

## **Stakeholder Views on Interactions between Low-carbon Policies and Carbon Markets in China: Lessons from the Guangdong ETS**

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China's nationally determined contribution (NDC) to the 2015 Paris Accord is to lower carbon dioxide intensity by 60-65% from 2005 levels, peaking greenhouse gas emissions by around 2030. Although China has not adopted mandatory national emission abatement targets, initial steps towards a national carbon market have been taken through a set of seven pilot regional carbon emission trading systems.

Learning lessons from existing emission trading system is crucial in designing a cost-effective national ETS in China. The EU allowance price experienced high volatility in phase I (2005-8) and Phase II (2008-12); the widely-held views of the causes include permit over-allocation, the global financial crisis, and regulatory uncertainty. Recent studies find that overlapping public policies such as renewable policies also explain the price plunge. If a country adopts a stringent mandatory policy to promote low-carbon technologies through parallel energy and low carbon policies (such as an ambitious renewable obligation target, a mandatory energy efficiency program, or a high carbon tax), the marginal abatement cost curve (MACC) would shift to the right and thereby significantly lower the carbon price visible in the ETS market.

Although previous studies suggest parallel low-carbon policies could influence allowance prices in the ETS and send industry the wrong signals, there has been little work on the potential interactions between low-carbon technology support policies and the pilot ETSs in China and on related stakeholder beliefs. Meanwhile, it is critically important to investigate stakeholder views on the Chinese carbon market and their perceptions on policy interaction because policy construction would benefit from greater participant confidence, which would contribute to wider public acceptance.

Therefore, we conducted a survey with a focus on the interaction of low-carbon and energy policies interaction in China, by which we hope can open the discussion and provide policy-makers with a better understanding of some of the built-in biases and perceptions of key actors as they formulate new energy and low-carbon incentive mechanisms. We employed a two-stage survey consisting of a questionnaire and follow-up interviews. 100 internet-based questionnaires were sent out to stakeholders involved in the Guangdong pilot ETS in June 2014, followed by semi-structured telephone interviews with a subset of 10 respondents for a deeper understanding of stakeholder views in August 2014.

As the economic and energy consumption growth momentum was still expected to be strong, half the stakeholders in this study considered a deep cut in emissions in the next decade unlikely. Stakeholders from the government sector generally were more hopeful of success in slashing GHG emissions in China in the future, and they were far more confident than industrial and academic stakeholders in the potential of carbon pricing in China.

Academic stakeholders tended to consider the progress of ETS development in China to be slow, and generally felt pessimistic about Chinese carbon markets due to over-allocation in the market and imperfect auditing regulations, even though their expectations of the future market price in Guangdong pilot were relatively higher compared with other stakeholders.

Analogously, industrial stakeholders also showed negative perceptions, as concerning the impact of the economic cycle on carbon allowance prices. There was a trend that industrial stakeholders who expected the carbon price to fall are far more than others. Possible reasons for the negative attitudes could be explained by proposed challenges discussed before: such as incomplete MRV (monitoring, reporting and verification) system, or many enterprises haven't been fully aware of the benefits produced by carbon markets, they consider participation in the market as merely fulfilling the need for governments' encouragement, social responsibility or corporate strategy.

There is relatively limited understanding of how other mechanisms might affect the price of carbon allowances. In theory, both a new carbon tax and a more stringent renewable target would shift the abatement curve to the right thereby reducing the allowance price. In our survey however, many stakeholders believed that renewable targets would dampen the carbon price, but a majority expected a carbon tax to actually boost the carbon price seen in the market. Most academic respondents recognized that interactions between the carbon market and other energy and low-carbon policies may decrease "demand" in emission trading markets (three of four leading academics surveyed expressed such concerns), and more than one third of respondents considered the interaction to be a significant challenge.

Stakeholder understanding of mechanism interaction is associated with the time claimed to be spent working on energy saving and emission reduction policies. Among respondents who spent more than 70% of their working time on climate change-related policies, two out of three could identify the policy interactions, while only half of respondents who spent less time (20%-50%) could recognize the conflicts and none of those who spent less than 20% of time recognized the potential problems associated with the policy interactions.

Our findings suggest there are still some important unresolved issues confronting the new national system. It would have been more desirable if in the process of implementing the national ETS, the Chinese authorities were able to learn lessons from the pilot systems. The lack of transparency in disclosing market information, a lack of knowledge among market participants, and an immature MRV system pose uncertainties for carbon markets. The inability of many stakeholders to understand that other low-carbon and renewable policies would reduce the price in the carbon market, reflects the need for greater capacity development among industry participants.

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