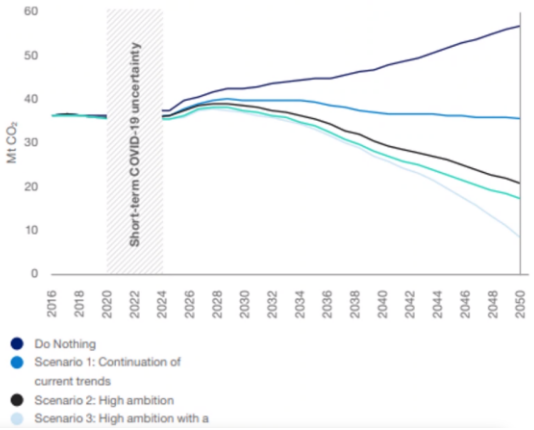
Jet Zero Consultation Workshop by DfT

Clear goal, multiple solutions

We will focus on achieving Jet Zero, whilst being flexible over the pathway to achieve it.

- Many of the technologies we need to achieve Jet Zero are at an early stage of development or commercialisation, therefore we must be **flexible in our approach.**
- Whilst there may be alternative pathways, the **goal is clear: we will commit the UK aviation sector to reaching net zero by 2050 – or Jet Zero.**
- We are also consulting on an **earlier target for UK domestic aviation to reach net zero by 2040.**
- We propose to set a **CO2 emissions reduction trajectory for aviation** from 2025 to 2050 against which we will monitor progress.
- We will **review our strategy every five years** and adapt our approach based on progress made

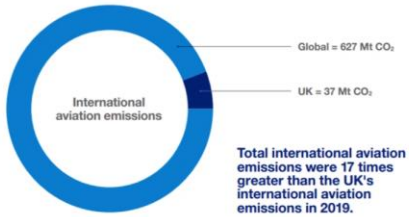
Aviation decarbonisation scenarios[6]



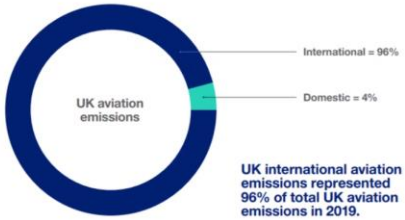
International leadership

The vast majority of UK aviation emissions are from international flights; tackling these needs global agreement and UK leadership.

- Our best path to tackling all aviation emissions is by using our international leadership and influence. For example, the UK was instrumental in the agreement and development of CORSIA, the first global market-based measure in any single sector.
- We will continue to work with other states through the **International Civil Aviation Organization (ICAO),** drawing also **on our COP26 Presidency**, to agree ambitious emissions goals and effective mitigation measures for the entire global sector.
- This includes:
  - securing agreement to a global **long-term goal for international aviation CO2 emissions** that is consistent with the Paris Agreement
  - negotiating for the **strengthening of the CORSIA offsetting scheme**
  - the adoption of policies that **support the use of truly sustainable aviation fuels.**



Total international aviation emissions were 17 times greater than the UK's international aviation emissions in 2019.



UK international aviation emissions represented 96% of total UK aviation emissions in 2019.

Delivered in partnership

Achieving Jet Zero requires all parts of the sector to work together to develop, test and implement the solutions we need.

- Governments cannot achieve Jet Zero alone; success is dependent on all parts of the sector and the public working together, across the globe.
- In the UK this collaborative approach is already well under way through the:
  - Jet Zero Council
  - Aerospace Technology Institute (ATI)
  - Aerospace Growth Partnership (AGP)
  - Airspace Change Organising Group (ACOG)
  - Civil Aviation Authority (CAA)

Our policy measures

System efficiencies

A significant proportion of our emissions reductions will come from improving the efficiency of our existing aviation system: our aircraft, airports and airspace

- In our "High ambition" scenario, system efficiencies account for **21 Mt CO_2** emissions reductions in 2050, or **36%.**

Existing policy commitments	New policy proposals
We will support **airspace modernisation**, providing up to £5.5m funding in the years 2020/21 and 2021/22.	We propose that **all airport operations in England should be zero emission by 2040** (scope 1 and scope 2 emissions).
We will work with the Civil Aviation Authority as co-sponsors of the Airspace Modernisation Programme to **support Airspace Change Organising Group (ACOG).**	We will seek a **voluntary agreement from all airlines to avoid tankering.**
We will continue to work through ICAO to ensure a **global baseline for fuel efficiency**.	We welcome thoughts on whether there are wider changes to policy that might incentivise improved efficiencies, including: • **Airport charges / slot allocation** • Making provision for Air Navigation Service Providers (ANSPs) to implement **differential charging based on environmental performance.** • Identifying where **changes to regulations** may be needed to implement new CO2 emission saving operations • Whether there are **other ways to stimulate investment** in greater operational efficiencies across the aviation system.

Sustainable aviation fuels (SAF)

Sustainable aviation fuels could play a key role in decarbonising aviation, whilst also representing an industrial leadership opportunity for the UK.

- In our "High ambition" scenario, SAF account for **8 Mt CO_2** emissions reductions in 2050, or **14%.**

Existing policy commitments	New policy proposals
We are consulting on **a UK SAF mandate** setting out our level of ambition for future SAF uptake.	We will consider **what further policies are needed** to provide SAF producers with greater confidence and encourage UK production.
We have formed the **Clean Skies for Tomorrow SAF Ambassadors group**, which will develop, pilot and promote industry-led policy proposals for national SAF policies, ahead of COP26.	We will continue to negotiate in ICAO for **comprehensive SAF sustainability standards.**
We will continue to engage SAF stakeholders through the **Jet Zero Council SAF Delivery Group**.	We will look at the feasibility of **using SAF on UK Public Service Obligation (PSO) routes**.
We have consulted on the **possibility of expanding the Renewable Transport Fuel Obligation** to reward recycled carbon fuels.	We will undertake a **SAF-specific review by 2030** and use this to confirm a SAF trajectory to 2050.
We are supporting the development of SAF through the **Green Fuel, Green Skies competition.**	We will work across government to **pioneer the accelerated procurement and use of SAF.**
We will **establish a SAF clearing house** to enable early stage aviation fuel testing.	

Zero emission flight (ZEF)

There is the potential for new, zero emission aircraft to play a role in the decarbonisation of aviation.

- In our "High ambition" scenario, zero emission flight accounts for **2 Mt CO_2** emissions reductions in 2050, or **4%.**

Existing policy commitments	New policy proposals
We will continue to **support industrial R&D** through the ATI Programme.	Our aspiration is to have **zero emission routes connecting the United Kingdom by 2030.**
We will continue to work with the ATI, industry and academia to **establish a method for quantifying the potential emissions savings of future R&D project.**	We will look at the **feasibility of using zero emission aircraft on UK PSO routes.**
We will support the **FlyZero project**, which will set out a plan by early 2022 for how the UK might best contribute to a zero emission aircraft by 2030.	We will work with industry to **encourage the adoption of innovative zero emission aircraft and aviation technology in General Aviation.**
We are investing £3m into R&D funding in 2021/22 to **understand the infrastructure needed by airports to handle new forms of zero emission aircraft.**	We will work through the Jet Zero Council to consider the **wider enabling framework for zero emission flight**.
The Government will publish a **UK Hydrogen Strategy** which will detail the key steps needed in the 2020s.	
We will support the development of the **Tees Valley Hydrogen Hub**.	
We will work with the CAA and ICAO to ensure the **UK remains the best location in which to develop and deploy new zero emission aircraft.**	

Markets and removals

The implementation of carbon markets and greenhouse gas removal technologies is vital to achieving Jet Zero.

- In our "High ambition" scenario the demand impact of carbon pricing accounts for **5 Mt CO2** emissions reductions in 2050, or **9%.** There are **21 Mt CO_2** residual emissions in 2050, or **37%** abatement required outside the aviation sector.

Existing policy commitments	New policy proposals
We will have all **legislation for CORSIA in force** no later than the start of UK ETS Phase I(b) in 2024.	We will **strengthen carbon pricing for aviation** to ensure we continue to apply the 'polluter pays' principle and consider incentives for greenhouse gas removal methods.
We will work to **enhance the effectiveness of the UK ETS.**	We will **explore how we can support other states** that may need help implementing CORSIA effectively.
We will set out **further details on the Government's approach to the development and deployment of greenhouse gas removal methods.**	
We will consider **how the UK ETS could incentivise the deployment of greenhouse gas removal methods**.	
We will negotiate for **carbon pricing to be maintained and strengthened** in the international aviation sector, including aligning the ambition of measures such as CORSIA with any **long-term goal adopted by ICAO**.	
We will be firm advocates within ICAO to **improve the environmental ambition of CORSIA** through ICAO's periodic reviews.	

Influencing consumers

We want to preserve the ability for people to fly whilst supporting consumers to make sustainable travel choices.

- We have not modelled savings through influencing consumer behaviour at this stage.

New policy proposals

We will work with the CAA **to explore whether mandating the provision of environmental information** to customers at the time of booking flights could influence consumer decision-making.

We will look at **other ways to support consumers to make sustainable choices** when booking flights and reward those parts of the aviation sector that move more quickly to decarbonise.

The benefits of influencing consumers

Work by the ICCT suggests that there can be **a difference of up to 63%** in emissions between different transatlantic flights.[42]

Information provision could help:

- Passengers make informed decisions at the time of booking a flight.
- Increase public awareness of carbon emissions and climate change.
- Support aviation growth in a sustainable manner.

Workshop questions

1. What are your views on the proposal that **UK *domestic* aviation should be net zero by 2040**? How do you propose this could be implemented?

2. What are your views on the proposal that **airport operations in England should be zero emission by 2040** (scope 1 and scope 2 emissions)? How do you propose this could be implemented?

3. What further measures are needed to support the development of a **globally competitive UK SAF industry** and increase SAF usage?

4. What are your views on our aspiration for **zero emission routes connecting the United Kingdom by 2030**? How do you propose these could be implemented?

5. What are your views on the **role of greenhouse gas removal methods** in achieving net zero aviation?

6. What more can the Government do to support consumers to make **informed, sustainable aviation travel choices**?