

Jet Zero Industry Charter

The Jet Zero Council (JZC) aims to deliver at least 10% sustainable aviation fuel (SAF) in the UK fuel mix by 2030 and deliver zero emission transatlantic flight within a generation, driving the ambitious delivery of new technologies and innovative ways to cut aviation emissions.

As industry members of the JZC we commit to leading by example, driving the delivery of Jet Zero and supporting the effective functioning of the JZC through:

1. Demonstrating our commitment to delivering net zero aviation by 2050 by tangibly supporting the development and take up of SAF and/or zero emission flight (ZEF).
2. Actively promoting and communicating Jet Zero activities and contributing to the success of the Jet Zero Communications & Engagement Network.
3. Proactively contributing to the JZC, including by attending all meetings, updating on our Jet Zero activities when requested and delivering upon actions as required.
4. Signing up to a science-based target such as the Race to Zero wherever possible.

Industry members have made the following additional pledges to show their commitment to delivering Jet Zero:

Dr Alicia Greated, Chief Executive Officer, Innovate UK KTN

- Innovate UK KTN will launch and deliver a SAF Innovation Programme to build the UK SAF supply chain by: helping businesses access expertise, finance and customers; brokering new partnerships; creating an investor network and conducting a SAF analysis to understand UK capability to develop a SAF industry.
- Continue to deliver the JZC SAF and ZEF Delivery Groups through co-ordination and secretariat functions.
- Provide secretariat for the JZC CEO Steering Group.
- Actively champion the progress and activities of the JZC through Innovate UK KTN's extensive industry and research networks.

Charlie Cornish, Group Chief Executive, Manchester Airports Group (MAG)

- MAG will develop Jet Zero educational materials focusing on understanding emerging technologies and delivery of Jet Zero. This will be delivered through MAG's AeroZones, Airport Academies and Stansted Airport College to local schools and provided to other JZC members free of charge. In the five years prior to 2020, MAG supported the education of 129,000 school children in its local communities and is aiming to strengthen this work.

- Fund three PhD projects supporting local students with research proposals aligned with the JZC's ambitions; consulting with JZC's subgroups chairs to determine the highest value added areas of research that will support the ambitions of the JZC and decarbonisation of flights from MAG's airports.
- Launch a competition to provide five years of free landing fees to the first transatlantic zero emission aircraft operating from MAG's airports. This is in addition to MAG's existing competition offering five years of free landing fees to the first zero emission aircraft operating from its airports.
- Introduce a financial incentive mechanism into MAG's airport charges to accelerate the take-up of SAF. The scheme will be developed and implemented following the finalisation of the UK SAF mandate to ensure that it is fully compatible with that policy framework.
- MAG is committed to delivering on the Government's requirements for Airspace Modernisation at the earliest opportunity and will continue to work collaboratively across industry.

Gary Elliott, Chief Executive Officer, Aerospace Technology Institute (ATI)

- The ATI will seek to maximise investment in critical technologies to drive forward both ultra-efficient and ZEF.
- Launch a series of technology challenges to promote R&D in ZEF.

Grazia Vittadini, Chief Technology Officer, Rolls-Royce

- Rolls-Royce will test its UltraFan suite of aerospace technologies on SAF in 2022.
- Make in-production Trent engines compatible with SAF by 2023.
- Continue developing the technology for Direct Air Capture which will remove CO₂ from the air which could be used in the production of SAF.

Dr Jennifer Holmgren, Chief Executive Officer, LanzaTech

- LanzaTech is committed to becoming a leading producer of SAF's in the UK.
- Aim to begin operating their first plant by 2026, and to have 3 sites operational by 2030 producing approximately 3% of jet fuel uplifted in the UK from sustainable sources.

Johan Lundgren, Chief Executive Officer, easyJet

- easyJet are targeting a reduction in carbon intensity of 35% by fiscal year 2035 (baseline fiscal year 2020).
- Working with a range of partners to develop and demonstrate hydrogen-powered aircraft and infrastructure.

John Holland-Kaye, Chief Executive Officer, Heathrow Airport

- Heathrow's goal is for in-air emissions (all emissions from planes, including during flights) in 2030 to be up to 15% lower than they were in 2019 and for ground emissions (emissions from surface access, procurement, airport vehicles and buildings) to be at least 45% lower by 2030 than they were in

2015. The overall ambition is for 2019 to have been the year of peak carbon from Heathrow airport, including flights, even as they grow in future.

- Use Heathrow's landing charges to create a strong financial incentive for its airline customers to increase SAF usage year on year. Working with the "Sustainable Markets Initiative" to agree an ambitious 2030 SAF purchase target for corporate air travel. Continue to advocate for a global agreement on net zero aviation at ICAO and develop and promote effective SAF policies in the UK and globally.
- Work with industry partners to research, test and roll-out the airport infrastructure needed to enable zero emissions aircraft. Offer a year's free landing to the first commercial zero emission service to operate from Heathrow.
- Aim for: 45% of passengers to use public transport to travel to/from the airport by 2026; no more than 57% of colleagues to travel on their own in a car by 2026 (down from 62%); all airport vehicles to be zero emission by 2030; and to lead the research and testing of new low carbon concrete in different investment projects during H7 and collaborate with major construction clients in the UK to help set the standards that will drive wider use of low carbon concrete.

Julie Kitcher, Executive Vice President Communications and Corporate Affairs, Airbus

- Airbus aims to certify all its civil aircraft to run on 100% SAF by 2030.
- Ambition to deliver the first zero emission aircraft by 2035, powered by hydrogen.

Karen Dee, Chief Executive, The Airport Operators Association (AOA)

- AOA will establish a programme of activities to facilitate knowledge sharing and the exchange of best practice amongst its members.
- AOA will use all available platforms to promote the industry's commitment to Jet Zero targets.

Kevin Craven, Chief Executive Officer, ADS Group

- ADS is committed to working with its members to develop and scale green aviation technology to reach net zero by 2050.
- ADS will support the aerospace supply chain and ecosystem in understanding emissions and making progress towards decarbonisation goals.

Kyle Martin, Vice President, European Affairs, General Aviation Manufacturers Association (GAMA)

- GAMA are committed globally to the following two pledges for the global turbine, hybrid and electric business and general aviation aircraft fleet:
 - Improve fuel efficiency by 2% per year from 2020 until 2030.
 - Continue carbon-neutral growth from 2020.

Louise Kingham OBE, UK Head of Country and Senior Vice President for Europe, bp

- bp will aim to supply 20% of UK's SAF demand by 2030.
- Invest in the UK to create a new global low carbon process centre for low carbon fuels.

Sir Martin Donnelly, President, Boeing Europe and Managing Director, Boeing U.K and Ireland

- Boeing has previously conducted successful test flights replacing petroleum jet fuel with 100% sustainable fuels. The company has committed to its commercial airplanes being certified to fly on 100% SAF by 2030.
- Boeing is a member of the World Economic Forum's Clean Skies for Tomorrow initiative that commits to use 10% SAF by 2030.

Matt Gorman MBE, Chair, Sustainable Aviation (SA)

- SA will help inform the pathway to net zero emissions through independent research and technical considerations, contributing to both Government policy development and sector action.
- SA will leverage the strength of its membership to maintain momentum on delivery of Jet Zero commitments across research and investment, driving sustainable efficiencies across the sector.

Sir Mike Wigston KCB CBE ADC, Air Chief Marshal, Royal Air Force (RAF)

- The Royal Air Force pledges to commit to its Net Zero 2040 strategy ambitions, to collaborate with the civil and military aviation sector on sharing best practice to develop and enable UK net zero airbases and airports, and contribute to UK government net zero aviation and low environmental impact aircraft improvements.
- Contribute resources, expertise and innovation in support of JZC initiatives, including on-going contributions to UK SAF development and commercialisation, using increased quantities of SAF in military aircraft, supporting CAA and NATS on fuel efficient airspace usage, collaborating with and supporting UK ZEF and synthetic training activity, and sharing Royal Air Force and Ministry of Defence Research & Development results and outcomes linked to reducing the UK aviation sector's environmental impact.

Neville Hargreaves, Vice President, Waste to Fuels, Velocys

- Velocys will provide timely, unbiased evidence to the JZC, its subgroups and the Government to assist in the removal of barriers to investment in SAF production in the UK.
- Support cross-industry initiatives and collaborations to accelerate the development of a SAF industry.

Rachel Gardner-Poole, Jet Zero Council Zero Emission Flight Delivery Group Chair (and Chief Operating Officer, Connected Places Catapult)

- The Connected Places Catapult will continue to provide a neutral voice to all stakeholders to advance net zero transformation by connecting the market, sparking innovative technology and accelerating commercialisation. The Catapult is also aiming to be carbon neutral in its operations by 2025.

Richard Moriarty, Chief Executive Officer, Civil Aviation Authority (CAA)

- Take a leading role, as the industry regulator, to report on the environmental performance of the UK sector, including emissions and noise, and to enable consumers to access information on the environmental impact of their flights.
- Take a leading role, as the industry regulator, to enable the introduction of low and zero-emission novel technologies, including SAF.

Russ Dunn, Chief Technology Officer and Head of Strategy, GKN Aerospace

- GKN Aerospace is committed to reducing its environmental impacts, in scope 1 & 2 emissions and consumption of natural resources to drive towards net zero manufacturing before 2050. Environmental performance progress will be disclosed through CDP. GKN Aerospace will also work with its suppliers to reduce the impact of scope 3 emissions and support reporting via the CDP disclosures.
- Continue investing most of its research and development expenditure in technologies and products that will help to decarbonise the sector. Support and inspire customers to accelerate the pace of change through exploitation of new technologies including electrification, flight efficiency and hydrogen propulsion.
- Collaborate with customers, partners and suppliers to maximise the joint value and contribution towards the aims of the JZC.
- Provide unbiased data driven guidance, proposals and feedback, to achieve the aims and ambitions of the JZC and the decarbonisation of the sector as a whole.

Sean Doyle, Chief Executive Officer, British Airways (BA)

- BA will continue investing in the development of SAF with the goal to purchase over 600,000 tonnes per year by 2030.
- Continue to play a leading role in proposing and supporting implementation of smart policy mechanisms to accelerate Jet Zero, including the practicalities of recognising SAF in emissions trading and strengthening of global carbon pricing, building on CORSIA.
- Create the market pull for technology innovation & low carbon aircraft and assess their operational application.
- Invest in carbon removal technology and help to develop supportive policy for this essential element of aviation's decarbonisation.

Shai Weiss, Chief Executive Officer, Virgin Atlantic

- Virgin will deliver a 15% gross reduction in CO₂/revenue ton kilometre by 2026 through continued fleet transformation and operational efficiency.
- Conduct research on the emission properties of SAF and the climate impact of contrails, reporting findings by 2024.

Stuart Gregg, UK&I Country Manager, Carbon Engineering (CE)

- CE will continue to develop and commercialise affordable and scalable Direct Air Capture (DAC) which can enable two aviation decarbonisation pathways (low carbon synthetic SAF and permanent carbon removals).
- CE will collaborate with its plant developers, partners, and suppliers to maximise its contribution towards the aims of the JZC.

Tim Alderslade, Chief Executive, Airlines UK

- Airlines UK will work collaboratively with the JZC, its subgroups, Government and across industry to assist in the commercialisation of SAF production in the UK, and development of ZEF.
- Airlines UK will play a leading role in collating evidence and feeding into the policy debate around the mechanism for incentivising investment into a UK SAF industry.

Tom Mackle, U.K. Airline CEO, DHL

- DHL has committed to reduce carbon emissions to below 29 million tonnes by 2030, down from 33 million tonnes in 2020.
- DHL will invest €7 billion in climate-neutral logistics by 2030 and has set a target of reaching a 30% blend of sustainable aviation fuel across its global fleet by 2030.
- DHL will continue to optimise its current fleet and maintain its fleet renewal strategy to reduce emissions.
- Building on DHL's investment in 12 all-electric cargo planes, DHL will continue to explore zero-emissions logistics.

Val Miftakhov, Chief Executive Officer, ZeroAvia

- ZeroAvia will continue to work towards and achieve first-of-a-kind R&D milestones for the development of hydrogen-electric propulsion technologies in the UK, working with UK-based innovators and supply chains to maximize the wider industrial opportunity.
- Working with the CAA, ZeroAvia will achieve certification of its ZA600 hydrogen-electric powertrain for aircraft up to 19-seats by 2024.
- Continue investing in the development of its green hydrogen production and fuelling ecosystem for airports in the UK, ensuring that the UK also leads in the technologies that will enable operators to adopt zero-emission propulsion and for airports and partners to build out multi-modal hydrogen hubs that can decarbonise a range of sectors and tackle air pollution.

- Employ over 150 people in the UK by the end of 2022, representing rapid growth, and to continue investing in the sector-leading advanced skills that are required to define the future of aviation technologies.