

A Study on Emissions Trading in the Mainland: Options for Hong Kong

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Towards using Market-driven Tools in Carbon Reduction

FROM COMMAND-AND-CONTROL TO MARKET-DRIVEN

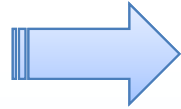
- Kyoto Protocol (1997)
 - “Countries can trade emission units to other countries.”
- Paris Agreement (2015)
 - Recognizes the important role of providing incentives for emission reduction activities, including tools such as carbon pricing



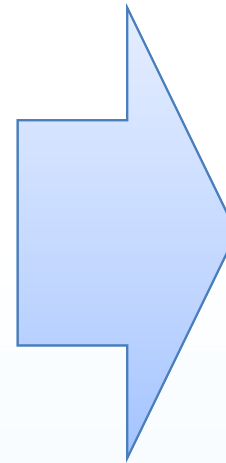
United Nations
Framework Convention on
Climate Change

ULTIMATE GOAL

Command-
and control



Market-
driven



Achieve
Carbon
reduction



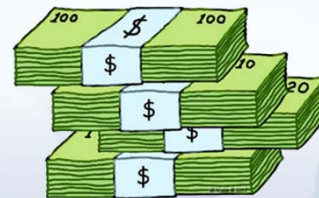
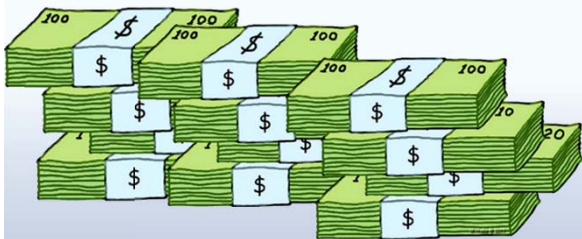
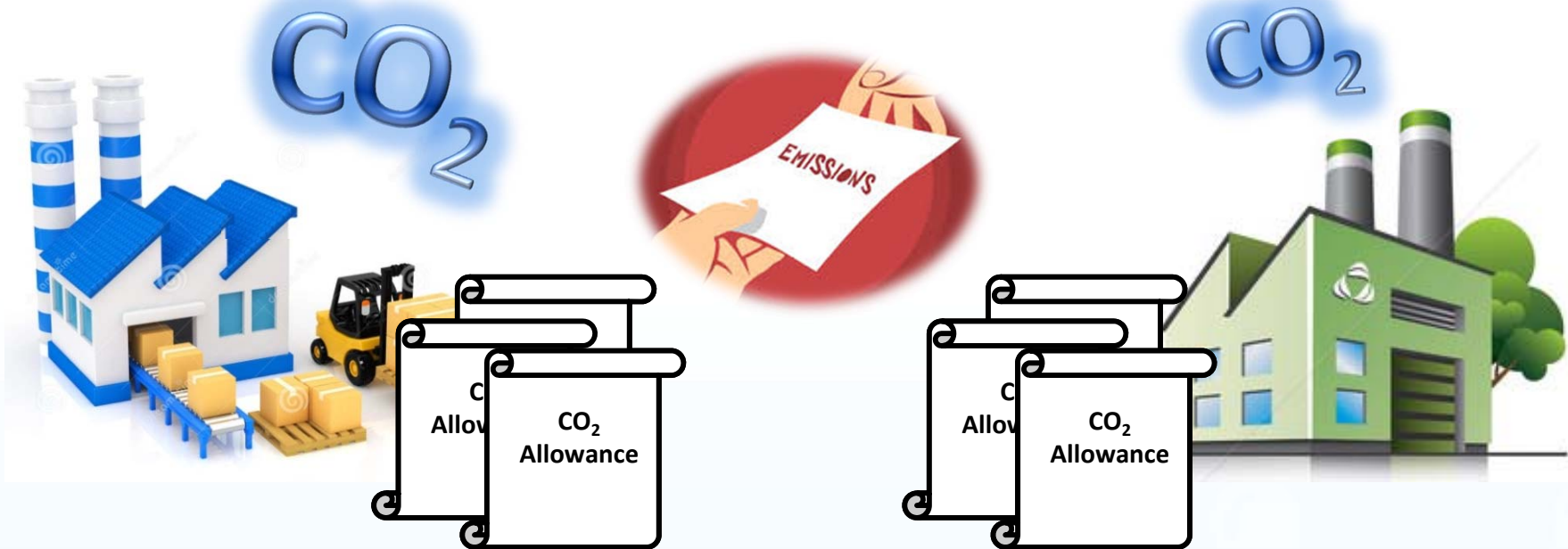
Emissions Trading System – Principles and Development

A MARKET-DRIVEN TOOL – EMISSIONS TRADING SYSTEM (ETS)

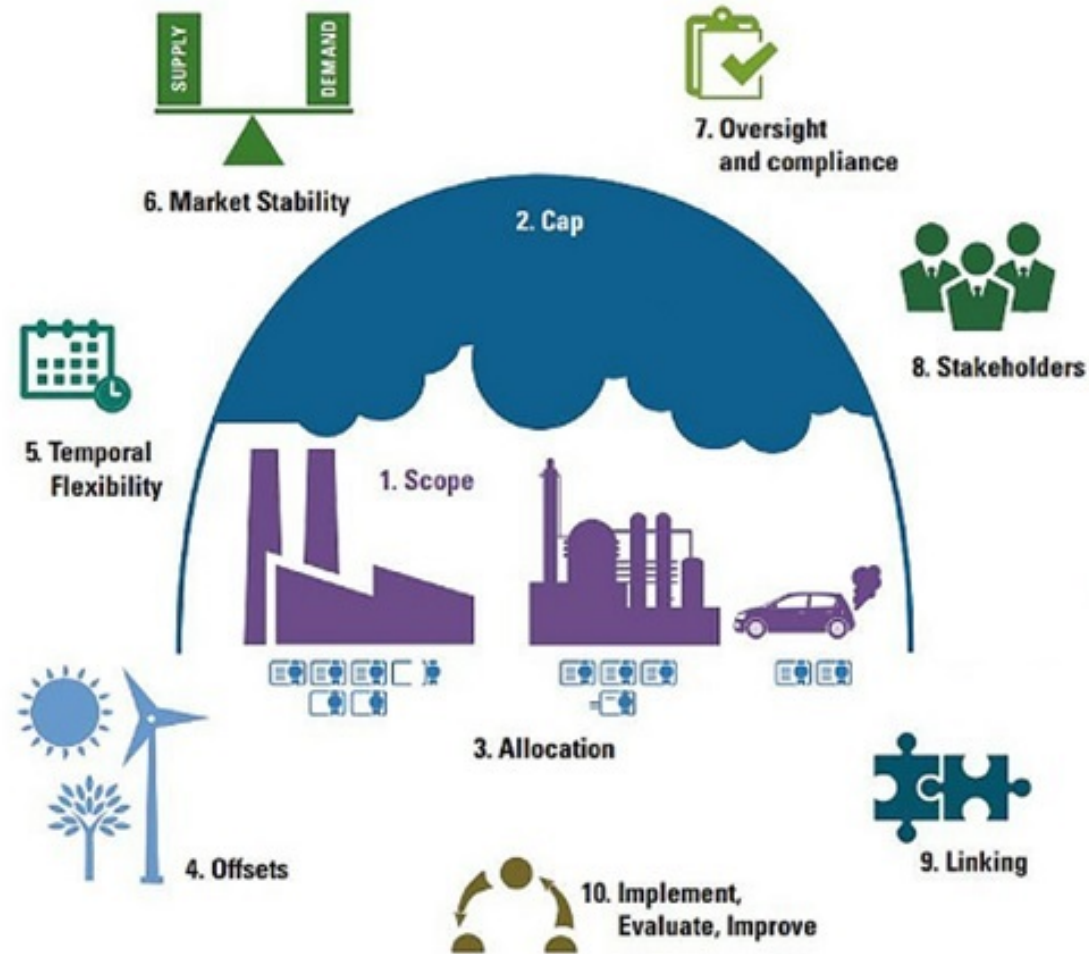
- administrative and market-based approach
- a way to discover the price of carbon.
- also called cap-and-trade.

CO₂ CO₂
CO₂ CO₂

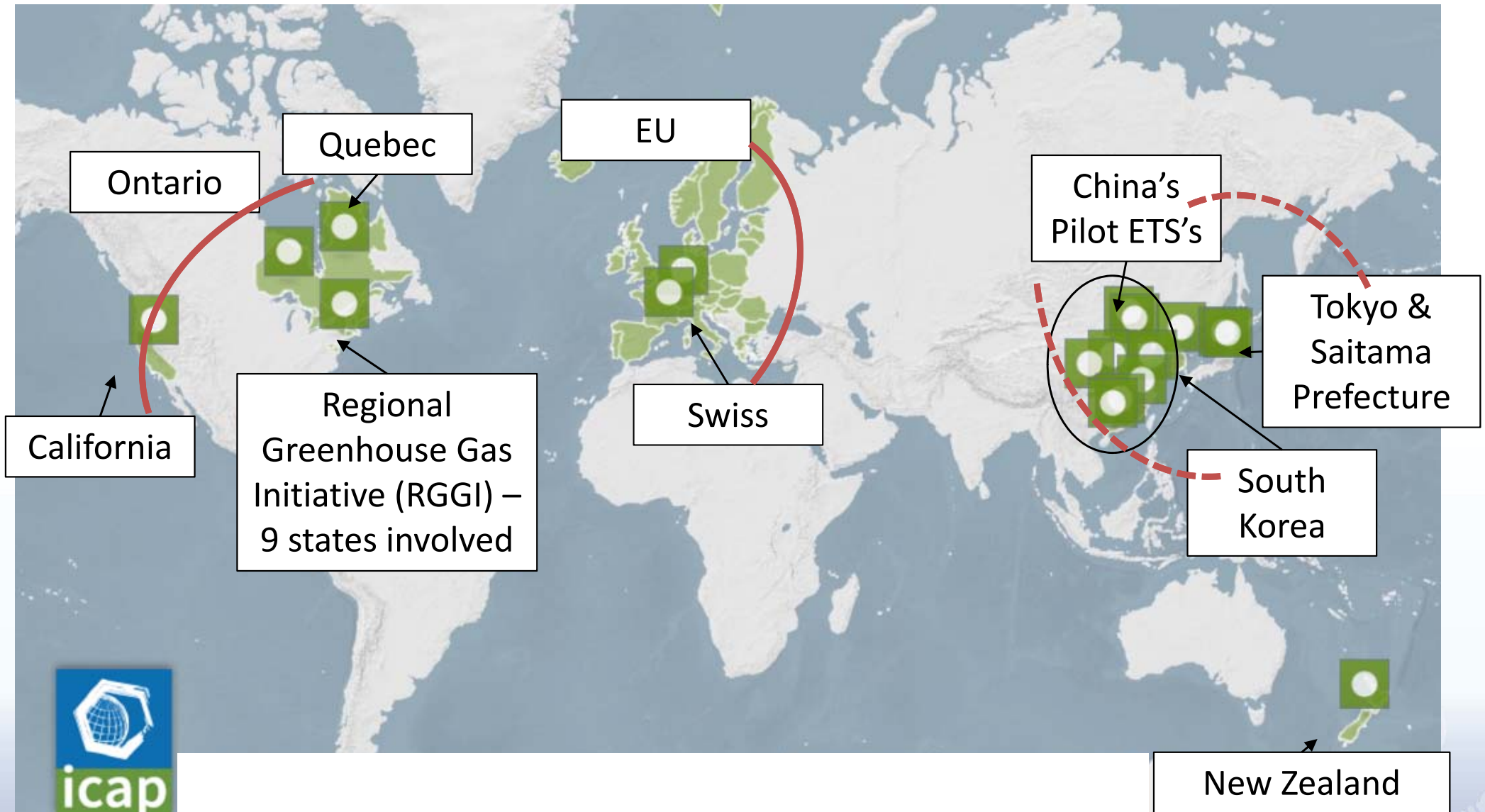
Cap



Ten Elements of an ETS

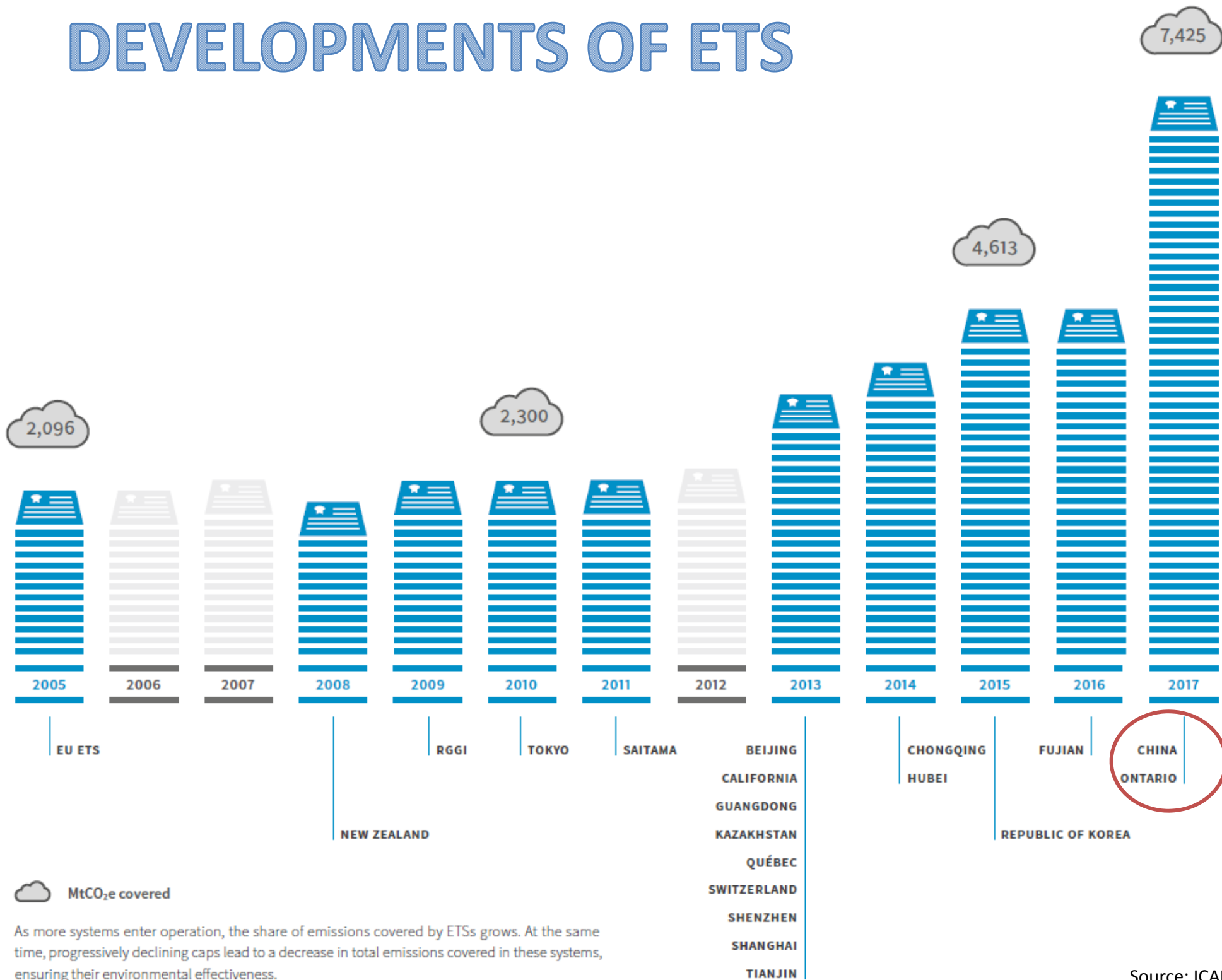


Existing ETS's in the World



- Linkage of ETS is encouraged in the Paris Agreement

DEVELOPMENTS OF ETS



EU ETS

NEW ZEALAND

RGGI

TOKYO

SAITAMA

BEIJING
CALIFORNIA
GUANGDONG
KAZAKHSTAN
QUÉBEC
SWITZERLAND
SHENZHEN
SHANGHAI
TIANJIN

CHONGQING
HUBEI

REPUBLIC OF KOREA

FUJIAN

CHINA
ONTARIO



Recent Development of Emissions
Trading in the Mainland
(by Shanghai Environment and
Energy Exchange, SEEE)



Carbon Emissions in Hong Kong and Roles in Emissions Trading

UNDERSTANDING HK'S ROLE IN EMISSIONS TRADING

In recognition of:

- the growth of carbon trading globally
- China's national ETS

To understand:

- how HK can play a part in these developments

HK GOVERNMENT'S ACTION PLAN

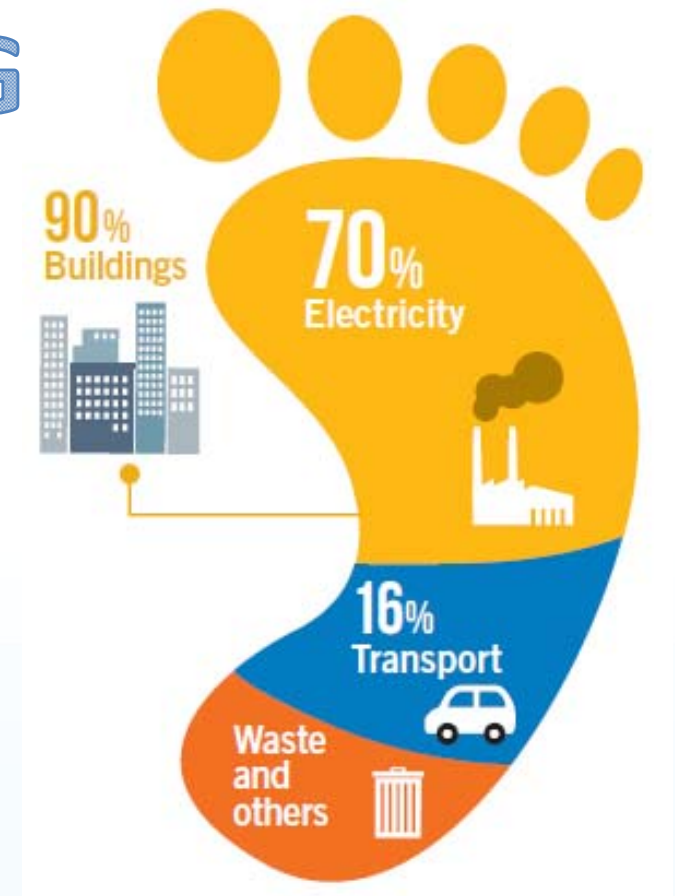
- “Hong Kong’s Climate Change Action Plan 2030+” includes:
 - HK’s Carbon Intensity Targets for 2030
 - HK’s PEAK CARBON by 2020
 - Decarbonisation efforts, including:
 - enhancing energy and carbon efficiency
 - phase down coal for electricity
 - study on what role HK might play in carbon trading

KEY POINTS SOLICITED FROM STAKEHOLDERS

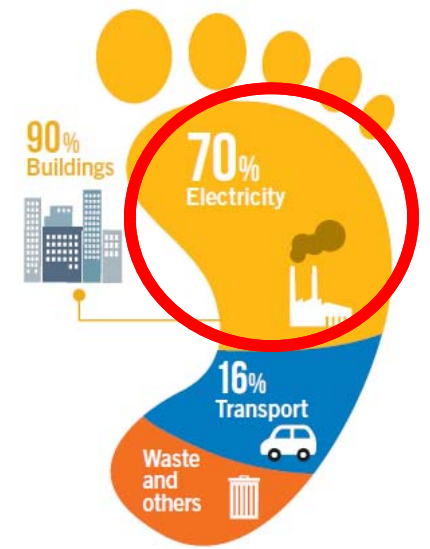
- Emphasized importance of **pricing carbon**
- Diverse views on setting up a local ETS
- Possible role for HK in national ETS: **professional and financial services**

SNAPSHOT OF CARBON EMISSIONS IN HONG KONG

- Electricity generation's the major contributor to HK's carbon footprint
- Buildings consume most of the electricity
- Transport is the second largest carbon emission sector



REFLECTION ON CHALLENGES AND OPPORTUNITIES – POWER GENERATION



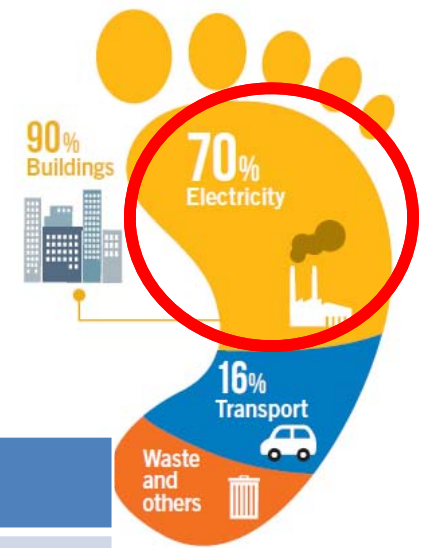
➤ SCA and TM

- TM controls specified air pollutants (SO₂, NO_x, RSP) but **NOT CO₂**
- **SCA** provides incentives and penalties based on performance, e.g. incentives from meeting RE target.

➤ Action plans and incentives to reduce CO₂ in SCA

- coal-fired plants → natural gas plants
- **Energy saving from audits, feed-in tariff and RE certificate provisions**

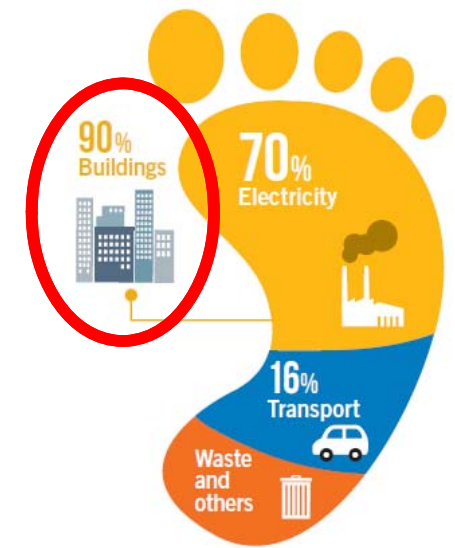
REFLECTION ON CHALLENGES AND OPPORTUNITIES – POWER GENERATION



➤ ETS

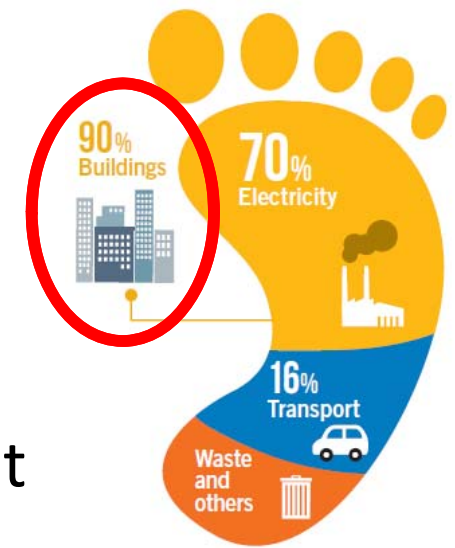
Opportunities	Challenges
<ul style="list-style-type: none">• Power sector has a role in all ETS, either directly or indirectly• Experience as controlled premises under pilot ETS and future national ETS• SCA's incentives encourage private sector to reduce carbon through market force, e.g. energy saving from audit, RE certificates• Other likely development, e.g. interconnection of local grid, import power from Mainland, etc., will bring in market competition• ⇒ Facilitating a local ETS?	<ul style="list-style-type: none">• SCA is more effective than ETS in carbon reduction• Carbon reduction costs between power companies similar making trading not likely

REFLECTION ON CHALLENGES AND OPPORTUNITIES – PROPERTY SECTOR



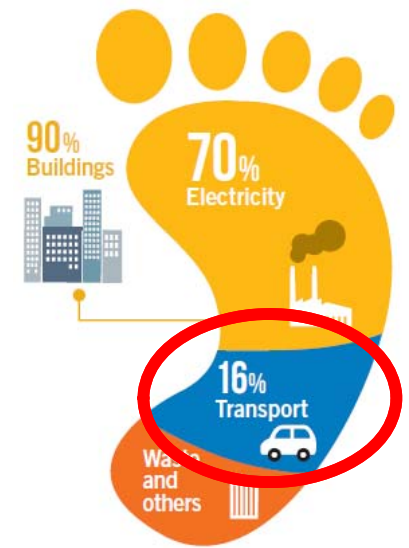
- Largest electricity consumer
- Current energy-efficiency related policies:
 - BEC for new and existing buildings (major retrofiting)
 - Mandatory Energy Audit existing building
 - “Energy Saving Plan for HK’s Built Environment 2015~2025+”:
Energy Intensity reduction target of 40% by 2025; **different policies** needed to help achieve this target.
- New buildings: regulations ensure EE requirements are met at design stage.
Improvement through tightening BEC.
- Existing buildings: **EE constraints** from older design and installation, yet they make up majority of the buildings in HK.
 - **Incentives to encourage EE retrofits**
 - **Adopting use of RE power as low carbon alternative**

REFLECTION ON CHALLENGES AND OPPORTUNITIES – PROPERTY SECTOR



- Ongoing partnership needed between Government and the sector in energy saving:
 - **Energy data transparency and benchmarking** important to CO₂ reduction effort, of which ETS fits in well.
 - Property owner-tenant cooperation is important.

REFLECTION ON CHALLENGES AND OPPORTUNITIES – AVIATION SECTOR



➤ 2 aspects in HK:

1) International civil aviation

- Accounting for cross-jurisdictional emissions.
- ICAO's attempt at carbon neutral growth: CORSIA commences in 2021.

2) Civil aviation between HK-Mainland (special region aviation)

- Emissions from this activity: **~4% of HK's total emissions.**
- Not counted as domestic aviation nor international aviation ⇒ **not included in CORSIA nor national ETS.**
- Potential opportunity in setting a **local offsetting scheme?** Cross-sector opportunity?

REFLECTION ON CHALLENGES AND OPPORTUNITIES – PROFESSIONAL AND FINANCIAL SERVICES

- Current Mainland circumstances:
 - Only **spot trading** is allowed
 - Relatively **inaccessible** to overseas organizations
 - CNY not fungible internationally
- Potential opportunities for HK:
 - Assist in **future and derivatives** trading
 - Mobilizing **capital** investment
 - **Off-shore centre** of the national ETS in future




Recommendations of the Study



THREE RECOMMENDATIONS

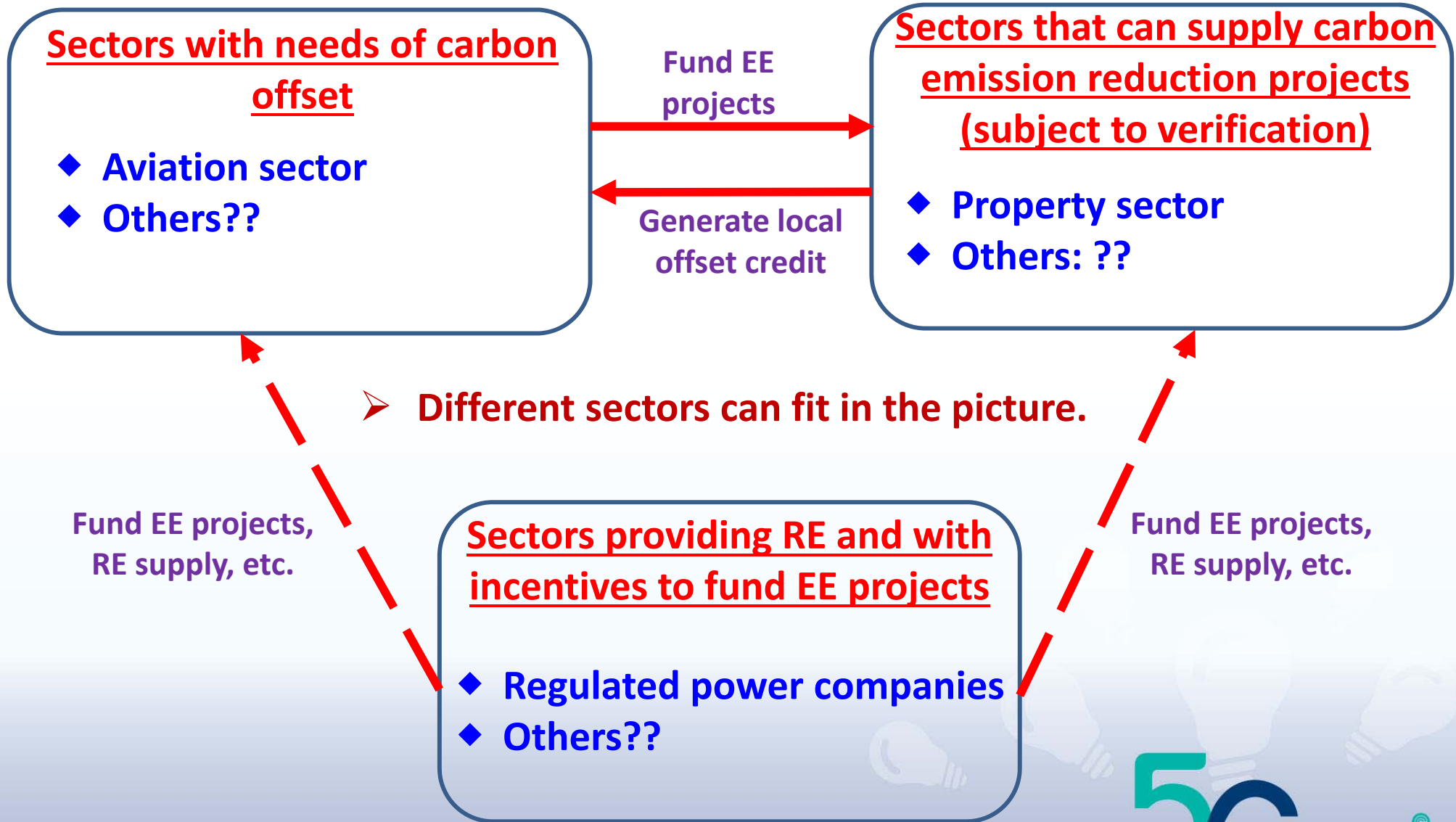
- Raise the issue of carbon pricing at the Steering Committee for Climate Change
- HK to serve the Mainland's Carbon Market: professional and financial services
- Cross-sector Engagement and Capacity Building

CONSENSUS → ACTION



Further Reflection on Turning Challenges into Opportunities in ETS for Hong Kong

TURNING CHALLENGES INTO OPPORTUNITIES IN ETS FOR HONG KONG



Thank you!

