

ISH8 Action 38 – LADACAN note on Jet Zero Progress since OYO IP ref 20040757

The ExA has requested comments on the sensitivity of the assessment to future operational requirements and pace of technological improvements. Since the Applicant is relying on Jet Zero to ensure its carbon commitments are delivered, it is pertinent to summarise progress since the publication of 'Jet Zero – One Year On'.

Overall, we remain sceptical about the government's ability to deliver the scale or pace of aviation CO₂ reductions assumed in the Jet Zero Strategy, on which the Applicant is relying.

As the Climate Change Committee noted in its 2023 report to Parliament:

"The Jet Zero Strategy approach is high risk due to its reliance on nascent technology – especially rapid SAF uptake and aircraft efficiency savings – over the period up to the Sixth Carbon Budget. The Government does not have a policy framework in place to ensure that emissions reductions in the aviation sector occur if these technologies are not delivered on time and at sufficient scale."

Specific issues indicative of uncertainty and slow progress are worth highlighting:

- 1) The Department for Transport remains insufficiently confident of economic and market certainty to yet create meaningful long-term demand forecasts for air passenger growth. The last official forecast was produced in 2017, pre-COVID.
- 2) Jet Zero relies on carbon pricing in the form of the UK Emissions Trading Scheme (ETS) and CORSIA to reduce emissions. Cost pass-through results in relative increases in ticket prices, which in turn reduce demand.

However, the UK ETS allowance price was significantly below its EU counterpart in the summer of 2023 following a government decision to allow entities to retain unused allowances issued during the pandemic, and the price has continued to fall.

In December 2023, allowances are trading at £32.66, significantly below the low price scenario used in the Jet Zero modelling. According to the modelling, UK ETS allowance prices in 2023 were assumed to be £71/tCO₂ in the central scenario, £95/tCO₂ in the high scenario and £53/tCO₂ in the low scenario. Prices are likely to remain lower than forecast until at least 2027.

Hence the short-term control of demand is lower than that modelled, which may result in more significant requirement for reduction in the medium term.

- 3) The Virgin Atlantic test flight using 100% Sustainable Aviation Fuel (SAF) took place as planned last month between London Heathrow and New York. The normally permitted maximum is a 50% blend, so the flight required permission from the UK CAA, as well as US and Canadian authorities.

The test flight changes none of the underlying issues about the supply or regulation of SAF. Tensions remain between industry and the government in the UK regarding who should pay for SAF, particularly for a revenue stability mechanism. The SAF mandate is still not in place, and questions about feedstocks remain to be resolved.

The UN International Civil Aviation Organisation's (ICAO's) third conference on aviation alternative fuels (CAAF3) took place last month and agreed an aspirational target of only a 5% emissions reduction from alternative fuels by 2030.

Assuming a 70% average net emissions saving, this equates to around a 7% saving by volume, significantly lower than the 10% by volume ambition for 2030 expressed in Jet Zero.

Although ICAO's aspirational target is not attributable to individual states and does not prevent more ambition, if supply is constrained at this global level the UK may struggle to deliver its own SAF ambitions without a significant increase in UK SAF production.

Capacity for such an increased production is not evident, and most of the five SAF plants that are due to be under construction in the UK by 2025 are not anticipated to start production until 2027 or 2028 at the earliest.

The government has announced that UK SAF use in the last twelve months increased to around 2.5% by volume, but as traffic continues to rebound from the pandemic, and UK production remains low, there may not be further increases to report in 2024.

- 4) The government, working through the Jet Zero Council, has only just begun a discussion on carbon removals anticipated to deliver 18.7MtCO₂ of emissions reductions by 2050. Its work on non-CO₂ and zero emission aircraft is also at an early stage.
- 5) The process supporting airspace modernisation (which is expected to contribute to emissions reduction by eliminating holding stacks and enabling continuous climb and descent) appears to have stalled. The Airspace Strategy Board has been scrapped and a new process is due to start in the New Year.

Similarly, as noted in our OFH3 post-hearing submission, proposals to introduce a Single Design Entity to deal with the necessary collaborative designs for airports where shared airspace creates a need for trade-offs, are likely to lead to delays.

Heathrow Airport recently had its airspace modernisation plans rejected by the CAA. Any hoped-for CO₂ reductions associated with improved efficiency may similarly stall.

- 6) The Jet Zero Strategy is still subject to two legal challenges. These have been delayed while the Court awaits a judgement in a relevant case, but they are due to be heard in the first quarter of 2024.

Additional sensitivity testing would be appropriate given that overall progress appears to be slower than expected, with no obvious impetus from government to improve it.