

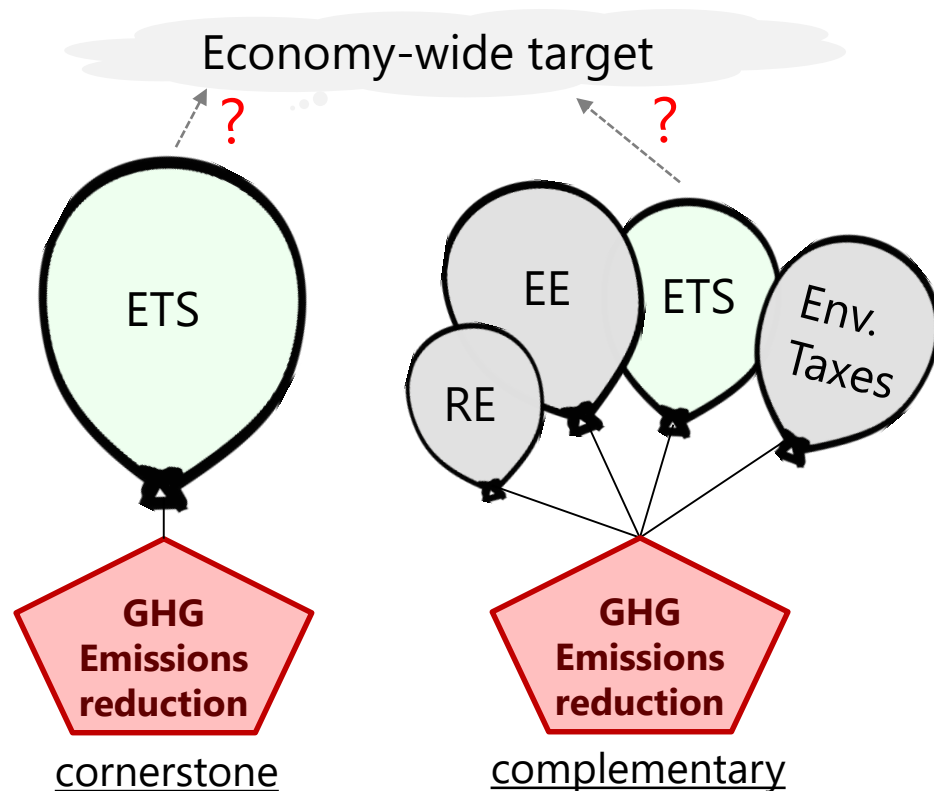


National ETS role and challenges to drive China's low-carbon energy transition

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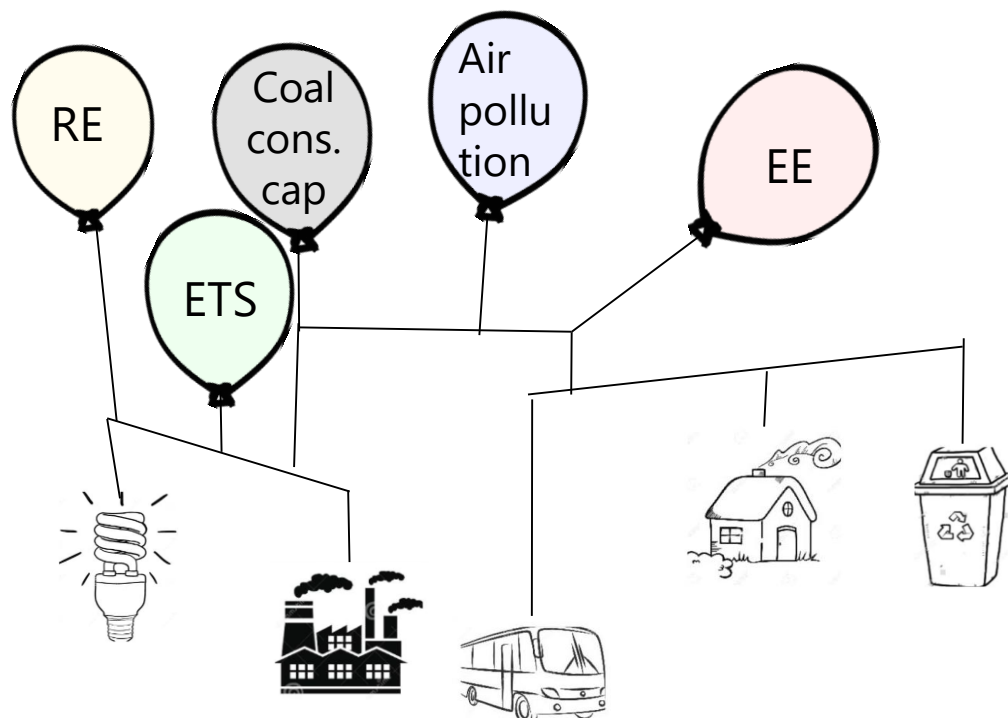
18th IEA-IETA-EPRI Annual Workshop on Greenhouse Gas Emission Trading, Nov. 2018, Boulogne, Paris

- At COP23, IEA Executive Director requested by Chinese climate envoy Xie Zhenhua to assess China's ETS and its interaction with wider energy policies
- Project objectives
 - Map China's low carbon policy landscape
 - Draw on international experiences in understanding and managing the role of ETS within the wider policy mix
 - Examine interactions between ETS and China's policy mix
- Outputs
 - Report on international ETS lessons relevant to China's national ETS (Summer 2018)
 - Joint China-IEA expert workshop (beginning 2019)
 - Analysis on interaction between ongoing power sector reform and ETS development (TBC, 2019)



- Role and function of an ETS varies across jurisdictions (cornerstone vs. complementary)
- Link with broader emissions reduction targets:
 - ETS contribution in economy-wide GHG targets (NDC)
- ETS role and function can evolve over time

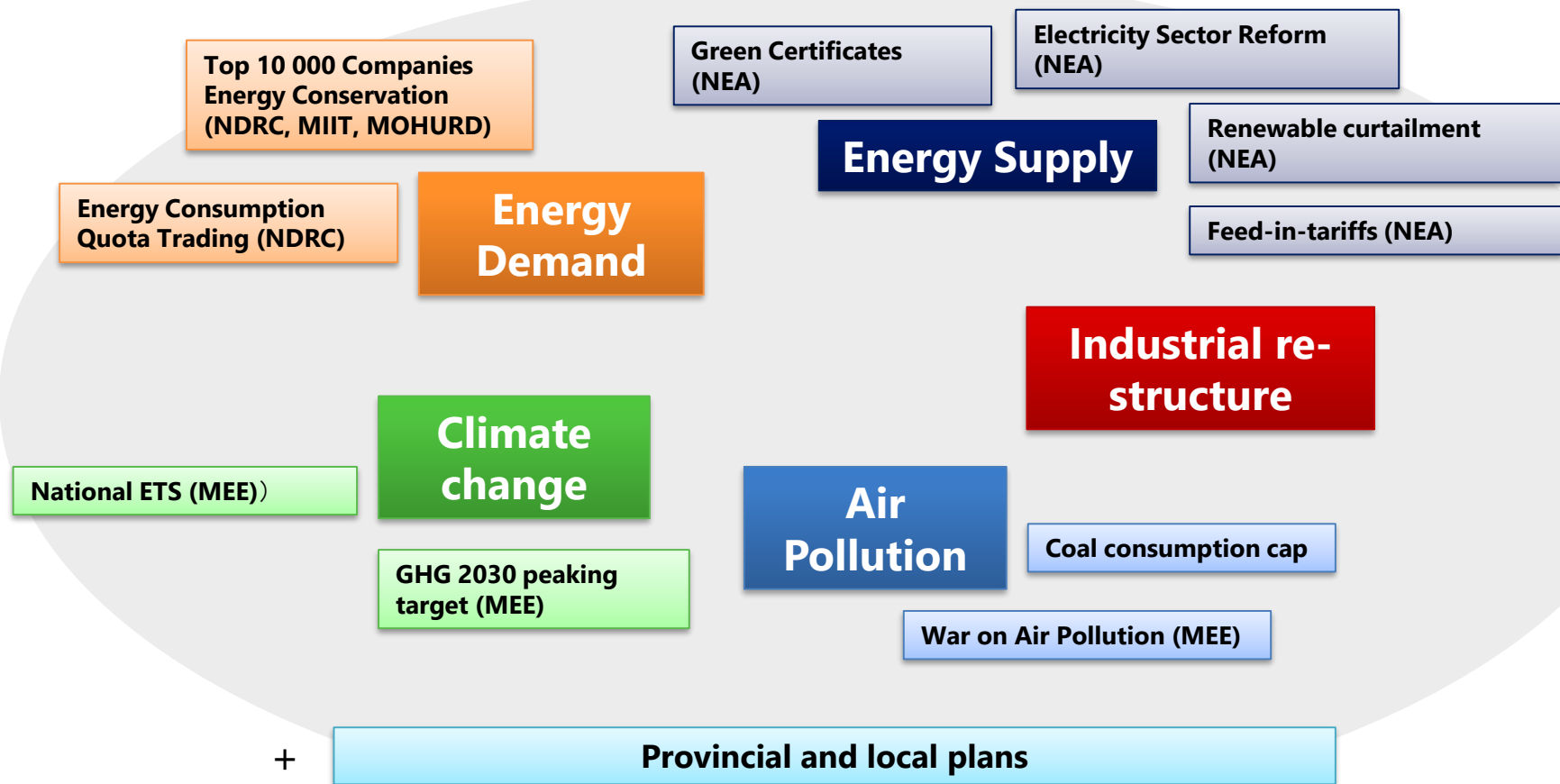
- What role and function for a national ETS within China's energy and low-carbon policy landscape?
- How will ETS's role and function change over time?
- How can the ETS cap be aligned with broader GHG targets?



Horizontal policy interactions

- “Horizontal” policy interactions between sectors responding to different targets and policies
 - Renewable energy and energy efficiency policies.
 - Flexible mechanisms
- “Vertical” interactions across jurisdictions
 - Between national, provincial and city levels

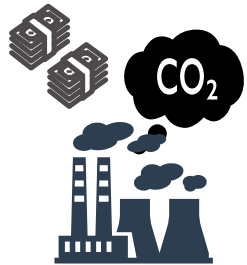
Overview of climate & energy policy package in China



- How will the ETS interact with other policies? (including air pollution, renewable energy, energy conservation, economic restructuring, and power reform)
- How will the initial ETS cap consider the existence and evolution of these interacting policies?
- What mechanisms will be used to promote ETS flexibility and predictability over time?
- How will ETS design consider regional and local objectives and address regional distributional impacts?

Competitive market

CO₂ cost

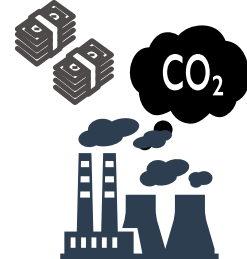


Cost pass through

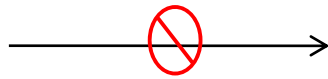


Regulated electricity price

CO₂ cost



No impact on price

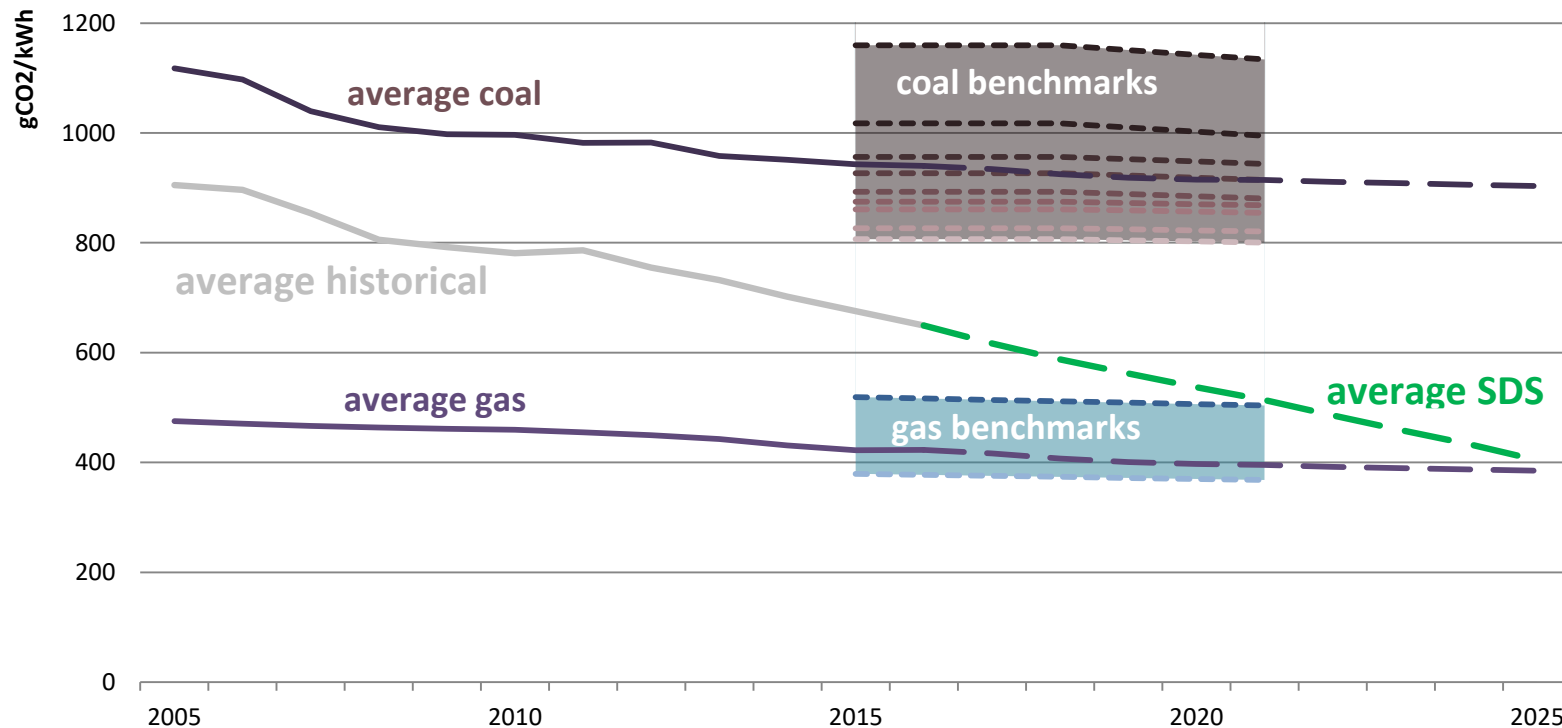


Indirect
CO₂ cost



- Adapting ETS design to different electricity market structures:
Liberalised vs regulated retail electricity price and dispatch
 - Actively intervening in competitive markets to address responses to the ETS
 - Including indirect emissions in the ETS cap to drive end-user response and expand ETS coverage

Average intensity for coal, gas and total power sector, and benchmarks...



Source: ECC analysis based on WEO2017

Benchmarks are a good starting point to continue the efforts of increasing the efficiencies of coal- and gas- fired power plants, but to reach a continuous decrease of the CO₂ intensity, further action is needed

- How will China's ETS design be adapted to its electricity sector structure?
- To maintain both effectiveness and efficiency of the ETS, how will the carbon price signal be reflected in power plant dispatch decisions?
- Will the carbon price be reflected in end-user prices?
- How can power reform and ETS development be mutually supportive?

- Carbon pricing plays a critical role in the policy mix for energy sector decarbonisation...
.... but understanding its role, and how it layers with other policies, can be complex.
- Having clarity on what you want the ETS to achieve is critical as it will affect design choices.
- ETS can work most efficiently and effectively with electricity dispatch based on time-of-delivery. Power reform is therefore key for the full functioning of the ETS, but ETS can also provide the appropriate signals to achieve full-functioning power reform.
- The geographical distribution of coal power plants and the coordination between national and province/regional level is going to be key to the success of the power reform and of the ETS.
- Future IEA work in this area:
 - IEA **Clean Energy Transition Program** supports emerging economies in developing and implementing their low carbon strategies, including carbon pricing policies
 - IEA is happy to deepen its cooperation with China on the national ETS



Thank you

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