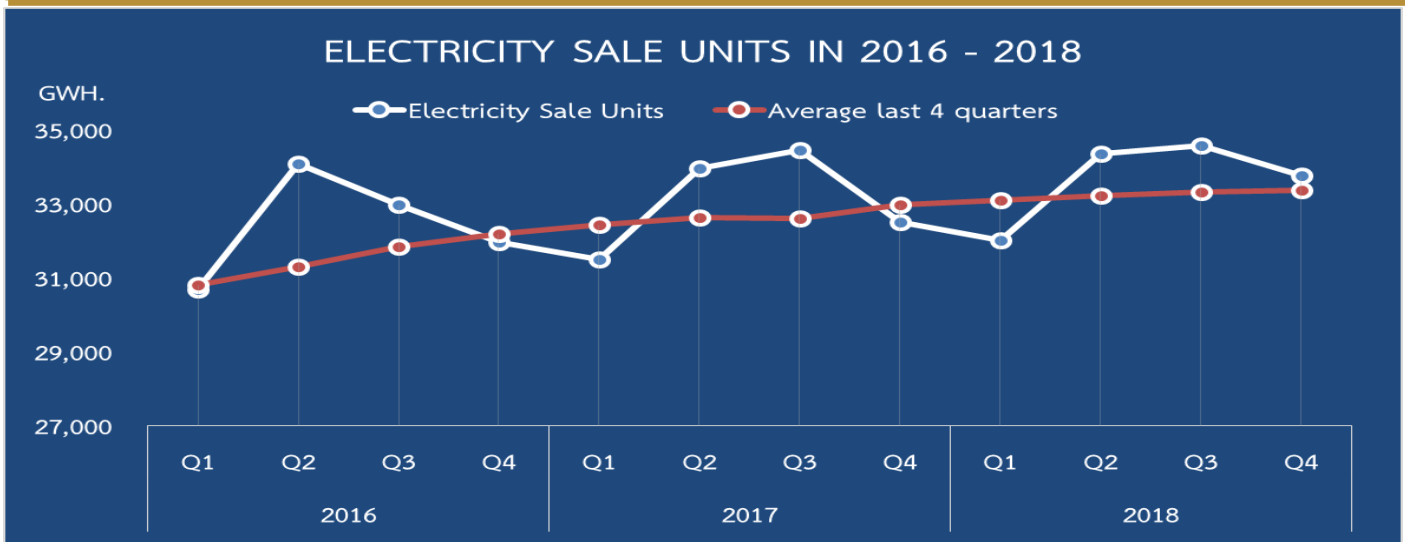


The Electricity Sales Report of PEA in 2018



Overall, the electricity sale units of PEA continuously increased while the growth diminishingly expanded in 2017-2018. According to the chart, the slope of average last 4 quarters further inclined, resulting from climate variability and global economy that had elevated trade war.

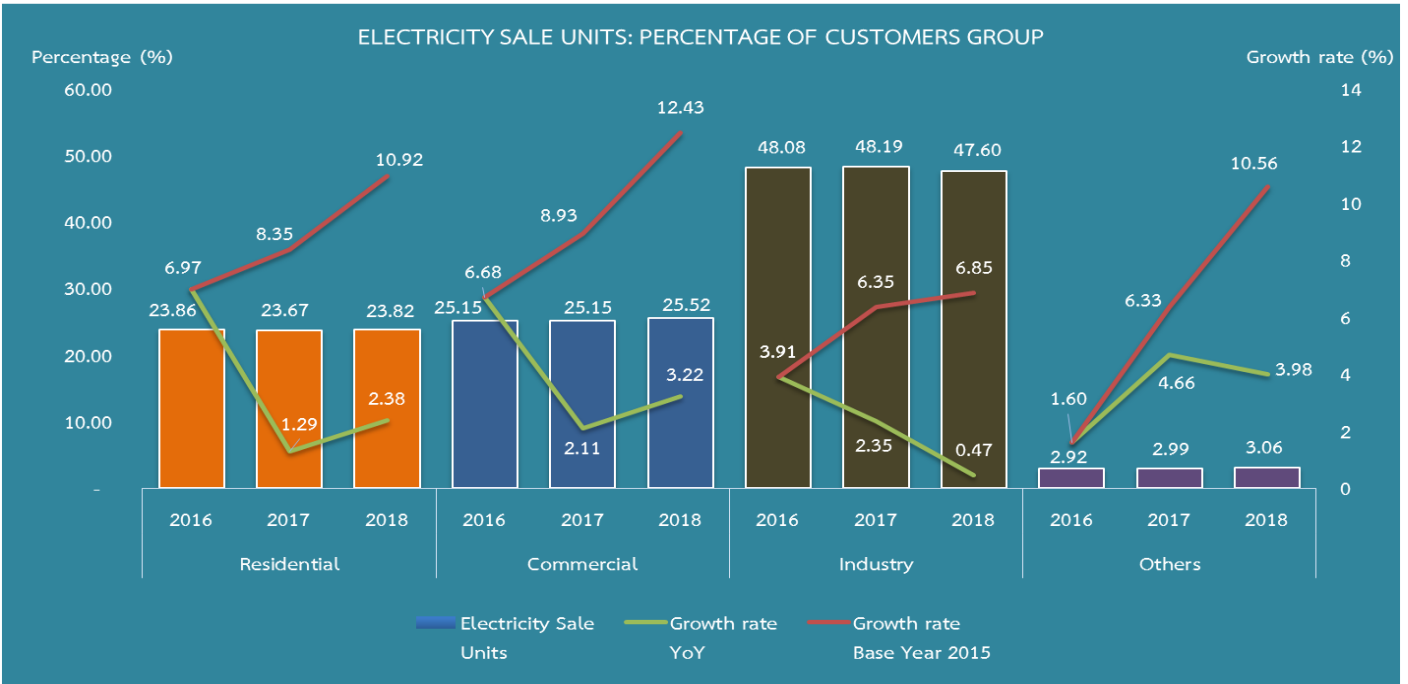
PEA usually had the highest electricity sale units in second quarter which was the hottest of the year e.g. 2016. As, the units in 2017-2018 reached to the peak at third quarter because rainy season came earlier and the weather became hot in year end. In 2018, rainy season took a long time from May to October and got into hot weather in fourth quarter shown as an electricity sale units was higher than average last 4 quarters.



In 2018, PEA had total electricity sales 134,673.89 million units. It expanded 1.72% YoY which was lower than approximation expanding 1.95% YoY (approximated in September 2018). Now that, the main factor causing a dip of electricity demand for manufacturing sector was trade war.

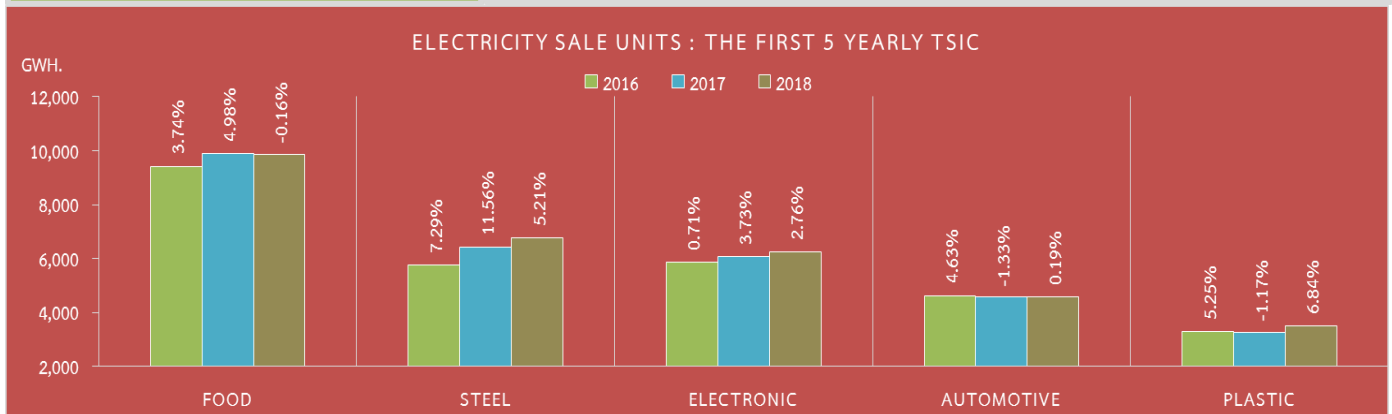
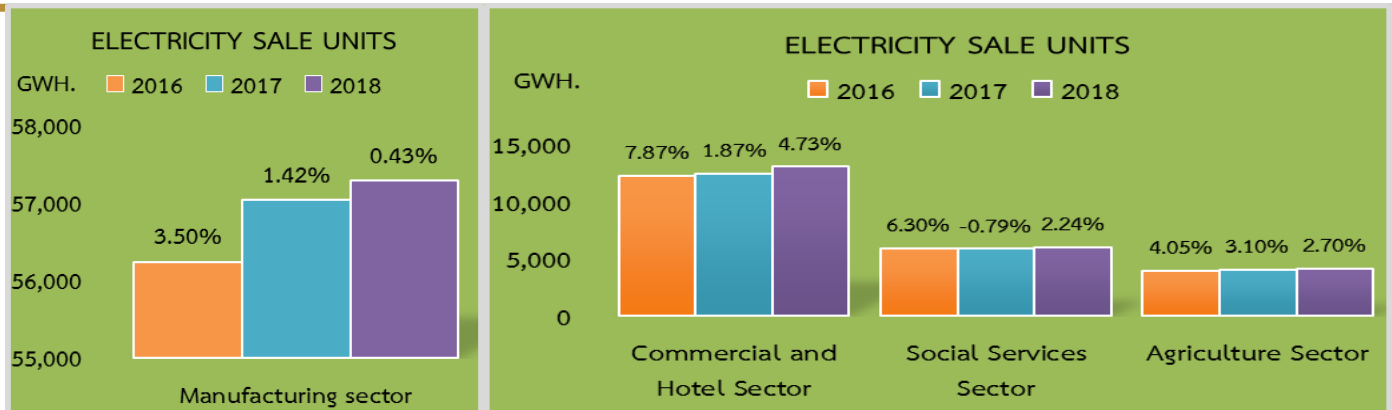
The residential and commercial sectors accelerated, owing to global and Asian sport competition including festivals and milestones. These caused an escalation of retail, wholesale and tourists.

To compare the growth rate between 2018 with base year 2015, it has found that the electricity sales inflated by 9.30% YoY.



Residential	Commercial	Industry	Others
<p>Growth rate magnified 2.38% YoY. Since, rainy season came earlier and took long time from May to October 2018. Whereas, the temperature was higher about 1.20 degree Celsius.</p> <p>Furthermore, there were many factors to impact electricity consumption. For example, world Cup, Asian Games and news that 13 missing boy trapped in Tham Luang cave. These caused people highly following the news by television, smart phone and tablet.</p>	<p>Enlarged by 3.22% YoY due to a surge of electricity consumption in hotel and department store segments at 3.36% and 2.77% YoY, respectively.</p> <p>The cause was tourists rising from 35.59 million people in 2017 to 38.28 million people in 2018. So, the growth was 7.54% YoY.</p> <p>Besides, domestic goods and services consumption surged by World and Asia sport tournament and a rescue of missing boys in cave.</p>	<p>Slightly Intensified by 0.47% YoY. It resulted from a slow growth of manufacture which was at 0.43% YoY by U.S.A. – China severe trade war.</p> <p>In addition, there was significantly affected by losing customers to SPP.</p> <p>In 2018, PEA bereaved 46 customers calculating to electricity sale units were 888.23 million units. To compare with previous year, the growth were 12.20% and 16.30% YoY, respectively. (In 2017, PEA lost 41 customers which electricity sale was 758.60 million units.)</p>	<p>3.98% YoY was escalated on account of elevated electricity usage in hospitals, local government administrations, schools, sanitation services, and religious organization.</p> <p>The electricity consumption for street light and public light increased which was opened for longer when the rain came.</p>

Growth (Up/Down) of electricity sale units compare with previous years



Manufacturing sector accrued by 0.43% YoY. There were 5 segments in manufacturing sector.

Food Segment dropped at 0.16% YoY. The first 3 electricity consumption were rice mill which decreased 1.03% YoY, resulting from a decline of agricultural area and product by government supporting in corn. The second was manufacture of tapioca falling 12.05% YoY from lacking of ingredients. The third one was canned food manufacture reducing 0.73% YoY for as manufacture of shrimp, crab and pineapple canned food for export eased by lack of ingredients.

Steel Segment jumped by 5.21% YoY owing to an escalation of iron-founding at 25.71% YoY. Besides, basic industry for metal that did not steel grew up 10.26% YoY following domestic construction.

Electronics segment went up 2.76% YoY, following a production of electronic equipment, radio, television and communication. The cause was a climb of global demand for electronics.

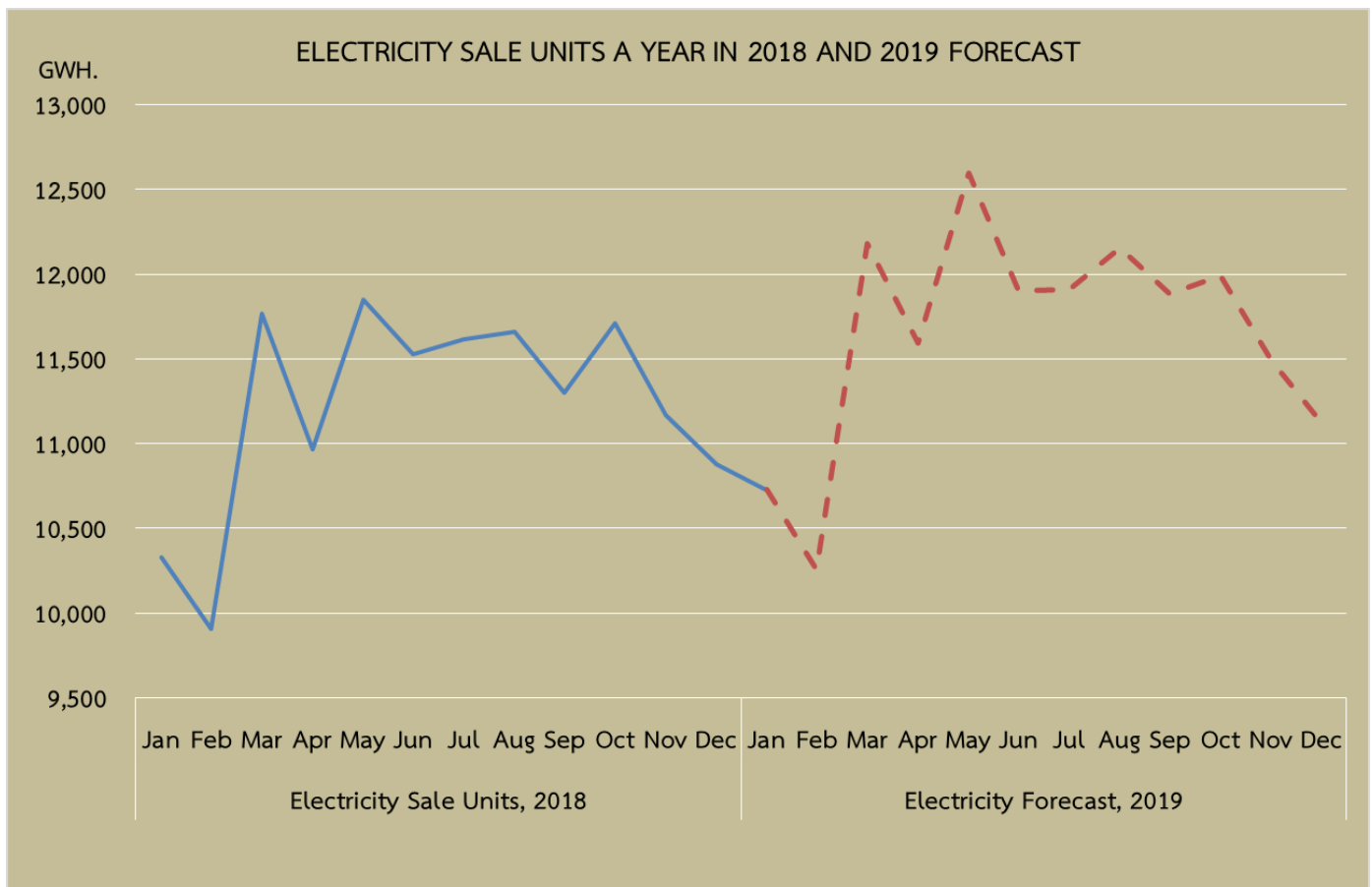
Automotive Industry surged by 0.19% YoY. Whereas, car production expanded 5.59% YoY, resulting from losing customers to SPP, self-electrical generation and energy saving.

Plastic Segment accumulated by 6.84% YoY, thanks to an increase of plastic container and others at 3.64% and 8.04% YoY.

Sales & Hotel sector increased by 4.73% YoY due to a large number of visitors to Thailand relating to a rise of electricity consumption in hotel and department store segments.

The Social Services sector rose 2.24% YoY, in consequence of electricity consumption for street light and public light which related to nonprofit organization escalating 6.43% YoY.

Agricultural sector varied by 2.70% YoY, on account of electricity consumption of livestock, agricultural services, fishing, cultivation, animal raising and planting of orchard and vegetables that increased by rainfall precipitation.



Electricity Sale Forecast

The electricity sales in 2018 expanded 1.72% YoY which was lower than approximation expanding 1.95% YoY (approximated in September 2018). Now that, the main factor was trade war causing a dip of electricity demand for manufacturing sector.

PEA forecasts the electricity sale situation in 2019 to improve. The committee approximated that will be expanded 3.82% YoY. There were many factors to impact the electricity sales 2019.

Positive factors

Political Situation

The election in March 2019 will be causing a political directionality and stability engendering investor confidence in Thailand economic and deciding to elevated investment.

Tourism

Thailand tourism continuously grew up which expected that in 2019, the tourists will be 40 million people because Thailand is a destination of worldwide visitors.

It resulted electricity consumption of hotels, resorts and services sectors have an engine of growth.

Technology

In 2018, the market share of e-Commerce was 3.2 million baht increasing 14.04% YoY by e-Payment development and augmentative logistics competition. Furthermore, there will be developing Big Data / AI and 5G in 2019 to help more businesses going online, including producers and customers can get into insight information and meet their expectation for supporting trade, investment, tourism and domestic economic.

Weather

There has expected that El Nino will come in 2019 that makes the temperature becoming hotter. Then, there are a high electricity consumption for cooler, air conditioners and ice factory.

Industrial Sector

There were many investment privilege in EEC;

- Exemption of corporate income tax.
- Import tariff exempt.
- Investment expenditure's subsidy.
- Allow to possess land ownership for doing business that was promoted.
- Leasehold of royal property.
- The individual income tax rate is 17% being the lowest in ASEAN.
- One-stop Service system.
- 5 year-work permit for appealing to investor, specialist and scientist from worldwide.

From work permit, leading companies were interested for investment in Thailand such as:

- Cluster of new automotive industry were tesla, Shanghai Motor, BMW, Suzuki and Mercedes-Benz.
- Logistics and aviation industrial cluster were Airbus, Boeing and Tianjin.
- Digital industrial cluster were Lazada, Alibaba and IZP Group.

Negative factors

Supportive Polices for SPP Cogeneration

Private sector's promotion to play a role in generating electricity for distribution caused losing more customers for SPP. The most of losing customers were in industrial sector which used a lot of electricity having an effect on a decline of electricity sale units.

Global Economic

After had finished G20 meeting at Argentina, United states-China trade war might happen again by the postponement of import tax increase policy for 90 days.

It impinged upon a reduction of global demand which influenced production line.

Moreover, there was a trend of Fed's interest rate hike. If Fed actually increase the rate, the capital outflow will increase.

Political situation of many countries in Europe still was indistinct and continually had problems. To illustrate, Britain Exiting EU (Brexit) haven't had a conclusion. And, there was the protesters "yellow jackets movement" in France.

Steel price was reduced in China and Asia which had more Thailand's import competitor. Seeing that, there was increasingly dumping which caused imported steel cheaper than domestic steel.

Baht Currency

Baht currency which was more appreciate might be risky factor to export since export goods was more expensive. Then, it might import more goods because the price was cheaper, especially steel products. It caused trade deficit which affected to domestic entrepreneurs' price competitiveness. Because of the cost was costly.

Household Sector

In 2018, household debt dramatically escalated by loan for homes and cars which were long term debt. Besides, cost of living grew apart from the slight surge of income which caused non-performing loan (NPL) in the long run. Household debt per GDP was in high level at 77.5%.

Natural Disasters

From accurately unexpected weather, there affected the efficiency of electricity distribution. Especially, the storm might destroy the distribution that couldn't usually distribute an electricity.