

ECONOMY UPDATES

Hong Kong, China

“From the supply side to demand side, utilisation of clean energy and energy efficiency in realising energy transition”

The 62nd Meeting of APEC Expert Group on Energy Efficiency & Conservation
and
APEC Expert Group on Clean Fossil Energy 2024 Meeting

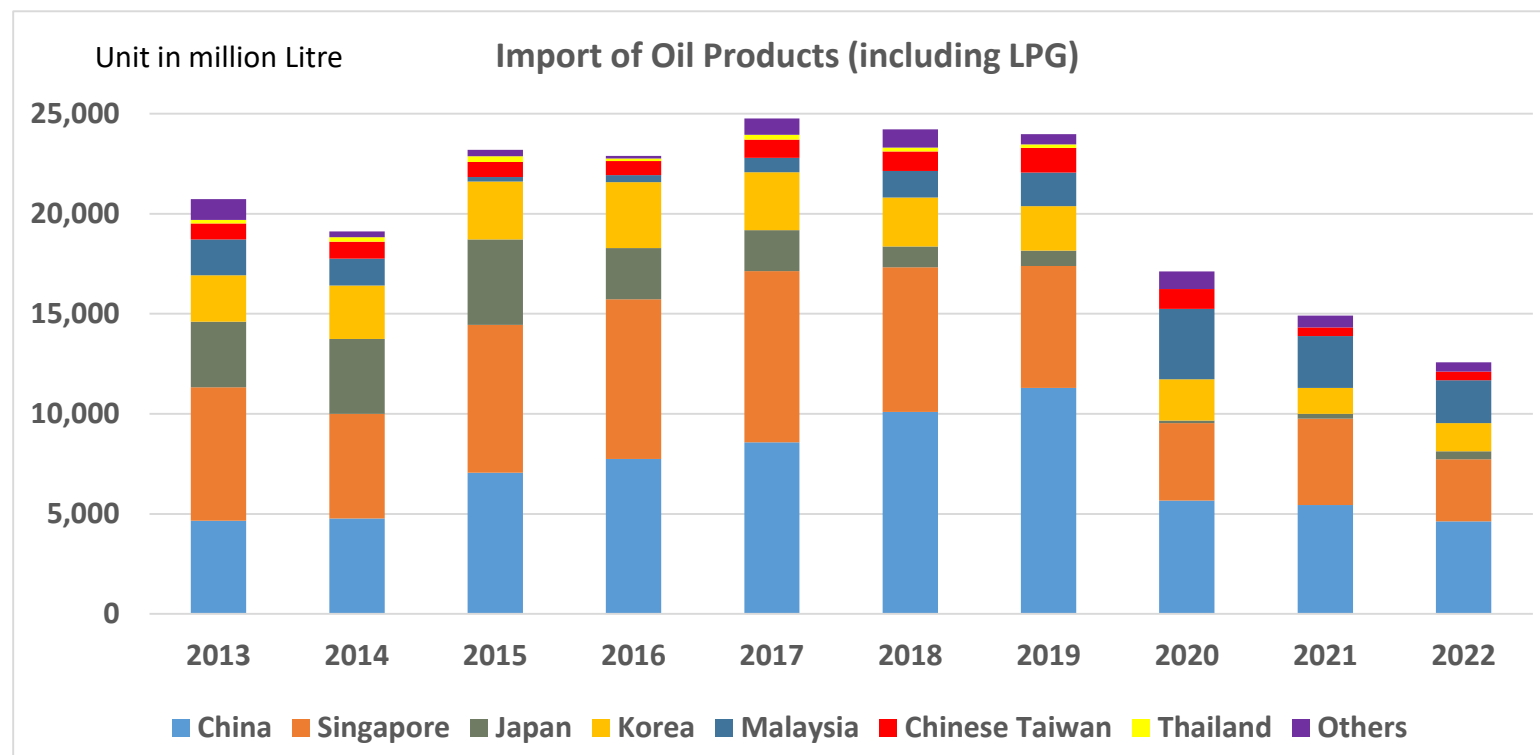
21-23 May 2024

Supply and Notable Development on Clean Fossil Energy *(Hong Kong, China)*



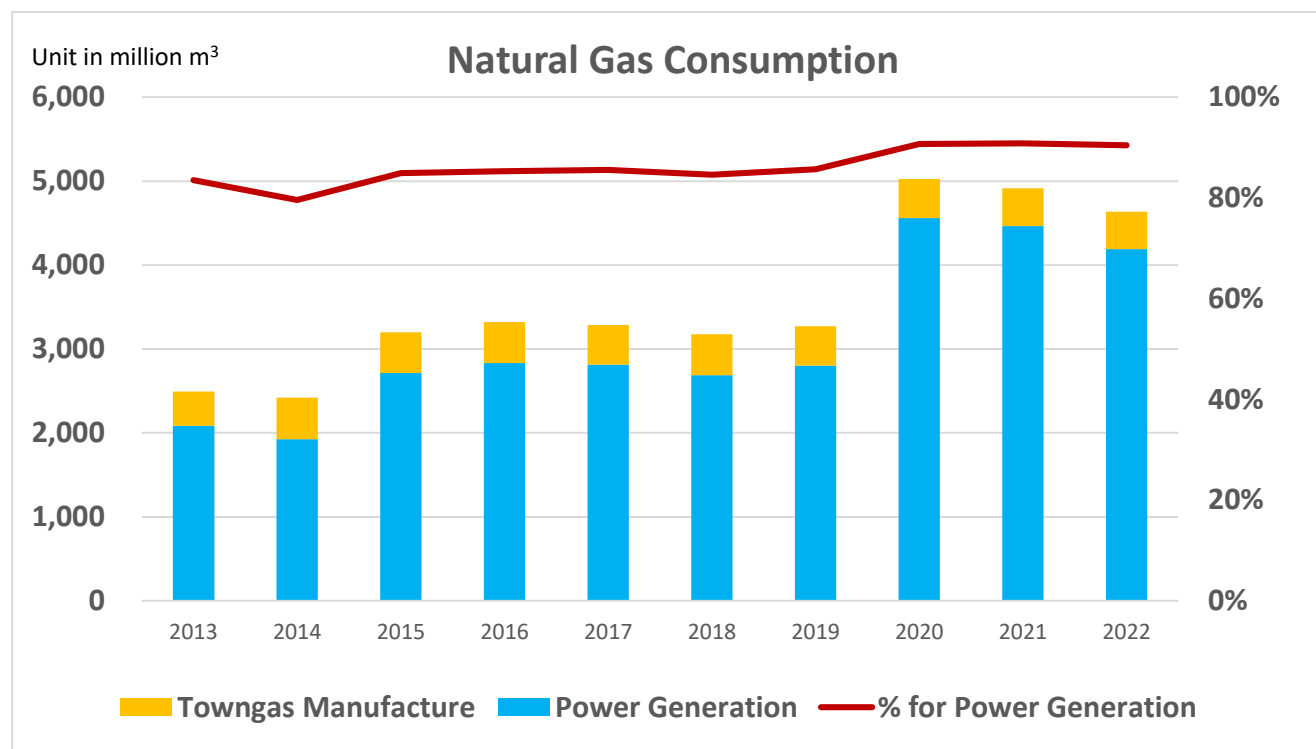
Highlights of Recent Changes in Demand on Oil and Gas in Hong Kong, China

- Oil products are mostly imported from APEC members
- China, Singapore, Japan, Korea & Malaysia are major suppliers



Highlights of Recent Changes in Demand on Oil and Gas in Hong Kong, China

- **Natural Gas** is imported from China via submarine gas pipelines
- Use for power generation and towngas manufacture



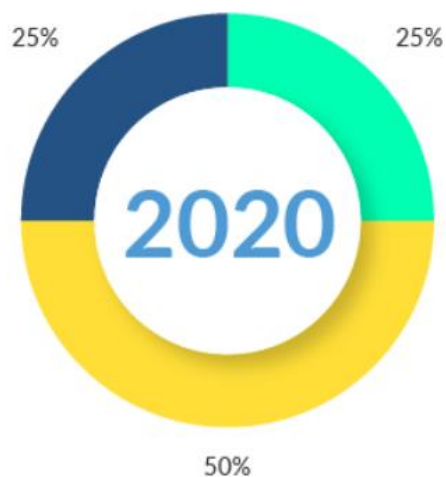
Notable Development on Clean Energy in Hong Kong, China

- Environmental targets for Hong Kong, China
 - Reduce total carbon emission by 50% by **2035** (as compared with 2005)
 - Carbon neutrality by **2050**
- Electricity fuel mix – increase in use natural gas

Before 2035: Total carbon emissions Compared with 2005 level ↓ 50%

Before 2050: 香港邁向 Carbon Neutral@HK

FUEL MIX FOR GENERATING HONG KONG'S ELECTRICITY IN 2020

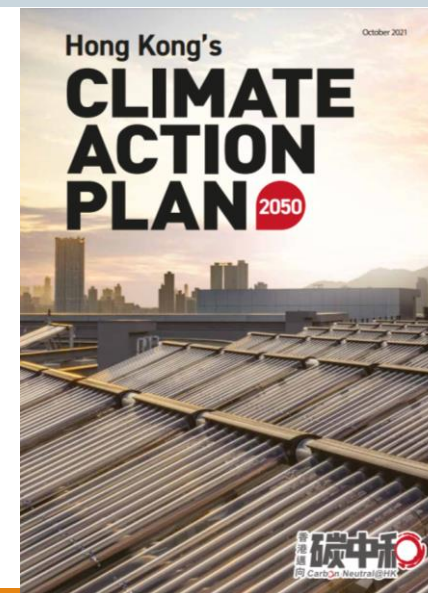


HONG KONG'S FUEL MIX OUTLOOK IN 2030



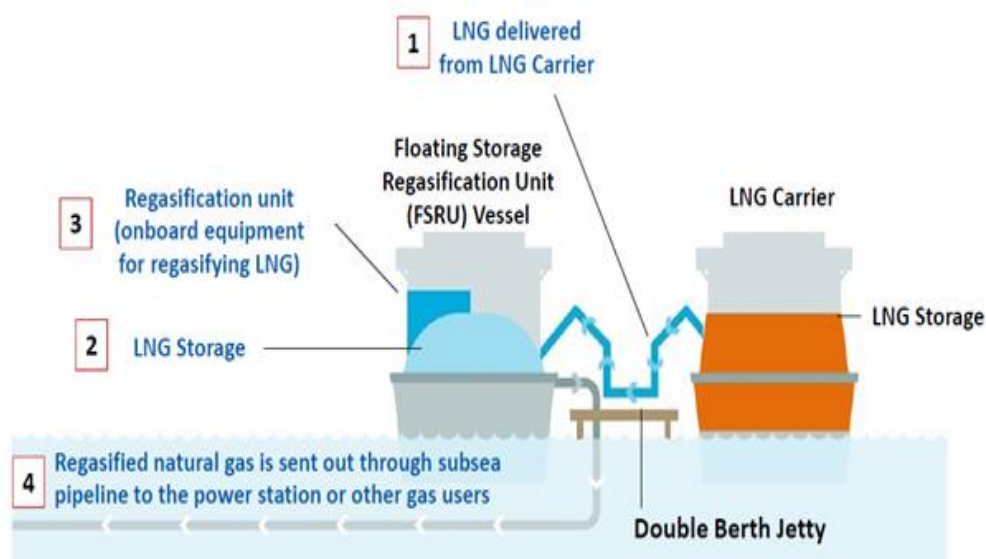
● Coal ● Natural Gas ● Non-Fossil Fuels (including imported nuclear and renewable energy)

● Coal ● Natural Gas ● Non-Fossil Fuels



Notable Development on Clean Energy in Hong Kong, China

- Existing natural gas supply from China by submarine gas pipelines
- Offshore Liquefied Natural Gas (LNG) Terminal** import facility - Floating Storage and Regasification Unit (**FSRU**) commissioned in July 2023
- FSRU benefits: Gas supply diversity and security, cost competitiveness and keep abreast of technological developments



Notable Development on Clean Energy in Hong Kong, China



World's largest FSRU

Storage Capacity of 263,000 m³

CLP 中電 港電
低碳發電新篇章-慶祝香港首個海上液化天然氣接收站啟用
A New Chapter of Low-carbon Energy : Celebrating Hong Kong's First Offshore LNG Terminal
HK Electric



Notable Development on Clean Energy in Hong Kong, China

- No natural reserve of natural gas
- Apart from importation, several **landfill sites** and biogas production plant in operation to supplement clean energy supply in Hong Kong, China



West New Territories Landfill (WENT)



Northeast New Territories Landfill (NENT)



South East New Territories (SENT) Landfill

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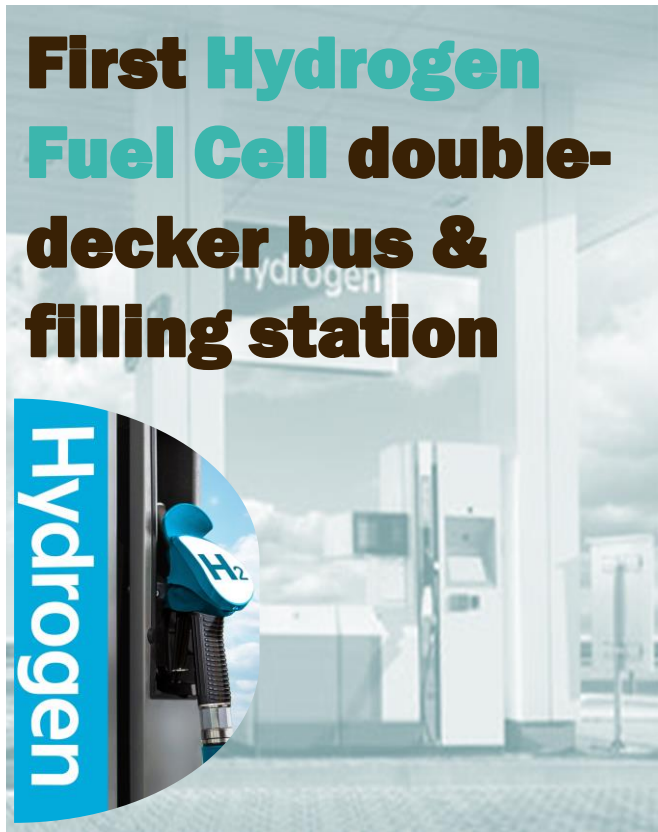


Organic Waste Treatment Facilities (OWTF)
Phase 1, **O.Park1**



Organic Waste Treatment Facilities (OWTF)
Phase 2, **O.Park 2**
(commissioned in Q1 2024)

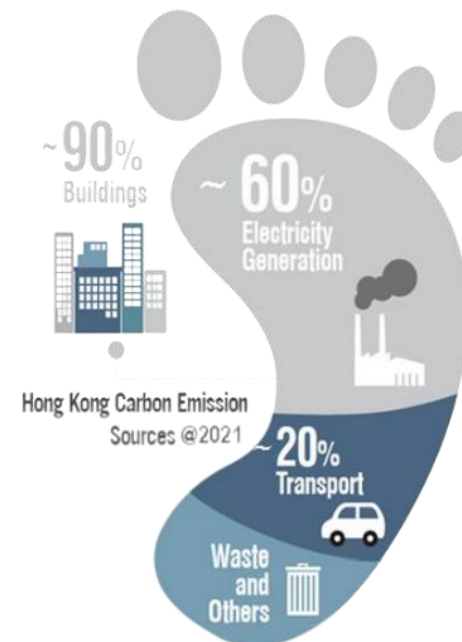
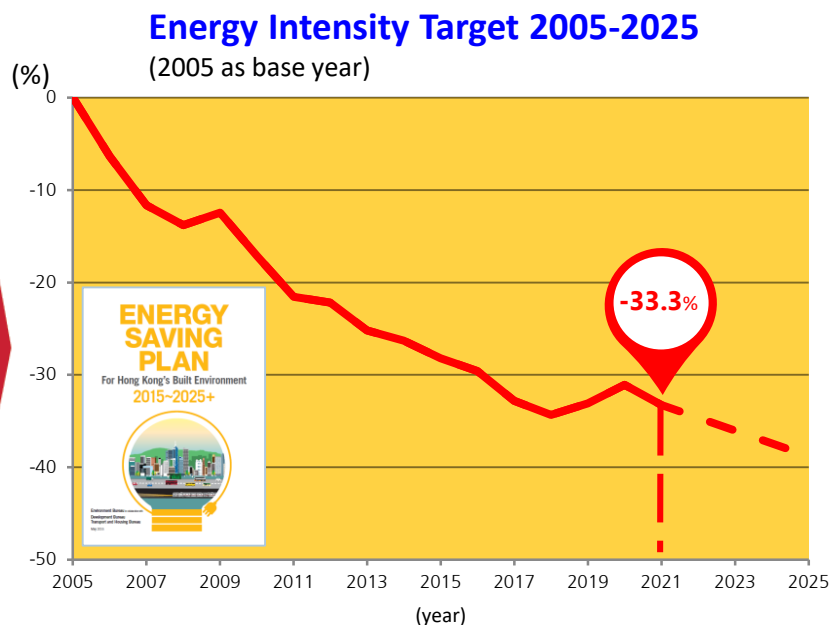
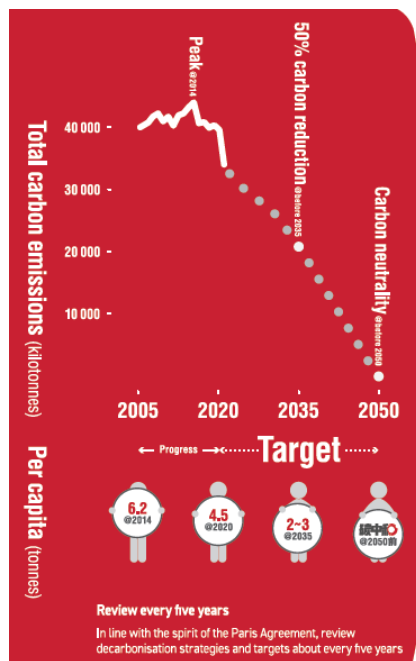
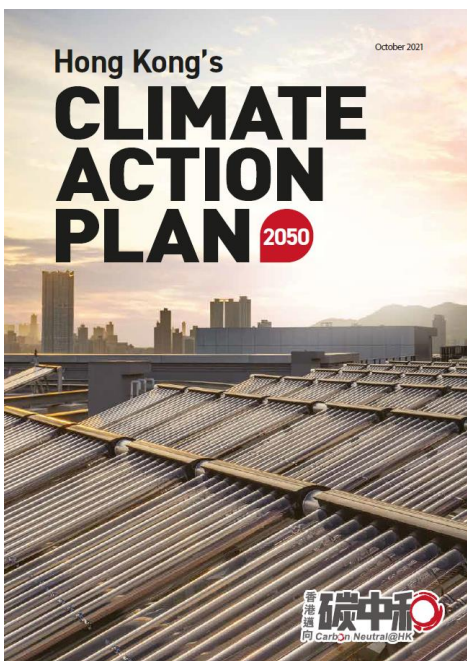
Hydrogen as Clean Fuel in Hong Kong, China





Energy Efficiency Initiatives *(Hong Kong, China)*

Utilisation of Clean Energy and Energy Efficiency Enhancement



Renewable Energy (RE)

Target **2035 7.5-10%**
(increase to 15% subsequently)



Electricity Saving in Buildings

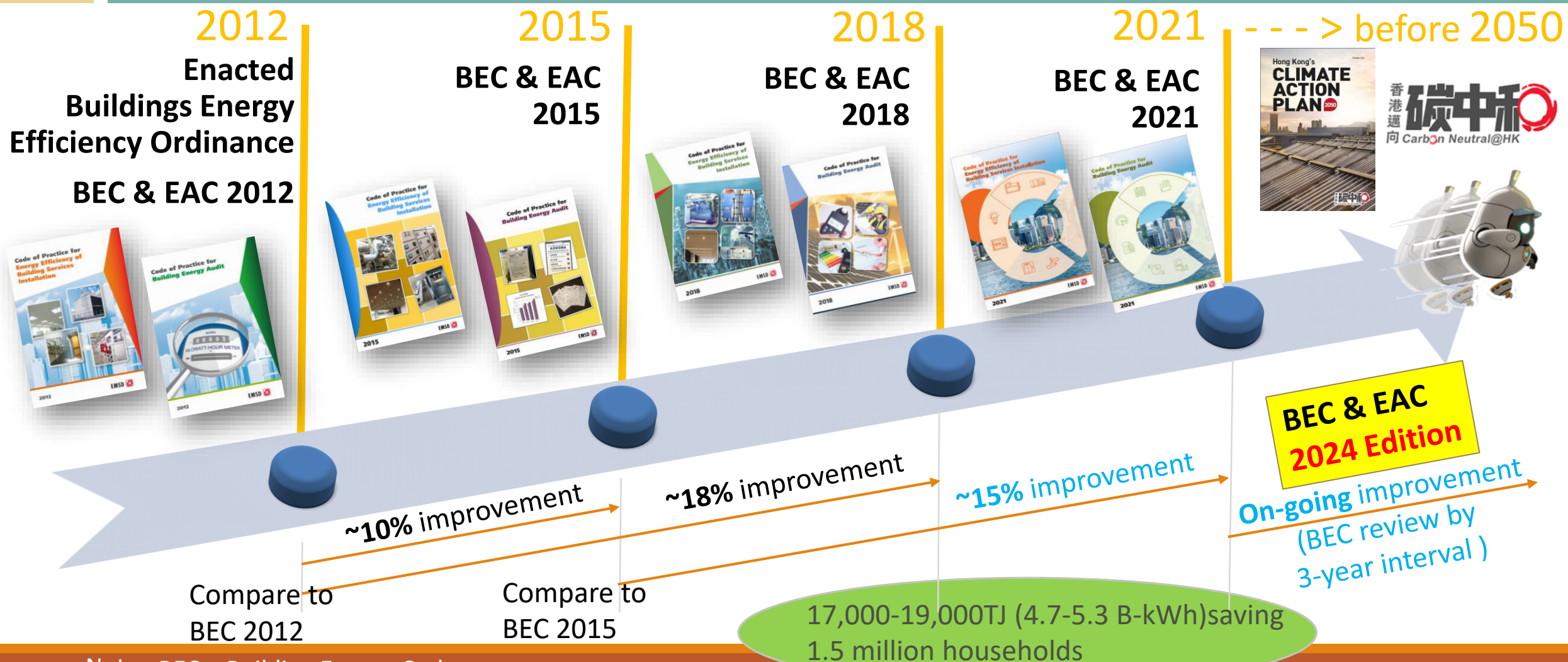
Target

Year	Commercial Buildings	Residential Buildings
2035	15-20% (Reduce by 30-40% subsequently)	10-15% (Reduce by 20-30% subsequently)

Electricity consumption (Compared with 2015)



Milestone of the Buildings Energy Efficiency Ordinance



Note: BEC = Building Energy Code
EAC = Energy Audit Code

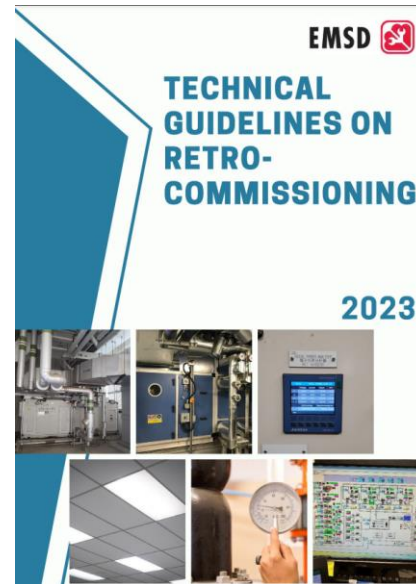
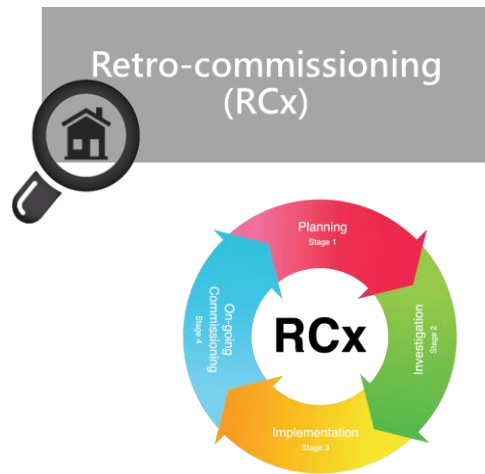
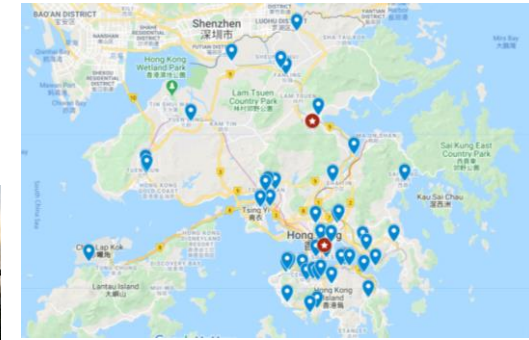
Retro-commissioning (RCx) for major government buildings

Existing buildings are often...

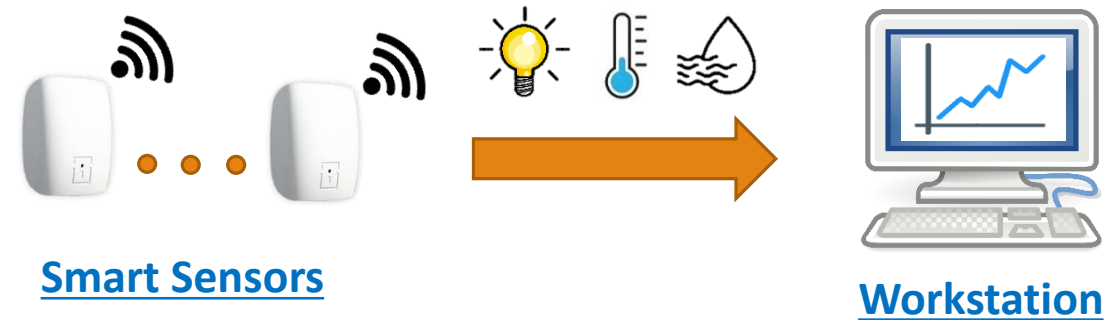


- Equipped with aging equipment
- Outdated building services system control
- High energy consumption
- unsatisfactory performance of systems

Conduct RCx in suitable major government buildings



Wireless data collection of room condition



RCx Competition and Capacity Building Training



重新校驗·智析電大比拼
WISE SAVE @ RCx COMPETITION

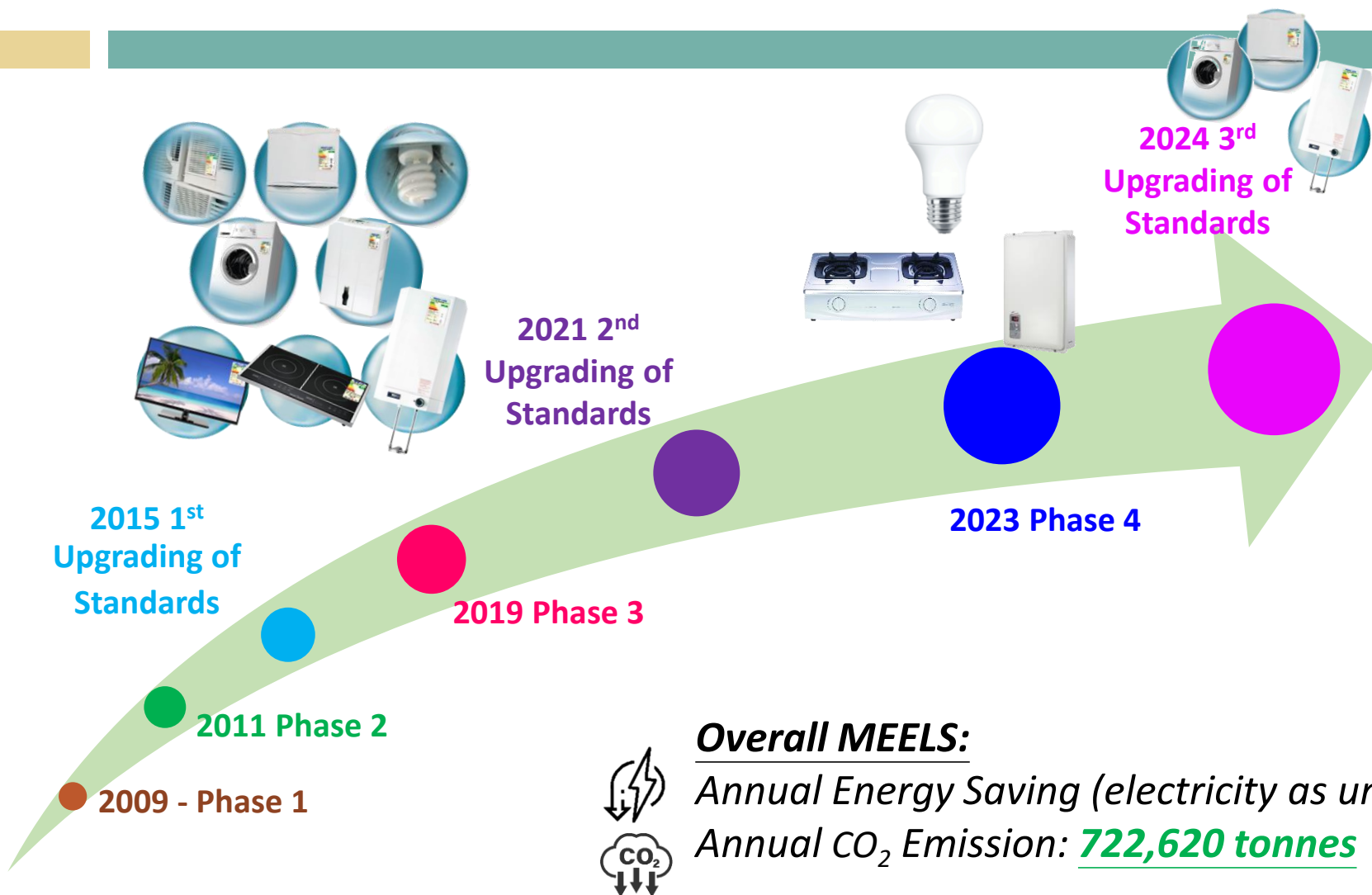
慳神大比拼 — 機構組別
Energy Saving Championship Scheme - Competition for Organisations



Capacity Building Training
on Retro-commissioning



Development of the Mandatory Energy Efficiency Labelling Scheme (MEELS)



MEELS Energy Coverage in Residential Sector

80% (11 products) (Phase 4)

↑

49% (8 products) (in first 3 Phases)

Overall MEELS:

Annual Energy Saving (electricity as unit): **1,083 GWh**

Annual CO₂ Emission: **722,620 tonnes**

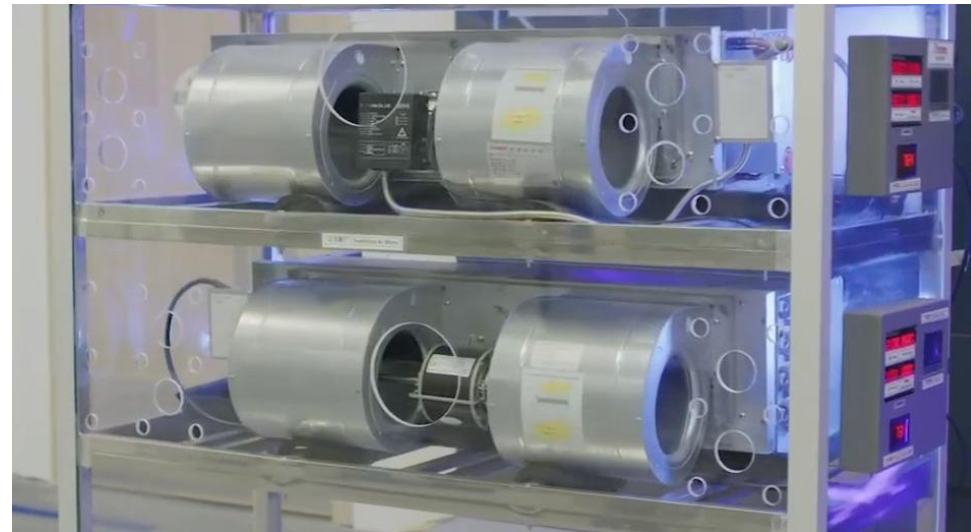
Green Tech Fund (GTF)



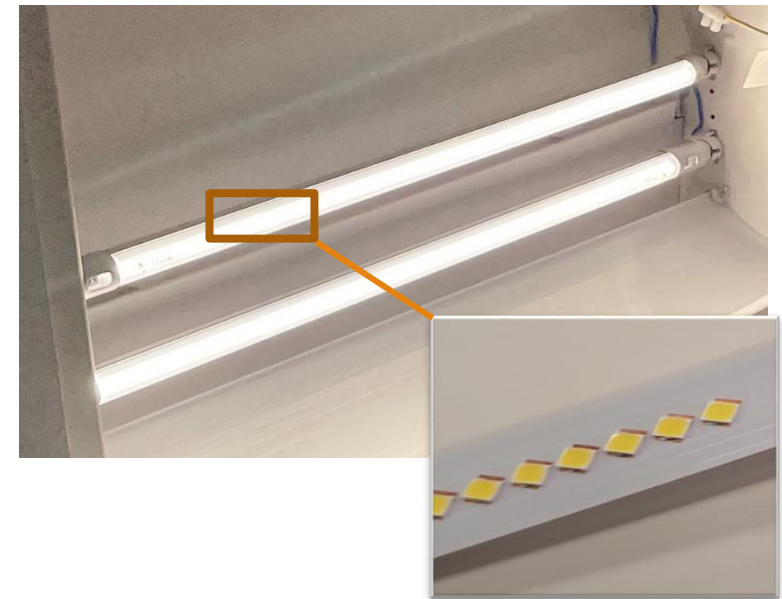
Examples of I&T Projects for Accelerating EE&C



Immersion Cooling System for servers in Data Centre



Permanent Magnet Synchronous Motor (PMSM) application



High Efficacy LED Lighting



Thank You

