

China National ETS

General Information

Summary

Status: ETS in force

Jurisdictions: China

China's national ETS started operating in 2021, bringing the world's largest ETS online after three years of preparation since the political launch. In early January 2021, the Chinese Ministry of Ecology and Environment (MEE) published key ETS policy documents, along with an announcement that regulated entities will need to surrender allowances pertaining to their 2019-2020 emissions in 2021. In mid-2021 the Chinese national ETS commenced trading on the trading platform operated by the Shanghai Environment and Energy Exchange (SEEE).

Building on its experience of successfully piloting carbon markets in eight regions, China launched its national ETS politically in December 2017. A step-by-step development roadmap was then outlined in a work plan, which was endorsed by the country's highest administrative body, the State Council. The launch of the ETS was a goal set in 2015 by China's highest political level, and the goal was reaffirmed by the country's Nationally Determined Contribution (NDC) under the Paris Agreement and the '13th Five-Year Work Plan (FYP) for Greenhouse Gas Emission Control.'

The objective of the China national ETS is to contribute to the effective control and gradual reduction of carbon emissions in China and to the achievement of green and low-carbon development. The ETS regulates more than 2,200 companies from the power sector (including combined heat and power, as well as captive power plants of other sectors), which emit more than 26,000 tCO₂ per year. The Chinese national ETS is estimated to cover more than four billion tCO₂, accounting for ~40% of national carbon emissions. The system's scope is to be further expanded in the future. Currently, it is an intensity-based ETS with the cap being adjusted ex-post based on actual production levels. The compliance obligations are also limited.

From the institutional perspective, the National Development and Reform Commission (NDRC) was responsible for national ETS development until 2018. That year, as part of a broader government restructuring, the climate change policy portfolio (including the development of the ETS) was shifted to the newly established MEE.

Key pillars of the development of the national ETS include: reporting and verification of historical emissions data from eight emission-intensive sectors; development of the national registry, trading system, and national enterprise GHG reporting system; set-up of the legislative and regulatory framework; and capacity building.

The existing Chinese regional ETS pilots are gradually transitioning into the national ETS. In the short term, the pilots continue to operate in parallel to the national market, covering the sectors and entities not included in the national market. Over the medium to long term, as more sectors are included in the national ETS, overlapping entities are expected to be integrated into the national market.

China's national ETS is expected to be one of the key policy instruments to realize the country's climate ambition in both the short and long term. The country's key mitigation

	<p>targets include peaking carbon emissions before 2030 and achieving carbon neutrality by 2060.</p>
<p>Year in Review</p>	<p>Many technical and political processes for the launch of the national ETS were concluded in 2020. The turning point was President Xi Jinping’s announcement in September 2020, committing China to achieve peak carbon emissions before 2030 and carbon neutrality by 2060. This generated great momentum for the development of the national ETS, leading to the system’s operationalization at the beginning of 2021.</p> <p>A key milestone for the national ETS was achieved with the finalization and publication of two important policy documents:</p> <ul style="list-style-type: none"> • ‘The National Measures for the Administration of Carbon Emission Trading (Trial)’ (short form: the National Measures); and • the ‘2019-2020 National Carbon Emission Trading Cap Setting and Allowance Allocation Implementation Plan (Power Generation Industry)’ (short form: the Allocation Plan). <p>The National Measures, which took effect in February 2021, provide the legal basis for the national ETS and supersede the interim measures published in 2014.* It is issued in the form of a departmental regulation, which is subject to future review and revision.** The document includes: general rules and provisions related to allowance allocation and registration; emissions trading; MRV; compliance; offsets; supervision and management; and penalties.</p> <p>In March of 2021 the Ministry of Ecology and Environment (MEE) published new draft ETS legislation that refines existing measures and places them on a higher level in the Chinese legal hierarchy. Titled the 'Interim Regulations for the Management of Carbon Emissions Trading', the new draft legislation will replace the National Measures once they are finalized following a consultation period.</p> <p>The Allocation Plan adopts benchmarking as the main allowance allocation approach and includes processes for pre-allocation and ex-post adjustments. It further clarifies the relationship between regional ETS pilots and the national ETS: the overlapping entities between them that are already covered by regional allocation plans in 2019 and/or 2020 are excluded from the national ETS for those years and remain in the regional systems. However, after the release of the Allocation Plan for the national ETS, the regional pilots will no longer issue allowances to them. Together with the Allocation Plan, the MEE also released the list of covered entities, according to which the national ETS covers 2,225 companies. The confirmation of the covered entities builds on an extensive historical data collection process that started in 2013 and continued until 2020.</p> <p>The MEE is also working on the policy documents outlining other key areas of the national ETS design, with some already released for public consultation even though they have not yet been finalized:</p> <ul style="list-style-type: none"> • ‘The Administrative Measures for the Registration, Trading, and Settlement of the National Carbon Emission Rights (Trial)’ was released in November 2020. It clarifies the basic elements and oversight system of allowance registration, trading, and settlement, as well as the functions of the agencies responsible for the registry and trading system’s operation. • Two documents on MRV were released in December 2020. The ‘Guidelines on Enterprise Greenhouse Gas Emissions Accounting and Reporting – Power Generation Facilities’ build on two existing technical guidelines and aim to establish the MRV foundation for the national ETS. The ‘Guidelines for Enterprise Greenhouse Gas Verification (Trial)’ build on a previous document from 2016 and provide further details on verification. <p>The two documents on MRV were finalized in March 2021 after a public consultation process.</p> <p>A key ongoing technical task is the development of the registry and of the trading platform, which are led by the local governments of Hubei and Shanghai respectively. In May 2020, the MEE organized an expert review meeting on the construction plan of these two systems. They have been further developed and improved, with several rounds of inspections by experts since then. The national government has indicated that the trading of allowances will start by the middle of 2021.</p> <p>Following the announcement of the country’s 2030 and 2060 targets, China put forward its enhanced NDC in December 2020, committing to reduce its carbon intensity by more than</p>

	<p>65% by 2030 compared to 2005 levels. China is in the process of developing its 14th Five-Year Plan (2021-2025) and 2030 carbon emissions peaking plan. Its national ETS will then be aligned with these targets and plans.</p> <p>* In December 2014, the NDRC—the former national competent authority for climate change—issued the Interim Measures for the Administration of Carbon Emissions Trading (NDRC Order No. 17) to regulate the construction of carbon markets in China.</p> <p>** This level of regulation (in Chinese: Guanli Banfa) is lower in the legal hierarchy compared to the State Council regulation, with implications for the level of financial fines it could impose. The document itself also leaves space for the further development of higher-level legislation such as national regulation (in Chinese: Zanxing Tiaoli) as the national ETS develops further.</p>										
Overall GHG emissions (excluding LULUCF)	Emissions: 12,301 MtCO ₂ e (2014)										
Overall GHG emissions by sector (in MtCO ₂)	<table border="1"> <thead> <tr> <th>Sector Name</th> <th>MtCO₂e</th> </tr> </thead> <tbody> <tr> <td>Energy (9,559)</td> <td>9559</td> </tr> <tr> <td>Industrial Processes (1,718)</td> <td>1718</td> </tr> <tr> <td>Agriculture (830)</td> <td>830</td> </tr> <tr> <td>Waste (195)</td> <td>195</td> </tr> </tbody> </table>	Sector Name	MtCO ₂ e	Energy (9,559)	9559	Industrial Processes (1,718)	1718	Agriculture (830)	830	Waste (195)	195
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GHG reduction target	<p>2016-2020: Reduction in carbon emissions per unit of GDP by 18% compared to 2015 levels (13th FYP)</p> <p>BY 2020: 40-45% reductions in carbon intensity compared to 2005 levels (voluntary commitment under the Copenhagen Accord of 2009)</p> <p>2021-2025: Reduction in carbon emissions per unit of GDP by 18% compared to 2020 levels (14th FYP)</p> <p>BY 2030: Peak CO₂ emissions before 2030 (announcement by President Xi in September 2020); lowering CO₂ emissions per unit of GDP by over 65% from 2005 levels (updated NDC)</p> <p>BY 2060: Carbon neutrality (announcement by President Xi in September 2020)</p>										
Carbon Price	<i>Current Allowance Price (per t/CO₂e):</i> No information available yet.										

ETS Size

Covered emissions	0.40
GHGs covered	CO ₂
Sectors and thresholds	<p>Power sector (including combined heat and power, as well as captive power plants of other sectors). Compliance obligations are currently limited (see “Enforcement” section).</p> <p>The scope is expected to be gradually expanded to cover seven other sectors in addition to power: petrochemical, chemical, building materials, steel, nonferrous metals, paper, and domestic aviation. There is no specific timeline for this expansion.</p> <p>INCLUSION THRESHOLDS: Entities with annual emissions of 26,000 tCO₂ in any year over the period 2013-2019.</p>
Point of regulation	<p>Downstream</p> <p>In the long run, both direct emissions from the power sector and indirect emissions from electricity and heat consumption are expected to be included.</p>
Number of entities	The Chinese regional ETS pilots covered power sector entities, which may also fall under the national ETS. These entities are transitioning into the national market. Below is an estimation, based on publicly available information, of the number of covered entities under the national ETS:

	1,961 (2019) 2,070 (2020) 2,225 (2021)
Cap	<p>The cap is set bottom-up, i.e., the sum of the total allowance allocation to all covered entities forms the cap. It is also an intensity-based cap, which changes according to the actual production levels. The national ETS is estimated to have a cap of over 4,000 MtCO₂/year for 2021.*</p> <p>* Moreover, according to the National Measures, voluntary allowance cancellation is allowed: covered entities, other institutions and individuals can voluntarily purchase and cancel emission allowances.</p>

Phases & Allocation

Trading periods	In mid-2021 the Chinese national ETS commenced trading on the trading platform operated by the Shanghai Environment and Energy Exchange (SEEE). The current regulation does not yet define specific trading periods for the Chinese national ETS. The current rules only apply to the first compliance period which covers 2019 and 2020.
Allocation	<p>FREE ALLOCATION: Benchmarking is used as the main allocation method, with four distinct benchmarks: conventional coal plants below 300 MW; conventional coal plants above 300 MW; unconventional coal; and natural gas.</p> <p>At first, entities will receive allowances at 70% of their 2018 output multiplied by the corresponding benchmark factor. Allocation will be adjusted later to reflect actual generation in 2019 and 2020. A unit load (output) adjustment factor distributes more allowances for entities operating at load rates lower than 85%. This may provide more allowances to less efficient power units. A regional adjustment factor that would give regional governments the opportunity to tighten allocation in line with regional climate targets had been proposed during the drafting phase of the Allocation Plan, but was not included in the final version.</p> <p>AUCTION: Currently, allocation is to take place mainly through free allocation, but the National Measures clarify that auctioning may be introduced at a later point in time.</p>

Flexibility

Banking and borrowing	Rules on banking and borrowing are not yet specified in the published policy documents. The system is expected to allow for banking but not for borrowing.
Offsets and credits	<p>The National Measures allow for the use of China Certified Emissions Reduction (CCER) already from 2021 onwards: covered entities can use offsets for up to 5% of their verified emissions from CCER projects in renewable energy, carbon sinks, methane utilization, and others.</p> <p>The CCER offset program was developed in China alongside the development of the regional ETS pilots. In 2012, the NDRC issued the 'Interim Measures for the Management of Voluntary GHG Emission Reduction Transactions' (short form: Interim Measures), which provide guidelines for the issuance of CCERs. Further details on the development of CCER projects and the acceptance of CCERs in the national ETS are expected to be regulated through a revision of the Interim Measures and/or through the development of an 'Administration Measure of Offset Scheme for National ETS.'</p>
Market Stability Provisions	Adjustment mechanisms to prevent abnormal price fluctuations, as well as risk prevention and control mechanisms to prevent market manipulations, are under development.

Compliance

Compliance Period	One year (1 January to 31 December). Nevertheless, entities are expected to surrender allowances in 2021 for the years 2019 and 2020.
Monitoring, Reporting, Verification (MRV)	<p>REPORTING FREQUENCY: Under the national ETS, covered entities submit the previous year's emission reports by the end of March each year. Entities in the power sector have had MRV obligations since 2013.</p> <p>VERIFICATION: Provincial-level ecological and environmental authorities will organize the verification of GHG reports. They may commission technical service agencies to provide verification services.</p> <p>The draft verification guidelines outline a six-step verification process and indicate a strong reliance on document review such that on-site verification in many cases would be deemed unnecessary. The verification entities could be the ecological and environmental units at provincial and subprovincial levels, government-affiliated institutions, and other technical service institutions selected (and paid) by the government.</p> <p>FRAMEWORK: MRV guidelines, supplementary data sheets, verification guidelines, and other guidance are available for the eight sectors expected to be covered by the ETS. This MRV framework has evolved continuously since 2013. In 2020, updated technical guidelines on emissions accounting, reporting, and verification were released for public consultation and are yet to be finalized.</p> <p>OTHER: The MEE will further improve the existing MRV guidelines and technical specifications for the national ETS, based on the practice.</p>
Enforcement	<p>According to the current Allocation Plan, compliance obligations are limited. Gas-fired plants only need to surrender allowances up to their level of free allocation as per the benchmarks. The compliance obligation of other covered entities is limited to the level of free allocation as per benchmarks, plus 20% of their verified emissions. This means that no allowances must be surrendered for verified emissions above this threshold. These measures aim to promote gas-fired units and reduce the overall compliance burden.</p> <p>The National Measures define that failures in reporting are subject to a fine of CNY 10,000 to 30,000 (USD 1,449 to 4,347), while failures in compliance obligations are subject to a fine of CNY 20,000 to 30,000 (USD 2,898 to 4,347). Any gap between the (limited) compliance obligation and allowances surrendered also will be deducted from the following year's allocation.</p>

Linking

Links with other systems	No information available yet.
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Other Information

Institutions involved	<p>The China national ETS has a multi-level governance structure involving three levels of government:</p> <ul style="list-style-type: none"> • the MEE acts as the national competent authority setting the rules and overseeing the system, with joint oversight of trading activities with other national regulators; • the MEE subsidiaries at the provincial level oversee the implementation of these rules; and • the municipal-level authorities take on some management duties locally.
Evaluation / ETS review	No information available yet.
Revenue	No information available yet.

Implementing Legislation	<p>Work Plan for Construction of the National Emissions Trading System (Power Sector)</p> <p>Notice on Key Works in Preparation for the Launch of the National ETS</p> <p>Interim Administrative Measures on Emissions Trading (2014) 24 Guidelines for GHG Monitoring and Reporting for various sectors (2013, 2014, and 2015)</p> <p>The National Measures for the Administration of Carbon Emission Trading (Trial), final</p> <p>The National Measures for the Administration of Carbon Emission Trading (Trial), draft for comments (English translation)</p> <p>Allocation Plan for the Power Sector (2019-2020) and list of covered entities, final (English translation)</p> <p>Allocation Plan for the Power Sector (2019-2020), draft for comments released in November 2020 (English translation)</p> <p>Guidelines on enterprises greenhouse gas emissions accounting and reporting – Power generation facilities, draft for comments</p> <p>Guidelines for Enterprises Greenhouse Gas Verification (Trial), draft for comments</p>
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