

Written evidence submitted by OFTEC and UKIFDA (SAFB07)

Submission to Sustainable Aviation Fuel (SAF) Bill Public Bill Committee

Summary

- The SAF Bill offers an opportunity to establish a joined-up approach to boosting domestic production of sustainable aviation fuel and of HVO, which can be used to successfully decarbonise the 1.7 million homes in the UK that are off the gas grid and oil heated.
- These homes serve four million consumers, predominantly living in rural communities.
- HVO has been shown to reduce carbon emissions in home heating by as much as 88% compared to kerosene. It is a drop-in solution, which requires no major changes to the boiler or existing heating system and no disruptive building works. It is a highly effective and affordable decarbonisation solution for rural off-grid homes.
- Increasing the domestic production of Sustainable Aviation Fuel (SAF) creates an opportunity to also increase production of HVO, given it is a byproduct of the SAF production process.
- Alongside the SAF Bill, the Government should also implement Section 159 of the Energy Act 2023 to create a Renewable Liquid Heating Fuel Obligation (RLHFO) which would create the necessary market mechanisms to supply HVO to rural off-grid households.

Introduction

There are 1.7 million homes (4 million people) in the UK, as well as thousands of businesses, that are heated by liquid fossil fuels. These homes are typically off the gas grid in areas such as Southwest England, East Anglia, Yorkshire, the North East of England as well as much of rural Wales, Scotland and Northern Ireland. These homes are served by over 6,000 businesses which are typically family-run SMEs employing c.20,000 staff across 500 locations, mainly in rural communities.

OFTEC and UKIFDA members represent the entire supply chain of the liquid fuel industry in the UK and Ireland, from highly skilled manufacturing and engineering roles to the installers and suppliers delivering vital heating oil to off gas grid residents.

How scaling-up SAFs can help decarbonise the UK's 1.7 million oil-heated homes

As part of a drive to decarbonise the UK's 1.7 million oil-heated homes, the industry has led efforts to move away from kerosene in favour of HVO as a drop-in replacement. Increasing the domestic production of SAF creates an opportunity to also produce HVO, given it is a byproduct of the process.

The SAF Mandate, which was legislated for in November 2024 and came into force on January 2025ⁱ, starts in 2025 at 2% of total UK jet fuel demand, increases on a linear basis to 10% in 2030 and then to 22% in 2040. From 2040, the obligation will remain at 22% until there is greater certainty regarding SAF supply.

This is relevant because the aviation industry and the heating oil industry share the same fuel – kerosene - with a seasonal bias towards the summer for jet fuel and winter for heating oil. The residential heating oil market is c11% of the total UK kerosene market:

	Million Tonnes of Oil Equivalent (2019)			Heating oil as percentage of total
	Aviation Fuel	Heating Oil	Total Kerosene	
Industry Use	-	1,582	-	10%
Domestic Use	-	1,777	-	11%
Total Demand	12,309	3,359	15,668	21%

There are 7 different approved ways for making SAF, and the most used is HEFA. Ministers have recently confirmed that HEFA ‘...will play a vital role in our aviation decarbonisation journey. The UK is already producing and supplying this type of SAF, and we welcome the further development of this industry.’ Ministers have also confirmed that the supply of HEFA SAF is incentivised by the UK’s SAF Mandate.ⁱⁱ

The HEFA SAF production takes waste materials through a process that uses hydrogen (hydrogenation). In the first step of the HEFA process, the oxygen is removed by hydrodeoxygenation. Next, the straight paraffinic molecules are cracked and isomerized to jet fuel chain length. The process is similar to that used for Hydrotreated Renewable Diesel production, only with more severe cracking of the longer chain carbon molecules.

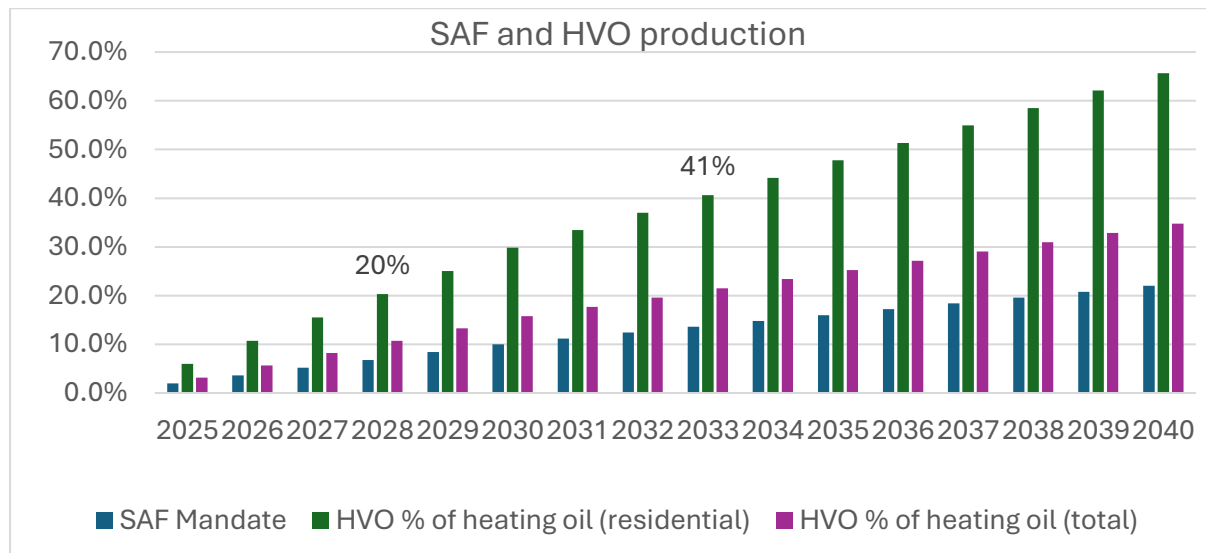
At the end of the process approximately 70% is jet fuel quality (i.e. SAF) and 30% is renewable diesel (i.e HVO) – therefore the SAF Bill presents a major opportunity to boost the domestic production of HVO which could help rural off-grid homes to decarbonise effectively.

This indicates that there is significant degree of confidence in feedstock availability to meet a 22% SAF mandate.

The industry recommendation is that HVO should be introduced to the domestic heating oil market in a blended form with kerosene, in exactly the same way that the Renewable Transport Fuel Obligation (RTFO) works for vehicles, and which has been in place since 2008. The percentage of HVO could then be increased over time.

The industry has put forward proposals to DESNZ to introduce a 20% HVO blend component in kerosene which could then be increased over time. This means the fuel could be rolled out to homes quickly and achieve Carbon Budgets 4, 5 and part of 6 for off-grid buildings, through to 2033. **No other existing or proposed policy mechanism can achieve this within those timescales.**

If the number of homes using oil were to remain as now, and even excluding other sources of HVO production, by 2040, with a SAF mandate of 22%, there will be enough HVO to produce a 66% blend product for heating, more than enough to meet the decarbonisation needs of all the UK's off-grid homes:



Graph highlighting production of SAF under the Mandate and the complementary production of HVO which could deliver a HVO blend product for home heating

Confidence that there is at least enough feedstock to meet the 22% SAF Mandate was further confirmed at Second Reading of the SAF Bill by the Transport Secretary. She set out that the Mandate would mean no restrictions the ability of consumers to fly. Therefore, this is further confirmation that the issue of feedstock availability and the demand from other transport modes and other sectors of the economy is not an issue:

“I know that some hon. Members may be concerned about the impact on passengers, so let me reassure them: none of this will limit people’s ability to fly. We expect minimal changes to fares, with an average ticket increasing or decreasing by up to £1.50 a year. I am pleased to say that this is a product of many months of consultation with the industry. Airlines are calling for it, airports are calling for it, SAF producers are calling for it, environmental organisations are calling for it, and the Government are therefore getting on with delivering it.”ⁱⁱⁱ

What the Government should do

Section 159 of Energy Act 2023^{iv} already provides the Government will the power to create a Renewable Liquid Heating Fuel Obligation (RLHFO) for home heating. This measure was introduced with cross party support in the last parliament.

This will - if delivered rapidly and in full - replicate the mechanism used to encourage the use of similar fuels in transport (Renewable Transport Fuel Obligation (RTFO)) introduced in 2008.

The RTFO has been highly successful in supporting a market for renewable fuel since its introduction in 2008. Renewable fuels supplied under the RTFO currently contribute a third of the savings required for the UK’s transport carbon budget.

The RLHFO mechanism is therefore well understood by industry. The supporting legislation has already been passed - as it is based on the RTFO - and could be implemented quickly for home heating. The industry is primed to respond to this consultation and support the implementation of a RLHFO.

A RLHFO avoids costly upfront expenditure to consumers and would result in large proportion of off-grid households decarbonising their home heating faster, spurring a wider transition. This will make a significant contribution to the UK meeting Carbon Budgets 4 and 5 and keeping the UK on track to meet Net Zero requirements.

Importantly, the implementation of the RLHFO would not require any further primary legislation, it could be implemented through secondary legislation with minimal parliamentary time required.

How a joined-up approach can help UK industry

Currently, HVO is not produced in commercial quantities in the UK. Co-production of SAFs and HVO domestically would create a better business case to attract investment in production facilities.

One such possible facility could be Grangemouth in Scotland, whose future is currently uncertain given struggles to compete against modern and low-cost Middle East and Asian assets. It is imperative we learn from this, ensuring UK and Scottish Government policy and the business case for a modern biofuel plant are aligned.

This can only be achieved if the biofuel produced at Grangemouth has several different markets to sell into supported by Government policy. This includes the transport, mobile machinery, aviation and heating sectors, which all currently use fossil fuels.

The domestic heating sector covered by the Grangemouth footprint represents 360million litres of fossil fuel consumption, which over time can be converted into biofuels produced at Grangemouth.

This is not a new or novel path. There are a number of international examples where refineries have made this kind of successful transition to biofuel production.

For example, at the end of 2022, eight US refineries had been converted into biofuel plants producing Hydrotreated Vegetable Oil (HVO), and/or Sustainable Aviation Fuel (SAF), with conventional refinery conversions expected to more than double production capacity by 2025.

This transition is also taking place in Europe. For example, Eni recently confirmed its decision to build Italy's third bio-refinery in Livorno^v and Preem are rebuilding their IsoCracker plant at the refinery in Lysekil^{vi}, Sweden.

How the Public Bill Committee can help

The increased production of SAF through the Sustainable Aviation Bill is a significant opportunity to also produce HVO to decarbonise off-grid home heating and deliver a major benefit to rural households and businesses.

During the course of its considerations, the Bill Committee can help by:

- Pressing government ministers on the need for a joined-up approach to boosting domestic production of both SAF and HVO by implementing s159 of the Energy Act 2023 to create a RLHFO which could immediately put the HVO into the home heating market
- Seek confirmation from the Government that it has confidence in the availability of feedstocks to produce SAF for aviation to meet 22% of demand and by consequence, that this would deliver enough HVO for a 66% blend product for off-grid home heating decarbonisation, more than enough to meet all the decarbonisation needs of the UK's off-grid households and businesses.

July 2025

ⁱ [The Renewable Transport Fuel Obligations \(Sustainable Aviation Fuel\) Order 2024](#)

ⁱⁱ Mike Kane MP, Minister for Aviation, Written Answer, HC Deb, 21 May 2025, UIN 52468

ⁱⁱⁱ Rt Hon Heidi Alexander MP, Secretary of State for Transport, SAF Bill, Second Reading debate, 11 June 2025, Vol 768, Column 1030

^{iv} Section 159, Energy Act 2023, Renewable Liquid Heating Fuel Obligation, [Energy Act 2023](#)

^v [Eni moves ahead with conversion of the Livorno refinery into a bio-refinery](#)

^{vi} HVO-100 and SAF (Sustainable Aviation Fuels) | ICR project| Preem