

## PRODUCTION AND DEPLOYMENT OF SUSTAINABLE AVIATION FUELS (SAFs) IN EUROPE – REFUEL EU AVIATION

### Abstract

This paper sets out A4E’s analysis of the July 2021 EC Proposal for a Regulation on ensuring a level playing field for sustainable air transport (RefuelEU Aviation Initiative)<sup>1</sup> as well as guiding principles for any future SAFs legislation.

European airlines are fully committed to decarbonise air transport and accelerate their efforts to make Europe the world’s first carbon neutral continent by 2050 through the reduction of CO<sub>2</sub> emissions in absolute terms and through CO<sub>2</sub> mitigation. Acknowledging its responsibilities despite the current crisis, the EU aviation sector recently published “**Destination 2050 - A route to net zero European aviation**” roadmap showing a pathway to reaching net zero CO<sub>2</sub> emissions by 2050<sup>2</sup>.

A4E welcomes the European Commission’s **ReFuelEU Aviation** initiative under the European Green Deal to ramp up the production, deployment and supply high quality SAF in Europe. We fully support the goal of the initiative and the desire to boost SAF production and uptake to ensure their large-scale availability at reduced costs in the medium and long term<sup>3</sup>. The important thing now is to get this legislative initiative right on fundamental elements, such as high sustainability criteria, scope, reporting and obligations, but also on the crucial details related to technical standards, environmental certification as well as the quality and origin of the feedstock.

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<sup>1</sup> COM(2021) 561 final - 2021/0205 (COD)

<sup>2</sup> Destination 2050 - A route to net zero European aviation, A4E, ACI Europe, ASD, ERA, CANSO, February 2021.  
[www.destination2050.eu/](http://www.destination2050.eu/)

<sup>3</sup> More on A4E position paper on Production and Deployment of SAFs in Europe – ReFuelEU Aviation, July 2021, [link](#)

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Launched in 2016, Airlines for Europe (A4E) is Europe’s largest airline association, based in Brussels. The organisation advocates on behalf of its members to help shape European aviation policy to the benefit of consumers, ensuring a continued safe and competitive air transport market. A4E is one of the initiators of European aviation’s [Destination 2050](#) decarbonisation roadmap, with a pledge to reach net zero CO<sub>2</sub> emissions from all flights within and departing Europe by 2050. In 2019, A4E members carried more than 720 million passengers via a modern fleet of over 3,000 aircraft – accounting for more than 70 per cent of the continent’s journeys. Members with air cargo and mail activities transport more than 5 million tons of goods each year to more than 360 destinations either by freighters or passenger aircraft. Follow us on Twitter [@A4Europe](#).

## Introduction

There are several elements of the Commission's proposed Regulation that A4E supports:

- The choice of a **Regulation focusing on ensuring the integrity of the EU single market for aviation**. An EU mandate should supplant national mandates and harmonise all relevant legislation (Recital 19).
- The suggested targets and its ambitions. They are ambitious, but appropriate and realistic (*Annex I and II*). The feasibility of targets, especially as of 2035 (20%), should be regularly reassessed depending on feedstock availabilities and production volumes.
- A **sub-mandate on RFNBOs** to take full advantage of the emerging Power-to-Liquid technologies, and the longer-term synergies with the ramp-up of green hydrogen.
- The flexibility granted to carriers to **claim the CO<sub>2</sub> under either the ETS or CORSIA** compliance, regardless of where SAFs is physically uplifted and the **'zero-rating' of RED-compliant SAFs**.
- A **clause addressing economic tankering** and carbon leakage (*Article 5*).
- References to ICAO activities and the intent to maintain **strong links with ICAO**.
- **Strict reporting rules** for suppliers with transparency requirements notably with regards to the sustainability of the fuel provided (*Article 9 and REDII Union Database*).
- Enforcement rules to ensure volumes are supplied even when penalties for non-deliveries have been paid (*Article 10*).

Whilst these elements of the proposal are supported, some adjustments would be welcomed:

### 1. Definitions of tanked/non-tanked volumes (*Article 3*)

To avoid possible **impacts on safety, security** and operations, rules on tankering should reflect the challenges pilots experience (operational restrictions, airspace closure, weather conditions, supply shortages): external pressure should not be asserted on crews with regards to quantity of fuels to be uplifted. Moreover, uplifting more fuel than needed to comply with the 90% rule would result in unnecessary emissions. A **more precise definition of 'tankering'** would allow to avoid such consequences.

### 2. Yearly aviation fuel required (*Article 3 and Article 7, paragraph 1(a)*)

The calculation of **"yearly fuel required"**, as well as **"aviation fuel uplifted"** should exclude mandatory fuel amounts as per EASA regulations, in particular 'Contingency

fuel', 'Destination alternate fuel' and 'Final Reserve fuel', as these obligatory amounts can add up to a significant portion of the total fuel required for a flight, especially in the case of short intra-EU sectors operated following long-haul sectors into the EU. A4E recommends to base calculations of "Yearly Fuel Required" and "Aviation Fuel Uplifted" on "Trip Fuel" and "Taxi Fuel" as per EASA CAT.OP.MPA.150 (Fuel Policy).

### 3. Definition of 'aircraft operator' (Article 3)

A4E questions the validity of defining an "aircraft operator" as a person that operates at least 729 flights per annum. If a smaller number of flights is operated by e.g. non-EU airlines using large wide-body aircraft, this exclusion **weakens the proposal's impact and can constitute considerable competition** due to the distortions it would create (e.g. several small airlines, each operating larger freighters). As there is no link between the proposed legislation and the ETS reporting system, A4E proposes to adapt this "de minimis" clause.

Proposed amendment: 'aircraft operator' means a person that operated at least ~~729~~ 52 commercial air transport flights departing from Union airports in the reporting period [...]

### 4. Definition of 'sustainable aviation fuels' and 'synthetic aviation fuels' (Article 3)

SAFs must be truly sustainable without any compromise. SAF production cannot occur at the expense of food supplies for people or animals and/or may not cause damage to the environment as in the case of deforestation. The definition of synthetic aviation fuels should not only be limited to - Renewable Fuels of Non-Biological Origins (RFNBOs) but include feedstock with low indirect land use change (ILUC) impact.

### 5. Fuel supply obligations at Union airports and transition period (Article 4, 13, Annex I)

The 2025-2029 transition period is an understandable flexibility in the ramp up of SAF supply at Union airports. To reduce the possible distortion a weighted average supply obligation may cause, it is important that this **transition is limited in time and that certainty with regards to supply is ensured as of 2030.**

To optimise the supply at airports, an additional flexibility should be considered to allow airports outside of the scope not defined as Union airports to become SAF supply sources.

### 6. Refueling obligations and tankering (Article 5)

EU carriers will be adversely impacted by a mandate not equally applying to global competitors. Distortions to a level playing and carbon leakage need to be prevented. A4E fully supports the aim of the proposed article 5 and the objective to restrict practices which would be detrimental to European airlines' competitiveness, result in carbon leakage and weaken the environmental potential of the measure. It is important that the article is **strongly enforced** for all carriers.

Yet, as currently written, this obligation will have operational consequences (delays or impact on scheduling linked to fuelling practices at airports). The article should be amended to **avoid operational and safety issues at airport level**, but also **simplify reporting obligations**.

#### **7. Airport infrastructure obligations (Article 6)**

A4E questions the relevance of an obligation on airports to provide the infrastructure. Airports have no contractual obligations in the supply of fuel and the clause could have unintended consequences e.g., recuperation of costs for infrastructure, responsibility between fuel suppliers and airports.

Proposed amendment: The provision should be deleted

#### **8. New reporting obligations for airlines (Article 7)**

Alongside existing reporting obligations (EU ETS, CORSIA), the proposed Article 7 introduces new obligations towards EASA. To avoid heavy additional administrative burden for airlines, these new reporting flows must be concise and minimise administrative burdens.

#### **9. Restriction of tankering (Article 7, paragraph 1(c))**

An exception to the restriction on tankering should be foreseen in case of fuel quality issues at destination airports that would prevent re-fuelling.

#### **10. SAF market monitoring (Article 14)**

We welcome a close monitoring of the SAF market. A mandate implemented prematurely would lead to higher prices for the industry, since there is limited availability of SAF. It would also stimulate a "race to the bottom" and lower sustainability standards as users

seek to fulfil their obligations. Mature market conditions must be a prerequisite to the introduction of a blending mandate. Considering the rapid pace of developments, the likely cost impact of the measure, the need to assess compliance with future norms and airlines investment, the 5-year frequency of such a report is not sufficient, especially during the first phase of the mandate and reporting should start earlier than 2028. This is also particularly crucial to reassess on time the impact, and if needed, adjust the significant volume increase foreseen from 2030 to 2035.

*Proposed amendment: By 1 January 2026 and every three years thereafter, the Commission services shall present a report to the European Parliament and the Council, on the evolution of the aviation fuels market and its impact on the aviation internal market [...]*

## 11. Reducing the costs of SAFs & enforcement of fines (Article 11)

**A4E does not share the optimistic price projections of the initiative's Impact Assessment<sup>4</sup>.** The current cost to produce SAFs will remain at least three times that of conventional jet fuel until 2030. Its price is also higher than that of sustainable alternative fuels used in other transport modes. As a result of these higher production costs, SAFs are, in absence of an orchestrated support strategy, not an economically viable substitute to conventional jet fuel.

To address the price differential with fossil fuel throughout the value chain, **financial measures are required, such as subsidies, offtake agreements, auctioning mechanisms and capital grants.** We expect the EU and Member States to financially support research & innovation, and the scale-up of production in Europe to reduce costs and ensure sufficient supply. This should be done through the revenues of the **EU ETS** and its Innovation Fund, at least until 2035 when the market is expected to be more mature. The extension of the **ETS Innovation Fund** should include support to **Contracts-for-Difference (CfD)**, notably to increase the attractiveness of SAFs.

Coupled with loan guarantees, grants and tax support for carbon capture and storage (CCS) and green bond investments, the USA are clearly becoming the most advanced region of the world to produce and use SAF<sup>5</sup>. A4E has been disappointed by the lack of interest and

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<sup>4</sup> The minimum selling price for HEFA in the EU is estimated between €1170 - €3000 per tonne in 2030 as feedstock costs will slightly increase over time, due to competition with other sectors. Source: *Destination2050*, NLR/SEO, February 2021.

<sup>5</sup> *Sustainable Skies Act* bill, introducing tax credits for SAF production, May 2021, [link](#)

support to SAFs granted in national COVID Recovery Plans. This does not bode well for the EU's SAF ambitions.

The set-up of a **European SAF Alliance / Low Carbon Fuel Alliance** with the aim to share information and identify the right policies and funding to support the scale-up of SAF in Europe is a welcomed development. It should notably support the development and certification of 100% SAFs aircrafts.

*Proposed amendment: Member States shall transfer the amount collected through those administrative fines as contribution to the InvestEU Green Transition Investment Facility, as a top-up to the EU guarantee.*

## SAF accounting system

To achieve the lowest cost and highest efficiency, a **SAF accounting framework inspired by the renewable electricity framework is needed**: fuel suppliers should be able to issue and trade SAF certificates (like Guarantees of Origin for renewable power) and only airlines that have purchased such SAF certificates can claim the associated emission reductions. These attributes should be issued for uplifted SAF, but any airline, regardless of whether it effectively tanks SAF or not, should be able to buy them. Some areas will have more feedstocks than others. To increase the use of regional supply chains, the production facilities are likely to be built close to these regions.

The SAF could then be distributed to the nearest airports if this does not require changes to the existing fuel supply infrastructure. The airport infrastructure will supply a given amount of SAF through its fuel system, but only airlines that actually purchase the SAF attributes will be able to account for it in the booking system. Airlines should be given the possibility to then decide on which flights to account for the SAF. This prevents airlines from carrying extra fuel on-board if SAF is not available at a certain airport. Airlines that aim for higher CO<sub>2</sub> emission reductions will decide to buy a larger amount of SAF and distribute the SAF in the most economic efficient way across the fleet. By doing this, policymakers can make the SAF market in Europe more dynamic and competitive, hopefully leading to better and more SAF at more affordable prices.