

World's Largest Carbon Market Is Scheduled for 2020 Launch in China

China is developing a nationwide carbon-trading scheme which, when launched, will be the world's largest — twice the size of the EU's Emissions Trading System and nearly nine times the size of California's. The new system will help China meet its emissions and renewable energy targets that are part of its Nationally Determined Contribution pledge under the Paris Agreement.

The December announcement from Beijing was greeted in the United States with excited praise from climate activists and skepticism from conservatives. The most reasonable assessment lies between those two extremes.

China's system will begin with the electric power sector only, but eventually will also include building materials, iron and steel manufacturing, non-ferrous metal processing, petroleum refin-

China is serious about climate change and is methodically working out a robust system

ing, chemicals, pulp and paper, and aviation. Importantly, the system will not be a cap-and-trade system per se (unlike the CO₂ trading systems in Europe and California), because there will not be an administratively set mass-based cap of some quantity of emissions. Rather, the trading system will be rate-based, meaning that it will be in terms of emissions per unit of electricity output.

This is also called a *tradable performance standard*. The government sets a performance benchmark of emissions rate per unit of output, sources receive permits (or allowances) based on their electricity output and their benchmark, and sources are allowed to trade. By regulating the rate rather than the mass of emissions, the standard may help mitigate political concern about constraining economic growth, but it does so by rewarding

higher levels of emissions through subsidies. Hence, this approach is inefficient compared with a mass-based cap-and-trade system.

The problems are exacerbated with China's system because the performance standards are set not only by sector, but by sub-categories of electricity production within the sector. As some categories are, in effect, subsidized by other categories, the cost-effectiveness of the overall system declines. There is a lack of incentive for the carbon market to move energy consumption from coal to natural gas, for example, because of the multi-benchmark approach.

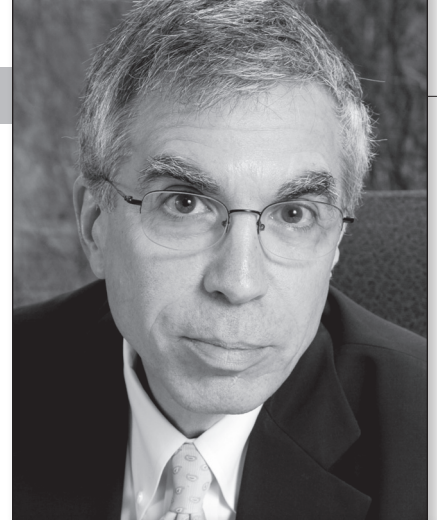
Finally, it appears that allowances will be allocated without charge, at least in the early stages of the program. This has been typical of emissions trading systems in other parts of the world, and may lessen political resistance, but it

also will sacrifice potential efficiency gains associated with auctioning allowances and recycling revenues by cutting distortionary taxes.

Despite these limitations, the announcement marks a significant step along the long road of climate change policy developments. The new system will eventually be very important, because of its magnitude and because of the importance of China in global CO₂ emissions and climate change policy.

More broadly, the announcement and the eventual launch of the system will have significant effects on other governments around the world — regional, national, and subnational. Some will be encouraged to launch or maintain their own carbon trading systems, and to increase the ambition of their systems.

A frequently stated fear of adopt-



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ing climate policies, including carbon pricing, is the competitiveness effects of those policies, due to emission, economic, and employment leakage. Since the greatest fear in this realm is that domestic factories will relocate to China, that concern will be greatly reduced — or at least it should be — when and if China has put in place a serious climate policy, whether through carbon markets or otherwise.

So, the best assessment of this new policy lies somewhere between the extremes. The December announcement by Beijing was neither as exciting as some of the applause from climate activists might suggest, nor was the announcement as meaningless as conservatives have claimed.

Rather, cautious optimism seems to be in order. China is serious about climate change, and is thinking long-term. The country appears to be methodically working to develop a meaningful carbon-trading scheme. What is important now is developing a robust system that can be effective, expanded in scope, and gradually made more stringent.

Development of the system has begun, with the real launch of trading likely to take place in 2020, which is a key year for Chinese climate policy for other reasons, as well. In that year, China will release its next Five-Year Plan, and it will submit its updated Nationally Determined Contribution to the United Nations under the Paris Agreement.