



**Jet Zero Council – Seventh Meeting**  
**16:15 – 17:15, Tuesday 7<sup>th</sup> February 2023**

**At Boeing UK**

**Attendees**

Ministerial Attendance

- The Rt Hon Grant Shapps MP, Energy Security and Net Zero Secretary, Joint Chair
- The Rt Hon Mark Harper MP, Transport Secretary, Joint Chair
- Baroness Vere of Norbiton, Parliamentary Under Secretary of State (Aviation, Maritime and Security)

Jet Zero Council CEO

- Emma Gilthorpe, Chief Operating Officer, Heathrow Airport

Member attendance

- Alan Newby, Director of Aerospace Technology and Future Programmes – deputising for Grazia Vittadini, Chief Technology Officer, Rolls-Royce
- Amy Ruddock, Vice President Europe and Middle East – deputising for Stuart Gregg, UK & Ireland Country Manager, Carbon Engineering
- Chris Gadsen, Director of Government Affairs – deputising for Johan Lundgren, Chief Executive Officer, easyJet
- Colin Tattum – deputising for Dr Alicia Greated, Chief Executive Officer, Innovate UK KTN
- David Lee, Professor of Atmospheric Science and Director of the Centre for Aviation, Transport, and the Environment; Manchester Metropolitan University
- Gary Elliott, Chief Executive Officer, Aerospace Technology Institute
- Greg Archer, European Policy Director – deputising for Dr Jennifer Holmgren, Chief Executive Officer, LanzaTech
- Holly Boyd-Boland, Vice President of Corporate Development – deputising for Shai Weiss, Chief Executive Officer, Virgin Atlantic
- Professor Iain Gray, Director of Aerospace, Cranfield University
- James McMicking, Vice President Strategy – deputising for Val Miftakhov, Chief Executive Officer, ZeroAvia
- Jonathan Hinkles, Chief Executive, Loganair
- Jonathon Counsell, Jet Zero Council Sustainable Aviation Fuels Delivery Group Chair (and Group Head of Sustainability, International Airlines Group)
- John Holland-Kaye, Chief Executive Officer, Heathrow Airport

- Baroness Brown Julia King DBE FREng FRS, Jet Zero Council Adviser (and Crossbench Member of the House of Lords)
- Karen Dee, Chief Executive, The Airport Operators Association
- Kevin Craven, Chief Executive Officer, ADS Group
- Kyle Martin, Vice President, European Affairs, General Aviation Manufacturers Association
- Maria Laine, President of Boeing UK, Ireland and Nordic region, Boeing
- Matt Gorman MBE, Chair, Sustainable Aviation
- Dr Oliver Taylor, Head of Business Development UK – deputising for Louise Kingham OBE, UK Head of Country and Senior Vice President for Europe, bp
- Oriel Petry, Senior Vice President Head of Public Affairs UK – deputising for Julie Kitcher, Executive Vice President Communications and Corporate Affairs, Airbus
- Air Vice-Marshal Paul Lloyd CBE – deputising for Sir Mike Wigston KCB CBE ADC, Air Chief Marshal, Royal Air Force
- Philip Sanderson, Chief Financial Officer – deputising for Neville Hargreaves, Vice President, Waste to Fuels, Velocys
- Russ Dunn, Chief Technology Officer and Head of Strategy, GKN Aerospace
- Professor Sarah Sharples, Chief Scientific Adviser, Department for Transport
- Stephen Heapy, Chief Executive Officer, Jet2
- Tom Mackle, UK Airline CEO, DHL
- Tim Alderslade, Chief Executive, Airlines UK
- Tim Hawkins, Chief of Staff – deputising for Charlie Cornish, Group Chief Executive, Manchester Airports Group
- Tim Johnson, Director, Aviation Environment Federation
- Tim Johnson, Policy Director, Civil Aviation Authority – deputising for Rachel Gardner-Poole, Jet Zero Council Zero Emission Flight Delivery Group Chair (and Chief Operating Officer, Connected Places Catapult) and Richard Moriarty, Chief Executive Officer, Civil Aviation Authority

#### Department for Transport official attendance

- Rannia Leontaridi, Director General, Aviation and Maritime Security
- Holly Greig, Deputy Director, Aviation Decarbonisation
- Richard Bruce, Director, Transport Decarbonisation

#### Department for Business and Trade official attendance

- Paul Griffiths, Head of Aerospace Team

### Additional Attendees

- Andy Johnston, Jet Zero Communications & Engagement Network Chair (and External Relations Manager, GKN Aerospace)
- Jessica Webb, Special Adviser to the Secretary of State for Energy Security and Net Zero
- Richard Coates, Special Adviser to the Secretary of State for Transport
- Ministerial Private Secretaries
- Jet Zero Council Secretariat

### Apologies

- Sean Doyle, Chief Executive Officer, British Airways
- Rt Hon Jesse Norman MP, Minister of State (Decarbonisation and Technology)
- David Bunch, UK Country Chair, Shell
- David Silk, Director, Airlines and Airports, Department for Transport

### **Actions**

- Council members who would like to share views on a Jet Zero Council (JZC) International are to contact the JZC Secretariat.

### **Summary of Meeting**

- The Secretary of State for Transport and the Jet Zero Council CEO highlighted the progress made on decarbonising aviation since the launch of the [Jet Zero strategy](#).
- Representatives from Virgin Atlantic, ZeroAvia the Department for Transport (DfT) and the Department for Business and Trade summarised progress on the Council's key workstreams: sustainable aviation fuels (SAF) and zero emission flight (ZEF).
- The Council discussed its priorities for 2023.

### **Readout**

#### **1. Opening remarks**

The Secretary of State for Transport emphasised that the Jet Zero Council would remain a priority for government throughout the machinery of government changes that month. He said the Jet Zero Strategy would enable the sustainable growth of aviation creating a future of green flight. He highlighted the progress made including the launch of the [2040 Zero Emissions Airport Target Call for Evidence](#) that day. He noted that the UK had helped negotiate the [long term global aspirational goal](#) for international aviation at the 41<sup>st</sup> ICAO Assembly, which set a global 2050 net zero target for CO<sub>2</sub> emissions. He also emphasised progress made on SAF through Department for Transport funding for Virgin Atlantic to make the world's first SAF powered [net zero transatlantic flight](#), and £165 million [Advanced Fuels Fund](#) awarded to Velocys, Fulcrum, Alfanar and LanzaTech to help begin developing SAF production plants in the UK. He said the Government remained on track to ensure

legislation for a SAF mandate would be in place by 2025 and would publish findings from the Government's independent review advising on how the UK can compete in the global SAF market. He also noted the Prime Minister's priority to fill the UK's skills gap, which he said was vital for aviation alongside technological innovation.

## 2. Jet Zero Council progress

The JZC CEO encouraged the Council to redouble its efforts that year. She highlighted numerous milestones by Council members since the [sixth JZC meeting](#) in July 2022 including: Manchester Airport Group's progress to become the [first UK airport with a direct hydrogen fuel pipeline](#), the Royal Air Force had completed the [world's first SAF military transporter flight](#) and GKN Aerospace had delivered its first ground-based liquid [hydrogen fuel system demonstrator](#).

## 3. Sustainable Aviation Fuel update

Jonathan Counsell gave an overview of progress made across the SAF workstream including input to the SAF mandate consultation and options for a SAF stability mechanism in addition to contracts for difference. He highlighted technical work on SAF to enable 100% SAF usage and understand its non-CO<sub>2</sub> impacts such as reducing contrails. He said that 12 financial organisations were working on SAF commercialisation who would be key to determining risks in this workstream. He outlined priorities for the group going forwards which included continuing this progress and working to increase global ambition on SAF through the International Civil Aviation Authority.

Richard Bruce re-emphasised the Secretary of State for Transport's updates on SAF, noting pace would be key to delivering the SAF mandate by 2025.

Holly Boyd-Boland updated on Virgin Atlantic's progress to deliver the world's first SAF powered [net zero transatlantic flight](#) in 2023. She said carbon removals could be used on residual emissions and noted that contrails and the non-CO<sub>2</sub> impacts of the flight would be monitored.

Key discussion points included:

- Council members said a SAF mandate and price stability support were needed urgently, and that capital would need to be in place by 2024 to build five UK SAF plants by 2025. The Secretary of State for Transport acknowledged this, highlighting ongoing work to consider a range of options for a stability mechanism. He also encouraged Council members to use the JZC to maintain dialogue on these issues.

## 4. Zero Emission Flight update

Tim Johnson gave an overview of the ZEF workstream noting that work was in progress to identify gaps in the regulatory framework and across the economy that would enable ZEF, also to develop ZEF technology and the supporting airport infrastructure. He said the ZEF DG was working to close its gap with the SAF DG since it had been established later in July 2022. He highlighted ongoing work to develop the ZEF Two-Year Plan for delivery.

Paul Griffiths gave an overview of [government and industry's new £113 million investment](#) through the Aerospace Technology Institute (ATI) Programme into Rolls-Royce's hydrogen combustion and Vertical Aerospace's all-electric flight

technologies. He also noted that further funding support for the sector was to come, and the government was keen to work with industry to maximise the use of the ATI programme's £685m government funding.

James McMicking updated on ZeroAvia's milestone of flying the [world's largest aircraft powered with a hydrogen-electric engine](#) as part of its ATI backed HyFlyer II project. He said this was a big moment for industry and signalled the UK's leadership to the world. He outlined ambitions to scale the aircraft up to 250 people and bring it to market for short range use in the UK.

Key discussion points included:

- Council members noted the need to understand the energy requirements to deliver enough hydrogen fuel to support ZEF. Paul Griffiths acknowledged that this was a challenge which the Government were working on across all sectors.
- Council members also noted that greenhouse gas removals would be crucial.

#### **5. Jet Zero Council priorities for 2023**

The JZC CEO set out her priorities for the Council which included: producing the SAF and ZEF Two-Year Plans to galvanize support for the Council's key deliverables; ensuring that Council members understand the second SAF mandate consultation; ensuring the Council understand the pathway towards a price stability mechanism, understanding aviation's non-CO<sub>2</sub> impacts and what actions could be taken to tackle them; understanding carbon removals and identifying gaps in their pathways; unlocking airspace modernisation; identifying issues and gaps in feedstocks.

#### **6. Closing remarks & AOB**

The Secretary of State for Transport thanked Boeing for hosting the meeting.

Maria Laine thanked the Secretary of State for Transport and Council members for their alignment on decarbonising aviation for which the Council is held in high regards.

The Secretary of State for Energy Security and Net Zero highlighted that large investments across the globe were going into SAF and Hydrogen, but the path to decarbonise aviation remained steep.

The Secretary of State for Transport announced that the eighth Council meeting would be held at the [Sustainable Skies World Summit 2023](#). He also highlighted ambitions to hold a JZC International and invited Council members to share their views on this.