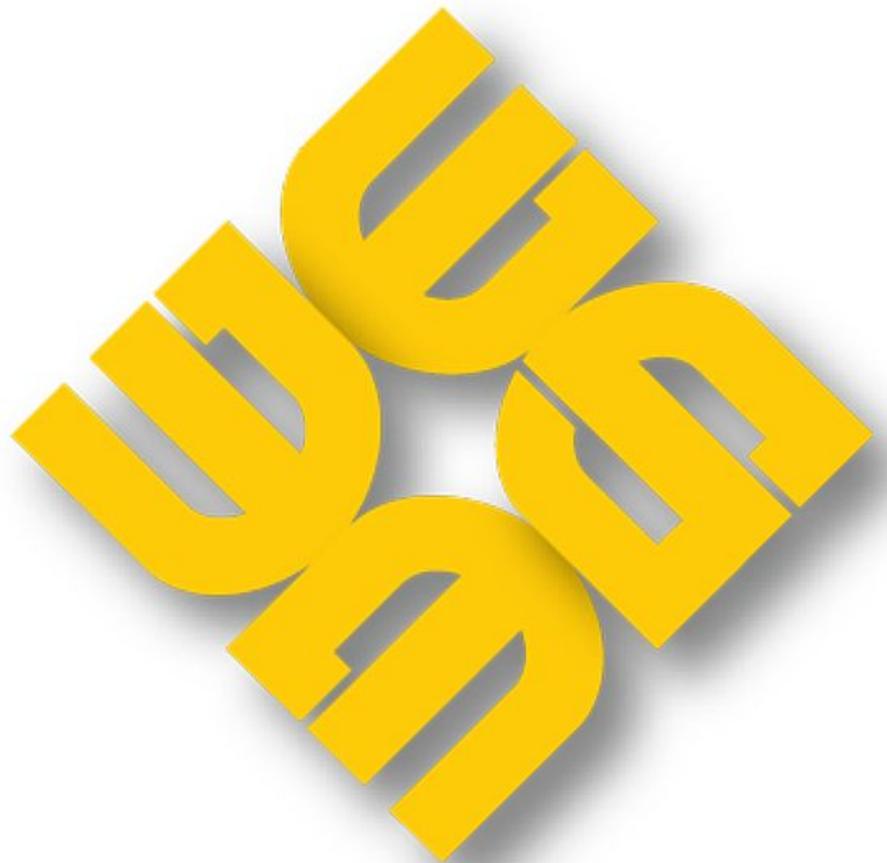


MAG-RMAR-2019-04

QUARTERLY RETAIL MARKET ASSESSMENT REPORT

26 September – 25 December 2019



**PHILIPPINE
ELECTRICITY
MARKET
CORPORATION**

**MARKET ASSESSMENT GROUP
(MAG)**

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Executive Summary

This Quarterly Assessment Report on the Retail Electricity Market covers the billing period **26 September to 25 December 2019**.

Based on the data of the Energy Regulatory Commission (ERC), there were a total of 2,029 qualified electricity end-users already issued with the ERC's Certificate of Contestability. Of these, 1,408 contestable customers or about 69 percent have already registered in the market as of the billing month of December 2019. Quarter-on-quarter, additional 36 contestable customers were issued with ERC's Certificate of Contestability while additional 50 Contestable Customers registered in the market.

In terms of contestability threshold, the market recorded 1,096 registrants (78 percent) in the 1 MW and above contestability threshold. The 312 registrants or 22 percent were classified under 750-999 kW contestability threshold. In terms of location, 1,264 Contestable Customers or about 90 percent of the registered Contestable Customers are in Luzon region while the remaining 144 Contestable Customers (10 percent) are in Visayas. In terms of the nature of business¹, 735 registered Contestable Customers were engaged in commercial activities while 673 registrants were engaged in industrial activities.

The total energy consumption of the registered Contestable Customers for the fourth quarter of 2019 stood at about 5,008 GWh. This amounts to 24 percent of the total energy consumption of the system for the quarter. The load factor of registered Contestable Customers remained relatively high throughout the period in review.

While high load factor reflects a generally efficient electricity usage by registered Contestable Customers², low load factor may present opportunities for contestable customers to strategize hourly energy use and/or shift operation to maximize low prices in the WESM. From the RES side, determination of the load factor and load profile are crucial in creating a tailor-fit contract with contestable customers.

By the end of December 2019 billing month, about 36.6 percent of the consumption of all registrants were supplied by the MERALCO group. This was followed by the Aboitiz group and the San Miguel group both at 20.2 percent share, then by the Ayala group at 12.4 percent share. The participation of new Suppliers, the registration of new Contestable Customers, and the switching of already registered Contestable Customers were all factors in the change of participant share for this quarter as compared to the previous.

Accordingly, the Herfindahl-Hirschman Index (HHI) calculated based on consumption and number of registered Contestable Customers per ERC's major participants grouping yielded a level of a concentrated market.

¹ 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.

² Dr. C.R. Bayliss CEng FIET, B.J. Hardy CEng FIET, in Transmission and Distribution Electrical Engineering (Fourth Edition), 2012

Of the 102 Suppliers with license from ERC, only 70 Suppliers are registered in the retail market. No additional Suppliers were registered during the period thus as of 25 December 2019, the market still recorded a total of 31 registered Retail Electricity Suppliers (RES), 14 registered Local RES (LRES), and 25 registered Supplier of Last Resort (SOLR). Meanwhile, starting December 2019, Phinma Energy-Corporation-RES changed its name to AC Energy Philippines, Inc..

During the period in review, five (5) switches from one Supplier to another were recorded. Of which, one (1) was from LRES to RES, two (2) were from RES to LRES while the remaining two (2) were from RES to a different RES.

This Quarterly Assessment Report on the Retail Electricity Market discusses the results of the monitoring indices, as set forth in the Catalogue of Retail Market Monitoring Data and Indices. This report also provides indications of the performance of the retail market during the quarter and how it fared against previous periods. Moreover, the report only covers Suppliers and Contestable Customers registered in the market and does not include other qualified Suppliers with license from ERC and end-users with a Certificate of Contestability but nonetheless remained Captive Customers.

I. MARKET STRUCTURE

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

A. Number of Participants

1. Contestable Customers

Over the billing quarter in review, an additional 50 contestable customers participated in the market, demonstrating a 4 percent increase from third quarter figures and a steady upward trend since 2018 as shown in **Figure 1**. This kept the retail market participation of contestable customers at around 69 percent of the entire population of qualified end-users with a certificate of contestability³ by the end of the 4th Quarter of 2019.

Considering that voluntary registration of electricity end-users in the 750 kW contestability threshold⁴ has already commenced last July 2016 and the mandatory contestability of electricity end-users with 1 MW and above average peak demand began in February 2017⁵, the increase in the yearly participation rate remained relatively conservative. Year-on-year, the 2019 participation rate was very similar with 2018, hovering a little above 66 percent. This rate notably dwindled to 29 percent in 2018 as a result of the 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. Further, it may be noted that the DOE issued on 29 July 2019 a Circular amending Section 3 of DC2012-05-0005⁶ to allow Contestable Customers to voluntarily register in the WESM⁷, which could have caused the slow increase in number of registrants.

³ A total of 2,029 qualified end-users as of December 2019 (Source: ERC's Competitive Retail Electricity Market (CREM) Report; Link: www.buyourelectricity.com.ph).

⁴ ERC Resolution No. 10, Series of 2016 *A Resolution Adopting the Revised Rules for Contestability*

⁵ ERC Resolution No. 28, Series of 2016 *Revised Timeframe for Mandatory Contestability, Amending Resolution No. 10, Series of 2016 Entitled Revised Rules for Contestability*

⁶ DOE Department Circular DC2012-05-005 *Prescribing the General Policies for the Implementation for Retail Competition and Open Aces*

⁷ DOE Department Circular DC2019-07-0011 *Amending Various Issuances on the Implementation of the Retail Competition and Open Access*

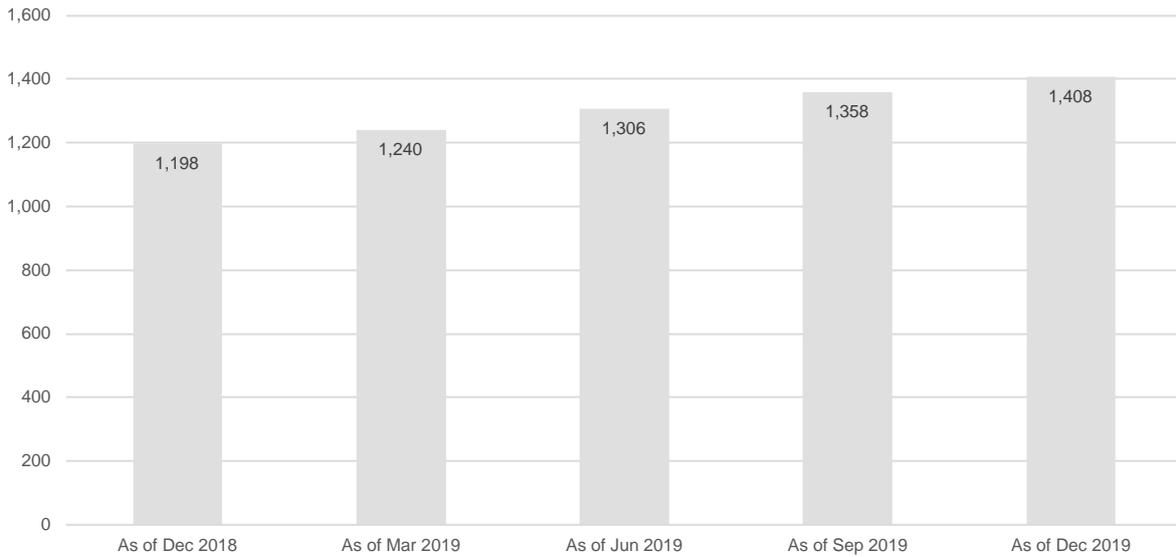


Figure 1. Cumulative Number of CCs, Dec 2018 to Dec 2019

Figure 2 shows the cumulative number of registrants per contestability threshold by the end of each relevant quarter. While both thresholds continuously increased from quarter to quarter, a higher percentage was noted under the 750-999 kW threshold (at 7 percent) compared to the 1 MW and above threshold (at 3 percent) for the 4th of 2019. Notwithstanding, the latter still comprised majority of the registrants, at 79 percent.

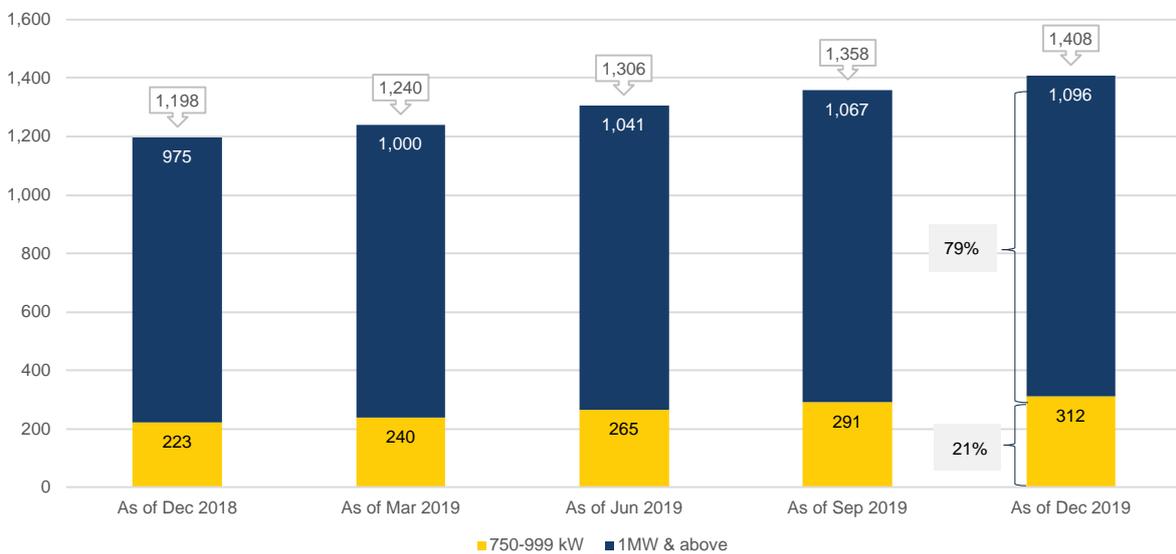


Figure 2. Cumulative Number of CCs Per Contestability Threshold, Dec 2018 to Dec 2019

System-wide, Luzon accounts for 83 percent of the electricity demand while Visayas accounts for the remaining 17 percent. On the retail market level, 90 percent of Contestable Customers or 1,264 Contestable Customers were located in Luzon while the remaining 10 percent or 144 Contestable Customers were located in

Visayas as shown in **Figure 3**, denoting the concentration of the Contestable Customers in Luzon.

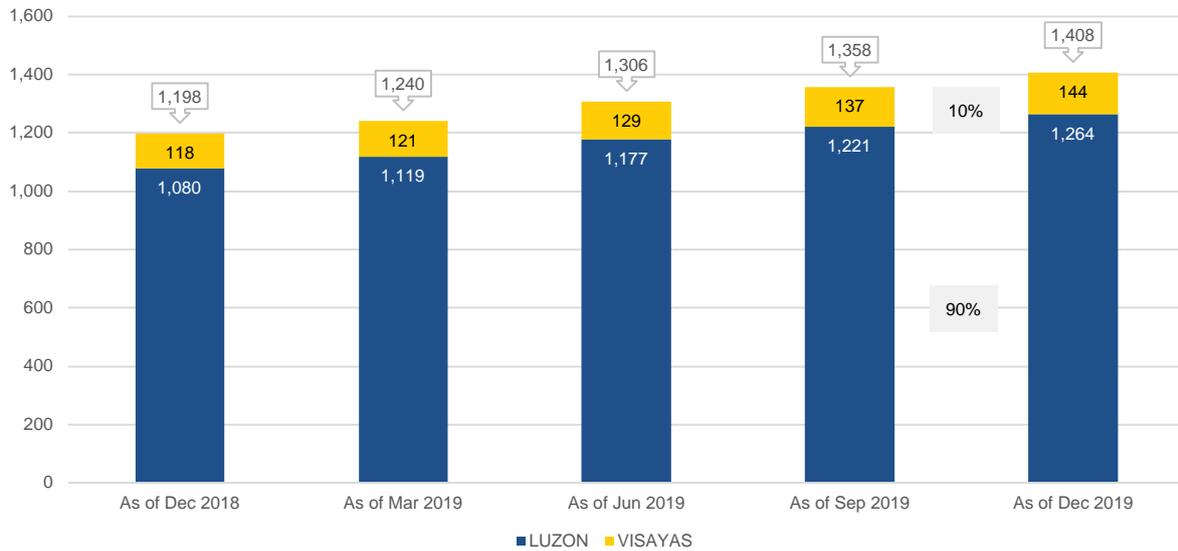


Figure 3. Cumulative Number of CCs Per Region, Dec 2018 to Dec 2019

Figure 4 shows the cumulative number of registered Contestable Customers per type of retail activity⁸ by the end of each relevant quarter. About 52 percent or 735 Contestable Customers engaged in commercial activities while the other 48 percent or 673 Contestable Customers were engaged in industrial activities. On other hand, in terms of consumption, Contestable Customers engaged in industrial activities account for about 62 percent of the total metered quantity.

⁸ 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.

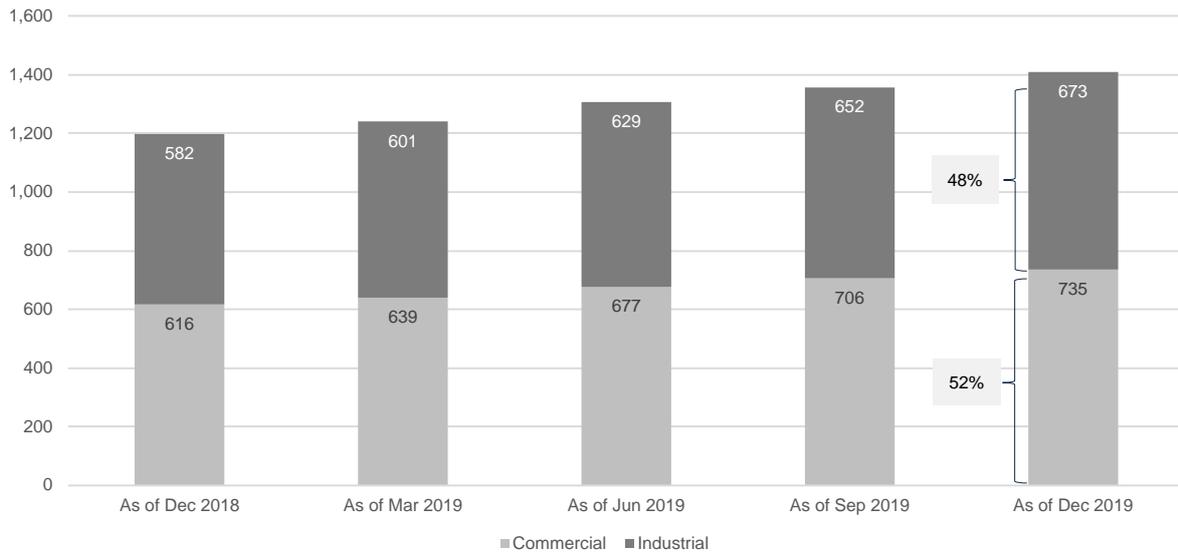


Figure 4. Cumulative Number of CCs Per Retail Activity, Dec 2018 to Dec 2019

Table 1 shows the breakdown of registered Contestable Customers by level of consumption based on metered quantity (MQ). Majority or about 67 percent of the registered Contestable Customers had maximum energy consumption ranging from above 1 MWh to 5 MWh during the 4th Quarter of 2019. About 24 percent had maximum energy consumption below 1MWh, while the remaining 9 percent had maximum energy consumption ranging above 5 MWh to 50 MWh during the period.

Table 1. Percentage of CCs Per Level of Maximum Energy Consumption, 2019-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	Above 50 MWh	Sub-Total Per Region
LUZON	22%	60%	5%	2%	0%	1%	0%	90%
VISAYAS	3%	7%	0%	0%	0%	0%	0%	10%
Sub-Total Per Level of Maximum Energy Consumption	24%	67%	6%	2%	0%	1%	0%	100%

2. Suppliers

Table 2 shows the cumulative number of Suppliers with License from ERC, vis-a-vis registered Suppliers per category vis-à-vis the number of active Suppliers or those that were currently serving a registered Contestable Customer. No additional Suppliers registered during the quarter. In addition, majority of the registered Retail Electricity Suppliers were actively participating in the market and serving registered Contestable Customers.

Table 2. Summary of Active Suppliers Per Category, as of 25 December 2019

Category	No. of Suppliers		
	With ERC License	Total Registered	With CCs Served
Retail Electricity Supplier	33	31	29
Local Retail Electricity Supplier	25	14	6
Supplier of Last Resort	44	25	1
Total	102	70	36

A list of all registered Suppliers per category (Retail Electricity Supplier, Local Retail Electricity Supplier, and Supplier of Last Resort) as of the December 2019 billing period is provided in **Table 3**. It may be noted that the PHINMA Energy Corporation-RES is now registered as AC Energy Philippines, Inc..

Table 3. List of Suppliers Per Category, as of 25 December 2019

Retail Electricity Supplier		
No.	Market Participant Name	Short Name
1	Aboitiz Energy Solutions, Inc.	AESIRES
2	AC Energy Philippines, Inc. (formerly PHINMA Energy Corporation-RES)	ACEPHRES
3	AC Energy, Inc. (formerly AC Energy Holdings, Inc.)	ACERES
4	AdventEnergy, Inc.	ADVENTRES
5	Anda Power Corporation RES	ANDARES
6	Bac-Man Geothermal, Inc.	BGIRES
7	Citicore Energy Solutions, Inc.	CESIRES
8	Corenergy, Inc.	CORERES
9	DirectPower Services, Inc.	DIRPOWRES
10	Ecozone Power Management, Inc.	EPMIRES
11	FDC Retail Electricity Sales Corporation	FDCRESC
12	First Gen Energy Solutions, Inc.	FGESRES
13	Global Energy Supply Corporation	GESCRES
14	GNPower Ltd. Co.	GNPLCRES
15	KEPCO SPC Power Corporation	KSPCRES
16	Kratos RES, Inc.	KRATOSRES
17	Manta Energy, Inc.	MANTARES
18	Masinloc Power Partners Company Limited	MPPCLRES
19	Mazzaraty Energy Corporation	MACRES
20	MeridianX Inc.	MERXRES
21	Millennium Power RES, Inc.	MPRIRES
22	Premier Energy Resources Corporation	PERCRES
23	Prism Energy, Inc.	PRISMRES
24	San Miguel Electric Corporation	SMELCRES
25	SEM-Calaca RES Corporation	SCRCRES
26	SMC Consolidated Power Corporation	SMCCPCRES
27	SN Aboitiz Power-RES, Inc.	SNAPRES
28	Solve, Inc.	SOLVRERES
29	TeaM (Philippines) Energy Corporation	TPECRES
30	Vantage Energy Solutions and Management, Inc.	VESMIRES
31	Waterfront Mactan Casino Hotel, Inc.	WAHCRES

Local Retail Electricity Supplier		
No.	Market Participant Name	Short Name
1	Batangas II Electric Cooperative, Inc.	BTLC2LRE
2	Camarines Sur II Electric Cooperative, Inc.	CASUR2LRE
3	Cebu I Electric Cooperative, Inc.	CEBEC1LRE
4	Cebu II Electric Cooperative, Inc.	CEBEC2LRE
5	Central Negros Electric Cooperative, Inc.	CENECOLRE
6	Clark Electric Distribution Corporation LRES	CEDCLRE
7	Dagupan Electric Corporation	DECORPLRE
8	Ilocos Norte Electric Cooperative, Inc.	INECLRE
9	Mactan Enerzone Corporation LRES	MEZLRE
10	Manila Electric Company	MRLCOLRE
11	San Fernando Electric Light & Power Co., Inc.	SFELAPLRE
12	Subic Enerzone Corporation	SEZLRE
13	Tarlac Electric, Inc.	TEILRE
14	Visayan Electric Company, Inc.	VECOLRE
Supplier of Last Resort		
	Market Participant Name	Short Name
1	Angeles Electric Corporation	AECSLR
2	Balamban Enerzone Corporation	BEZSLR
3	Batangas II Electric Cooperative, Inc.	BTLC2SLR
4	Benguet Electric Cooperative, Inc.	BENECOSLR
5	Bohol I Electric Cooperative, Inc.	BOHECO1SLR
6	Bohol Light Company, Inc.	BLCISLR
7	Cabanatuan Electric Corporation	CELCORSLR
8	Camarines Sur II Electric Cooperative, Inc.	CASUR2SLR
9	Cebu I Electric Cooperative, Inc.	CEBEC1SLR
10	Cebu II Electric Cooperative, Inc.	CEBEC2SLR
11	Clark Electric Distribution Corporation	CEDCSLR
12	Dagupan Electric Corporation	DECORPSLR
13	Ilocos Norte Electric Cooperative, Inc.	INECSLR
14	Ilocos Sur Electric Cooperative, Inc.	ISECOSLR
15	Isabela I Electric Cooperative, Inc.	ISLCO1SLR
16	La Union Electric Cooperative, Inc.	LUELCOSLR
17	Mactan Electric Company, Inc.	MECOSLR
18	Mactan Enerzone Corporation	MEZSLR
19	Manila Electric Company	MRLCOSLR
20	Negros Oriental II Electric Cooperative, Inc.	NRECO2SLR
21	Subic Enerzone Corporation	SEZSLR
22	Tarlac Electric, Inc.	TEISLR
23	Tarlac I Electric Cooperative, Inc	TRLCO1SLR
24	Tarlac II Electric Cooperative, Inc	TRLCO2SLR
25	Visayan Electric Company, Inc.	VECOSLR

B. Market Share

1. Market Share of Supplier

Table 4 shows the cumulative number of registered Contestable Customers served by each Supplier at the end of each relevant quarter. The Suppliers were grouped based on the ERC's major participant grouping⁹ which reflects the affiliation among the Suppliers.

The following Suppliers: MRLCOLRE, AESIRES, SMELCRES, ACERES and ADVENTRES, remained as the top five (5) Suppliers with the most number of registered Contestable Customers for four straight quarters. Quarter-on-quarter, MRLCOLRE and AESIRES showed the highest increases in number of Contestable Customers.

Table 4. Cumulative Number of CCs Per Supplier, Dec 2018 to Dec 2019

Market Participant Group	As of Dec 2018	As of Mar 2019	As of Jun 2019	As of Sep 2019	As of Dec 2019
Aboitiz Group	306	316	318	328	340
ADVENTRES	77	72	67	67	68
AESIRES	159	172	178	186	194
MACRES	3	4	3	3	3
PRISMRES	37	39	39	40	43
SFELAPLRE	1	1	1	1	1
SNAPRES	29	28	30	31	31
Ayala Group	154	155	220	235	238
ACEPHRES				46	47
ACERES	72	71	88	99	102
DIRPOWRES	38	40	45	46	46
EPMIRES	44	44	44	44	43
MERALCO Group	390	433	452	468	491
CEDCLRE	6	6	8	11	11
MERXRES ⁽ⁱⁱ⁾				1	1
MRLCOLRE	353	386	403	415	434
VESMIRES	31	41	41	41	45
PHENRES	74	40	0	0	0
PHENRES	74	40			
San Miguel Group	121	140	164	169	173
MPPCLRES ⁽ⁱⁱⁱ⁾			6	6	6
SMCCPCRES	10	30	48	52	55
SMELCRES	111	110	110	111	112
Others	149	152	148	154	162
ANDARES	1	2	3	3	3
BGIREs	24	43	47	50	52
BTLC2LRE					1
CESIRES	2	2	2	3	4
CORERES	2	2	2	1	1
FDCRESC	12	12	12	12	15
FGESRES	28	13	11	11	11
GESCRES	16	14	15	17	17
GNPLCRES	4	4	4	4	4
KRATOSRES	17	19	20	21	22
KSPCRES	3	3	3	3	3
MANTARES	2	2	2	2	1
MERXRES			1		
MPPCLRES	6	6			
PERCRES	12	12	11	12	12
SCRCRES	1	1	3	4	4
TPECRES	18	16	11	10	11
WAHCRES	1	1	1	1	1
TOTAL	1,194	1,236	1,302	1,354	1,404

Note ⁽ⁱⁱ⁾ MERXRES - Meralco group (ERC CREM Report as of Jul 2019); ⁽ⁱⁱⁱ⁾ MPPCLRES - San Miguel group (ERC CREM Report as of Jun 2019)

⁹ Major participant grouping is based on ERC's Competitive Retail Electricity Market (CREM) Report.

Figure 5 shows the quarterly share of the Suppliers per major participant, in terms of the number of Contestable Customers registered in the market as of the December 2019 billing period.

Over the years, a significant drop in the MERALCO group’s share was observed. From about 63 percent at the start of implementation of Retail Competition and Open Access in July 2013 billing month, its share was halved to around 32.7 percent by the end of the December 2018. Thereafter, it started to slowly recover by the end of March 2019 billing month recording 35 percent mark and generally stayed at such level until December 2019.

Despite the increase in the count of contestable customers by other groups, namely Aboitiz, Ayala, and San Miguel, their percent share remained the same overall leaving MERALCO still at the top.

Provided in **Table 5** is the summary of changes in the number of Contestable Customers per supplier, from September 2019 figures to December 2019 figures, including the newly-registered contestable customers (column B), customers which switched to new supplier (column C) from a different supplier (column D), and customers which ceased participation during the quarter.

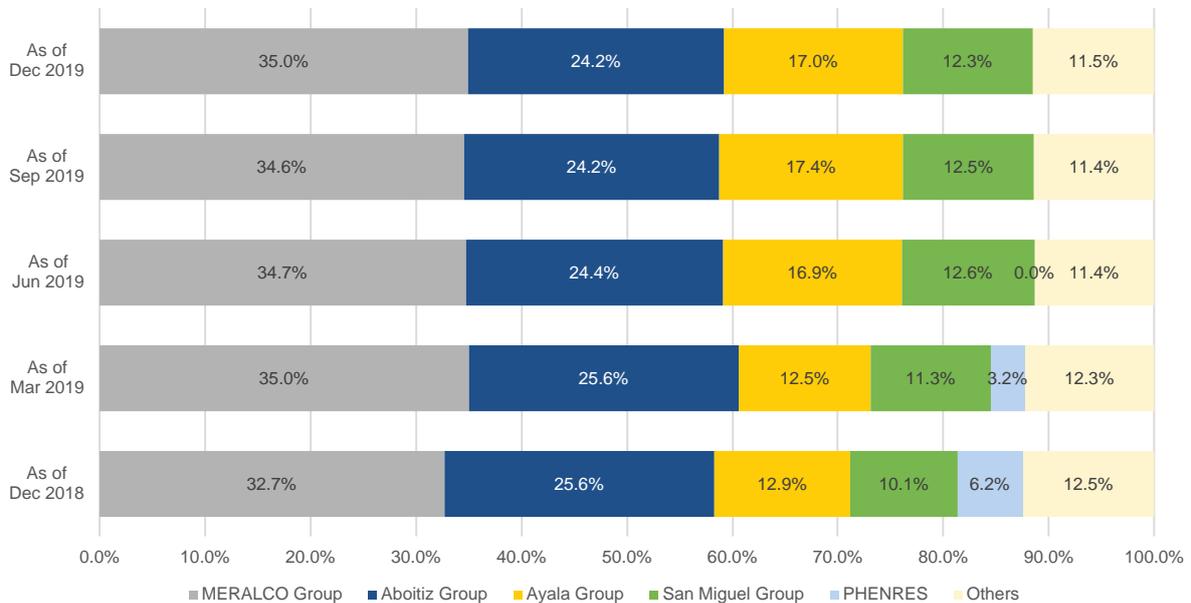


Figure 5. Share in Number of CCs Per Major Participant, Dec 2018 to Dec 2019

Table 5. Summary of Changes in Number of CCs Per Supplier, Sep 2019 to Dec 2019

Market Participant Group	Number of Contestable Customers					
	As of Sep 2019 A	New B	Customer Switching		Ceased E	As of Dec 2019 A+B+C-D-E
			Switched To C	Switched From D		
Aboitiz Group	328	12	0	0	0	340
ADVENTRES	67	1				68
AESIRES	186	8				194
MACRES	3					3
PRISMRES	40	3				43
SEZLRE						
SFELAPLRE	1					1
SNAPRES	31					31
Ayala Group	235	6	2	1	4	238
ACEPHRES	46		2	1		47
ACERES	99	4			1	102
DIRPOWRES	46					46
EPMIRES	44	2			3	43
MERALCO Group	468	25	2	2	2	491
CEDCLRE	11					11
MERXRES ⁽ⁱⁱⁱ⁾	1					1
MRLCOLRE	415	20	2	1	2	434
MRLCOSLR						
VESMIRES	41	5		1		45
PHENRES	0	0	0	0	0	0
PHENRES						
San Miguel Group	169	4	0	0	0	173
MPPCLRES ⁽ⁱⁱⁱⁱ⁾	6					6
SMCCPCRES	52	3				55
SMELGRES	111	1				112
Others	154	9	1	2	0	162
ANDARES	3					3
BGIRES	50	1	1			52
BTLC2LRE		1				1
CESIRES	3	1				4
CORERES	1					1
FDCRESC	12	3				15
FGESRES	11	1		1		11
GESCRES	17					17
GNPLGRES	4					4
KRATOSRES	21	1				22
KSPGRES	3					3
MANTARES	2			1		1
MERXRES						
MPPCLRES						
PERGRES	12					12
SCRCRES	4					4
TEILRE						
TPECRES	10	1				11
VECOLRE						
WAHCRES	1					1
TOTAL	1,354	56	5	5	6	1,404

As seen in **Figure 6**, the MERALCO group remained with the largest share in terms of registered Contestable Customer consumption at 36.6 percent. Notwithstanding, It is noteworthy that MERALCO group share demonstrated quarter-on-quarter decrease in terms of consumption despite the increase in share based on number of customers.

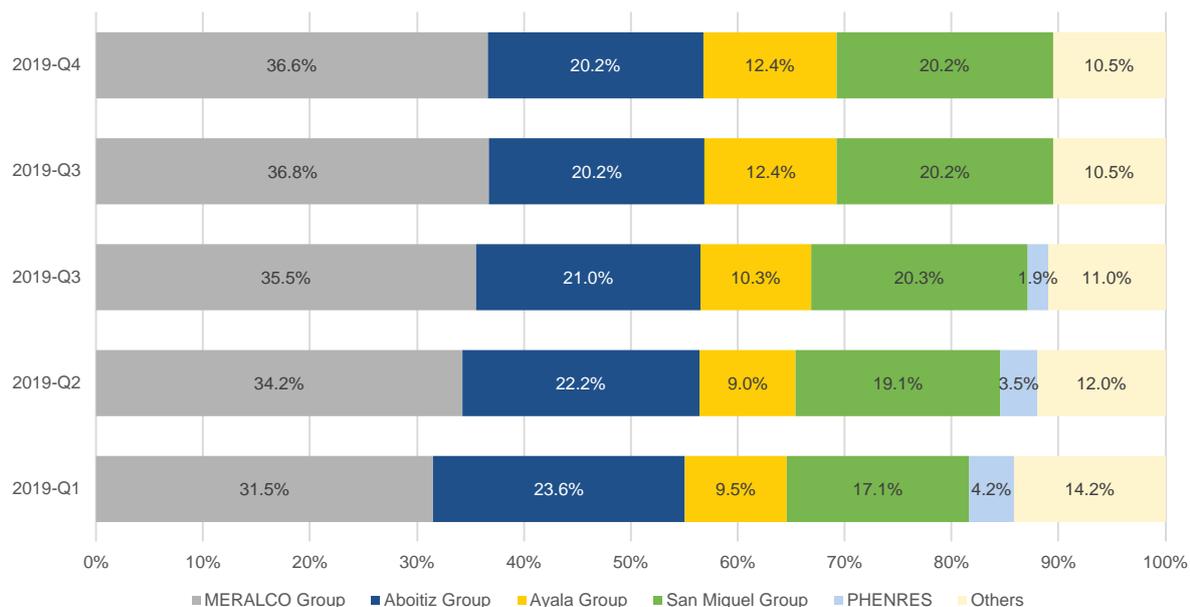


Figure 6. Share in Total Energy Consumption of CCs Per Major Participant, 2018-Q4 to 2019-Q4

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

No.	Short Name	Distribution Utility/ Economic Zone	No.	Short Name	Distribution Utility/ Economic Zone
1	AEC	Angeles Electric Corporation	27	LEYECO V	Leyte V Electric Cooperative, Inc.
2	AFAB	Authority of the Freeport Area of Bataan	28	LEZ	LIMA Enerzone Corporation
3	AKELCO	Aklan Electric Cooperative, Inc.	29	LUELCO	La Union Electric Cooperative, Inc.
4	ALECO	Albay Electric Cooperative, Inc.	30	MECO	Mactan Electric Company
5	ANTECO	Antique Electric Cooperative, Inc.	31	MERALCO	Manila Electric Company
6	BATELEC I	Batangas I Electric Cooperative, Inc.	32	MEZ	Mactan Economic Zone
7	BATELEC II	Batangas II Electric Cooperative	33	NEECO I	Nueva Ecija I Electric Cooperative, Inc.
8	BEZ	Balamban Enerzone Corporation	34	NORECO II	Negros Oriental II Electric Cooperative, Inc.
9	BLCI	Bohol Light Company, Inc.	35	OEDC	Olongapo Electricity Distribution Company
10	BOHECO I	Bohol I Electric Cooperative, Inc.	36	PANELCO III	Pangasinan III Electric Cooperative, Inc.
11	CAGELCO I	Cagayan I Electric Cooperative, Inc.	37	PECO	Panay Electric Co., Inc.
12	CAGELCO II	Cagayan II Electric Cooperative, Inc.	38	PELCO I	Pampanga I Electric Cooperative, Inc.
13	CASURECO II	Camarines Sur II Electric Cooperative, Inc.	39	PELCO II	Pampanga II Electric Cooperative, Inc.
14	CEBECO I	Cebu I Electric Cooperative, Inc.	40	PELCO III	Pampanga III Electric Cooperative, Inc.
15	CEBECO II	Cebu II Electric Cooperative, Inc.	41	PENELCO	Peninsula Electric Cooperative, Inc.
16	CEDC	Clark Electric Distribution Corporation	42	PEZA	Philippine Economic Zone Authority
17	CELCOR	Cabanatuan Electric Corporation	43	QUEZELCO I	Quezon I Electric Cooperative, Inc.
18	CENPELCO	Central Pangasinan Electric Cooperative, Inc.	44	SAMELCO I	Samar I Electric Cooperative, Inc.
19	DECORP	Dagupan Electric Corporation	45	SEZ	Subic EnerZone Corporation
20	DORELCO	Don Orestes Electric Cooperative, Inc.	46	SFELAPCO	San Fernando Electric Light and Power Company, Inc.
21	FIT	First Industrial Township Utilities, Inc.	47	TARELCO I	Tarlac I Electric Cooperative, Inc.
22	ILECO I	Iloilo I Electric Cooperative, Inc.	48	TARELCO II	Tarlac II Electric Cooperative, Inc.
23	INEC	Ilocos Norte Electric Cooperative, Inc.	49	TEI	Tarlac Electric, Inc.
24	ISECO	Ilocos Sur Electric Cooperative, Inc.	50	VECO	Visayan Electric Company, Inc.
25	ISELCO I	Isabela I Electric Cooperative, Inc.	51	NGCP ^[iv]	National Grid Corporation of the Philippines
26	LEYECO II	Leyte II Electric Cooperative, Inc.			

^[iv] for the Directly Connected Contestable Customers

As expected, majority or about 73 percent of the registered Contestable Customers were located within the franchise area of MERALCO. It should be noted, however, that not all of these registered Contestable Customers were being supplied by MRLCOLRE, as some of them availed the services of other Suppliers for their energy requirements as shown in **Figure 7(a)**. About 6 percent were within the VECO franchise and 13 percent were scattered within the other franchise areas and economic zones. Meanwhile, 8 percent of the registered Contestable Customers were directly connected to the transmission grid.

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 on account of the registered Contestable Customers within said franchise area.

Within the MERALCO franchise area, 44 percent of the energy consumption of registered Contestable Customers was supplied by MRLCOLRE and its other affiliate suppliers, while the remaining 56 percent were supplied by other Suppliers serving within the MERALCO franchise area as seen in **Figure 7(b)**.



Figure 7. (a) Energy Consumption of CCs by Franchise Area, 2019-Q4; (b) Energy Consumption by Supplier within MERALCO Franchise Area, 2019-Q4¹⁰

2. Herfindahl–Hirschman Index (HHI)

This section discusses the market concentration of Suppliers by major participant grouping of ERC, based on the number of Contestable Customers they are in contract with and based on the energy consumption of these Contestable Customers. **Figure 8** shows that the level of market concentration using the

¹⁰ Corrected as approved by the MSC 10 December 2020

Herfindahl-Hirschman Index (HHI)¹¹ in both categories, consistently fell within the concentrated area throughout all the quarters in comparison. The HHI value based on the number of registered Contestable Customers barely increased during the quarter while the HHI value based on CC consumption was observed to decrease minimally from previous quarter.

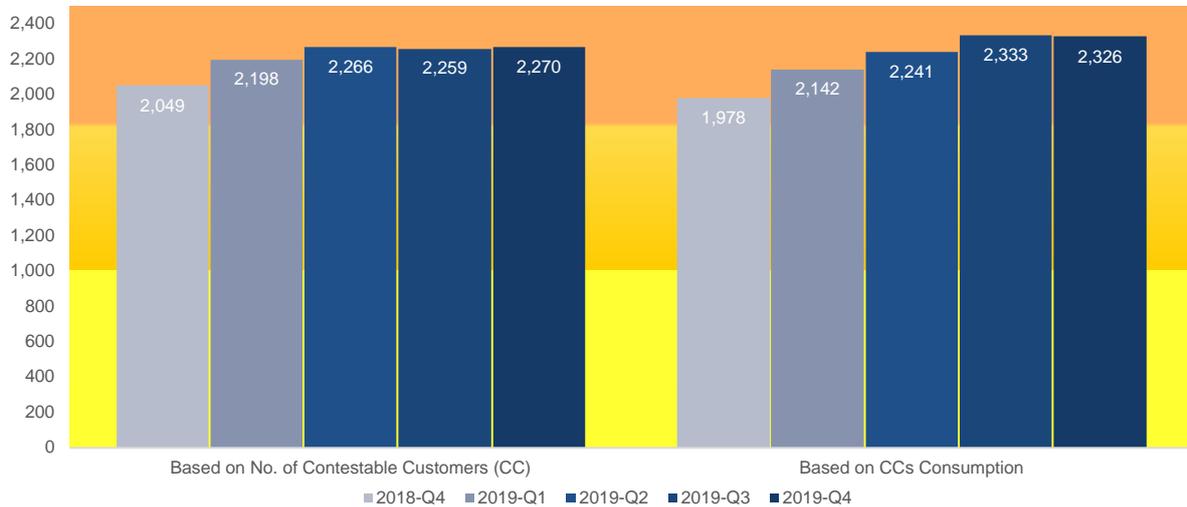


Figure 8. HHI Values Based on Number of CCs and CC Consumption, 2018-Q4 to 2019-Q4

3. Four-Firm Concentration Index (C4)¹²

The four-firm index or C4 values based both on the number of registered Contestable Customers and their consumption were still high at 88 and 89 percent, respectively, during the quarter in review as shown in **Figure 9**. Note that the top four (4) Suppliers used in this index were determined based on the latest major participant grouping of the ERC.

¹¹ 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

¹² 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%

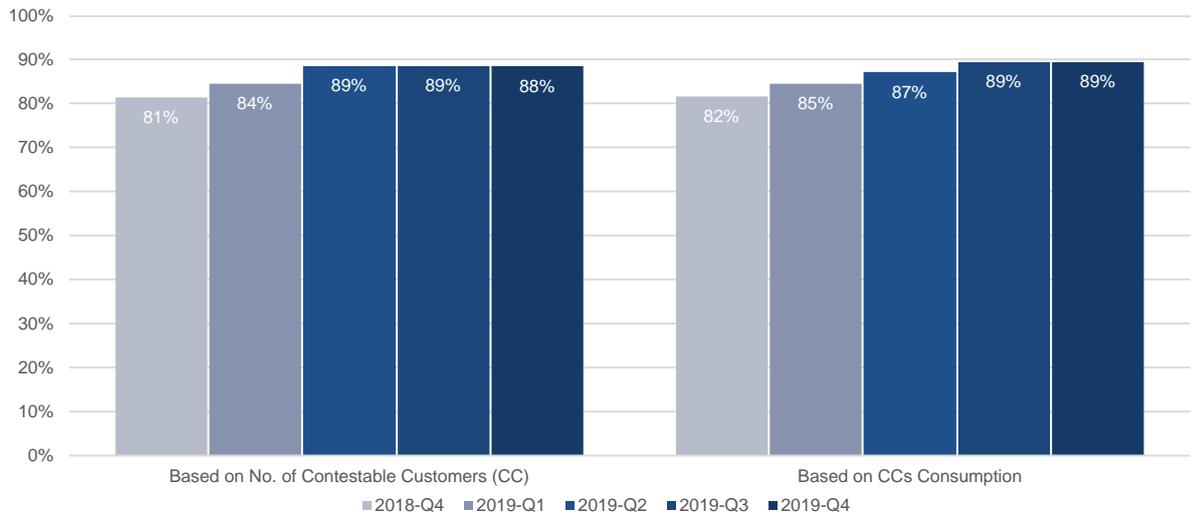


Figure 9. Four-Firm Index, 2018-Q4 to 2019-Q4

4. Supplier Structure

Table 7 shows the degree of integration among the Suppliers, Generation Companies, and Distribution Utilities as of December 2019¹³. The Supplier structure shows that majority of the Retail Electricity Suppliers had 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	No. of Suppliers with Affiliate Generator	No. of Suppliers with Affiliate Supplier	No. of Suppliers with Affiliate DU
Retail Electricity Supplier	31	24	18	13
Local Retail Electricity Supplier	14	2	4	3
Supplier of Last Resort	25	5	7	4
Total	70	31	29	20

II. MARKET PERFORMANCE

A. Total Energy Consumption

The quarter-on-quarter total energy consumption which includes both that of the Captive¹⁴ and registered Contestable Customers is shown in **Figure 10**. The consumption is a function of both the demand for electricity and the change in number of participants in the retail market.

¹³ Based on latest available ERC data.

¹⁴ 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.

A decrease of 1.36 percent in the fourth quarter figures compared to third quarter's driven by the lower temperature during the fourth quarter particularly during the December billing month (**Figure 11**). It was also noted that quarter-on-quarter decrease mirrored the decline in consumption of the captive customers which accounted for 76 percent of the total consumption. Contestable customers, on the other hand, almost retained their level of quarterly consumption.

Meanwhile, year-on-year, both contestable and captive customers recorded increases in consumption indicating growth in number of customers and in economic activities.

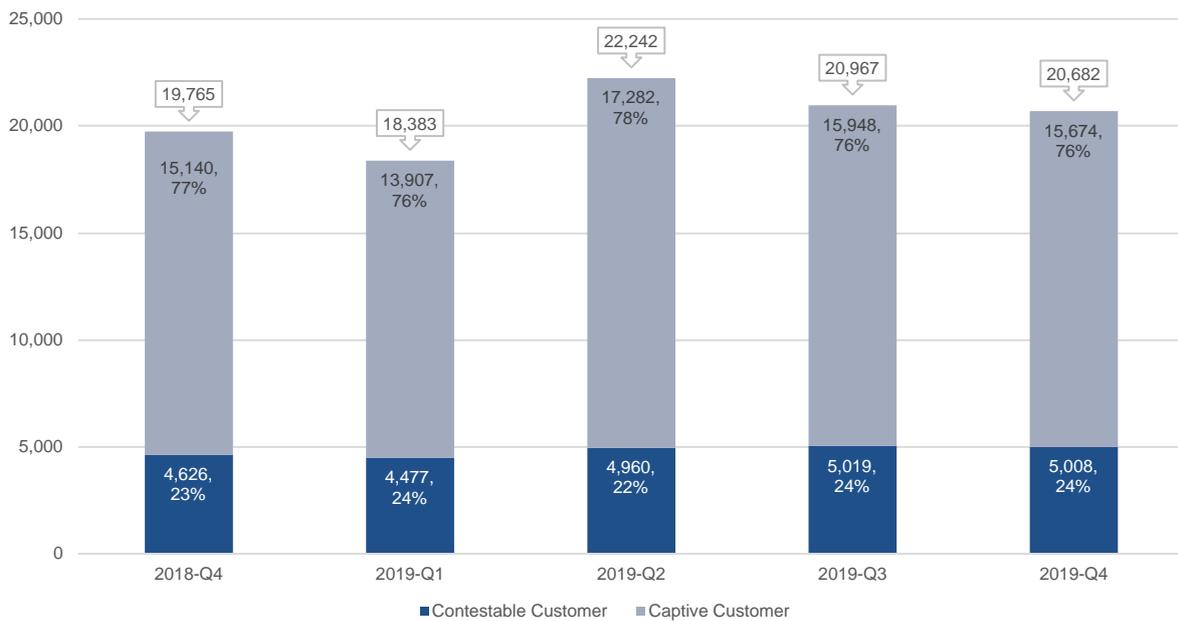


Figure 10. Total Energy Consumption (in GWh), 2018-Q4 to 2019-Q4

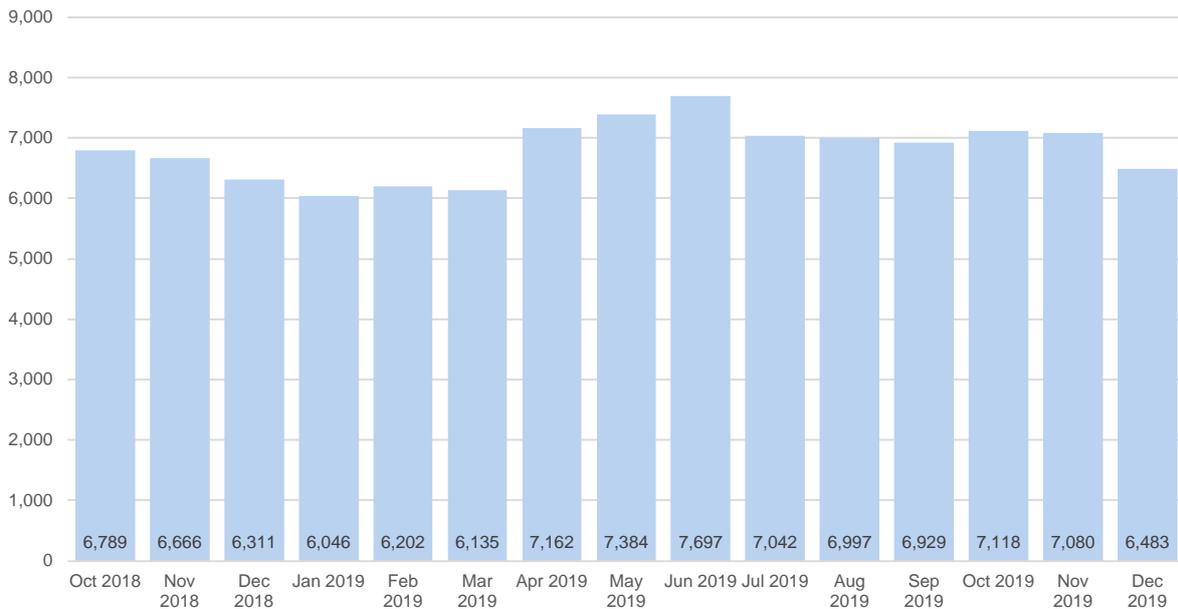


Figure 11. Monthly Total Energy Consumption (in GWh), 2018-Q4 to 2019-Q4

B. Hourly Energy Consumption Profile of Registered Contestable Customers

Figures 12 and 13 show the hourly average consumption per month of registered industrial and commercial Contestable Customers, respectively, for the billing months July to December 2019. The consumption profile demonstrated how their electricity consumption varied over the course of a 24-hour period.

As shown in **Figure 12**, the electricity consumption of industrial Contestable Customers, generally, did not show substantial peak and off-peak variations. A dip in their average energy consumption was generally observed during intervals 0600H, 0700H, 1300H, and 1900H, denoting that they likely operate on three shifts.

Furthermore, the month-on-month comparison of their hourly consumption profile denotes that the level of consumption changes depending on the month, with the least consumption recorded during the December billing month consistent with the low economic activity and production during the holiday season. Meanwhile, the October billing month recorded the highest consumption throughout the six months.

On the other hand, 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 was approximately the same for any given month.

It is interesting to note that the consumption pattern of industrial customers present an opportunity to shift their loads to off-peak hours when prices from WESM or other generators are usually lower.

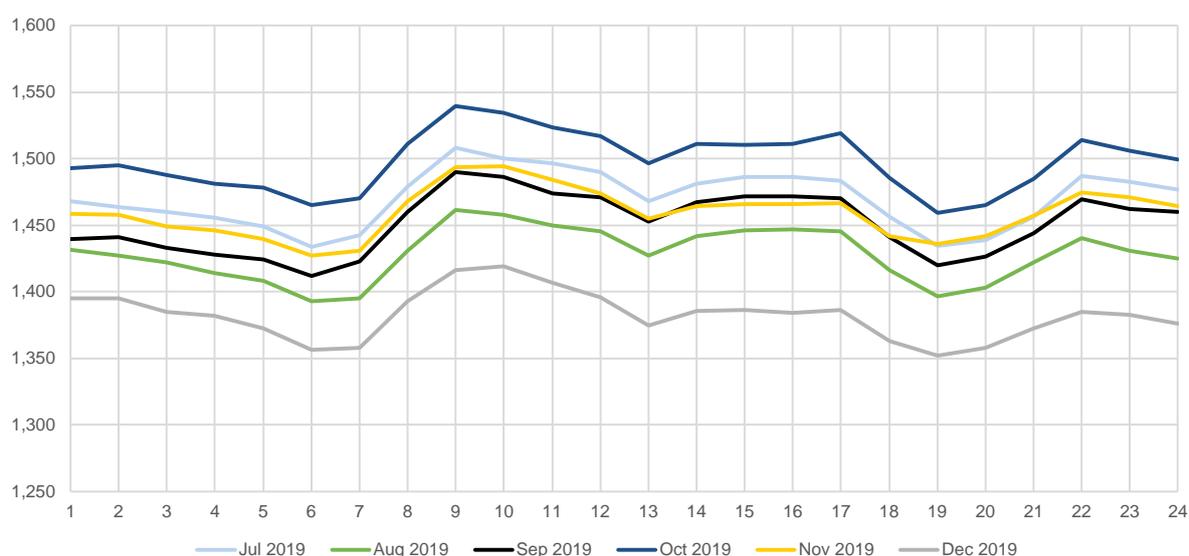


Figure 12. Hourly Average Energy Consumption (in MWh), Industrial CCs, Jul to Dec 2019

The registered commercial Contestable Customers, on the other hand, showed a substantial variation in their peak and off-peak consumption as shown in **Figure 13**.

Peak consumption of registered Commercial Contestable Customers was generally observed from around 0900H to 2200H.

Meanwhile, month-on-month comparison showed that the level and hourly pattern of the Contestable Customers' consumption were almost unchanged during the last six months except on the trading intervals 2200H-2400H of December 2019 when a higher level of consumption was noted attributable to the extended business hours of commercial establishments e.g. malls and restaurants prevalent during the holiday season.

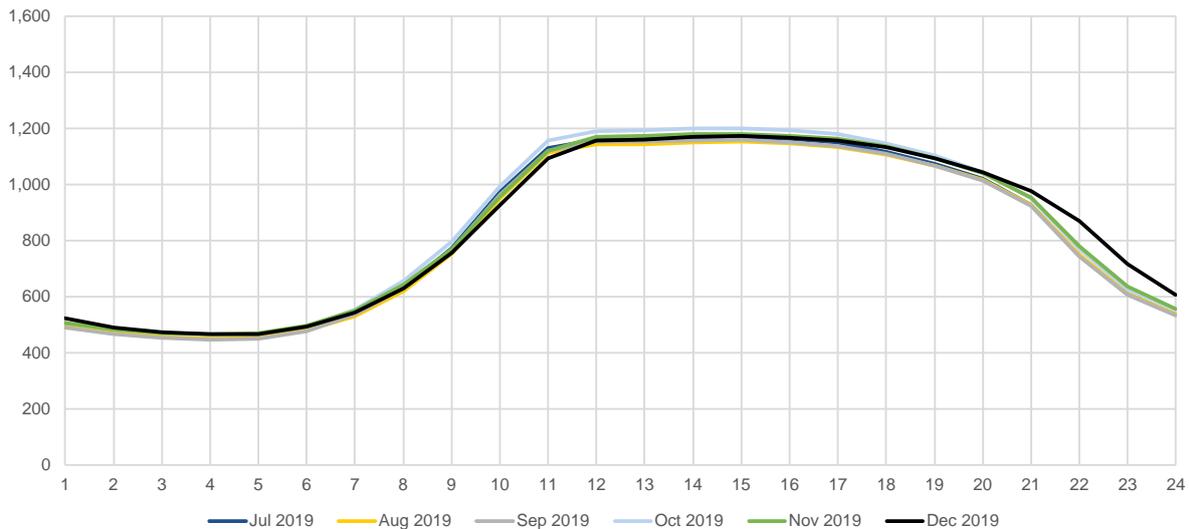


Figure 13. Hourly Average Energy Consumption (in MWh), Commercial CCs, Jul to Dec 2019

C. Load Factor

Figure 14 shows the monthly load factor¹⁵ of registered Contestable Customers, which was calculated based on their actual electricity consumption. The high load factor reflects a generally efficient electricity usage of registered Contestable Customers¹⁶.

Slightly lower load factor of registered Contestable Customers was observed during the last quarter of 2019 particularly during the December billing month at 78 percent.

¹⁵ Based on Metered Quantity (MQ)

¹⁶ Dr. C.R. Bayliss CEng FIET, B.J. Hardy CEng FIET, in Transmission and Distribution Electrical Engineering (Fourth Edition), 2012

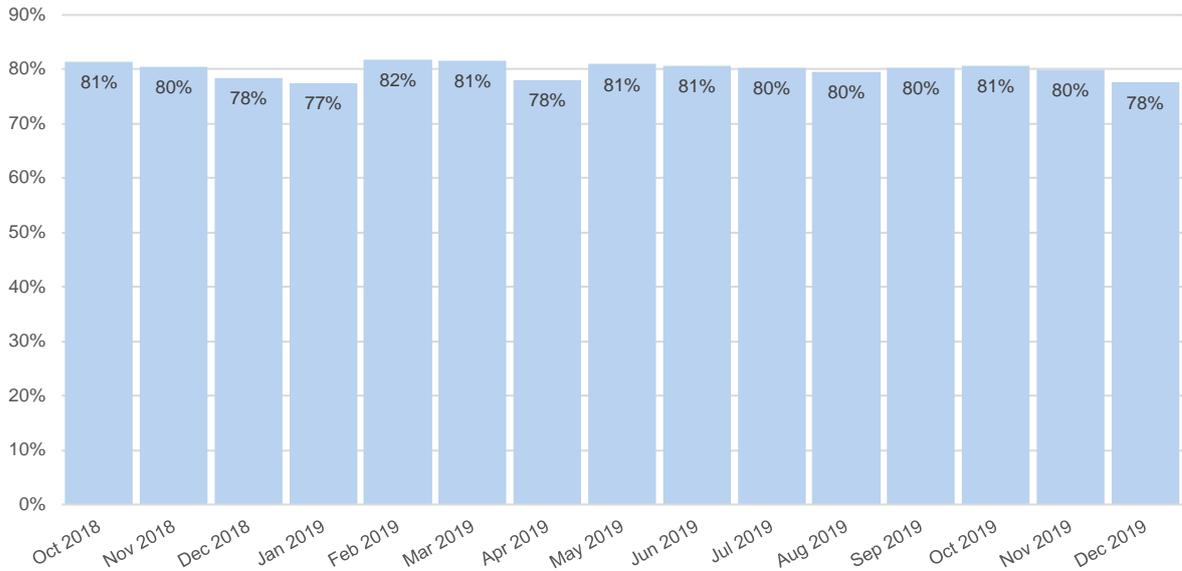


Figure 14. CC Load Factor, Dec 2018 to Dec 2019

III. RETAIL ACTIVITY

A. Customer Participation Level

The quarterly share of registered Contestable Customers per industry type by the end of December 2018 to the current quarter in review is shown in **Figure 15**. The registered Contestable Customers in the commercial sector maintained its share of about 52 percent by the end of December 2019 billing month.

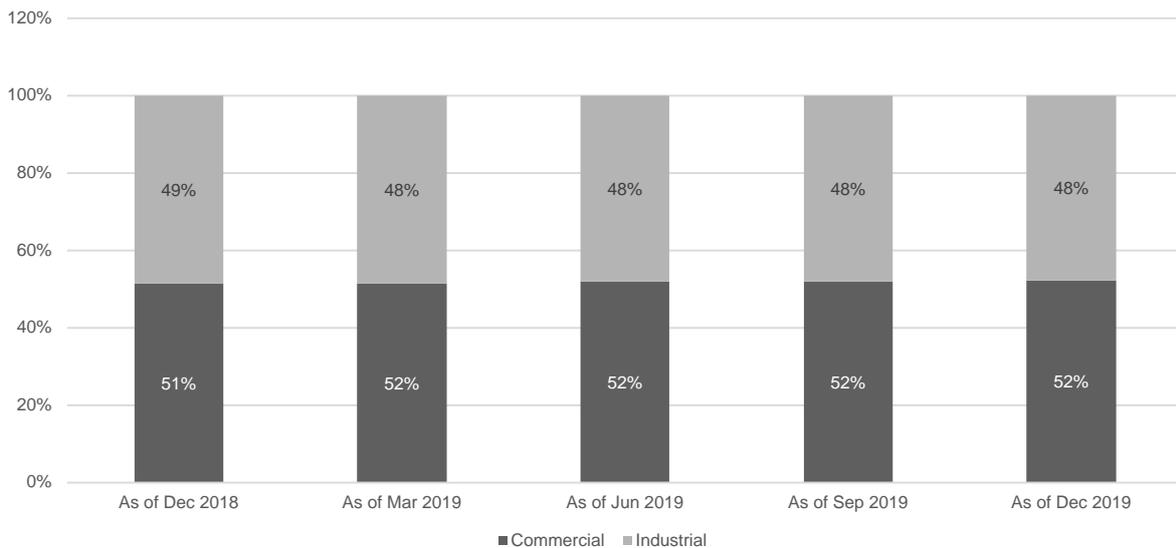


Figure 15. Percentage of CCs Per Industry Type, Dec 2018 to Dec 2019

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, five (5) switches from one Supplier to another were recorded during the October to December 2019 billing months.

Table 9 provides the details of the customer switching for the fourth quarter of 2019.

Table 8. Customer Switching Rate

Particulars	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
Switching Rate (Luzon)	0.00%	0.28%	2.04%	0.64%	3.72%	0.54%	0.36%	0.00%	0.68%	0.17%	0.41%	0.08%	0.08%	0.08%	0.16%
Total No. of CCs	1,045	1,059	1,080	1,091	1,103	1,119	1,126	1,144	1,177	1,196	1,212	1,221	1,235	1,247	1,264
Total No. of CCs that Switched	0	3	22	7	47	6	4	0	8	2	5	7	7	7	2
LRES to RES			4						7						1
RES to LRES		1	2	3	17	1			3	2			1		1
RES to RES		2	16	4	24	5	4		4		5	7		7	
SOLR to RES															
Switching Rate (Visayas)	0.88%	0.00%	5.93%	5.08%	3.36%	0.83%	0.00%	0.00%	3.10%	0.76%	0.00%	0.73%	0.72%	0.00%	0.00%
Total No. of CCs	114	118	118	118	119	121	122	126	129	131	132	137	138	143	144
Total No. of CCs that Switched	1	0	7	6	4	1	0	0	4	1	0	1	1	0	0
LRES to RES															
RES to RES	1		7	6	4	1			4	1		1	1		
Switching Rate (Luzon-Visayas)	0.09%	0.25%	2.42%	1.08%	3.68%	0.56%	0.32%	0.00%	0.92%	0.23%	0.37%	0.15%	0.15%	0.07%	0.14%
Total No. of CCs	1,159	1,177	1,198	1,209	1,222	1,240	1,248	1,270	1,306	1,327	1,344	1,358	1,373	1,390	1,408
Total No. of CCs that Switched	1	3	29	13	45	7	4	0	12	3	5	2	2	1	2

Table 9. Summary of Customer Switching, Q4 2019

Customer Switching	Oct 2019	Nov 2019	Dec 2019
Total No. of CCs that Switched	2	1	2
LRES to RES			from MRLCORE to ACEPHRES
RES to LRES	from MANTARES to MRLCORE		from ACEPHRES to MRLCORE
RES to RES	from VESMIREs to ACEPHRES	from FGESRES to BGIRES	
SOLR to RES			