

China’s national Carbon market: sector expansion

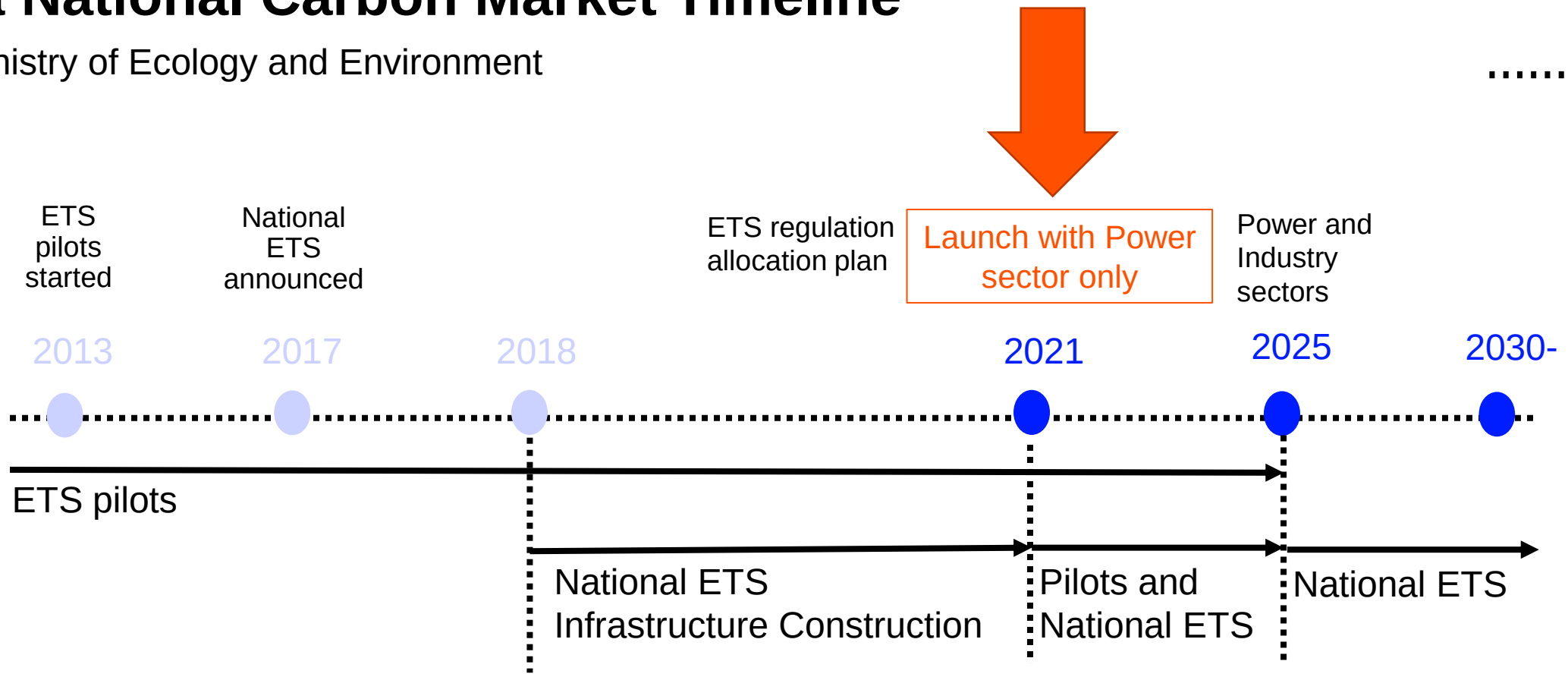
Yan Qin, Lead Analyst, Refinitiv

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IEA-IETA-EPRI workshop 13 October 2021

China National Carbon Market Timeline

MEE: Ministry of Ecology and Environment



2021: 2162 power enterprises (2225 on the list), 4.5 Gt emissions/yr

The 8 pilots will run in parallel with national ETS for some years (until 2025 likely)

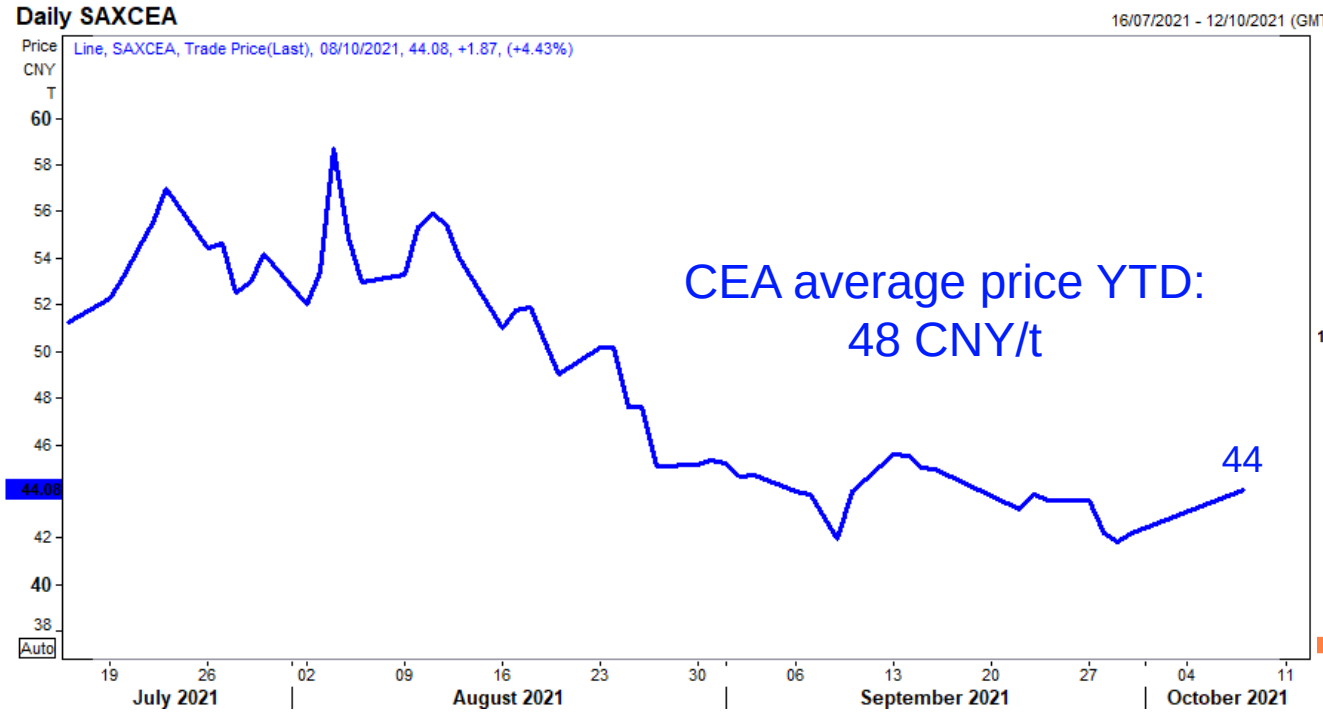
- Shanghai (Trading platform for national ETS)
- Hubei (National ETS Registry)
- Beijing (CCER)

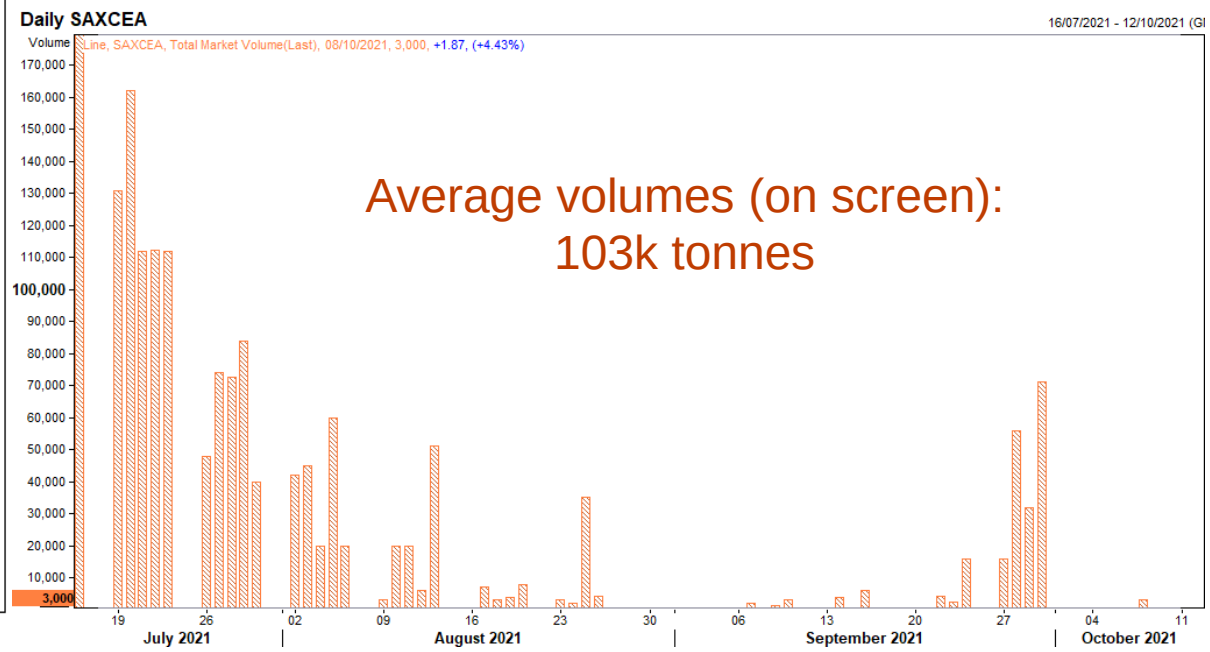
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China national ETS price between 40-60 CNY/t so far

- Spot trading only, 100% free allocation
- Only covered enterprises allowed in trading
- 31 December is compliance deadline

- 4.1 Mt on 16 July
- A few OTC trades: *8.4 Mt on 30 Sep*





Source: Refinitiv Eikon, Shanghai Environment and Energy Exchange

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The ETS is a core instrument in achieving China's climate pledge

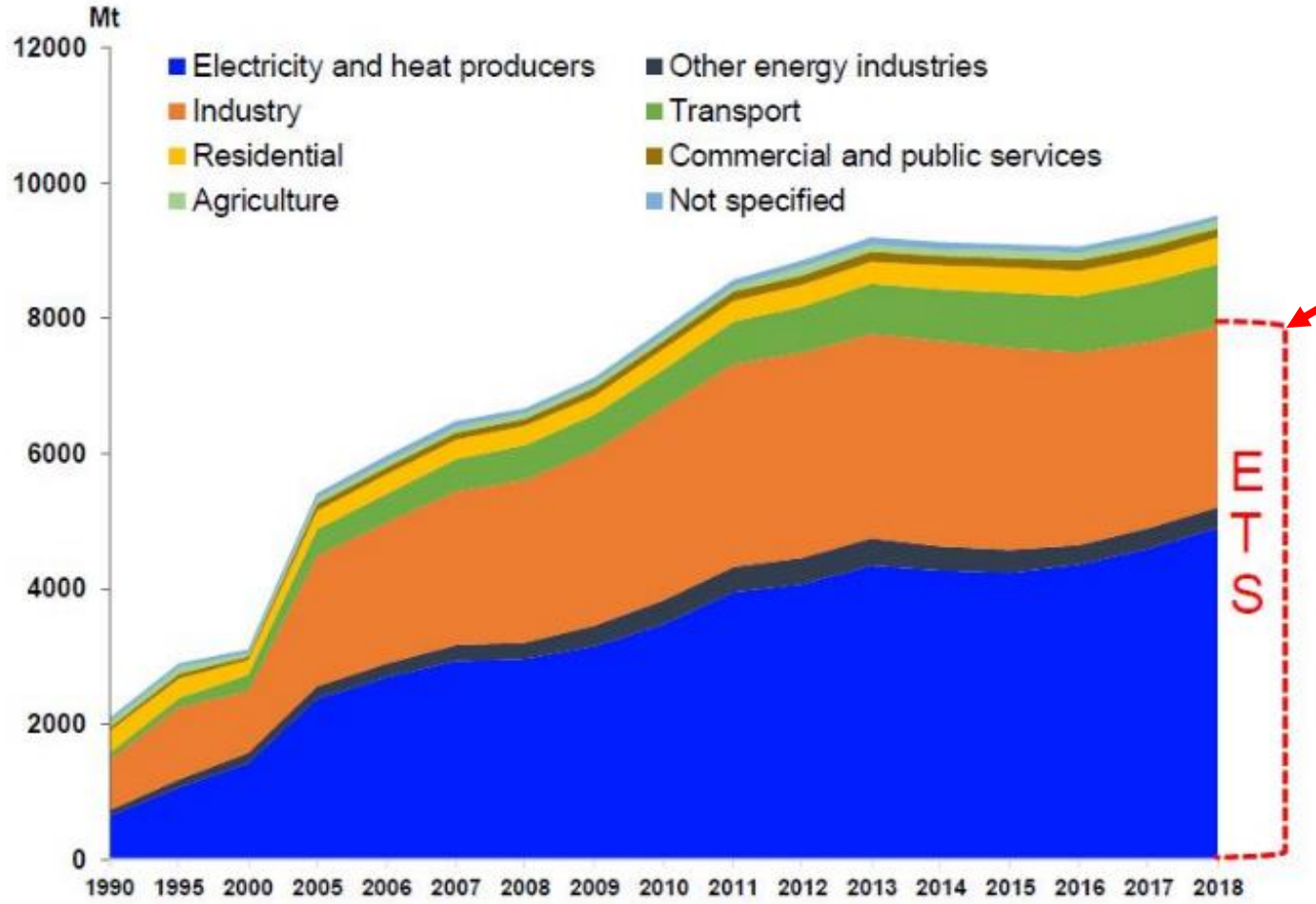


Figure 9: China CO2 emissions by sector and potential coverage of ETS (Source: IEA)

Power and Industry:
80% of China's CO2 emissions (~10 Gt in 2020)

- 6 industry sectors shall be included in ETS by 2025
- Industry associations all tasked by MEE to facilitate inclusion in ETS

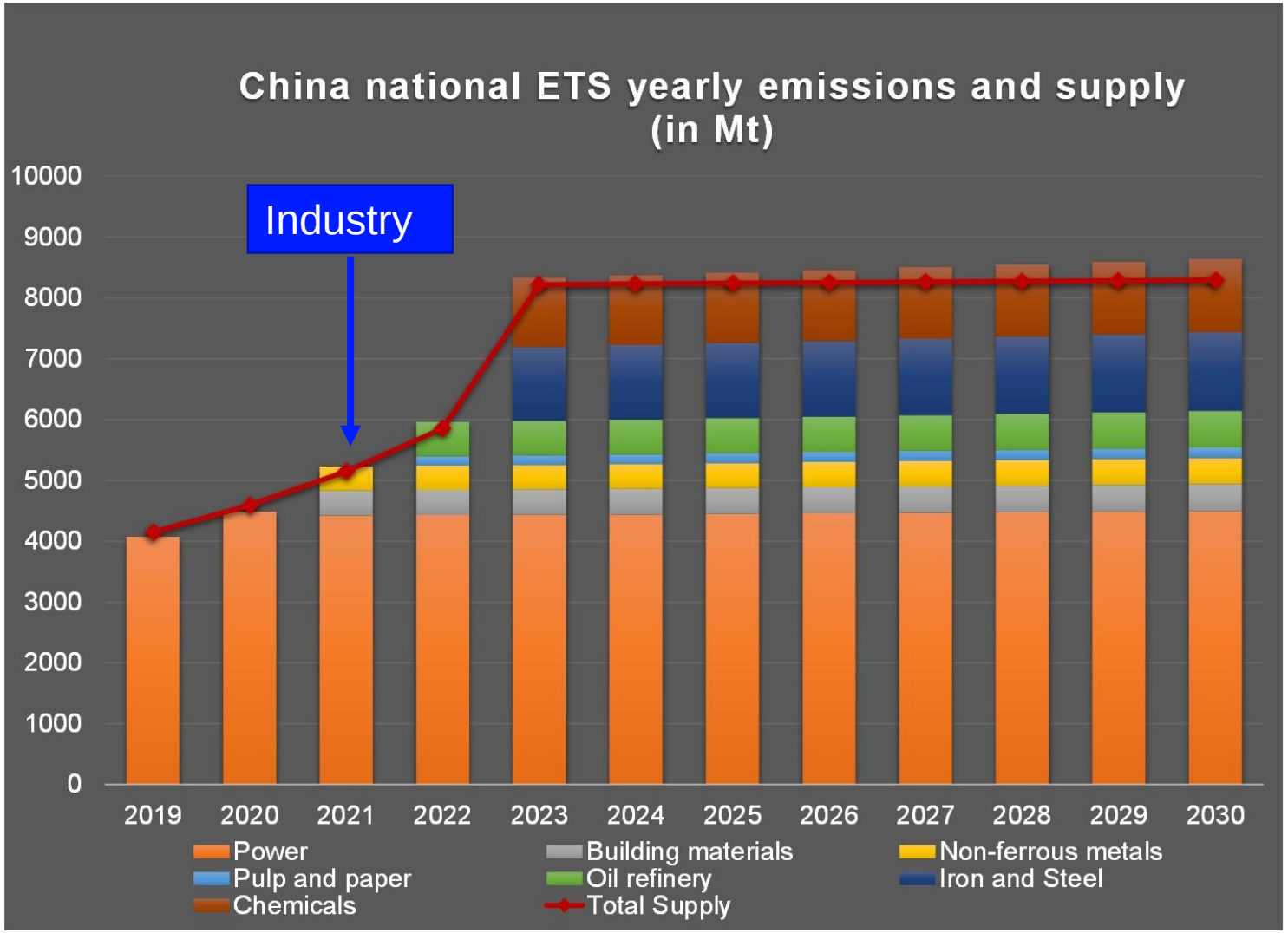
Building materials
Non-ferrous metals
Pulp and paper
Refinery
Iron and Steel
Chemicals

*Excl. Aviation (CORSIA etc.)

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Cement, Aluminium likely to be included in 2022, Steel and other sectors will follow

.....but the pace depends on data collection and benchmark calculations



Refinitiv Base Assumptions

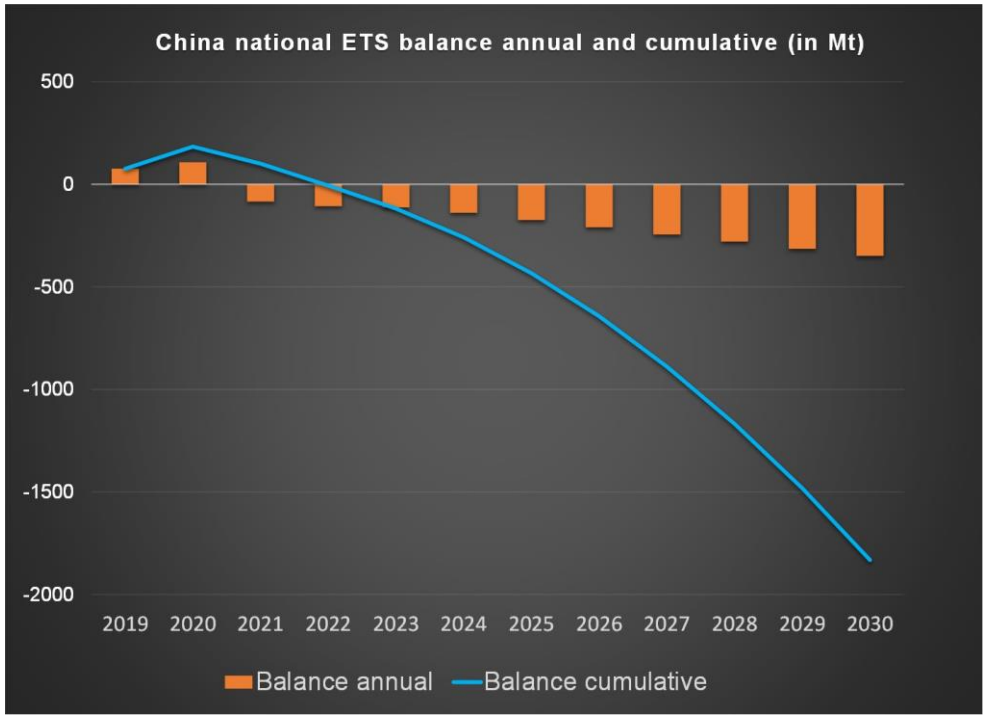
Industry sector	Included in ETS
Building materials	2022
Non-ferrous metals	2022
Pulp and paper	2023
Refinery	2023
Iron and Steel	2024
Chemicals	2024

8000 enterprises in 2025

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China National ETS Yearly Price Forecast: starting from 40 CNY/t and rising to 160 CNY/t in 2030

- We expect Power sector abatement cost to set the prices, and rather relaxed benchmarks for industry (carbon cost burden concerns)
- Decline in benchmarks per year (Intensity-based target)



*exclude CCER from balance calculation (*2021: 5% of compliance obligation*)



ETS Balance and Yearly average price based on Refinitiv Carbon Research team's fundamental China Carbon market model

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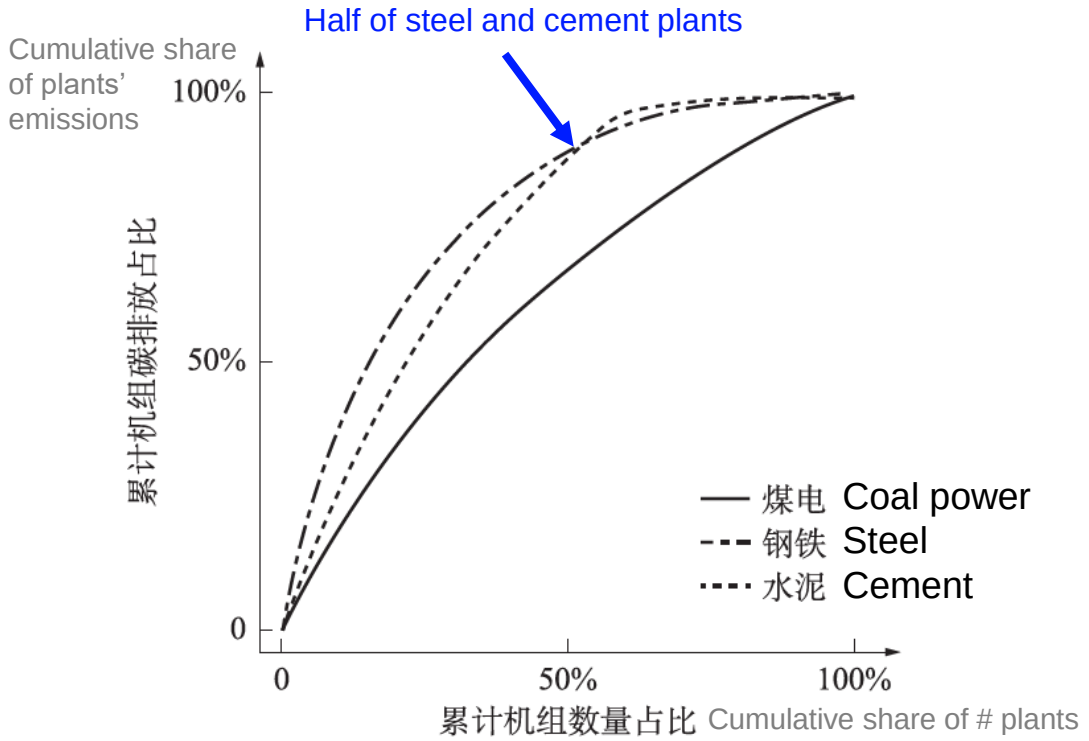
Large uncertainties regarding expansion to industry sectors, but unlikely to affect ETS prices

- Might be 1-2 years delayed than our base case timeline
- Depending on the progress of data collection and benchmark calculations
- Pressure from EU CBAM (speeding up Steel sector?)

Industry sector	Included in ETS
Building materials	2022
Non-ferrous metals	2022
Pulp and paper	2023 ?
Refinery	2023 ?
Iron and Steel	2024 ?
Chemicals	2024 ?

- Bigger emitters only? State-owned enterprises only?
- 8000 enterprises

  -----> 5000 enterprises (60% of total CO2 emissions)



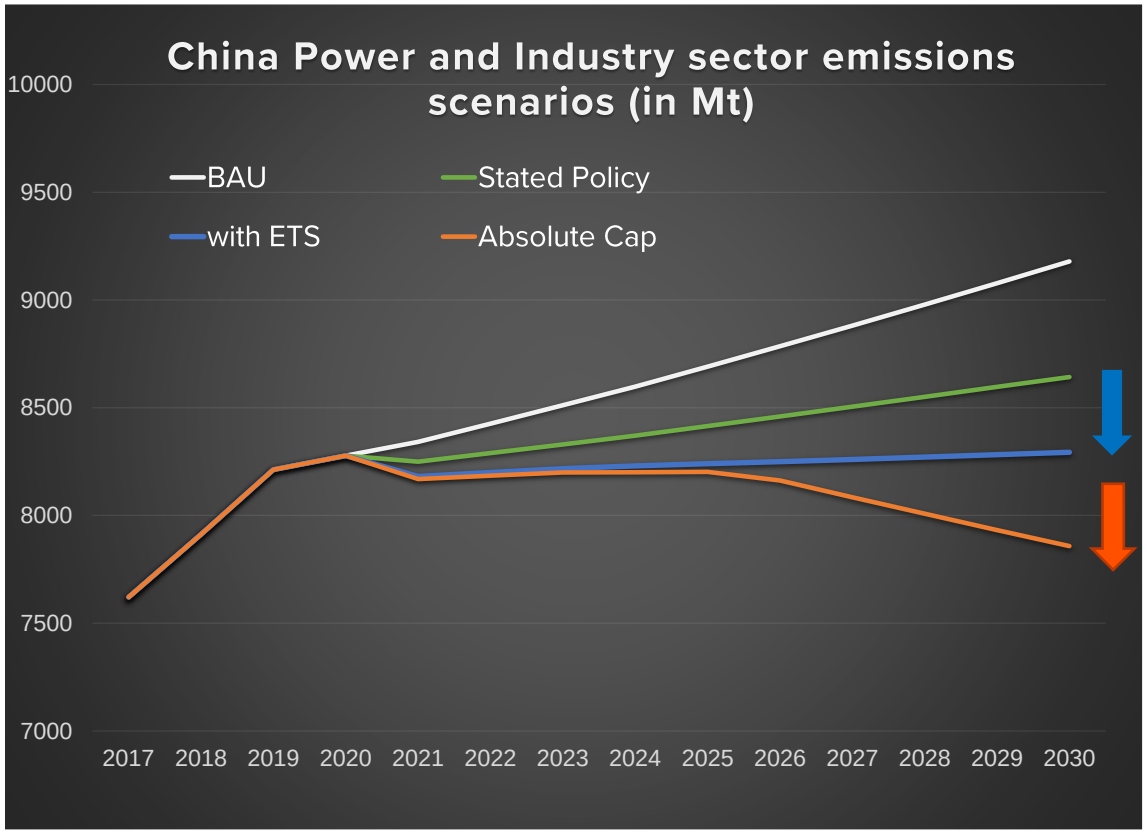
Source: "The Carbon Emission Status and Emission Reduction Positioning of Key Industrial Sectors", C. Wang et al. March 2021

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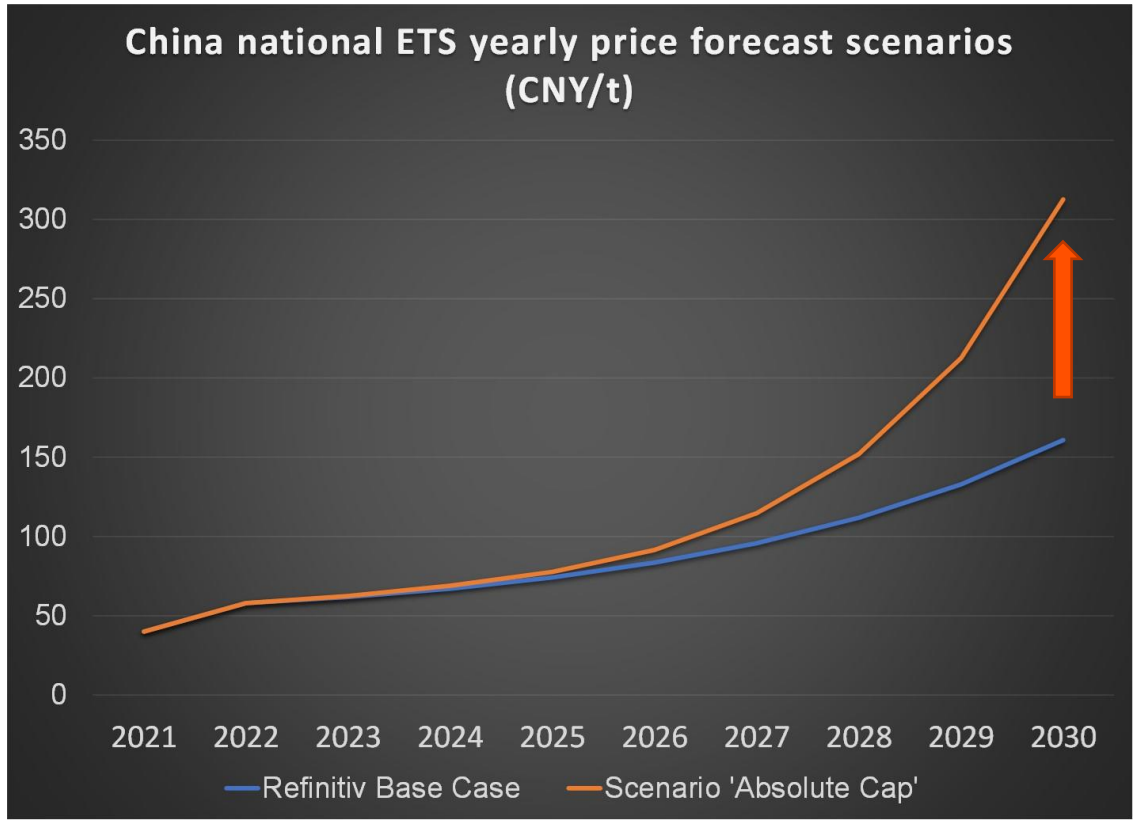
China ETS switching to Absolute Cap could double allowance prices and drive more emissions reduction

ETS could reduce emissions additionally 200-300Mt/year

Absolute Cap could reduce further 300-400 Mt/year



With Absolute Cap implemented from 2025, ETS allowance price expected to double to above 300 CNY/t in 2030 (€40)



**Stated Policy include all the implemented and proposed measures under the 14th Five-Year Plan and 2030 Carbon Peak targets, such as renewables target, sectoral emissions reduction pledge and carbon peak pledge.*

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Thank you!

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