



Solving for Zero

6th May 2022

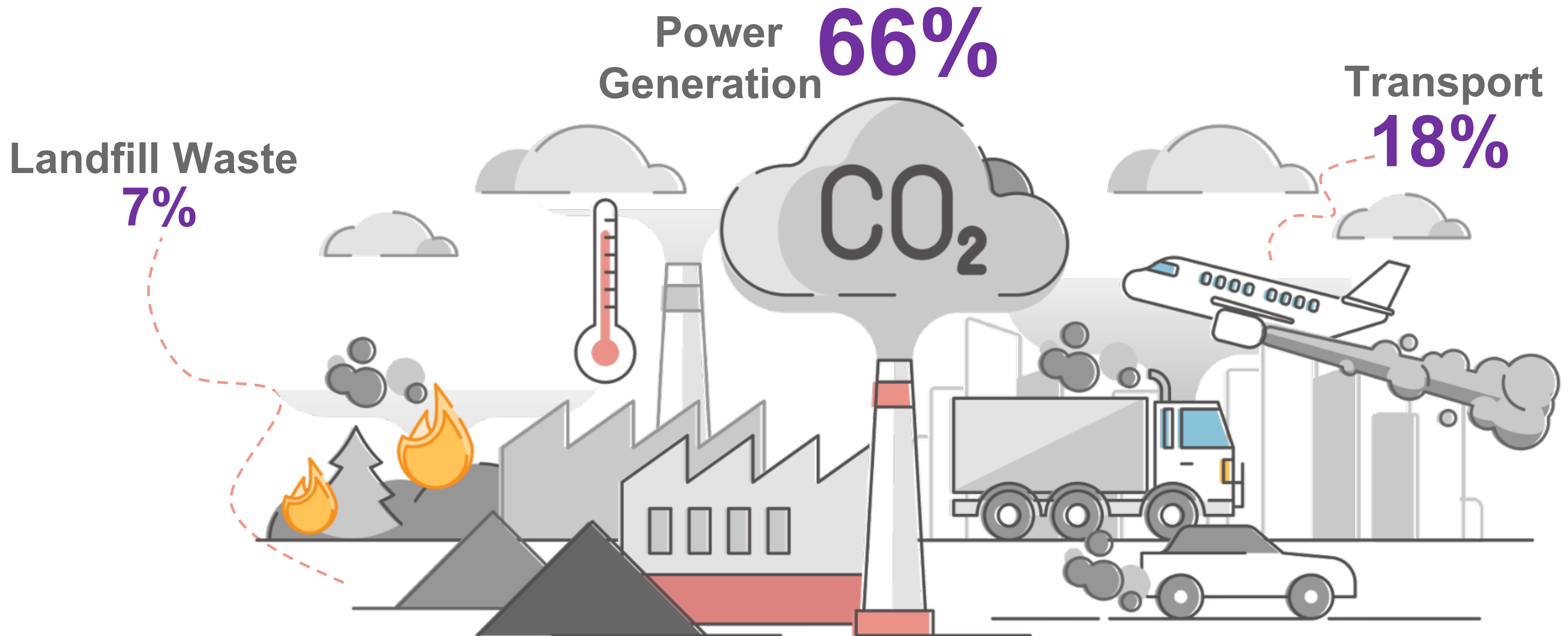
Stephen Wong



The opinions expressed in this presentation and on the following slides are solely those of the presenter and not necessarily those of Our Hong Kong Foundation.

Critical areas of Hong Kong's decarbonisation efforts

% of Carbon Emission by Source in Hong Kong – 2019



Timeline of climate and green finance strategy in Hong Kong



Note: Cross-Agency Steering Group (CASG)

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Hong Kong has made significant progress to its overall strategy...

Progress updates on the Steering Group's key priority areas



Ensure climate-related disclosures align with TCFD by 2025

- ✓ SFC and HKEX plan to evaluate the application of the International Sustainability Standards Board's proposed disclosure requirements to Hong Kong

Align and operationalise the Common Ground Taxonomy

- ✓ The Steering Group will, with the aim of aligning with the CGT, explore developing a green classification framework for adoption in the local market

Launch a Green and Sustainable Finance Centre

- ✓ Led by two working groups, the GSF Centre has made recommendations to promote capacity building through GSF training and increasing accessibility to GSF data and analytics

Dedicate Carbon Market Workstream to explore carbon market opportunities

- ✓ The Steering Group published its preliminary feasibility assessment and as a next step, will evaluate appropriate market and regulatory model as well as a roadmap and implementation plans

But we have just started exploring carbon market opportunities

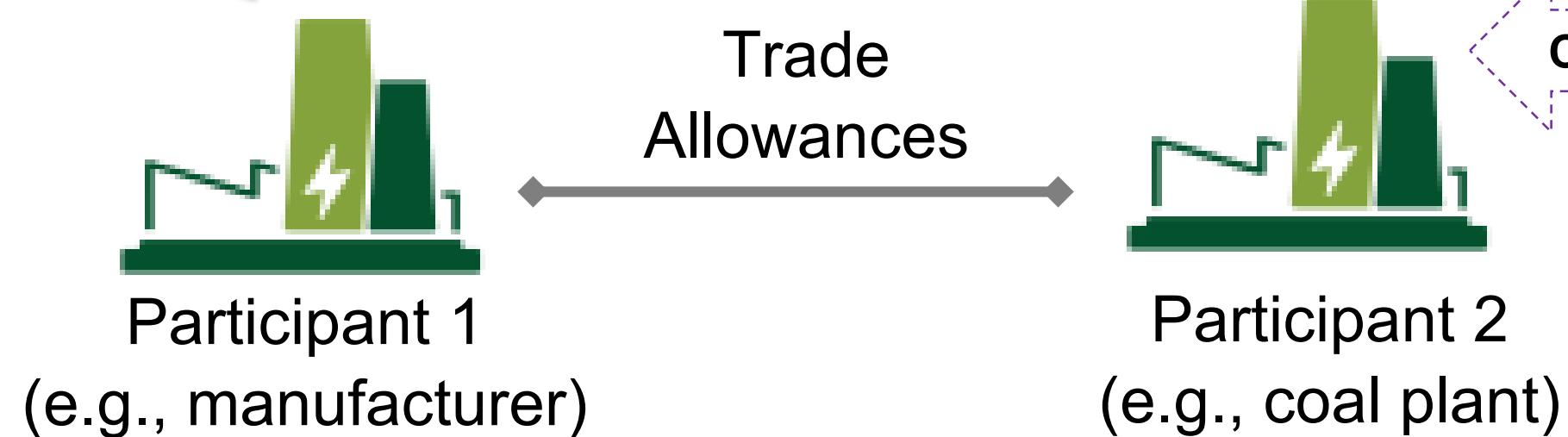
Carbon markets turn CO₂ emissions into a commodity by giving it a price

Compliance Markets

Provide a **regulated mechanism** for market participants to trade allowances, each representing a permit issued by regulators to **emit a tonne of carbon emissions**

Excess allowances for sale

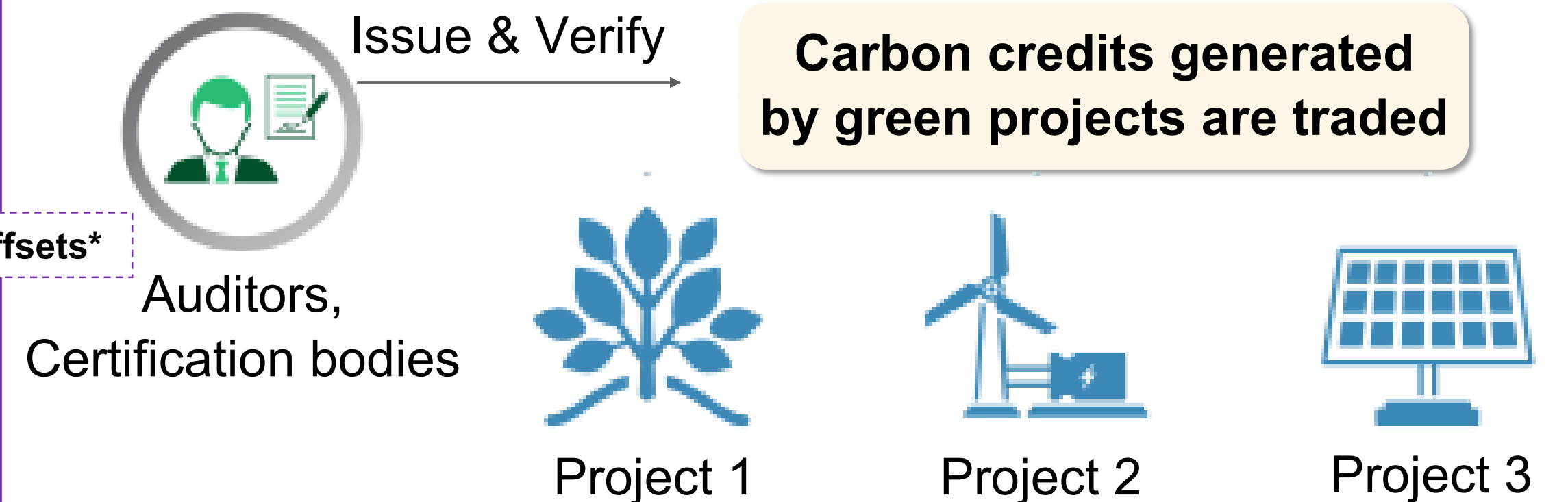
Excess emissions beyond allowance



Emissions are lowered to minimise the cost of purchasing allowances

The Voluntary Market

Buyers (usually corporates) **voluntarily** purchase carbon credits generated by projects that avoid or remove GHG emissions to **neutralise or compensate for their emissions**



Channels capital and serves as a transitional tool to complement compliance market

Note: Compliance markets with linkages to the VCM generally allow covered entities to use VCM credits (in the form of "compliance offsets") to meet between 3 and 10 percent of their compliance obligations.

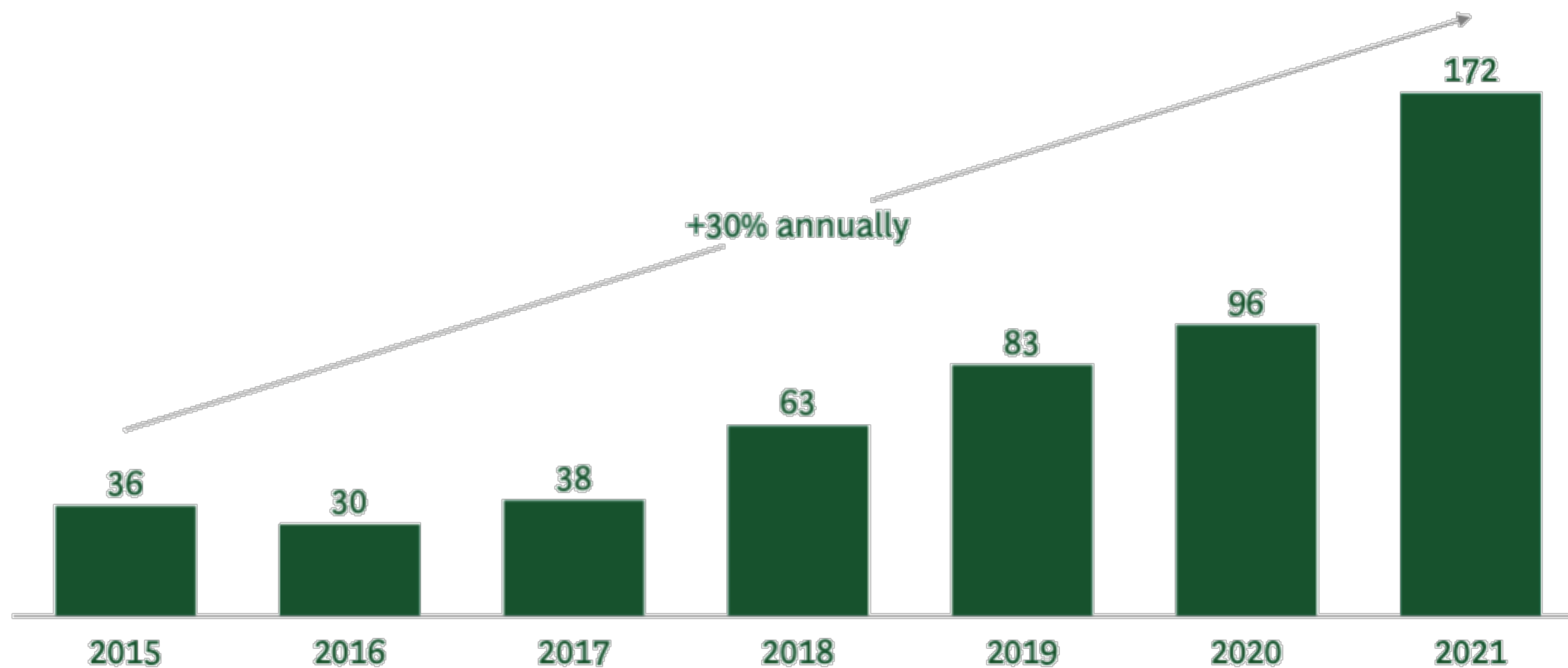
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The size of carbon market is small, especially the voluntary market

Compliance market

In terms of market value

~\$170B
as of 2021



Source: World Bank, as of April 2021

Voluntary market

In terms of market value

\$1B+
as of 2021

For example, the motor industry has increased participation in the VCM

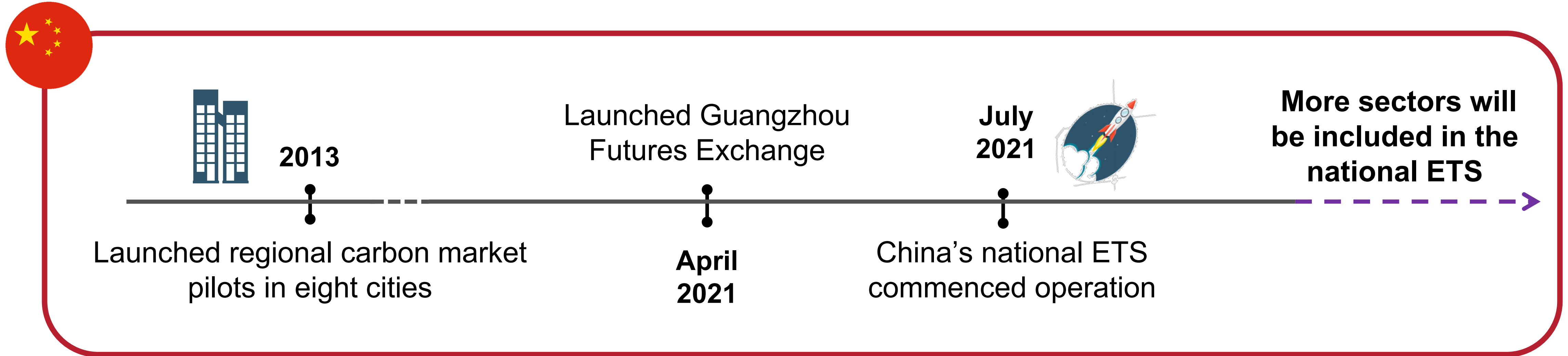
- ❖ Tesla sold greenhouse gas credits to General Motors Co. and Fiat Chrysler Automobiles NV.



Note: All prices provided in USD from sources, and normalized to 2020 USD using the Bureau of Labor Statistics' CPI inflation calculator

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China's carbon trading market developments



National Emissions Trading System

- China's national ETS – the world's largest in terms of covered emissions
- Regulates more than 2,000 companies from the power sector
- Pilots ETS will cover the sectors and entities not included in the national market

Guangzhou Futures Exchange

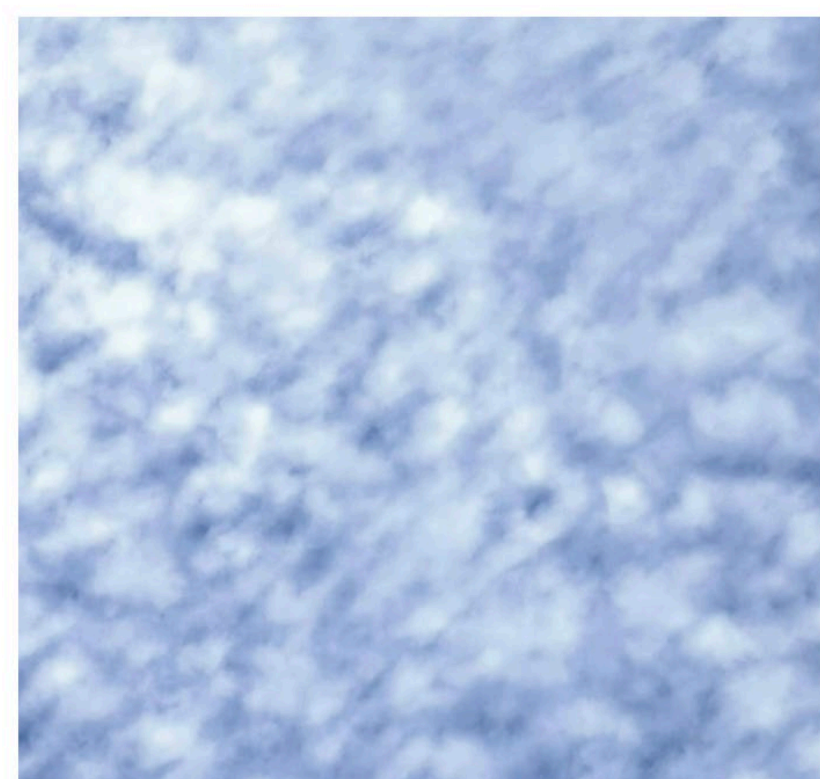
- China Securities Regulatory Commission commits to launch a carbon futures market
- HKEX invests 7% in GFEX and signs Memorandum of Understanding
- Carbon emissions futures and options are planned products

Opportunities for Hong Kong in the carbon market

Q Does Hong Kong have potential to develop a local carbon market?

The local market is too small and oligopolistic

- In 2019, electricity generation represents 66% of CO2 emissions
- There are only two market players for electricity generation



Carbon Market Opportunities for Hong Kong
Preliminary Feasibility Assessment
March 2022

Green and Sustainable Finance Cross-Agency Steering Group
Carbon Market Workstream

Co-Chairs:



Members:



Cooperate with China to develop Hong Kong into a regional carbon trading centre...

- Develop **Greater Bay Area Unified Carbon Market**
- Explore **international participation** and potential linkage with the **national ETS**
- Develop Hong Kong into Mainland's **offshore risk management centre**

Opportunities for Hong Kong in the carbon market (con't)

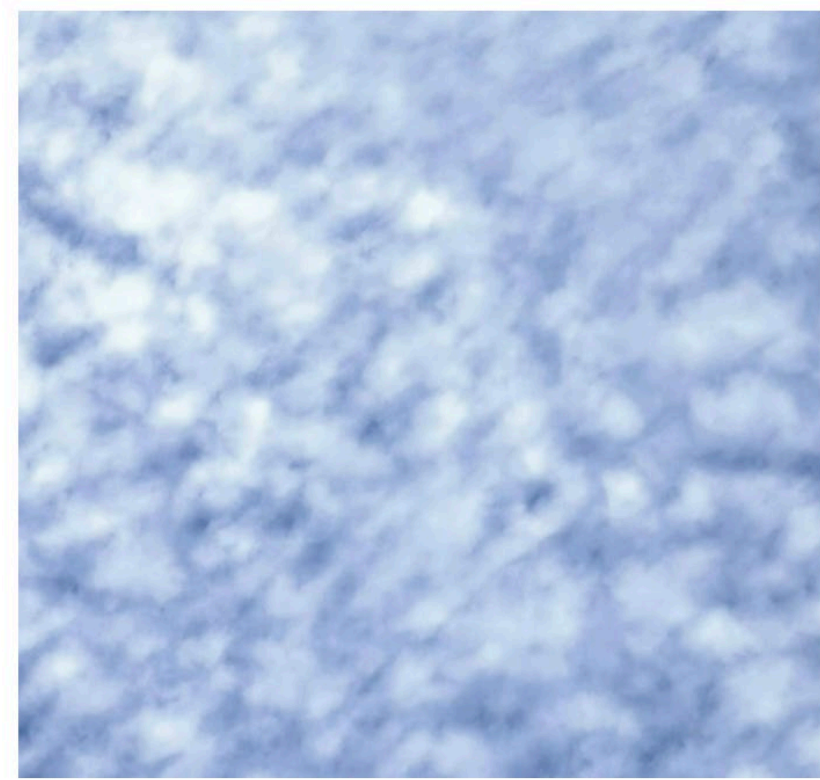
Hong Kong has several **green and sustainable projects** across different industries (i.e., construction, transport, food)

Hong Kong lacks funds to scale up these projects



Develop Hong Kong into a global, high quality Voluntary Carbon Market

- The voluntary market is a platform for firms to **sell their carbon credits to make profits**
- Need to develop **high-quality standards** to give confidence to project buyers
- Rules that allow buyers to identify project owners, have transparency in project disclosures, independent auditing, etc.



Carbon Market Opportunities for Hong Kong
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Carbon Market Workstream

Co-Chairs:



Members:



What are high-quality carbon credits?

Standard setters such as Verra and Gold Standard generate over 70% of the world's voluntary market carbon credits



Established in 2005



Established in 2003



Hong Kong can leverage on the Taskforce on Scaling Voluntary Carbon Markets work

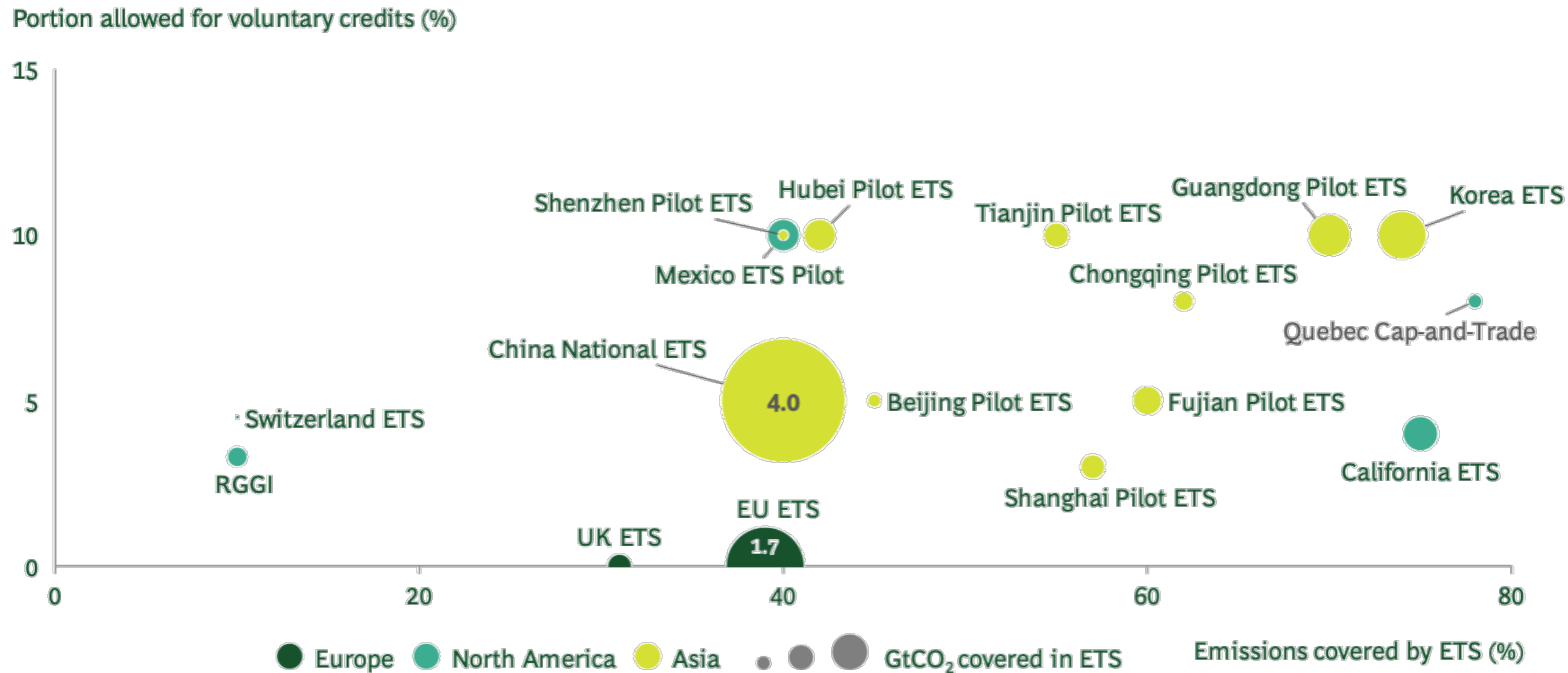
- TSVCM includes over 250 member institutions, including Verra and Gold Standard
- Develop **Core Carbon Principles** – a set of quality guidelines for the supply of carbon credits that are **standardised to allow trading at scale**

Note: TSVCM is a private sector-led initiative with the goal to scale a transparent, verifiable, and robust VCM to help meet the goals of the Paris Agreement. It comprises over 250 member institutions, representing buyers and sellers of carbon credits, standard setters (such as the Gold Standard and Verra), the financial sector, market infrastructure providers, etc.

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Greater interoperability between VCM and ETS can grow the carbon markets

Current ETS schemes linked to the VCM



Key prerequisites for interoperability

VCM



1. Stringent **Measuring, Reporting, and Verification (MRV)**
2. **Taxonomy** for categorizing VCM credits
3. Clear **eligibility criteria** and **limits** on transferable credits

Greater interoperability between VCM and ETS



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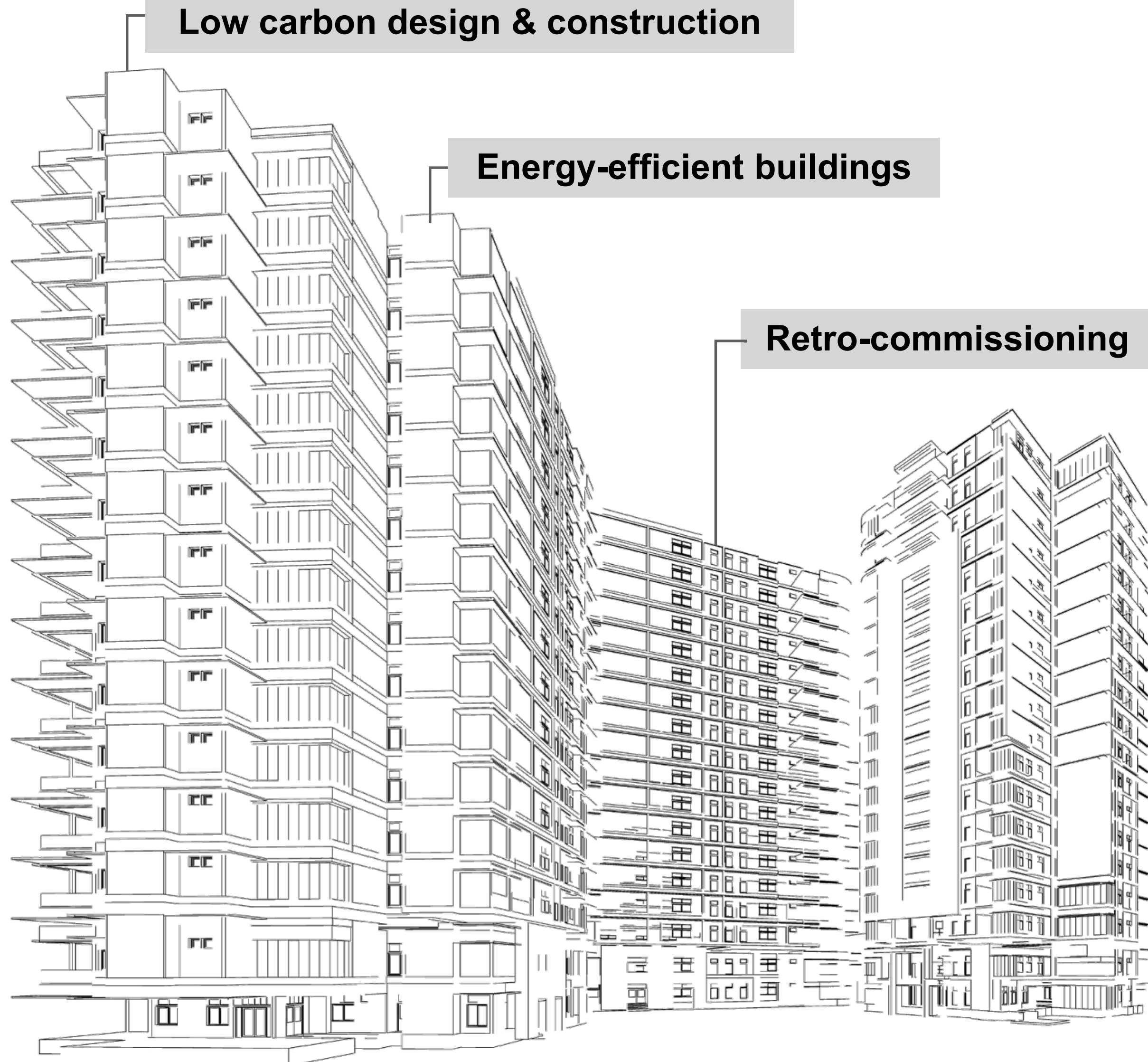
Industry Perspective

Green Buildings

Research • Advocate • Engage
研究 • 倡議 • 推動



There has been some green activity in the building industry



Buildings Department
GFA Concession Scheme,
2010



發展局
Development Bureau

Development Bureau
Construction Innovation and
Technology Fund, 2018



**Hong Kong Green Building
Council**
Beam Plus, 2010



Urban Renewal Authority
Green Item Subsidy, 2015



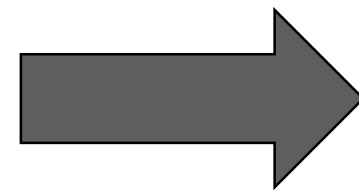
Green Council
Green Label Scheme, 2000

Green construction - creating emission-free construction sites

Modular Integrated Construction



Free-standing modules are manufactured in a factory



InnoCell at HKSTP



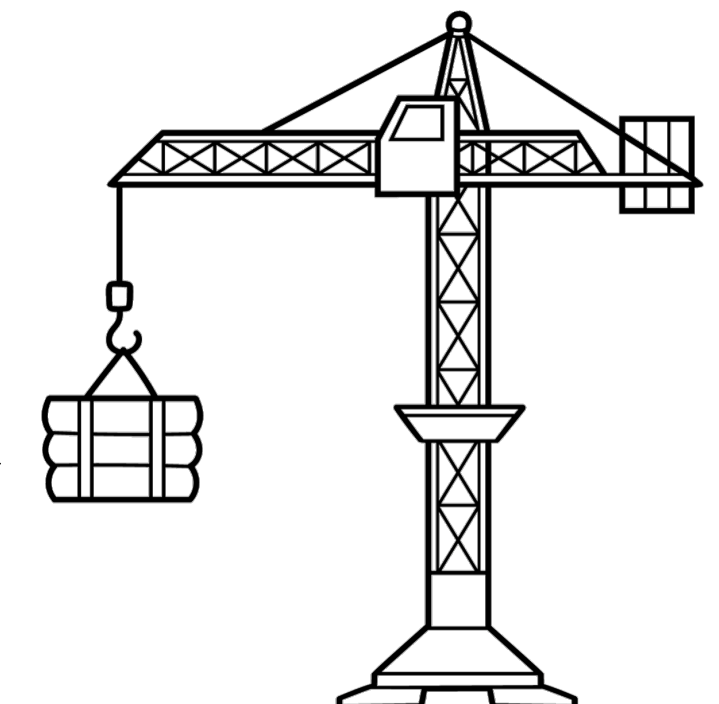
Modules are transported to construction site to form a building

MiC adopts the concept of “factory assembly followed by on-site installation” and is a proven method to **reduce construction waste, pollution, and electricity consumption**

Electrical Machinery



Lithium-ion energy storage system to replace diesel generators

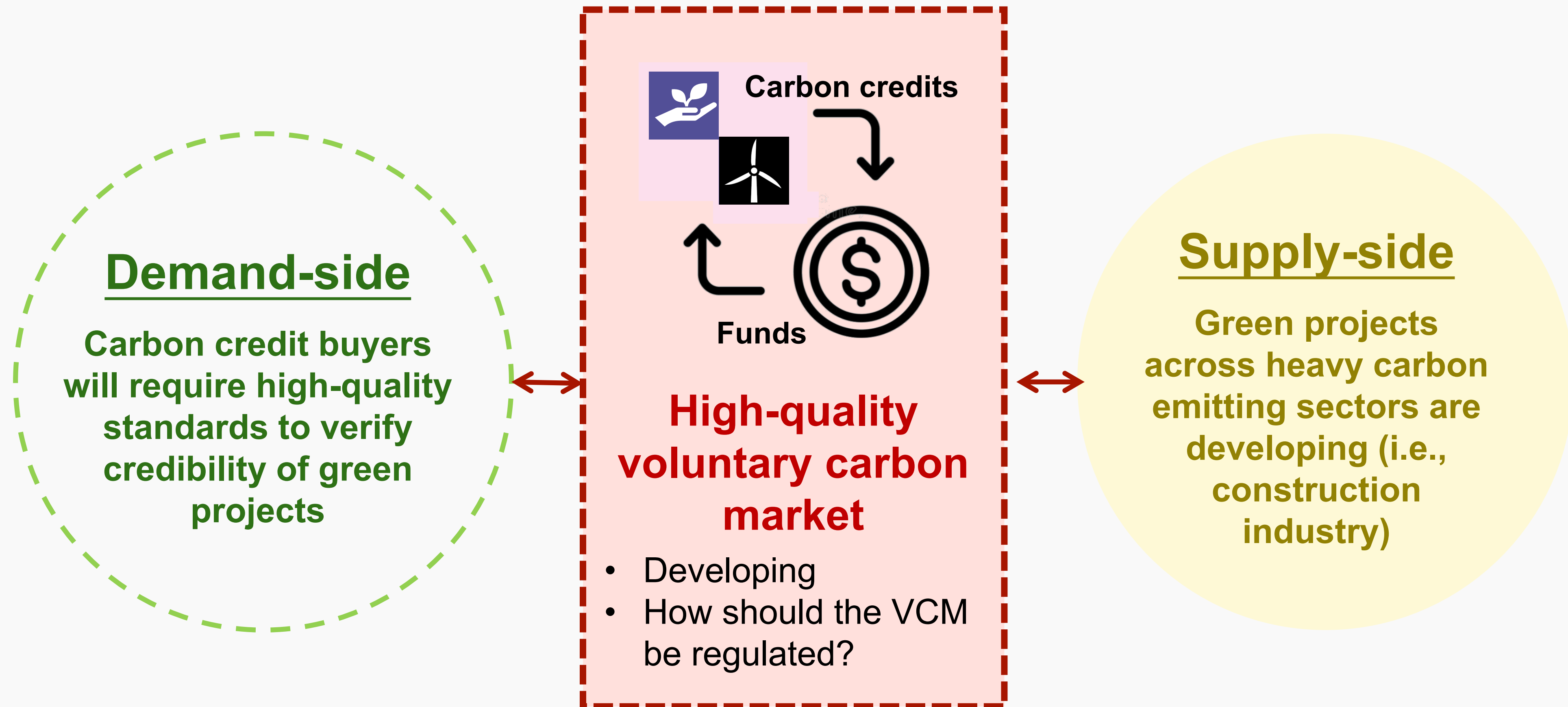


Meet the electricity demand of heavy machineries

Electrification of machineries are transforming construction sites to become **quieter, safer, and more efficient**. Alternatives are proving to **reduce carbon emissions and save costs**

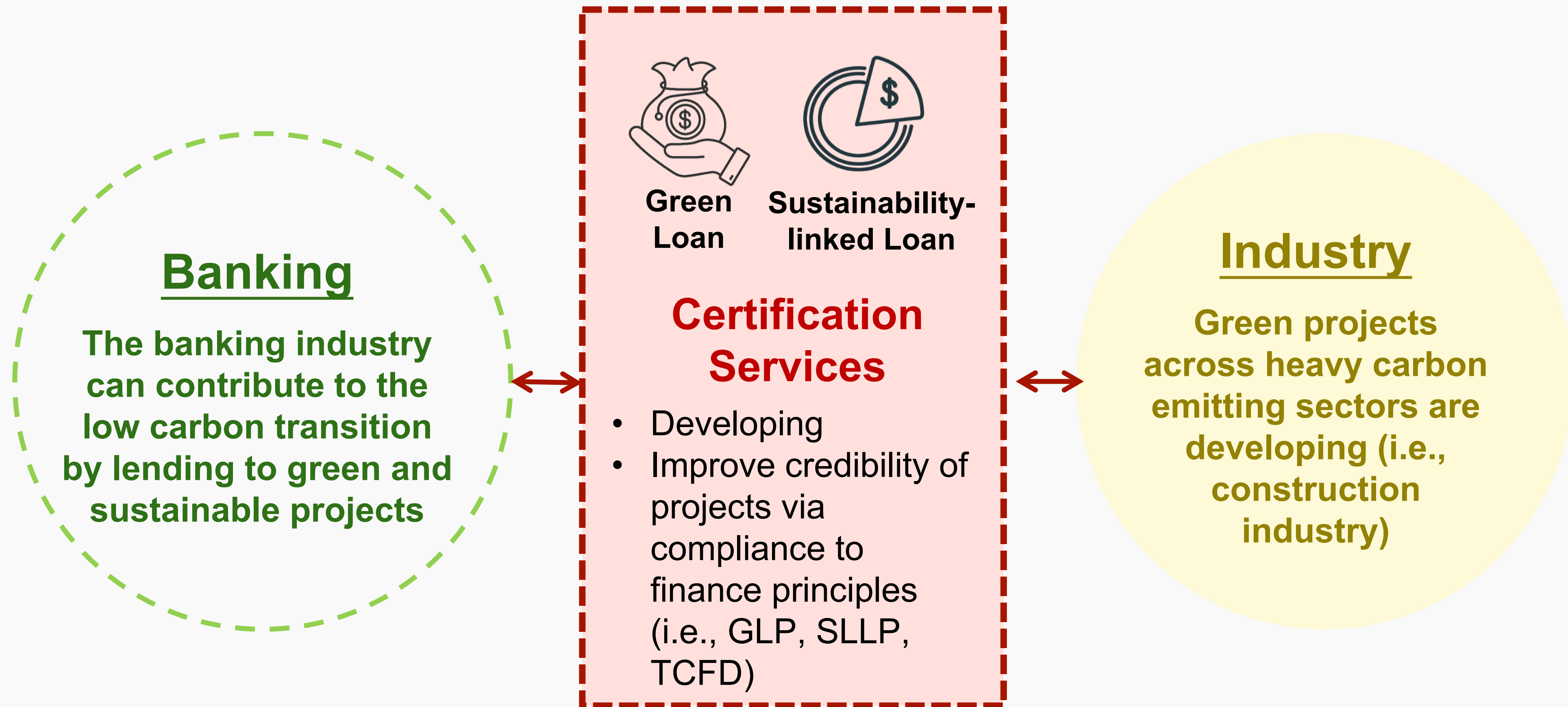
Yet, how do we ensure that capital flows to these green projects?

1. Voluntary Carbon Markets can channel funding for projects that generate carbon credits...



Yet, how do we ensure that capital flows to these green projects?

2. **Banks** can provide capital and support green and sustainable projects (i.e., green loans, sustainability-linked loans)...



Certification services can improve credibility for project owners

Construction Industry Council's Sustainable Finance Certification Scheme

5th November 2021

- Provides a **common framework and assessment system** for green project owners* in the construction industry
- Demonstrates to **financial institutions and investors** efforts to comply with **international sustainable finance principles**, including:
 - Use of proceeds
 - Project evaluation and selection processes
 - Management of proceeds
 - Impact reports (focused primarily on carbon emissions)



18 pilot projects achieved certifications

Note: Project owners, including the HKSAR Government, statutory bodies and developers; contractors; sub-contractors; and suppliers/manufacturers.

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Does the greenness of a project really help mobilise capital?

Are the certifications raising green capital for projects?

Banking



e.g., Green loan,
Sustainability-linked loan

Industry



e.g., CIC's Sustainable
Finance Certification Services

Do green projects lower/increase bank's credit risk?



What are the **policy considerations** when banks loan?



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Thank you
