China

THE CLIMATE GROUP

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Prospects for Carbon Trading in China

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The Context

Comments from Chinese officials on a carbon trading system have caught the full attention of the international community. Last August, Xie Zhenhua, Vice Chairman, National Development and Reform Commission (NDRC) stated that "Setting up carbon exchange centers is the way we must go (in the future)."[i] Following on this statement, there have been many conflicting accounts on the potential for a carbon trading system in China, leaving many businesses and observers puzzled. This briefing aims to provide a succinct review of the discussion currently taking place in China.

The primary motivation for a carbon trading scheme in China is to continue improving energy efficiency while pursuing economic growth. China's experience under the 11th five year plan (2006-2010) in allocating energy efficiency goals by province and selecting which power plants to shut down has proved difficult. As a result, a market-based approach has gained popularity as a potential better way forward. To a lesser degree, China is also motivated by the generally positive experience with the Clean Development Mechanism (CDM). China is the source of 51% of CERs issued globally. The China CDM Fund, the government body that invests the money earned from the sale of CERs generated in China, has almost $1 billion to invest in clean technology projects in China. This amount is expected to increase to $1.5 billion by 2012[ii].

Will It Happen?

How likely is it that China will go forward with a carbon trading system? And if the country were to adopt a carbon trading system, when and where would it start? In October, 2010, during its fifth plenary session, the 17th CPC Central Committee approved the proposals for formulating the development plan for the next five years (2011-2015) including a statement that the country "will gradually establish a carbon emissions trading market"[iii]. The proposal needs to be formally adopted and approved but the nation is moving forward with steps to establish a carbon market.

China is currently examining the advantages and disadvantages of sector-specific and economy-wide systems as well as the comparative experiences of other nations, especially in the EU. Active steps to determine those advantages and disadvantages include establishing pilot programs. Carbon trading pilot programs are highly likely to start in three areas of the economy: 1) Low-carbon pilot regions (chosen from amongst the nationally recognized five low carbon provinces and eight low carbon cities), including Guangdong province proposal to establish a regional carbon trading pilot program amongst eleven of its cities[iv]; 2) Energy intensive industry sectors like

electricity, chemicals and oil, most likely starting with electricity; and 3) State-owned enterprises[v].

Further positive signs of China's movement towards establishing a carbon trading system include a recently held workshop in Beijing, co-hosted by the European Commission (EC) and the NDRC (following on the first workshop in July co-hosted by The Climate Group and the EC) where European representatives shared Europe's experience with the EU emissions trading system (ETS).

Under the next five year plan, China will run pilot trading programs, address existing barriers and explore various system designs. Whether or not China will decide to move from considering carbon trading to implementing it will depend largely on the economic impact pilot trading systems have on the Chinese economy. The hope is that a carbon trading system will be economically advantageous compared to the administrative method used in the 11th Five-year-plan. The latter allocated energy intensity reduction goals by province and asked provincial leaders to shut down inefficient plants which can result in uneven GDP and job loss within sectors and between provinces. If carbon trading can help China meet its energy efficiency goals in a more cost-effective and politically popular way than dividing reduction goals by province, it will likely move forward.

What Are The Challenges?

China already has some existing infrastructure in place to run a carbon trading system, including designated third-party verification (determined by the NDRC) for measuring pollution like Sulfur Oxides (SOx) and energy consumption, as well as over 20 environmental exchanges with the largest in Beijing, Tianjin and Shanghai.

However, it is clear that a lot of groundwork needs to be laid before China can formally establish a fully functioning domestic carbon trading system, including:

1. **Electricity price reform**: Most fundamental (but often overlooked) in establishing a carbon trading system in China is having an energy/electricity market where power plants have the ability to purchase electricity at varied price levels. The wholesale and retail prices of electricity are currently set by the NDRC, which is good for reliability and supply but would limit the ability of a power plant to make low cost emission reductions. Power plants will need more flexibility in fuel sources and price to reduce emissions efficiently and effectively.

2. **Building capacity**: One of the main challenges for China is inadequate capacity and lack of experience to implement and oversee a domestic carbon trading system. The financial exchanges, NDRC, and financial institutions are actively building this capacity through research and information sharing. China's CDM Fund is currently working with its partners to determine which sectors are best to be included in a carbon trading system. Like many nations, the electric power sector is a likely candidate as it is consolidated into "the big five" (Huaneng, Datang, Haidian, China Power Investment Corporation, and Guodian) and provincial owned power producers, so ease of implementation is good relative to other industries. Involving China's banks in the development of the trading system is beginning, but needs to be accelerated.

3. **Strengthening data collection, energy monitoring and reporting**: Measurement, reporting, and verification (MRV) of emissions in China has been central to international climate negotiations and press coverage, but moved from a controversial debate to constructive and cooperative discussion at COP16 in Cancun leading many to believe it

can and will be overcome in the next few years. In fact, China said at the fourth-round of the UN climate talks in Tianjin last October that it is working on an up-to-date, national greenhouse emission database, the first publicly-available database to include provincial level data since 1994[vi].

Conclusion

China is experimenting with market based instruments to meet its energy policy goals and China is moving towards adopting a carbon trading system as one of the primary instruments it will use to meet its carbon intensity goal. China's main concern is pursuing sustainable economic growth and balancing the structure of the economy. Exploring the effectiveness of carbon trading is a logical next step in China's energy efficiency efforts. There are challenges that can and will be overcome. While carbon trading is no panacea for reducing China's emission, the diversity of energy intensity within sectors and between provinces makes a domestic carbon trading system a good fit for China.

Contact

For more information, please contact:

Xia Wu
Head of Communications, China
T: +86 10 64403639
F: +86 10 64403749
xwu@theclimategroup.org

Sasha Tenenbaum
Communications Manager, North America
T: +646-912-8034 **F**: +646 861 4606
stenenbaum@theclimategroup.org

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[ii] Bloomberg News, October 22, 2010, http://www.bloomberg.com/news/2010-10-22/china-cdm-fund-to-have-1-5-billion-for-clean-energy-projects-by-2012.html
[iii] http://news.xinhuanet.com/politics/2010-10/27/c_12708501.htm
[iv] http://news.163.com/10/1213/23/6NQQNRFK00014AED.html
[v] http://www.caijing.com.cn/2010-12-23/110600841.html
[vi] iv China Dialogue, October 13, 2010, http://www.chinadialogue.net/article/show/single/en/3870