

China - Fujian pilot ETS

General Information

ETS Description

The province of Fujian launched its ETS in September 2016. It covers around half of the province's emissions and nearly 300 entities in nine sectors: electricity grid, petrochemicals, chemicals, building materials, iron and steel, nonferrous metals, paper, aviation, and ceramics. The ETS covered electricity generation until 2019, after which the sector was incorporated into the national ETS.

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 2020, 2.8 million forestry offset credits had 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 the national ETS expands to new sectors, covered entities in these sectors will be integrated into the national ETS from the regional markets.

ETS Status

in force

Jurisdictions

Fujian

Year in Review

In January, the Fujian Provincial Ecology and Environment Bureau (EEB) announced that the ETS had achieved a 100% compliance rate for 2021 – for the seventh year running – with all 296 covered entities having submitted allowances as required on time.

In July, the EEB released the 2022 allocation plan, which introduced benchmarking as the allocation method for ordinary steel making.

Sectoral coverage

Domestic Aviation

Industry

Revenue usage

General budget, including debt reduction

Emissions & Targets

Overall GHG Emissions excl. LULUCF (MtCO₂e)

299.81 MtCO₂ (2021)*

* 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, or 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 23.25 (USD 3.28) (updated prices available [here](#))

Size & Phases

Covered emissions (2020)

38.00%

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*

2020: ~126 MtCO₂

2021: 131.72 MtCO₂

2022: 116.22 MtCO₂

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

* 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

Electricity grid, petrochemical, chemical, building materials, iron and steel, nonferrous metals, paper, aviation, and ceramics. Electricity production was covered until 2019, after which it transitioned to the Chinese national ETS.

INCLUSION THRESHOLDS:

2016 to 2019: Energy consumption of 10,000 tonnes of coal equivalent (tce) per year, for any year between 2013 and 2019.

2020 to 2021: Emitters with energy consumption of 5,000 tce or more in any year from 2013 to 2020 were also included.

2022: Emitters with energy consumption of 5,000 tce or more in any year from 2019 to 2022 were also included.

Point of regulation

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

Type of entities

Companies

Number of entities

293 (2022)

Allowance Allocation & Revenue

Allowance allocation

Allowances are distributed for free, using benchmarking or grandparenting. A pre-allocation method is adopted for the annual allowance allocation. Allocation is then adjusted ex-post to reflect the actual production in the respective compliance year.

FREE ALLOCATION:

Benchmarking: Benchmarking is applied to the grid, cement, ordinary steel, aluminum, plate glass, chemical and aviation sectors.

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

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 the settlement prices ranging from CNY 26.50 (USD 3.74) to CNY 30 (USD 4.23). No further auctions have taken place to date.

Total Revenue

CNY 1.25 million (USD 185,460) 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 3.53) 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

Revenues are attributed to the central treasury.

Flexibility & Linking

Offset credits

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

QUANTITATIVE LIMITS: The use of CCERs is limited to 5% of the annual compliance obligation. The limit is increased to 10% for companies that use both FFCER and CCER offset credits.

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 personality.

Banking and borrowing

Banking is allowed.

Borrowing is not allowed.

Links with other Systems

The Fujian ETS is not linked with any other system.

Compliance

Compliance mechanism

Covered entities must surrender one allowance per tCO₂e emitted for all their covered emissions, and allocation is based on auctions or free allocation.

Compliance Period

One calendar year. Covered entities have until the end of June of the following year to surrender allowances.*

* 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 circle.

Monitoring, Reporting, Verification (MRV)

MONITORING: Covered entities are required to set up monitor plans and monitor their emission based on these plans.

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

VERIFICATION: Third-party verification is required for all annual emissions reports. In addition, further validation is carried out by government-assigned experts for ~30% of the reports to further enhance accuracy; this process is also called “fourth-party verification” in China.

FRAMEWORK: The Fujian DRC and the Fujian Statistical Bureau jointly released a guiding document on monitoring and reporting that includes a monitoring plan template, using national measuring and reporting guidelines. In addition, the Fujian DRC and the Fujian Quality and Technical Supervision Bureau jointly released criteria for the administration of third-party verifiers.

Enforcement

According to the 2022 allocation plan, compliance obligations are limited. For sectors using the benchmarking method, the surplus or shortfall was limited to 20% of their verified emissions. For sectors using historical intensity methods, the surplus or shortfall is limited to 3-10% of verified emissions. On top of this limitation, the maximum amount of surplus or shortfall is 200,000 tonnes.

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 1,412) to CNY 30,000 (USD 4,235). 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 allowance, with a maximum limit of CNY 30,000 (USD 4,235). 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 the misconduct of trading entities, 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 1,411) to CNY 30,000 (USD 4,235).

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 1,411) to CNY 30,000 (USD 4,235).

In addition, in 2018, the Fujian DRC released guidelines concerning ETS credit information management, providing further details on recording and misbehaviors and corresponding incentives and penalties. Incentives for ETS compliance include priority lending, priority approval for project administration, and reduced frequency of inspections. 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: 5% of the total cap is kept as a government reserve for market stabilization.

TRIGGER: According to the (trial) “Implementation Rules of Emissions Trading Market Management in Fujian Province”, the Fujian Economic and Information Center under the guidance of the competent authority – in consultation with an advisory committee – can buy or sell allowances to stabilize the market under certain conditions. These conditions include: market fluctuations (i.e., if the cumulative increase or decrease of allowance prices for ten consecutive trading days reaches a certain percentage); severe imbalances between supply and demand; or liquidity issues. More specifically, high prices may trigger allowance auctions from government reserves through the Haixia Equity Exchange. Low prices may trigger authorities to buy allowances from the market through governmental funds.

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 restructure 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 2018 and 2019](#)

[Fujian Provincial Ecology and Environment Bureau – Allocation Plan for 2020](#)

[Fujian Provincial Ecology and Environment Bureau – Allocation Plan for 2021](#)

[Fujian Provincial Ecology and Environment Bureau – Allocation Plan for 2022](#)

Evaluation / ETS review

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

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