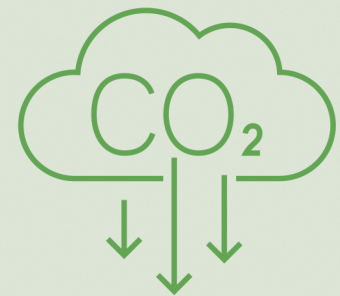


# Do carbon credits spell new opportunity for emissions producers?



By Douglas Almond and Shuang Zhang

**F**or many enterprises, the threat of carbon emissions has not always been apparent. As such, they rarely have the incentive to act to reduce emissions.

As part of China's national carbon emissions trading scheme, large carbon emitters are assigned an emissions limit. If a company's actual emissions fall below the permitted level, their saved credits become assets and can be used to generate revenue via the trading scheme.

Last year, China announced it would reach peak carbon emissions by 2030 and become carbon neutral by 2060. A trading scheme is a sensible approach, as it will give companies greater incentive to participate if they can benefit financially from it.

Of course, it is a tremendous challenge to include companies in this scheme. Nevertheless, China's willingness to take positive measures sends a clear message about its commitment to the environment.

China's carbon emissions trading scheme is the result of long-term planning and development. Here are some of the key dates and steps taken:

**2010:** China initiated the carbon emissions trading scheme programme.

**2013:** Shenzhen, Shanghai and Beijing were included as pilot cities.

**2014:** Chongqing, Guangdong, Hubei and Tianjin were included in the pilot.

**2016:** The second pilot phase began in July 2016 in the locations listed above.

During the first pilot phase (2014–2016), the inclusion (or exclusion) of an area in the pilot scheme had little effect on its atmospheric visibility. However, starting from the second phase (post-2016), a greater improvement in atmospheric visibility was observed in the pilot areas compared to that in non-pilot areas.

In Guangdong, for example, the pilot covered four industries: coal-fired

power plants, petrochemicals plants, steelworks and cement plants. Enterprises in these industries emitted over 20,000 metric tons of CO<sub>2</sub> annually between 2020 and 2012. Prior to adopting the carbon emissions trading scheme, the atmospheric visibility in the areas surrounding regulated companies was similar to those areas with unregulated enterprises. In the first pilot phase, the atmospheric visibility was about the same between the two groups; however, in the second phase, the atmospheric visibility in areas surrounding regulated enterprises improved by approximately 4%.

The difficulty of scaling such a scheme up is enormous. For one, the pilot areas used are relatively more developed than other parts of China. In addition, since most of the big emitters in China are state-owned enterprises with relatively low levels of marketization, it remains a challenge for them to participate in market-based carbon emissions trading. In the future, it is predicted that less market-oriented areas will require more time for inclusion in the

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emissions trading scheme.

In short, the launch of a national carbon emissions trading scheme is an important step forward, but there is still a long way to go with enormous challenges ahead.

It is essential to include state power companies in the national carbon emission trading scheme. Because electricity consumption and carbon emissions are somewhat positively correlated (the carbon emissions of e-commerce companies, for example, are primarily contributed by data centres housing high energy-consuming computers), major electricity consumers should also be included in the future.

In addition, more supporting measures must be put in place. For example, China currently places strict controls on the price of electricity. Once power companies are included in carbon trading, they will be compelled to use cleaner energy for power generation, inevitably leading to higher unit costs. However, if electricity pricing regula-

tion is not relaxed, power companies will be less profitable and therefore have no incentive to reduce emissions. Therefore, to promote the implementation of a carbon trading scheme, it is necessary to put electricity price reform on the agenda and ensure that electricity prices are driven by the market.

Finally, for those companies included in the national carbon trading scheme, it is important to embrace change and adjust existing perceptions of costs. In the past, companies were more concerned about their own costs and less so about pollution and other social costs. In the future, companies need to take full consideration of both and actively make use of this opportunity to promote the transformation of their business model and better respond to this grand challenge.