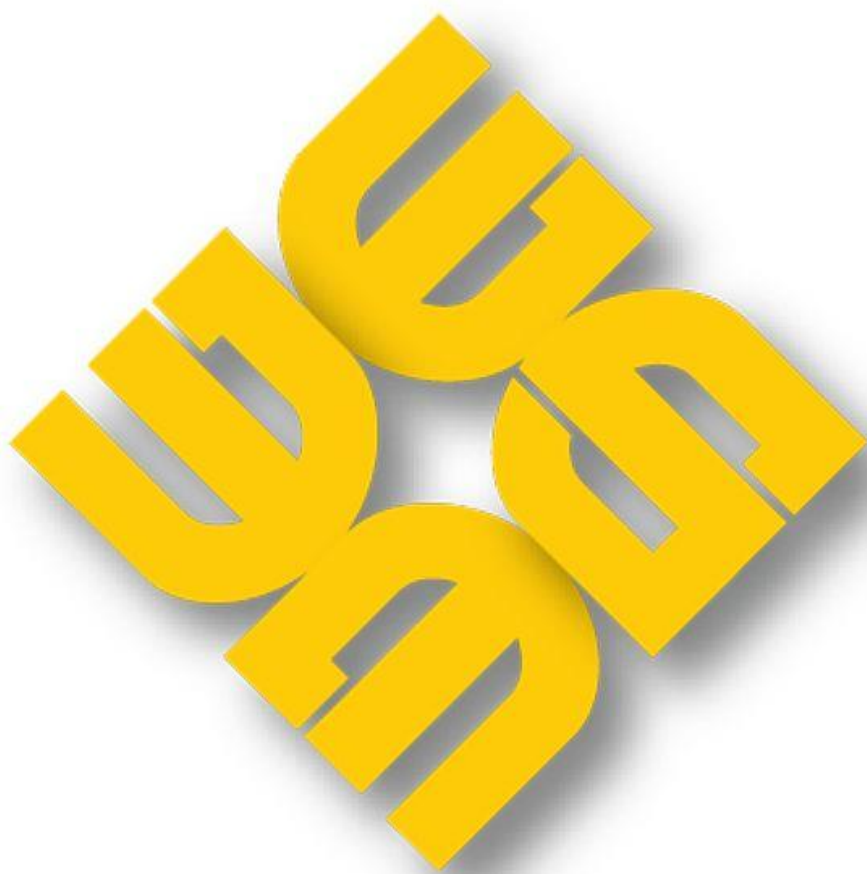


MAG-ARMAR-2017

ANNUAL RETAIL MARKET ASSESSMENT REPORT

26 December 2016 – 25 December 2017



**PHILIPPINE
ELECTRICITY
MARKET
CORPORATION**

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Executive Summary

This Annual Assessment Report on the Retail Electricity Market covering the billing months January to December 2017 (**26 December 2016 to 25 December 2017**) discusses the results of monitoring indices, as set forth in the Catalogue of Retail Market Monitoring Data and Indices. The report provides indications on how the retail market performed during the year in review and how it fared with the performance of the retail market in the previous years. It is important to note that the Contestable Customers being referred to in this report are only those registered in the market. Other electricity end-users that have been issued with a Certificate of Contestability by the Energy Regulatory Commission (ERC) but have yet to register in the market remain as Captive Customers.

As of 25 December 2017, there were a total of 940 registered Contestable Customers (from previous year's 492 registered Contestable Customers). Likewise, the market recorded a total of 28 registered Retail Electricity Suppliers (RES), 13 registered Local RES (LRES), and 24 registered Supplier of Last Resort (SOLR).

Of the total registrants, 78 Contestable Customers are in the 750 kW to 999 kW contestability threshold, while 862 Contestable Customers are in the 1 MW and above contestability threshold. Majority or 856 registered Contestable Customers are in Luzon and the remaining 84 registered Contestable Customers are in Visayas. Furthermore, 462 registrants are engaged in industrial activities while 478 registrants are into commercial activities. The total registrants is about 59 percent of the 1,598 electricity end-users that were already issued a Certificate of Contestability by the ERC.

The total energy consumption of the registered Contestable Customers for January to December 2017 billing months stood at about 73,311 GWh. This consumption level accounts for about 20 percent of the combined energy consumption of the registered Contestable Customers and the Captive Customers for 2017. The load factor of registered Contestable Customers was maintained relatively high throughout the period in review, indicating that their electricity usage was reasonably efficient.

Majority of the registered Contestable Customers are located within the MERALCO franchise area. By the end of December 2017 billing month, about 30 percent of all registrants were being supplied by MERALCO local RES (MRLCOLRE).

As regard to the level of market concentration, the HHI values and C4 values were on a decreasing trend over the months. The market concentration based on HHI using the ERC's major participant grouping shifted from a highly concentrated market throughout 2013 to 2016, to moderately concentrated market in 2017.

I. MARKET STRUCTURE

The market structure indices are used to determine the number of players, market share, and level of market concentration.

A. Number of Players

1. Number of Contestable Customers

More than four years since the retail market was launched on 26 June 2013, the number of participating Contestable Customers grew from only 240 Contestable Customers that initially registered to 940 registrants by the end of the December 2017 billing month (**Figure 1**). This is about 59 percent of the 1,598¹ qualified electricity end-users already issued with a certificate of contestability based on the latest data of the Energy Regulatory Commission (ERC). The year 2017 marked a significant 91 percent increase in the number of registered Contestable Customers following the supposed timeline for their mandatory registration as determined by the ERC², which will be discussed below.

Figure 1. Year-on-Year Cumulative Number of Registered of Registered Contestable Customers (as of End of December Billing Period), 2013-2017

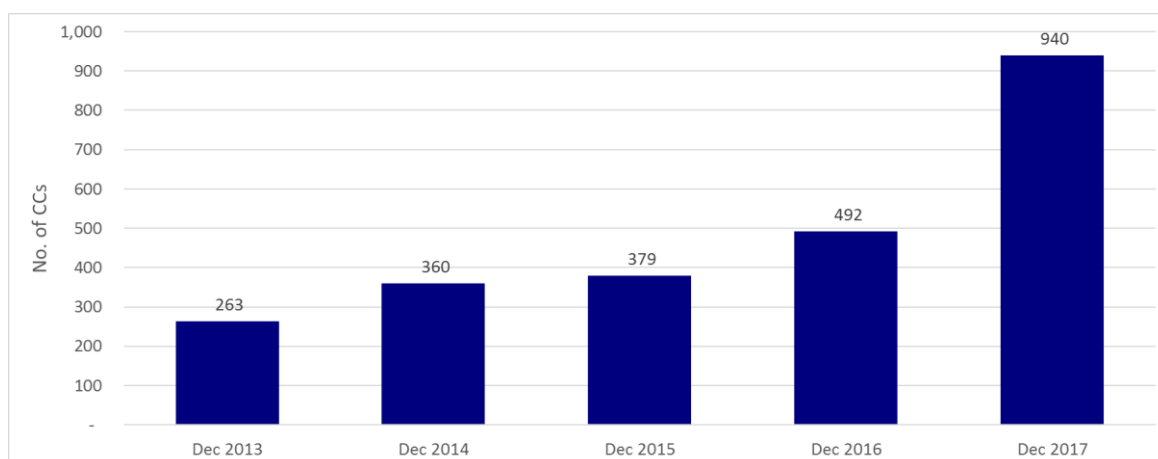


Table 1. Year-on-Year Growth in the Number of Registered Contestable Customers

Annual Growth in No. of Registrants	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017
Cumulative No. of Registrants as of End of Period	263	360	379	492	940
Annual Percent Increase		37%	5%	30%	91%

For the year 2017, a noticeable increase in the number of registrants was particularly noted in March 2017, consistent with the timeline set in ERC Resolution No. 28, Series of 2016³ for the mandatory contestability of electricity end-users with 1 MW and above average peak demand by 26 February 2017. As depicted in

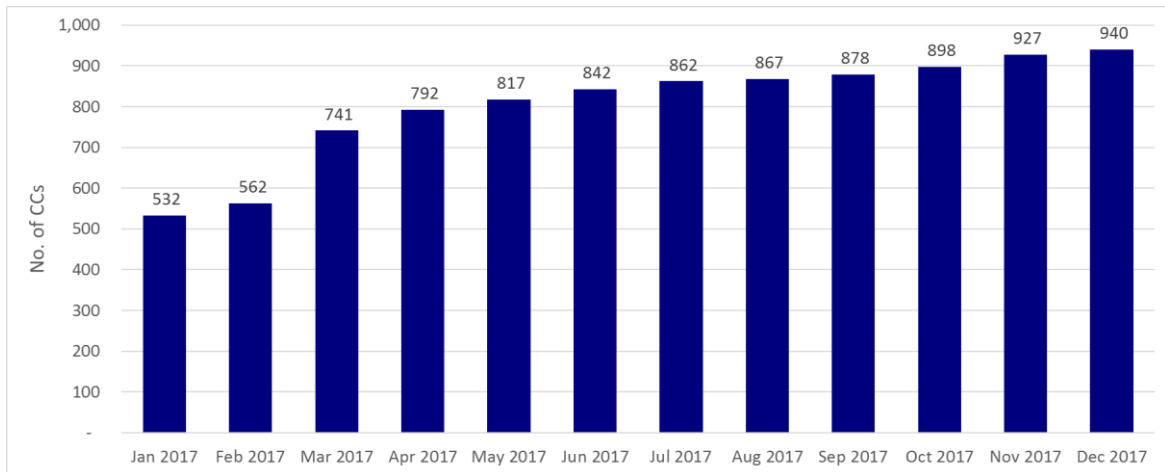
¹ Monthly Statistical Data as of December 2017 (www.buyourelectricity.com.ph).

² ERC Resolution No. 28, Series of 2016.

³ Subject of the Temporary Restraining Order (TRO) issued by the Supreme Court on 21 February 2017.

Figure 2, a 32 percent increase was observed during this period from 562 to 741 registered Contestable Customers from February to March 2017 billing period.

Figure 2. Monthly Cumulative Number of Registered Contestable Customers (as of End of Billing Period), January to December 2017



Shown in **Figures 3 and 4** are the year-on-year and monthly cumulative number of registrants per contestability threshold, respectively. When the voluntary registration of the contestable customers in the 750-999 kW began on 26 June 2016 per ERC Resolution No. 10, Series of 2016, the market initially registered 14 participants. By the end of the March 2017 billing period, the market recorded a total of 78 registered Contestable Customers in this lower contestability threshold. However, there had been no additional registrants in the 750-999 kW contestability threshold after this period following Supreme Court's imposition of a temporary restraining order (TRO), halting the implementation of *ERC Resolution Nos. 05, 10, 11, and 12 all series of 2016, which are the rules and regulations implementing the RCOA*, as well as the DOE Department Circular DC2015-06-0010, which defines the latest timeline of implementation of RCOA at that time.

Pending the Supreme Court's resolution to the Motion filed before it by the DOE and the ERC for the lifting of the TRO, the DOE issued on 29 November 2017 Department Circulars DC2017-12-0013 and DC-2017-12-0014 *to address policy and regulatory gaps resulting from and consistent with the cases mentioned above.*

These latest policy issuances of the DOE hope to *provide immediate guidance to affected power industry entities in view of the TRO on the pre-existing RCOA processes*, in particular, the suppliers and contestable customers that wish to participate in the market. The said policy issuances will effectively allow the voluntary participation of Contestable Customers in the 750 kW and above contestability threshold, among others.

Figure 3. Year-on-Year Cumulative Number of Registered Contestable Customers Per Contestability Threshold (as of End of December Billing Period), 2013 to 2017

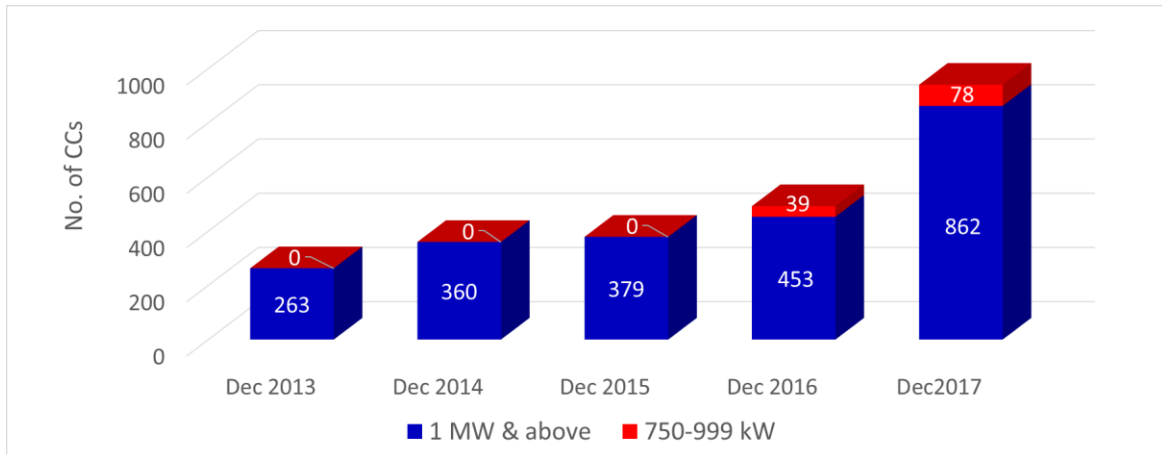
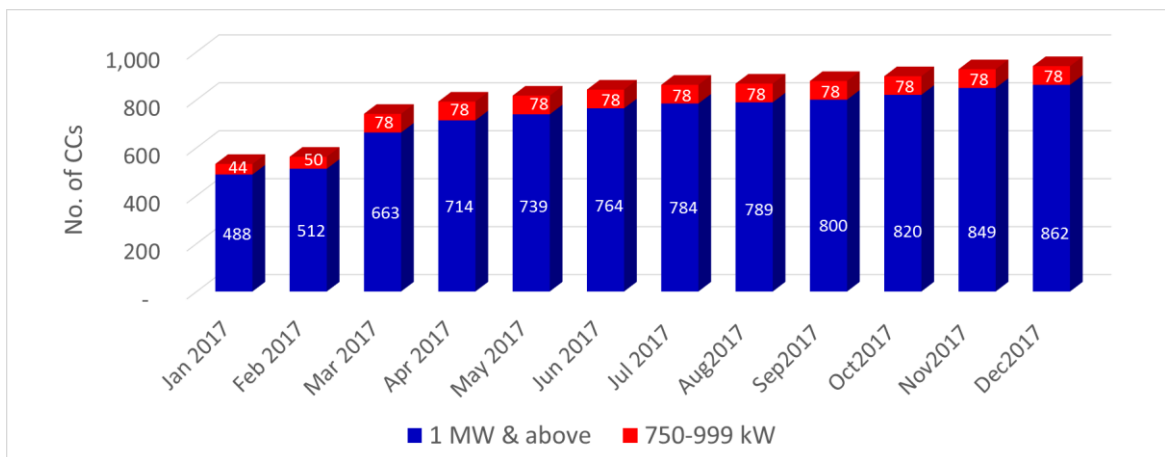


Figure 4. Monthly Cumulative Number of Registered Contestable Customers Per Contestability Threshold (as of End of Billing Period), January to December 2017



In terms of distribution by area, 856 Contestable Customers (about 91 percent) are located in Luzon while 84 Contestable Customers (about 9 percent) are located in Visayas. The annual figures in the number of registered Contestable Customers per region are depicted in **Figure 5**. It may be observed that over the years, participation of Contestable Customers both in Luzon and Visayas in terms of number of registrants has increased significantly relative to the first year of RCOA's implementation. It may be noted that most of the new registrants in the year 2017 alone are Contestable Customers in Luzon. As can be observed in **Figure 6** and consistent with the previous discussions, a significant growth in the number of registrants in Luzon came in March 2017.

Figure 5. Year-on-Year Cumulative Number of Registered of Registered Contestable Customers Per Region (as of End of December Billing Period), 2013-2017

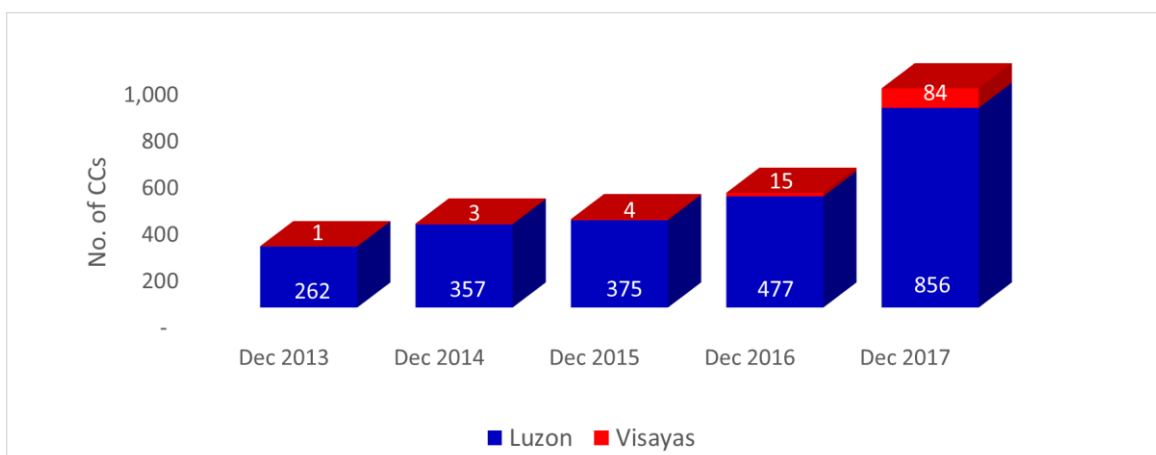
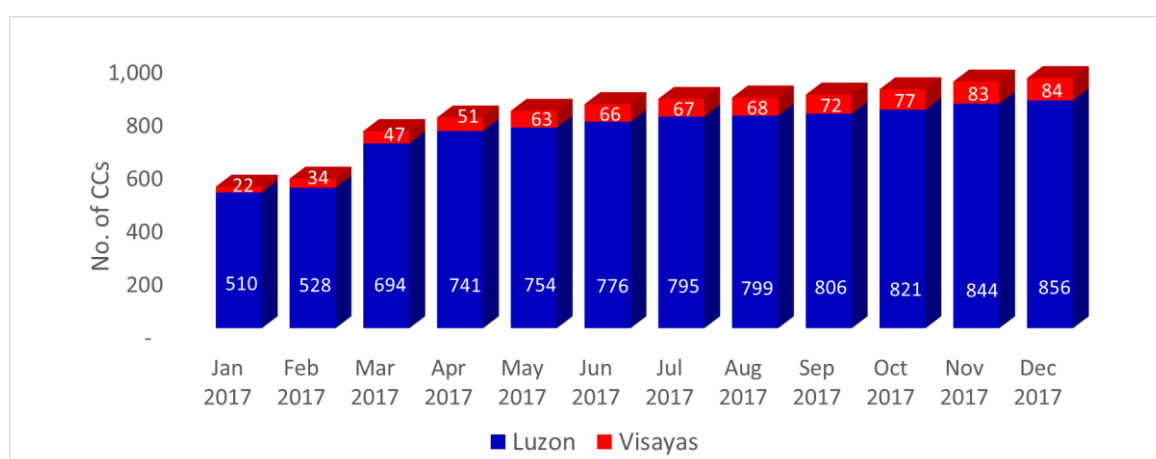


Figure 6. Monthly Cumulative Number of Registered Contestable Customers Per Region (as of End of Billing Period), January to December 2017



The year-on-year number and percentage of registered Contestable Customers per type of activity are shown in **Figures 7** and **8**. The figures depict that 462 Contestable Customers (about 49 percent) are engaged into industrial activities while 478 Contestable Customers (about 51 percent) are into commercial activities as of end of the December 2017 billing period. Note that the retail market started with a significantly higher number of industrial Contestable Customers than commercial Contestable Customers. However, as shown in **Figures 9** and **10**, the considerable number of commercial Contestable Customers that registered in March 2017 and the continuing registration in the market of this type of Contestable Customers resulted in a change in the share structure with now more commercial Contestable Customers registered in the market beginning the November 2017 billing month.

Figure 7. Year-on-Year Cumulative Number of Registered Contestable Customers Per Retail Activity (as of End of December Billing Period), 2013 to 2017

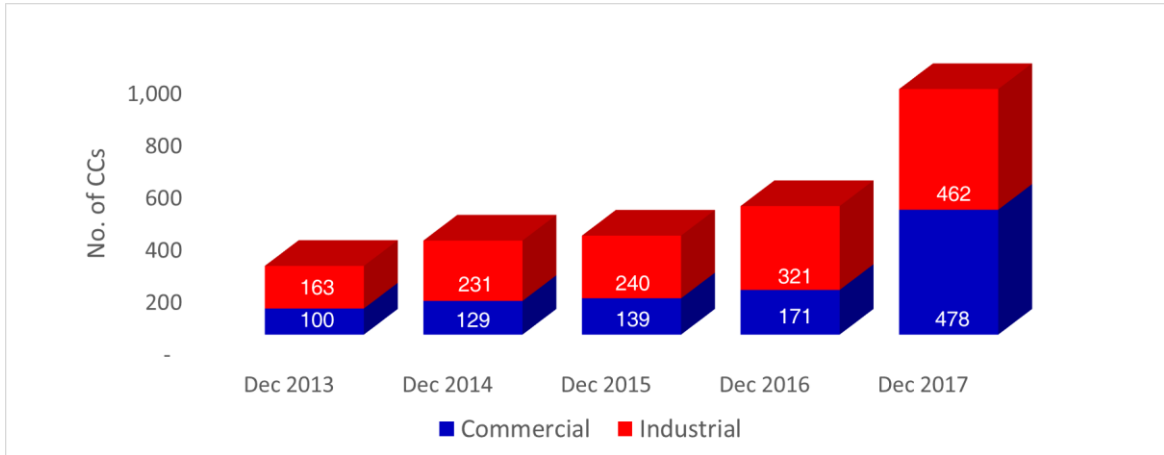


Figure 8. Year-on-Year Percentage Share in the Number of Registered Contestable Customers Per Retail Activity (as of End of December Billing Period), 2013 to 2017

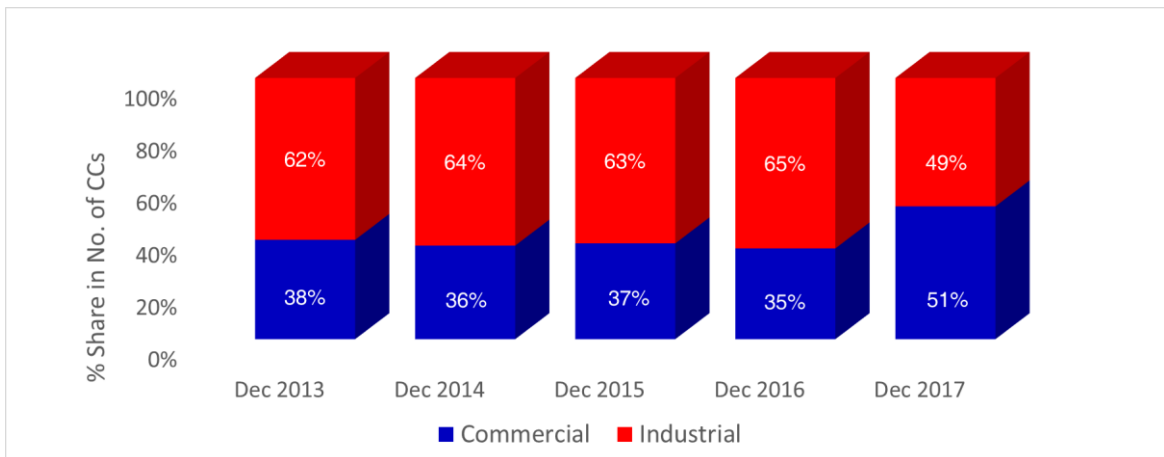


Figure 9. Monthly Cumulative Number of Registered Contestable Customers Per Retail Activity (as of End of Billing Period), January to December 2017

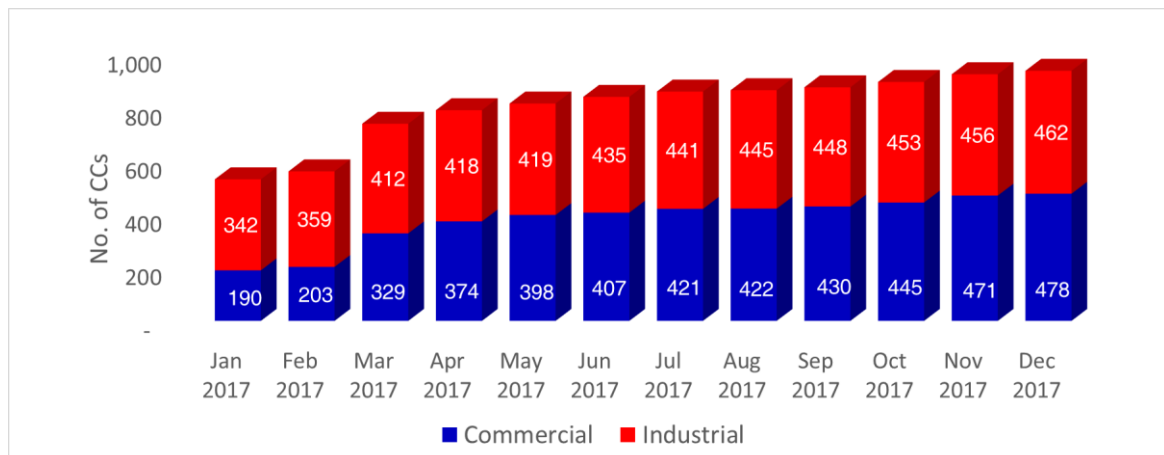


Figure 10. Monthly Percentage Share in the Number of Registered Contestable Customers Per Retail Activity (as of End of Billing Period), January to December 2017

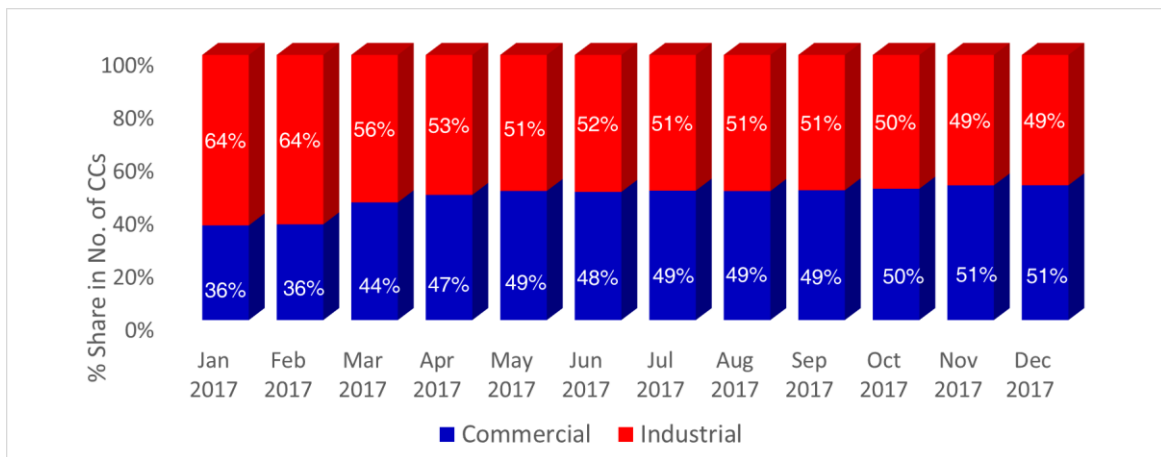


Table 2 shows the percentage of registered Contestable Customers per level of maximum energy consumption based on their metered quantity (MQ). For the January to December 2017 billing months, majority or about 77 percent of the registrants had maximum energy consumption higher than 1 MWh up to 5 MWh. Meanwhile, about 10 percent of the registered Contestable Customers had maximum energy consumption of 1 MWh and below, while about 10 percent had maximum energy consumption higher than 5 MWh up to 10 MWh during the period. The remaining 4 percent of the registered Contestable Customers had maximum energy consumption higher than 10 MWh.

Table 2. Percentage of Registered Contestable Customers, Per Level of Maximum Energy Consumption—January to December 2017

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	Above 50 MWh	Sub-Total Per Region
LUZON	8.8%	69.9%	8.8%	1.6%	0.4%	1.5%	0.2%	91.1%
VISAYAS	1.1%	6.5%	0.7%	0.1%	0.1%	0.2%	0.1%	8.9%
Sub-Total Per Level of Maximum Energy Consumption	9.8%	76.5%	9.5%	1.7%	0.5%	1.7%	0.3%	100.0%

2. Number of Suppliers

As of the period covered in this report, there are a total of 28 Retail Electricity Suppliers (RES), 12 Local RES (LRES) and 24 Suppliers of Last Resort (SOLR) have registered in the market. **Figures 11** and **12** show the year-on-year and the 2017 month-on-month cumulative number of registered suppliers per category. For the year 2017, 9 new RES and 18 new SOLR registered in the market.

Figure 11. Year-on-Year Cumulative Number of Registered Suppliers Per Category (As of End of December Billing Period), 2013-2017

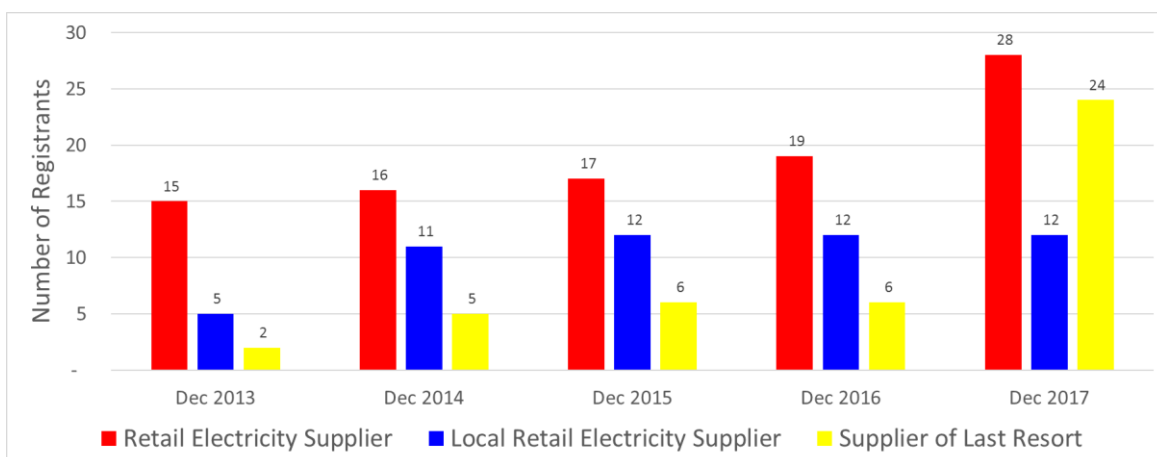
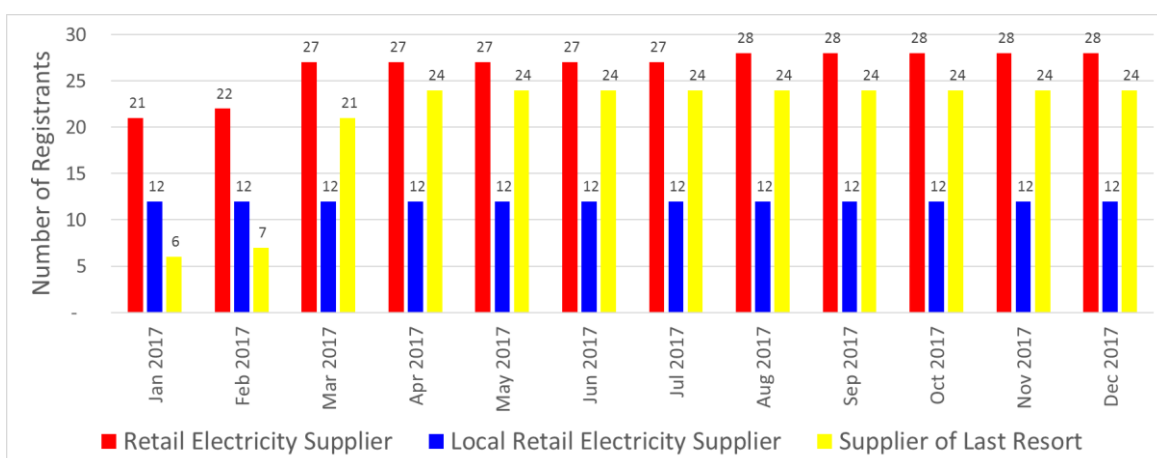


Figure 12. Month-on-Month Cumulative Number of Registered Suppliers Per Category (as of End of Billing Period), January to December 2017



As of the December 2017 billing period, majority of the RES are actively participating in the WESM and serving registered Contestable Customers. A summary of the number suppliers with registered Contestable Customers served is shown in **Table 3**. As of this period, 25 RES and 4 LRES are serving registered Contestable Customers.

Table 3. Summary of Suppliers Per Category, as of 25 December 2017

Category	No. of Suppliers	
	Total Registered	With CCs Served
Retail Electricity Supplier	28	25
Local Retail Electricity Supplier	12	4
Supplier of Last Resort	24	0

A list of all registered suppliers per category (RES, LRES, and SOLR) as of the December 2017 billing period is provided in **Table 4**.

Table 4. List of Suppliers Per Category—as of 25 December 2017

Category	No.	Market Participant Name	Short Name
Retail Electricity Supplier	28	AC Energy Holdings, Inc.	ACERES
		AdventEnergy, Inc.	ADVENTRES
		Aboitiz Energy Solutions, Inc.	AESIRES
		Bac-Man Geothermal, Inc.	BGIRES
		Citicore Energy Solutions, Inc.	CESIRES
		Corenergy, Inc.	CORERES
		DirectPower Services, Inc.	DIRPOWRES
		Ecozone Power Management, Inc.	EPMIRE
		FDC Retail Electricity Sales Corporation	FDCRESC
		First Gen Energy Solutions, Inc.	FGESRES
		Global Energy Supply Corporation	GESCRE
		GNPower Ltd. Co.	GNPLGRES
		GNPower Mariveles Coal Plant Ltd. Co.	GNPRES
		KEPCO SPC Power Corporation	KSPGRES
		Kratos RES, Inc.	KRATOSRES
		Mazzaraty Energy Corporation	MACRES
		Manta Energy, Inc.	MANTARES
		Masinloc Power Partners Company Limited	MPPCLRES
		Millenium Power RES, Inc.	MPPIRES
		Premier Energy Resources Corporation	PERGRES
		Prism Energy, Inc.	PRISMRES
		San Miguel Electric Corporation	SMELGRES
		SMC Consolidated Power Corporation	SMCCPGRES
		SN Aboitiz Power-RES, Inc.	SNAPRES
		Solvre, Inc.	SOLVRERES
		Trans-Asia Oil & Energy Development Corporation	TAORES
		Team (Philippines) Energy Corporation	TPEGRES
		Vantage Energy Solutions and Management, Inc.	VESMIRE
		Waterfront Mactan Casino Hotel, Inc.	WAHCRES
Local Retail Electricity Supplier	12	Batangas II Electric Cooperative, Inc.	BTLC2LRE
		Camarines Sur II Electric Cooperative, Inc.	CASUR2LRE
		Dagupan Electric Corporation	DECORPLRE
		Ilocos Norte Electric Cooperative, Inc.	INECLRE
		Manila Electric Company	MRLCOLRE
		San Fernando Electric Light & Power Co., Inc.	SFELAPLRE
		Subic Enerzone Corporation	SEZLRE
		Tarlac Electric, Inc.	TEILRE
		Cebu I Electric Cooperative, Inc.	CEBEC1LRE
		Cebu II Electric Cooperative, Inc.	CEBEC2LRE
		Central Negros Electric Cooperative, Inc.	CENECOLRE
		Visayan Electric Company, Inc.	VECOLRE
Supplier of Last Resort	24	Angeles Electric Corporation	AECSLR
		Benguet Electric Cooperative, Inc.	BENECOSLR
		Balamban Enerzone Corporation	BEZSLR
		Bohol Light Company, Inc.	BLCISLR
		Bohol I Electric Cooperative, Inc.	BOHECO1SLR
		Batangas II Electric Cooperative, Inc.	BTLC2SLR
		Camarines Sur II Electric Cooperative, Inc.	CASUR2SLR
		Cebu I Electric Cooperative, Inc.	CEBEC1SLR
		Cebu II Electric Cooperative, Inc.	CEBEC2SLR
		Clark Electric Distribution Corporation	CEDCSLR
		Cabanatuan Electric Corporation	CELCORSLR
		Dagupan Electric Corporation	DECORPSLR
		Ilocos Norte Electric Cooperative, Inc.	INECSLR
		Ilocos Sur Electric Cooperative, Inc.	ISECOSLR
		Isabela I Electric Cooperative, Inc.	ISLCO1SLR
		La Union Electric Cooperative, Inc.	LUELCSLR
		Mactan Electric Company, Inc.	MECOSLR
		Mactan Enerzone Corporation	MEZSLR
		Manila Electric Company	MRLCOSLR
		Negros Oriental II Electric Cooperative, Inc.	NRECO2SLR
		Subic Enerzone Corporation	SEZSLR
		Tarlac I Electric Cooperative, Inc.	TRLCO1SLR
		Tarlac II Electric Cooperative, Inc.	TRLCO2SLR
		Visayan Electric Company, Inc.	VECOSLR

B. Market Share

1. Market Share of Supplier

Notably, the suppliers generally increased the number of their registered Contestable Customer, with exception of a few Suppliers that either maintained or decreased the number of Contestable Customers they served. **Table 5** below shows the cumulative number of registered Contestable Customers served by each Supplier at the end of each relevant period. On top of the list is MRLCOLRE with 279 registered Contestable Customers as of end of the December 2017 billing period. Following distantly are AESIRES with 166 Contestable Customers, TAORES with 84 Contestable Customers, SMELCRES with 80 Contestable Customers, and ADVENTRES with 72 Contestable Customers. The rest of the Suppliers served 37 or less Contestable Customers.

Table 5. Cumulative Number of Registered Contestable Customers Per Supplier, as of End of Billing Period

Supplier Name	Cumulative No. of CCs by Supplier as of End of Billing Month				
	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017
ACERES					37
ADVENTRES	5	20	20	43	72
AESIRES	46	49	51	90	166
BGIRES					9
CESIRES					1
DIRPOWRES	29	32	32	34	36
EPMIRES	16	22	26	17	35
FDCRESC					9
FGESRES				9	20
GESGRES	2	2		1	16
GNPLCRES		1	2	3	4
KRATOSRES					1
KSPCRES					1
MACRES					2
MANTARES					2
MPPCLRES	1	1	1		2
MRLCOLRE	155	207	212	237	279
MRLCOSLR				1	
PERCRES					12
PRISMRES					13
SEZLRE			2	2	2
SFELAPLRE		1	1	1	1
SMCCPCRES					4
SMELCRES	1	7	9	18	80
SNAPRES		3	3	8	17
TAORES		3	9	17	84
TEILRE			1	2	1
TPECRES	7	9	5	5	15
VECOLRE		1	1	1	
VESMIRES					15
WAHCRES			1	1	1
Total	262	358	376	490	937

The following figures show the share of Suppliers in terms number of registered Contestable Customers and their corresponding energy consumption, per major grouping.⁴

⁴ ERC major grouping in December 2017 Competitive Retail Electricity Market (CREM) Report.

Figures 13 and 14 depict the year-on-year and monthly share of the top 5 suppliers using the major participant groups, respectively. The top 5 suppliers were determined based on the supplier share as of the December 2017 billing period. The list is topped by the MERALCO group with about 31 percent share as of December 2017. Following closely is the Aboitiz group with about 29 percent share. Meanwhile, the Ayala group's share stood at about 12 percent. The San Miguel group and TAORES each had about 9 percent share in the number of registered Contestable Customers at the end of the December 2017 billing month.

It is quite evident that over the years, the share of the MERALCO group has been going down, from about 59 percent at the end of December 2013 to its current 31 percent share. The Ayala group's share was also observed to be on a downward trend, from about 17 percent at the end of December 2013 to about 12 percent at the end of December 2017.

On the other hand, the shares of the Aboitiz group, San Miguel Group, and TAORES showed an increasing trend over the years. The share of Aboitiz increased from about 19 percent in 2013 to about 29 percent by the end of the December 2017 billing period. The San Miguel group increased its share from less than one percent in 2013 to about 9 percent in December 2017, and TAORES from about one percent in 2014 to about 9 percent in December 2017. The other smaller suppliers had shares ranging from less than one percent to about 2 percent at the end of the December 2017 billing period.

Figure 13. Year-on-Year Share in the Number of Registered Contestable Customers Per Major Participant Group (As of End of December Billing Period), 2013 to 2017

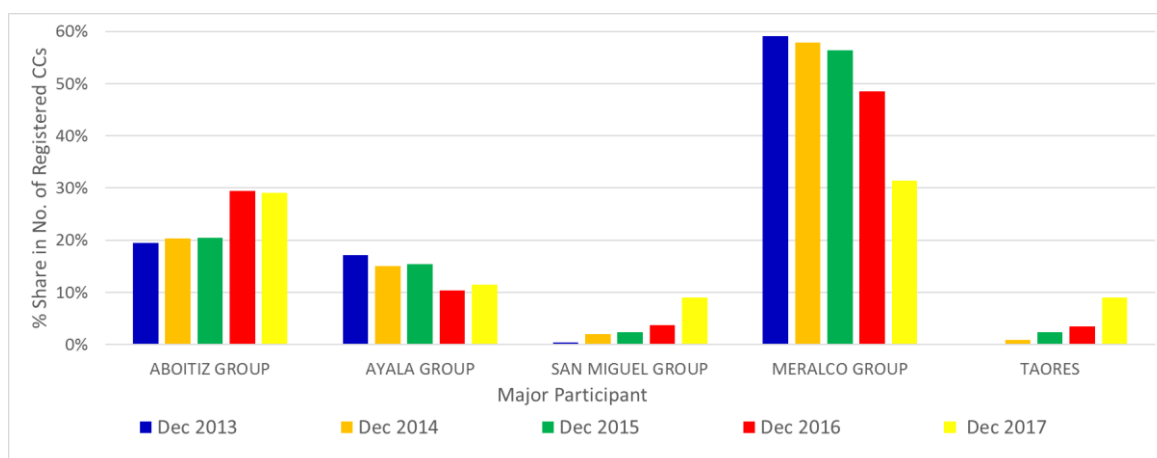
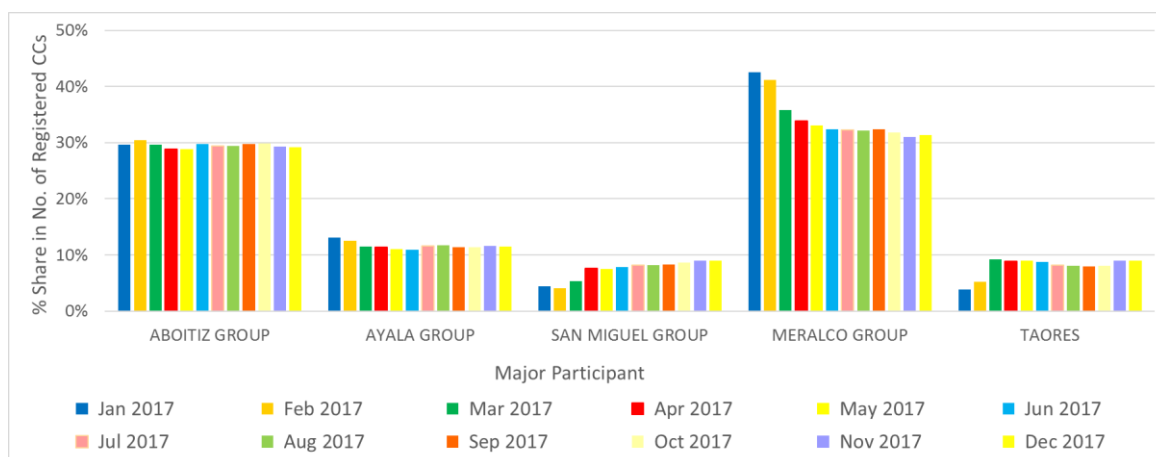


Figure 14. Monthly Share in the Number of Registered Contestable Customers Per Major Participant Group (as of End of Billing Period), January to December 2017



Consistent with the discussion above, the MERALCO group had the largest share in terms of registered Contestable Customer consumption for all the years from 2013 to 2017. For the year 2017 (January to December billing period) alone, the MERALCO group had a share of about 37 percent (from 53 percent in the previous year and 57 percent in 2013), followed by Aboitiz with about 25 percent share (from about 21 percent in the previous year and 24 percent in 2013), San Miguel Group with about 12 percent (from 7 percent in the previous year and 1 percent in 2013), Ayala group with about 9 percent (from 10 percent in the previous year and about 12 percent in 2013), and TAORES with about 5 percent from about 2 percent in the previous and in 2013).

Notably, the share of the MERALCO group has been going down, with the increasing number of smaller suppliers serving the registered Contestable Customers.

The year-on-year and 2017 quarterly share in total energy consumption of Registered Contestable Customers per major participant, respectively, are shown in **Figures 15** and **16**.

Figure 15. Year-on-Year Share in Total Energy Consumption of Registered Contestable Customers Per Major Participant Group, 2013 to 2017

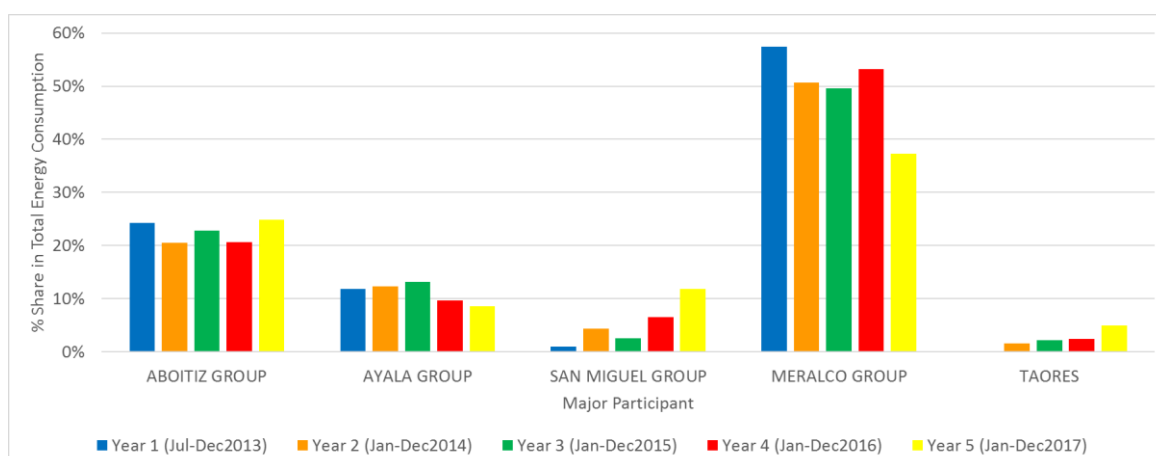
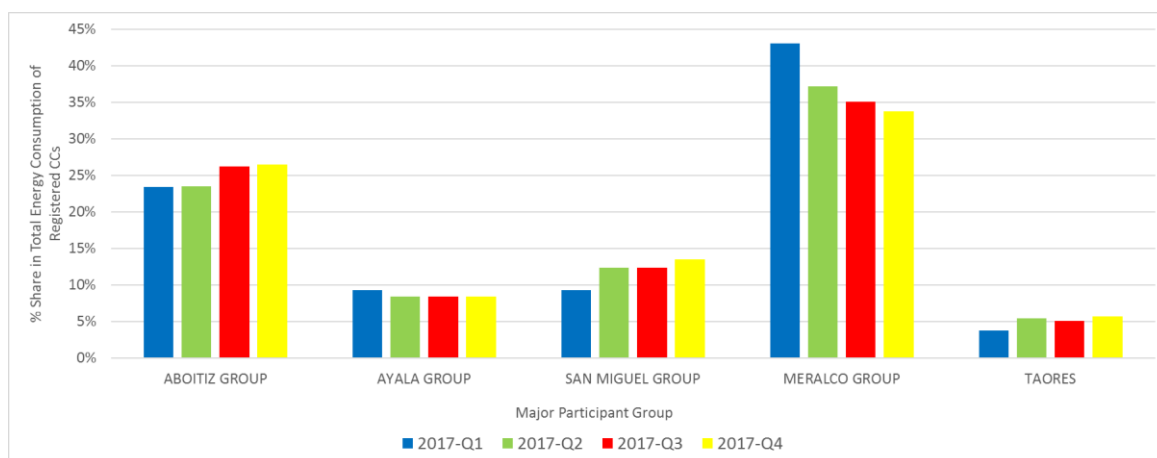


Figure 16. Quarterly Share in Total Energy Consumption of Registered Contestable Customers Per Major Participant, 2017



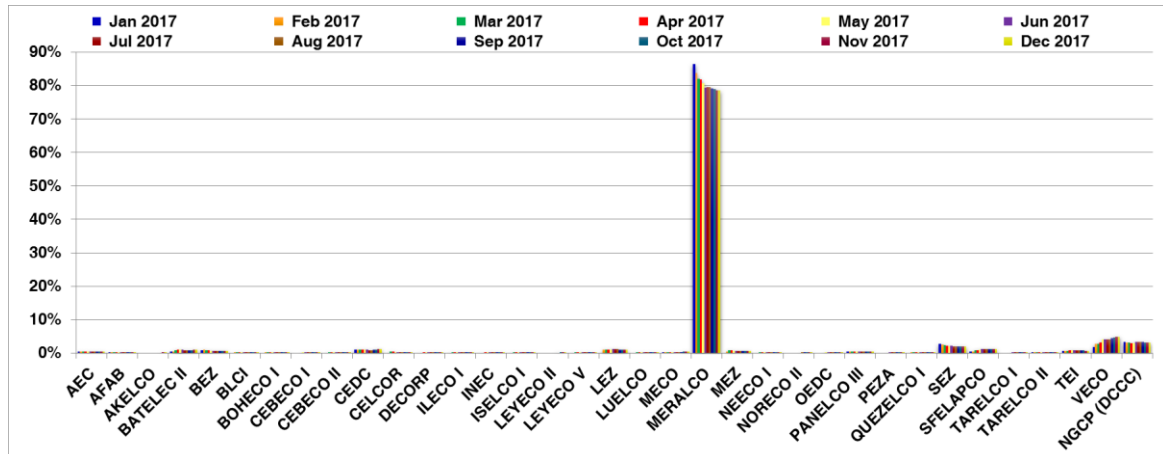
In terms of location, registered Contestable Customers were scattered within the different distribution utility franchise areas and economic zones listed in **Table 6**.

Table 6. List of Distribution Utility Franchise Areas and Economic Zones

Short Name	DU / EZ
AEC	Angeles Electric Corporation
AFAB	Authority of the Freeport Area of Bataan
AKELCO	Aklan Electric Cooperative, Inc.
BATELEC II	Batangas II Electric Cooperative
BEZ	Balamban Enerzone Corporation
BLCI	Bohol Light Company, Inc.
BOHECO I	Bohol I Electric Cooperative, Inc.
CEBECO I	Cebu I Electric Cooperative, Inc.
CEBECO II	Cebu II Electric Cooperative, Inc.
CEDC	Clark Electric Distribution Corporation
CELCOR	Cabanatuan Electric Corporation
DECORP	Dagupan Electric Corporation
ILECO I	Iloilo I Electric Cooperative, Inc.
INEC	Ilocos Norte Electric Cooperative, Inc.
ISELCO I	Isabela I Electric Cooperative, Inc.
LEYECO II	Leyte II Electric Cooperative, Inc.
LEYECO V	Leyte V Electric Cooperative, Inc.
LEZ	LIMA Enerzone Corporation
LUELCO	La Union Electric Cooperative, Inc.
MECO	Mactan Electric Company
MERALCO	Manila Electric Company
MEZ	Mactan Economic Zone
NEECO I	Nueva Ecija I Electric Cooperative, Inc.
NORECO II	Negros Oriental II Electric Cooperative, Inc.
OEDC	Olongapo Electricity Distribution Company
PANELCO III	Pangasinan III Electric Cooperative, Inc.
PEZA	Philippine Economic Zone Authority
QUEZELCO I	Quezon I Electric Cooperative, Inc.
SEZ	Subic EnerZone Corporation
SFELAPCO	San Fernando Electric Light and Power Company, Inc.
TARELCO I	Tarlac I Electric Cooperative, Inc.
TARELCO II	Tarlac II Electric Cooperative, Inc.
TEI	Tarlac Electric, Inc.
VECO	Visayan Electric Company, Inc.
NGCP	National Grid Corporation of the Philippines (for the Directly-Connected Contestable Customers or DCCC)

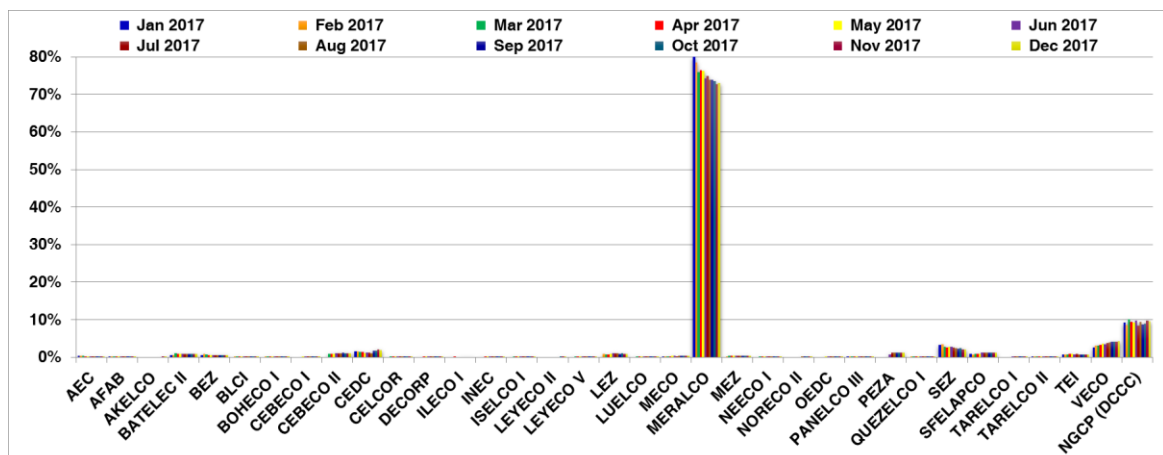
As shown in **Figure 17**, majority or about 79 percent of the registered Contestable Customers are located within the franchise area of MERALCO. It should be noted, however, that not all of these registered Contestable Customers are being supplied by MRLCOLRE, as some of them tap the other suppliers serving within the MERALCO franchise area to supply their energy requirements. About 5 percent are within VECO and 13 percent are scattered within the other distribution utility franchise areas and economic zones. Meanwhile, 3 percent of the registered Contestable Customers are directly connected to the transmission grid.

**Figure 17. Percentage of Registered Contestable Customers Per Location
(as of End of Billing Period), January to December 2017**



Consistent with the previous discussion and with majority of the registered Contestable Customers located within the MERALCO franchise area, bulk of the energy consumption of registered Contestable Customers during the period in review was also accounted for by registered Contestable Customers within that franchise area. As depicted in **Figure 18**, the registered Contestable Customer consumption within the MERALCO franchise area accounted for about 75 percent of the total consumption of all registered Contestable Customers covering the January to December 2017 billing months.

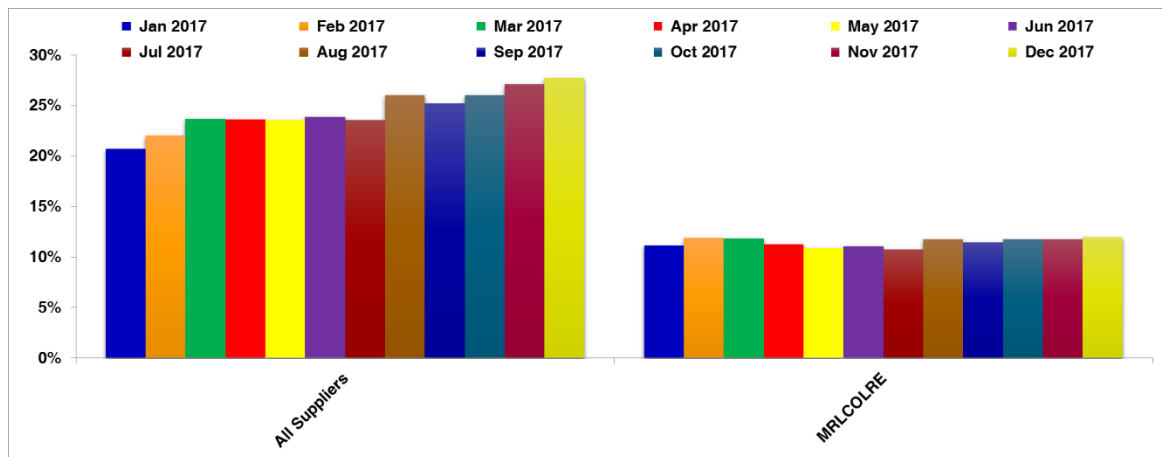
**Figure 18. Percentage of Registered Contestable Customers' Energy
Consumption Per Location—January to December 2017**



Shown in **Figure 19**⁵ is the share of registered Contestable Customers in the total energy consumption within the MERALCO franchise area as supplied by all suppliers including MRLCOLRE. In 2017, the share of all registered Contestable Customers in the total energy consumption within the MERALCO franchise area associated with all the suppliers was about 24 percent (with monthly shares ranging from about 21 to 28 percent). This is higher than the previous year's 19 percent share (with monthly shares ranging from 18 to 20 percent) in the total energy consumption within the MERALCO franchise area.

Meanwhile, the total energy consumption of registered Contestable Customers within the MERALCO franchise associated with MRLCOLRE alone in 2017 was about 11 percent (with monthly shares ranging from about 11 to 12 percent), about the same as the previous year. It may be observed that despite the increasing share of registered Contestable Customers in the total energy consumption within the MERALCO franchise area, the share associated with MRLCOLRE remained almost the same.

Figure 19. Share in Total Energy Consumption Within MERALCO Franchise Area—January to December 2017



2. Herfindahl–Hirschman Index (HHI)

The year-on-year (from 2013 to 2017) and quarterly (2017) level of market concentration using the Herfindahl-Hirschman Index (HHI)⁶ are shown in **Figures 20** and **21**, respectively. The HHI values depicted in the figures are based on the market share of major participants.

Consistent with the previous discussion, HHI values both in terms of number of registered Contestable Customers and their energy consumption showed a downward trend. The HHI values based on number of registered Contestable

⁵ Total energy consumption also accounts for Captive Customer Consumption within the MERALCO franchise area.

⁶ 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
- 1000 – 1800 - moderately concentrated
- Greater than 1800 - concentrated
- Greater than 2500 - highly concentrated

Customers and their consumption indicated a shift from a highly concentrated to concentrated market by the end of the December 2017 billing month.

Such shift in the level of market concentration was brought about by the increasing number of active suppliers and registered Contestable Customers. The shares are now divided among more suppliers resulting in lower HHI values as compared in the previous years.

Figure 20. Year-on-Year HHI Values Based on Supplier Share in the Number and Consumption of Registered Contestable Customers, 2013 to 2017

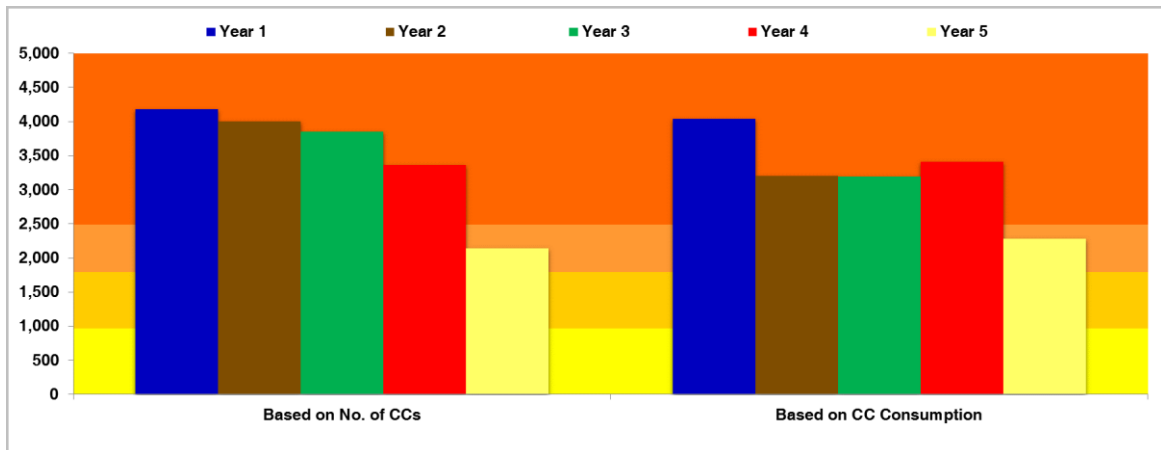
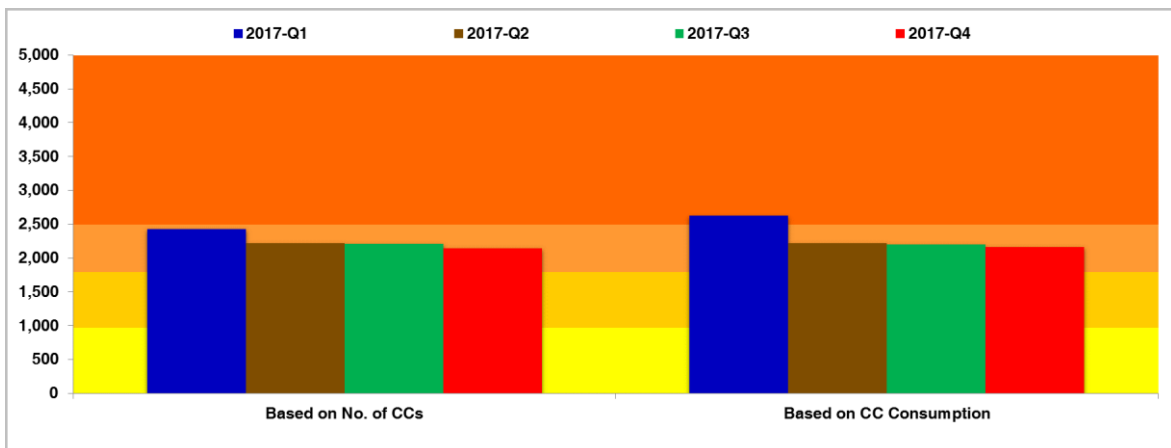


Figure 21. Quarterly HHI Values Based on Supplier Share in the Number and Consumption of Registered Contestable Customers, 2017



3. Four-Firm Concentration Index (C4)

Similarly, the four-firm index or C4 values were observed to be decreasing over the years both in terms of number of registered Contestable Customers and their energy consumption as depicted in **Figures 22 and 23**. Note that the C4 or top 4 suppliers were determined based on the major participants grouping.

While a downward trend was observed in the C4 values, it may be noted that the figures are still quite high at above 80 percent for both the number and consumption

of registered Contestable Customers until the end of the December 2017 billing period.

Figure 22. Year-on-Year Four-Firm Index, 2013 to 2017

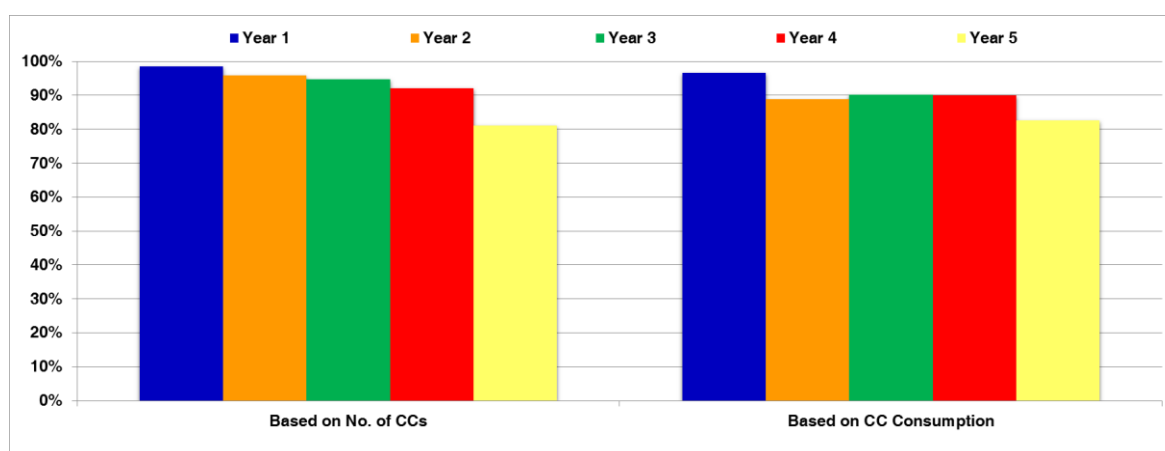
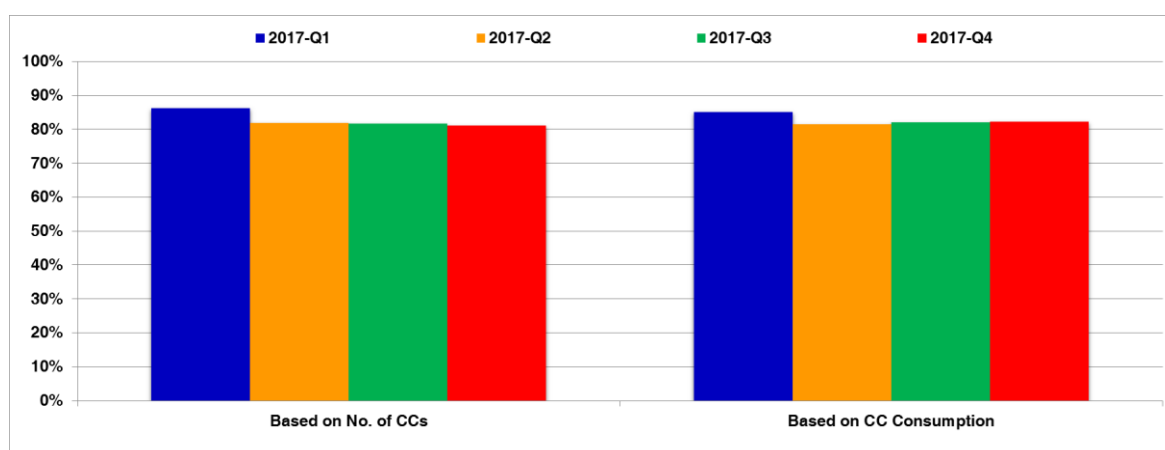


Figure 23. Quarterly Four-Firm Index, 2017



4. Supplier Structure

Table 7 shows the degree of integration between the Suppliers and Generation Companies; Suppliers and Other Supplier; and Suppliers and Distribution Utilities. The supplier structure shows that majority of the RES have affiliate Generation Companies. Note that one supplier may have multiple affiliate Generation Companies, Suppliers, and/or Distribution Utilities.

Table 7. Summary of Suppliers with Affiliate Generation Companies, Suppliers and Distribution Utilities

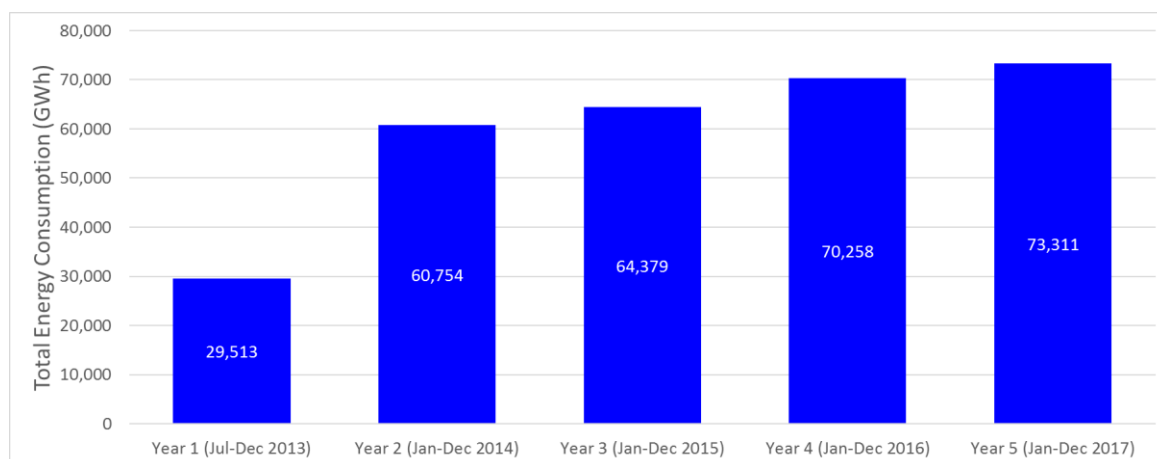
Category	No. of Registered Suppliers	With Affiliate GenCo		With Affiliate Supplier		With Affiliate DU	
		No. of Suppliers with Affiliate	% of Suppliers	No. of Suppliers with Affiliate	% of Suppliers	No. of Suppliers with Affiliate	% of Suppliers
Retail Electricity Supplier	28	21	75%	13	46%	10	36%
Local Retail Electricity Supplier	12	2	17%	4	33%	2	17%
Supplier of Last Resort	24	5	21%	6	25%	4	17%

II. MARKET PERFORMANCE

A. Total Energy Consumption

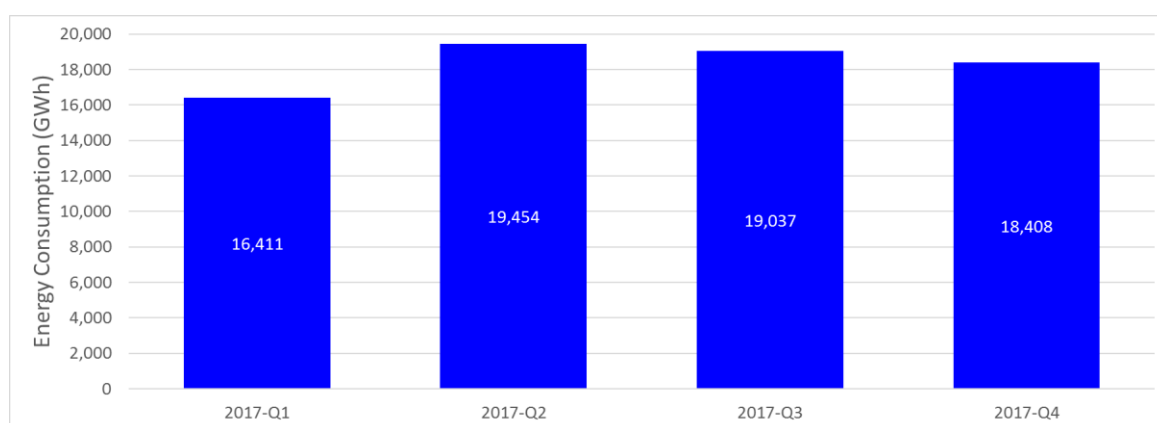
The year-on-year total energy consumption from 2013 to 2017 is shown in **Figure 24**. Note that the total energy consumption described in this section includes both that of the Captive⁷ and registered Contestable Customers. Over the years, the energy consumption showed an increasing trend. From about 29,513 GWh in 2013, the total energy consumption grew to as high as 73,311 GWh in 2017.

Figure 24. Year-on-Year Total Energy Consumption (in GWh), 2013 to 2017



Meanwhile, the quarterly total energy consumption for the year 2017 alone is depicted in **Figure 25**. Factors such as temperature and seasonal changes, as well as the economic activities during certain periods of the year may well have played a role in the varying level of energy consumption per quarter. As expected, the highest energy consumption was observed during second quarter covering the summer months of April to June and was recorded at about 19,454 GWh. The lowest consumption, on the other hand, was observed during the first quarter at about 16,411 GWh, which period covered the long holidays in December 2017.

Figure 25. Quarterly Total Energy Consumption (in GWh), 2017



⁷ Captive Customer consumption for this purpose is the energy consumption of customers of Private Distribution Utilities (PDU) and Electric Cooperatives (EC), as well as other consumption associated Directly-Connected Customers (DCC), Network Services Providers (NSP), Kalayaan pumping and other generator-related consumption.

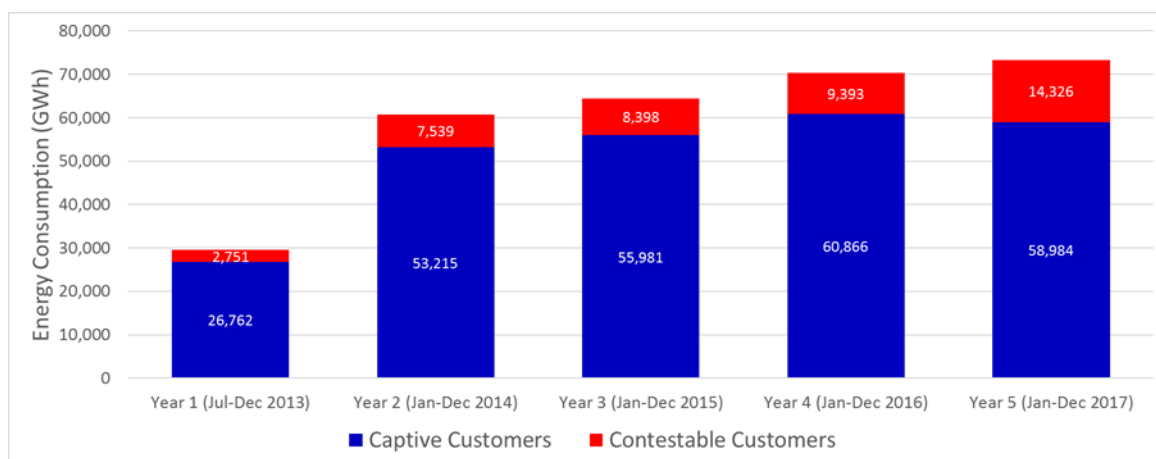
B. Energy Consumption by Type of End-User

Shown in **Figure 26** is the yearly total energy consumption by type of end-user consisting of the Captive Customers⁸ and the registered Contestable Customers.

Year-on-year, the energy consumption of Captive Customers showed increases from 2013 to 2016. However, in 2017, the energy consumption of Captive Customers went down, which was influenced primarily by the increased number of registrants in the contestable market.

As seen in the figures, the consumption of registered Contestable Customers showed a significant increase of about 53 percent in 2017 at 14,326 GWh from about 9,393 GWh in 2016. Such increase is supported by the remarkable growth in the number of new registrants during the period as described in the previous section.

Figure 26. Year-on-Year Total Energy Consumption (in GWh) Per Type of End-User (Captive and Registered Contestable Customer), 2013 to 2017

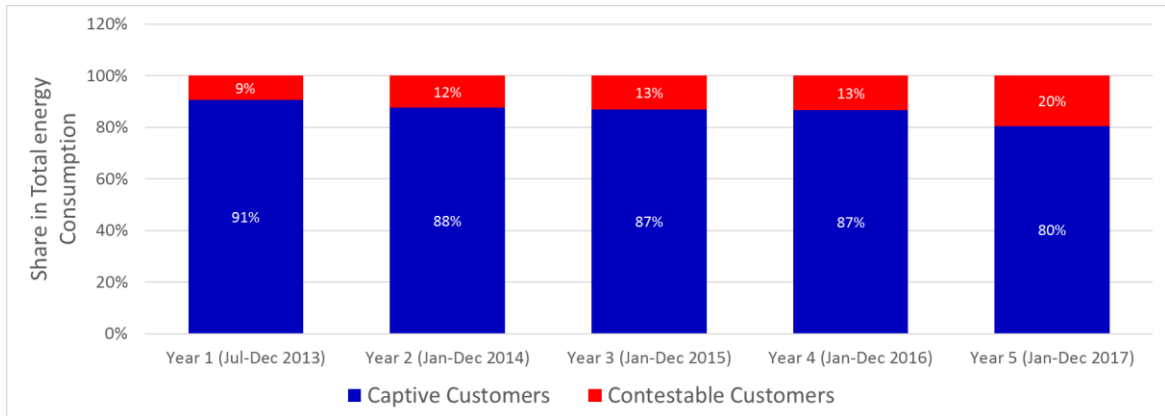


C. Share in Energy Consumption by Type of End-User

The share of registered Contestable Customers and Captive Customers in the total energy consumption based on WESM transactions for the comparative periods in review is shown in **Figure 27**. From about 9 percent in 2013, the share of the registered Contestable Customers in the total energy consumption in 2017 stood at about 20 percent. This may be attributable to several factors that includes the increased registrants in the market and perhaps the increasing demand for electricity by this type of end-users.

⁸ Captive Customer consumption for this purpose is the energy consumption of customers of Private Distribution Utilities (PDU) and Electric Cooperatives (EC), as well as other consumption associated Directly-Connected Customers (DCC), Network Services Providers (NSP), Kalayaan pumping and other generator-related consumption.

Figure 27. Year-on-Year Share in Total Energy Consumption Per Type of End-User, 2013 to 2017



D. Hourly Energy Consumption Profile of Registered Contestable Customers

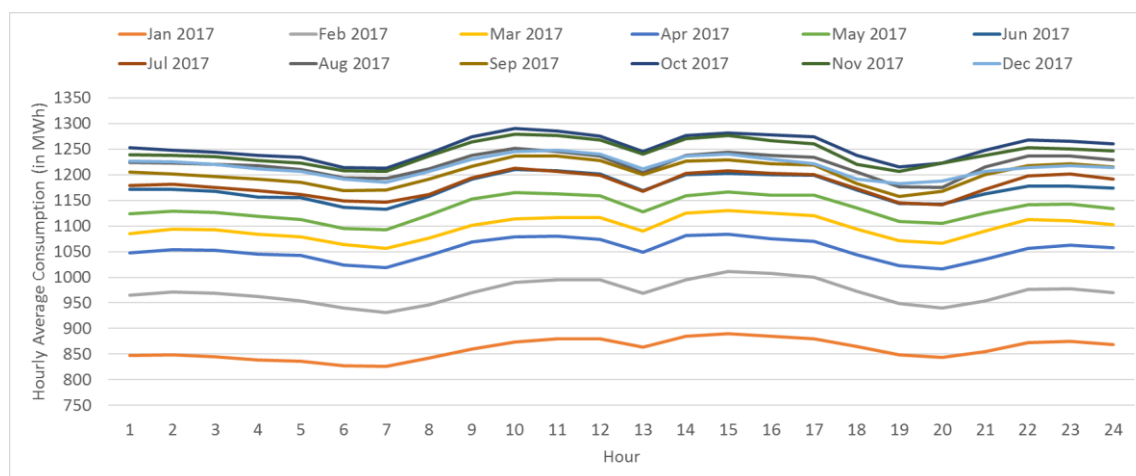
Figures 28 and 29 show the consumption profile per month of registered industrial and commercial Contestable Customers, respectively, for the billing months January to December 2017 based on their hourly average consumption. The consumption profile demonstrates how their electricity consumption varied over the course of a 24-hour period.

As shown in **Figure 28**, the industrial Contestable Customers, generally, did not show substantial peak and off-peak variation in their hourly average energy consumption. Furthermore, the month-on-month comparison of their hourly consumption profile denotes that regardless of seasonal changes and varying temperatures throughout the year, the pattern of electricity consumption of the registered industrial Contestable Customers during the course of a day is approximately the same for any given month.

As depicted in the consumption profile of the registered industrial Contestable Customer, a dip in their average energy consumption was generally observed during intervals 0700H, 1300H, and 2000H denoting that they operate on three shifts.

For the January to December 2017 billing period, the highest hourly average energy consumption of registered industrial Contestable Customers was recorded in the October 2017 billing month at 1000H (about 1,290 MWh) while the lowest average energy consumption was noted in January 2017 billing month at 0700H (about 827 MWh).

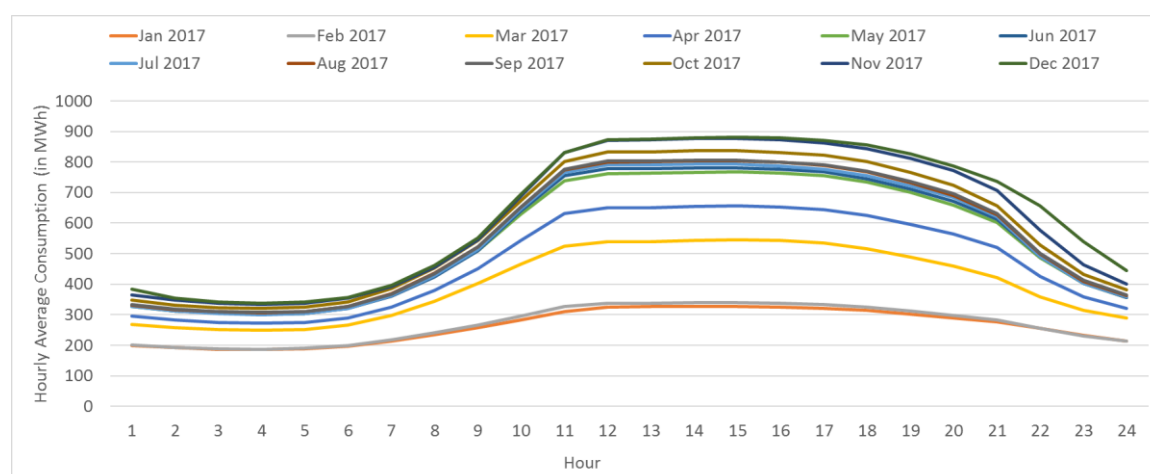
Figure 28. Hourly Average Energy Consumption (in MWh), Registered Industrial Contestable Customers, January to December 2017



While the registered industrial Contestable Customers had an almost flat consumption profile, the registered commercial Contestable Customers, on the other hand, showed a substantial variation in their peak and off-peak consumption as shown in **Figure 29**. Peak consumption of registered Commercial Contestable Customers was generally observed from around 1000H to 2100H.

The highest hourly average energy consumption of registered commercial Contestable Customers during the fourth quarter was recorded in December 2017 billing month at 1500H (about 881 MWh) while the lowest average energy consumption was noted in January 2017 billing month at 0400H (about 185 MWh).

Figure 29. Hourly Average Energy Consumption (in MWh), Registered Commercial Contestable Customers, January to December 2017



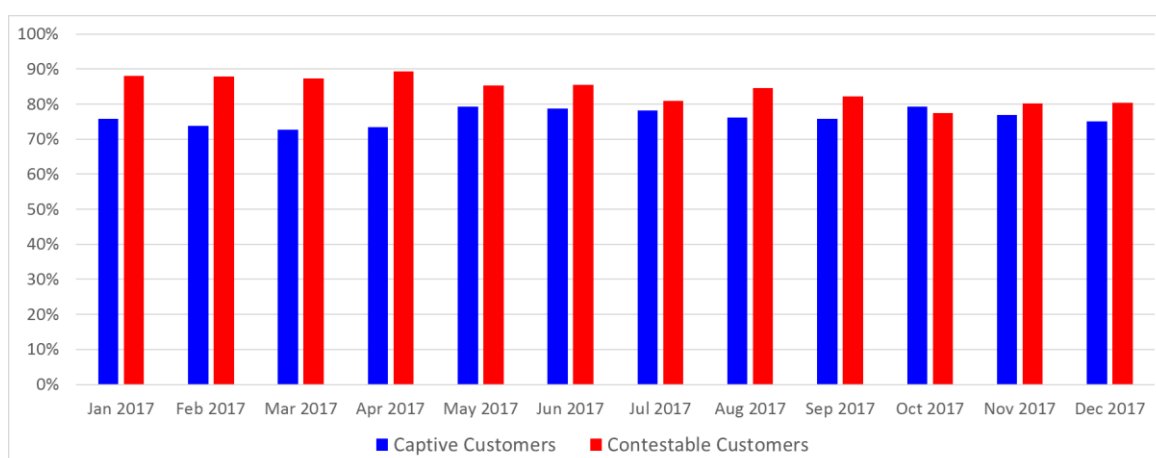
E. Load Factor

Figure 30 shows the monthly load factor⁹ of registered Contestable Customers and Captive Customers, which is calculated based on their actual electricity consumption. The load factor of registered Contestable Customers was maintained relatively high ranging from 77 percent to 89 percent.

The high load factor reflects a reasonably efficient electricity usage of registered Contestable Customers. It may be observed, however, that the load factor of registered Contestable Customers was on a downward trend along with the increased number of registered commercial Contestable Customers, which will be discussed in the succeeding section.

For the period January to December 2017, the registered Contestable Customers consistently showed higher load factor than the Captive Customers. Note that the load factor of Captive Customers still accounted for contestable customers that have not yet registered in the market and remained under their respective distribution utilities. The load factor of Captive Customers ranged from 73 percent to 79 percent.

Figure 30. Comparative Monthly Load Factor, Registered Contestable Customers vis-à-vis Captive Customers, January to December 2017



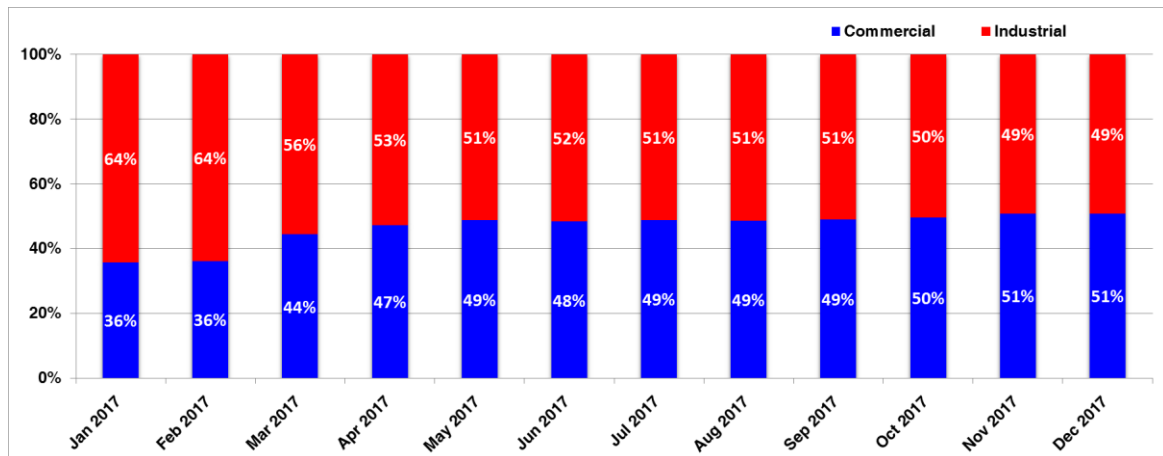
III. RETAIL ACTIVITY

A. Customer Participation Level

Based on **Figure 31**, the commercial sector now comprised more than half of the Contestable Customers' participation in the retail market, outnumbering the registered industrial Contestable Customers. From a share of about 36 percent in January 2017, the share of registered Contestable Customers by the end of December 2017 stood at about 51 percent.

⁹ Based on Metered Quantity (MQ)

Figure 31. Percentage of Registered Contestable Customers, Per Industry Type, January to December 2017



B. Customer Switching Rate

Table 8 shows the switching rate among registered Contestable Customers for the period covered in this report. Based on the data, 38 switches from one supplier to another were recorded from January to December 2017.

In Luzon, 14 registered Contestable Customers switched from LRES to RES, 4 switched from RES to LRES, 18 switched from RES to another RES, and 1 switched from SOLR to RES. Meanwhile, in Visayas, 1 registered Contestable Customer switched from LRES to RES.

Table 8. Customer Switching Rate, January to December 2017

Particulars	Contestable Customer Switching Rate (For Contestable Customers Switching the Following Billing Month)											
	Jan 2017	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017
Switching Rate (Luzon)	0.2%	0.0%	0.0%	0.0%	0.3%	0.8%	0.1%	0.4%	0.9%	0.0%	0.0%	2.0%
Total No. of CCs	510	528	694	741	754	776	795	799	806	821	844	856
Total No. of CCs that Switched	1	-	-	-	2	6	1	3	7	-	-	17
LRES to RES					1							13
RES to LRES								3				1
RES to RES	1				1	6			7			3
SOLR to RES							1					
Switching Rate (Visayas)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%
Total No. of CCs	22	34	47	51	63	66	67	68	72	77	83	84
Total No. of CCs that Switched	-	-	-	-	-	-	-	1	-	-	-	-
LRES to RES								1				
Switching Rate (Luzon-Visayas)	0.2%	0.0%	0.0%	0.0%	0.2%	0.7%	0.1%	0.5%	0.8%	0.0%	0.0%	1.8%
Total No. of CCs	532	562	741	792	817	842	862	867	878	898	927	940
Total No. of CCs that Switched	1	-	-	-	2	6	1	4	7	-	-	17

C. Spot Exposure

A depiction of the monthly spot exposure per supplier is shown in **Figure 32**. For the fourth quarter 2017 covering the January to December billing months, 10 suppliers consistently incurred positive spot exposures, including the two (2) suppliers that consistently incurred 100 percent spot exposures. The positive spot exposure of these suppliers meant that the actual consumption of their contestable customers was greater than the bilateral contract quantities declared by their counterparties.

In addition to the two (2) suppliers that incurred 100 percent spot exposures, it was observed that another two (2) suppliers consistently incurred high spot exposures (above 35 percent).

Meanwhile, one (1) supplier consistently incurred negative spot exposures.

Figure 32. Monthly Spot Exposure, Per Supplier, January to December 2017

