The background of the slide features a large industrial facility with several massive, white, spherical storage tanks. Each tank is supported by a network of thick, white concrete pillars. A complex network of red metal scaffolding or walkways is visible around the tanks. The ground is a flat, paved area with yellow and red-and-white striped safety markings. The sky is a clear, light blue.

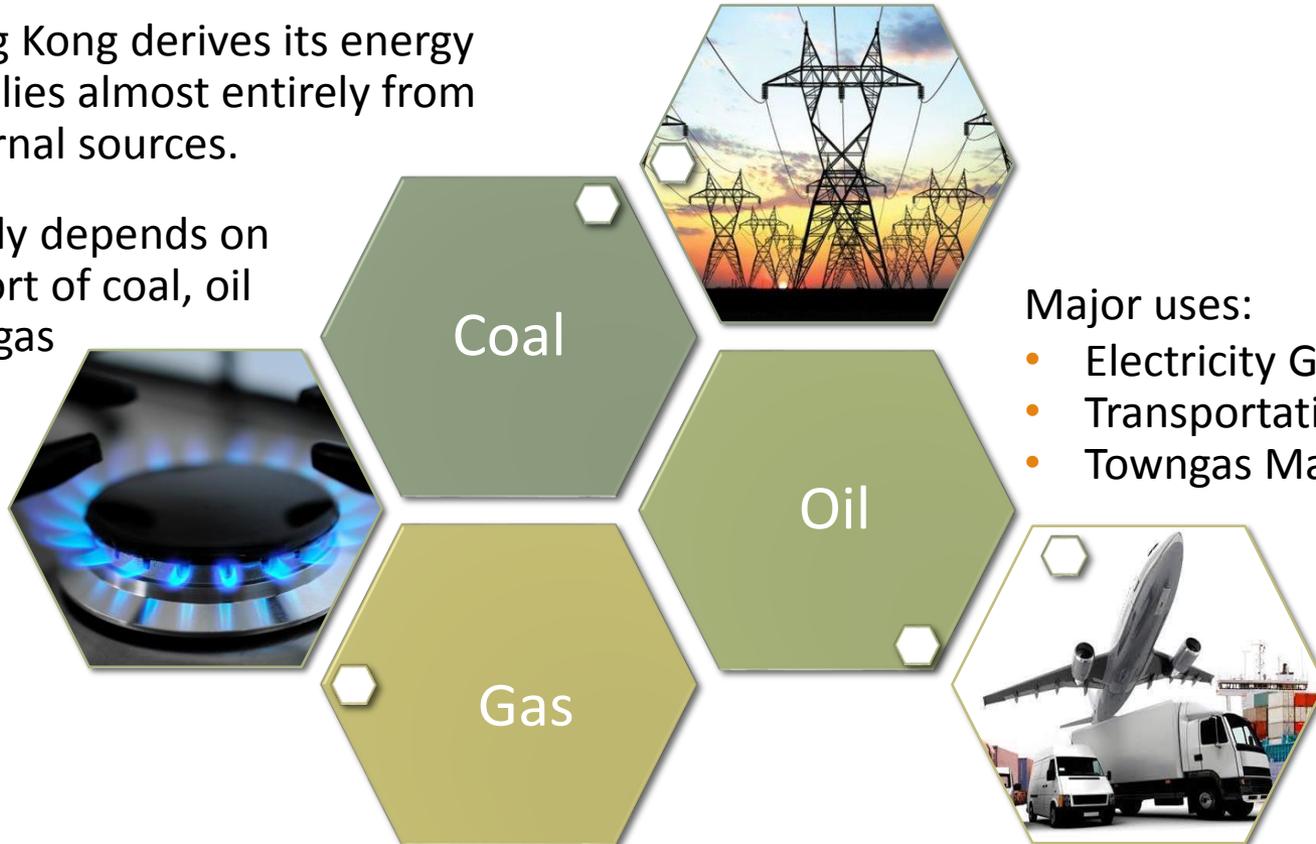
# Update on OIL AND GAS SECURITY in Hong Kong

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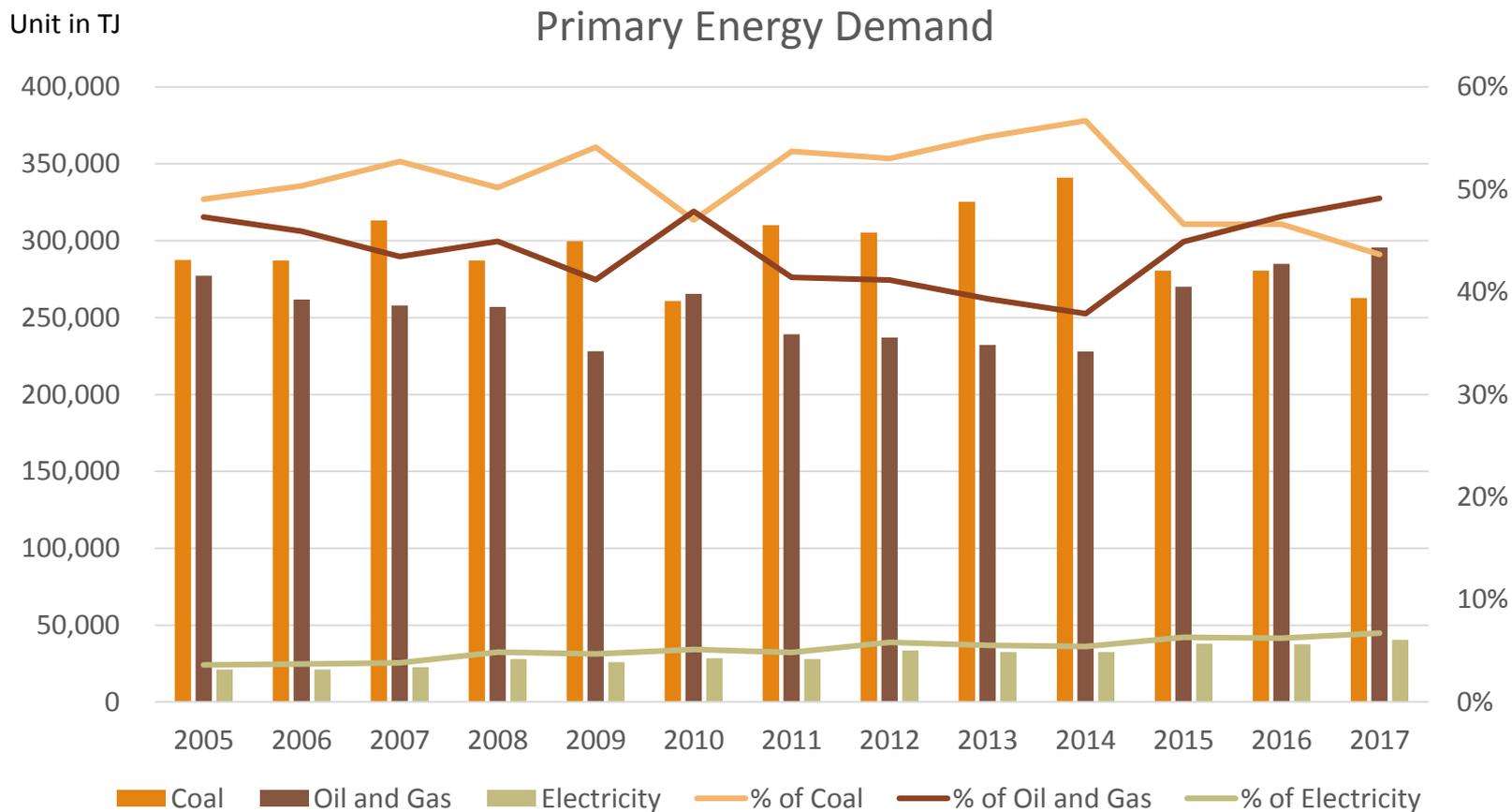
**CHEUNG Chin King, Thomas**  
**Senior Engineer**  
**Electrical & Mechanical Services Department,**  
**Hong Kong**

## Oil and Gas Demand Situations

- Hong Kong derives its energy supplies almost entirely from external sources.
- Highly depends on import of coal, oil and gas

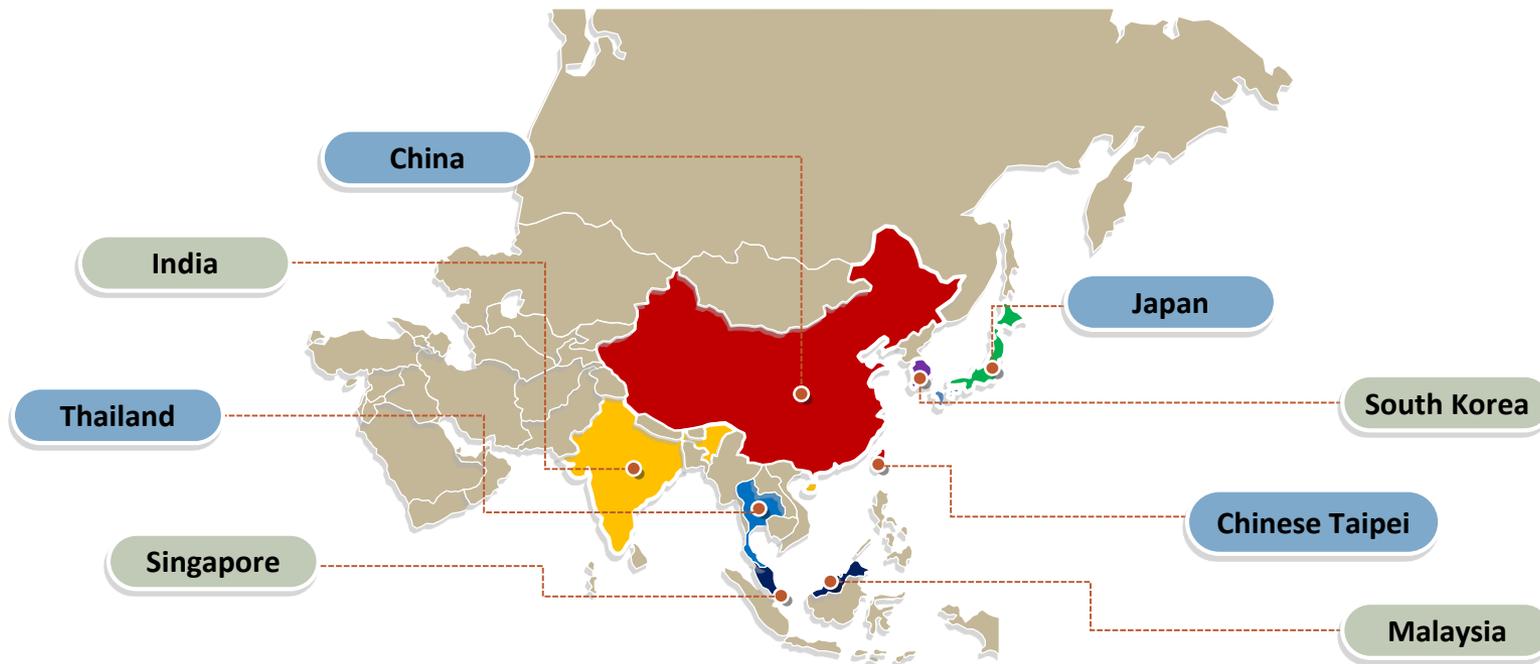


## Oil and Gas Demand Situations



## Petroleum Products Supply Security

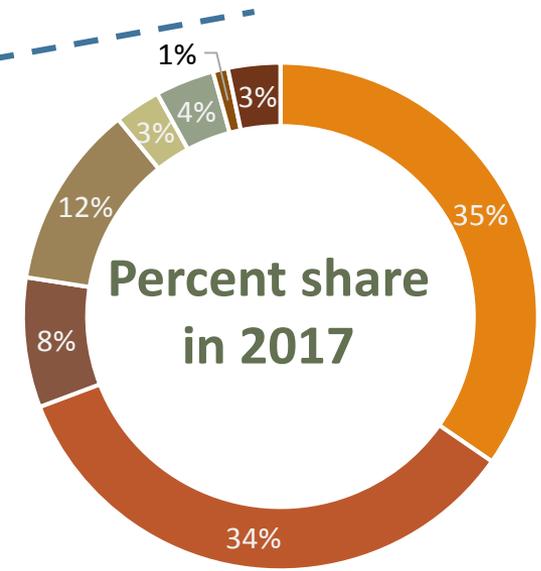
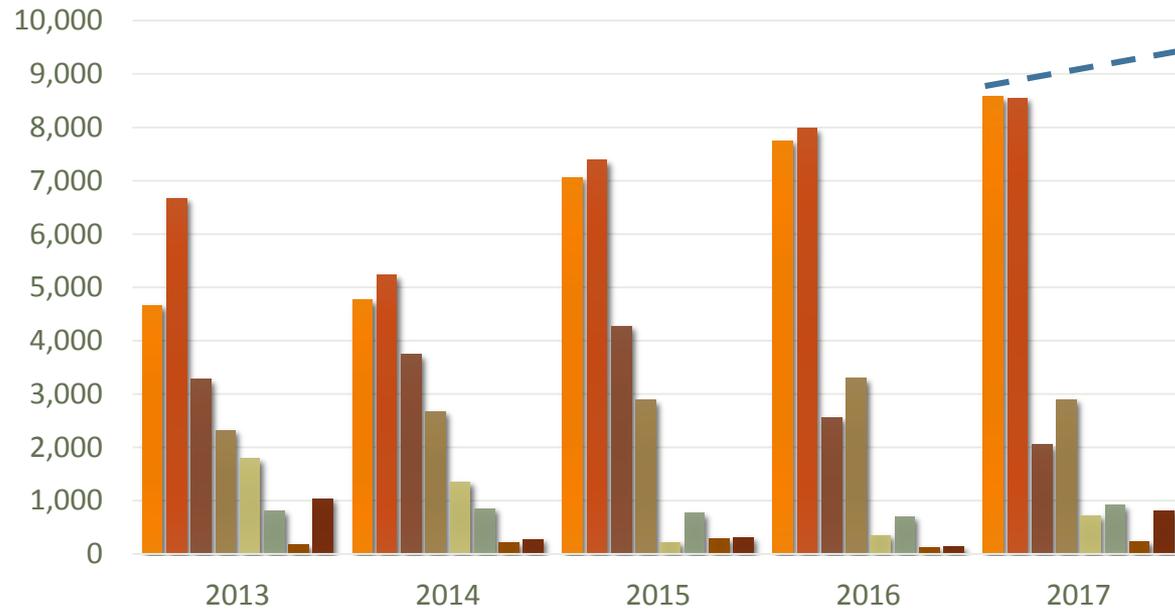
- Hong Kong has no oil refinery, most of the oil products are imported from Asian countries
- Oil products range from Aviation Gasoline, Kerosene, Unleaded Motor Gasoline, Gas Oil, Diesel Oil, Naphtha, Fuel oil and LPG



## Petroleum Products Supply Security

Unit in million Litre

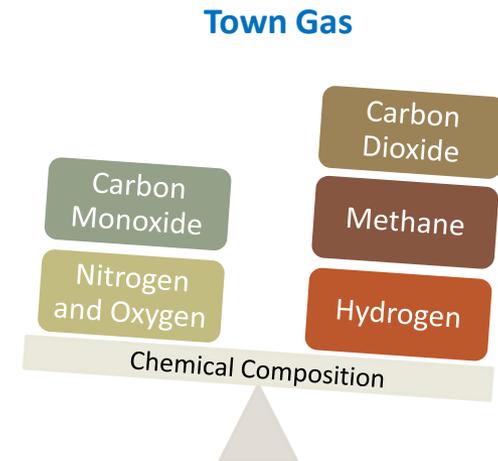
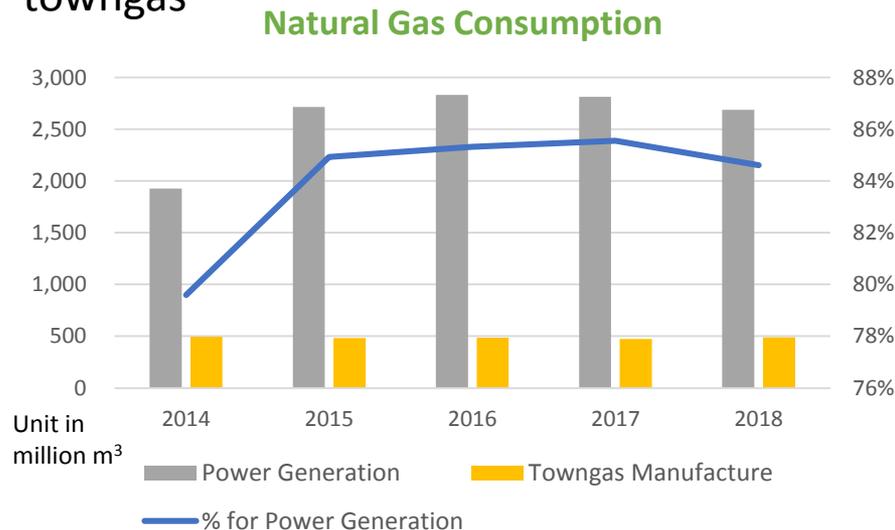
### Import of Oil Products



- China
- Singapore
- Japan
- Korea
- Malaysia
- Chinese Taipei
- Thailand
- Others

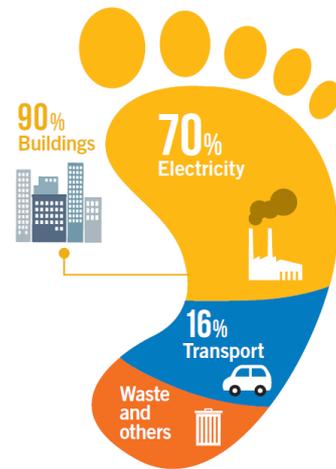
## Natural Gas (NG) Supply Security

- Natural gas is currently imported into HK through three different sources, including the Yacheng Gas Field, West to East Pipeline II and Dapeng LNG Terminal
- Natural Gas is solely used for power generation and towngas manufacture
- In 2018, the total natural gas consumption is 3.2 billion m<sup>3</sup>, 85% of which is used for electricity generation while the rest is used for the production of towngas

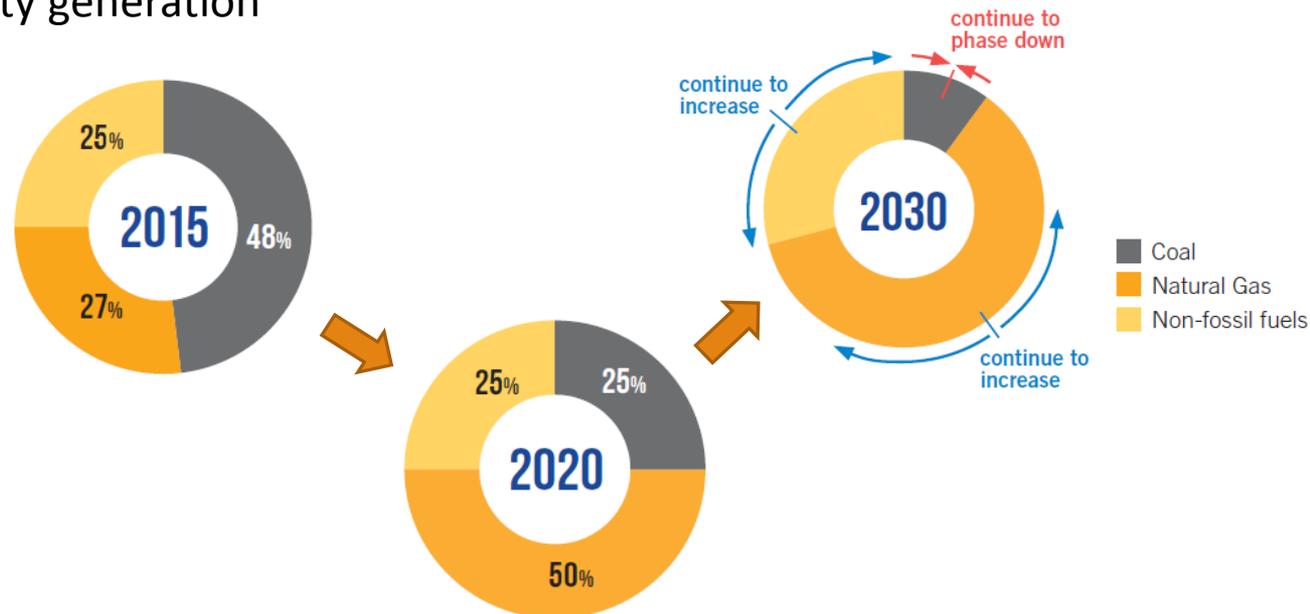


## Natural Gas (NG) Supply Security

- The largest source of local carbon emissions (around 70 %) come from electricity
- To strive for a cleaner environment and to reduce CO2 emission, the Hong Kong government has set target to utilize more natural gas and non-fossil fuel sources for electricity generation

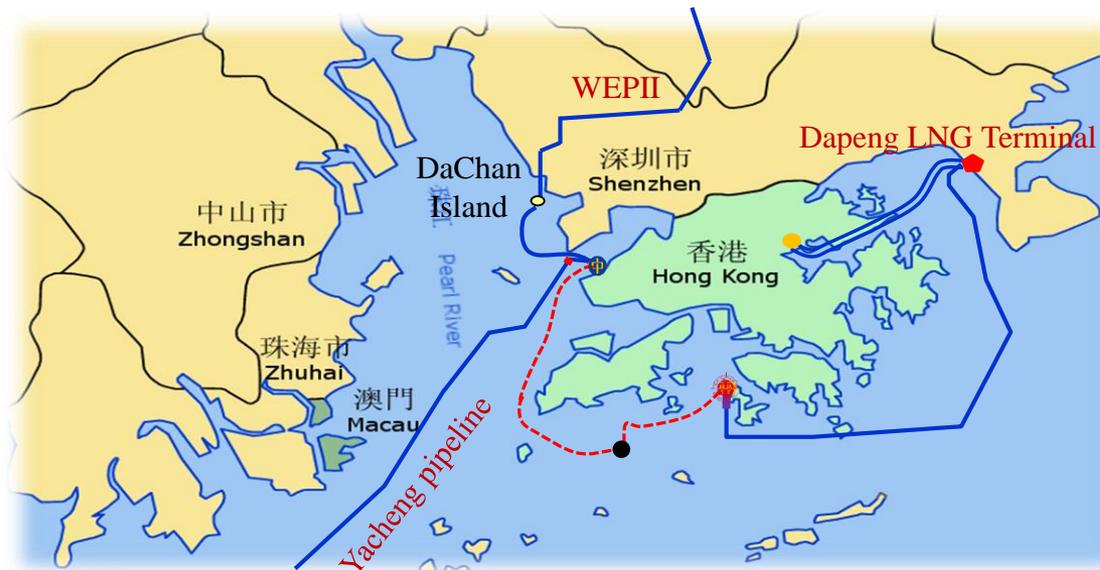


Largest source of local carbon emissions



## Natural Gas (NG) Supply Security

- To support the increase use of natural gas, an offshore LNG Terminal in HK based on Floating Storage and Regasification Unit (FSRU) technology would be introduced by 2021
- The FSRU is equipped with LNG storage tanks and regasification equipment (having a storage capacity up to approximately 270,000m<sup>3</sup> and regasification capacity of 1,000mmscfd)



- To meet the electricity demand as well as the fuel mix ratio, it is envisaged that the FSRU shall be replenished once every 5-8 days

- The new subsea pipeline has a total length of approximately 63 km

— Existing subsea pipelines

- - - New subsea pipelines for FSRU

● FSRU vessel

## Policy Framework

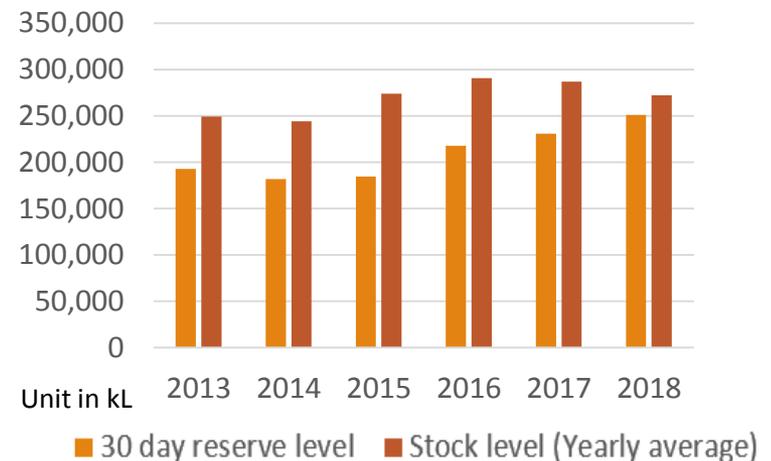
### Oil supply security policy

- Oil (Conservation and Control) Ordinance, Cap. 264 was enacted in 1979
- Under the Ordinance, the Director of Oil Supplies (DOS), is empowered, in the event of an oil supply emergency, to regulate or prohibit the storage, supply, acquisition, disposal or consumption of oil

### Stockpiling for gas oil and naphtha

- Hong Kong has no government-held oil stocks
- The voluntary code on “Maintenance of Stocks by Importing Companies of Gas Oil and Naphtha” was established in 1982
- Major oil and gas companies oil agreed to subscribe to the code and maintain 30-day reserve level for gas oil

Oil Reserve level over the past 6 years



## Policy Framework

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- Oil Supply Contingency Plan (OSCP) is in place for the DOS to implement respective measures on the supply and use of oil under different emergency scenarios
- The OSCP describes the coordination (with oil companies, utilities and public services) on the supply, use and conservation of oil, with a view to minimize the effects during oil disruption
- In order to provide appropriate responses to different situations, the OSCP is structured into different response levels
- To strengthen the communication and emergency response with relevant Government departments, desktop drill exercise would be conducted
- The OSCP will be reviewed and updated in every 6 to 8 years or whenever necessary

## APEC-wide regional cooperation

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### Regional Agreement

- A Memorandum of Understanding (MOU) on energy cooperation was signed between the Hong Kong SAR Government and the China Government in 2008 (The National Development and Reform Commission and Administrator of the National Energy Administration)
- The continuous supply of nuclear electricity and natural gas to Hong Kong was secured for a further term of 20 years

### Regional cooperation

- Explore cooperative measures between economies to safeguard oil and gas supply during emergency period
- Organize more technical visits, seminars and working group meetings

# Thank you very much

Email Address: [thomascheung@emsd.gov.hk](mailto:thomascheung@emsd.gov.hk)

Contact Number: 852-2808 3245