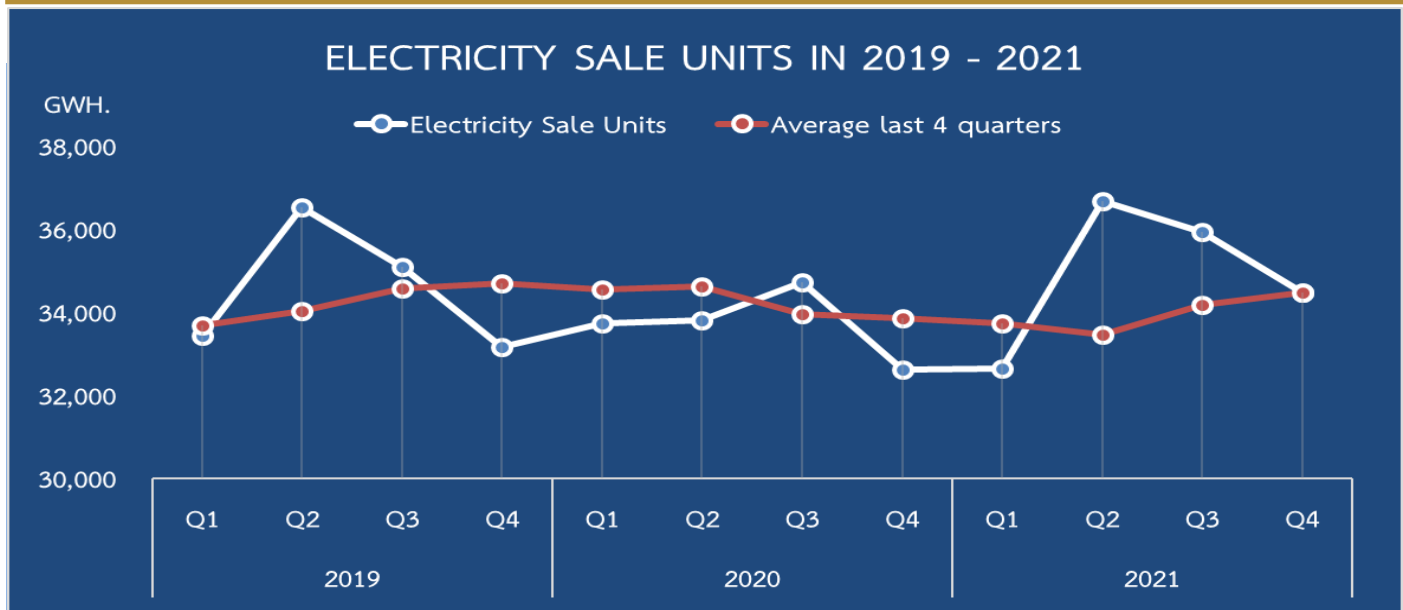


The Electricity Sales Report of PEA in 2021



The electricity sale units of PEA increased by 3.57% YoY, especially in the 2nd and 4th quarter from a growth of exports in the industrial sector, as well as the unwinding supply chain disruption problem and increase in residential's electricity consumption due to Work from Home and Online learning.

Moreover, the expenditure stimulus policies resulted in increased private and household spending. Thailand has reopened and there was the policy to promote domestic tourism at the end of the year. As a result, the electricity consumption was higher than the previous year.

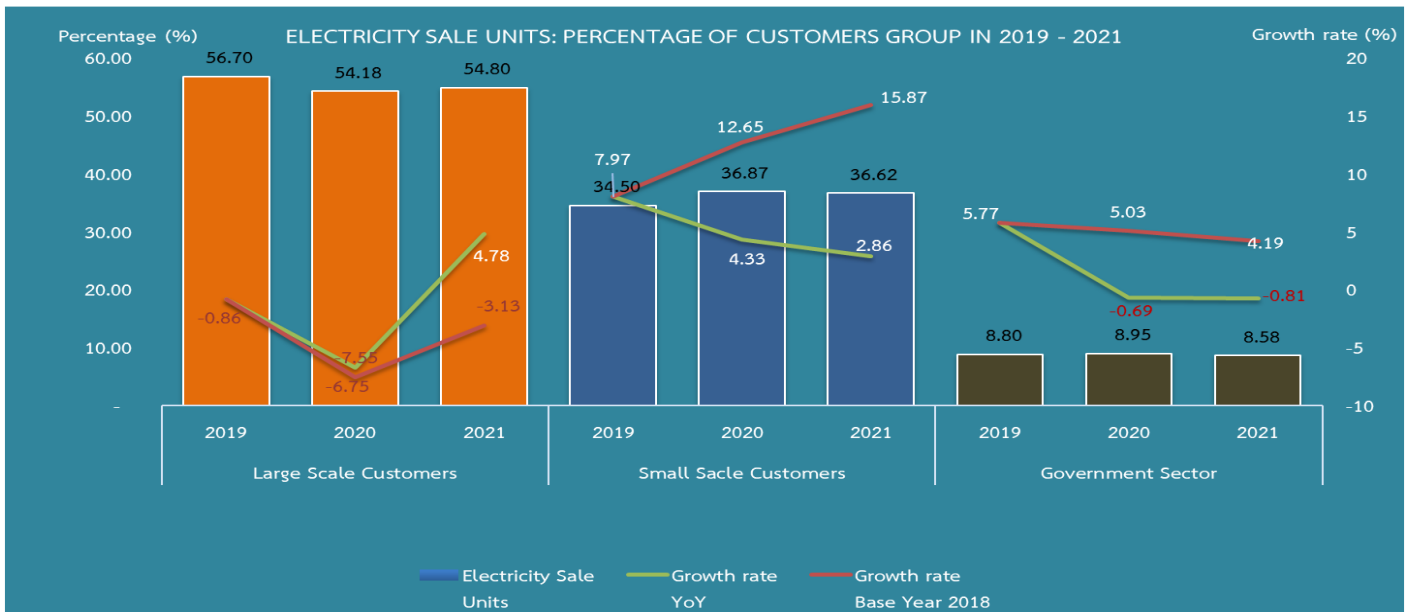


In 2021, PEA had total electricity sales 139,687.23 million units. It grew up 3.57% YoY which was higher than approximation increasing 2.78% YoY (approximated on September 29th, 2021).

The residential sector accelerated at 3.64% YoY owing to epidemic prevention measures resulted in people work from home and online learning continuously.

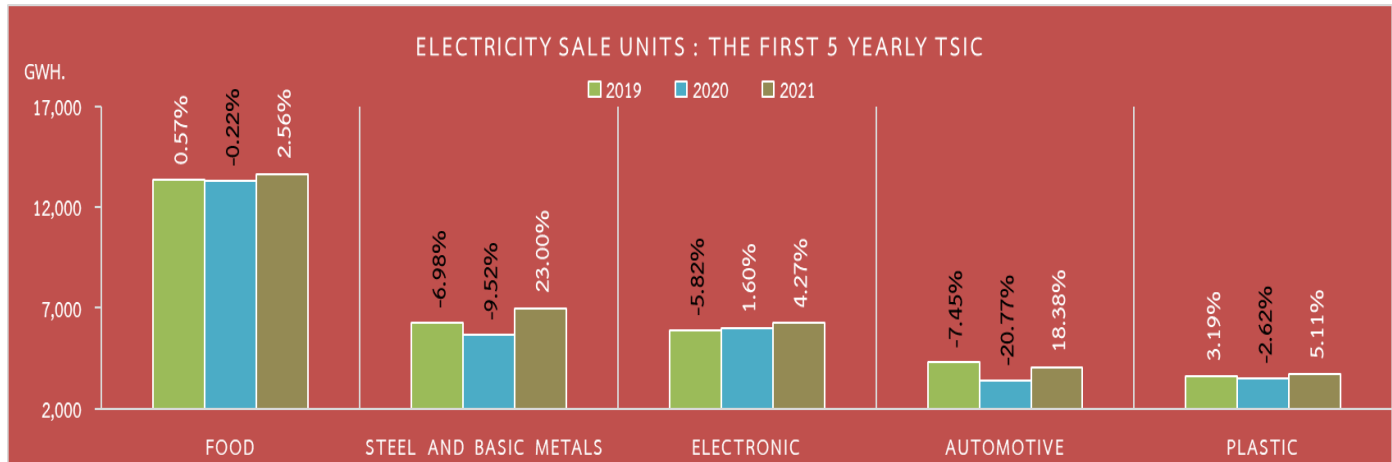
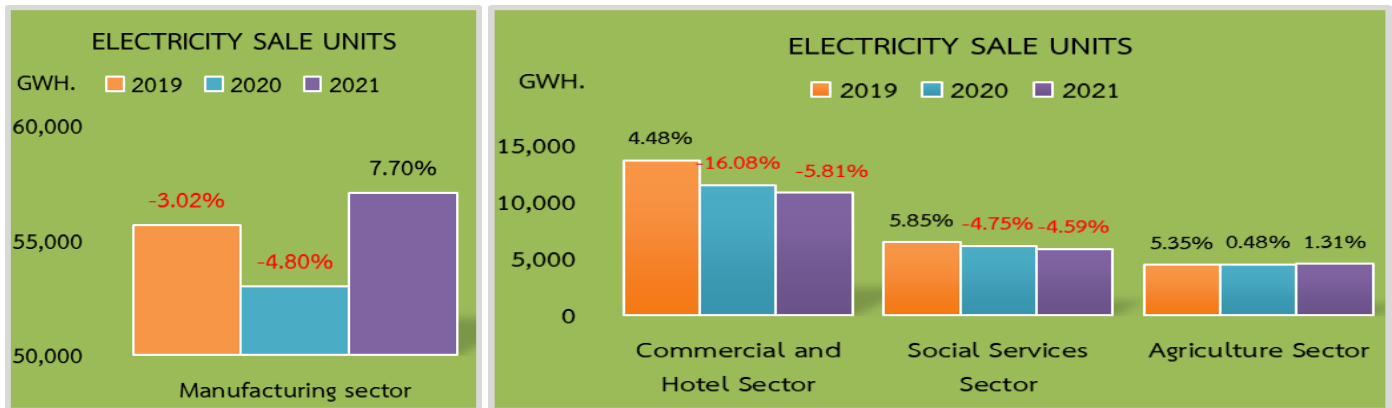
Small, Medium and Large general service went up 0.38%, 0.71% and 6.41% YoY, respectively, following the growth of the world and domestic economy.

Specific business service extremely declined at 18.21% YoY because international travel restrictions resulted in no arrivals to Thailand. However, it was likely to recover due to the decrease rate was less than the previous year at 31.75%.



Large Scale Customers	Small Scale Customers	Government Sector
<p>Growth rate enlarged at 4.78% YoY.</p> <p>Electricity consumption of the industrial sector soared 7.24% YoY from the recovery of world economy, resulting in the rise in orders for important products such as computers, steel, rubber products from key partners such as China, the USA, Hong Kong etc.</p> <p>Electricity consumption of large scale commercial sector shrank 5.06% YoY resulting from the decline in foreign tourists. In addition, during the 1st - 3rd quarter, department stores and large stores were closed to control the spread of COVID-19.</p>	<p>This segment rose at 2.86% YoY.</p> <p>The electricity consumption in residential sector expanded 3.64% YoY owing to work from home, and online learning policy to prevent the spread as well as measures to alleviate the burden of the people especially the electricity subsidy resulted in the growth of electricity consumption.</p> <p>Besides, small scale commercial customers increasingly consumed electricity by 0.55% from government spending policies such as “Half-Half” scheme, “Shop Dee Mee Kuen” and financial support from social security. As a result, people have more liquidity in daily life.</p>	<p>Falling at 0.81% YoY on account of Work from Home policy which reduced electricity consumption in office buildings, including online learning. These resulted in schools and universities reducing electricity consumption.</p>

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



Manufacturing sector expanded at 7.70% YoY. There were 5 segments in manufacturing sector.

Food Segment slightly ascended at 2.56% YoY due to the electricity consumption of rice mill rose 8.37% YoY from domestic consumption. Besides, cassava starch production grew 12.11% YoY following orders from China. Conversely, ice production dipped at 2.74% YoY from cold weather. As a result, the overall electricity consumption thinly increased.

Steel and basic metals segment mostly expanded by 23.00% YoY owing to demand for steel and steel products from China, India, Vietnam, South Korea, Indonesia, Malaysia and Taiwan. Moreover, the order of rolled steel products from the U.S.A and Malaysia increased.

Electronics segment escalated at 4.27% YoY from the increase in computer and electric equipment (HDD) exports to the U.S.A and Hongkong, including electrical circuit boards from Hong Kong and Singapore. Furthermore, sales of electrical appliances soared.

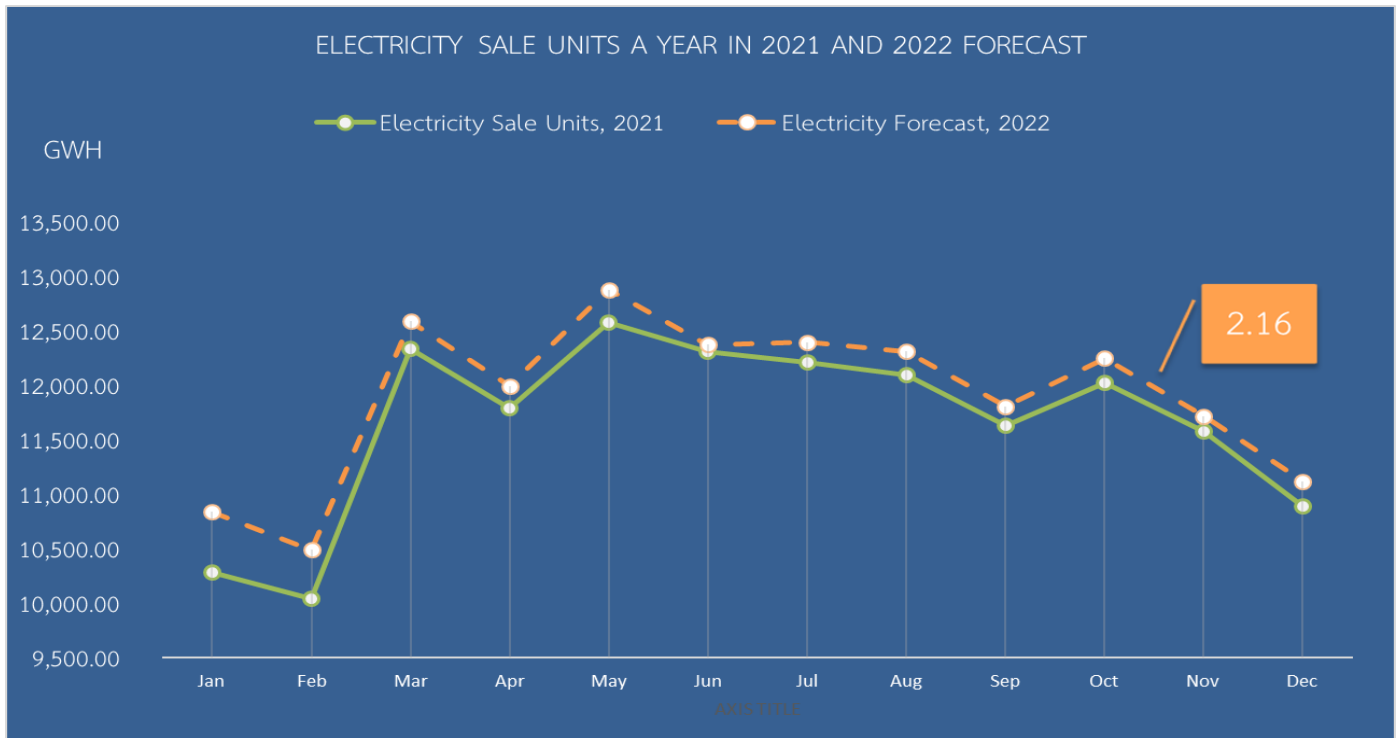
Automotive Industry highly spread at 18.38% YoY following the growth of vehicle exports to Australia and Vietnam including export of auto parts in the U.S.A, Japan, Indonesia and South Africa. In addition, the deficiency of microprocessors for car assembly began to ease.

Plastic Segment enhanced at 5.11% YoY, thanks to an increase in exports of plastic products to Japan the U.S.A and Vietnam. Moreover, domestic consumption had increased.

Sales & Hotel sector plummeted at 5.81% YoY due to the decrease in the number of domestic and foreign tourists from last year. Moreover, the government had measures to limit the opening of restaurants and shopping malls to prevent the spread of COVID-19.

Social Services sector fell 4.59% YoY, in consequence of anti-pandemic measures resulted in electricity consumption in educational institution and public administration continuously declined.

Agricultural sector rose at 1.31% YoY, on account of an increase in electricity consumption of livestock.



Electricity Sale Forecast

The electricity sales in 2021 went up 3.57% YoY was higher than approximation which increased 2.78% YoY (approximated in September 2021).

PEA forecasts the electricity sale situation in 2022 to improve. The committee approximated that will be expanded 2.16% YoY. There were many factors to impact the electricity sales 2022.

Positive factors

Export

Export was the main force of Thailand's economy resulting from high demand for some products, especially automobile, computer, rubber products and steel from key partners such as China, the U.S.A and Hong kong which has a positive effect on the domestic supply chain.

Economic situation

The stability of the domestic economy will be expected to remain stable by spending of the household from the stimulus policy such as "Half-Half" scheme phase 4 and "Shop Dee Mee Kuen" scheme. What's more, liquidity and assistance

through digital supply chain finance platform equally increasing capital accessibility of SMEs and Thai farmers. In addition, there was the promotion of domestic tourism from the project "We travel together phase 4 " to support the domestic economy. (adding 2 million rooms and extending until May, 2022)

Foreign Tourist

Thailand Pass registration will open for Thai people and foreign tourists in "Test & Go" starting February 1, 2022. The expansion of the sandbox area, including the relaxation of measures by allowing alcohol drinks until 11 P.M. for SHAPLUS restaurants. These caused the increase in domestic tourism.

RCEP (Regional Comprehensive Economic Partnership)

35th ASEAN Summit Negotiation about RCEP is the largest Free-trade zone and Thailand is one of the 15 co-founded countries. It is effective on January 1st, 2022. Thailand will be benefited from the abolition of import duties collected on 39,366 and immediately reduce the tax to 0% for 29,891 items.

Vaccination

The continue to accelerate booster vaccination to prevent the spread of COVID-19 supports the confidence of both the household and the private sector to continue economic activities.

Negative factors

Epidemic

The infection of omicron variant will have been increasing both domestic and international, which will be considered a major obstacle affecting economic growth and tourism sector.

Inflation Rate

Inflation affect the purchasing power from energy prices especially oil affected to transportation and machine operation industry cost. Besides, the price of consumer goods, for example, pork has been affected by the porcine reproductive and respiratory syndrome in pigs (PRRS).

Ukraine and Russia's war

- Europe sanctions such as blocking Russian banks from accessing the financial communication system or SWIFT. Moreover, controlling the export of goods and technologies related to oil and gas production from Russia resulted in Europe's economy and the world economy expanding at a slower rate than the European Free Trade Association (EFTA) is an important export market for Thailand.

- Thailand's agriculture and livestock segment rely on Russian and Ukrainian goods such as fertilizers, corn, wheat, barley and sunflower oil. As a result of the war, Thailand will have to import goods at higher prices.

- The semiconductor shortage will affect electrical appliances and automobile industries because Russia and Ukraine are producers of palladium and neon gas which is an important part of semiconductor production.

- The problem of freight rate will go up due to the rising oil price, which will continually lead to higher export prices.

Household and SMEs Debt

Many sectors, especially small businesses related to the tourism sector directly and indirectly still affected by financial liquidity problems. Furthermore, the household sector affected by employment, inflation rate and the risk of income being reduced, resulted in financial problems in the long run.

Public Debt

The government increased limitation of the ratio of public debt per gross domestic product (GDP) that not more than 60% per GDP to 70% per GDP. There could be a risk if governments can't bring the budget to cause employment infrastructure and higher income which will directly affect the financial stability.

Inclement weather

The rainy situation in 2022 may be impacted by La Niña since October 2021. There will be summer storms and rain from March to May, and it is expected that less rainfall in June and return to rainfall again in July. Moreover, from August onwards, rainfall will be less than usual owing to the return to El Niño. Inclement weather directly affects the electricity distribution system.