

UK Emissions Trading Scheme (UK ETS)

Setting the cap



Agenda: What will we cover today?



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| 1. Overview of the UK Emissions Trading Scheme (UK ETS) |
| 2. What is the UK ETS cap? |
| 3. How does the cap relate to emissions? |
| 4. Aligning the cap with net zero targets |
| 5. Practicalities and context to consider when setting the cap |
| 5. Questions |



Overview of UK ETS

On **1st January 2021**, we launched the **UK Emissions Trading Scheme**, to replace the UK's participation in the EU ETS. The UK ETS is a **cap-and-trade scheme**, where a cap is set on the total amount of certain greenhouse gases that can be emitted by sectors covered by the scheme.

Scheme participants must **surrender 1 UK Allowance (UKA) per tonne** of emitted CO₂ equivalent (CO₂e) each year.

- Covers a **quarter of UK emissions (108 MtCO₂e in 2021)**.
- **Sectors** covered are power, energy-intensive industries, and aviation (UK domestic and UK to European Economic Area countries).
- **Gases** covered are carbon dioxide, nitrous oxide and perfluorocarbons (PFCs).
- In 2019, the UK legislated for **net-zero emissions**, with a **target of 2050**. The UK ETS will play a key role in achieving this.
- In **July 2023**, the UK ETS Authority outlined a range of **policy developments to the ETS** including:
 - aligning the UK ETS cap to the UK's Net Zero target,
 - expanding the scope of the scheme,
 - developing our free allocation and aviation policies in future.

UK ETS Cap: What is it made up of?

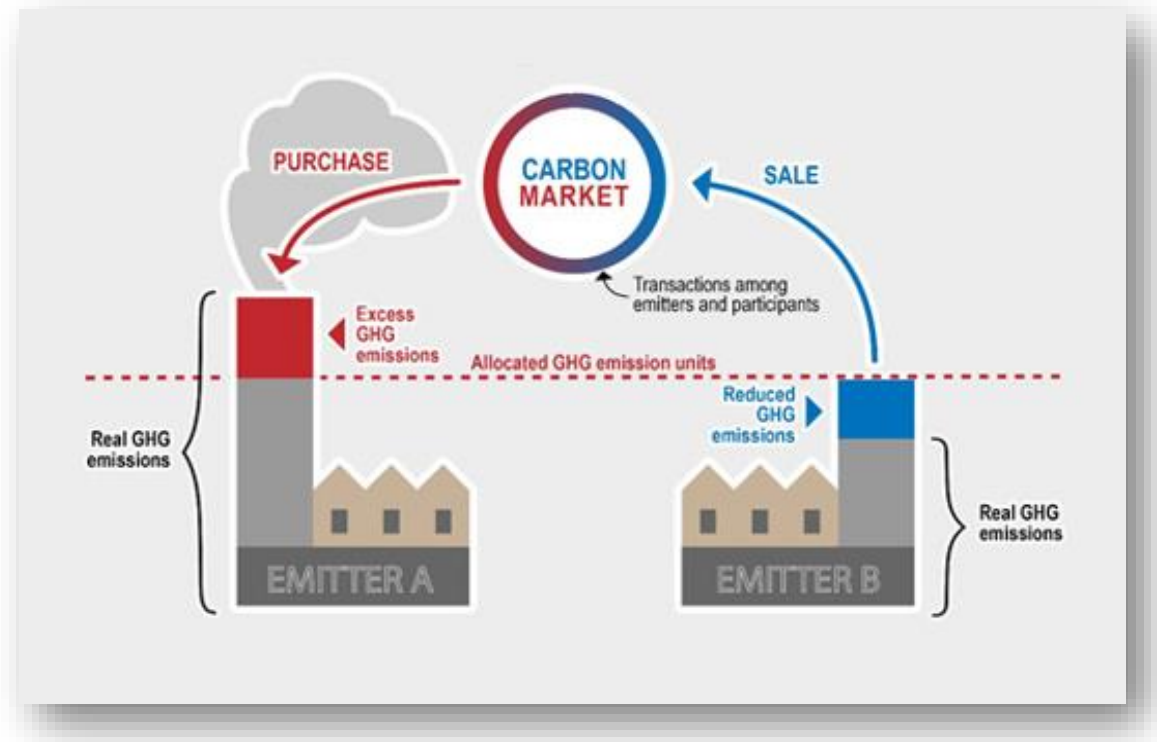
The cap sets overall limit on allowances, but this is split into: free allocations, new entrants, auctions and the flexible share.

| Allowance type | | Description | Allowances in 2021 |
|-------------------------|--------------|---|--------------------|
| Auctioned Allowances | | Calculated as the total number of allowances created in that calendar year minus the sum of FAs (and other smaller pots). Sold at auctions each fortnight | 83 million (53%) |
| Free Allocations (FA) | Industry Cap | The total number of allowances available to be provided as freely allocated allowances for stationary emitters. | 57 million (37%) |
| | Aviation | Freely allocated allowances for the aviation sector. | 4.7 million (3%) |
| Flexible Share | | Allowances which can be used in the instance that the level of FAs exceed the Industry Cap, or for market stability purposes | 4.7 million (3%) |
| New Entrants' reserve | | Reserved for new installations | 3.1 million (2%) |
| TOTAL ALLOWANCES | | | 156 million |



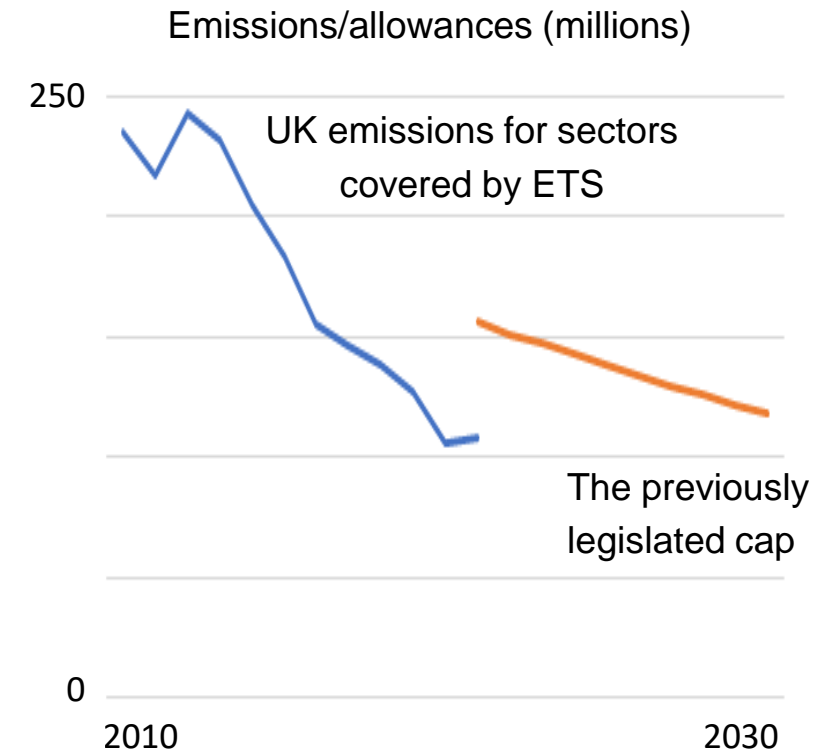
UK ETS Cap: What is it?

- The UK ETS is a **cap-and-trade system**.
- The **'cap' is set** as the total amount of greenhouse gases businesses and sectors included in the scheme can emit each year.
- This cap is **divided into allowances** and distributed to participants covered by the scheme, who are **free to buy and sell allowances** from each other. The price of an allowance at any point in time is the carbon price.
- Participants **must purchase and surrender allowances** for each tonne of their reported emissions every year.
- The cap decreases over time, meaning a decreased availability of allowances in future. This provides a **signal to the market to decarbonise**.



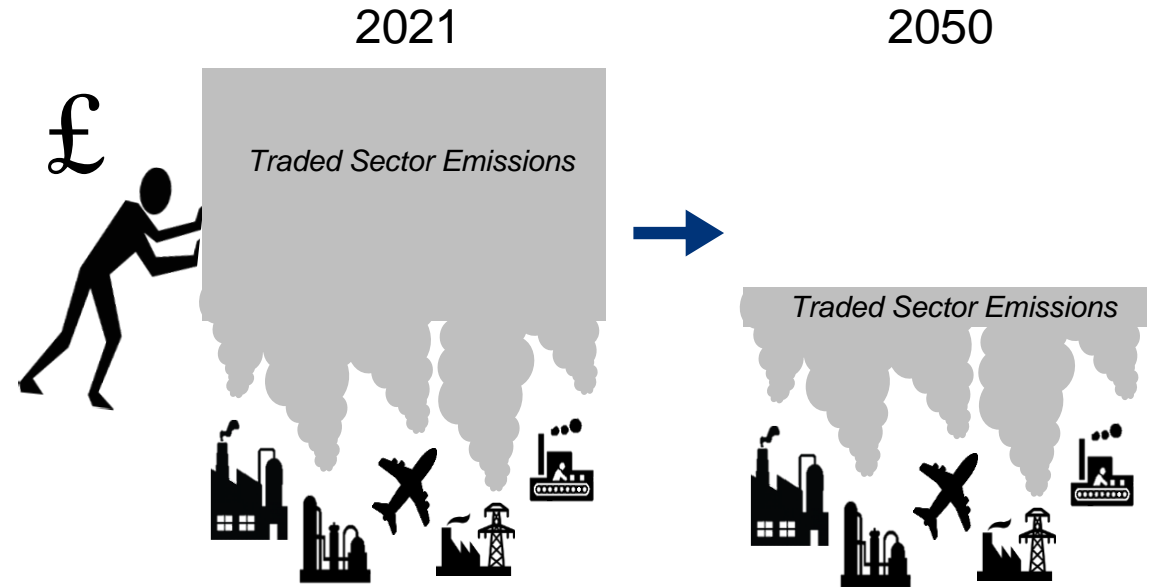
UK ETS Cap: Relationship - the cap and emissions

- A cap **does not directly** set the actual price of carbon; it affects behaviour and expectations in the market, which drive the carbon price.
- In effect, the cap sets a **limit on emissions** for the covered sectors each year.
- However, the cap is **not necessarily exactly equal** to the actual emissions at any one point in time, as allowances can be carried over ('banked') between years.
- The number of allowances in circulation in the market can **exceed or fall short of the annual cap**. In any one year, it is a combination of:
 - a) Allowances **issued by the government** (free allocation and auctioned).
 - b) Allowances **banked/hedged** by installations and in secondary markets.
 - c) If linked, UK market participants could buy/sell further allowances from/to the **linked market**.
- The **annual cap** does not directly reduce the number of actual emissions in the market that year, but it **sends a signal to market participants**. The overall **phase cap** does set a hard limit on allowances.



UK ETS Cap: Why get the cap right?

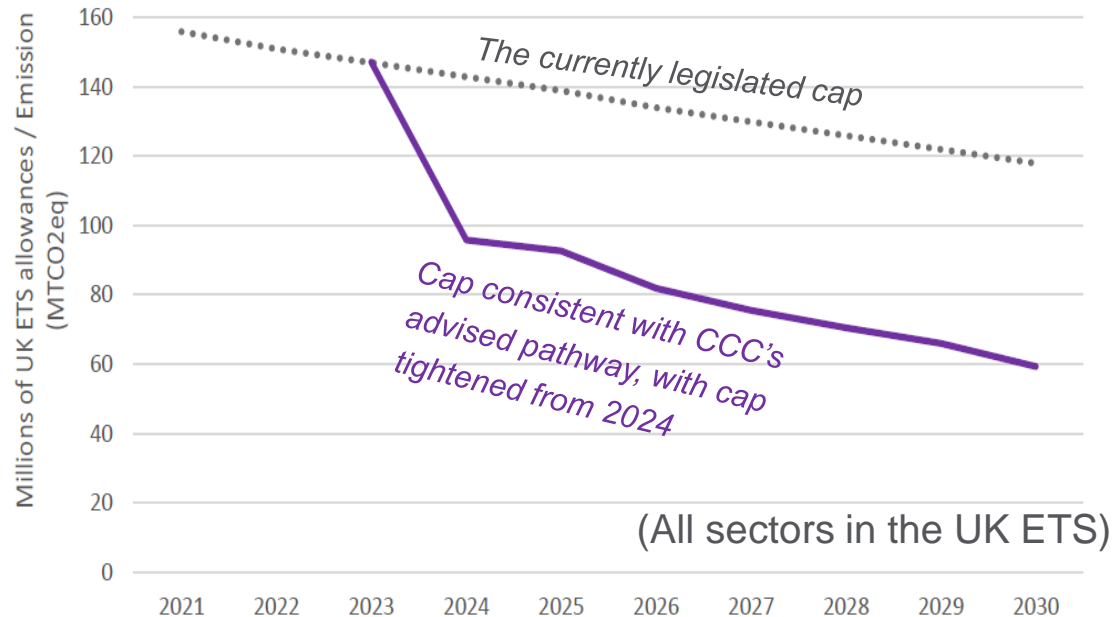
- Our **ultimate goal** is to transition to a low-carbon productive economy, reducing emissions and reaching net-zero by 2050.
- As the cap decreases over time, the availability of allowances decreases and we'd expect the carbon price signal to increase. This means the costs of emissions-intensive production should **increase over time**.
- Renewable energy and low-emissions goods and processes become **more competitive and viable**, so low-carbon innovation is **encouraged**.
- The cap sets the pace of emissions reductions. This needs to:
 1. Be in-line with delivering emissions targets,
 2. Avoid outpacing the technical ability of industry (as a whole) to decarbonise.
- **So, the cap needs to be set correctly.**



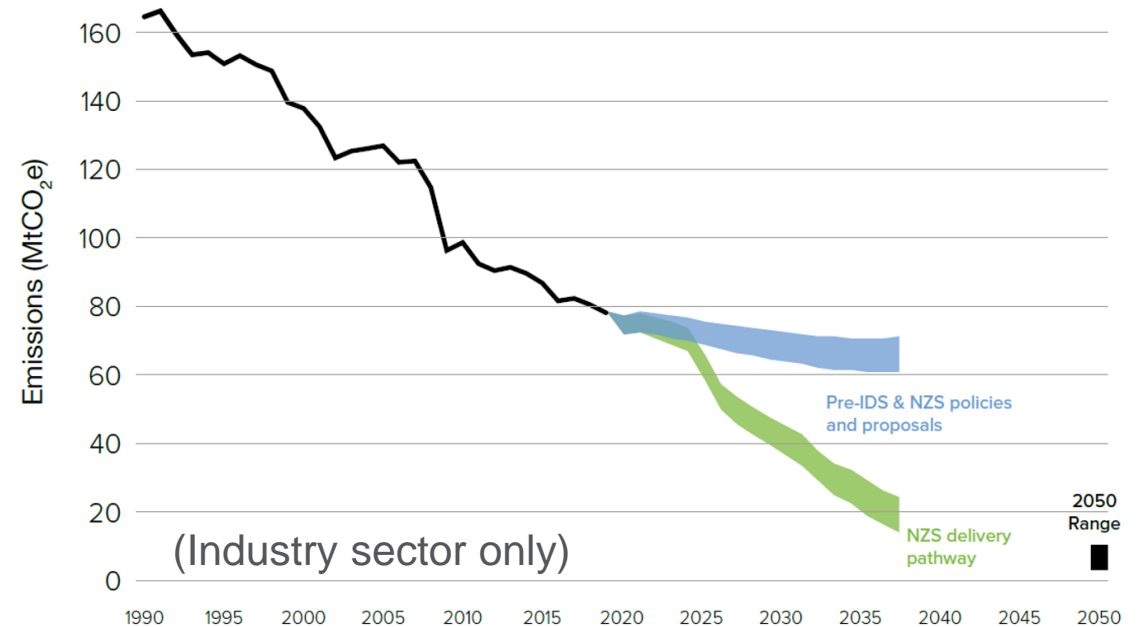
UK ETS Cap: A net-zero consistent cap

With net-zero targets for our **whole economy**, we could then consider the size of the **sectors covered by an ETS**.

1. The **UK Committee for Climate Change (CCC)** provided **advice**, setting out a pathway to 2030 for emissions covered by the UK ETS, consistent with their 'Balanced Net Zero Pathway'.

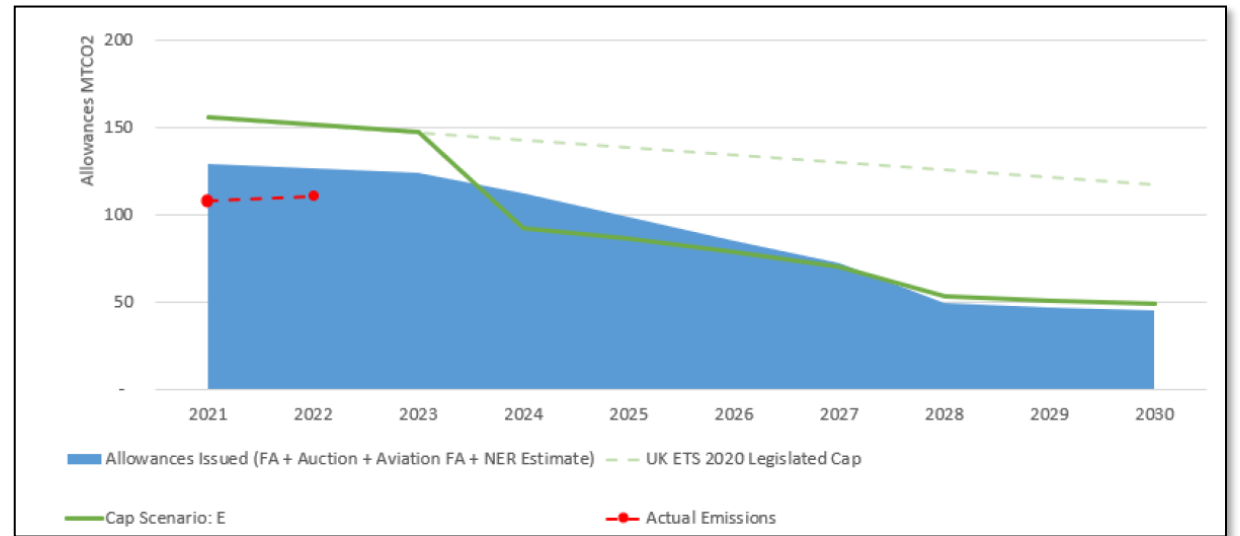


2. The **UK's Net Zero Strategy** also set out advice by sector, which provide an outline of the pace of emissions reductions needed across different parts of the economy to deliver UK economy-wide climate targets.



UK ETS Cap: Future development

- We are **resetting the UK ETS cap from 2024 to be consistent with our net zero target**, at the top of the net zero consistent range we consulted on (936m allowances over the phase).
- We will **smooth the transition to the net zero cap**, through releasing 53.5 million allowances from the reserve pots to auction between 2024-2027.
- We are also **providing long term market resilience**, by retaining 29.5m allowances initially in reserve for market stability mechanisms.

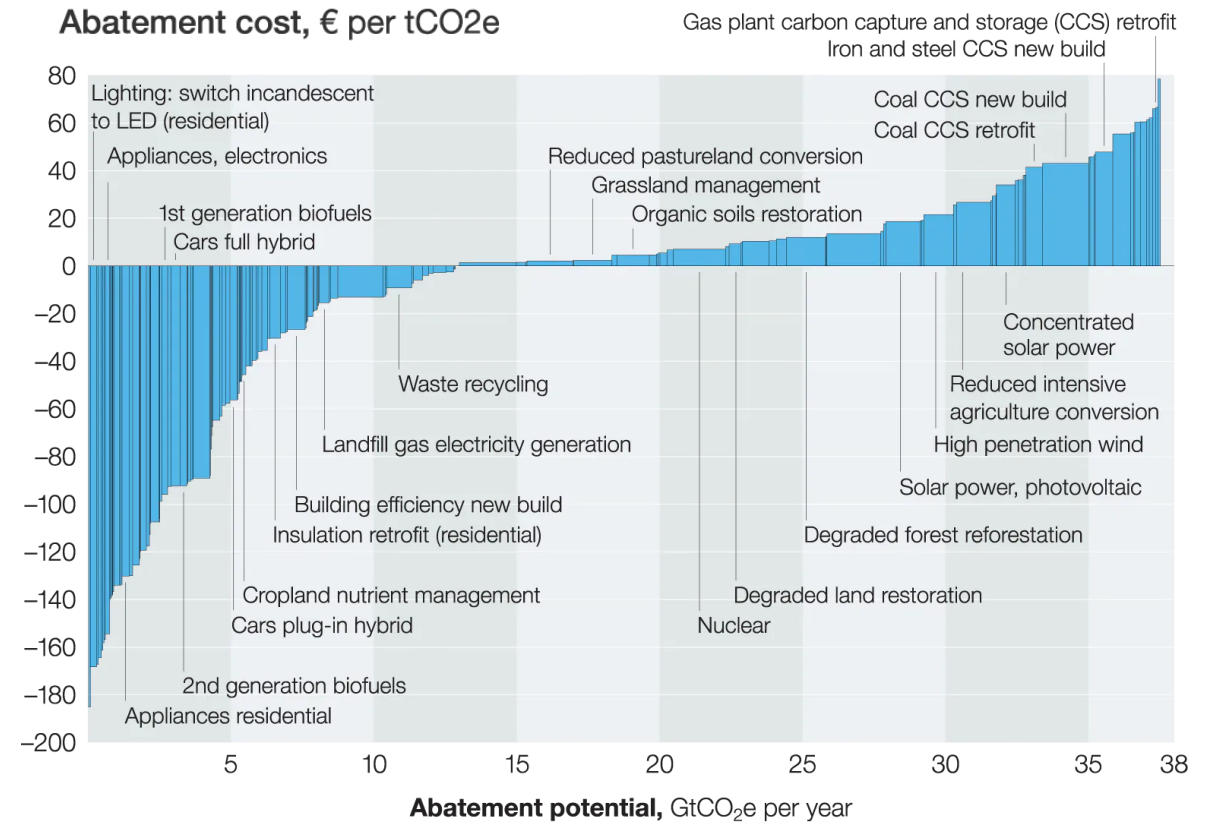


UK ETS Cap: Practical steps to decarbonise

- Marginal Abatement Cost Curves (MACCs) help us **understand the abatement potential and abatement cost** for different abatement methods, for each relevant sector.

(Abatement = reduction in emissions)

- They map out the **cost/saving** of abatement methods (height) **against** their **annual abatement potential** (width), in order of cost-effectiveness.
- The ability to **choose** whether to buy allowances or reduce emissions means, as a whole, ETS participants will do the **cheapest abatement first** and progressively move to the more expensive options.
- Other policies (beyond ETS) fit in here. These charts help us understand where policies should be focused (*e.g. if substantial abatement is needed, we may need to assess barriers to deploying expensive methods*).



Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures below €80 per tCO₂e if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.

McKinsey&Company | Source: McKinsey Global GHG Abatement Cost Curve v2.1

UK ETS Cap: Cap setting - context is important

The UK ETS cap was set at **5% below** the UK's notional share of the EU ETS cap from day one.

In July 2023, we announced that we would be aligning the UK ETS cap with our **2050 net zero goals** to send a clear signal to business and give them the confidence to invest in the transition to greener technology.

The cap- level and trajectory may look **different** for other countries, compared to the UK ETS. It is important to **consider the context**, including:

- What are your **net-zero targets**?
- How does an ETS **play a role** in achieving those targets?
- Which **sectors** are covered by your ETS?
- What are your **current emissions** levels?
- How quickly and easily could sectors **decarbonise**?
- What do **MAC curves** look like your context?



What did we cover?



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Questions

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