

ChinaFAQs

The Network for Climate and Energy Information



Does China need a cap-and-trade program in order to begin reducing emissions?

POLICIES TO REDUCE GREENHOUSE GAS EMISSIONS: DIFFERENCES BETWEEN CHINA AND THE U.S.

U.S. legislation to reduce greenhouse gas (GHG) emissions is focused on establishing a “cap-and-trade” system. Some Americans wonder why China’s carbon reduction policies look different than those of the US and question whether these other mechanisms are comparable or effective.

In China, the current capacity of financial markets and central regulatory systems is vastly different than in the United States, and, by implication, so are climate mitigation policies available to Chinese policymakers. The state of China’s industries, markets and environmental regulatory agencies indicate that targets and quotas, green taxes and incentives — all tools being used effectively by Beijing today (see ChinaFAQs fact sheet: “Energy and Climate Policy Action in China”) — may be both appropriate and efficient mechanisms for GHG emission abatement in China.

This type of pluralistic approach is actually envisioned in the international agreements conceived under the UN Framework Convention on Climate Change of which the US and China are both participants. An action plan agreed upon in 2007 introduced the concept of “measurable, reportable and verifiable” policies. Many of the policies that China uses might be considered under this type of framework.¹

For example:

- **Targets and quotas:** China has implemented a wide variety of environmental and energy targets and quotas. This reliance on targets to achieve and measure outcomes is seen in all sectors of Chinese policy. Whether mandating the number of senior centers to be built, university seats to be added or rail lines to be laid, the central government uses targets and quotas to ensure that local and regional officials are held accountable to central policies. The resulting familiarity with simple quantitative policy mechanisms has made the implementation of energy efficiency targets easier than would have otherwise been possible.
- **Taxes:** Several of China’s tax structures, including its vehicle and value added taxes, have been designed with energy and environmental outcomes in mind (See ChinaFAQs fact sheet: “Energy and Climate Policy Action in China”). Although China does not have the necessary emissions tracking mechanisms and infrastructure in place to administer an emissions tax or cap, these taxes have proven the government’s ability to track consumption and industrial output. This suggests that straightforward taxes on energy sources may be more appropriate initially than a cap on GHG emissions.

Since such taxes can be administered directly to a limited number of energy companies, China can take advantage of existing institutions to enforce its policies. Proving its willingness to encourage changes in energy consumption through taxes, China increased fuel taxes on gasoline and diesel on January 1, 2009.ⁱⁱ

ENFORCEMENT CAPACITY LIMITATIONS ON CARBON-REDUCTION POLICIES IN CHINA

In addition, there are technical and market capacity limitations in China that could hinder reliance on a cap-and-trade system in the near term.

- **Financial incentives and penalties:** China has had a long history of using financial carrots and sticks to encourage desired outcomes (See ChinaFAQS fact sheet: “China’s Measurement and Compliance”). Due to centralized control of the banking sector, the government has a unique ability to encourage climate-conscious investment practices through a combination of favorable and punitive lending policies. For example, China invested US\$12 billion in renewable energy capacity (excluding large hydropower) in 2007, second only to Germany.ⁱⁱⁱ Conversely, China’s new green credit policy punishes heavy polluters by limiting bank lending to companies with heavy pollution and high energy consumption. Since July 2008, 12 such companies have been banned from obtaining loans. In Jiangsu province alone, more than US\$137 million in loans have been called in from companies that failed environmental assessments by the local Environmental Protection Bureau.^{iv}
- **Technical capacity:** A cap-and-trade system depends on sophisticated monitoring and verification programs that China simply does not have in place today. Even at the most general level of reporting, Chinese GHG data is inadequate. Whereas the United States prepares annual GHG inventories to quantify domestic emissions and China reports quarterly energy use, China has only submitted a single national inventory of its greenhouse gas emissions to the UN Framework Convention on Climate Change.^v Chinese industry and government partnerships are now designing emissions calculators and registry programs. Establishing these programs and building the capacity to verify the data will take several years. For example, China has spent the past fifteen years developing its sulfur dioxide emissions monitoring and compliance system, and in recent years conducting experimental sulfur trades. After years of development and some difficult growing pains, there is a push among environmental policy advisors for the Chinese government to establish a national sulfur dioxide cap-and-trade program in the power sector, starting in 2011.^{vi}

- Market maturity:** China's financial markets are not as mature as U.S. and European markets, given their short history and limited scope. Cap-and-trade makes sense when underlying market structures already exist. American exchanges will provide a reliable environment for trading allowances, offsets and financial derivatives to hedge compliance and energy costs. In comparison, China's markets may not have the necessary liquidity or maturity to allow companies to benefit from the efficiencies of cap-and-trade regulation. China's stock markets are small and a sideline to the real economy. China's futures market is even more immature. As a result, traders in a new derivative, such as an emissions credit, would not necessarily have the sophistication to identify real from false claims, and the immaturity of the monitoring system suggests there would be many unreliable reports. Finally, in a country with a sophisticated financial system there are real cost savings in relying on it in part to absorb the enforcement costs. Given that China's tax and industrial oversight structures are more developed, the cost savings are likely to be realized by using these structures rather than financial structures.

There is no question that China needs more accurate entity and national level emissions accounting. However, the government has demonstrated that it can accomplish a considerable amount of carbon mitigation even as it develops better accounting. Until that accounting is developed, and until its financial markets further develop, China is not

in a position to implement an effective national cap-and-trade system. However, it is experimenting with limited local or single sector cap-and-trade programs, which can inform future climate policy options.^{vii}

This fact sheet is a product of ChinaFAQs, a joint project of the World Resources Institute and experts from leading American universities, think tanks and government laboratories. Find out more about the ChinaFAQs Project at: <http://www.ChinaFAQs.org/>.

Notes

ⁱ For further detail both on how China's national plan might be considered within such a regime and on the negotiating positions of China and other countries, see WRI Working Papers at <http://www.wri.org/project/cop-15>.

ⁱⁱ People's Daily, December 6, 2008, <http://english.peopledaily.com.cn/90001/90776/90785/6548233.html>.

ⁱⁱⁱ Xinhua News Agency, China focus: China takes responsible attitude to climate change and environmental protection, April 2008.

^{iv} More Efforts Needed to Implement Environmentally-Friendly Loan Policy," Xinhua, February 13, 2008.

^v See China's Initial National Communication on Climate Change: <http://unfccc.int/resource/docs/natc/chnnc1e.pdf>. China is currently preparing its second national communication. WRI and other organizations are working in China today to build local capacity for undertaking rigorous GHG accounting programs WRI's efforts involve intensive work in a number of heavy industry sectors and are described at www.ghgprotocol.org.

^{vi} Wang Jinnan statement at China Council for International Cooperation and Development Workshop, Sept 8, 2009.

^{vii} Shai Oster (11/11/08), "China Expands Markets for Emissions Trading" <http://online.wsj.com/article/SB122636062518315545.html>.

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