



MINISTRY OF ENERGY AND MINERAL RESOURCES  
REPUBLIC OF INDONESIA

# Evaluation of End Use Electricity Data

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Jakarta, 29 October 2020

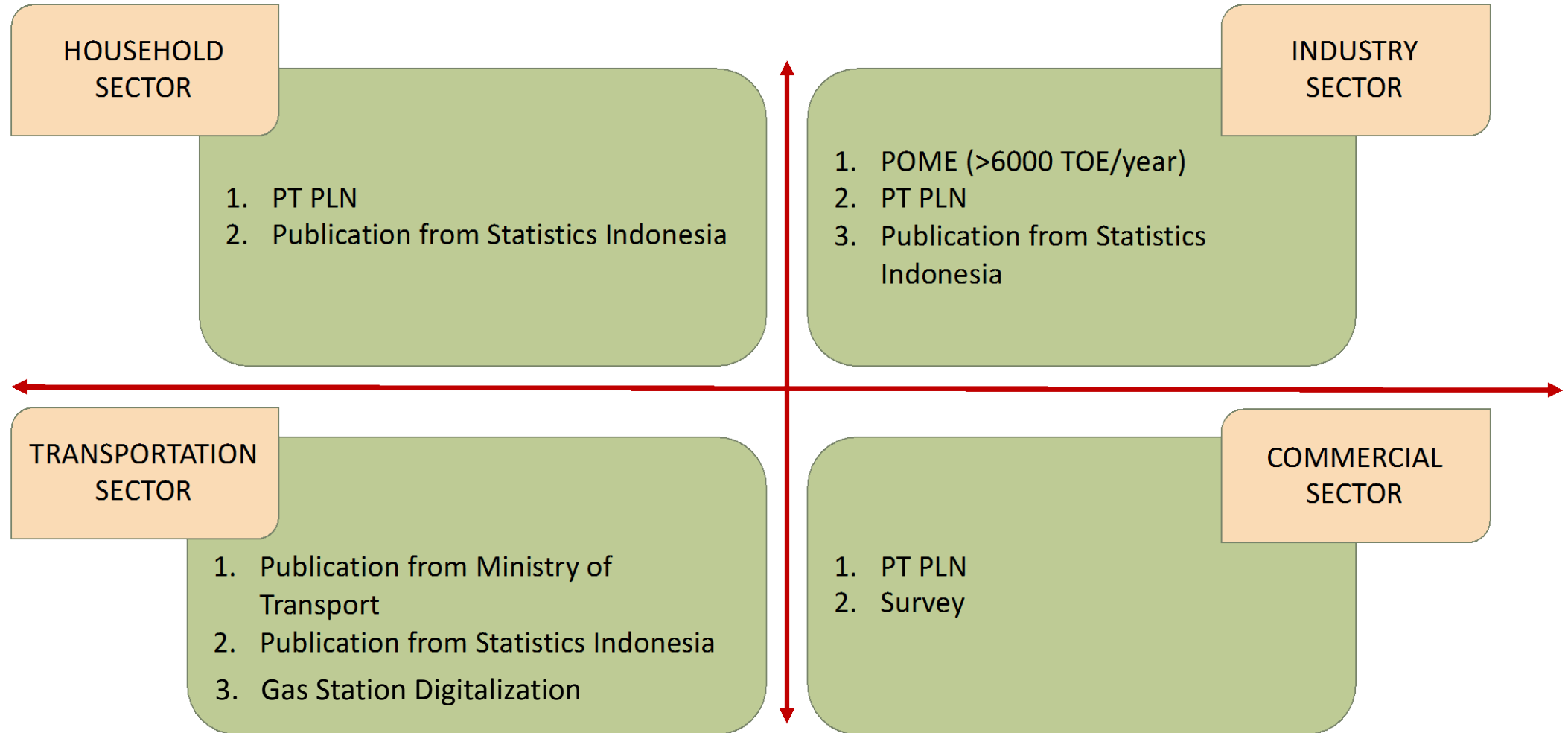


# Why are services important?

- The services sector contributes to approximately 45% to Indonesia's GDP, so that it becomes a mainstay of the economic growth.
- Energy consumption increase.
- To be a priority for the national strategy in implementing Industry 4.0



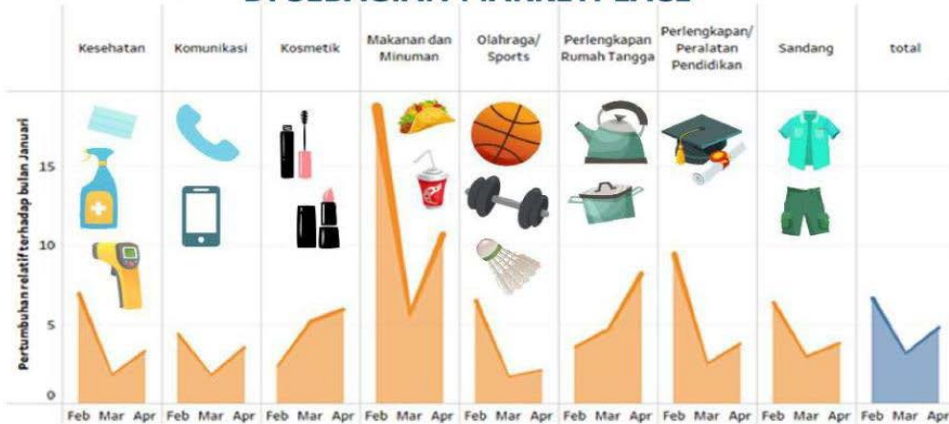
# Sources Data Collection for End-User





# E-commerce in Indonesia

## PERTUMBUHAN PENJUALAN *ONLINE* DI SEBAGIAN *MARKETPLACE*



Relatif terhadap penjualan bulan Januari, Penjualan Kosmetik dan Perlengkapan Rumah Tangga terus mengalami peningkatan selama 3 bulan terakhir.

- Based on Central Bank of Indonesia data, total e-commerce transaction value reached IDR 13 Trillion (app. USD 1 Billion) per month in 2019.
- The e-commerce contributes to 5.5% of Indonesia's GDP.
- Finance, wholesale and retail trade, hotels, food and beverages, and transportation and logistics sectors have the highest transaction value.

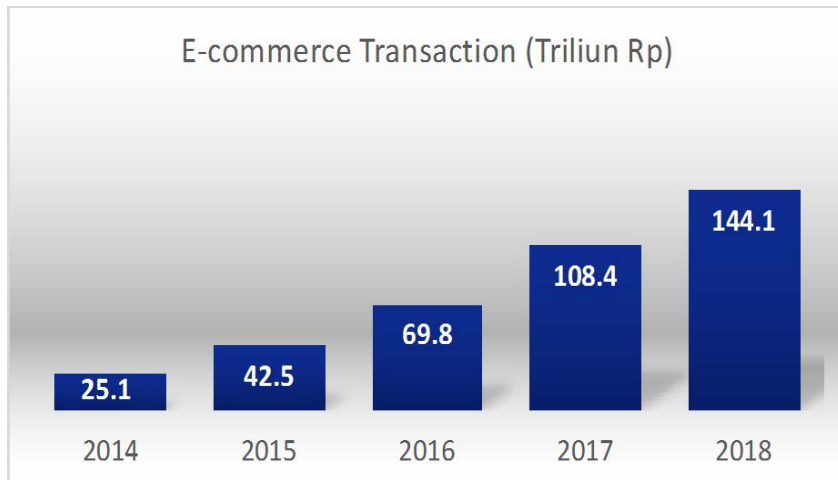
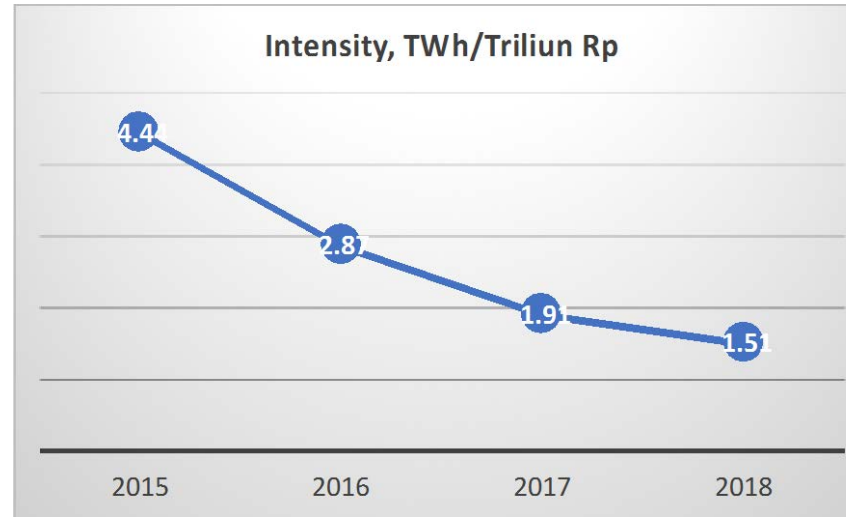
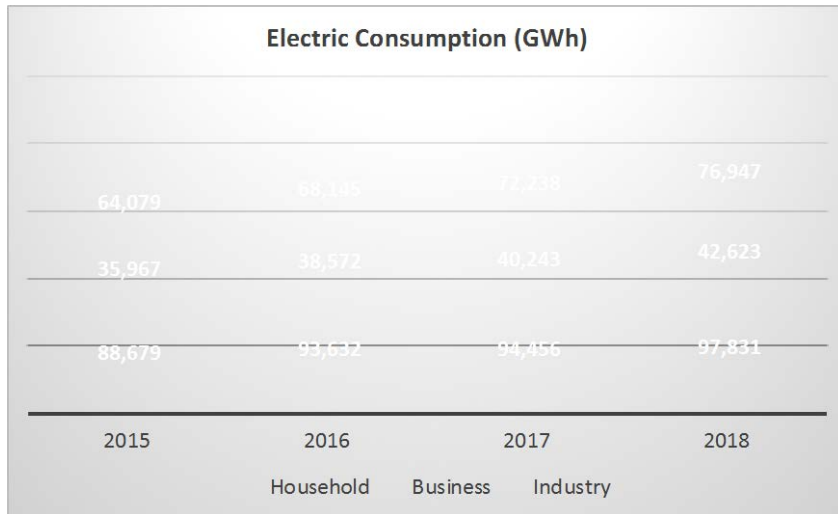


Source: Bureau Statistics



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# Electrical End User Data



- Electrical consumption divided by sub-sector/segment, like: social, household, business, industry, government, bulk and special service. And each of sub-sector have a leveling from 1 until 4 with different prices each level. Electrical consumption available on a monthly basis.
- E-commerce transactions grew by 500% from 2014-2018
- E-commerce energy intensity (electricity consumption/e-commerce transaction) keep decreasing year by year. From 2014 to 2018, e-commerce energy intensity has decreased by 66%, from 4.44 TWh/Trillion IDR in 2014 to 1.51 TWh/Trillion IDR in 2018.



# How to Develop Electrical End User Data

- How to **elaborate** the electrical end user data to be our next **big data** ?
- Regarding in e-Commerce development in Indonesia, the electrical end user data could be our basic energy efficiency data. How to **align** all of that?







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# End Use Data Collection in the Services Sector

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Jakarta, 29 Oktober 2020





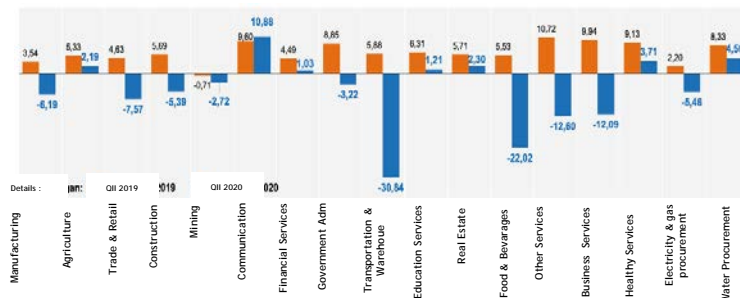
# Covid-19 Impacts on the Indonesian Economy

## Indonesia's GDP Growth 2017-2020

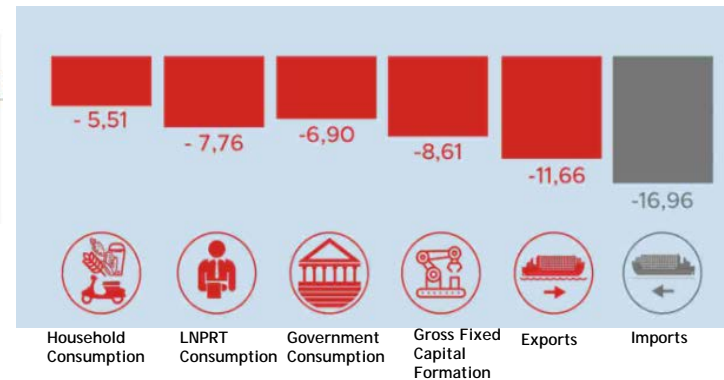


- Indonesia's economy suffered its sharpest downturn with the GDP contracting by 5.32 percent in the second quarter of 2020 due to the impact of COVID-19.

## Growth Rate of GDP By Industrial Origin



## Growth Rate of GDP by Expenditure



- Economic sectors that experienced the worst contraction included transportation-warehouse (-30.84 percent), accommodation-food and beverages (-22.02 percent), other services (-12.60 percent) and corporate services (-12.09 percent)
- The slow economic growth affects not only economic activities but also energy demand.

Source: Statistic of Indonesia on 5 August 2020



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# Why data on services important for energy efficiency?

- Final energy consumption in Indonesia is increasing by about 5% per year, including the services sector
- The share of final energy consumption in the services sector is around 5% of the total national energy consumption
- Although the share of energy consumption in the services sector is only 5%, the sector's contribution to GDP is quite significant
- The energy efficiency potential in the services sector is significant, ranges from 10% to 30%.



# Commercial Buildings Data Collection

- The commercial building/service sector survey was conducted in 7 big cities in Indonesia
- The purpose of the survey is to collect data on the intensity of energy consumption and the distribution of energy use
- Surveyed Commercial Building/Service Sector Category : Hospital, Hotel, Office, Shopping Mall



# Commercial Buildings Data Collection

Number of Buildings Surveyed by Category



- The building energy consumption data were collected from 207 of a target of 250 buildings in seven cities in Indonesia
- The survey only covered about 9.8% of the entire commercial buildings in 7 cities surveyed
- The survey collects information about building energy consumption per energy source, the share of energy consumption by major equipment and appliances in buildings, number of occupants and total floor area.

Building Survey Distribution



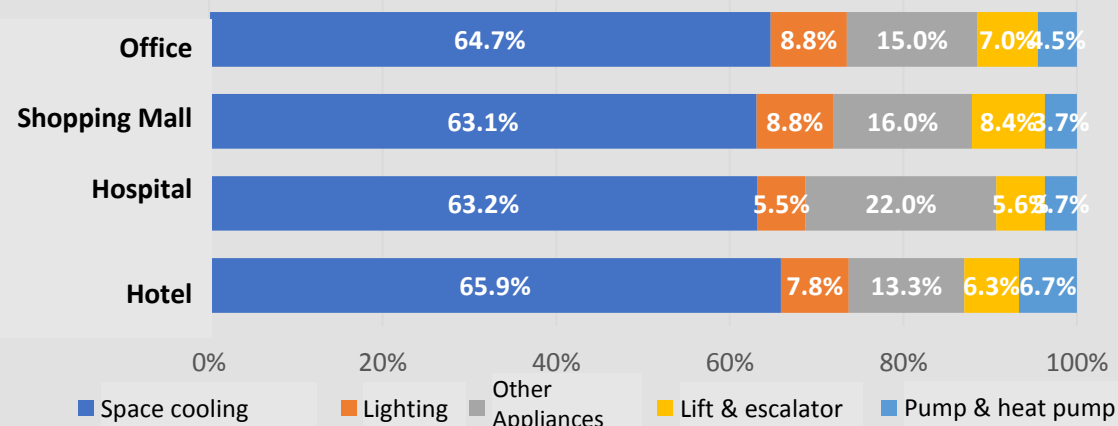


# Survey results and Outlook

Location Factor to SEC



SEU in Commercial Buildings



## Survey Results

- Energy consumption (Kwh), Energy Intensity) and SEU data for 207 buildings were collected in this survey
- The results of this survey have been verified by building owners or facility managers.

## Outlook

- For future surveys, the locations and number of buildings surveyed should be increased to obtain statistically representative data
- The number of commercial buildings for each category will also be balanced.
- Currently, an energy online reporting system for the industry and services sector is being developed to help analyse energy use and identify energy efficiency opportunities in the sectors. The system will also allow the Government to provide feedback and recommendations on energy efficiency measures.





THANK YOU



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