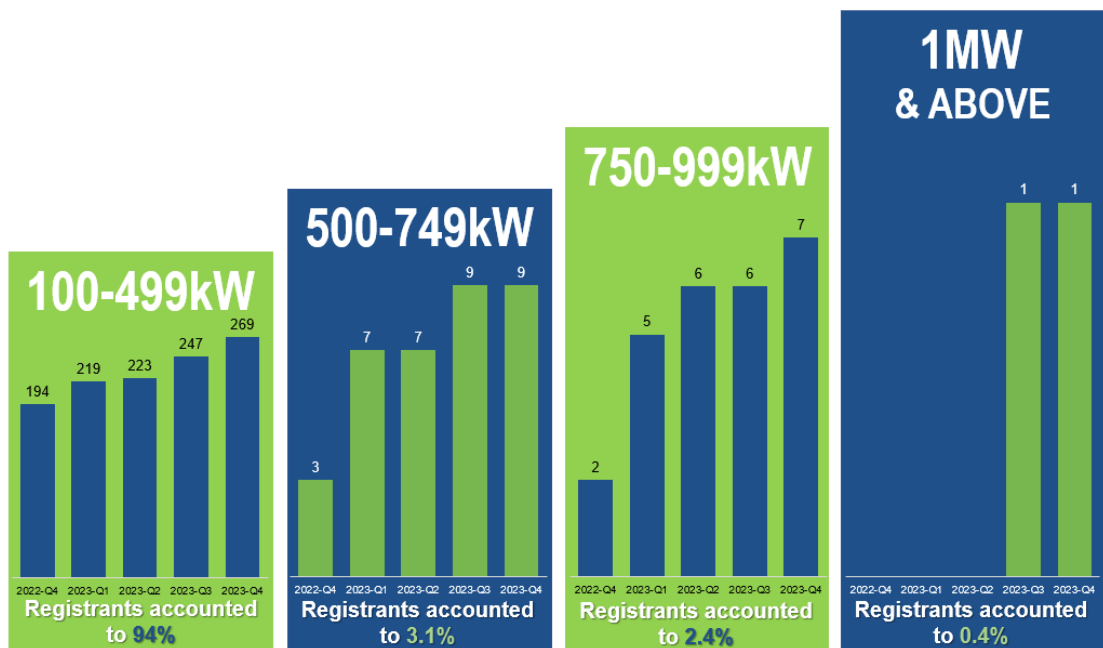


Figure 2121. Cumulative Number of GEOP End-users per Threshold, 2022-Q4 to 2023-Q4

Figure 21 also illustrates that the majority of GEOP End-users were within the 100k-499kW, which is below the current threshold offered under the RCOA program. Notably, the addition of one (1) GEOP End-user within the RCOA threshold opting to still engage under this program signifies a notable trend for larger consumer/s actively choosing to participate in the GEOP during the specified timeframe.

2.1.1.2. Per Location

In terms of geographical distribution of GEOP End-Users, majority, accounting for 73% or a total of 208 GEOP End-Users, were located in the Luzon grid while the remaining 27% or 78 GEOP End-Users, were located in the Visayas grid, as depicted in **Figure 22**. This distribution pattern remained consistent when compared to the assessment of the previous quarter and to the RCOA. The data underscores that Luzon serves as the focal point of concentration for GEOP End-users, indicating that a significant portion of these customers were located in this region.

LUZON	
Period	No. of CCs
As of Dec 2022	147
As of Mar 2023	169
As of Jun 2023	171
As of Sep 2023	188
As of Dec 2023	208

VISAYAS	
Period	No. of CCs
As of Dec 2022	52
As of Mar 2023	62
As of Jun 2023	65
As of Sep 2023	75
As of Dec 2023	78

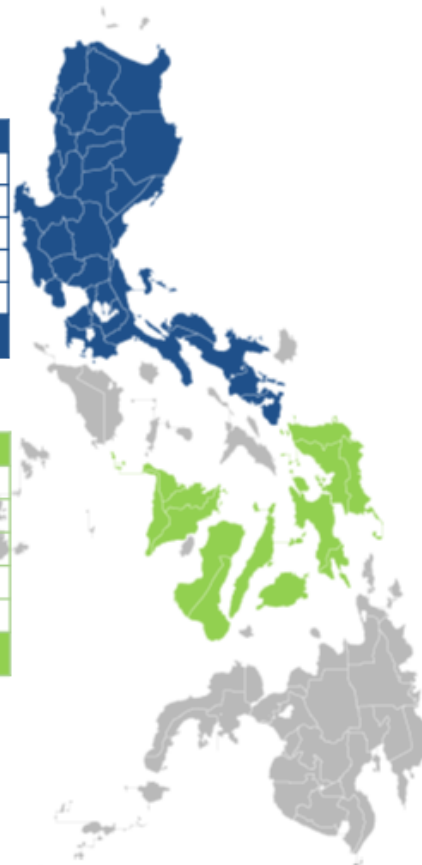


Figure 2222. Cumulative Number of GEOP End-users Per Region, 2022-Q4 to 2023-Q4

Note: Retail market is only operational in the Luzon and Visayas grid. Commencement of retail market in the Mindanao shall be determined by the DOE and ERC.

2.1.1.3. Per Retail Activity

A consistent pattern of shares between the commercial and industrial sectors was observed in terms of industry participation among GEOP End-users when compared with the preceding quarters. With increasing trend for the percent share under commercial activities, the total registered GEOP End-users for this quarter is about 65% activities while the remaining 35% belongs to the industrial sector.

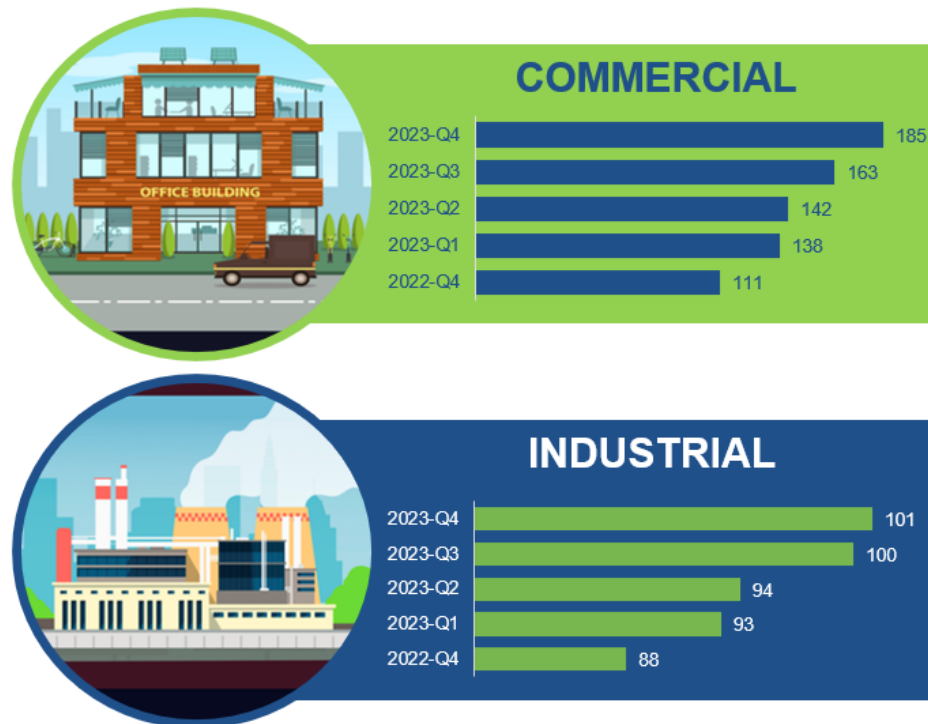


Figure 2323. Cumulative Number GEOP End-users Per Retail Activity, 2022-Q4 to 2023-Q4

2.1.1.4. Average Consumption

Regarding the energy consumption of GEOP End-users, **Table 4** provides a breakdown of consumption levels based on the averaged metered quantity (MQ) for the 4th quarter of 2023. Notably, most of the GEOP End-users recorded an average consumption falling under the category of 1MWh and below. Moreover, one (1) GEOP End-user registered for four (4) months under the 1MW and above threshold which has attained a 0.35% share of the total average energy consumption for the reviewed quarter.

Table 5. Percentage Per Level of Average Energy Consumption, 2023-Q4

Region	0.5 MWh and below		Above 0.5 MWh to 1 MWh		Above 1 MWh to 5 MWh		Sub-Total Per Region		Percent Change from the previous quarter	
LUZON	70.63%	▲	2.10%		-		72.48%	▲	1.24%	▲
VISAYAS	26.22%	▲	0.70%	▼	0.35%	▲	27.20%	▼	1.24%	▼
Sub-Total Per Level of Average Energy Consumption	96.85%	▲	2.80%	▲	0.35%	▲	100.00%		-	
Percent Change from the previous quarter	0.49%	▼	0.14%	▲	0.35%	▲	-		-	

2.1.1.5. Suppliers

Within the GEOP framework, authorized RESEs are allowed to provide energy supply, contingent with the possession of an operational permit from the Department of Energy (DOE) and proper authorization or licensing from the Energy Regulatory Commission (ERC), which will then allow them to become a Renewable Energy (RE) Supplier.

As of December 2023, there were a total of seventeen (17) registered RE Suppliers in the market, along with thirteen (13) designated Suppliers of Last Resort (SoLRs).

An additional RE Supplier¹¹ has entered into an active contract with GEOP End-users resulting in ten (10) among the 17 RE Suppliers having active contracts with GEOP End-users. It is worth noting that all RE Suppliers with active contracts are also actively participating in the RCOA.

Table 6. Cumulative Number of Supplier

	Registered	With Active Contract
RE Supplier	17	10
SoLR	13	-

2.2. MARKET SHARE

2.2.1. Supplier Share

2.2.1.1. Share in terms of Number of GEOP End-users and Consumption

Figure 24 shows the quarterly share of the RE Suppliers per major participant grouping in terms of the number of GEOP End-users registered in the market as of the December 2023 billing period.

Based on quarter-on-quarter review, the Ayala group continuously increased its percent share and remained to be the top group in terms of the number of GEOP End-Users served. Meanwhile, EDC group also held a significant share in terms of the number of users served within GEOP being the top 2 major participant grouping. This measure highlights the enduring prominence of the Ayala group and the sustained presence of other players in the GEOP.

¹¹ Complete list of all registered Suppliers per category is provided in Annex A. List of Suppliers Per Category, as of 25 December 2023

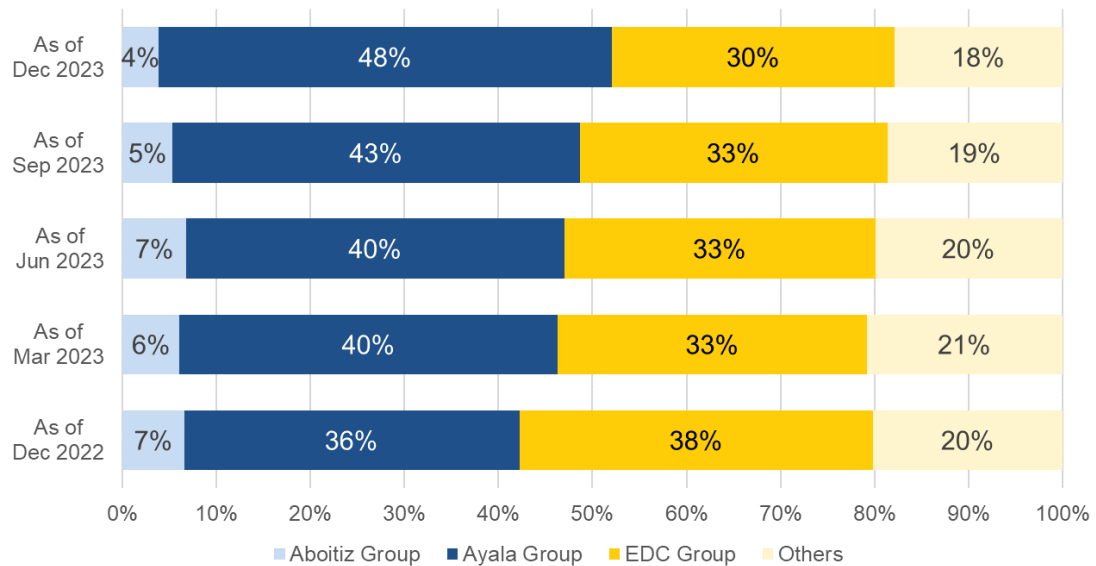


Figure 24. Share in Number of GEOP End-Users Per Major Participant Grouping, 2022-Q4 to 2023-Q4

With regard to the distribution of major groups' shares in terms of energy consumption, **Figure 25** illustrates that the Ayala group remained to have the most substantial share by the end of the 4th quarter of 2023, accounting to 42%. This highlights the dominant position of the Ayala group in both the number of GEOP End-users engaged and the energy consumption served.

It is noteworthy that the suppliers not belonging to a major group labeled as "Others" saw an increase in the percentage share of energy consumption served despite the decrease in the percentage share in the number of engaged GEOP End-users.

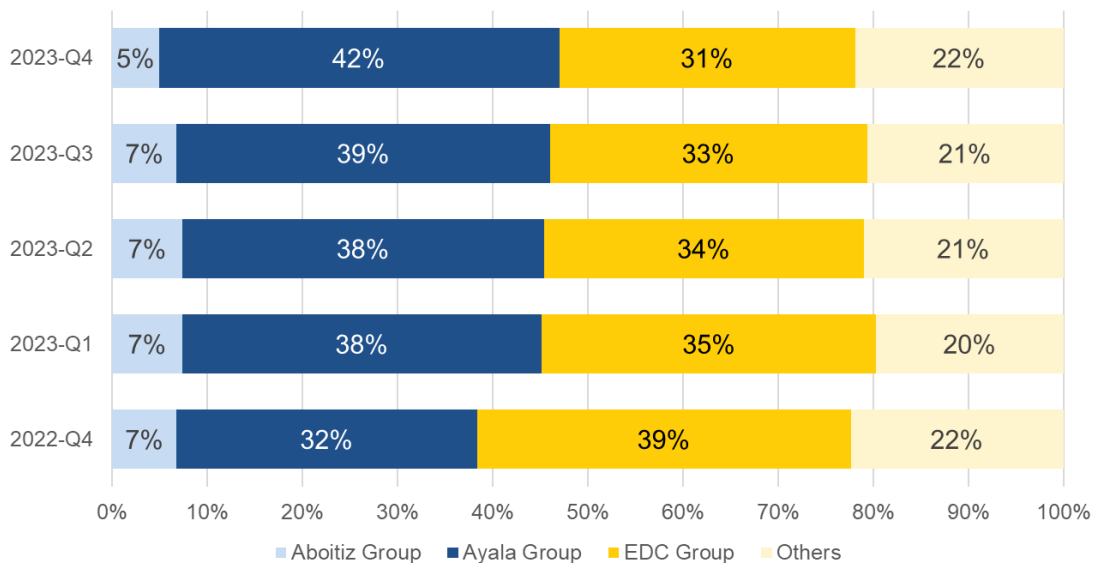


Figure 25. Share in Total Energy Consumption of GEOP End-users Per Major Participant Grouping, 2022-Q4 to 2023-Q4

2.2.1.2. Consumption Per Franchise Area Location

Geographically, registered GEOP End-users were spread throughout the various economic zones and DU franchise areas indicated in *Appendix B: List of Distribution Utility and Economic Zones*.

d1About 62% of the registered GEOP End-users consumption, as shown in **Figure 26(a)**, were located in MERALCO's franchise area, 17% were within the VECO franchise, and 21% were scattered throughout the other franchise areas and economic zones. **Figure 26(b)** illustrates that inside the MERALCO franchise area, majority of the GEOP End-Users were supplied by various RE Suppliers, which do not belong to any major participant groupings determined by the ERC, at 51%, followed by the Ayala group which is the top major participant grouping within the GEOP.

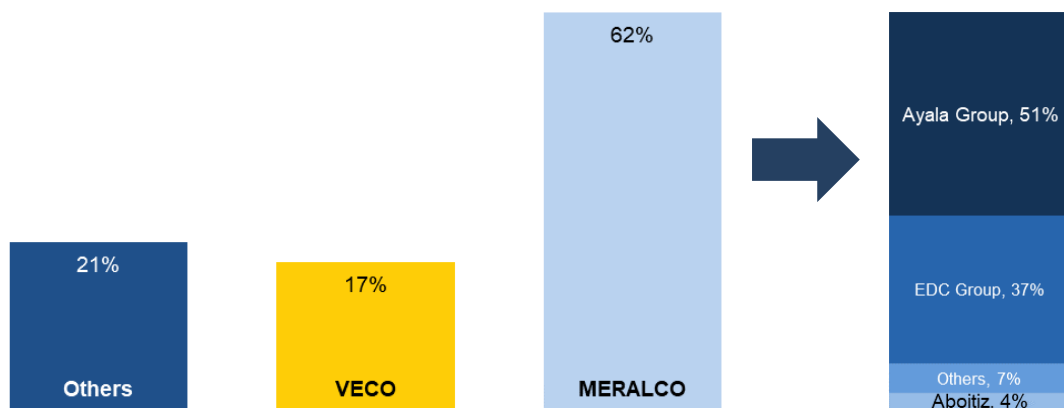


Figure 2626. (a) GEOP End-Users Energy Consumption by Franchise Area, 2023-Q4; (b) GEOP End-Users Energy Consumption by Supplier within MERALCO Franchise Area, 2023-Q4

Furthermore, there have been minimal changes in the percentage share per location and within MERALCO's franchise area in comparison to the previous quarter.

2.2.2. Market Concentration

2.2.2.1. Herfindahl–Hirschman Index (HHI)

This section discusses the market concentration in the GEOP, by major participant grouping determined by the ERC. This index was based on the number of contracted GEOP End-users and the corresponding energy consumption of these GEOP End-users. **Figure 27** shows the level of market concentration using the Herfindahl–Hirschman Index (HHI)¹² when measured in terms of the number of served GEOP End-users and their consumption.

¹² HHI measures the degree of market concentration. Defined as the sum of the Suppliers' market share, the HHI threshold are as follows:

- HHI < 1000 - not concentrated
- Greater than 1000 up to 1800 - moderately concentrated
- Greater than 1800 up to 2500 - concentrated
- Greater than 2500 - highly concentrated

In terms of per major participant groupings, the market was identified as having a high level of concentration. As discussed earlier regarding the percentage share, the increase in both the number of GEOP End-users and their consumption within the Ayala group led to the continued increase in this measure. Consequently, this resulted in an increase in the level of market concentration and a decline in terms of competition.

Meanwhile, when considering market shares on a per Renewable Energy (RE) Supplier basis, the market was found to be moderately concentrated. **Figure 27** illustrates a notable rise in the share one (1) RE Supplier, bringing it close to the threshold of being classified as concentrated. Moreover, this influx in measurement extends to the market participant grouping as well.

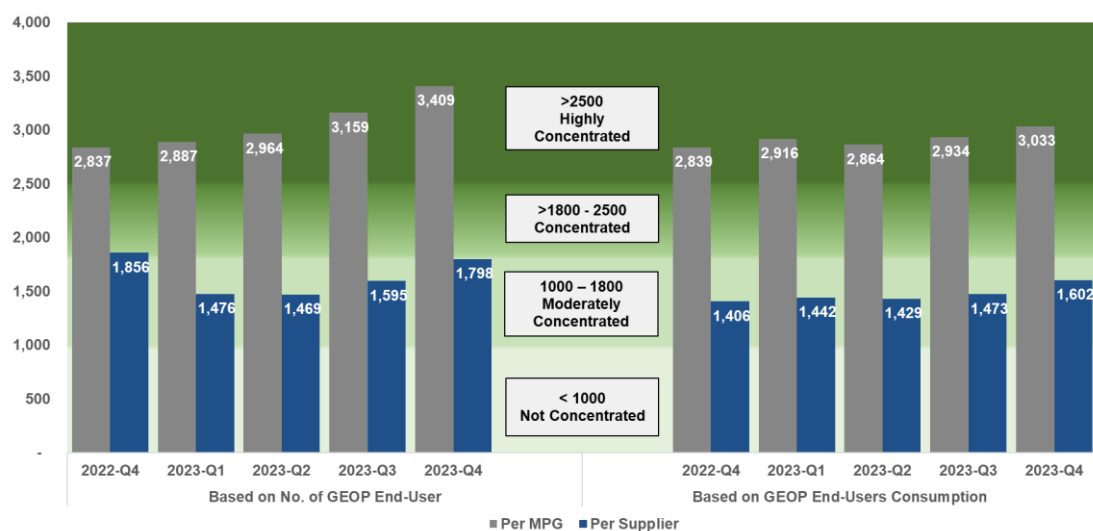


Figure 2727. HHI Values, 2022-Q4 to 2023-Q4

2.2.2.2. Four-Firm Concentration Index (C4)

With regard to the four-firm index or C4 for the GEOP, values were based both on the number of registered GEOP End-users and their consumption in terms of per major participant grouping. During the period of review, C4 values were still high for both measures at about 96% as shown in **Figure 28**.

Furthermore, when considering the shares of each supplier, the market continues to exhibit characteristics of an oligopoly, with the top four suppliers collectively holding more than 70% of the total shares. Specifically, these four major suppliers control as much as 76% of the market when assessed in terms of the number of GEOP End-Users and 73% in terms of energy served. This concentration can be attributed to the early stages of GEOP implementation, and the unique characteristics of energy sources involved in the program.

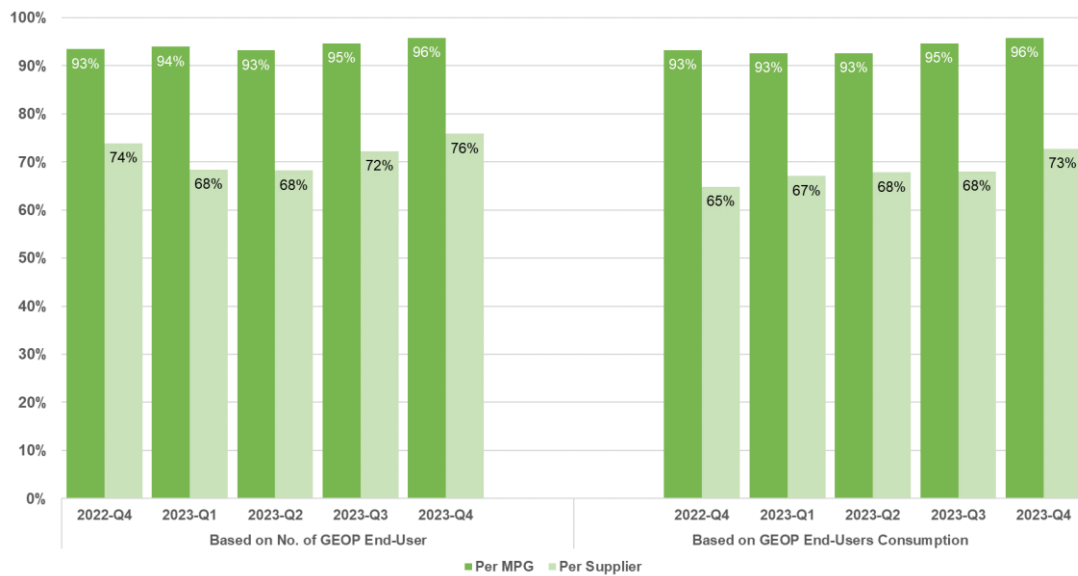


Figure 2828. Four-Firm Index, 2022-Q4 to 2023-Q4

2.3. MARKET PERFORMANCE

2.3.1. Energy Consumption

2.3.1.1. Monthly Energy Consumption

Figure 29 depicts the month-on-month consumption of consumers over the past fifteen (15) months, encompassing the 4th quarter of the preceding year, 2022. It is apparent that even during the rainy and cool dry season, there persists a continuous and consistent upward trend in the consumption of both the industrial and commercial sectors. The primary factor driving this trend is the continued increase in participation in the GEOP.

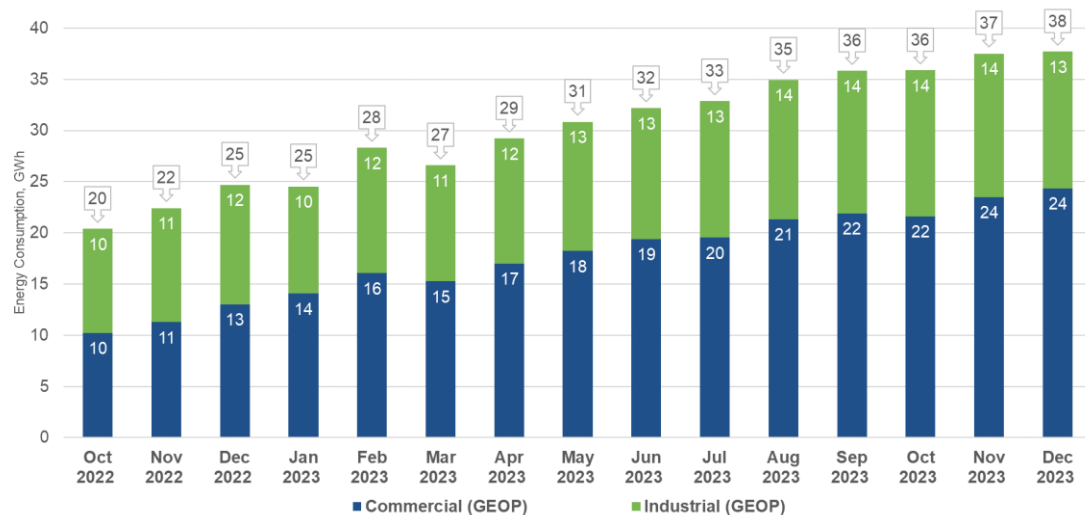


Figure 2929. Total Energy Consumption Industry Type (in GWh), Oct 2022 to Dec 2023

2.3.2. Load Profile

2.3.2.1. Hourly Energy Consumption Profile

Figures 30 and 31 show the hourly average consumption of registered industrial and commercial GEOP End-users, respectively, for the billing periods of June to December 2023. The consumption profile demonstrated how their electricity consumption varied over the course of a 24-hour period.

As illustrated in **Figure 30**, the electricity consumption patterns of industrial GEOP End-users exhibited minor variations between peak and off-peak periods, particularly during intervals from 0600h to 1700h. Although, the billing period of October was noted to be with the highest consumption for the six (6) months in comparison, dips in the average energy consumptions were consistently observed during specific intervals at 0600h, 1300h, and 1800h. This pattern strongly indicates that these industrial customers were operating on a three-shift and/or break schedule.

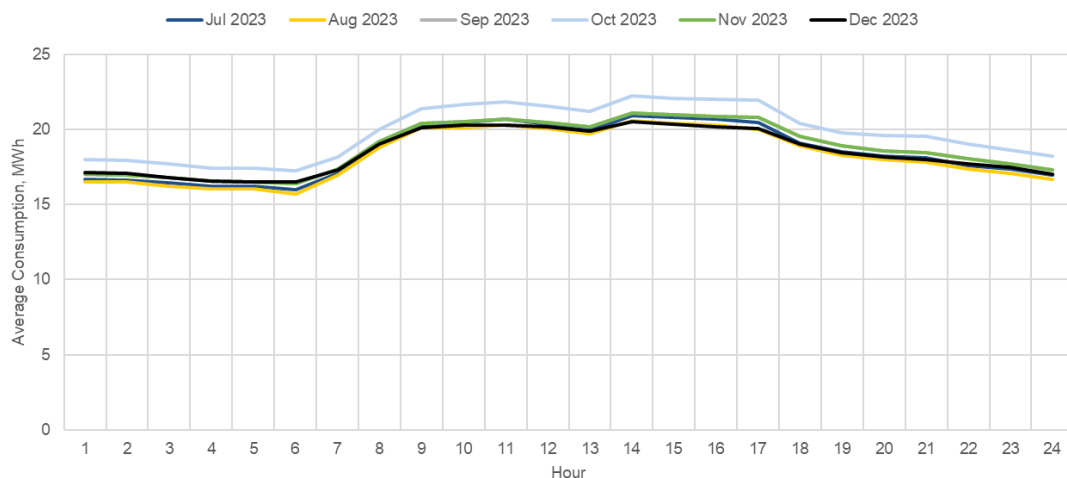


Figure 30. Hourly Average Energy Consumption (in MWh), Industrial, Jun to Dec 2023

Figure 31 illustrates the significant distinctions in consumption patterns during peak and off-peak periods among registered commercial GEOP End-users. Notably, these customers exhibited peak consumptions between the hours of 1000h to 2000h. In comparison to the preceding quarter, there was an observable increasing recorded consumptions, mirroring the industrial sector. This increase can be attributed to the increasing number of registered GEOP End-users, serving as the primary driving force behind this trend.

Furthermore, when load profiles are compared, the data suggests that there is a strong correlation between the total number of registered GEOP End-users and the resulting load profile of the consumers.

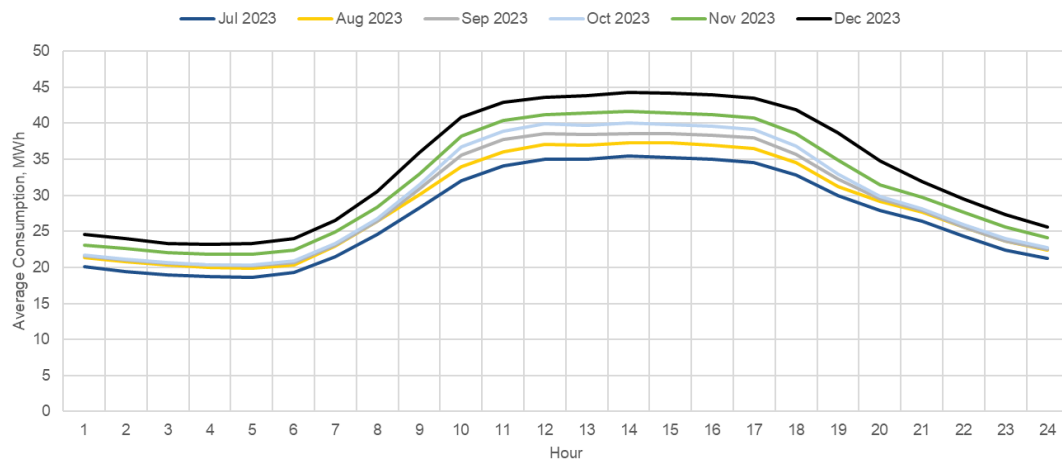


Figure 31. Hourly Average Energy Consumption (in MWh), Commercial, Jun to Dec 2023

2.3.2.2. Load Factor

Figure 32 shows the monthly load factor¹³ of the registered GEOP End-users, which was calculated based on their actual electricity consumption (total consumption over the maximum consumption and the total no. of hours). The load factors of the registered GEOP End-users remained consistently high throughout the 4th quarter of 2023. Despite a recorded lower load factor in the billing periods of November and December in comparison to the previous year, it was sustained at a level of 71%, which still indicates efficient utilization of electricity.

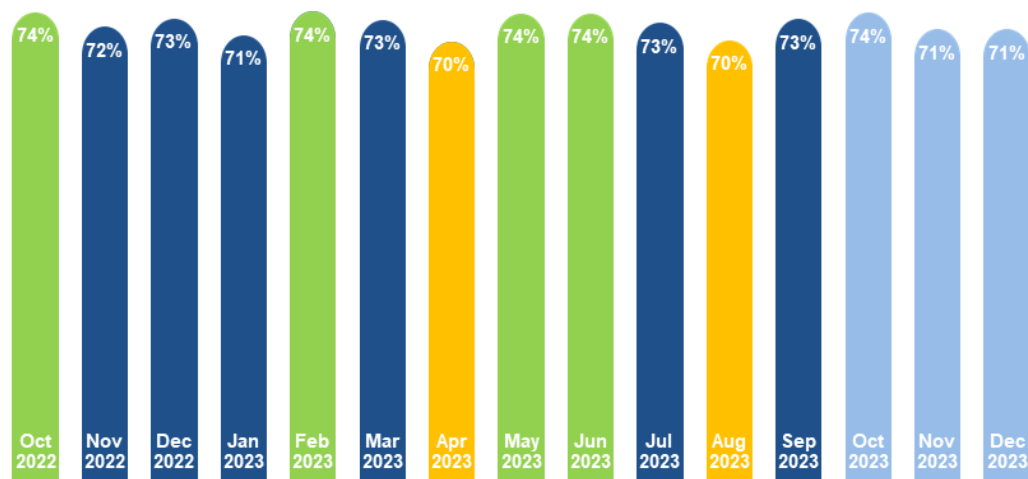


Figure 32. Load Factor, Oct 2022 to Dec 2023

¹³ Based on Metered Quantity (MQ)

2.4. RETAIL ACTIVITY

2.4.1. Customer Switching Rate

Figure 33 provides a historical switching rate among registered GEOP End-users. Based on the data, there were six (6) instances of customers switching from one supplier to another during the billing periods of October to December 2023. Four (4) out of the six (6) switches was due to the expiry of contract and non-renewal of contract. However, the remaining two (2) observed trend for the initiation of switches stemmed from the termination of contracts, possibly influenced by factors like receiving a more competitive offer or the need for a more specific resource supply to meet the demand.

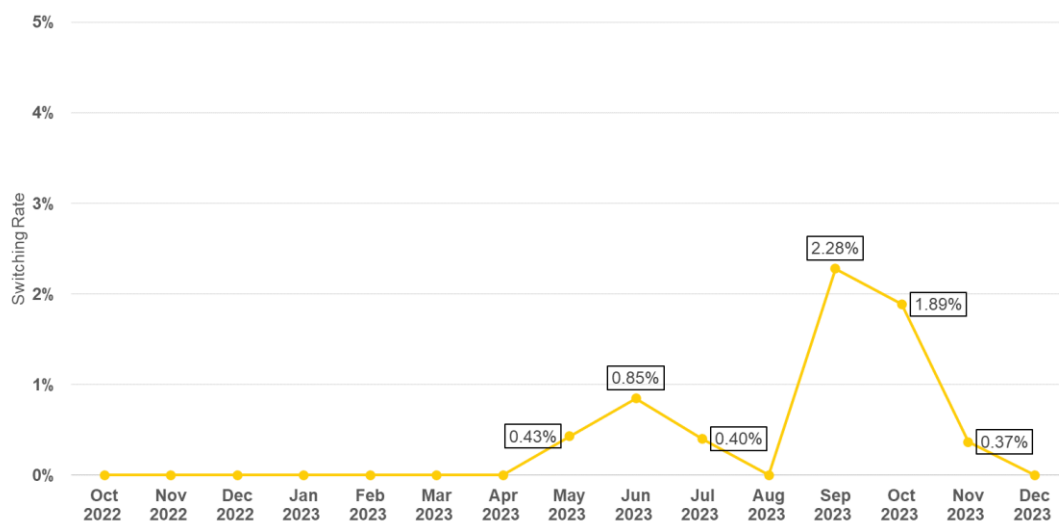


Figure 3333. Switching Rate, Oct 2022 to Dec 2023

Table 7. Switching Rate, Oct 2022 to Dec 2023

Particulars	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Switching Rate (Luzon)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.59%	0.58%	0.00%	0.00%	2.13%	0.00%	0.52%	0.00%
Total No. of GEUs	117	129	147	160	162	169	170	170	171	181	186	188	189	194	208
Total No. of GEUs that Switched	0	0	0	0	0	0	0	1	1	0	0	4	0	1	0
Local RE Supplier to RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RE Supplier to Local RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RE Supplier to RE Supplier	0	0	0	0	0	0	0	1	1	0	0	4	0	0	0
SOLR (GEOP) to RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switching Rate (Visayas)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.54%	1.47%	0.00%	2.67%	5.26%	0.00%	0.00%
Total No. of GEUs	42	48	52	56	59	62	61	63	65	68	71	75	76	77	78
Total No. of GEUs that Switched	0	0	0	0	0	0	0	0	1	1	0	2	4	0	0
Local RE Supplier to RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RE Supplier to Local RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RE Supplier to RE Supplier	0	0	0	0	0	0	0	0	1	1	0	2	4	-	-
SOLR (GEOP) to RE Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switching Rate (Luzon-Visayas)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%	0.85%	0.40%	0.00%	2.28%	1.51%	0.37%	0.00%
Total No. of GEUs	159	177	199	216	221	231	231	233	236	249	257	263	265	271	286
Total No. of GEUs that Switched	0	0	0	0	0	0	0	1	2	1	0	6	4	1	0

APPENDIX A - LIST OF REGISTERED SUPPLIERS

Category	No.	Market Participant Name	RCOA	GEOP
Retail Electricity Supplier (RES) and Renewable Electricity Supplier (RE Supplier)	1	Aboitiz Energy Solutions, Inc.	✓	✓
	2	AC Energy and Infrastructure Corporation	✓	
	3	ACEN Corporation (Formerly known as AC Energy Corporation)	✓	✓
	4	ACX3 Capital Holdings Inc.	✓	
	5	Advent Energy, Inc.	✓	✓
	6	Anda Power Corporation RES	✓	
	7	AP Renewables Inc.	✓	✓
	8	Asiapac Green Renewable Energy Corp.	✓	
	9	Bac-Man Geothermal, Inc.	✓	✓
	10	Citicore Energy Solutions, Inc.	✓	✓
	11	Corenergy, Inc.	✓	
	12	DirectPower Services, Inc.	✓	✓
	13	Ecozone Power Management, Inc.	✓	
	14	EEI Energy Solutions Corporation	✓	✓
	15	FDC Retail Electricity Sales Corporation	✓	
	16	First Gen Energy Solutions, Inc.	✓	✓
	17	Global Energy Supply Corporation	✓	
	18	GNPower Ltd. Co.	✓	
	19	Green Core Geothermal, Inc.	✓	✓
	20	Jin Navitas Electric Corporation	✓	
	21	KEPCO SPC Power Corporation	✓	
	22	Kratos RES, Inc.	✓	✓
	23	Mabuhay Energy Corporation	✓	
	24	Masinloc Power Partners Company Limited	✓	
	25	Mazzaraty Energy Corporation	✓	
	26	MegawattSolutions Inc.	✓	
	27	MeridianX Inc.	✓	
	28	PetroGreen Energy Corporation	✓	
	29	Premier Energy Resources Corporation	✓	
	30	Prism Energy, Inc.	✓	✓
	31	Rockport Power Inc.	✓	
	32	SEM-Calaca RES Corporation	✓	
	33	Shell Energy Philippines, Inc. - RES	✓	✓
	34	Limay Power Inc. (formerly SMC Consolidated Power Corporation)	✓	
	35	SN Aboitiz Power- Magat, Inc.	✓	✓
	36	SN Aboitiz Power-RES, Inc.	✓	✓
	37	Solar Philippines Retail Electricity, Inc.	✓	✓
	38	TeaM (Philippines) Energy Corporation	✓	
	39	Therma Luzon, Inc.	✓	✓
	40	Vantage Energy Solutions and Management, Inc.	✓	

Category	No.	Market Participant Name	ROA	GEOP
Local Retail Electricity Supplier	1	Batangas II Electric Cooperative, Inc.	✓	
	2	Camarines Sur II Electric Cooperative, Inc.	✓	
	3	Cebu I Electric Cooperative, Inc.	✓	
	4	Cebu II Electric Cooperative, Inc.	✓	
	5	Central Negros Electric Cooperative, Inc.	✓	
	6	Clark Electric Distribution Corporation LRES	✓	
	7	Dagupan Electric Corporation	✓	
	8	Ilocos Norte Electric Cooperative, Inc.	✓	
	9	Mactan Enerzone Corporation LRES	✓	
	10	Manila Electric Company	✓	
	11	Nueva Ecija I Electric Cooperative, Inc.	✓	
	12	San Fernando Electric Light & Power Co., Inc.	✓	
	13	Subic Enerzone Corporation	✓	
	14	Tarlac Electric, Inc.	✓	
	15	Visayan Electric Company, Inc.	✓	
Supplier of Last Resort	1	Angeles Electric Corporation	✓	✓
	2	Balamban Enerzone Corporation	✓	
	3	Batangas II Electric Cooperative, Inc.	✓	✓
	4	Benguet Electric Cooperative, Inc.	✓	
	5	Bohol I Electric Cooperative, Inc.	✓	
	6	Bohol Light Company, Inc.	✓	
	7	Cabanatuan Electric Corporation	✓	
	8	Camarines Sur II Electric Cooperative, Inc.	✓	
	9	Cebu I Electric Cooperative, Inc.	✓	✓
	10	Cebu II Electric Cooperative, Inc.	✓	
	11	Clark Electric Distribution Corporation	✓	
	12	Dagupan Electric Corporation	✓	✓
	13	Ilocos Norte Electric Cooperative, Inc.	✓	
	14	Ilocos Sur Electric Cooperative, Inc.	✓	
	15	Iloilo I Electric Cooperative, Inc.		✓
	16	Isabela I Electric Cooperative, Inc.	✓	
	17	La Union Electric Cooperative, Inc.	✓	✓
	18	Mactan Electric Company, Inc.	✓	✓
	19	Mactan Enerzone Corporation	✓	✓
	20	Manila Electric Company	✓	✓
	21	Negros Oriental II Electric Cooperative, Inc.	✓	
	22	Subic Enerzone Corporation	✓	
	23	Tarlac Electric, Inc.	✓	✓
	24	Tarlac I Electric Cooperative, Inc.	✓	✓
	25	Tarlac II Electric Cooperative, Inc.	✓	✓
	26	Visayan Electric Company, Inc.	✓	✓

APPENDIX B - LIST OF DISTRIBUTION UTILITIES / ECONOMIC ZONES WITH CONTESTABLE CUSTOMERS AND GEOP END-USERS

No.	Distribution Utility/ Economic Zone	RCOA	GEOP	No.	Distribution Utility/ Economic Zone	RCOA	GEOP
1	Angeles Electric Corporation	✓	✓	32	Leyte II Electric Cooperative, Inc.	✓	
2	Authority of the Freeport Area of Bataan	✓		33	Leyte V Electric Cooperative, Inc.	✓	
3	Aklan Electric Cooperative, Inc.	✓		34	LIMA Enerzone Corporation	✓	
4	Albay Electric Cooperative, Inc.	✓	✓	35	La Union Electric Company, Inc.	✓	
5	Antique Electric Cooperative, Inc.	✓		36	La Union Electric Cooperative, Inc.	✓	
6	Batangas I Electric Cooperative, Inc.	✓	✓	37	Mactan Electric Company	✓	
7	Batangas II Electric Cooperative	✓	✓	38	Mactan Enerzone Corporation	✓	✓
8	Benguet Electric Cooperative	✓	✓	39	Malvar Enerzone Corporation	✓	
9	Balamban Enerzone Corporation	✓		40	Manila Electric Company	✓	✓
10	Bohol Light Company, Inc.	✓		41	MORE Electric and Power Corporation	✓	✓
11	Bohol I Electric Cooperative, Inc.	✓	✓	42	Nueva Ecija I Electric Cooperative, Inc.	✓	
12	Bohol II Electric Cooperative, Inc.	✓		43	Nueva Ecija II Electric Area 1 Cooperative, Inc.	✓	
13	Cagayan I Electric Cooperative, Inc.	✓		44	Negros Occidental Electric Cooperative	✓	✓
14	Cagayan II Electric Cooperative, Inc.	✓		45	Northern Negros Electric Cooperative, Inc.	✓	
15	Capiz Electric Cooperative, Inc.	✓	✓	46	Negros Oriental II Electric Cooperative, Inc.	✓	
16	Camarines Sur II Electric Cooperative, Inc.	✓		47	Olongapo Electricity Distribution Company	✓	
17	Cebu I Electric Cooperative, Inc.	✓	✓	48	Pangasinan III Electric Cooperative, Inc.	✓	✓
18	Cebu II Electric Cooperative, Inc.	✓	✓	49	Pampanga I Electric Cooperative, Inc.	✓	
19	Cebu III Electric Cooperative, Inc.	✓	✓	50	Pampanga II Electric Cooperative, Inc.	✓	✓
20	Clark Electric Distribution Corporation	✓		51	Peninsula Electric Cooperative, Inc.	✓	
21	Cabanatuan Electric Corporation	✓		52	Quezon I Electric Cooperative, Inc.	✓	
22	Central Negros Electric Cooperative, Inc.	✓	✓	53	Samar I Electric Cooperative, Inc.	✓	✓
23	Central Pangasinan Electric Cooperative, Inc.	✓		54	San Fernando Electric Light and Power Company, Inc.	✓	
24	Dagupan Electric Corporation	✓	✓	55	Sorsogon II Electric Cooperative, Inc.	✓	
25	Don Orestes Electric Cooperative, Inc.	✓		56	Subic EnerZone Corporation	✓	
26	Iloilo I Electric Cooperative, Inc.	✓	✓	57	Tarlac I Electric Cooperative, Inc.	✓	✓
27	Iloilo II Electric Cooperative, Inc.	✓		58	Tarlac II Electric Cooperative, Inc.	✓	✓
28	Iloilo III Electric Cooperative, Inc.		✓	59	Tarlac Electric, Inc.	✓	✓
29	Ilocos Norte Electric Cooperative, Inc.	✓		60	Visayan Electric Company, Inc.	✓	✓
30	Isabela I Electric Cooperative, Inc.	✓		61	National Grid Corporation of the Philippines ¹⁴	✓	
31	Isabela II Electric Cooperative, Inc.	✓					

¹⁴ For Directly Connected Customers