International Carbon Action Partnership

# UK Emissions Trading Scheme

## General Information

**ETS Description**

The UK Emissions Trading Scheme (UK ETS) began operating in January 2021, following the departure of the UK (excluding power operators located in Northern Ireland) from the EU ETS. Verified emissions from stationary UK ETS operators currently account for around a quarter of the UK's territorial GHG emissions. The first phase of the UK ETS runs until 2030.

The UK ETS covers around 1,000 installations in the power and industrial sectors, as well as around 400 aircraft operators. Aviation activity covered includes flights within the UK as well as flights departing the UK to the European Economic Area (EEA) and Switzerland.

Covered installations and aircraft operators must surrender allowances for all their covered emissions. Allowances are allocated primarily through auctioning, with a portion freely allocated to mitigate the risk of carbon leakage. The system has both a cost containment mechanism (CCM) and an auction reserve price, to support market stability.

The UK ETS cap is consistent with the UK's target of achieving net zero by 2050.

In December 2023, the UK Government published the long-term pathway for the UK ETS, outlining its continuation until at least 2050, in alignment with net-zero targets. The document includes a workplan for consultations on expanding the scheme to waste incineration and energy from waste, domestic maritime, and GHG removals, as well as a framework for potentially including more high-emitting sectors.

**ETS Status**

in force

**Jurisdictions**

United Kingdom

**Year in Review**

A package of reforms to develop the UK ETS further were implemented in 2024 as well as a number of consultations to expand its scope.

Since January 2024, the UK ETS cap was reset to be consistent with the UK's net-zero target by 2050. The changes included a 30% reduction in the total number of allowances available between 2021 and 2030. To ensure a smooth transition to the net zero cap, 53.5 million previously unallocated allowances were released from reserve pots to auction between 2024 and 2027. The cap will reduce from 156 $MtCO_2e$ in 2021 to around 50 $MtCO_2e$ by 2030.

In May 2024, the UK ETS Authority launched two consultations related to scope expansion. The UK ETS intends to cover emissions from waste incineration and energy from waste from 2028 (preceded by a two-year MRV-only period from 2026 to 2028). The UK ETS Authority followed up on its commitment to integrate engineered greenhouse gas removals (GGRs) in the scheme by proposing policy options for how this could be done.

In October 2024, the UK Government confirmed that the UK Carbon Border Adjustment Mechanism (UK CBAM) will be introduced on 1 January 2027, in order to address the risk of carbon leakage. The CBAM will place a carbon price on some of the most emissions-intensive industrial goods imported to the UK from the aluminum, cement, fertilizer, hydrogen, and iron and steel sectors that are at risk of carbon leakage.

In November 2024, the UK ETS Authority launched two further consultations on scope expansion: to cover emissions from domestic maritime activities from 2026 and to recognize and implement non-pipeline transport for carbon capture and storage. In addition, the Authority also published an initial response to the 2023 “Free Allocation Review” consultation, confirming that operators who cease operation will have their final year’s allocation adjusted to reflect activity levels, while also allowing operators who are ceasing to decarbonize to apply to be exempted from this new rule to ensure the incentive to decarbonize is maintained.

In December 2024, the UK ETS Authority confirmed that the start of the second free allocation period will move from 2026 to 2027, to align changes to free allocation with the introduction of the UK CBAM in 2027. The UK ETS Authority also launched a consultation seeking views on how carbon leakage risk should be calculated, and the approach to adjusting free allocation levels for CBAM sectors.

**Sectoral coverage**

Mining and extractives
Domestic Aviation
Industry
Power

**Revenue usage**

General budget, including debt reduction

## Emissions & Targets

**Overall GHG Emissions excl. LULUCF (MtCO2e)**

409.6 $MtCO_2e$ (*2022*)

**GHG reduction targets**

**By 2030:** At least a 68% reduction in UK net GHG emissions from 1990 levels, including emissions from LULUCF (NDC)

**By 2035:** At least a 81% reduction in UK net GHG emissions from 1990 levels, including emissions from LULUCF (NDC)

Limit UK net GHG emissions to 965 $MtCO_2e$ over 2033 to 2037, representing ~77% reduction from 1990 levels, including emissions from LULUCF and international aviation and shipping (“Carbon Budget Order 2021”)

**By 2050:** Net-zero UK GHG emissions, including emissions from LULUCF and international aviation and shipping (“Climate Change Act 2008 [2050 Target Amendment] Order 2019”)

**Current Allowance Price (per t/CO2e)**

Current prices can be checked here

## Size & Phases

**Covered emissions (2022)**

27.00%

**Verified ETS Emissions**

110.60$MtCO_2e$

**GHGs covered**

CO2, N2O, PFCs

**Phases**

**PHASE 1:** Ten years (2021 to 2030)

**Cap or total emissions limit**

A cap limits the total emissions allowed in the system.

**FIRST ALLOCATION PERIOD (2021 to 2025):** 633 $MtCO_2e$, to be adjusted to reflect the hospital and small emitter opt-outs.

**SECOND ALLOCATION PERIOD (2026 to 2030)*:** 303 $MtCO_2e$, to be adjusted to reflect the hospital and small emitter opt-outs.

The cap was initially set at 5% below the UK's notional share of the EU ETS cap for its fourth phase. The cumulative caps for the first and second allocation periods were originally 736 $MtCO_2e$ and 630 $MtCO_2e$, respectively. However, they were reduced following a 2022 consultation on reforming the UK ETS, which included aligning the cap trajectory with the UK's net-zero emissions target. The cap for 2025 is 86.7 $MtCO_2e$. Allowances for the New Entrants' Reserve (NER) are part of the overall cap.

* An Authority publication of December 2024 announced that the second allocation period would start in 2027. To effect this, a new allocation period will be created for a standalone year in 2026, however free allocations for this time will be calculated on the same basis as 2021 to 2025 free allocations.

**Sectors and thresholds**

**POWER SECTOR AND INDUSTRY**: The UK ETS applies to a specified list of activities of installations in the power and industrial sectors. This includes activities involving the combustion of fuels in installations with a total rated thermal input exceeding 20 MW, as well as activities in refining, heavy industry, and manufacturing. Power generators in Northern Ireland still fall under the EU ETS, as they are part of the integrated Single Electricity Market with the Republic of Ireland.

In addition to the power sector's participation in the UK ETS, the UK's Carbon Price Support (CPS) policy imposes an additional carbon tax of GBP 18 per $tCO_2$ (USD 23.01) for power generators in Great Britian (excluding Northern Ireland) using fossil fuels.

**Hospitals and Small Emitter (HSE) Scheme**: Hospitals and small emitters with emissions below 25,000 $tCO_2e$ per year and a net-rated thermal input lower than 35 MW can opt out of the ETS and instead monitor and report their emissions and meet annual emission reduction targets. This approach is similar to the UK's opt-out scheme in Phase 3 of the EU ETS.

**Ultra-Small Emitter Exemption**: For stationary installations emitting fewer than 2,500 $tCO_2e$ per year, an ultra-small emitter exemption is in place. These installations are required to monitor emissions and notify the regulator if emissions exceed the threshold.

**AVIATION**: UK ETS obligations arise from flights within the UK, flights from the UK to a country within the EEA (excluding outermost regions) and to Switzerland, and flights between the UK and Gibraltar. * Commercial aircraft operators with fewer than 243 full scope flights in a four-month period for three consecutive four-month periods or total full scope annual emissions of less than 10,000 $tCO_2$ are exempt.

Non-commercial aircraft operators are not subject to UK ETS obligations if their annual full scope emissions fall below 1,000 $tCO_2$. Full scope flights are those departing from or arriving in an aerodrome in the UK, Gibraltar, an EEA state, Switzerland, or outermost regions other than an excluded flight.

The UK is also considering how the UK ETS should interact with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). In December 2024, the UK Department for Transport launched a consultation on implementing CORSIA in the UK, in partnership with the UK ETS Authority, which includes options for how CORSIA could interact with the UK ETS on flights in scope of both schemes.

**ADDITIONAL SECTORS**: In 2023, the UK ETS Authority announced its intention to expand the scheme to cover emissions from domestic maritime from 2026, and emissions from waste incineration and energy from waste from 2028.

* Aviation activities included in the UK ETS are outlined in the "Greenhouse Gas Emissions Trading Scheme Order 2020".

**Point of regulation**

Point source

**Type of entities**

Installations, aircraft operators

**Number of entities**

A total of 1,396 entities in 2023, made up of 1,009 installations and 387 aircraft operators

## Allowance Allocation & Revenue

**Allowance allocation**

**AUCTIONING**: Auctioning is the primary means of allowance allocation in the UK ETS. Auctions have a GBP 22 (USD 28.12) Auction Reserve Price (ARP), below which allowances will not be sold. Auctions clear even when not all allowances are sold. Unsold allowances are carried over to the next four auctions, up to a limit of 125% of allowances originally intended for sale at those auctions. If all four subsequent auctions reach the 125% limit, the remaining unsold allowances are transferred into the Market Stability Mechanism Account.

In 2024, ~69 million allowances were sold at auction, raising ~GBP 2.6 billion (~USD 3.3billion). As set out in the auction calendar, ~56 million UK Allowances (UKAs) will be auctioned in 2025 across 25 auctions.

**FREE ALLOCATION**: A number of UKAs are allocated for free to industrial participants at risk of carbon leakage. The number of free allowances that an installation is entitled to is determined using the historical activity level, an industry benchmark, and a carbon leakage exposure factor (CLEF). The benchmarks and CLEFs that have been used initially are those used in Phase 4 of the EU ETS in the most part with an exception for the lime benchmark and malt extraction's carbon leakage status. Historical activity levels are based on data collected under the EU ETS.

There is a maximum number of allowances allocated for free (the "industry cap"). Originally, an absolute value for the industry cap was established for each year of the first phase. This approach was changed following the 2022 consultation on reforming the UK ETS. From 2024, the industry cap is now set at 40% of the total cap and reduces annually in line with the cap trajectory. If the total amount of free allocation exceeds the industry cap for a particular year, unallocated UKAs from the industry cap from the previous year, as well as allowances from a flexible reserve, can be used. As a last resort, a cross-sectoral correction factor would be applied to ensure a uniform reduction across eligible participants.

An initial allocation table, which lists the volume of free allowances for each installation for the first allocation period, was published in May 2021. Eligible installations must submit a verified Activity Level Report (see 'Compliance' section). If the data in the Activity Level Report shows an increase or decrease in activity of 15% or more from historical activity levels (calculated based on the previous two years' activity levels), their free allocation will be recalculated.

The first phase of a review of free allocation started with a call for evidence in spring 2021 and continued in 2022 as part of the consultation on developing the UK ETS. The second phase of the review, starting with a consultation in December 2023, is focused on the free allocation methodology and better targeting support for those sectors most at risk of carbon leakage. In December 2024, the UK ETS Authority published a further consultation on the carbon leakage list to be used for free allocation in the next period and confirmed that changes following the free allocation review will be made from 2027, with 2026 allocations calculated on the same basis as the first allocation period. The Authority also confirmed changes to rules around free allocation for installations that cease activity.

In 2023, the UK ETS Authority announced that free allocation for aviation operators would be phased out by 2026.

**Carbon Border Adjustment Mechanism:** As part of the December 2024 consultation, the UK ETS Authority put forward proposals to gradually adjust free allocation in CBAM covered sectors following the introduction of the new mechanism. The UK CBAM will apply to imports of specific goods in the aluminum, cement, fertilizers, hydrogen, and iron and steel sectors. It will cover both direct emissions related to the production processes of the CBAM goods, as well as indirect emissions related to the production of electricity consumed during their production. To better align the UK CBAM launch with the domestic ETS, the UK ETS Authority has confirmed that the free allocation in 2026 will be calculated on the same basis as the first allocation period delaying the second allocation period to 2027.

**NER**: A reserve of free allowances is set aside for installations that become eligible for participation within Phase 1 and for covered installations that significantly increase their activity level. The number of free allowances for new entrants is determined based on their activity in the first year of operation, the industry benchmark, and CLEF.

**Auctioning share**

75%

**Total Revenue**

GBP 17.2 billion (USD 21.9 billion) since the beginning of the program
GBP 2.6 billion (USD 3.3 billion) in 2024

2024

**Use of Revenues**

Revenues from UK ETS auctions accrue to the general budget and are not earmarked.

## Flexibility & Linking

**Offset credits**

The use of offset credits is not allowed. The UK ETS Authority intend to include engineered GGRs in the system.

**Banking and borrowing**

Banking is allowed, and allowances remain valid in future years of the scheme.

Limited and implicit borrowing is allowed, i.e., the use of UKAs allocated for free in the current year for compliance in the previous year.

**Links with other Systems**

The UK ETS is not linked with any other system.

The UK government has indicated it is open to the possibility of internationally linking the scheme in the future but has not made any decision on preferred linking partners. The UK-EU Trade and Cooperation Agreement (TCA) stipulates that the jurisdictions "shall give serious consideration to linking their respective carbon pricing systems in a way that preserves the integrity of these systems and provides for the possibility to increase their effectiveness".

**Other carbon pricing instruments in the jurisdiction**

**Carbon tax:** UK Carbon Price Support (CPS)

The CPS, introduced in 2013, is an additional GBR 18/t$CO_2$ (USD 23/t$CO_2$) tax on emissions from fossil fuel power generation in Great Britain (excluding Northern Ireland), on top of the UK ETS carbon price.

**Domestic crediting mechanisms:** UK Woodland Carbon Code and Peatland Code

## Compliance

**Compliance mechanism**

Covered entities must surrender one allowance per t$CO_2$e emitted for all their covered emissions, and allocation is based on auctions or free allocation.

**Compliance Period**

One year. Covered entities have until the end of April of the following year to surrender allowances. These provisions are the same as under the EU ETS.

**Monitoring, Reporting, Verification (MRV)**

**REPORTING FREQUENCY:** Annual self-reporting.

**VERIFICATION:** Verification by independent accredited verifiers is required before the end of March each year.

**FRAMEWORK:** The UK ETS has adopted the MRV framework of Phase 4 of the EU ETS, including discretionary changes regarding reduced frequency of improvement reporting and the simplification of monitoring plans.

**Penalties and enforcement**

Regulated entities must pay an excess emissions penalty for each $tCO_2e$ emitted not matched by a surrendered allowance. This penalty is equal to GBP 100 per $tCO_2e$ (USD 127.81) initially but is adjusted for inflation over time. Paying this penalty does not remove the obligation to surrender an allowance. A new deadline for any outstanding deficit will be set, and non-compliance with this will result in a penalty of 1.5x the relevant carbon price, and may lead to escalating daily GBP 1,000 penalties if it continues to remain unmet. The names of non-compliant operators are published.

## Market Regulation

**Market Stability Provisions**

**COST CONTAINMENT MECHANISM (CCM)**

**Instrument type:** Price-based instrument

**Functioning:** The UK ETS has a CCM to avoid price spikes by auctioning additional allowances. If the CCM is triggered, regulators can decide on whether and how to intervene. The intervention can include: redistributing allowances between the current year's auctions; bringing forward UKA supply from future years; drawing from the Market Stability Mechanism Account; auctioning up to 25% of remaining allowances in the NER; or auctioning allowances left unallocated from the industry cap in a given year. The UK ETS Authority has publicly consulted on the current design of the CCM and is currently analyzing responses to the consultation.

The CCM is triggered if, for six consecutive months, the allowance price is three times the average allowance price in effect in the UK in the two preceding years.

**AUCTION RESERVE PRICE (ARP)**

**Instrument type:** Set price

**Functioning:** To ensure a minimum level of ambition in the transition from the EU ETS to the UK ETS, an ARP of GBP 22 (USD 28.12) is in place. The UK ETS Authority has publicly consulted on maintaining the ARP and sought views on the level and design of the ARP.

**SUPPLY ADJUSTMENT MECHANISM (SAM)**

The UK ETS Authority launched a consultation in December 2023 on the potential introduction and design of a SAM. The UK Government is currently analyzing responses to the consultation.

**Market Design**

**MARKET PARTICIPATION:** Compliance entities, non-compliance entities (domestic and international), and individuals.

**MARKET TYPES:**

**Primary:** The majority of allowances are allocated through auctioning. Auctions are held every two weeks, with dates and allowance amounts set out in the auction calendar. Compliance entities, financial institutions, and business groupings and public bodies acting on behalf of compliance entities can participate. Auctions are managed by ICE Futures Europe.

**Secondary:** UKAs are traded on the ICE Futures Europe exchange. Contracts for daily futures, futures, and options on futures contracts are available. Participants may also trade allowances over the counter. Participants in the secondary market must have an account in the UK Registry. Participants trading on the exchange must meet the requirements of the ICE Futures Exchange.

**LEGAL STATUS OF ALLOWANCES:** The "Recognized Auction Platforms (Amendment and Miscellaneous Provisions Regulations 2021) Affirmative Statutory Instrument" establishes UKAs as financial instruments.

## Other Information

**Institutions involved**

**UK Climate Change Committee (CCC):** An independent, statutory body established under the Climate Change Act 2008. Its primary role is to advise the UK government and devolved administrations on emissions targets and on the progress in their achievement. The CCC provides expert advice on the design and implementation of the UK ETS, on its effectivenessin reducing emissions and reports on its progress.

**UK ETS Authority:** Overall responsibility for designing and implementing the UK ETS. It is composed of the representatives of the UK Government (Department for Energy Security and Net Zero (DESNZ), HM Treasury (HMT) and Department for Transport (DfT)), Scottish Government, Welsh Government, and the Department of Agriculture, Environment and Rural Affairs of Northern Ireland.

**Regulators (Environment Agency; Scottish Environment Protection Agency; Natural Resources Wales; Northern Ireland Environment Agency; Offshore Petroleum Regulator for Environment and Decommissioning)**: Responsible for enforcing compliance with the UK ETS Regulations. The Environment Agency serves as the registry administrator and is responsible for the management of accounts in the UK Emissions Trading Registry.

**Regulatory Framework**

The Greenhouse Gas Emissions Trading Scheme Order 2020

The Greenhouse Gas Emissions Trading Scheme Auctioning Regulations 2021

**Evaluation / ETS review**

Phase 1 includes two mandatory whole-system reviews. The first review was published at the end of 2023, and the second must be published by the end of 2028.

The UK ETS evaluation programme supports the mandatory review process. The report for Phase 1 of the UK ETS evaluation was published in December 2023.*

Phase 2 of the evaluation, assessing quantitative impacts of the UK ETS, is scheduled to be published in 2026.

In addition to the whole-system reviews, the UK ETS Authority is in the process of reviewing the future of UK ETS markets policy and free allocation for stationary installations. The UK ETS Authority is also consulting on expansion of scope to the waste and maritime sectors and to recognize non-pipeline transport for CCS as well as integration of engineered GGRs. The UK ETS Authority is also considering the approach to implementing CORSIA, including options for how CORSIA and the UK ETS should interact on flights in scope of both schemes.

* The report is available online.

## Disclaimer