

China - Fujian pilot ETS

General Information

ETS Description

The province of Fujian launched its ETS in September 2016. It covered 248 entities across nine sectors in 2024: electricity grid, petrochemicals, chemicals, building materials, iron and steel, nonferrous metals, paper, aviation, and ceramics. The ETS covered electricity generation until 2020, and the steel (ironmaking and sintering processes), cement, and aluminum sectors until 2023, after which they were incorporated into the National Carbon Market.

Covered entities must surrender allowances for all their covered emissions, and allocation is based predominantly on free allocation, using benchmarking or grandfathering based on production levels. Auctioning may take place when considered appropriate by the ETS authorities.

The Fujian ETS pilot has a special focus on carbon sinks. In 2017, the Fujian government outlined a plan to promote forestry offset projects in the province. By the end of 2024, 4.1 million forestry offset credits had been traded in the Fujian ETS.

Unlike other Chinese pilots, which were mandated by the National Development and Reform Commission (NDRC), the mandate for the Fujian ETS came from the State Council with the endorsement of the “National Ecological Civilization Pilot Area (Fujian) Implementation Plan”. In the short term, it operates in parallel with the national carbon market. As China’s National Carbon Market expands to new sectors, covered entities in these sectors will be integrated into it

ETS Status

in force

Jurisdictions

Fujian

Year in Review

In December 2024, the Fujian Provincial Ecology and Environment Bureau (EEB) issued the “Work Plan for Establishing carbon inclusive system”, which sets the roadmap to establish provincial offset system and link it to Fujian ETS.

In November 2025, the EEB released the allocation plan for 2024. The allocation plan is similar to the 2023 one, with slightly tightened benchmarks and changes to the base year for the grandfathering method. It confirmed that covered entities from the steel (ironmaking and sintering processes), cement, and aluminum sectors are integrated into the China’s National Carbon Market.

Sectoral coverage

Domestic Aviation
Industry

Revenue usage

General budget, including debt reduction

Emissions & Targets

Overall GHG Emissions excl. LULUCF (MtCO₂e)

299.2 MtCO₂ (2022)*

* No data is publicly available for more recent years. Data here is provided by local experts. Previously reported data is based on public sources from the launch year of the ETS in 2014, of 240.0 MtCO₂.

GHG reduction targets

By 2030: Peak CO₂ emissions (Carbon Working Guidance)

By 2060: Achieve carbon neutrality (Carbon Working Guidance)

Current Allowance Price (per t/CO₂e)

Average secondary market price: CNY 24.81 (USD 3.45)

Size & Phases

Covered emissions (2022)

29.00%

GHGs covered

CO₂

Phases

2016-ongoing

Cap or total emissions limit

A cap limits the total emissions allowed in the system. The cap in recent years has been as follows:

2016 to 2018: ~200 MtCO₂

2019: ~220 MtCO₂^[1]

2020: ~126 MtCO₂

2021: 131.7 MtCO₂

2022: 116.2 MtCO₂

The cap comprises three elements: existing entities' allowances, the new entrants' reserve, and the market stability reserve.

[1] There is no public data on the total cap or its elements. This number is based on an estimate by experts. The cap for 2019 was estimated to cover 87% of carbon emissions.

Sectors and thresholds

Petrochemicals, chemicals, building materials, iron and steel, nonferrous metals, paper, aviation, and ceramics. Electricity production was covered until 2020, after which it was integrated into China's National Carbon Market. Steel, cement, and aluminium smelter sectors were integrated into the National Carbon Market from 2024.

INCLUSION THRESHOLDS:

- 2016 to 2019: Companies with energy consumption of 10,000 tonnes of coal equivalent (tce) per year, for any year between 2013 and 2019.
- 2020 to 2021: Companies with energy consumption of 5,000 tce or more in any year from 2013 to 2020
- 2022 to 2023: Companies with energy consumption of 5,000 tce or more in any year from the latest four years.
- 2024: Companies with energy consumption of more than 5,000 tce or annual CO₂ emissions of more than 13,000 tonnes in any year

from the last three years.

Point of regulation

Point source (industry, aviation); downstream (indirect emissions from electricity and heat consumption).

Type of entities

Companies

Number of entities

248 (2024)

Allowance Allocation & Revenue

Allowance allocation

Allowances are distributed for free, using benchmarking or grandparenting. The allocation plan is updated every year. For the compliance year 2024:

FREE ALLOCATION:

Benchmarking: Benchmarking is applied to the grid operator, plate glass, chemical and aviation sectors.

Grandparenting: The remaining sectors are allocated allowances based on historical carbon intensity and actual output. These entities can also apply for more allowances as a reward for early mitigation action.

According to the 2024 allocation plan, compliance obligations are limited. For sectors using the benchmarking method, the minimum allocation is 80% of their verified emissions and the maximum is 120%. For sectors using historical intensity methods, the surplus or shortfall is limited to 3% to 10% of verified emissions, according to their emission levels. On top of this limitation, the maximum amount of surplus or shortfall is 200,000 tCO₂e.

AUCTIONING: Auctioning may take place when considered appropriate by the ETS authorities (see 'Market Stability Provisions' section) and may be introduced as a method for allowance allocation over time. Up to 10% of the total cap is reserved for market intervention.

In order to increase market liquidity and price discovery, the Fujian DRC organized a discriminatory (non-uniform price) auction of 50,000 allowances in 2016 from the government reserve, with settlement prices ranging from CNY 26.50 (USD 3.69) to CNY 30 (USD 4.17). No further auctions have taken place to date.

Total Revenue

CNY 1.25 million (USD 173,672) since beginning of program*

* The Fujian ETS has held only one auction, in 2016, which provided 50,000 allowances at a floor price of CNY 25 (USD 3.47) per tonne. The exchange did not disclose the final volume and price. The calculation here assumes that all allowances were sold at the floor price.

Use of Revenues

- General budget, including debt reduction

Revenues are attributed to the central treasury.

Flexibility & Linking

Offset credits

The use of domestic project-based carbon offset credits (China Certified Emission Reductions, or CCERs) and Fujian Forestry Certified Emission Reduction credits (FFCERs) is allowed.

QUANTITATIVE LIMITS: The use of FFCER and CCER offset credits are limited to 5% of the annual compliance obligation.

QUALITATIVE LIMITS: Eligible offset credits are restricted to those generated in Fujian province from entities not regulated under the ETS, and from CO₂ or CH₄ reduction projects. Hydropower-related offset credits are not eligible. FFCER projects from three project types (afforestation, forest management, and bamboo management) are eligible if implementation took place after mid-February 2005 and if the project developers have independent legal status.

In the 2024 compliance year, 928 offset credits were used for compliance.

Banking and borrowing

Banking is allowed.

Borrowing is not allowed.

Links with other Systems

The Fujian ETS is not linked with any other system.

Other carbon pricing instruments in the jurisdiction

ETS: Chinese national ETS

Domestic crediting mechanisms: Local Forest offset credits in Fujian (FFCER)

Domestic crediting mechanism (national): China Certified Emissions Reduction (CCER)

Compliance

Compliance mechanism

Covered entities must surrender one compliance unit (allowance or offset credit) per tCO₂e emitted for all their covered emissions, and allocation is based primarily on free allocation.

Compliance Period

One calendar year. Covered entities have until the end of June of the following year to surrender allowances. [\[1\]](#)

[\[1\]](#) This is according to the “Interim Measures of the Fujian ETS”. In practice, the provincial government releases executive notices to guide the timeline of the annual compliance cycle.

Monitoring, Reporting, Verification (MRV)

FRAMEWORK: The Fujian DRC and the Fujian Statistical Bureau jointly released a guiding document on GHG emissions monitoring and reporting that includes a monitoring plan template, and guidelines for national measuring and reporting.

MONITORING: Covered entities are required to set up and follow monitoring plans.

REPORTING: Annual reporting of CO₂ emissions to the competent authority by the end of February of the year following the reporting year.

VERIFICATION: Third-party verification is required for all annual emissions reports. In addition, re-verification is required for some reports to further enhance accuracy; this process is called “fourth-party verification” in China.

Penalties and enforcement

REGULATED ENTITIES: Penalties for failing to submit an emission or verification report on time, providing false information, or disturbing the verification process range from CNY 10,000 (USD 1,391) to CNY 30,000 (USD 4,172). Companies failing to surrender enough allowances to match their emissions are fined between one to three times the average market price of the past 12 months per missing allowance, with a maximum limit of CNY 30,000 (USD 4,172). Additionally, twice the amount of the missing allowances can be withdrawn from the account of the company or deducted from the following year’s allocation.

TRADING INSTITUTIONS: Penalties for misconduct, such as not publishing relevant trading information, failing to establish and implement a risk management system or leaking commercial secrets, can range from CNY 10,000 (USD 1,391) to CNY 30,000 (USD 4,172).

THIRD-PARTY VERIFIERS: Penalties for misconduct, such as publishing false reports, reporting with errors, leaking commercial secrets, or participating in the market, can range from CNY 10,000 (USD 1,391) to CNY 30,000 (USD 4,172).

In addition, in 2018, the Fujian DRC released guidelines concerning ETS non-compliance information management, providing further details on recording of misbehaviors and corresponding incentives and penalties. Incentives for ETS compliance include priority lending and priority approval for government financial support. Punishments for non-compliance include restrictions on approval of new projects, increased frequency of inspections, and a record in the bank credit system.

Market Regulation

Market Stability Provisions

RESERVE

Instrument type: Price-based instrument

Functioning: 5% of the sum of the calculated allowance from covered entities is kept as a government reserve for market stabilization. The Fujian EEB can organize irregular auctions according to market demand, no fixed triggers are envisaged.

EXCHANGE

Instrument type: Price-based instrument

Functioning: The exchange limits day-to-day price fluctuations to a 10% move in either direction for listed trading, as well as 30% for block trading. Only transactions within this price range can be successfully completed on the exchange.

Market Design

MARKET PARTICIPATION: Compliance entities and institutional investors (domestic only) that meet the requirements of the emissions trading rules set up by Fujian EEB.

MARKET TYPES:

Primary: While most allowances are allocated for free, the Fujian Haixia Equity Exchange organizes ad hoc auctions for the primary market. So far, only one auction has been held.

Secondary: Spot trading of Fujian Emission Allowances (FJEA), CCERs and FFCERs takes place on the Fujian Haixia Equity Exchange.

LEGAL STATUS OF ALLOWANCES: Allowances are not considered financial instruments.

Other Information

Institutions involved

Fujian Provincial Ecology and Environment Bureau: Responsible for establishing the Fujian ETS after governmental restructuring in 2019.

Fujian Haixia Equity Exchange: Responsible for operating the trading platform.

Fujian Economic and Information Center: Responsible for operating the registry, market management, and MRV administration.

Regulatory Framework

[2020 Amendments to the Interim Measures](#)

[Fujian Provincial Ecology and Environment Bureau – Allocation Plan for 2024](#)

Evaluation / ETS review

Research on improving the Fujian ETS has been undertaken every year, funded by the local government.

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