

CARBON MARKET BUSINESS BRIEF

CHINA

CHINA'S PILOT SYSTEMS AT A GLANCE

| | Beijing | Shanghai | Shenzhen | Guangdong | Hubei | Chongqing | Tianjin | Fujian |
|--------------------------|--|---|---|---|---|---|--|--|
| Years in operation | Since November 2013 | Since November 2013 | Since June 2013 | Since December 2013 | Since April 2014 | Since June 2014 | Since December 2013 | Since September 2016 |
| Overall cap & trajectory | Around 50 million tCO ₂ e in 2018 ¹ . | The 2019 cap was 158 million tCO ₂ e | Excluding buildings, the cap was around 31.45 million tCO ₂ e in 2015 | Around 465 million tCO ₂ e in 2019 and 2020 | Around 270 million tCO ₂ e in 2019 | Around 97 million tCO ₂ e in 2018 | Around 160–170 million tCO ₂ e in 2017 | Around 220 million in 2019 |
| Target(s) | 20.5% reduction in carbon intensity, compared to 2015, and pledge to peak its GHG emissions both by 2020 | Carbon intensity reduction of 20.5%, compared to 2015 by 2020 and to peak emissions by 2025 | 45% reduction in carbon intensity compared to 2005 by 2020. The city has also pledged to peak its emissions by 2022 | 20.5% reduction in carbon intensity, compared to 2015 by 2020, and pledge to peak emissions before 2030 | 19.5% reduction in carbon intensity by 2020, compared to 2015 | 19.5% reduction in carbon intensity compared to 2015 levels by 2020 | 20.5% reduction in carbon intensity, compared to 2015 by 2020 and pledge to peak its CO ₂ emissions by 2025 | 19.5% reduction in carbon intensity compared to 2015 by 2020 |

¹ It is estimated to be around this value also in 2018 and 2019, but exact number is not available.

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|-----------------------|---|---|---|--|---|--|---|--|
| Sectors covered | <ul style="list-style-type: none"> • Electricity providers • Heating Sector • Cement • Petrochemicals • Other industrial enterprises • Manufacturers • Service sector • Public transport • Domestic aviation | <ul style="list-style-type: none"> • Airports • Domestic Aviation • Ports • Shipping • Chemicals • Heat and power • Water suppliers • Hotels • Iron, steel and non-ferrous metals • Petrochemicals • Building materials • Paper • Railways • Rubber • Textiles • Large commercial shops | <ul style="list-style-type: none"> • Power • Water • Gas • Manufacturing Buildings • Port, subway, public buses and other non-transport sectors. | <ul style="list-style-type: none"> • Power • Iron and steel • Cement • Paper • Petrochemicals • Aviation | <ul style="list-style-type: none"> • Power • Industry | <ul style="list-style-type: none"> • Power • Iron • Steel and non-ferrous metals • Chemicals • Cement • Caustic soda | <ul style="list-style-type: none"> • Heat and electricity production • Iron and steel • Petrochemicals • Chemicals • Oil and gas • Paper, aviation, and building materials are included from 2019 | <ul style="list-style-type: none"> • Electricity • Petrochemicals • Chemicals • Building materials • Iron and steel • Nonferrous metals • Paper • Aviation • Ceramics |
| GHGs covered | CO ₂ | CO ₂ | CO ₂ | CO ₂ | CO ₂ | CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ | CO ₂ | CO ₂ |
| # of covered entities | 831, as of 2019. A further 14 aviation entities and 634 other entities have mandatory reporting but no surrender obligations. | 280 existing and 33 new entrant entities in 2020 | 706 as of 2020 | 245 existing plus 23 new entrant entities in 2020 | 373 as of 2020 | 180 as of 2019 | 113 in 2019 | 269 in 2019 and 2020 |
| Allocation method | Mix of free allocation and auction (except Chongqing, where units are freely allocated) | | | | | | | |

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| Trading rules | Public online bidding and agreement transfer (OTC, exceed 10,000 tonnes per deal). Compliance entities, China domestic investors and individuals are eligible to trade. | Public online bidding and agreement transfer (OTC, exceed 100,000 tonnes per deal). Only compliance entities and domestic investors can trade. | Trading is via fixed price transactions, electronic bidding ($\pm 10\%$ limit on the daily price) and bulk entrusted transaction (in excess of 10,000 tonnes per deal, $\pm 30\%$ limit on the daily price). Trading is open to compliance entities, international and domestic investors and individuals. | Public online bidding and agreement transfer (OTC, exceed 100,000 tonnes per deal). Local compliance enterprises, international or domestic brokers, funds, trusts and individuals are eligible to trade. | Public online bidding ($\pm 10\%$ limit on the daily price) and agreement transfer (OTC). Compliance entities, international or domestic brokers and individuals are eligible to trade. | Public online bidding and OTC trades. Compliance entities, international or domestic brokers and individuals are eligible to trade. | Trading is either via online spot deals or OTC trades. Compliance entities, international or domestic brokers and individuals are eligible to trade. | Entrustment trading, exchange trades, fixed price transfers, and OTC deals. Only local compliance entities and Chinese domestic investors can participate. |
| Use of offsets and linking | Domestic CCERs are allowed, up to 5% of the annual allocation. Of these, 50% must be from Beijing projects. Only CCERs from renewable energy, energy conservation projects and forestry carbon sink projects are allowed. | CCERs generated after 1 Jan 2013 can be used for 3% of the cap. (2020 Shanghai Allowance Allocation Plan | CCERs can be used for 10% of the annual compliance obligation. Hydropower project credits are not accepted, and there are geographic restrictions on the use of others. | CCERs are allowed. Credits from a provincial offset programme, Pu Hui Certified Emission Reductions (PHCERs), have been accepted since 2017. At least half of all offsets used must come from projects targeting CO2 or methane emissions, and at least 70% must come from projects located in the province. Credits from hydropower and most fossil fuel projects are not eligible. | CCERs can be used for 10% of the annual initial allocation for each entity. Only credits from rural biogas or forestry projects in the key counties under the national or provincial poverty alleviation plan (within Hubei) are eligible, and must have been generated between 1 January 2013 and 31 December 2015. | CCERs from 2010 onwards are allowed up to 8% of the compliance obligation, except for those from hydropower projects. | CCERs are allowed for up to 10% of the compliance obligation. They can only be from projects which target CO2 reductions, except hydropower, and must be of vintage 2013 or later. | CCERs from projects in the province and Fujian Forestry Certified Emissions Reductions (FFCERs) are allowed. The use of CCER credits is capped at 5% of the annual compliance obligation, whereas there is a cap of 10% for use of both credit types. Hydropower credits are not eligible. |

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| Other features | Banking is allowed. Borrowing is not allowed. The Beijing ETS authority can organise an auction if the weighted average price exceeds CNY150 (USD21.34) for 10 consecutive days, and buy back allowances if the price is under CNY20 for a similar period. | Banking is allowed both within and across compliance periods, with some restrictions. Borrowing is not allowed. | Banking is allowed. Borrowing is not. | Banking is allowed. Borrowing is not. | Banking is allowed, but only for allowances which have traded at least once. The government withholds 8% of the total cap in a market stabilisation reserve. | Banking is allowed, borrowing is not. | Banking is allowed, borrowing is not. | Banking is allowed, borrowing is not. |
| Penalties for non-compliance | Companies face fines up to CNY 50,000 for failing to submit emissions or verification reports on time. Those which fail to surrender enough allowances to cover their emissions face a fine of up to five times the average market price over the previous six months for each allowance short. | Fines for missing the deadline to submit an emissions report or verification report on time or for providing fraudulent information range from CNY10,000-50,000. Non-compliance can yield a fine of CNY 50,000-100,000, as well as still needing to surrender the missing allowances. Further penalties may also be imposed, such as noting on the company's credit record, public reporting, and losing access to special funds for energy efficiency measures. | Any participant submitting false information will be fined for the difference between reported and actual emissions at a rate three times the average price for the preceding six months. Further, the shortfall in surrendered allowances can be withdrawn from the company's account or deducted from the following year's allocation. | Penalties for failing to submit emissions or verification reports on time range from CNY 10,000-50,000. Companies which do not surrender enough allowances will have double the shortfall withdrawn from the following year's allocation and are fined CNY 50,000. Non-financial penalties include negative impacts on access to bank loans and subsidy programmes. | Penalties for failing to submit an emissions or verification report on time range from CNY 10,000-30,000. Any participant found to have manipulated the market is liable to a fine of up to CNY 150,000. Any company with a shortfall in surrendered allowances will have double the amount taken off the subsequent year's allocation and fined one to three times the average market price per unit, up to a maximum of CNY 150,000. | There are no financial penalties for non-compliance. However, companies will be disqualified for three years for preferential financial support and other nationally-supported policies, such as energy efficiency | There are no financial penalties for non-compliance. However, companies will be disqualified for three years for preferential financial support and other nationally-supported policies, such as energy efficiency | Penalties for failing to complete MRV range from CNY 10,000-30,000. Any company with a shortfall in surrendered allowances could have double the amount taken off the subsequent year's allocation and be fined one to three times the average market price per unit, up to a maximum of CNY 30,000. Penalties for misconduct of trading entities and their staff range from CNY 10,000-30,000. |

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|-----------------|---------|-------------------------------------|--|----------------------------------|--|-----------|--|--|
| Use of revenues | N/A | CNY 84.4 million was raised in 2020 | CNY 2.6 million raised by auctions as of the end of 2019; no auctions held in 2020 | CNY 11.28 million raised in 2020 | In 2020, CNY 49.32 million was collected | | In 2020, CNY 240.88 million was raised | CNY 1.25 million was raised by end of 2020 |

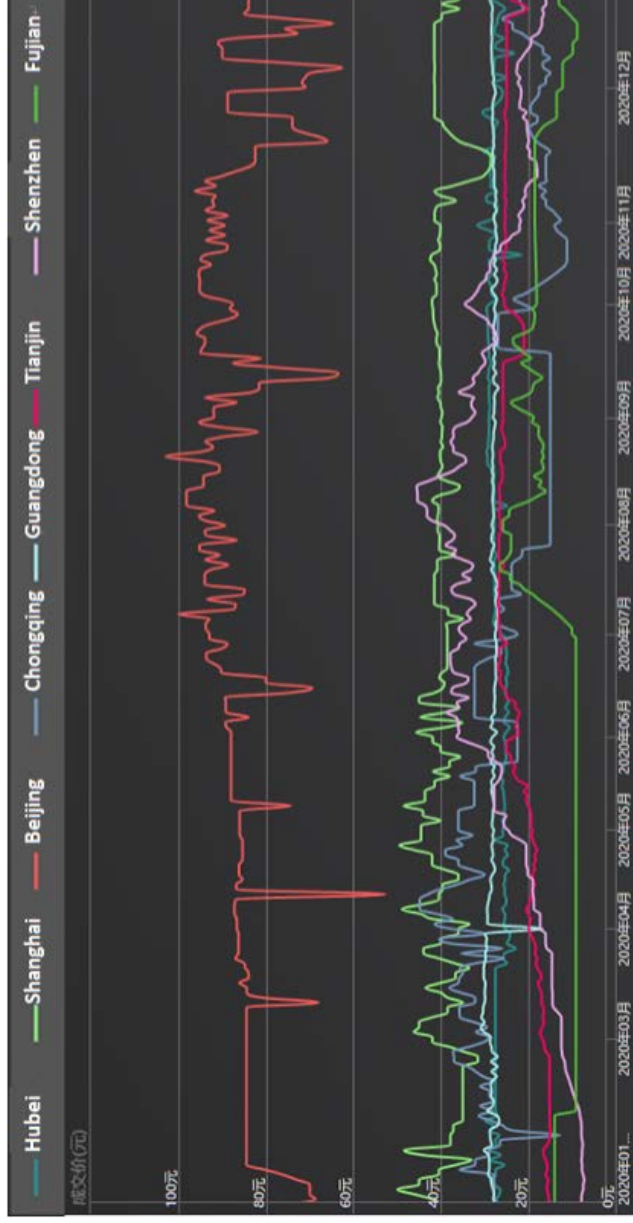


FIGURE 1
Average Allowance spot price of China Pilots ETS in 2020 (CNY/tonne CO₂e)
Source: China Carbon Trading Web

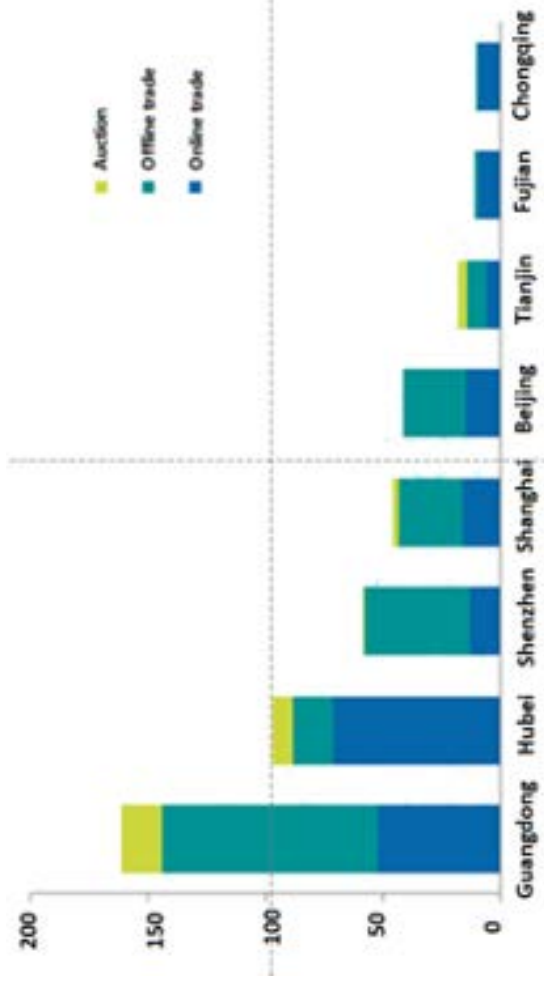


FIGURE 2

China ETS cumulative trading volume (million tonnes, as of 19 Feb 2021)

Source: [China Carbon Trading Web](#)

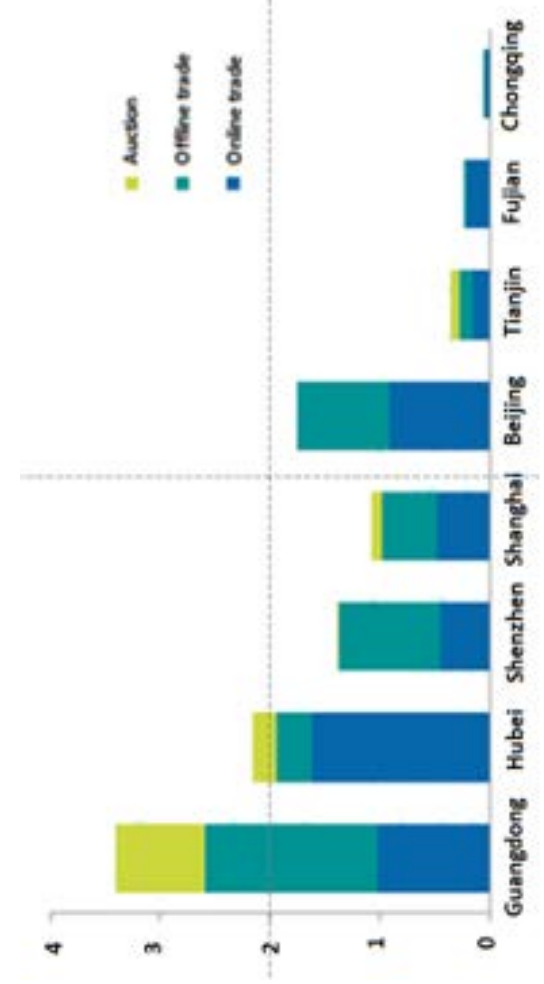


FIGURE 3

China ETS cumulative trading amounts (billion RMB, as of 19 Feb 2021)

Source: [China Carbon Trading Web](#)

MARKET COMMENTARY

By end of 2020, the cumulative trading volume of the eight pilots had reached 445 million tonnes with a total value of CNY 10.47 billion (US\$1.61 billion), including all online trading, OTC trades, and auctions, for both spot and forwards.

With the impact of the pandemic, the annual compliance deadlines across the pilots ETS were postponed by around 3-4 months. But as the country recovered gradually from the middle of 2020, most of the pilot systems completed their tasks within the year.

In 2020, the average prices in all pilot markets increased more than 20% compare to 2019, while trading volumes were down 17%. The eight ETS pilots remained local trading markets, and a total of around 73 million allowances were traded across the country. Guangdong province again accounted for the largest share of volume in 2020, around 33.03 million tonnes. For the trading price, Beijing once again reached the highest spot price of CNY 98.02/t, and Shenzhen got the lowest at CNY 7.70/t.

USEFUL LINKS

[MEE China](#)

[NCSC China](#)

[China Beijing Environment Exchange](#)

[China Guangzhou Carbon Emission Exchange](#)

[China Shanghai Environment and Energy Exchange](#)

[China Hubei Carbon Emission Exchange](#)

[China Shenzhen Emission Exchange](#)

[Tianjin Climate Exchange](#)

[Chongqing Carbon Emissions Trading Center](#)

[China Fujian Environment and Energy Exchange](#)

[SinoCarbon](#)

[ICAP](#)

[World Bank Carbon Pricing Dashboard](#)

[China Carbon Trading Web](#)

REFERENCES

[ICAP Status Report 2021](#)

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