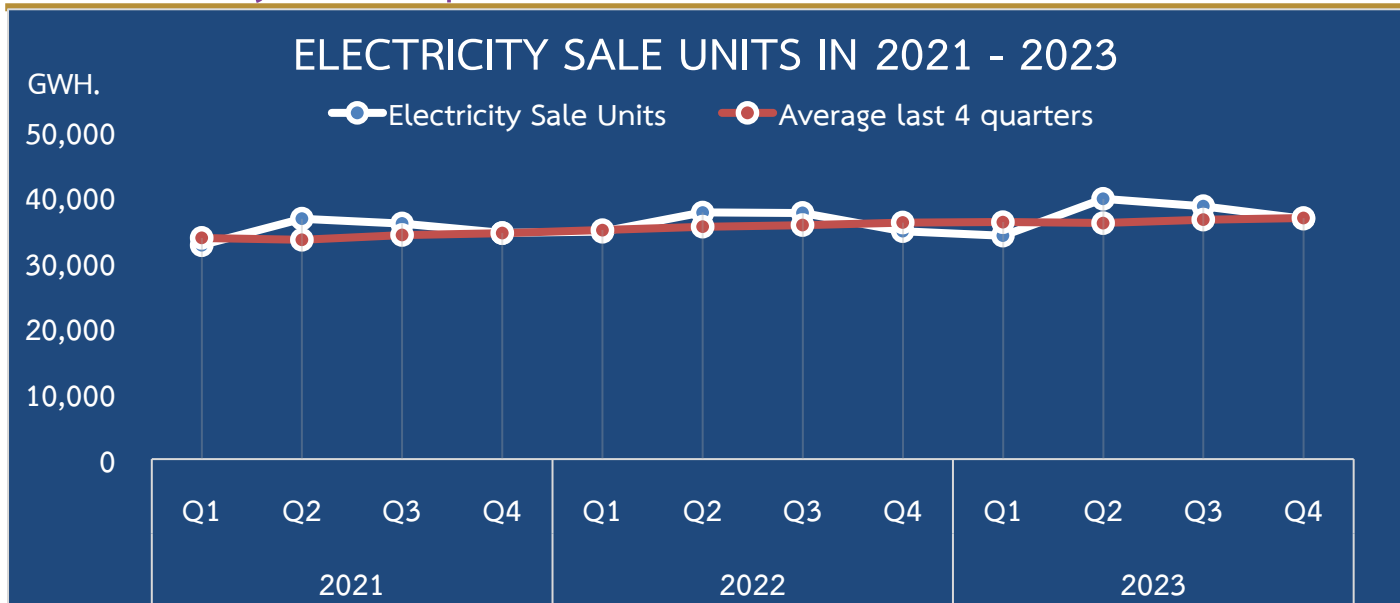


The Electricity Sales Report of PEA in 2023



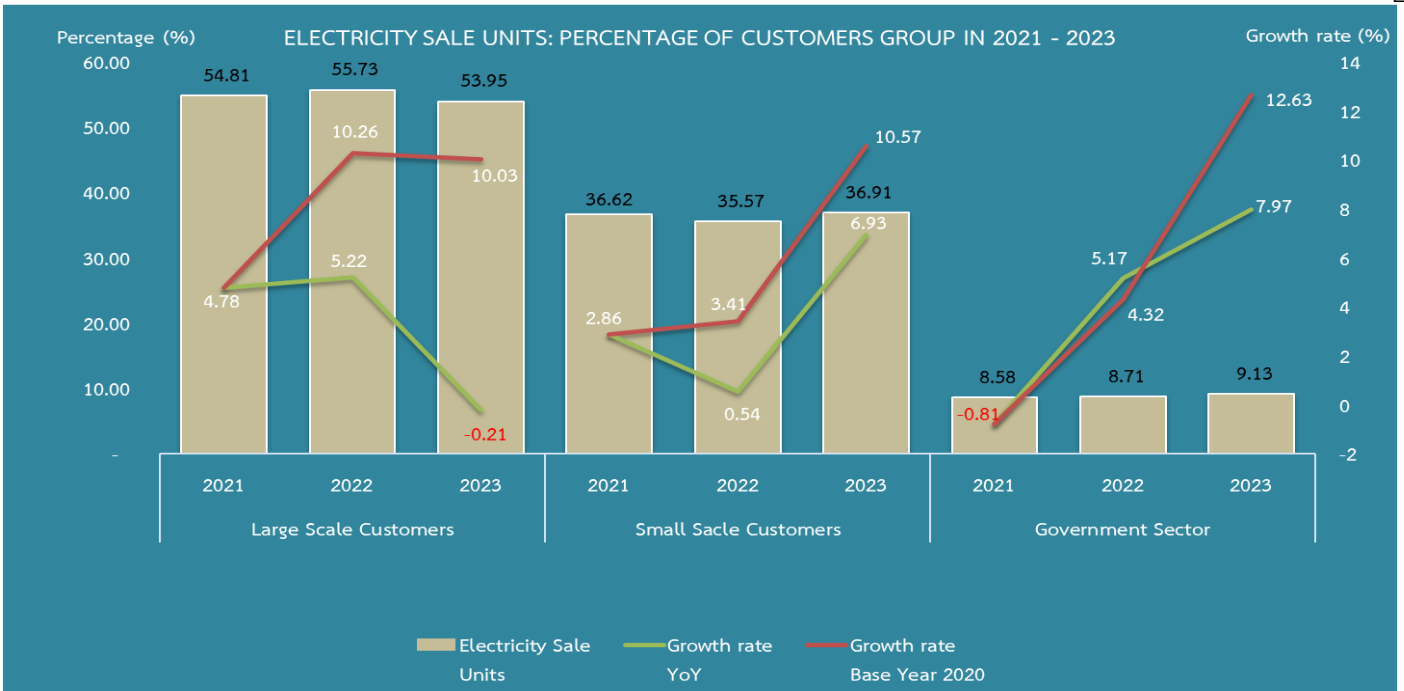
In 2023, The electricity sale units of PEA were 148,976.11 million units, which increased by 3.04% YoY from a growth of domestic and international travelers causing an increase of income and employment in household and service sector. Moreover, Industrial sector was recovered by export. Government launched policies to support cost of living and oil price causing a drop of inflation rate. These affected to increasing consumer confidence.



In 2023, PEA had total electricity sales 148,976.11 million units. It grew up 3.04% YoY which was higher than approximation increasing 2.98% YoY (approximated on November 20th, 2023).

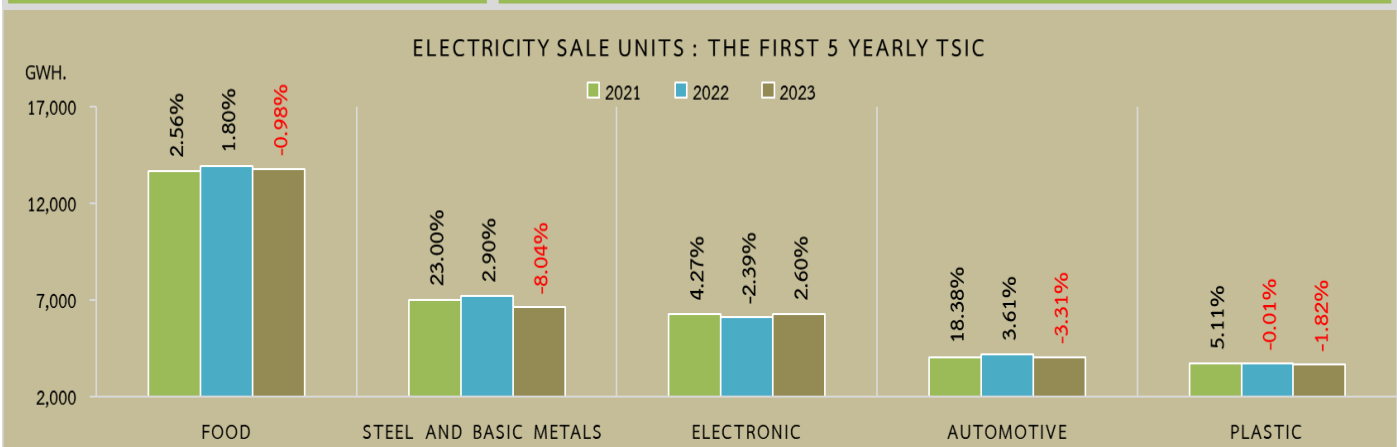
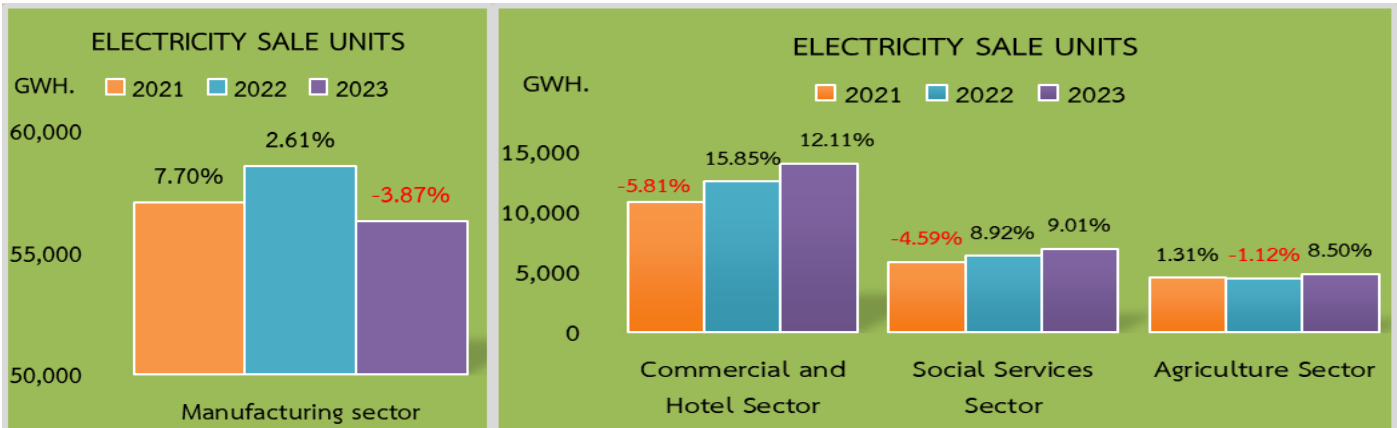
The residential sector increased at 7.45% YoY owing to the higher temperature from El Nino.

Large general service fell 2.01% YoY due to a drop of orders from partners. While, Specific business service rocketed at 25.44% YoY. Medium and small general service went up 4.90% and 4.84% YoY, respectively, following the number of arrivals relating to the number of tourists which made money for hotels, restaurants, entertainment venue and transportation. Moreover, government launched policies to stimulate private and household expenditure.



Large Scale Customers	Small Scale Customers	Government Sector
<p>Growth rate fell at 0.21% YoY. Electricity consumption of the industrial sector drop at 3.02% YoY from the decrease in export such as computers, equipment and component, jewelry and accessories, plastic, rubber and steel.</p> <p>Electricity consumption of large scale commercial sector rose at 11.21% YoY resulting from a growth of tourism from domestic and international travelers. There was “We Travel Together phase 5” causing an increase of income in goods and services from restaurants, entertainment venue and transportation. Besides, household and private sector had more expenditure during “Shop Dee Mee Kuen” measure for taxation.</p>	<p>This segment rose at 6.93% YoY. The electricity consumption in residential sector enlarged at 7.45% YoY owing to hot weather and Dry Spell which caused higher temperature.</p> <p>Besides, small scale commercial customers increasingly consumed electricity by 5.41% from expenditure of household by higher income that recovered from tourism like restaurants and entertainment venue. Moreover, there were government spending policies and demand for goods such as non-alcohol and alcohol beverage, meat and clothes.</p>	<p>Government sector went up at 7.97% YoY on account of electrical consumption in hospitals because people had more concern about their health after COVID-19 and the society has coming through Aged society. In addition, the number of patients in high blood pressure disease, diabetes and cancer were getting higher. While, schools, religious organization and government buildings like administrative offices more consumed electrical for cooling.</p>

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



Manufacturing sector declined at 3.87% YoY. There were 5 segments in manufacturing sector.

Food Segment slightly descended at 0.98% YoY due to tapioca flour that exported to China, Taiwan and Malaysia. Besides, sugar production from sugar cane and rice mil declined because of drought.

Steel and basic metals segment mostly dropped by 8.04% YoY owing to export steel and aluminum.

Electronics segment increased at 2.60% YoY from electric circuit orders from Japan, Taiwan and China for using with Internet of Things and Data Center. Moreover, there were development of smart vehicle and 5G communication.

Automotive Industry decreased 3.31 % YOY, following the motorcycle orders from Belgium, China, United States and United Kingdom. Besides, the domestic orders fell at 8.67% YoY because financial institution had a strict policy for loan due to the risk of household's debt.

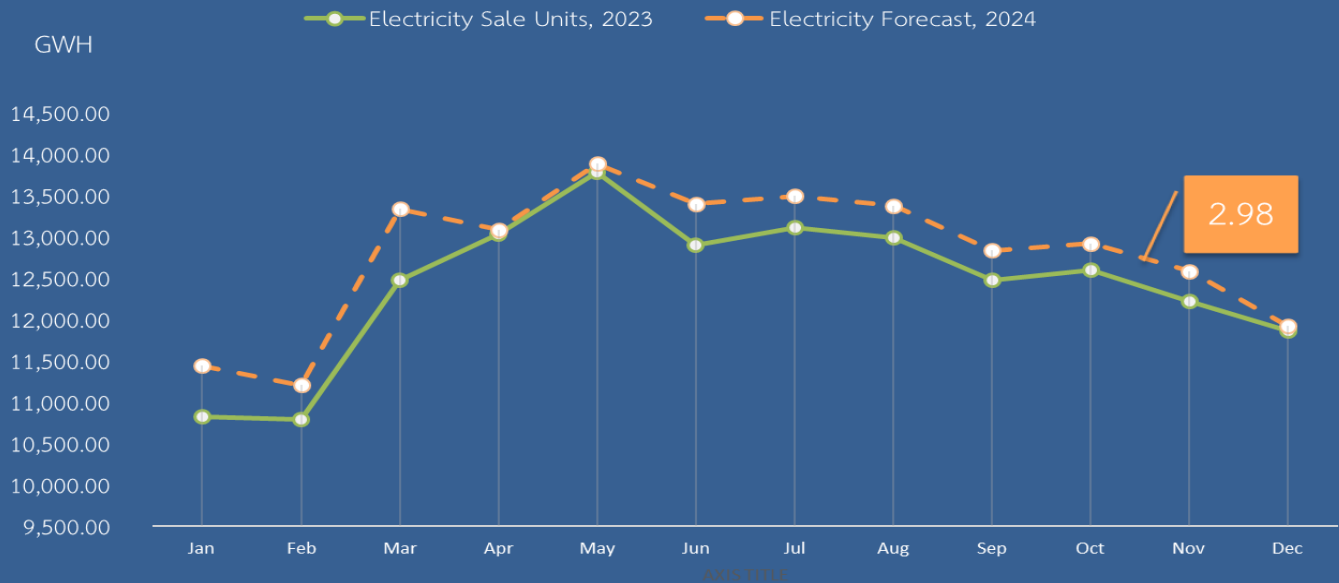
Plastic Segment went down at 1.82% YoY, thanks to the drop of export because of the fluctuation of plastic price following oil price. Likewise, government launched action plan on plastic waste management phase 2 (2023-2027) which supported environmentally friendly products such as bioplastics and recycled plastics.

Sales & Hotel sector enhanced at 12.11% YoY, following the electricity usage of hotels rising at 25.90% YoY from the number of arrivals to Chiang Rai, Chiang Mai and Phuket. There were a lot of activities and campaigns, including VISA free entry measure. This measure supported to Chinese, Kazakh, Indian, Taiwanese and Russian.

Social Services sector grew at 9.01% YoY, from the electricity consumption of medical centers, educational institutions, religious organization and government offices.

Agricultural sector rose at 8.50% YoY, resulting from electric consumption of livestock, agricultural pumping, fishery, rubber garden, vegetable farms and orchard.

ELECTRICITY SALE UNITS A YEAR IN 2023 AND 2024 FORECAST



Electricity Sale Forecast

The electricity sales in 2023 went up 3.04% YoY was higher than approximation which increased 2.51% YoY (approximated in November 2023).

PEA forecasts the electricity sale situation in 2024 to improve. The committee approximated that will be expanded 2.98% YoY. There were many factors to impact the electricity sales.

Positive factors

Tourism

It is the main factor to drive Thai economic by the arrivals of tourists. Because Thailand is the famous tourist attraction and low cost of living. Besides, there are many facilities such as transportation, low cost air lines and VISA free entry. Government launched many campaigns to support tourism like extension for closing time of entertainment venues in Bangkok, Phuket, Chon Buri, Chiang Mai and Samui islands, Songkran festival held for 1 month and concerts. These caused a growth in hotels, restaurants and airlines. In 2024, the number of tourists has been forecasted 36.2 million people.

Private investment

There was a construction for expanding branches and renovating, especially department stores. Moreover, there was an expansion of factories following the investment support and public policies, especially in Eastern region. In 2024, private investment has expected to grow 598,000 million baht.

Export

The demand for industrial goods grew, especially food and beverage, resulting from an increase of income per capita and necessary goods. Electronics had an upward trend following a growth of electrical vehicle, AI and data center for digital economic. United States imported washing machine and air condition from Thailand, instead of China.

Expenditure in household and private sectors

Government launched “Easy E-Receipt ” measure that taking expenditure for goods and services with electronics tax invoice for deducting tax maximum 50,000 baht during 1st January to 15th February 2024. These increased circulating fund in economic for 70,000 million baht or 0.18% of GDP. In addition, there were measures to support energy expenditure that stimulated consumption.

Foreign investment in Thailand

BOI had plan to persuade investment to Thailand in 5 industries;

- BCG (Bio – Circular - Green) supports food production like Novel Food, Organic Food and food with health claim. Moreover, there are hydrogen production by water using renewable energy and electricity production or stream from hydrogen.

- Electrical Vehicle in Thailand had the most sales in Asian which was 60% of markets. BYD had the first factory in Thailand which started the production in 2024 for 150,000 cars per year in Eastern Economic Corridor. Changan automobile announced to invest 9,800 million baht for the first production base outside China for export 100,000 cars. Besides, GAC AION ,which was the third in China, announced to invest 6,400 million baht for production factory. While, Foxconn, the huge electronic supplier in Taiwan, joint venture with PTT for being the production base.

- Electronics, especially Chip industry, can improve to be Front - end in medium and long terms that Thailand can produce wafer which has service package for assembling and testing chip as well as Malaysia standard. Because Thailand is a production base for assembling EE.

- Digital and Creation are divided into 5 groups; Hardware & Smart device, Software, Communications, Digital service and Digital content.

- Supporting Thailand to be the middle center of international business.

Moreover, Thailand has an infrastructure for digital and be the Low-Carbon society. There are many measures to support entrepreneurs to transit to new industry for up-level of production base. In addition, government launched Thailand Vision “IGNITE THAILAND” to increase potential in

8 hubs; Tourism Hub, Wellness & medical Hub, Agriculture & Food Hub, Aviation Hub, Logistic Hub, Future Mobility Hub, Digital Economy Hub and Financial Hub which has a goal to be a global center of industrial sector.

Negative factors

The Recession

- There are tight monetary policy and weaken labor market, in addition there is election in 60 countries which was 60% of global economic such as United States, Taiwan, EU causing the uncertainty of public policies.

- US and China economic are in downward trend, especially United States that affected by tight monetary policy and a decrease of private expenditure following the weaken labor market that affected to income and saving of labors. Besides, there are restriction of loan and a drop of profit from high interest rate and less purchasing power. Whereas, China has risk from high debt and expenditure of senior citizen, climate change, geopolitical conflict and a fall of real estate’s income.

- Houthi attacked cargo ship in Suez Canal which was important route between Europe and Asia. Their transportation was 12% of total marine transportation causing freight and insurance costs up 3 times than previous year.

- Conflict between United States and China about competition to be the advanced technology leader like smart devices and electrical vehicle using semi-conductor which is the upstream production by depriving competitor. There is a trend to invest in alliances like India.

- The increase of oil price by OPEC+ announcement dropping capacity 2 million barrel per day until the first quarter of 2024. But the OPEC meeting was postponed caused the doubt about the cooperation of members to reduce the productivity.

Trade barrier

The net zero emission trend for solving global warming caused the adaption of every sectors to be trendy. Manufacturing sector specified the large factories like power plant that was more than 10 MW, oil refinery, steel mill and cement plant needed to install Continuous Emission Monitoring Systems or CEMS since 10th June 2023 for real time controlling and watching out the emission. The new factory must be finishing CEMS installation before running business but the old ones needed to be done by 9th June 2024.

Household Debt

The people who earned salary less than 15,000 baht per month and freelance and self employed faced the financial problems causing income not covering expenditure. The debt and loan shark increased, while the saving declined.

Drought

Thailand faced the variant climate from El Nino causing an increase in price level of agricultural goods and consumer products.

Inflation rate

There is a risk from high cost of food by El Nino and India which is the biggest exporter of sugar launched policy to control sugar export causing a growth of sugar price. In addition, there is an uncertainty of Middle East conflict that affected to new high energy price.