2024 a significant year for UK development of sustainable aviation fuels

Morgan Lewis examines the development of sustainable aviation fuels in the UK

The summer of 2024 saw the topic of UK sustainable aviation fuels (SAF) highlighted in the first King's Speech of the new Labour government, paving the way for a Sustainable Aviation Fuel (Revenue Support Mechanism) Bill to be introduced to Parliament (and in doing so reassuring the aviation industry of the new government's commitment to Jet Zero). In April 2024, the previous government published details of the so-called UK SAF mandate to ensure that SAF makes up an increasing proportion of the jet fuel supplied by the UK each year and beginning on January 1, 2025, and separately launched a consultation about a revenue certainty mechanism to support UK SAF production. Let's take stock of those two key developments to discern the current state of play for UK SAF.

SAF is one of the key technologies to achieve Jet Zero and are already available for commercial use. These fuels are obtained from sustainable feedstocks from waste gases to municipal waste and can be blended into fossil-based aviation fuel and used in existing aircraft and infrastructure and so deliver both short-term and long-term C02 emissions savings. When fully replacing kerosene, SAF has been predicted to achieve lifecycle GHG emissions savings of over 70% compared with conventional jet fuel.

UK SAF MANDATE

The mandate has its origins in the UK's long-standing commitment to reducing UK emissions in line with the Paris Agreement which saw the UK legislating in 2019 for net zero emissions by 2050 across the economy.

As early as 2021 the government recognised that the aviation sector, whose decarbonisation profile is hard to abate, would need to play its part in achieving that goal, labelling its plans to deliver net zero aviation by 2050 as "Jet Zero" thus breaking the link between air travel and rising global temperatures. The government identified that their delivery plan would include building a thriving UK SAF industry with a strategic objective to have an SAF mandate in place by 2025.

In April 2024 the government, following a consultative process beginning in July 2022, confirmed the details of the mandate, one of the first in the world. The mandate sets progressive targets on aviation fuel suppliers to provide increasing quantities of SAF from 2025 to 2040. The mandate is binding on jet fuel suppliers but will require support from airlines and airports. It will operate as a tradable certificate scheme under which the supply of SAF is rewarded in proportion to GHG emissions reductions it achieved in the previous year. The certificates can be deployed to discharge a supplier's obligation under the mandate or sold to other suppliers in need of certificates to meet their obligations. In order to qualify for certification, the SAF in question will have to produce at least 40% fewer GHG emissions than conventional fossil fuel. This is below the 50% reduction threshold in the US for SAF to benefit from the US tax incentives scheme and the EU thresholds of 65% for biofuels based SAF and 70% for "power to liquids" SAF. The mandate will start from January 2025 requiring at least 2% of jet fuel supplied to the UK to be made from sustainable sources, increase linearly to 10% in 2030 and then to 22% in 2040, remaining there until there is greater certainty regarding SAF supply. It is intended that the value of certificates will narrow the gap between the kerosene price and the SAF cost, thereby encouraging production of SAF. Draft legislation under the Energy Act 2004 has already been laid before Parliament.

SAF suppliers who supply SAF beyond their required level can sell their excess certificates to those in shortfall. The mandate will include a buy-out option allowing suppliers who do not meet their obligations to pay a price per litre to the government. This default obligation would not lead to any emissions reductions, so should not be regarded as a long-term method of compliance. Intentional non-compliance will be subject to civil penalties.

However, a more comprehensive policy framework beyond a SAF mandate is required to deliver domestic supply of SAF and scale investment in UK SAF plants.

REVENUE CERTAINTY MECHANISM

UK already has SAF being produced in the P66 Humber Refinery, with 13 other projects in development supported by the government's Advanced Fuel Fund which has allocated competitively £135 million of capital grant funding to first-of-a-kind projects directly contributing to the establishment of a UK SAF industry, alongside private financing encouraged by such support. In 2022, the government committed to see at least five commercial scale UK SAF plants under construction by 2025. The first commercial transatlantic flight on 100% SAF, completed in November 2023 [by Virgin Atlantic] exemplifies what can be achieved by industry and government working in partnership.

In April, the government also launched a consultation on an industry-funded revenue certainty mechanism to provide further reassurance about future revenues, reduce risk and attract private investment in UK SAF production. The consultation sets out four options seeking views from stakeholders across the supply chain. These are:

- guarantee an agreed price per litre of fuel produced by participating SAF producers ("guaranteed strike price");
- guarantee an agreed minimum price for the producer's SAF certificates redeemed via the mandate ("buyer of last resort");
- automatically adjust the mandate when there is an oversupply to bring price of SAF closer to buy-out price; and
- minimum price for certificates which is applied through the mandate.

The government has decided that the certainty sought by the investment community is best achieved through a private law contract between a producer and government (or counterparty of government) short-listing the first two options and making clear their preference for the guaranteed strike price option. However, on the government's current projections the mechanism will not be in operation before end of 2026. In the meantime, lenders may prove reluctant to assume the risks of funding SAF projects.