



Department
for Transport

UK approach to Sustainable Aviation Fuels

What is Sustainable Aviation Fuel (SAF)?

*“SAFs are **drop-in fuels**, meaning they can be blended into fossil-based aviation fuel and **used in existing aircraft and infrastructure without modification**”.*

SAF can deliver, on average, a 70% greenhouse gas emission (GHG) saving over kerosene.



What is sustainable aviation fuel (SAF)?

SAFs are **drop-in fuels**, meaning they can be blended up to 50% with conventional fossil-based aviation fuel and **used in existing aircraft and infrastructure without modification**.

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Biofuels – biogenic waste or residues e.g. used cooking oil, agricultural or forestry residues



Recycled carbon fuels – fossil waste that cannot be reused or recycled e.g. unrecyclable waste plastic, waste industrial gases



Power to liquid fuels – energy derived from low carbon electricity or heat



Why are we supporting SAF?



Reduce emissions and support the UK's legal net zero commitment. SAF is expected to contribute up to 6.3Mt annual CO₂ savings by 2040.



Support economic growth across regions. A SAF industry could generate nearly £1.8bn GVA for the UK from UK production and global exports by 2030.*



Support green jobs. Potential for up to 10,300 jobs by 2030.*



Increase domestic fuel resilience

** According to estimates published by Sustainable Aviation. GVA and jobs figures cover direct, construction and upstream activities.*

Overarching objectives

Create secure and growing demand for SAF

SAF Mandate



Kickstart a domestic SAF industry

£135m allocated under the Advanced Fuels Fund

Extended by £63m for 2025/2026

UK Clearing House



Secure investment

Revenue certainty mechanism

Working with industry to remove barriers



Identifying the risks to SAF growth

To direct our policy interventions, we have **worked collaboratively with industry to identify the risks to SAF uptake and growth of a domestic SAF industry**. We also commissioned an independent report to identify the conditions required to build a domestic industry. The key risks highlighted:



Policy certainty into the future



Supply and demand uncertainty



Revenue certainty



Technology / construction risks



Feedstock availability



SAF Mandate

Core programme objective: *Create secure and growing UK SAF demand*



Delivers meaningful carbon savings by only supporting the most sustainable SAF. The mandate only supports waste and residue-derived biofuels (no crops), recycled carbon fuels and power-to-liquid fuels.



Provides policy certainty on the future of SAF

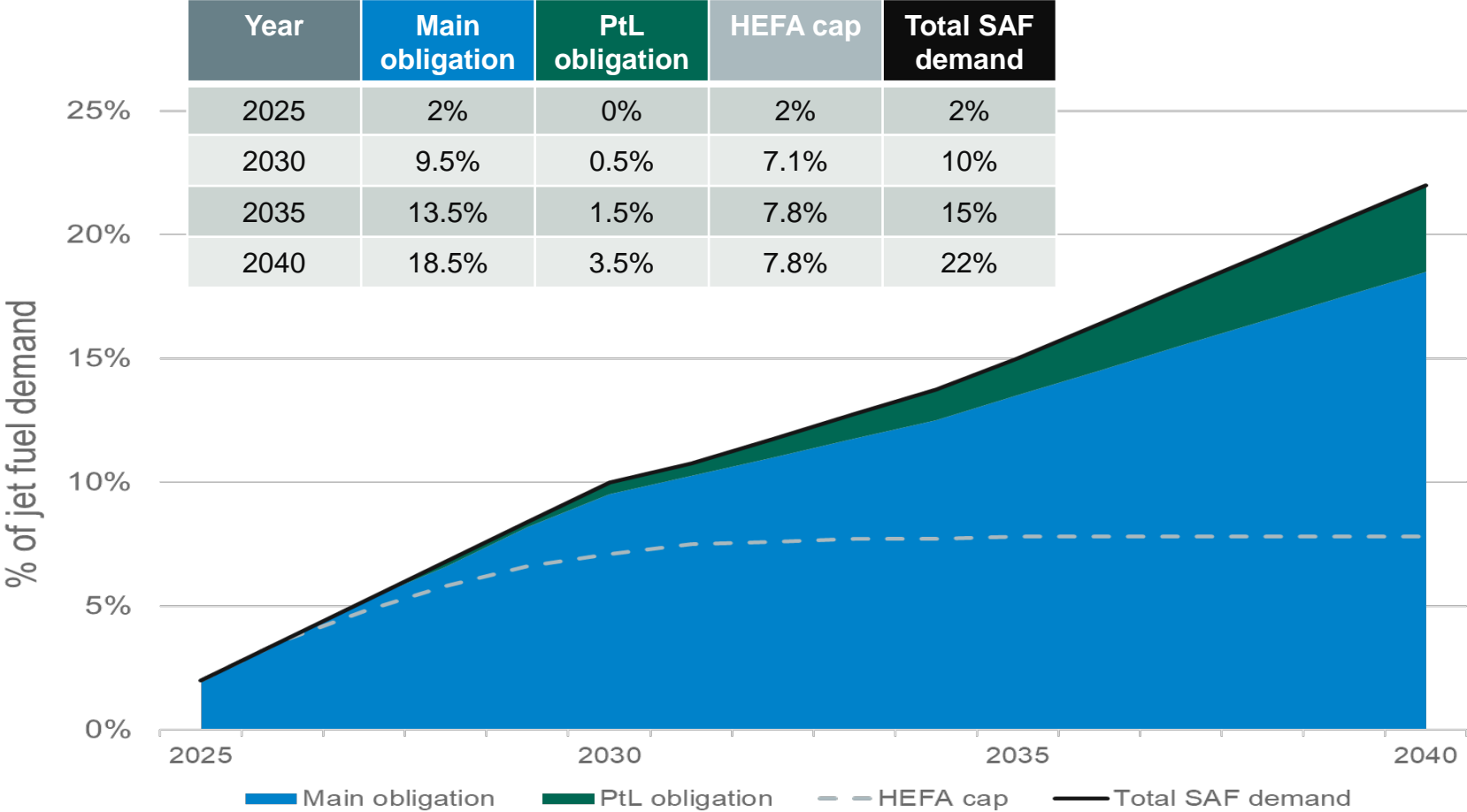


Provides certainty on SAF supply and demand



Helps address feedstock risks. Trajectories consider feedstock availability. It will also diversify production routes through a HEFA cap and directs more support to non-biogenic feedstock pathways (which are likely to become scarcer) through a PtL obligation.

We have set increasing targets from 2025-2040, balancing ambition with deliverability



The SAF Mandate SI sets targets on an increasing annual basis from 2025 until 2040. From then, the target level remains the same.

Suppliers will be subject to two obligations – a main obligation and a power-to-liquid (PtL) obligation. The main obligation starts in 2025 and the PtL obligation starts in 2028.

The amount of SAF made from segregated oils and fats (HEFA) that can be used to meet the main obligation will be capped.

The purpose of the HEFA cap and PtL obligation is to drive feedstock and technology diversity.

Advanced Fuels Fund (AFF)

Core programme objective: *Kickstart a domestic SAF industry*

The £135m Advanced Fuels Fund supports first-of-a-kind SAF production plants through the project pipeline to reach an investment ready stage. 13 Projects have been awarded funding, which have the potential to produce up to 700,000 tonnes of SAF per annum. The Autumn 2024 Budget extended the AFF for another year, with further funding of £63 million. The AFF:



Addresses perceived technology and construction risks by taking first-of-a-kind SAF demonstration projects through the project pipeline, including through detailed feasibility studies, to the final construction phase.



Provides certainty on SAF supply by supporting a range of projects across the UK. It will further support our mandate and carbon emission reduction targets, by securing supply in the UK.



Helps address perceived feedstock risks by supporting the advancement of a diverse range of technology routes to SAF, so we are not locked into one kind of feedstock.



UK Clearing House

Core programme objective: *Kickstart a domestic SAF industry*

The UK clearing house was launched in November 2023. It is a hub to support safety testing and certification of new aviation fuels through co-ordination, advice and funding. The UK Clearing House:



Addresses perceived technology risks by expediting and reducing the cost of testing new SAF pathways, facilitating their quick access to the market.



Is a low-cost policy solution, which can still encourage investment in SAF production facilities. Two SAF projects have been awarded funding to support the costs of testing their fuel.



Is working with EU and US counterparts to **ensure global efficiencies in testing**.



Revenue Certainty Mechanism

Core programme objective: *Secure investment*

The UK has committed to delivering a revenue certainty mechanism to support the growth of a UK SAF industry. The Government recently announced its intention to introduce the required legislation in this parliamentary period. The scheme will:



Provide certainty on revenues from SAF products for a defined period, with the aim of driving investment in SAF production in the UK. There are different ways to design and deliver such a mechanism, which the Government has recently publicly consulted on.



Provide policy certainty on the future of SAF.



Revenue Certainty Mechanism

- The **Guaranteed Strike Price (GSP)** works by a producer entering into a private law contract with a government backed counterparty. The contract sets a price ('strike price') that the producer will receive when it sells the SAF product.
 - If a SAF producer sells a litre of SAF for below the 'guaranteed strike price', the counterparty will pay the difference to the SAF producer, shown as (2) in figure 1.
 - If the SAF producer sells a litre of SAF for above the 'guaranteed strike price', the SAF producers will pay the difference to the counterparty, shown as (1) in figure 1.

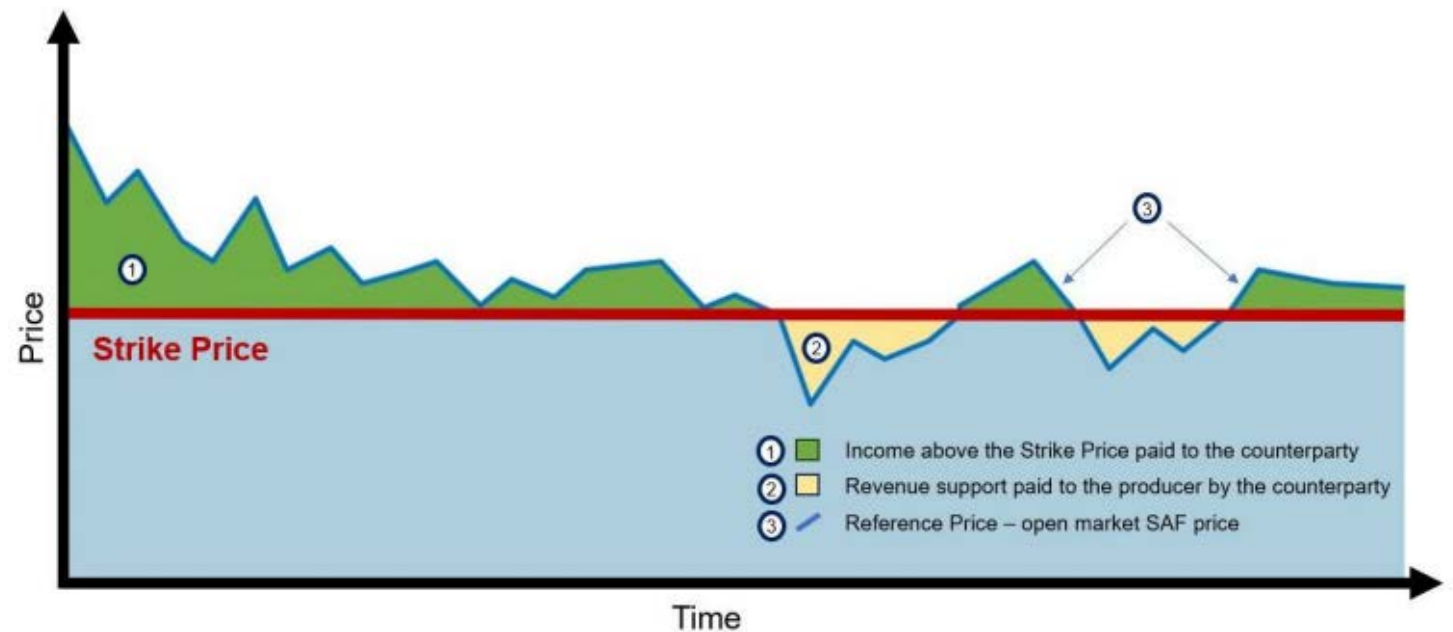


Figure 1: Illustration of GSP