

China Carbon Pricing Survey 2013

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Abstract

This paper summarises results from the inaugural China Carbon Pricing Survey. The survey elicited expectations about the future of China's carbon price from China-based experts on carbon pricing and carbon markets during July to September 2013. The results indicate confidence that all seven of China's pilot schemes will be under way by 2015, with prices rising over time and having an effect on investment decisions; however there is significant uncertainty about price levels. There is strong confidence that China will proceed to introduce national emissions trading, probably in conjunction with a carbon tax. Carbon price levels are expected to rise, in time exceeding those currently prevailing in the EU emissions trading scheme. A large majority of respondents expect that China's 2020 emissions intensity target will be achieved or surpassed, and almost all expect further targets to be adopted in 2025 and 2030, possibly in the form of absolute limits on emissions.

Keywords

Carbon pricing, emissions trading, carbon tax, public policy, expert survey, China

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[China Carbon Forum](#) (CCF) is a non-profit organisation that provides an independent, neutral platform to engage stakeholders in China's climate change sector. CCF prepares research and organizes focused events to discuss climate change issues in specific sectors, including invitation-only networking events, research, and policy consultations to discuss removal of barriers to emissions reductions, and to develop a more climate resilient society. Contact for CCF: Mr. Hugh Kater, hughkater@chinacarbon.info

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Executive summary

This is a summary of results from the inaugural China Carbon Pricing Survey, jointly conducted by the Centre for Climate Economics and Policy at the Australian National University, and China Carbon Forum, a Beijing-based independent organization with the objective to foster trust and cooperation among China's stakeholders for climate action.

The survey, undertaken from late July to early September 2013, elicited expectations about the future of China's carbon price from 86 China-based experts on carbon pricing and carbon markets. The survey is a collective "best guess" by these experts. It is by nature not representative, both because it is not possible to create a representative list of experts, and because of self-selection of those who chose to respond to the survey. However it does provide a clear indication of dominant expert views on the likely future for China's carbon pricing.

The results indicate confidence that China's seven pilot emissions trading schemes (ETS) will be implemented, with prices rising over time and influencing investment decisions, however there is significant uncertainty about price levels. There is strong confidence that China will proceed to introduce national emissions trading, probably in combination with a carbon tax. Carbon price levels are expected to rise, in time exceeding those currently prevailing in the EU ETS. A large majority of respondents expect that China's 2020 emissions intensity target will be achieved or surpassed, and almost all expect further targets to be adopted in 2025 and 2030, possibly in the form of absolute limits on emissions.

The ETS pilots

The survey indicates that experts anticipate that all seven pilot schemes will become operational, although with further delays, and that price levels, while differing between the schemes, will rise quickly.

Over 80% of respondents expect that all seven ETS pilots will be in operation by the end of 2015, but almost half expect that this will not be achieved by the intended period of 2013-2014.

The average expected carbon price across all the ETS pilots that are in operation is RMB 32/t in 2014; RMB 41/t in 2016; and RMB 53/t in 2018. However there is significant uncertainty about price levels. The lowest 20% of responses expect prices of less than RMB 30/t in 2018, while the highest 20% expect prices higher than RMB 80/t in 2018.

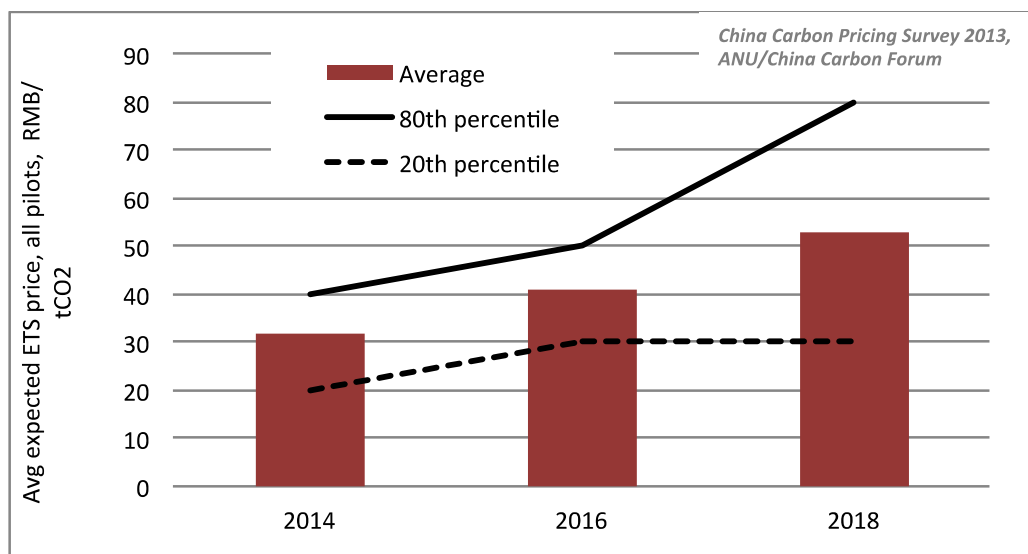
On average, ETS pilots in Shenzhen, Shanghai, Beijing and Guangdong are expected to start sooner, and have higher carbon prices, than the schemes in Tianjin, Hubei and Chongqing.

With respect to the impact of the pilots on investment decisions, 84% of respondents expect them to affect investment decisions, although most expect this effect to be either 'moderate' or 'marginal', rather than 'strong'. Respondents to the Chinese language version of the survey were more confident that investment decisions would be affected.

EXECUTIVE SUMMARY

Average prices in the pilot schemes are expected to rise, but price levels are highly uncertain

Question: What average carbon price do you expect to apply in the pilot schemes that are in operation, on average during 2014, 2016 and 2018 respectively?



National carbon pricing

The survey indicates clear expectations that China will follow through with its commitment to a national ETS, probably in conjunction with a carbon tax. Half of the respondents expect a national ETS to be in place at or before 2018, and over 80% believe a national ETS will exist by 2020.

Almost 60% expect that by 2020, both a national ETS and a carbon tax will be in place. Only 1% of respondents expect that China will never adopt a national ETS, while 15% expect that China will never adopt a carbon tax.

Price expectations meanwhile vary greatly between experts, suggesting that there is uncertainty about the nature and stringency of ETS and the response of the economy. Reflecting this uncertainty, many respondents (almost one third) chose not to provide price estimates.

For the national ETS, the average price expectation (factoring in no scheme and zero price expectations from some of the respondents) rises steadily from RMB 29/tCO₂ in 2018; to RMB 51/t in 2020; and RMB 68/t in 2025. The expected Chinese national ETS price in 2020 (equivalent to EUR 6/t) is above today's EU ETS price and just below the price of EU 2020 futures.

The average expected carbon tax level rises from RMB 7/t in 2016 to RMB 32/t in 2025.

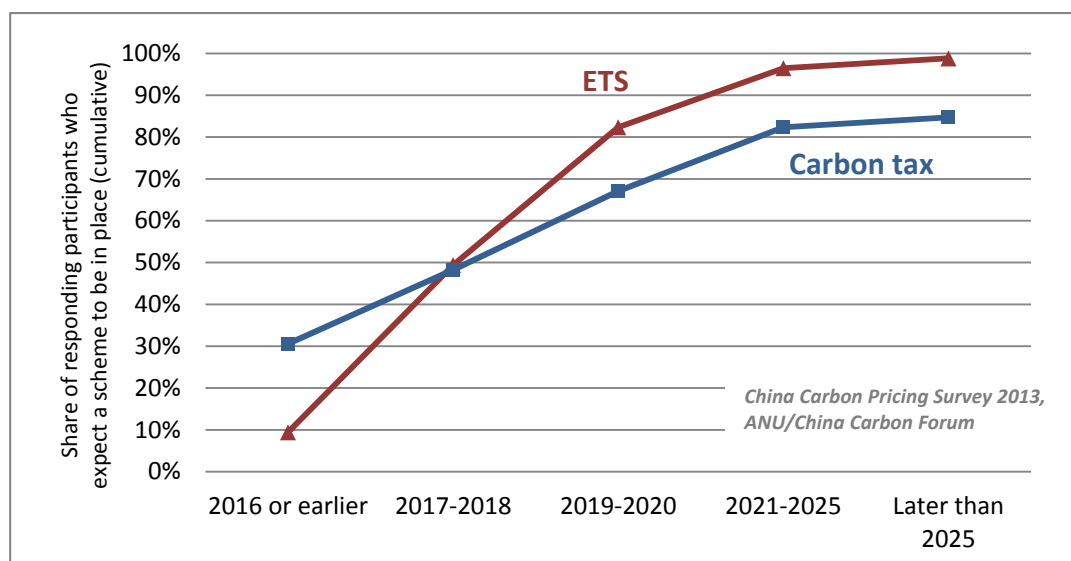
The combined average expected carbon price from ETS and carbon tax in 2020 is RMB 70/t (EUR 8.50/t, \$11.50/t). The majority of respondents expect the overall price of carbon in China to be lower than the EU ETS until 2020, however by 2025 a majority expects China's carbon price to be similar to or higher than the EU ETS price.

Over two thirds of respondents expect that by 2025, China's ETS will be linked with one or more emissions trading schemes in other countries.

EXECUTIVE SUMMARY

Both a national ETS and carbon tax are expected to start by 2020

Questions: When do you expect that a national emissions trading scheme will start? By when do you expect that a national carbon tax will be in operation?



China's emissions targets

The survey indicates strong confidence that China's 2020 emissions target will be achieved or surpassed, that there will be post-2020 targets, and that there is an increasing likelihood of an absolute target replacing the intensity target approach.

The large majority of respondents (87%) expect that China will achieve or surpass its 2020 emissions intensity target of a 40-45% reduction in the ratio of emissions to GDP compared to the year 2005. Respondents to the Chinese language version of the survey were more confident of this than respondents to the English language version.

95% of respondents expect new targets to be adopted for 2025 and 2030. Over two thirds of respondents think that the 2030 target will be an absolute target, and almost half expect that an absolute target will already apply at 2020.