

# China's National Carbon Market: A Game Changer in the Making?

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As 2017 drew to close, China officially approved plans for its long-awaited national Emission Trading Scheme (ETS) and the National Development and Reform Commission (NDRC) outlined some of the implementation details<sup>1</sup>. Though it will be limited to the power sector (and combined heat and power, or CHP) at first, it will nevertheless be the world's largest carbon market. It is expected to cover 1,700 companies representing approximately 30% of China's total greenhouse gas (GHG) emissions. China's CO<sub>2</sub> emissions from fuel combustion amounted to approximately 8,796 metric tonnes of CO<sub>2</sub> equivalent (MtCO<sub>2</sub>Eq.) in 2016, and seem to remain stable since 2014, though they appear to increase again in 2017<sup>2</sup>. Shanghai should host the national market exchange, which will be jointly owned by the governments of other provinces while Hubei should host the registry<sup>3</sup>.

The ETS aims to support China in its climate plans, with the objectives to lower its CO<sub>2</sub> emissions per unit of GDP by 40% to 45% by 2020 from the 2005 level, and to peak CO<sub>2</sub> emissions by 2030 at the latest. As often in China, the leadership chose a "trial-and-error" approach by first experimenting new policies locally, as there are currently seven local experimentations and then broadening them to the national level. The local markets were launched in 2013 in the cities of Beijing, Shanghai, Tianjin, Shenzhen, Chongqing and the provinces of Guangdong and Hubei. These provinces and cities cover more than 25% of the national GDP, and 1,373 MtCO<sub>2</sub> Eq. These local markets have so far generated moderated emission trading and have had limited impacts on carbon emissions reduction. However, they remain experiments and the lessons learnt have been used to elaborate the national ETS<sup>4</sup>.

However, many uncertainties remain at the national level on the way the ETS will work. It seems that the government has chosen to keep a tight control over the scheme, preventing high carbon prices and using it to foster economic reforms. That being said, the announcement remains a very positive sign, with a potentially strong international impact.

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## Soft or failed start?

China's national ETS has left many key questions unanswered, and its announcement has significantly lowered expectations.

A first disappointment relates to the timeline and the international context. The political launch of the ETS was long prepared, and officially announced in a US-China Joint Presidential Statement on Climate Change, just a few months ahead of COP 21. Paragraph 12 announces that “China also plans to start in 2017 its national emission trading system, covering key industry sectors such as iron and steel, power generation, chemicals, building materials, paper-making, and nonferrous metals”<sup>5</sup>. In 2016, it was confirmed and even extended by the NDRC, with the inclusion of the aviation sector<sup>6</sup>. As 2017 came, expectations were high and rumours began to speculate about the launch date: first half of the year, November (during COP 23), or possibly early 2018. The announcement was finally made on December 18. Not only was China very close to its deadline, but most of the sectors initially mentioned had been dropped out. In addition, no official date has been announced for the actual start of the ETS, but many experts suggest that it will not happen before 2020 or later<sup>7</sup>. Indeed, the NDRC estimates that it will take about 12 months to build the whole system to which another year should be added in order to test the system<sup>8</sup>. Official reasons for the delay include valuation of permits traded on the local exchanges, as well as data accuracy and transparency issues<sup>9</sup>.

Has China missed its target and lost face with this limited scope and not yet functional ETS? Probably not. First of all, the announcement was made close to the end of the year, but still on time. Then, one could argue that by announcing its withdrawing from the Paris Agreement, the United States (US) has called into question a major incentive for China to agree to such a decisive step as the ETS. China could be willing to take distance from the joint-statement with the US. And including only one sector is still enough to make China's ETS the world's biggest carbon market. Still, one could ask why China made such a commitment, and why it respected the targeted date but not the sectors announced.

More importantly, the national announcement has left many key technical questions unanswered. Few details were announced in the

plan. Obviously, the government does not want to put pressure on the power sector with a high carbon price, but to create incentives for them to achieve more emission cuts. However, some important information is still lacking. This includes a clear agenda for the transition toward 1) a functioning national market for power, and 2) an ETS encompassing all sectors. More measures are also expected to improve transparency of the market. For instance, one measure would be to avoid considering company emissions data as commercial secrets, and authorising their release to the market. Another important step would be to clarify what a “cap-and-trade” system means for the Chinese government, as its ETS does not seem to have a true emissions cap: the current cap consists in a total of company-level expected emissions, which creates little incentives for companies to transition toward a low-carbon system. In addition, the national market will let provincial governments carry out the allocation for local companies. The role of the market remains to be clarified, especially as no penalty levels have been announced. Besides, a price containment mechanism is still to be set up. Finally, the plan also mentions that market access will only be available to power companies, and that they will only be allowed to trade spot permits, which is a significant limitation<sup>10</sup>.

China's ETS will also suffer from policy interventions. It is intimately linked with the political agenda, and the choice of power as the first sector to address is no coincidence. The ETS comes at a time when China is implementing (since 2015) a very large and ambitious power sector reform, which can be summarised in 4 points: 1) improved planning with the aim of addressing coal generation overcapacity issues; 2) reform of grid companies; 3) end of administrative allocation of entitlement of annual hours of production for each coal generator; and 4) reform of the wholesale markets. Some argue that the ETS could not function without this power reform<sup>11</sup>, which might actually be the exact reason why its actual implementation has been postponed. This could be a weakness for the scheme, and demonstrates how dependent it is on other policies and government interventions. More generally, the question of liberalisation remains: it is unlikely that China would give up its “command and control” policy approach anytime soon. This will inevitably influence the price of carbon, and some also fear a potential competition between the carbon price and subsidies from the national government for State-Owned Enterprises (SOEs)<sup>12</sup>.

## A time of political and economic risks

Political uncertainties and fear of loss of competitiveness may explain why China seems to have moved back from the ambitions shown in the 2015 US-China Statement. This bilateral cooperation move was agreed under President Obama and its Democrat administration. The US has since entered a new era, and President Trump has repeatedly mentioned tax cuts and barriers to Chinese exports. Under such circumstances, Beijing may consider that the ETS would impose a new financial burden on Chinese companies at a time when trade with the US may become more difficult. In this context, it is crucial to ensure that carbon prices are controlled.

The current situation of the Chinese political system may also explain why the ETS is developed this way. The 13<sup>th</sup> National Committee of the Chinese People's Political Consultative Conference (CPPCC) has probably clarified some of the recent political orientations, including on climate change, and the market should learn about these in the coming weeks. The main unknowns relate to the future role of the institutions established during the National People Congress (NPC) of March 2018. It was announced there that the Ministry of Environment Protection (MEP) is changing name to become the Ministry of Ecological Environment (MEE, *shengtai huanjing bu* in Chinese), and it is poised to take over the ETS management. This means important changes, as the MEE is to host some key climate change departments which were formerly under the NRDC responsibility.

These changes represent, according to Chinese official sources, a complete “re-adjustment of duties” in the field of climate change<sup>13</sup>. In addition, the NPC also announced the establishment of a Ministry of Energy<sup>14</sup>. The coming months and years will tell how this new institutional set up works, and whether the MEE takes over the leading role that the NDRC has played so far on climate change issues. Other issues include the legal challenges that the ETS creates, as the scheme is not sanctioned by the law, which so far made it difficult for the NDRC to impose penalties on companies<sup>15</sup>.

## A possible game changer with major domestic and international implications?

Therefore, the ETS announcement betrays a political will to control the carbon price as much as possible, and to use the ETS to serve a broad policy objective. Experts are confident that the power sector ETS should be in place by 2020 or 2021, and that carbon prices will rise as we get closer to that date. This will give enough time for the government to prepare the industry and improve green infrastructures. In the meantime, the local markets will continue to function, and probably broaden their scope as well as improve their transparency. The ETS will facilitate some reforms, accelerate some others and probably have an important international impact.

Europe is probably the region that is looking with the most interest at the Chinese experience, because of its own ETS. Europe's scheme includes the EU-28 as well as Switzerland, Liechtenstein, Norway and Iceland, and is considered as a frontrunner. However, the EU ETS is suffering from a number of issues, most notably a low carbon price (although it has slightly increased to €12 per tonne recently). So far, it creates little incentives to transition away from fossil fuels. In 2020, it should go through a major reform aiming at cutting quotas at a faster rate (from 1.7% to 2.2% per year) and set aside excess quotas in order to push prices up. However, this reform is often seen as too limited, and some advocate the introduction of a carbon price floor, as it is the case in the UK<sup>16</sup>. The EU played an important role in the development of China's ETS, as a number of EU experts worked with the Chinese government on the establishment of the new system<sup>17</sup>. Reforming and improving the EU system, could also have a positive impact on China's ETS, while, in return, China's experience and lessons learned could also ultimately benefit the EU, especially as Brussels could at some point consider an EU ETS focused uniquely on the power sector, in order to accelerate coal phase-out. Discussions are now taking place between the EU, China but also California on how to boost ETS cooperation and potential market linkages<sup>18</sup>.

China's market is also expected to influence other countries, most notably the so-called BRICS (Brazil, Russia, India, China and South Africa). The national ETS may create incentives for India to broaden its existing market-based initiatives and to adopt a carbon market. India has already established two market-based schemes that could

be used as a basis for a more comprehensive ETS: in 2009, it launched the Perform, Achieve and Trade (PAT) initiative that aims at energy savings in big industries<sup>19</sup>. The second mechanism focuses on respiratory solid particulate matters and was launched in 2011<sup>20</sup>. China's ETS could also influence Brazil, which until recently was said to be considering a cap-and-trade mechanism<sup>21</sup>.

Finally, China's ETS will also impact the whole international climate regime. It has been designed to support China's climate objectives and Nationally-Determined Contributions (NDC<sup>22</sup>) and therefore should also be considered in a broader climate context. The national ETS is a new mechanism supporting the international framework to fight against climate change, as stated in paragraphs 6.1, 6.2 and 6.4 of the United Nations Paris Agreement<sup>23</sup>. Importantly, the ETS puts forward key concepts in the climate regimes like report, verification, certification, openness, fairness, and justice. Paragraph 13 of China's NDC is also dedicated to a GHG emissions accounting system<sup>24</sup>, which puts the focus on transparency, another key component of the Paris Agreement. This ETS supports the Paris Agreement decisions, at a time when the whole process seems weakened because of the US withdrawal.

Despite all these unanswered questions, one certainty remains: the Chinese ETS will differ from the existing ones (and notably from the EU ETS). Depending on its actual results in the coming years, it might become a model for future carbon markets. It could be argued that China has rightly adapted the common ETS concept in order to make it compatible with its political and economic system. A Chinese ETS may not be free of political interventions and may lack transparency in its carbon price setting. But this does not mean that it will not be effective in reducing China's GHG emissions.

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10. C. Hard, “Is China’s Plan to Cut Emissions for Real?”, Atlantic Council, January 2018. During a private interview, a senior and respected Chinese expert said that 80% of the coal plants had already reached the targets set by the ETS. This means that exchanges will only occur between 20% of the plants: the best 10% of players selling to the worst 10%.

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