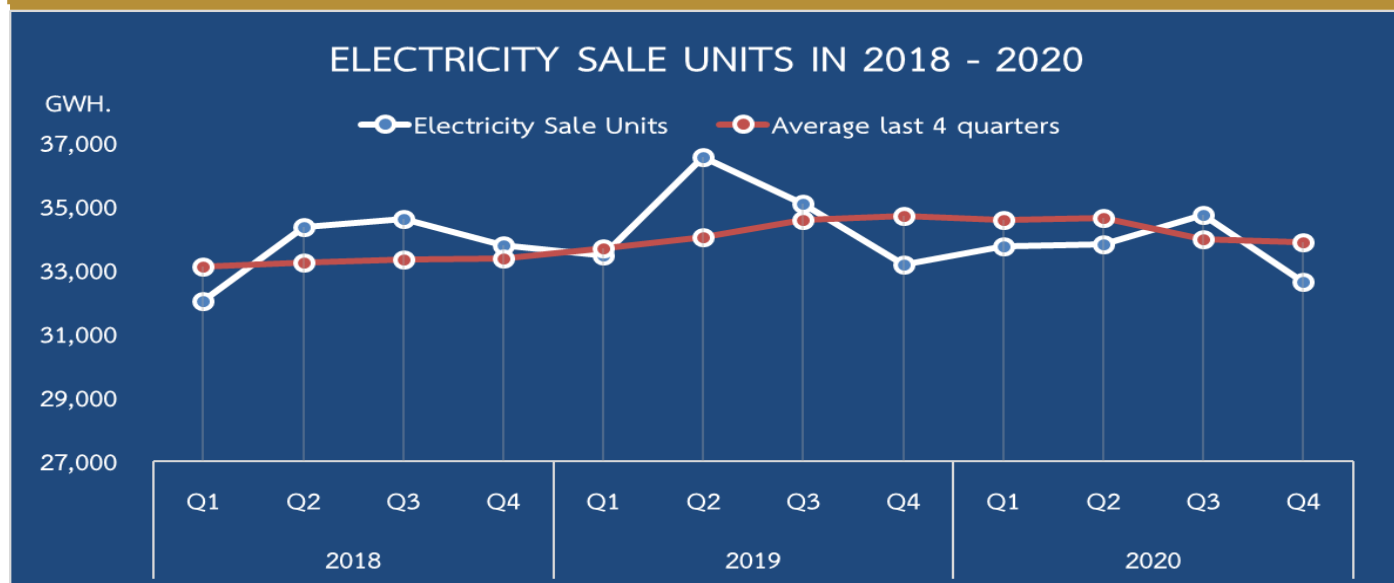
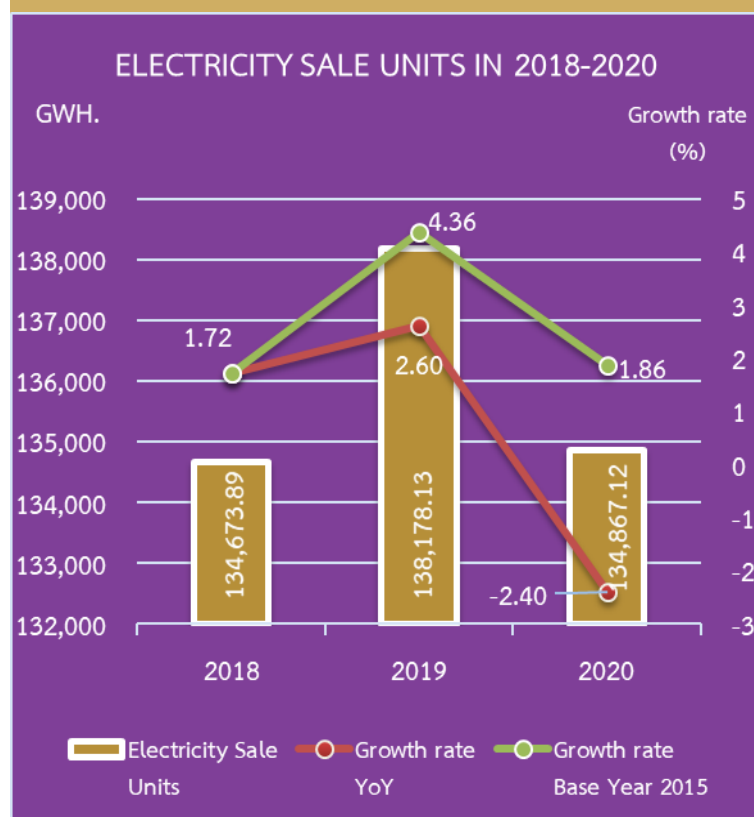


## The Electricity Sales Report of PEA in 2020



The electricity sale units of PEA decreased in First and Second quarters of 2020 from COVID-19 causing an enforcement of tourism limitation and lockdown policies. Also, industrial sector was continuously affected by exports and closed factories, particularly in automobile plants. In addition, exports shrank owing to a decrease in international orders. While the electricity consumption of residential sector rose, the overall was still lower than the previous year. At the third quarter, electricity consumption slightly increased due to government stimulus. However, electricity consumption dropped in fourth quarter owing to lower temperatures than usual.

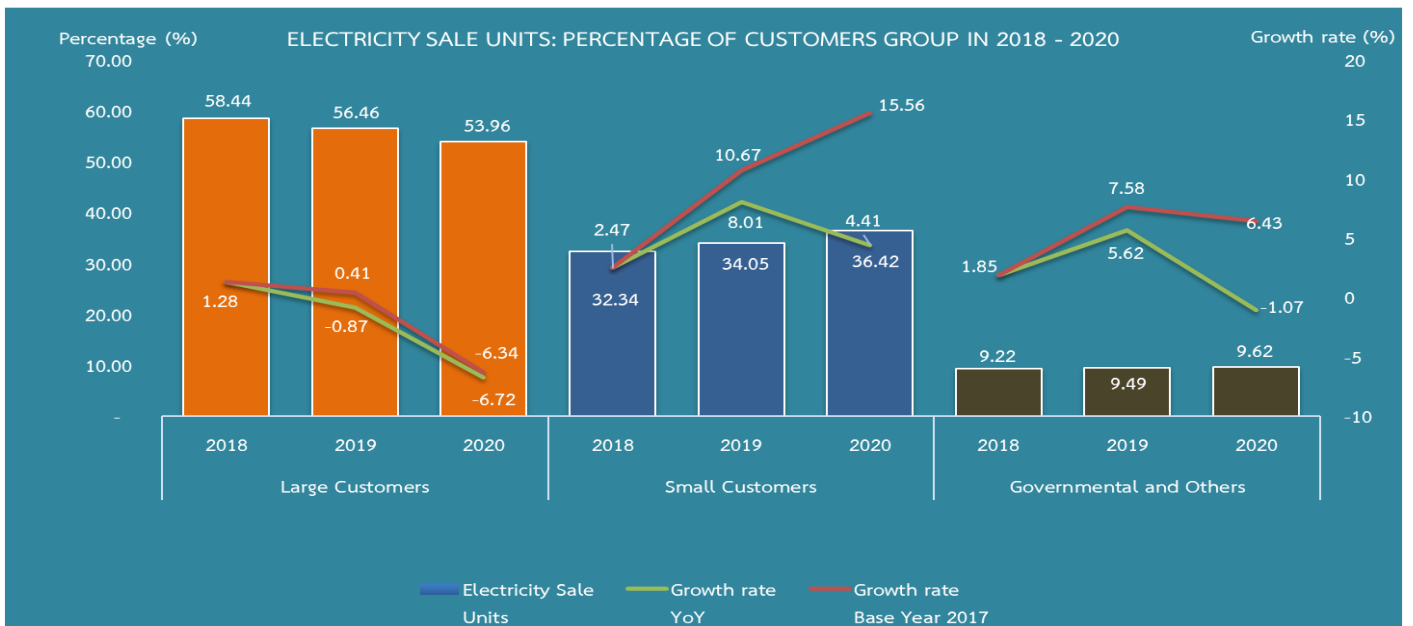


In 2020, PEA had total electricity sales 134,867.12 million units. It dipped 2.40% YoY which was higher than approximation decreasing 1.91% YoY (approximated in October 2020).

The residential sector accelerated at 6.48% YoY owing to epidemic prevention measures and high unemployment. People spent more time in house and high temperature.

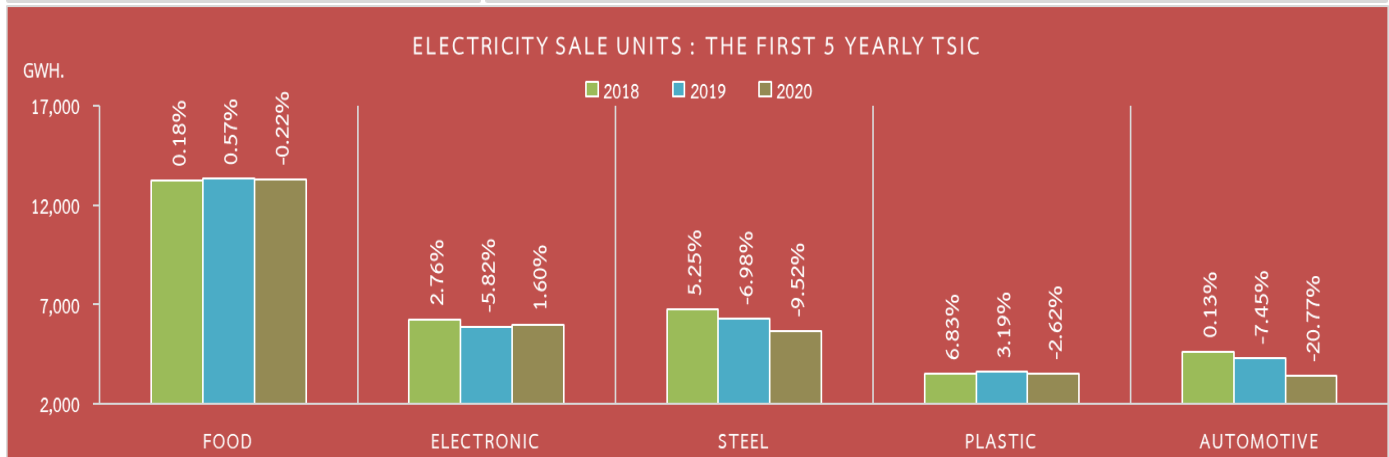
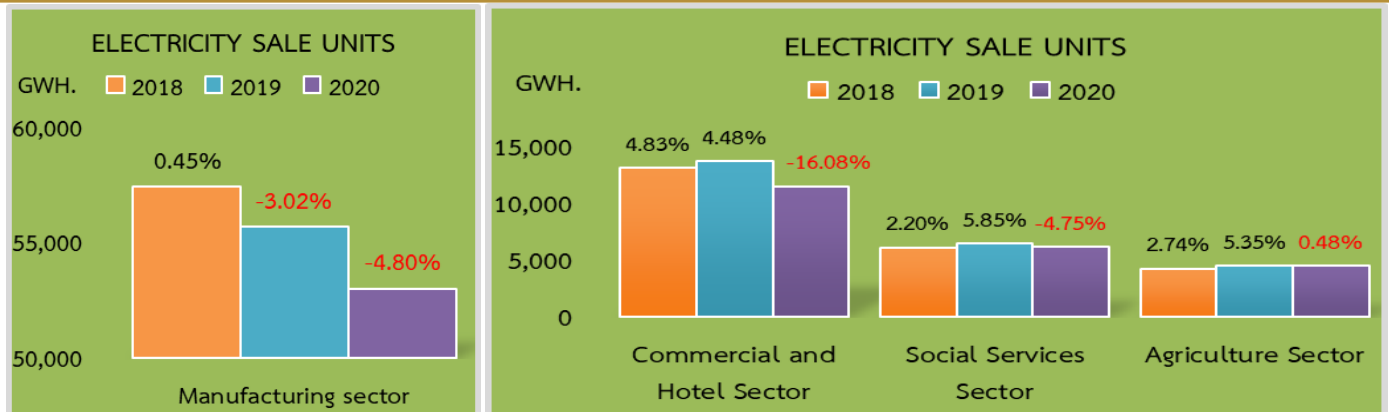
Small, Medium and Large business sectors fell 1.16%, 3.82% and 5.41% YoY following domestic and global economic stagnation.

Specific business extremely declined at 31.75% YoY because of tourist limitation. Hotel sector was severely affected by foreign tourists.



Large Customers	Small Customers	Governmental and Others
<p>Growth rate plunged 6.72% YoY.</p> <p>Electricity consumption of industrial sector dipped 4.54% YoY from the COVID-19 pandemic. These caused automobile plants had to close for 3 months. Furthermore, government declared lockdown policies resulting in a decrease of exports. Even if there were high demand for some products such as Rubber products, overall dropped.</p> <p>Electricity consumption of large commercial customers shank 14.71% YoY resulting from limitation of international departure for who travelled to Thailand. However, economy was likely recovering from government stimulus that affected to domestic tourism.</p>	<p>This segment enlarged by 4.41% YoY.</p> <p>The electricity consumption in residential sector expanded 6.48% YoY owing to work from home, “stay at home” policy and online learning policy etc. Also, the temperature was higher than last year during summer. The electricity subsidy resulted in a growth of electricity consumption.</p> <p>Besides, small commercial customers decreasingly consumed electricity by 1.53% from a decline in domestic and foreign tourists, including the lockdown measure and postponing the Songkran Festival.</p>	<p>Falling at 1.07% YoY on account of a drop in electricity usage of governmental and state-owned enterprise sector at 2.08% YoY.</p> <p>From Work from Home policy which responded to government policies following measures to prevent the epidemic of COVID-19, reduced electricity consumption in office buildings.</p> <p>Others rose at 0.94% YoY from free electricity to screen people during an epidemic. In addition, highway and public lights were particularly used due to the sooner and longer cold weather.</p>

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



**Manufacturing sector** plummeted by 4.80% YoY. There were 5 segments in manufacturing sector.

**Food Segment** dipped at 0.22% YoY. An electricity consumption of ice factory dropped 0.29% YoY following a demand from shopping malls and restaurants. Besides, Freeze and chilled chicken meat had lower sale than previous year.

**Electronics segment** expanded by 1.60% YoY owing to an increase in computer and electric equipment orders because of Work from home policy which corresponded to the sales of air conditioners, refrigerators and fans were higher than last year.

**Steel Segment** went down 9.52% YoY, following a forward linkage industry such as Automotive and Construction industry. Electricity consumption continued to decline from March to September, resulting in lower sales of steel than the previous year.

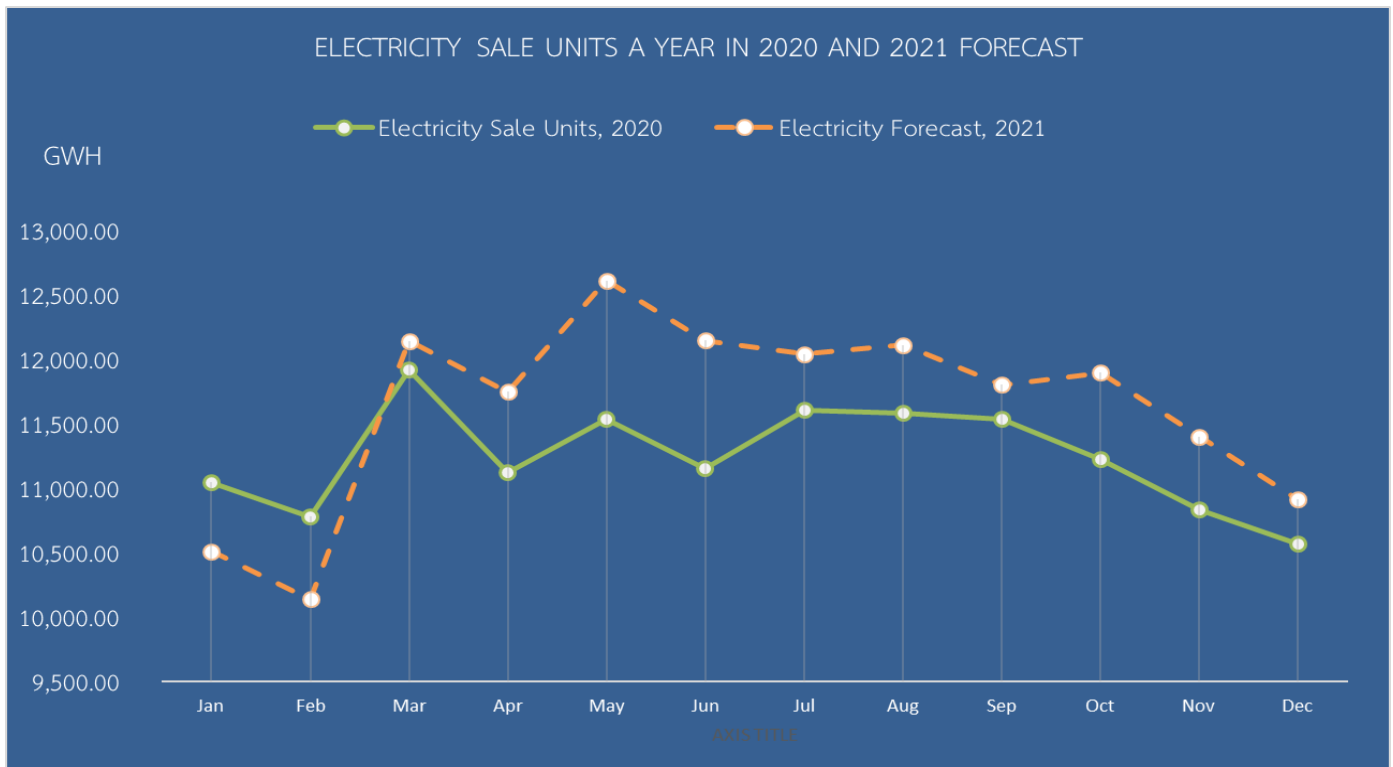
**Plastic Segment** shrank by 2.62% YoY, thanks to a decrease in sales of plastic products and others such as PE, PP and PET.

**Automotive Industry** diminished at 20.77% YoY following an economic slowdown from COVID-19. The pandemic impacted to automotive industry causing a drop in electricity consumption from January to October.

**Sales & Hotel sector** plummeted by 16.08% YoY due to foreign tourists who can't travel to Thailand from February onwards.

**The Social Services sector** fell 4.75% YoY, in consequence of anti-pandemic measures resulted in electricity consumption in hospital, university and public administration continuously declined.

**Agricultural sector** rose by 0.48% YoY, on account of an increase in electricity consumption of livestock and fishery.



### Electricity Sale Forecast

The electricity sales in 2020 dipped 2.40% YoY was higher than approximation which decreased 1.91% YoY (approximated in March 2020). Now that, the main factor was Covid-19 causing a dip in electricity demand.

PEA forecasts the electricity sale situation in 2021 to improve. The committee approximated that will be expanded 3.38% YoY. There were many factors to impact the electricity sales 2021.

### Positive factors

#### Pandemic control

Production and Vaccination will effectively control and reduce the spread of COVID-19. Resulting from global economy recovery, there were more international orders from Thailand. Besides, there could admit more foreign tourists. While domestic vaccination will make people to travel and spend as well.

### Government policy and measure

Government policy that stimulated domestic economy such as

1. “Half-Half” Project, “We-win” Project, “We stand together” etc.
2. Electricity charge subsidy, water bill and Internet bill subsidy.
3. Labor remedial measures in the social security system.
4. Liquidity enhancement and debt moratorium.
5. Reduction of land and building tax and property transfer fee waiver.

### Technology

COVID-19 pandemic will accelerate the utilization of technology, especially, Work from home and Online activities such as e-Commerce, Mobile Banking, Streaming, Virtual Event etc. These caused an increase in electricity consumption of residential sector.

### **Economic situation**

After COVID-19 had spread, Many Countries launched Monetary and Fiscal Policies to stimulate the economy. These was a reason to recover global economy that could grow the export Volume.

### **Export**

COVID-19 pandemic made high demand for some products, especially computer, electrical appliance, automobile and rubber. If there were vaccination and control of the pandemic, the export volume would expand at 6-8 % YoY.

### **Tourism sector**

There was expected to increase domestic tourism from government stimulus supporting people expenditure during special holidays such as Songkran Festival.

In terms of foreign tourist, there will permit special visas for tourists who were screened such as vaccination record and quarantine.

### **Negative factors**

#### **Epidemic**

There was a mutation of covid-19 and side-effect from the vaccine. For instance, there were many people in Africa who didn't get a vaccine or vaccine resistance. Moreover, there was new infectious diseases in Russia such as H5N8 avian influenza. There was also a risk of a repeated COVID-19 epidemic within the country.

### **Foreign Tourist**

Despite the fact that there was vaccination in many countries, there was risks from foreign tourists affecting a recovery of tourism businesses which relied on foreign tourists.

### **Debt**

The Economic stimulus from government had led to an increased public debt. In addition, Business sector was affected by export and a decline in tourists facing in liquidity problem. This problem caused a decline in household income and increase in household debt.

### **Natural Disasters**

It is predicted that La Nina will occur all year round, which caused more rainfall and lower temperature than last year. This might be one of the factors causing lower electricity sales than expected.

### **Baht Currency**

Appreciation of Baht from Quantitative easing launched by FED and Central bank of many countries might affect to Thai export.