

ETS and Climate Finance in China

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Framework

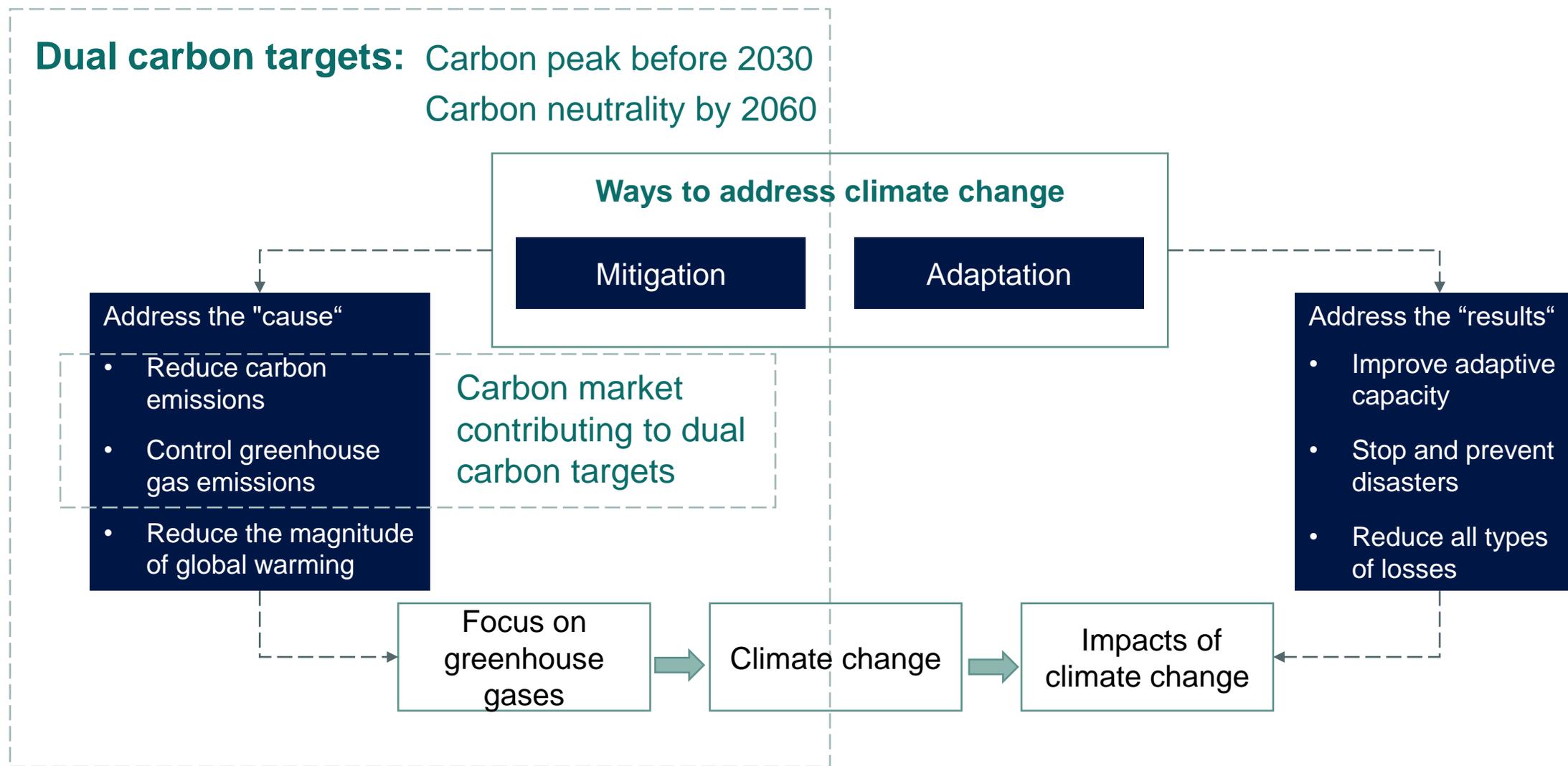
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1

Dual carbon targets and ETS

ETS as a tool to contribute to dual carbon targets



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ETS in China

Pilot Carbon Market

Since 2013, Beijing, Tianjin, Shanghai, Chongqing, Hubei, Guangdong, Shenzhen, Fujian and Sichuan have launched their pilot carbon markets one after another.

Progress:

- Market mechanism successfully established and functioning smoothly
- Market trading is becoming increasingly active
- Carry out differentiated business model and carbon finance innovation exploration
- Cover 1.27 billion tons of CO₂

Disadvantage:

- Trading activity needs to be improved, and the market tide phenomenon is obvious
- The pricing mechanism needs to be improved, and the carbon price is much lower than that of overseas markets
- Insufficient market effectiveness to support stable and active trading of carbon financial products
- Regional markets are fragmented, and carbon quotas are not credible enough

National carbon market

From January 2021, the first compliance cycle of the national carbon market was officially launched, with the first batch of key emission sectors in the power generation industry included. The first year progressed smoothly, with a compliance completion rate of 99.5%.

Industry Covered: Power sector

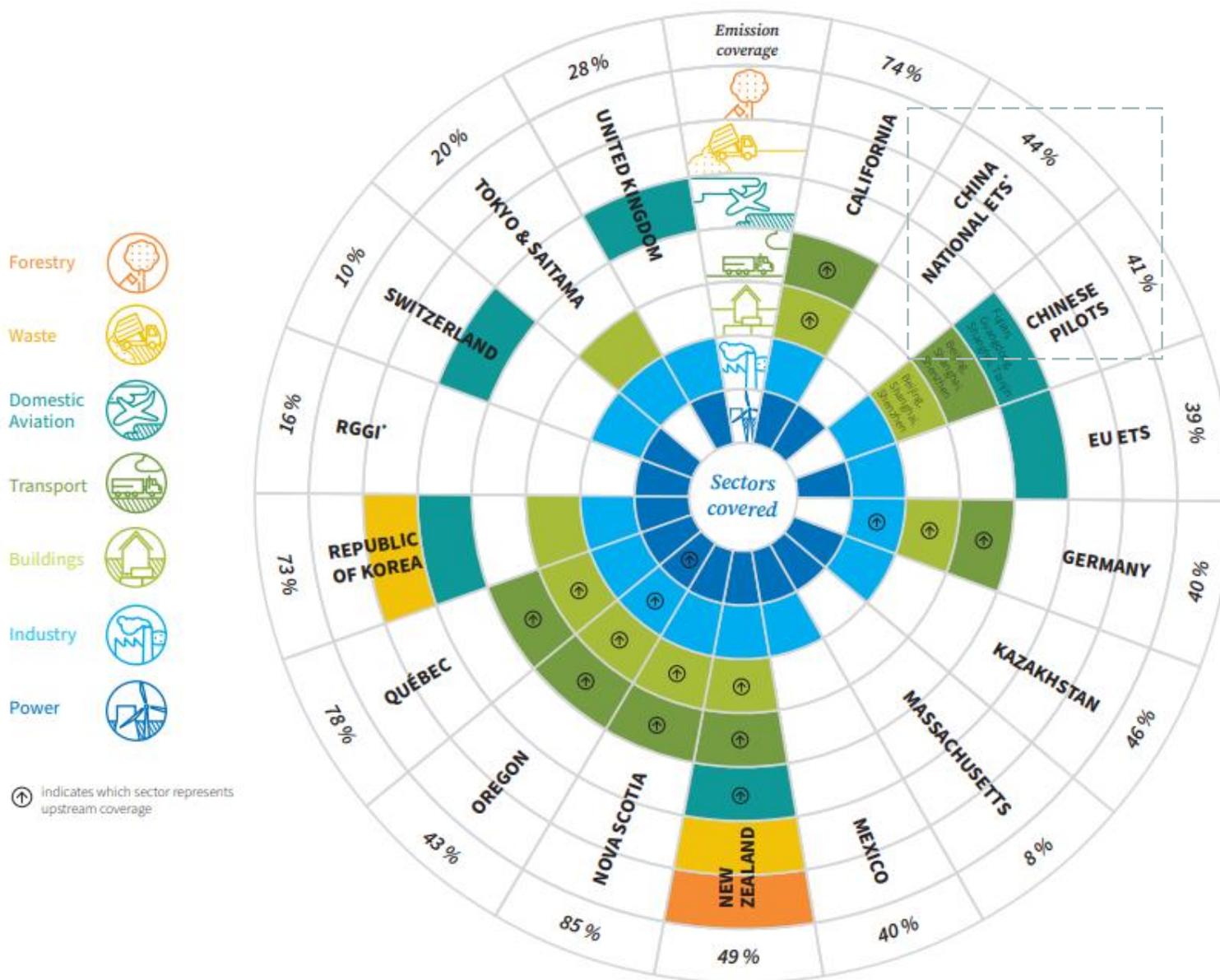
Number of companies covered: 2,162 (first year)

Emissions covered: 4.5 billion tons of CO₂, about 44% of China's total or 9% of global GHG emissions

Progress:

- Cumulative transaction of 179 million tons of carbon allowances and 7.661 billion yuan in 2021, with a closing price of 54.22 yuan per ton on the compliance deadline, higher than all pilot carbon markets except Beijing
- Carbon price basically fluctuates around RMB 55/t in 2022 and 2023

Market mechanisms fitting China's needs



- A “**soft cap**” – the annual emissions covered depends on the electricity actually generated
- Allowances allocated according to **benchmarks** set by MEE, to encourage power generation with better efficiency
- After carbon peak in 2030, the need for a “hard cap” could occur
- **Carbon futures** – no transaction yet, but in consideration

Carbon Financial Products

commercial activities based on carbon emission trading, that serve to reduce greenhouse gas emissions or increase the capacity of carbon sinks with carbon allowances, carbon credits or other carbon emission rights as the medium or target of the financing activities.

According to the standard "Carbon Finance Products" JR/T 0244-2022, carbon finance products can be divided into three categories.

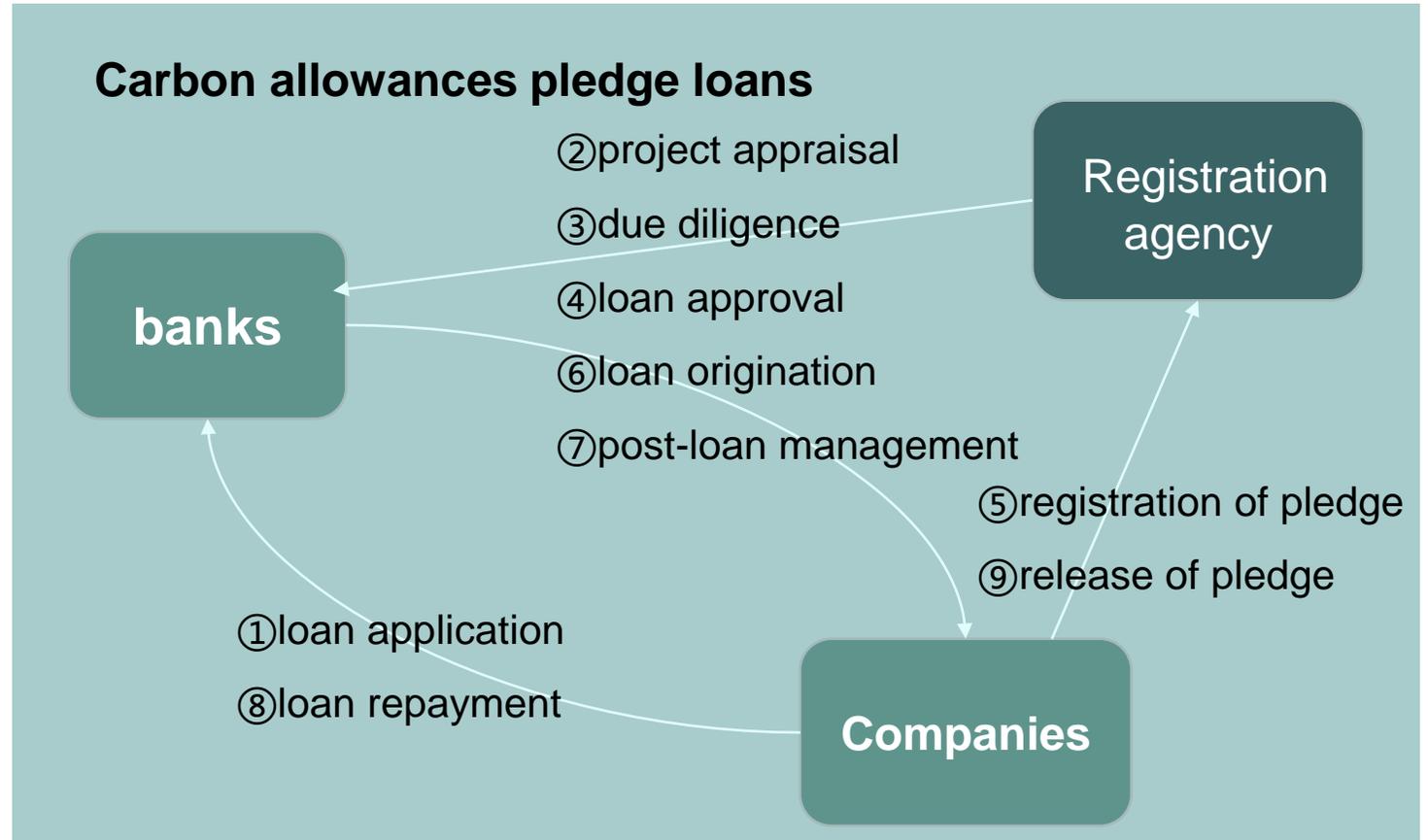
- ◆ **carbon financing instrument:** Carbon finance products that use carbon assets as the underlying for various types of capital financing.
- ◆ **carbon trading instrument:** A financial contract based on carbon emissions trading with carbon allowances and credits as the underlying.
- ◆ **carbon supporting instrument:** Financial products that provide quantitative services, risk management and product development for activities such as development and management of carbon assets and market trading.

Carbon assets pledge loan

Since the launch of the national carbon market, **more than 27*** provinces and autonomous regions have conducted **carbon asset pledge financing**.

Includes:

- CEA pledge loan
- CCER pledge loan
- Carbon sinks pledge loan



* According to IIGF statistics

Carbon Allowance Linked Debt Financing Instrument

Anhui Energy Group Co., Ltd. fourth ultra-short-term financing bonds (carbon assets) for 2022

Highlights: The floating profit is the profit from carbon assets, which is linked to the value from 7,000 tons of carbon allowances held by the issuer on the date of disposal, and is listed and traded on China national ETS.

Carbon Asset Pledge Debt Financing Instrument

Datang International Power Generation Co., Ltd. 2022 Fourth ultra-short-term Financing Bonds

Highlights: Carbon allowances of the issuer's three subordinate branches are pledged assets, and the value of the pledged assets is about RMB 66 million.

CCER-linked debt financing instruments

CGN Wind Power Ltd. 2014 Phase I medium-term Notes

Highlights: Adopt the "fixed rate + floating rate" mechanism. The coupon floating rate is tied to the CCER revenue generated by the issuer's five wind projects.

Carbon insurance: Insurance products that are developed to reduce the risk of default during development or trading of carbon assets

- ① Carbon delivery insurance
- ② Carbon credit price insurance
- ③ Carbon asset financing guarantee



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Climate finance pilots

Progress made in the climate investment and financing pilots

The Climate Investment and Financing Guidance states in “Guide and Support Local Practices in Climate Investment and Finance” :

Initiate Climate Investment and Finance Local Pilots

Select regions with strong will to implement, with better basic conditions, with a potential driving force and being representative, to carry out climate investment and finance pilots with investment policy guidance and strengthened financial support.

On 21/12/2021, the MEE together with other Ministries and financial regulatory departments, compiled the Notice of the Pilot Work on Climate Investment and Financing .

The first batch of reported 3 new national-level zones

In February 2021



The first batch of climate investment and financing pilot applications - 30 places

In January 2022

The pilot list was released

In August 2022

A total of **23 climate investment and financing pilots** were approved, including 12 cities, 4 districts and 7 state-level new areas

1. Preparation of pilot plans



Guide the pilot localities taking local contexts into consideration, prepare the pilot work plan and pilot implementation plan. Establish cross-sectoral work coordination mechanism, clear division of responsibilities, detailed timeline and road map (led by the MEE, and relevant departments according to the division of responsible functions).

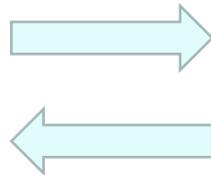
2. Curb the “two high” projects’ blind development

Provinces and cities have proposed several measures including: establishment of “two high” project lists, classified disposal, energy budget management, energy saving potential exploration, etc.

SHANDONG

carbon emissions
accompanying
proposed projects

Replace



- Shutting down enterprises or switching to product line with lower emissions
- Phasing out outdated production capacity and reducing excess capacity
- Replacing fossil energy with renewable energy and clean electricity
- Other ways

Various innovative practices by pilot cities

Qingdao

- Building a local **climate investment and financing project library**
 - over 100 climate mitigation and adaptation projects up for selection
 - currently including 20 projects with total project investment of RMB 11 billion and financing requirement of RMB 3.5 billion
- Actively strengthening the **“government – enterprise – financial institution” cooperation**
 - led by local government’s departments of finance and environment
 - banking institutions granted over RMB 3 billion in credit and nearly RMB 1 billion in loans for 9 climate investment and financing projects

Wuhan

- Wuhan Wuchang District brings together two important **infrastructures of the carbon market to attract financial resources**
 - National Carbon Market Registry; Hubei Carbon Emissions Trading Center
- Relying on rich financial resources gathered by the climate finance pilot, Wuhan plans to build:
 - **a core hub** of the national carbon market; to be **a national carbon financial center**

Lishui

- Different from other pilots, Lishui's carbon emissions have been at the lowest level, with net greenhouse gas emissions reaching **a negative level of -135.23 million tonnes** in 2019.
- Emphasizing **Eco-product value realization**
 - promote innovation in carbon sink products
 - publishes “Three-Year Action Plan for Carbon Sink Eco-Products Value Realization”



Thanks