EASA
European Union Aviation Safety Agency

2025 Report

ReFuelEU Aviation Annual Technical Report

2024 in review

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Acknowledgements

The completion of this report has been performed with the support of ICF, serving as the principal consultant. We extend our profound gratitude to all the authorities within the ReFuelEU Aviation Member State Network for their indispensable support and cooperation.

Photo credits

Executive Summary

2024 Context

The ReFuelEU Aviation Regulation (Regulation (EU) 2023/2405, hereafter "RFEUA" or "the Regulation") stipulates in Article 13 that EASA is required to annually prepare and publish a RFEUA Annual Technical Report, starting in 2025. This report shall contain several key elements, including information on the status of compliance of the parties obligated under RFEUA as well as insights into the state and development of the sustainable aviation fuel (SAF) market within the European Union (EU) and its Member States.

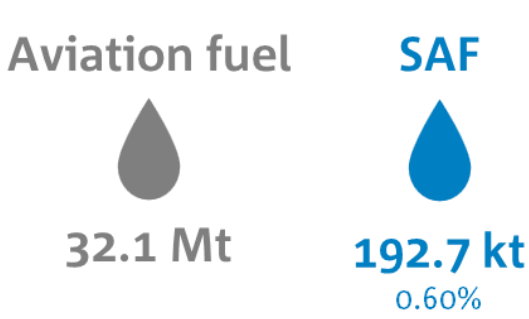
The primary RFEUA obligations[1] came into effect on January 1, 2025. The parties subject to the Regulation – primarily aviation fuel suppliers and aircraft operators – were required to report data for the 2024 reporting period, even if their primary obligations were not yet applicable during 2024. This report is, therefore, based on 2024 data collected during the first reporting exercise in 2025.

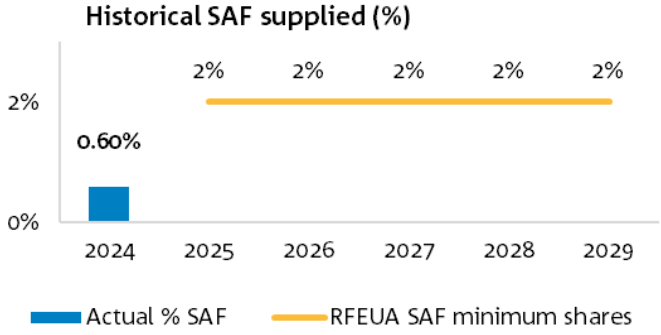
The 2024 datasets, though marked by some limitations inherent to the first-time nature of the 2024 reporting period, serve an important purpose. This initial reporting exercise functioned as a "dry run", offering valuable insights into the preparedness of stakeholders in view of the upcoming regulatory requirements. It highlights areas where further clarifications and coordination may be necessary, helping to smooth out the process for future reporting periods. Furthermore, the 2024 data is crucial as it establishes an initial baseline. This baseline is essential for laying the foundations for future monitoring and compliance activities. By understanding the starting point, stakeholders and regulators can better track progress and ensure that the goals of the Regulation are met effectively.

Aviation Fuel Suppliers

The first year of RFEUA implementation saw a **67% compliance rate with the aviation fuel supplier reporting obligation**, with 83 out of 123 obligated fuel suppliers submitting reports. This somewhat lower compliance rate can largely be attributed to the fact that the primary obligation to supply a minimum share of SAF was not yet applicable, combined with the first-time nature of the 2024 reporting period.

In total, aviation fuel suppliers reported **32.1 million metric tonnes (t) of aviation fuel supplied** to Union airports during 2024, of which **192,700 t – or 0.60% – was SAF**.[2] While this falls short of the mandatory 2% minimum SAF share that takes effect in 2025, the obligation to supply minimum shares of SAF was not yet applicable in 2024.





[1] Referring here to the (1) refuelling obligation of aircraft operators and (2) obligation of aviation fuel suppliers to supply minimum shares of SAF.

[2] Note that this figure does not fully capture all aviation fuel and SAF supplied in the EU in 2024, given that (1) about one-third of aviation fuel suppliers did not submit reports, and (2) supply of aviation fuel and SAF to non-Union airports is not captured by reporting.

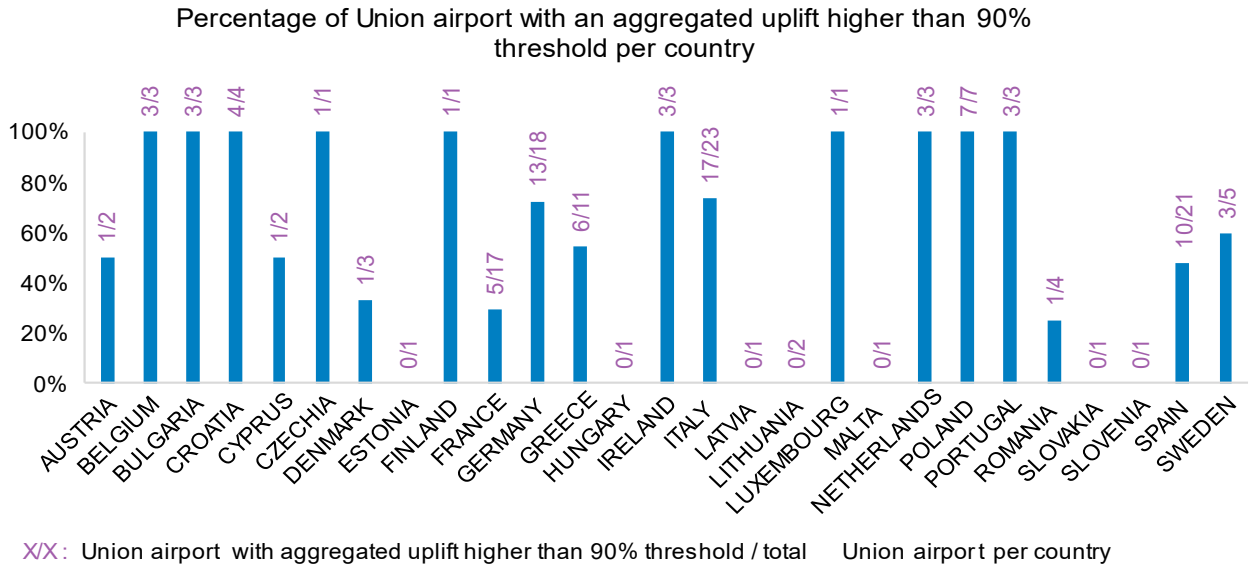
According to the reports submitted by aviation fuel suppliers, the **2024 SAF supply to Union airports consisted almost entirely of "aviation biofuels"**[3] (approximately 98%), with the majority (81%) derived from used cooking oil as feedstock.

In total, the **SAF supply to Union airports reported for 2024 achieved greenhouse gas (GHG) emission savings of 714 kt CO_2e**, with the SAF supplied reducing emissions by 91% compared to the conventional jet fuel it replaced.

Aircraft Operators

The first year of RFEUA implementation saw a **74% compliance rate with the aircraft operator reporting obligation**, with 262 out of 351 aircraft operators submitting reports that were accepted by the National Competent Authorities (NCAs). Non-compliance with the aircraft operator reporting obligation (Article 8 RFEUA) was mostly linked to smaller or third-country operators unfamiliar with EU regulatory processes, suggesting a need for continued outreach and support.

At Union level, aircraft operators uplifted 38.8 Mt of aviation fuel at Union airports in 2024, exceeding the 90% refuelling threshold. However, when looking at the level at which the obligations of Article 5 are enforced, at each Union airport level, **in only 61% of cases** (87 out of 143), **the actual fuel uplift from flights performed was above 90% of the fuel required threshold.** This share varies significantly between Member States and shows that fuel uplift currently happens unevenly in Europe.



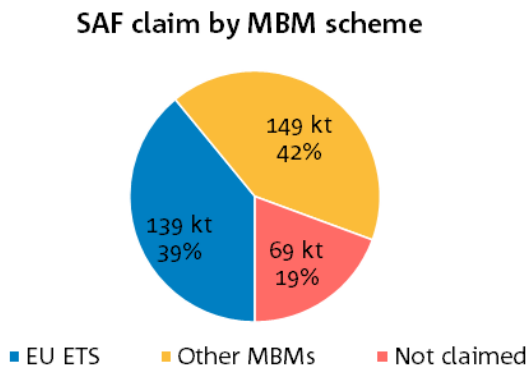
X/X : Union airport with aggregated uplift higher than 90% threshold / total Union airport per country

Finally, **aircraft operators purchased circa 358 kt of SAF in 2024, 0.81% of the total aviation fuel uplifted** at Union airports. Of the SAF purchased – as reported by aircraft operators – 39% (139.5 kt) was claimed under the EU ETS, 42% (148.6 kt) was claimed under "other market-based measures"[4], and 19% (69.2 kt) was not claimed under any MBM scheme. Notably, no SAF amounts were reported under the CH ETS nor CORSIA.

[3] "Aviation biofuels" are defined as biofuels produced from feedstock listed in Part B of Annex IX of the EU Renewable Energy Directive (EU RED).

[4] The "other market-measures" category encompasses the UK Emission Trading Scheme (UK ETS) and other national schemes where the SAF can be claimed.

96.5% (345.1 kt) **of the SAF purchased was categorised under "aviation biofuels"**[5], while 1% (2.2 kt) was "other aviation biofuels"[6] and 0.2% (0.6 kt) was "advanced aviation biofuels"[7]. 2.7% (9.8 kt) of the SAF purchased was not allocated to a category in the reports submitted by the aircraft operators.



RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	345.1 kt	96.5%
Other aviation biofuels	2.2 kt	1%
Advanced aviation biofuels	0.6 kt	0.2%
Not categorised	9.8 kt	2.7%

State and Development of the EU SAF Market

SAF production capacities in the EU

EASA's assessment of SAF production capacities in the EU revealed a **notable increase in the number of EU Member States hosting SAF production activity**[8], rising to 17 in 2024. This represents a substantial increase compared to the figure of 12 EU Member States identified for 2023 in the previous year's assessment[9] and underscores the continued momentum in SAF development across the EU.

EASA developed **three scenarios for the EU's SAF production capacities**[10], using the year 2030 as the reference point. Each scenario outlines the anticipated SAF production capacities based on its respective assumptions[11] and includes figures from last year's assessment for comparison. In addition, two lines, representing the 2030 RFEUA targets for SAF (excluding synthetic aviation fuels) and synthetic aviation fuels, give an indication of how the SAF production capacities for each scenario compare.

The ***Operating*** **scenario.** Reflects the currently available production capacity for SAF and assumes that only facilities already operating today will operate by 2030. Results in 1.4 Mt of SAF production capacity available by 2030.

The ***Realistic*** **scenario.** Includes all production facilities in the *Operating* scenario as well as those currently under construction. Results in 3.6 Mt of SAF production capacity available by 2030.

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[5] "Aviation biofuels" are defined as biofuels produced from feedstock listed in Part B of Annex IX of the EU Renewable Energy Directive (EU RED).

[6] "Other aviation biofuels" are biofuels produced from feedstock not listed in Annex IX of the EU Renewable Energy Directive (EU RED) and except for those produced from food and feed crops, intermediate crops, palm fatty acid distillate and palm and soy-derived materials, and soap stock and its derivatives.

[7] "Advanced aviation biofuels" are defined as biofuels produced from feedstock listed in Part A of Annex IX of the EU Renewable Energy Directive (EU RED).

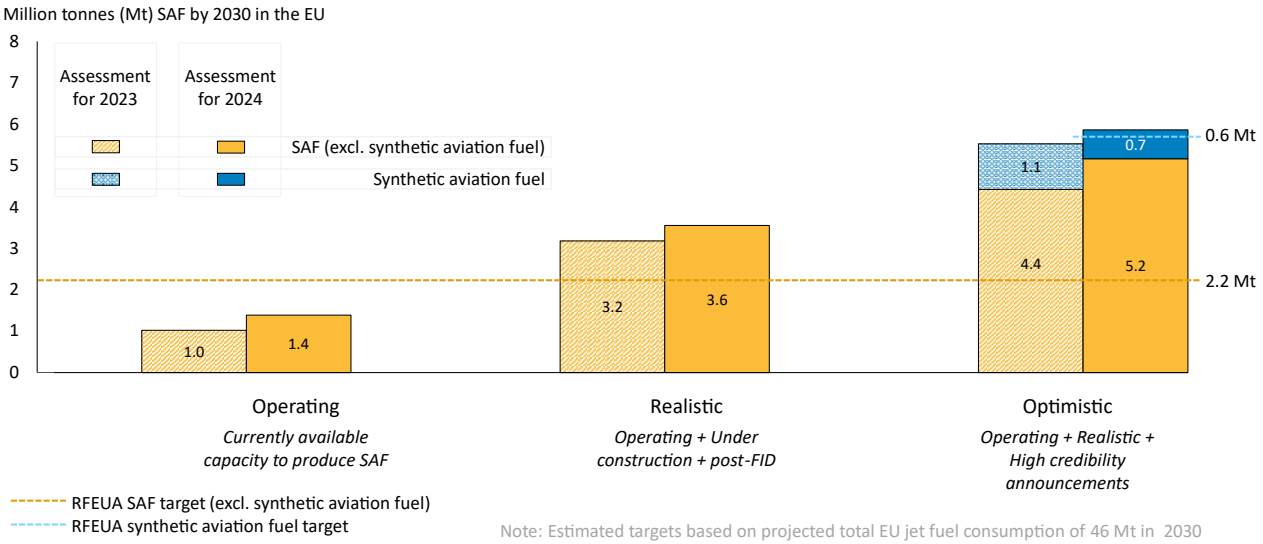
[8] Understood as EU Member States with at least one operating or announced SAF production facility.

[9] See the EASA *State of the EU SAF market in 2023* report.

[10] The figures for SAF production capacities in this report are based on the maximum potential SAF output for the year in which each facility is expected to commence operations. These figures assume that each project achieves its stated production targets. As such, the data should be interpreted as indicative of potential capacity rather than actual projected output.

[11] See Chapter 3 for more information.

The ***Optimistic* scenario.** Encompasses all production facilities included in the *Realistic* scenario (operating and under construction), along with high-credibility projects that have disclosed key data for their announced facilities. Under the *Optimistic* scenario, total SAF production capacity is projected at 5.2 Mt (excluding synthetic aviation fuel amounts), with an additional 0.7 Mt of synthetic aviation fuels. Compared to last year's assessment, the production capacities of synthetic aviation fuels available by 2030 has decreased due to the cancellation or suspension of several projects.



EU SAF Market – Key Themes and Developments

EU SAF production capacities are projected to be sufficient to meet the minimum shares of SAF defined under the ReFuelEU Aviation Regulation for 2030 (excluding synthetic aviation fuels). However, a continuous scale-up of production capacities will be necessary to establish a well-functioning market and to achieve the 2035 RFEUA targets, which rise to 20% in that year.

The scale-up of synthetic aviation fuel production in the EU is lagging. As of today, none of the larger synthetic aviation fuel facilities in the EU have reached Final Investment Decision (FID), **putting at risk the 2030 sub-target for synthetic aviation fuels.** To meet that target, given project development lead times, several facilities must reach FID by 2026 at the latest.

In 2024, used cooking oil (UCO) and waste animal fat (categories 1 and 2) accounted for 98% of the feedstock used for SAF supplied within the EU.

Of the feedstock used for SAF supplied in the EU, 69% originated from non-EU countries, with China contributing 38% and Malaysia 12%. Finland as the largest European contributor stood at 10%.

For 2024, **25 aviation fuel suppliers – out of 83 – reported a total supply of 193 kt of SAF**. Fewer than ten aviation fuel suppliers accounted for 80% of this amount, indicating a significant level of market concentration. This suggests that the EU SAF market remains in an early, nascent phase, dominated by a small number of mature or well-capitalised suppliers. SAF was delivered to 33 Union airports across 12 EU Member States; however, five Member States alone – France, the Netherlands, Spain, Sweden and Germany – accounted for 99% of the total amount supplied.

Finally, according to Eurostat, **the EU imported 80 kt of SAF in 2024** – amounting to more than 40% of the total SAF supply reported in the EU for that year – pointing to the continuing importance of imports despite growing domestic production capacity.

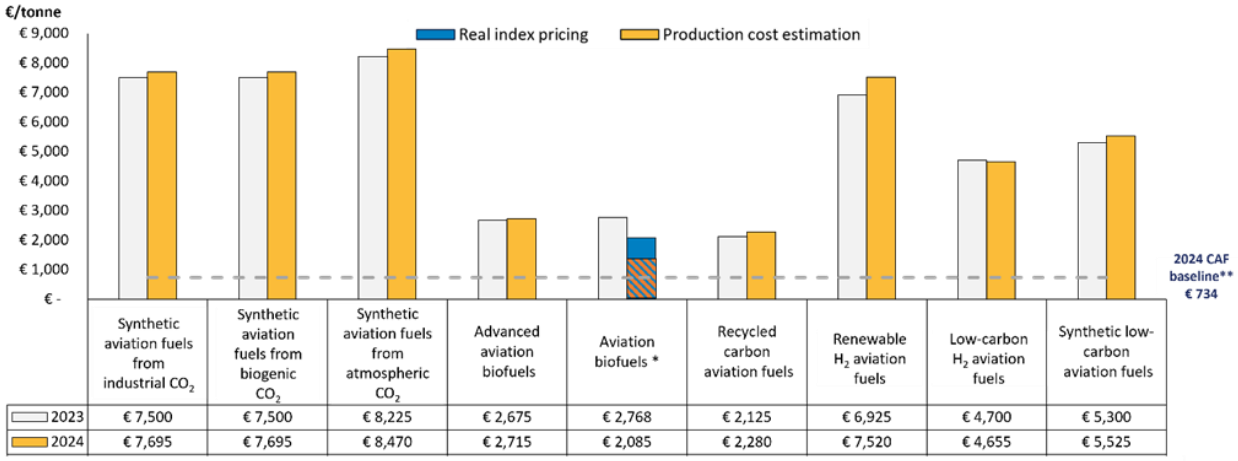
2024 Aviation Fuels Reference Prices

EASA also determined 2024 reference prices for all aviation fuels eligible under the ReFuelEU Aviation Regulation.[12] The reference prices' primary purpose is to serve as reference values for EU Member States in determining penalties under RFEUA, as well as for the support mechanism for the use of eligible aviation fuels under the EU ETS Directive (FEETS).

The reference prices reflect SAF prices for the 2024 reference year, based on a defined methodology.[13] Where possible, reference prices were determined using price indices ("real index prices") maintained by price reporting agencies. For those aviation fuels for which no real index price was available in 2024, reference prices were calculated using a bottom-up production cost estimation.

For 2024, a real index price could only be determined for "aviation biofuels" – set at EUR 2,085 per tonne – and conventional aviation fuel (CAF) – set at EUR 734 per tonne.

The figure below provides an overview of the 2024 reference prices for the different RFEUA eligible aviation fuels subcategories. It also includes the 2023 reference price for each RFEUA eligible aviation fuels subcategory for informational purposes.



	Synthetic aviation fuels from industrial CO_2	Synthetic aviation fuels from biogenic CO_2	Synthetic aviation fuels from atmospheric CO_2	Advanced aviation biofuels	Aviation biofuels *	Recycled carbon aviation fuels	Renewable H_2 aviation fuels	Low-carbon H_2 aviation fuels	Synthetic low-carbon aviation fuels
2023	€ 7,500	€ 7,500	€ 8,225	€ 2,675	€ 2,768	€ 2,125	€ 6,925	€ 4,700	€ 5,300
2024	€ 7,695	€ 7,695	€ 8,470	€ 2,715	€ 2,085	€ 2,280	€ 7,520	€ 4,655	€ 5,525

*The bar with blue and yellow stripes represents the 2024 production cost estimation for aviation biofuels (provided for informational purposes).

** For reference: The 2023 CAF price was 816 €/tonne.

[12] Note that the reference prices presented in this Annual Technical Report are identical to the ones included in the EASA 2025 Briefing Note 2024 Aviation Fuels Reference Prices for ReFuelEU Aviation published in February. This briefing note served as a preliminary release of the 2024 reference prices.

[13] For more information, please consult the dedicated methodology document on the EASA Reference Prices for RFEUA Eligible Aviation Fuels, publicly available on the EASA website.

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Introduction

Background

The year 2025 marks the first year of enforcement for the Regulation (EU) 2023/2405 (ReFuelEU Aviation Regulation). This Regulation is a key component of the EU's Green Deal and Fit for 55 package, aimed at increasing the supply of and demand for Sustainable Aviation Fuels (SAF) in the EU while ensuring a level playing field.

The Annual Technical Report (ATR) is an annual requirement under Article 13 of the ReFuelEU Aviation Regulation, with the European Union Aviation Safety Agency (EASA) being the designated authority to prepare and publish it. Its purpose is to provide factual insights based on the data collected through the reporting exercise of the parties subject to the Regulation – aviation fuel suppliers, aircraft operators and Union airport managing bodies – in the respective reporting year.

Data sources

This report presents an analysis of key data related to the implementation and enforcement of the Regulation. The datasets underpinning this report were collected for the 2024 reporting period, through formal submissions from three key obligated stakeholder groups. Aviation fuel suppliers reported their data via the European Commissions' CIRCABC and Union Database (UDB) platforms, whereas aircraft operators and Union airport managing bodies submitted their information through EASA's Sustainability Portal.

The data gathered during this reporting exercise was then used to generate Key Performance Indicators (KPIs), which serve as essential metrics for assessing the effectiveness and impact of the Regulation. By analysing these indicators, stakeholders can gain insights into SAF adoption rates, compliance levels among aviation fuel suppliers, aircraft operators, and Union airport managing bodies, as well as overall progress towards the goal of a more sustainable aviation sector in the European Union. The KPIs not only highlight current achievements but also identify areas requiring further attention and improvement, helping to inform future policy and operational decisions.

The 2024 data is derived from the inaugural reporting exercise following the implementation of the new Regulation. As this marks the initial phase of compliance and data submission, the reported data is estimated to cover approximately 80% of the total expected information. This percentage reflects the ongoing adjustments and familiarisation period for entities adapting to the regulatory requirements. As a result, while the dataset offers a strong foundation, it may not yet capture the full scope of data anticipated in future reporting cycles.

Report structure

This document is structured into three sections to ensure clarity and coherence in data presentation.

Section I outlines the regulatory aspects of the Regulation, including the definitions, obligations and reporting requirements of the obligated stakeholders.

Section II provides a comprehensive "Union level" overview, aggregating data across all European Union Member States to illustrate overarching trends, progress, and challenges, and the state of the EU SAF market.

Section III offers detailed summaries at EU Member State level, breaking down the aggregated data to showcase individual compliance levels for each type of stakeholder obligated under the Regulation. This section supports a nuanced understanding of how each Member State is performing within the regulatory framework established by the Regulation.

1. Regulatory Framework

The ReFuelEU Aviation Regulation (2023/2405) on ensuring a level playing field for sustainable air transport was adopted by the European Parliament and Council on October 18th, 2023. As part of the obligations set out in Article 13, EASA is required to publish every year a technical report on the basis of the reports by aviation fuel suppliers, aircraft operators and Union airport managing bodies referred to in Articles 7, 8 and 10. This report serves as the first edition, including both reported information and the state of the market.

This first section offers a regulatory overview of the different requirements outlined in the Regulation for the three main stakeholder groups. It also provides an update on the supporting documents published to aid in fulfilling the reporting obligations. As it focuses only on key changes and decisions adopted by the Agency and the European Commission, this section may evolve from year to year.

Note: Summary of main requirements vs legal basis of RFEUA

This section does not constitute the legal basis of RFEUA, it merely summarises the main requirements. Please consult the Regulation itself as well as any supporting official documentation published by the European Commission.

1.1 Aviation fuel suppliers

	Description
Definition	As per **Article 3.19**, *'aviation fuel supplier' means a 'fuel supplier' as defined in Article 2, second paragraph, point (38), of Directive (EU) 2018/2001, supplying aviation fuel or hydrogen for aviation at a Union airport.*
Scope list	List of aviation fuel suppliers in scope of the Regulation.[14]
Obligations	**Article 4** mandates that aviation fuel suppliers ensure that all aviation fuel made available to aircraft operators at each Union airport contains gradually increasing minimum shares of SAF, starting in 2025. As an exception, an aviation fuel supplier may, from 01 January 2025 until 31 December 2034, supply the minimum shares of SAF as a weighted average over all the aviation fuel it supplies across Union airports for a given reporting period. This is referred to as the "flexibility mechanism".
Reporting process	As per **Article 10**, aviation fuel suppliers are required to submit to the Union Database, by 14 February each year, information on SAF and aviation fuel supplied during the reporting period, including the amounts and characteristics of that SAF and aviation fuel.
Supporting documents	• Template for aviation fuel suppliers' reporting on SAF sustainability characteristics and aviation fuel supplied • Template for aviation fuel suppliers' reporting on aviation fuel quality

Table 1 – Summary of aviation fuel suppliers' RFEUA obligations.

[14] Note: As no official list of aviation fuel suppliers was published by the European Commission for the 2024 reporting period, the figure of 123 obligated suppliers has been derived using the list published for the 2025 reporting period, supplemented by additional entities that were not included in that list but nonetheless submitted reports.

1.2 Aircraft operators

	Description
Definition	As per **Article 3.3**, *'aircraft operator' means a person who operated at least 500 commercial passenger air transport flights, or 52 commercial all-cargo air transport flights departing from Union airports in the previous reporting period or, where it is not possible for that person to be identified, the owner of the aircraft.*
Scope list	List of aircraft operators in-scope of the Regulation.
Obligations	**Article 5** sets out the refuelling obligations and mandates aircraft operators to uplift at least 90% of the aviation fuel[15] required at Union airports on a yearly basis. In the cases this threshold is not met, aircraft operators shall justify as per Article 5.2 to the NCA. Alternatively, the aircraft operators may also request refuelling exemptions on certain routes meeting the criteria set out in Article 5.3. **Article 14** establishes a voluntary environmental labelling scheme, the Flight Emissions Label (FEL), under which aircraft operators shall apply to the Agency should they want to display emissions per passenger or emissions per passenger-kilometre to the public.[16]
Reporting process	As per **Article 8**, the aircraft operators are required to submit by 31 March of each reporting year the completed official reporting template with the data of the respective reporting period to the NCAs and to the Agency via either EASA's Sustainability Portal or email. Pursuant to the FEL, aircraft operators are required to submit by 1 May of each year starting in 2025 the required information under Article 3 FEL to the Agency to estimate flight emissions.
Supporting documents	• Commission interpretative guidelines on the application of exemptions • EASA's manual for aircraft operators and verification bodies • Official reporting RFEUA template • EASA's fuel monitoring tool (optional) • Flight Emissions Label Implementing Regulation • Flight Emissions Label website

Table 2 – Summary of aircraft operators' RFEUA obligations.

[15] Note that this is valid for both conventional jet fuel and sustainable aviation fuel. There is no obligation on aircraft operators to uplift defined amounts of SAF.

[16] Only those aircraft operators that have opted-in the FEL may display emissions to their passengers in the European Union, in accordance with Article 6(5) of the FEL Implementing Regulation.

1.3 Union airports

	Description
Definition	As per **Article 3.1**, *'Union airport' means an 'airport' as defined in Article 2, point (1), of Directive 2009/12/EC of the European Parliament and of the Council (12) where passenger traffic was higher than 800 000 passengers or where the freight traffic was higher than 100 000 tonnes in the previous reporting period, and which is not situated in an outermost region, as listed in Article 349 TFEU.*
Scope list	List of Union airports in-scope of the Regulation.
Obligations	**Article 6** mandates Union airport managing bodies to facilitate the access to SAF. **Article 7** mandates Union airport managing bodies to report actions taken to facilitate the access of aircraft operators to hydrogen or electricity used primarily for the propulsion of an aircraft and to provide the infrastructure and services necessary for the delivery, storage and uplifting of such hydrogen or electricity to refuel or recharge aircraft.
Reporting process	Union airport managing bodies are required to submit their reports to the National Competent Authorities via the EASA Sustainability Portal.
Supporting documents	-

Table 3 – Summary of Union airport managing bodies' RFEUA obligations.

1.4 Subcategories of aviation fuels eligible under ReFuelEU Aviation

Article 3 RFEUA defines various aviation fuel subcategories for the purposes of the Regulation. These include different subcategories of SAF – such as "aviation biofuels" and "synthetic aviation fuels" – as well other subcategories of aviation fuels, including low-carbon aviation fuels, that are eligible to count towards the minimum shares of SAF established in the Regulation.

Table 4 presents all aviation fuel subcategories eligible under the ReFuelEU Aviation Regulation, along with their respective definitions.

RFEUA AVIATION FUELS SUBCATEGORY	DEFINITION AS PER ARTICLE 3 RFEUA
Sustainable aviation fuels (SAF)	
Synthetic aviation fuels	**Art 3(12).** Renewable fuels of non-biological origin (RFNBOs) as defined in the Renewable Energy Directive (RED)[17].
Advanced aviation biofuels	**Art 3(8)(a).** Biofuels produced from feedstock listed in Part A of Annex IX of RED.
Aviation biofuels	**Art 3(8)(b).** Biofuels produced from feedstock listed in Part B of Annex IX of RED.
Other aviation biofuels	**Art 3(8)(c).** Biofuels produced from feedstock not listed in Annex IX of RED and except for those produced from food and feed crops, intermediate crops, palm fatty acid distillate and palm and soy-derived materials, and soap stock and its derivatives.
Recycled carbon aviation fuels	**Art 3(9).** Recycled carbon fuels as defined in RED.

[17] Renewable Energy Directive (EU RED).

RFEUA AVIATION FUELS SUBCATEGORY	DEFINITION AS PER ARTICLE 3 RFEUA
Other eligible renewable and low-carbon aviation fuels	
Renewable hydrogen for aviation	**Art 3(16).** Hydrogen for use in aircraft that qualifies as renewable fuel of non-biological origin (RFNBO) as defined in RED.
Low-carbon hydrogen for aviation	**Art 3(15).** Hydrogen for use in aircraft the energy content of which is derived from non-fossil, non-renewable sources.
Synthetic low-carbon aviation fuels	**Art 3(13).** Aviation fuels of non-biological origin, the energy content of which is derived from non-fossil, low-carbon hydrogen.

Table 4 – Aviation fuel subcategories eligible under ReFuelEU Aviation.

1.5 Considerations for the 2024 reporting period

The primary RFEUA obligations[18] came into effect on January 1, 2025.

The parties subject to the Regulation – primarily aviation fuel suppliers and aircraft operators – were required to report data for the 2024 reporting period, even if their primary obligations were not yet applicable during 2024. This report is, therefore, based on 2024 data collected during the first reporting exercise in 2025.

The 2024 datasets, while containing gaps due to the first-time nature of the 2024 reporting period, serve an important purpose. This initial reporting exercise functioned as a "dry run", offering valuable insights into the preparedness of stakeholders in view of the upcoming regulatory requirements. It highlights areas where further clarifications and coordination may be necessary, helping to smooth out the process for future reporting periods.

Furthermore, the 2024 data is crucial as it establishes an initial baseline. This baseline is essential for laying the foundations for future monitoring and compliance activities. By understanding the starting point, stakeholders and regulators can better track progress and ensure that the goals of the Regulation are met effectively.

[18] Referring here to the (1) refuelling obligation of aircraft operators and (2) obligation of aviation fuel suppliers to supply minimum shares of SAF.

2. Overview of Reported Data – European Union Level

This chapter presents a comprehensive overview of the Key Performance Indicators (KPIs) for the primary obligated parties under the Regulation – aviation fuel suppliers and aircraft operators, as well as Union airport managing bodies – at the aggregated European Union level ("Union level").

The KPIs are informed by data from the 2024 reporting period, submitted by aviation fuel suppliers, aircraft operators and Union airport managing bodies during the first reporting exercise under RFEUA in 2025.

These KPIs play a critical role in monitoring collective progress toward the Regulation's ambitious objectives – evaluating compliance among obligated parties, assessing the advancement of EU-wide SAF adoption, and tracking reductions in greenhouse gas (GHG) emissions across the Union. By analysing these metrics at Union level, policymakers and stakeholders can identify regional strengths, highlight areas requiring targeted intervention, and support a coordinated approach to sustainability in aviation. This Union-level overview is intended to enhance transparency and accountability.

KPI CATEGORIES	LIST OF KPIS FOR AVIATION FUEL SUPPLIERS[19]	DESCRIPTION
Reporting Status	**FS1:** Reporting status of aviation fuel suppliers at Union level	Percentage at Union level of aviation fuel suppliers that submitted reports.
Aviation Fuel and SAF Supply	**FS2.1:** Aviation fuel supplied at Union level **FS2.2:** SAF supplied at Union level **FS2.3:** Historical % SAF supplied at Union level	Amount of aviation fuel and SAF reported as supplied by aviation fuel suppliers at Union level. % SAF compared to aviation fuel.
SAF Characteristics	**FS3.1:** SAF supplied per category of RFEUA eligible aviation fuel at Union level **FS3.2:** Feedstock origin of SAF supplied at Union level **FS3.3:** Feedstock composition of SAF supplied at Union level	Key characteristics of SAF supplied at Union level – Category of RFEUA eligible aviation fuel, feedstock origin and feedstock composition.
Emission Savings	**FS4.** SAF CO_2e savings at Union level	CO_2e savings of SAF supplied at Union level.
Aviation Fuel Composition	**FS5.** Aviation fuel composition at Union level	Content of aromatics, naphthalenes and sulphur in aviation fuel supplied at Union level.

Table 5 – KPI summary table for aviation fuel suppliers – Union level.

KPI CATEGORIES	LIST OF KPIS FOR AIRCRAFT OPERATORS[20]	DESCRIPTION
Reporting Status	**AO1:** Reporting status of aircraft operators reporting at Union level	Percentage at Union level of aircraft operators that submitted reports.
Anti-tankering Status	**AO2.1:** Total fuel uplifted versus 90% of fuel required at Union level **AO2.2:** Fuel uplifted versus the 90% of fuel required obligation in the Union airports	Level of uplifts of all RFEUA aircraft operators departing from Union airports.
SAF Purchased Summary	**AO3.1:** Amount of SAF purchased at Union level **AO3.2:** RFEUA eligible fuel category **AO3.3:** SAF claimed by MBM scheme	Information on SAF purchased as reported by the AOs at Union level.

Table 6 – KPI summary table for aircraft operators – Union level.

[19] Additional or alternative KPIs may be defined by EASA for subsequent reporting periods.
[20] Additional or alternative KPIs may be defined by EASA for subsequent reporting periods.

Union level

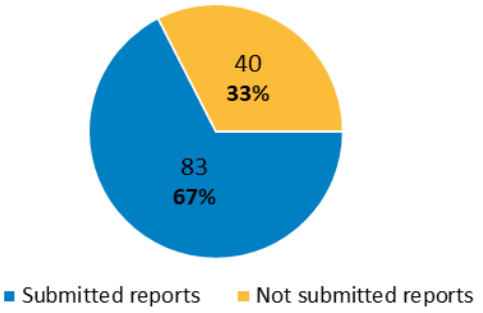
At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1/2

83 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



192.7 kt of SAF supplied to Union airports

Aviation fuel

32.1 Mt

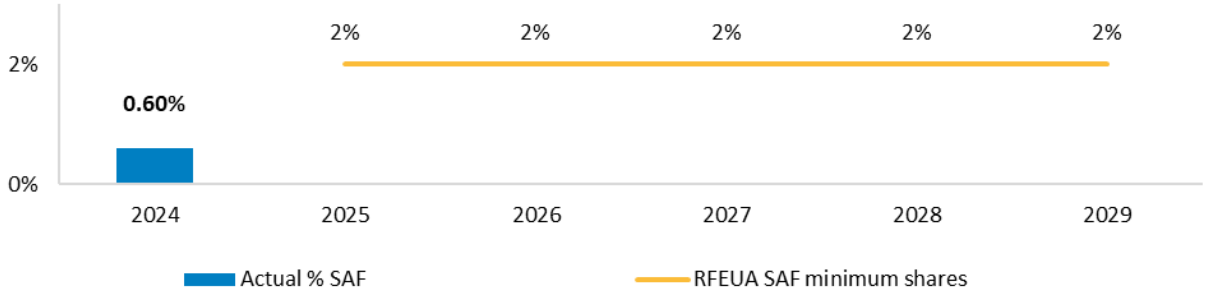
SAF

192.7 kt

0.60% of supplied fuel

0.60% of supplied aviation fuel was SAF

Historical SAF supplied vs aviation fuel supply (%)



Union level

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2/2

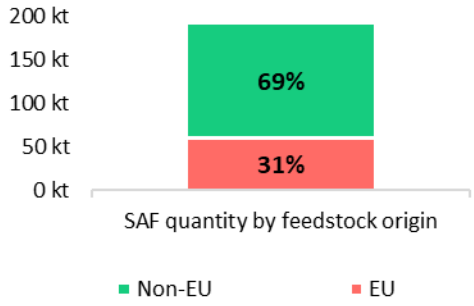
98% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel at Union level

Aviation biofuels (189 kt) Advanced aviation biofuels (3 kt) Other aviation biofuels (1 kt)

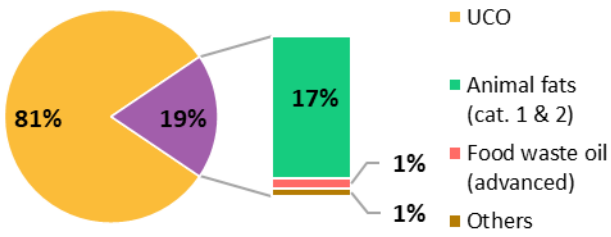
69% of SAF supplied came from feedstock originating outside the European Union

SAF feedstock by origin



81% of SAF supplied was made from used cooking oil

SAF feedstock composition



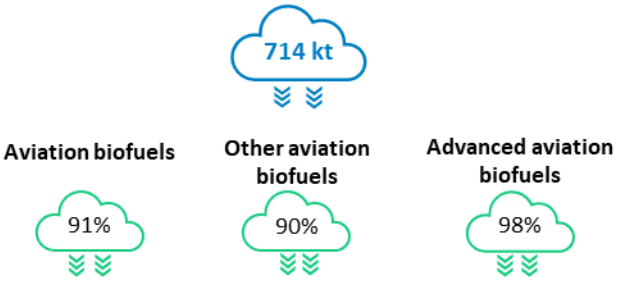
Aviation fuel composition at Union level

Aviation fuel composition

	Weighted average	Max. value (DEFSTAN) Jet A1
Aromatics (vol %)	16.74	<25
Naphthalene (vol %)	0.58	<3.0
Sulphur (mass %)	0.04	<0.3

714 kt of CO_2e savings from SAF supplied at Union level

SAF CO_2e savings



Percentages show CO_2e emissions savings vs. fossil comparator. The minimum threshold for biofuels is 65%

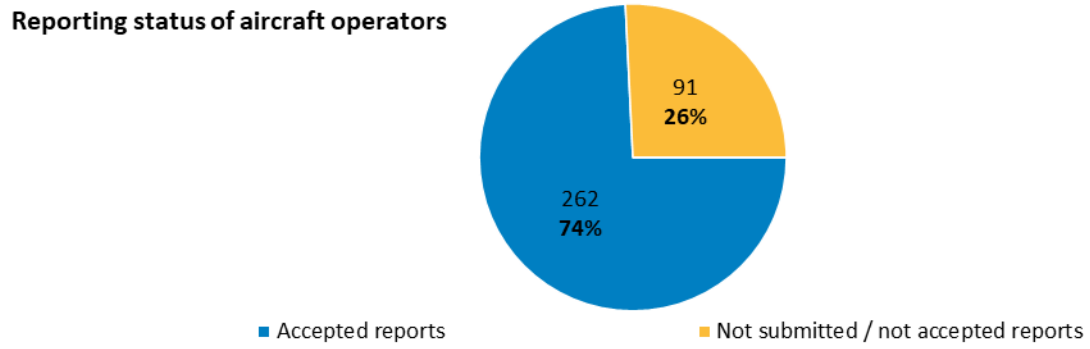
At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

1/1

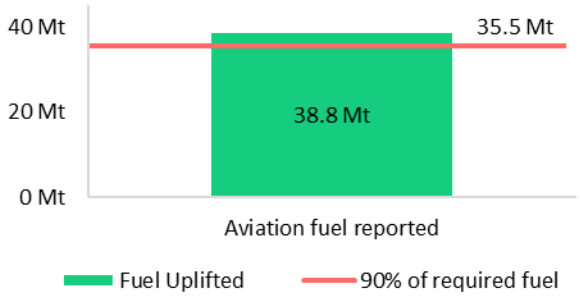
262 accepted reports from aircraft operators

Reporting status of aircraft operators



38.8 Mt of aviation fuel uplifted by RFEUA aircraft operators

2024 fuel uplifted vs required fuel



In 61% of Union airports the yearly uplift was above the 90% threshold

61%

87 out of 143

Union airports

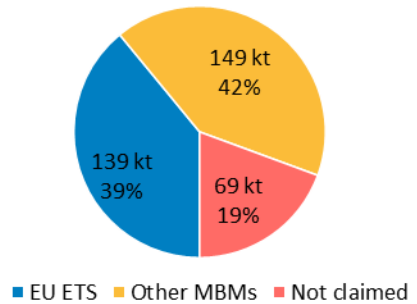
357.6 kt of SAF purchased by aircraft operators

SAF

357.6 kt

81% of SAF reported was claimed in an MBM scheme

SAF claim by MBM scheme



96.5% of SAF purchased is aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	345.1 kt	96.5%
Other aviation biofuels	2.2 kt	1%
Advanced aviation biofuels	0.6 kt	0.2%
Not categorised	9.8 kt	2.7%

2.1 Aviation fuel suppliers

This section provides an overview, at European Union level, of the compliance status of aviation fuel suppliers with their reporting obligations for the 2024 reporting period, as set out in Article 10 of RFEUA. Under Article 10, aviation fuel suppliers are required to report information on the SAF and aviation fuel supplied during the reporting period, including details on their quantities and characteristics.

As these reporting obligations became enforceable in 2025, aviation fuel suppliers were required to submit the relevant data for the 2024 reporting period by 14 February 2025, via the European Commission's CIRCABC and Union Database platforms.

Note: No obligation on aviation fuel suppliers to supply minimum shares of SAF in 2024

The obligation under Article 4 of the Regulation, requiring aviation fuel suppliers to make available a minimum share of SAF to aircraft operators at Union airports, did **not** yet apply during the 2024 reporting period. Accordingly, the data presented below should not be interpreted as compliance indicators, but rather as insights into the initial reporting exercise.

An analysis of the submitted data revealed challenges in both completeness and accuracy. Approximately one-third of aviation fuel suppliers did not submit reports, and several submissions received were incomplete or inconsistent, indicating potential data gaps.

In accordance with the requirements of Articles 4 and 13 RFEUA, the following indicators were identified for aviation fuel suppliers for the 2024 reporting period:

KPI CATEGORIES	LIST OF KPIS FOR AVIATION FUEL SUPPLIERS[21]	DESCRIPTION
Reporting Status	**FS1:** Reporting status of aviation fuel suppliers at Union level	Percentage at Union level of aviation fuel suppliers that submitted reports.
Aviation Fuel and SAF Supply	**FS2.1:** Aviation fuel supplied at Union level **FS2.2:** SAF supplied at Union level **FS2.3:** Historical % SAF supplied at Union level	Amount of aviation fuel and SAF reported as supplied by aviation fuel suppliers at Union level. % SAF compared to aviation fuel.
SAF Characteristics	**FS3.1:** SAF supplied per category of RFEUA eligible aviation fuel at Union level **FS3.2:** Feedstock origin of SAF supplied at Union level **FS3.3:** Feedstock composition of SAF supplied at Union level	Key characteristics of SAF supplied at Union level – Category of RFEUA eligible aviation fuel, feedstock origin and feedstock composition.
Emission Savings	**FS4.** SAF CO_2e savings at Union level	CO_2e savings of SAF supplied at Union level.
Aviation Fuel Composition	**FS5.** Aviation fuel composition at Union level	Content of aromatics, naphthalenes and sulphur in aviation fuel supplied at Union level.

Table 7 – KPI summary table for aviation fuel suppliers – Union level.

[21] Additional or alternative KPIs may be defined by EASA for subsequent reporting periods.

2.1.1 Reporting status

FS1: Reporting status of aviation fuel suppliers at Union level

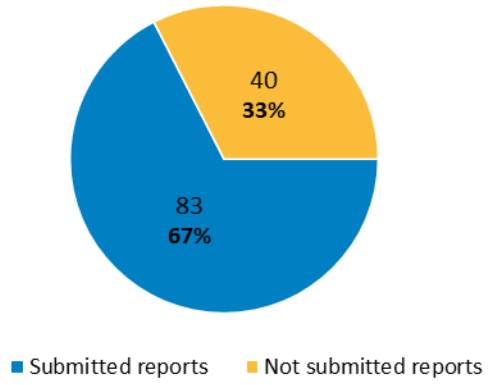


Figure 1 – FS1: Reporting status of aviation fuel suppliers at Union level.

In 2025, a total of 123 aviation fuel suppliers[22] were required to report their 2024 data by 14 February 2025, in accordance with Article 10 of the Regulation. Of these, 83 submitted reports, representing approximately two-thirds (67%) of all aviation fuel suppliers covered by the Regulation.[23]

Given that 2025 marked the first reporting year under the RFEUA framework, this reflects a reasonable level of compliance. However, it also underscores the need for continued guidance and engagement with aviation fuel suppliers and National Competent Authorities (NCAs).

2.1.2 Amount of aviation fuel and SAF supplied

FS2.1 and FS2.2: Aviation fuel and SAF supplied at Union airports

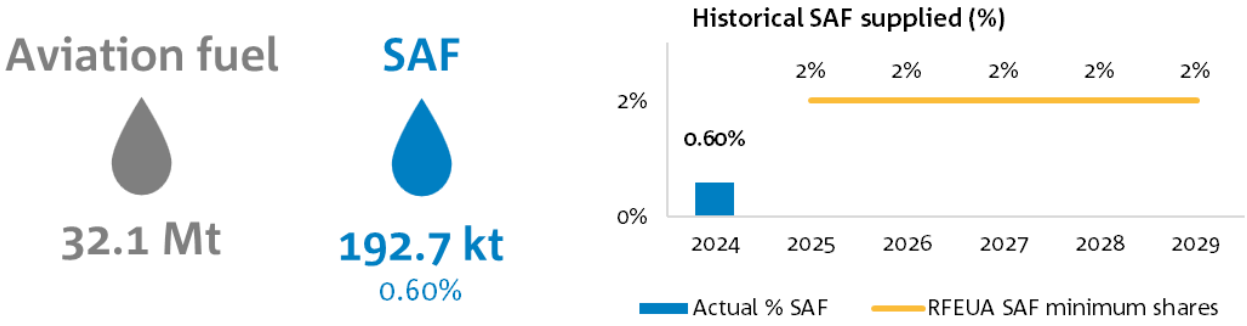


Figure 2 – FS2.1 and FS2.2: Aviation fuel and SAF supplied. FS2.3: Historical % SAF supplied.

Aviation fuel suppliers reported supplying 32.1 million metric tons of aviation fuel in 2024. Of this total, 192.7 kilotonnes (kt) were SAF as defined under RFEUA, representing 0.60% of the overall aviation fuel supplied.

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[22] As no official list of aviation fuel suppliers was published by the European Commission for the 2024 reporting period, the figure of 123 obligated suppliers has been derived using the list published for the 2025 reporting period, supplemented by additional entities that were not included in that list but nonetheless submitted reports.

[23] It is important to note that the figure of 83 refers specifically to reporting on SAF and aviation fuel supply under Article 10(a), (b), (c), and (e). A significantly lower number – 35 aviation fuel suppliers – reported on aviation fuel composition as required under Article 10(d), which had to be submitted directly via the Union Database.

Although this 0.60% share falls short of the 2% minimum SAF share set by RFEUA for 2025 and the following years, it is important to note that aviation fuel suppliers were not yet obligated to supply minimum shares of SAF in 2024. Moreover, the reported SAF amounts for 2024 may be lower than the actual amounts supplied, as approximately one third of aviation fuel suppliers did not submit their reports and the reporting did not capture potential SAF supply to non-Union airports.

The total amounts of AVGAS reported as supplied in 2024 was 1,869 tonnes, which is negligible compared to the overall aviation fuel amounts.

2.1.3 Characteristics of SAF supplied

FS3 and FS4.1: SAF supplied by RFEUA eligible aviation fuel category and feedstock origin

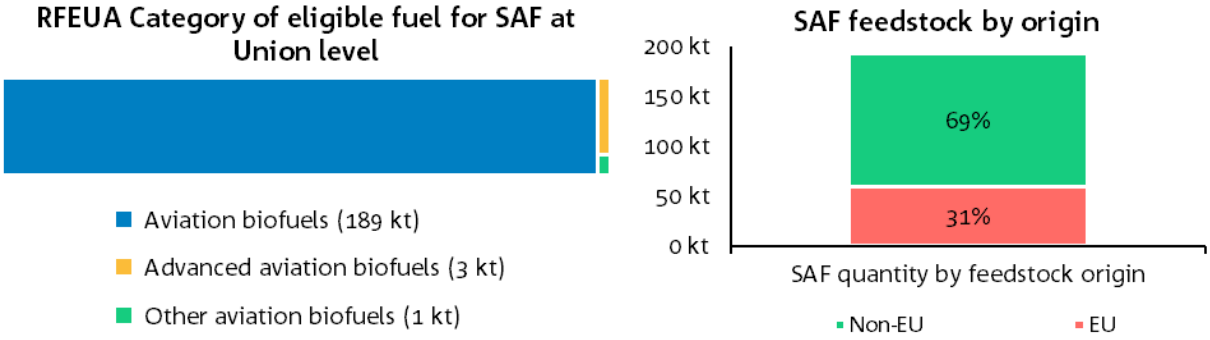


Figure 3 – FS3.1: SAF supplied per RFEUA eligible aviation fuel category and FS3.2 by feedstock origin.

Article 3 of RFEUA defines various categories of SAF and other aviation fuels that are eligible to count toward the minimum shares of SAF required under the Regulation.

Of the 192.7 kt of SAF reported in 2024, the vast majority – 189 kt, or approximately 98% – were "aviation biofuels", produced from feedstock listed in Annex IX Part B of the EU Renewable Energy Directive (EU RED). The remaining amounts comprised "advanced aviation biofuels," derived from feedstock listed in Annex IX Part A of the EU RED, as well as "other aviation biofuels," produced from feedstock not included in Annex IX but still meeting the sustainability and greenhouse gas (GHG) emission savings criteria set out in the EU RED.

Of the SAF reported by aviation fuel suppliers for 2024, 31% was produced from feedstock originating within the EU, while 69% was derived from feedstock sourced from countries outside the EU. It is important to note that feedstock originating outside the EU does not necessarily imply that the SAF itself was produced abroad. In many cases, feedstock was imported and subsequently refined into SAF at facilities located within the EU.

FS4.2: SAF supplied by feedstock composition

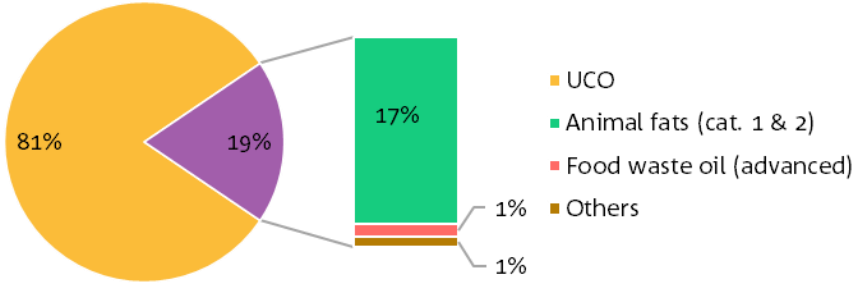


Figure 4 – FS3.3: SAF supplied by feedstock composition.

The SAF supplied to Union airports in 2024 was produced from six different feedstocks, as reported by aviation fuel suppliers. Used cooking oil (UCO) remained by far the most used feedstock, accounting for 81% of the total. Of the remaining 19%, animal fats (categories 1 and 2) represented 17%. Overall, 98% of the feedstock used for SAF in 2024 was listed in Annex IX Part B of the EU Renewable Energy Directive (EU RED). The remaining 2% consisted of food waste oil and very small quantities of other feedstocks, notably carinata.

2.1.4 CO_2e emission savings of SAF supplied

FS4: SAF CO_2e emission savings

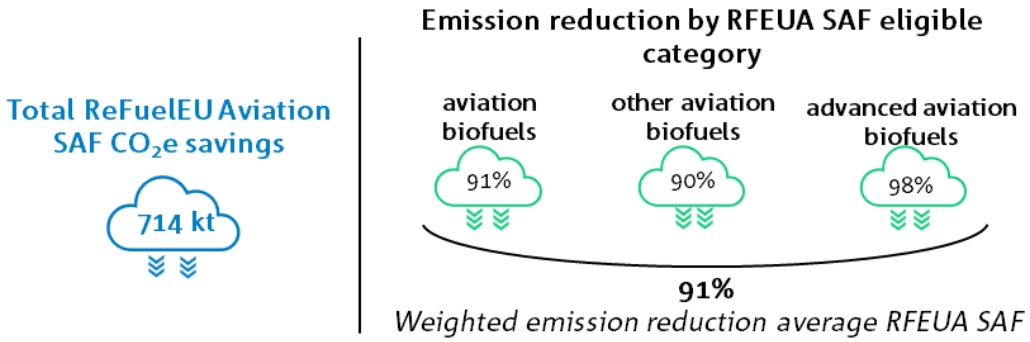


Figure 5 – FS4: CO_2e savings from SAF supplied at Union level.

By assessing the CO_2e emission savings associated with the SAF amounts reported by aviation fuel suppliers for 2024, it is possible to calculate the total CO_2e savings enabled through the supply and use of SAF.

In total, the CO_2e emission savings from SAF supplied and reported in 2024 amount to 714 kt of CO_2e, if determined against a baseline scenario in which 100% of aviation fuel supplied is conventional fossil jet fuel with a CO_2e emissions intensity of 94 g CO_2e/MJ – i.e. the GHG emissions intensity assigned to fossil fuel under the EU Renewable Energy Directive (EU RED).[24]

It is also worth noting that SAF across all three categories achieved high CO_2e emissions savings—ranging from 90% for "other aviation biofuels" to 98% for "advanced aviation biofuels," with a weighted average reduction of 91% compared to the baseline of conventional fossil-based jet fuel.

[24] GHG emissions for SAF are calculated on a lifecycle basis (well to wake, or WTW) as per the methodology laid down in the EU RED. Emissions are determined as CO_2-equivalents (CO_2e) per megajoule (MJ) of SAF and subsequently compared against a fossil comparator for liquid fuels for transport (which includes jet fuel) set in the EU RED to 94 gCO_2eq/MJ.

2.1.5 Composition of aviation fuel supplied

FS5: Aviation fuel composition – average content of aromatics, naphthalenes and sulphur

	WEIGHTED AVERAGE	MAX VALUE (as per DEFSTAN 91-091) for JET A1
Aromatics (vol %)	17.09	<25
Naphthalenes (vol %)	0.710	<3.0
Sulphur (mass %)	0.036	<0.3

Table 8 – Composition of aviation fuel reported.

Under Article 10(d) of RFEUA, aviation fuel suppliers are required to report specific compositional details of the aviation fuel supplied during the reporting period, including the content of aromatics, naphthalenes, and sulphur, as well as the test methods used to determine these values.

In 2024, the reported weighted average for aromatics was 17.09 vol %, which is significantly below the maximum limit set by DefStan 91-091 standard for Jet A1. The average content of naphthalenes was 0.710 vol %, and sulphur averaged 0.036 mass % – both also below the respective maximum thresholds defined in the standard.

However, it is important to note that these figures reflect only about 16% (6.426 million metric tonnes) of the total aviation fuel supplied in the EU in 2024, thereby limiting their representative-ness.

2.2 Aircraft operators

This section presents an overview, at European Union level, of the compliance status of aircraft operators with their reporting obligations under Article 8 RFEUA. Article 8 requires aircraft operators to provide information on fuel uplifted and SAF purchased during the reporting period, including under which MBM scheme the SAF was claimed.

As reporting obligations became enforceable in 2025, aircraft operators were required to submit 2024 data by 31 March 2025 to the NCAs and EASA, in accordance with Article 8 RFEUA. The auditing deadline for accepting the reports by the NCAs was set for 30 April 2025. Only accepted reports by the NCAs were used for the analysis.

Note: Refuelling obligations for aircraft operators

The obligations under Article 5, relating to the anti-tankering and exemption requests, were not applicable in the 2024 reporting period, therefore, the data reflected below do not constitute compliance indicators, but rather offer insights on the first reporting exercise. In fact, when it comes to the exemption requests under Article 5(3) REFUA, none were requested for 2024, as not yet applicable.

When analysing the data submitted by the aircraft operators, several issues were identified such as incomplete and inconsistent entries in the initial submissions; and discrepancies between the reported fuel required and fuel uplifted, indicating potential data gaps. These issues were likely due to the late publication of guidance material on how to undertake the monitoring and reporting processes and related information on data retention, which have been clarified in the European Commission's interpretative guidelines on exemptions and EASA's manual for aircraft operators and verification bodies.

Aligned with the requirements of Articles 5 and 8 RFEUA, the following indicators were identified for the 2024 reporting period:

KPI CATEGORIES	LIST OF KPIS FOR AIRCRAFT OPERATORS[25]	DESCRIPTION
Reporting Status	**AO1:** Reporting status of aircraft operators reporting at Union level	Percentage at Union level of aircraft operators that submitted reports.
Anti-tankering Status	**AO2.1:** Total fuel uplifted versus 90% of fuel required at Union level **AO2.2:** Fuel uplifted versus the 90% of fuel required obligation in the Union airports	Level of uplifts of all RFEUA aircraft operators departing from Union airports.
SAF Purchased Summary	**AO3.1:** Amount of SAF purchased at Union level **AO3.2:** RFEUA eligible fuel category **AO3.3:** SAF claimed by MBM scheme	Information on SAF purchased as reported by the AOs at Union level.

Table 9 – KPI summary table for Aircraft operators – Union level.

[25] Additional or alternative KPIs may be defined for subsequent reporting periods.

2.2.1 Reporting status

AO1: Reporting status of aircraft operators

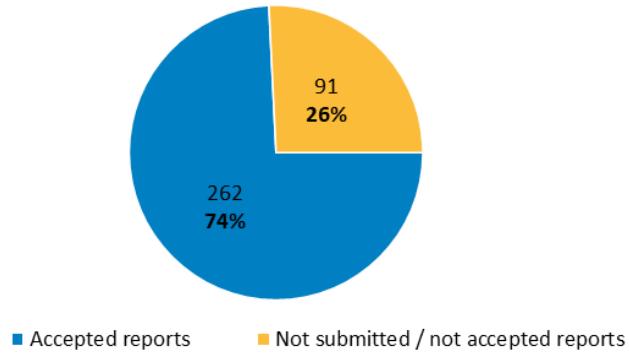


Figure 6 – AO.1: Reporting status of aircraft operators.

In 2025, a total of 351 aircraft operators were required to report their 2024 data in accordance with Article 8 RFEUA and the published Commission list.[26] Of these, 278 aircraft operators submitted a report, while 75 did not. The latter are mostly small airlines unfamiliar with other reporting obligations (e.g. EU ETS) or third country operators that did not respond to the NCAs' requests.

Among the submitted reports, 262 were accepted[27] by the respective NCA, representing 74% of all aircraft operators subject to reporting obligations. The remaining 91 required reports (26%) were either not submitted (75) by the aircraft operators or not accepted (16) by the NCAs.

Considering that 2025 was the first reporting year under the RFEUA framework, Figure 6 highlights a relatively high level of compliance with the reporting obligation and engagement from aircraft operators. Throughout the year, EASA and the 27 NCAs have been engaging with the aircraft operators to ensure a smooth onboarding onto the Sustainability Portal and reporting process, providing ad hoc training and info sessions. While the high level of compliance suggests that the majority of obligated aircraft operators are aware of the obligations and are engaged with their NCAs, the 26% non-compliance or non-acceptance is an indication that continued engagement and support to the aircraft operators is needed to ensure improved data reporting and quality.

2.2.2 Anti-tankering status

AO2.1: Fuel uplifted versus 90% of fuel required at Union level

Based on the data reported, in 2024, aircraft operators departing from Union airports uplifted a total of 38.8 Mt of aviation fuel, exceeding the 90% of fuel uplift obligation (35.5 Mt). While this suggests that the anti-tankering measures are either effective or may not be needed, since aircraft operators appear to be uplifting 90% of the required fuel at an aggregated Union level, a few considerations need to be made.

[26] List of aircraft operators in-scope of ReFuelEU Aviation for the 2024 reporting period.

[27] After the report submission deadline, NCAs had a one-month auditing period to review the reports received and to "accept" them. The criteria for acceptance varied across Member States, but in general entailed the timely submissions and completeness of the documentation required (including official template report, verification reports, data gaps, etc.).

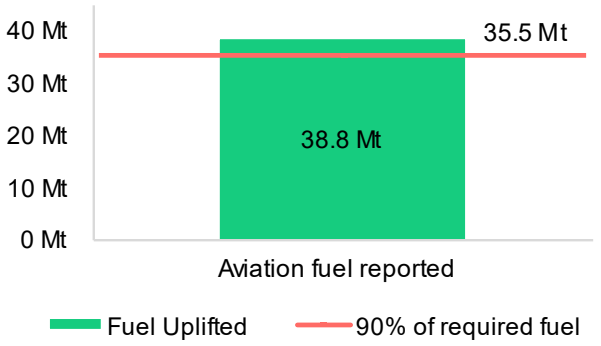


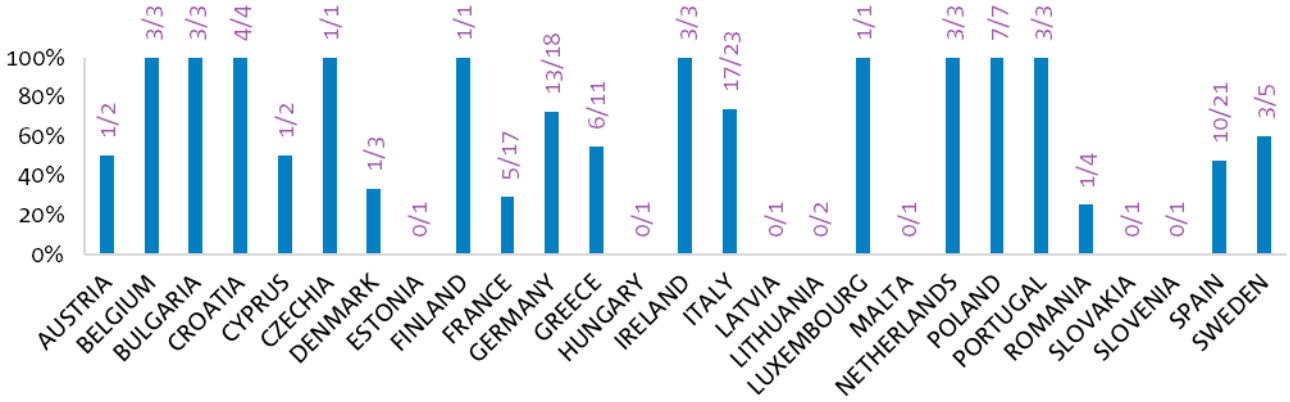
Figure 7 – AO2.1: Fuel uplifted versus 90% of fuel required at Union level.

Firstly, the Regulation's objective is to ensure that the compliance with the anti-tankering clause is maintained in the long-term. The introduction of a SAF mandate on the aviation fuel suppliers is expected to increase the average price of aviation fuel, which could potentially incentivise tankering practices in the future – hence the need to mitigate the risk.

Secondly, despite the apparent compliance at Union level, the aircraft operators still fall short by 2.4 Mt when assessing the obligation at the level the obligation is enforced: at each Union airport. This is indicated by the total "yearly non-tanked quantity" reported in Column G of the RFEUA reporting template, representing the quantity of fuel not uplifted in each Union airport compared to the 90% threshold of the fuel required[28] mandated by the Regulation. Therefore, while at aggregated level airlines seem to be compliant, at a granular level there are discrepancies regarding the level of uplifts.

Note: In 2024 there was no obligation for aircraft operators to uplift 90% of the fuel required at Union airports.

AO2.2: Fuel uplifted versus the 90% of fuel required obligation in the Union airports



X/X : Union airport with aggregated uplift higher than 90% threshold / total Union airport per country

Figure 8 – AO2.2: Fuel uplifted versus the 90% of fuel required obligation in the Union airports.

Indeed, Figure 8 highlights disparities across Member States[29] when it comes to the fuel uplifts. In 61% of the Union airports the actual fuel uplift from flights performed was above the 90% of the fuel required threshold. This share varies significantly between Member States and shows that fuel uplift happens unevenly in Europe.

These discrepancies may stem from the diverse jet fuel dynamics across the European Union, depending on the size of the Union airport but also the Member State where it is situated. More accurate and comprehensive data will be essential to provide a clearer and more reliable picture.

[28] Fuel required equals to trip fuel plus taxi fuel. N.B. this refers to any type of aviation fuel.

[29] For ease of reference the report refers to Member State level, however, the obligations are at Union airport levels.

2.2.3 Summary of SAF purchased

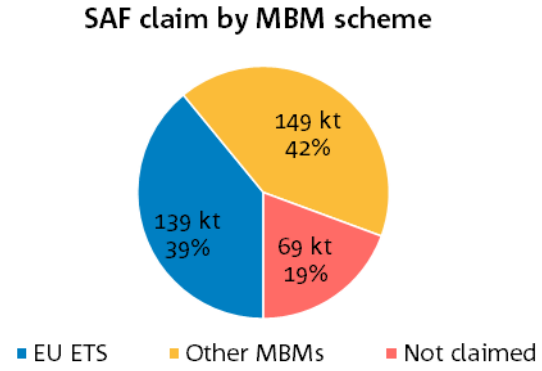
AO3.1: Amount of SAF purchased at Union level

Figure 9 – AO3.1 Amount of SAF purchased at Union level.

A key challenge observed during the first reporting period regards the SAF reporting tab in the reporting template. Aircraft operators received limited guidance on how to correctly complete the section, resulting in blank or inconsistent data submissions. EASA is currently working on a revised version of the *Manual for aircraft operators and verification bodies* which will provide clear instructions for the SAF reporting. This is expected to improve the data reporting of SAF in the coming reporting periods.

Based on the data reported, aircraft operators purchased 357.6 kt of SAF in 2024, representing 0.81% of the total aviation fuel uplifted at Union airports[30]. However, it is important to note that the scope of fuel uplifted only applies to flight departing from Union airports, while the SAF purchases may include amounts purchased globally. In fact, when comparing it to the SAF supplied by fuel suppliers, the SAF purchased by aircraft operators represents circa double the amount of the SAF supplied. This is likely due to some having reported the total amounts of SAF purchased globally (including purchase made in the United Kingdom), rather than limiting it to SAF uplifted at Union airports.

AO3.2 and AO3.3: SAF claimed by MBM scheme and by RFEUA eligible fuel category



RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	345.1 kt	96.5%
Other aviation biofuels	2.2 kt	1%
Advanced aviation biofuels	0.6 kt	0.2%
Not categorised	9.8 kt	2.7%

Figure 10 – AO3.3: SAF claimed by MBM scheme; and AO3.2: RFEUA eligible fuel category.

Article 8 RFEUA requires aircraft operators to report both the market-based measure (MBM) schemes under which SAF was claimed and which SAF category was purchased. In terms of MBM schemes, the reporting template provides aircraft operators the following options: EU ETS; CH ETS; CORSIA; Other MBMs[31]; or not claimed.

Based on the accepted reports, the EU ETS accounted for 39% (139.5 kt) of SAF claims by aircraft operators. 42% (148.6 kt) of the eligible fuel, representing the majority of SAF purchased by aircraft operators, was claimed under “other market-based measures", such as the UK ETS. 19% (69.2 kt) of the reported SAF was not claimed under any MBM scheme. Notably, no SAF amounts were reported under the CH ETS nor CORSIA. This may suggest that a significant share of SAF related emissions reductions is being claimed outside of the European regulatory framework.

Furthermore, aircraft operators also reported on the eligible fuel categories purchased: “aviation biofuels”; “other aviation biofuels”; “advanced aviation biofuels”; and not categorised. Of the SAF

[30] Please note that the fuel uplifted and the SAF purchased do not have the same scope. The fuel uplifted is only applied to RFEUA eligible flights, whereas the SAF purchased does not have this limit and any purchase could be reported.
[31] The “other market-based measures” category encompasses UK ETS or national schemes where SAF can be claimed.

purchased, 96.5% (345.1 kt) falls under the “aviation biofuels” category, which is aligned with the SAF market availability of 2024, where the majority of SAF supplied was HEFA (see section 2.1.3). 2.7% (9.8 kt) purchased was not categorised, and 1% (2.2 kt) was categorised under “other aviation biofuels”.

2.2.4 Flight Emissions Label implementation status

Article 14 RFEUA established a voluntary framework for communicating flight emissions to passengers, which aircraft operators within the scope of the Regulation may choose to opt into. The Flight Emissions Label Implementing Regulation, adopted on 31 December 2024, sets out the criteria for calculating and displaying emissions values to ensure transparency and harmonisation across the aviation sector.

In 2024, no aircraft operator has opted into the voluntary FEL scheme, pending the adoption of the Implementing Regulation. However, work was undertaken by the Agency and the Commission to advance the implementation of the scheme, including the development of the website (flightemissions.eu), and preparation of the Sustainability Portal.

To ensure smooth implementation in 2026, the Agency is collaborating with Air France-KLM, which has volunteered to test the system. Air France-KLM will be able to receive early access to the FEL results and calculation methods, the reporting and validation processes and the testing of the digital tools and workflow.

Further details are available on https://www.flightemissions.eu/. This website will contain the latest information on the FEL, the participating airlines and the manual for operators and data aggregators.

2.3 Union airport managing bodies

This section presents the compliance status of the reporting obligations of Union airport managing bodies (hereafter "Union airports" in this section) with their obligations under RFEUA.

As of 1 January 2025, Union airports are required to facilitate the access of SAF, as per Article 6 RFEUA. Union airports are additionally required to report actions taken to facilitate the access of aircraft operators to hydrogen or electricity used primarily for the propulsion of an aircraft and to provide the infrastructure and services necessary for the delivery, storage and uplifting of such hydrogen or electricity to refuel or recharge aircraft (Article 7(3) RFEUA).

Article 6 RFEUA - SAF access difficulties

To monitor potential barriers to SAF access at Union airports, aircraft operators are required to submit SAF access difficulty notices via the Sustainability Portal to the NCA of the respective Union airport. The NCA is then required to investigate the claim with the relevant Union airport and determine its validity.

In 2024, no SAF access difficulties at Union airports were submitted by the aircraft operators to the NCAs. Thus, all Union airports were in compliance with their obligations under Article 6 RFEUA.

Article 7(3) RFEUA – Reports and deployment plans

In terms of reporting under Article 7(3) RFEUA, 31 Union airports submitted reports. While most Union airports did not provide projected amounts of hydrogen (t) and electricity (kW) for the propulsion of aircraft, six Union airports provided figures. More specifically, the total amounts reported are:

	2025	2027	2030	2035
Hydrogen, amount in tonnes	0.06	900	1,078	2,274
Electricity, amount in kW	1,076	52,501	458,300	1,461,500

Table 10 – Alternative propulsion energy quantity forecast.

In addition to the quantitative reports, two Union airport managing bodies submitted deployment plans to their NCAs and EASA, outlining their strategies for supporting hydrogen and electric infrastructure for aircraft propulsion:

- AENA (for its 21 Union airports) outlined its renewable electricity production plan for the future with photovoltaic. While currently the renewable electricity supplied at the airport is used for their own activities and those of third parties (supply for stationary aircrafts, handling agents, tenants, etc.), they plan to supply also for aircraft propulsion in the future. AENA is also undertaking studies to determine the amounts of hydrogen needed for the propulsion of aircraft in the future.
- Rotterdam The Hague airport submitted the results from the feasibility study of the TULIPS project, looking into the impact of the introduction of electric and hydrogen aircraft in airports and estimated demand for each.

3. State of the EU SAF Market

Article 13(d) RFEUA requires the Annual Technical Report to contain information about the state of the EU SAF market.

This chapter therefore includes:

- An assessment of SAF production capacities in the EU; and
- An overview of key themes and trends shaping the EU SAF market.

3.1 Assessment of SAF production capacities in the EU

Assessing the status and evolution of SAF production capacities in the EU is essential for understanding the development of the EU SAF market and gaining insight into the Union's ability to meet the minimum SAF shares under RFEUA through domestic production.

The next two sections begin with a brief explanation of the methodology, followed by the presentation of results from EASA's assessment of EU SAF production capacities.

3.1.1 Methodology

The analysis of SAF production capacities in the EU was undertaken in three steps, as follows:

1. **Desk research of operating and announced SAF production facilities in each EU Member State**

Drawing on comprehensive desk research, EASA first compiled available information on both operational facilities and project announcements related to SAF production across EU Member States.

For last year's *State of the EU SAF Market in 2023* report, EASA had already established a database of SAF production facilities and project announcements, which served as the foundation for the current analysis. This database was subsequently updated to incorporate new project announcements as well as revisions to existing facilities and planned projects – such as changes in production capacity, commissioning timelines, location, or project status. All data compiled during this step were obtained from publicly accessible sources.

2. **Consultation with EU Member State authorities**

Once the initial desk research was completed and new project announcements made since last year's *State of the EU SAF Market in 2023* report were incorporated, EASA reached out to the competent authorities of each EU Member State to verify the updated data. The data was shared with national authorities in December 2024. Following the consultation period, all feedback was collected and the data revised accordingly where necessary. Where discrepancies existed, information provided by EU Member States (e.g. on project status) was given precedence over publicly available sources.

Note: SAF production capacity assessment – Focus on 2024

In line with the focus of the Annual Technical Report, the SAF production capacity assessment conducted by EASA focuses on the previous year.

The SAF production capacity assessment conducted for and included in this EASA 2025 Annual Technical Report therefore reflects the status of EU SAF production capacities as of December 2024.

3. Development of scenarios

To account for the uncertainties inherent in the still-nascent SAF market – where not all announcements are expected to result in operational facilities – EASA developed three scenarios:

- Operating (maturity score = 5);
- Realistic (maturity score = 4 & 5);
- Optimistic (maturity score = 3, 4 & 5).

These scenarios are based on a maturity score assigned to each SAF production project. Refer to Table 11 for a summary of the maturity score methodology.

The year 2030 is used as a benchmark year for the SAF production capacity assessment as it serves as a key reference point under the ReFuelEU Aviation Regulation. Additionally, only a limited number of SAF project announcements extend beyond 2030, and those are subject to greater uncertainty. Future Annual Technical Reports will incorporate additional reference points beyond 2030 as the EU SAF market continues to evolve.

PROJECT MATURITY SCORE	DESCRIPTION
5	Commercial-scale SAF facility (In service)
4	Facility under construction
3	Main facility attributes announced: technology, feedstock, SAF capacity, commissioning year, location, upstream/downstream partners
2	Only limited information announced (ex. commissioning year and technology disclosed but feedstock, capacity and location are unknown)
1	Very limited information OR Non-ASTM approved pathway

Table 11 – SAF Production capacity project maturity assessment.

Note: Estimating the production capacity of co-processed SAF

Production amounts of co-processed SAF are rarely disclosed publicly. To address this data gap, EASA estimated the co-processing capacity per facility in cases where public information was unavailable.

In the *Operating* scenario, an annual output of 10 kt of SAF per co-processing facility was assumed. This figure was increased to 15 kt in the *Realistic* scenario and 20 kt in the *Optimistic* scenario.

Where specific co-processing amounts had been reported, these values were used as the facility's maximum production capacity.

3.1.2 Results

The analysis revealed that 17 EU Member States now exhibit SAF activity – defined as having at least one operational or announced SAF production facility (see Table 12). This represents a substantial increase compared to the figure of 12 Member States identified in the previous year's assessment, conducted as part of the *State of the EU SAF Market in 2023* report. This growth underscores the continued momentum in SAF development across the EU.

EU MEMBER STATES WITH AT LEAST ONE OPERATING OR ANNOUNCED SAF FACILITY (EU MEMBER STATES WITH FIRST-TIME SAF ACTIVITY IN GREEN)	EU MEMBER STATES WITH NO OPERATING OR ANNOUNCED SAF FACILITY
Austria, Belgium, Croatia, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden	Bulgaria, Cyprus, Czech Republic, Greece, Hungary, Ireland, Lithuania, Luxemburg, Malta, Slovenia

Table 12 – Status of EU Member States with regard to operating and announced SAF production facilities.

Figure 11 illustrates three scenarios for the EU's SAF production capacities, using the year 2030 as the reference point. Each scenario outlines the anticipated SAF production capacities based on its respective assumptions. For comparison, figures from the *State of the EU SAF Market in 2023* report are also included. In addition, two lines, representing the 2030 RFEUA targets for SAF (excluding synthetic aviation fuels) and synthetic aviation fuels, give an indication of how the SAF production capacities for each scenario compare.

The ***Operating*** **scenario.** Reflects the currently available production capacity for SAF and assumes that only facilities already operating today will operate by 2030. Results in 1.4 Mt of SAF production capacity available by 2030. The notable increase compared to the figures in last year's assessment is attributable to the commissioning of Eni's Gela refinery in Italy, which has been announced with a maximum operating capacity of 400 kt of SAF per year.

The ***Realistic*** **scenario.** Includes all production facilities in the *Operating* scenario as well as those currently under construction. Results in 3.6 Mt of SAF production capacity available by 2030. The increase relative to last year's assessment stems from the higher maximum potential SAF production capacity identified at the Moeve Huelva refinery expansion, currently under construction and expected to be commissioned in 2026, along with the revised capacity of Eni's Gela refinery, which was previously estimated at 150 kt but is now reported at 400 kt.

The ***Optimistic*** **scenario.** Encompasses all production facilities included in the *Realistic* scenario (operational and under construction), along with high-credibility projects that have disclosed key data for their announced facilities. Under the *Optimistic* scenario, total SAF production capacity is projected at 5.2 Mt (excluding synthetic aviation fuel amounts), with an additional 0.7 Mt of synthetic aviation fuels. Compared to last year's assessment, the production capacities of synthetic aviation fuel available by 2030 has decreased due to the cancellation or suspension of several projects. This reduction underscores the ongoing challenges in commercialising synthetic fuel technologies and highlights the urgent need for remaining projects to reach the Final Investment Decision (FID) stage to enable the EU to meet its 2030 RFEUA synthetic aviation fuel sub-mandate without relying on imports.

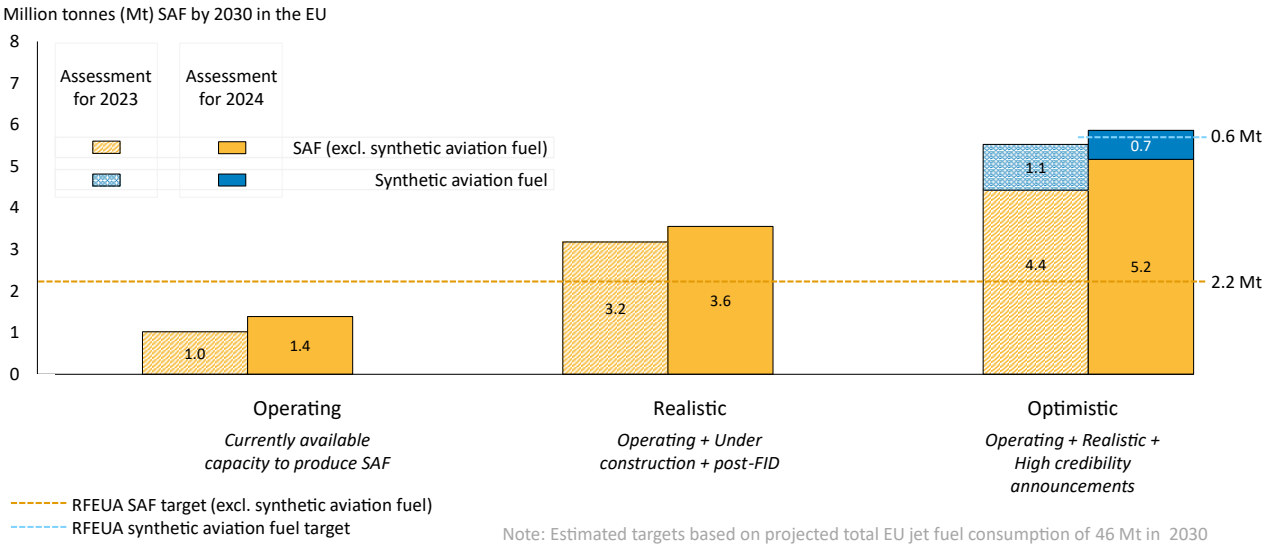


Figure 11 – Three scenarios for the EU's SAF production capacities.

Note: Maximum potential SAF output vs actual SAF output

The figures for SAF production capacity presented in this report represent the maximum potential SAF output for the year in which each facility is expected to commence operations, based on publicly available sources. These figures assume that each project achieves its stated production targets and do not account for ramp-up periods, partial operations, or delays in commissioning.

As such, the data should be interpreted as indicative of potential capacity rather than actual projected output, which may result in historical figures that exceed the actual SAF production amounts recorded for those years.

3.2 EU SAF market – Key themes and developments

Based on the analysis conducted and the data submitted by aviation fuel suppliers for the 2024 reporting period, several key themes have emerged across the segments of the value chain. The overarching theme is a strong momentum in SAF development overall, accompanied by clear indications of the need for additional support to scale up synthetic aviation fuels, expand EU feedstock capacities, and ensure SAF access across all EU Member States.

3.2.1 State of the market

Within the EU, SAF production capacity is expected to grow steadily over the next five years. If the current trajectory of expansion is maintained and the planned production targets are met, EU SAF production capacities are projected to be sufficient to meet the minimum shares of SAF defined under the Regulation for 2030 (excluding synthetic aviation fuels). Realising this outcome depends on several critical factors: sustained investment in new production facilities, timely commissioning of these plants, and rapid scaling across the entire SAF value chain.

The obligation of supplying minimum shares of SAF is set to increase from 6% in 2030 to 20% by 2035, significantly raising the bar for domestic production. Based on current projections, EU-based SAF output will fall short of the anticipated demand of 9.6 Mt[32], necessitating increased reliance on imports from other regions.

At the same time, the scale-up of synthetic aviation fuel production in the EU is lagging, putting at risk the 2030 sub-target for synthetic aviation fuels. This shortfall may necessitate imports of synthetic aviation fuel and/or trigger penalty payments by obligated parties. As of today, none of the larger synthetic aviation fuel facilities in the EU have reached Final Investment Decision (FID). To meet the 2030 sub-target for synthetic aviation fuels, given project development lead times, several facilities must reach FID by 2026 at the latest.

As of June 2025, the global pipeline for synthetic aviation fuel facilities comprises 94 announced demonstration or commercial projects, with a combined capacity of 7.2 million tonnes per year. The European Economic Area (EEA) is the frontrunner, accounting for 59% of the projects and 42% of the planned capacity. Nonetheless, global momentum remains tentative: only one facility – Infinium's 0.023 Mt/yr Project Roadrunner in Texas – has reached FID, while an additional 0.76 Mt/yr (including a flexible 0.5 Mt/yr e-methanol plant) is still in front-end engineering design. Due to the absence of binding synthetic aviation fuel mandates outside the EU and UK, many projects – particularly in North America, which benefits from strong U.S. supply-side incentives and long-term offtake agreements – are oriented toward exporting to the European market. However, non-EEA capacity planned for 2030 faces both slow project progress and the challenge of meeting the EU's stringent sustainability criteria before these fuels can be imported into the EU.

[32] Based on a jet fuel consumption forecast of 48 Mt in 2035.

3.2.2 Upstream activity – Feedstock landscape and SAF imports

In 2024, used cooking oil (UCO) and waste animal fat (categories 1 and 2) accounted for 98% of the feedstock used in SAF supplied within the EU. Consequently, nearly all SAF was classified as "aviation biofuels" as per the RFEUA definition. As the feedstock base diversifies and emerging technologies scale up, a greater share of advanced aviation fuels is expected to enter the market.

Of the feedstock used for SAF supplied in the EU, 69% originated from non-EU countries. China alone contributed 38%, while Malaysia accounted for 12%, together comprising 50% of the total 57% sourced from the Asia-Pacific region. The remaining 39% originated from the EU, UK, and EFTA states, with Finland being the largest European contributor at 10%, followed by the UK at 8%. A small portion of feedstock came from Latin America and the Caribbean (LACAB), the Middle East, and North America, with Saudi Arabia being the most significant among these at 2%. Given that China and other Asian countries have announced plans to expand their domestic SAF production capacities, the availability of feedstock from the region for export to the EU may decline.

According to Eurostat data, 80 kt of "biojet" was imported into the EU in 2024[33], primarily through ports in the Netherlands and Sweden. In relation to the 193 kt of SAF supply reported by aviation fuel suppliers, this represents more than 40% of the total SAF supplied in the EU. Although domestic SAF production capacity is increasing, data from Eurostat and aviation fuel suppliers indicate that imports continued to play a significant role in the EU's SAF landscape in 2024.

3.2.3 Downstream activity – SAF supply landscape

For 2024, 25 aviation fuel suppliers (out of 83) reported a total supply of 193 kt of SAF. Fewer than ten aviation fuel suppliers accounted for 80% of this volume, indicating a significant level of market concentration. This suggests that the EU SAF market remains in an early, nascent phase, dominated by a small number of mature or well-capitalised suppliers.

In 2024, SAF was delivered to 33 Union airports across 12 EU Member States; however, five Member States alone accounted for 99% of the total amount supplied. The largest single delivery was made to Amsterdam Schiphol Airport, while Parisian airports collectively received the highest overall amount throughout the year. Furthermore, five Union airports represented 70% of all SAF delivered within the EU. This distribution reflects the current stage of SAF deployment, with supply concentrated in a limited number of countries and major airport hubs.

Note: Addressing risks related to out-of-specification SAF

Each SAF production pathway undergoes extensive testing before being standardised under ASTM D7566 and entering the market. On-specification SAF is safe to use and considered a drop-in fuel, meaning it can be used in existing aircraft and infrastructure without modifications.

As SAF adoption grows, the risk of aviation fuel or SAF being delivered that do not meet the required quality standards increases. This is largely due to the novelty and complexity of synthetic blending component (SBC) production, handling, and blending processes. Additionally, the high cost of SAF compared to fossil jet fuel may incentivize fraudulent activities, further elevating the risk of out-of-specification aviation fuel.

In February 2025, EASA published the Safety Information Bulletin 2025-01 "Risks Related to Out of Specification Aviation Turbine Fuels"[34] to raise awareness of the potential risks associated with SATF market expansion and to encourage proactive measures for fuel quality assurance all along the supply chain. EASA, together with stakeholders involved in the manufacturing, supply, and use of SAF, is currently conducting a Safety Issue Assessment to identify potential risks and appropriate mitigation measures.

[33] Eurostat - Supply and transformation of oil and petroleum products - monthly data.

[34] EASA Safety Information Bulletin 2025-01 "Risks Related to Out of Specification Aviation Turbine Fuels"

4. 2024 Aviation Fuels Reference Prices for ReFuelEU Aviation

Article 13(d) RFEUA requires the Annual Technical Report to contain information on SAF prices, including information on the evolution of the price gap between SAF and conventional aviation fuels (CAF).

EASA calculated 2024 reference prices for the different aviation fuels eligible under ReFuelEU Aviation as well as for CAF, which are intended to serve as reference for EU Member States in their determination of penalties under RFEUA as well as for the support mechanism for the use of eligible aviation fuels under the EU ETS Directive (FEETS).[35][36]

Note: Identical reference prices in Annual Technical Report and in February briefing note

In February 2025, EASA published the *2024 Aviation Fuels Reference Prices for ReFuelEU Aviation* briefing note[37], which provided the 2024 reference prices for the aviation fuel categories eligible under RFEUA as well as CAF.

The briefing note published in February served as a preliminary release of the price information later included in this Annual Technical Report. Accordingly, the aviation fuels reference prices presented in this chapter are **identical** to those published in the February briefing note.

4.1 Methodology

Note: Methodology document for RFEUA eligible aviation fuels reference prices

Alongside this Annual Technical Report, EASA has published a methodology document explaining in detail how the reference prices for RFEUA eligible aviation fuels are determined.

The methodology document can be accessed on EASA's website.

Where possible, reference prices were determined using price indexes maintained by price reporting agencies (also referred to as "real index pricing"). For those RFEUA eligible aviation fuels for which no real index price was available in 2024, reference prices were calculated using a bottom-up production cost estimation methodology (also referred to as "back up pricing" or "production cost estimation").

Real index pricing

Only CAF and "aviation biofuels" reference prices could be established via real index pricing.

The "real index pricing" result for "aviation biofuels", set at EUR 2,085 per tonne, is calculated by price reporting agencies for the Northwest European (NWE) hub. As illustrated in Figure 12, this price reflects the costs associated with feedstock production, upstream logistics, and production at

[35] Delegated Regulation supplementing Directive 2003/87/EC of the European Parliament and of the Council by laying down detailed rules for the yearly calculation of price differences between eligible aviation fuels and fossil kerosene and for the EU ETS allocation of allowances for the use of eligible aviation fuels.

[36] Note that the European Commission publishes a dedicated Commission notice regarding the applicable price difference between kerosene and relevant eligible aviation fuels under the FEETS mechanism. EUR-Lex - 52025XC02934 - EN - EUR-Lex

[37] EASA 2025 Briefing Note *2024 Aviation Fuels Reference Prices for ReFuelEU Aviation*. 2024 Aviation Fuels Reference Prices for ReFuelEU Aviation | EASA

the refinery. However, it does not capture downstream components, such as costs associated with blending, distribution, and downstream actors' (such as aviation fuel suppliers') profit margins.

Liquidity is currently strongest at the NWE hub, making it a suitable benchmark for establishing a reference price that supports a level playing field. Beyond this hub, SAF prices vary considerably due to the factors outlined above. Ongoing evaluation will be required to determine whether the NWE hub should continue to serve as the most appropriate benchmark as the SAF market and the associated pricing dynamics evolve.

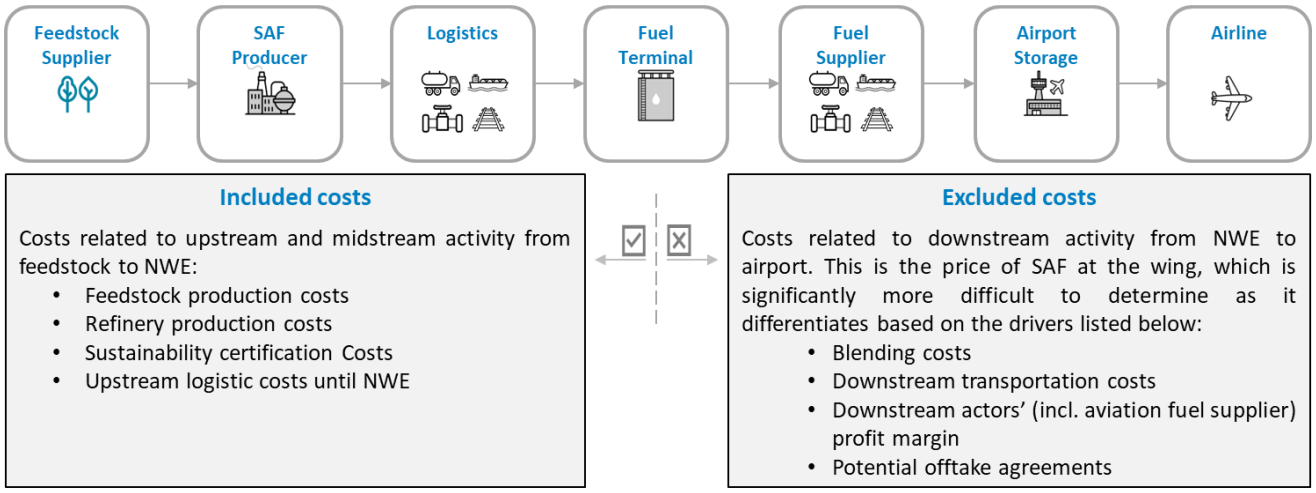


Figure 12 – Overview of included and excluded costs of PRA assessments.

Back up pricing

The reference prices for the other RFEUA eligible aviation fuels were determined using production cost estimations, factoring in feedstock, energy, and technology deployment costs, as well as hypothetical production capacity estimations for 2024. For these production cost estimations, facilities were assumed to be "first-of-a-kind" (FOAK) facilities, with smaller capacities, to better represent a hypothetical 2024 production scenario.

4.2 2024 aviation fuels reference prices per RFEUA aviation fuels subcategory

Note: EASA 2024 SAF reference prices vs SAF prices paid by aircraft operators in 2025

The reference prices for RFEUA eligible aviation fuels, as determined by EASA, reflect average SAF prices for a given reference year, based on a defined methodology.[38]

Their primary purpose is to serve as reference values for EU Member States in determining penalties under RFEUA, as well as for the support mechanism for the use of eligible aviation fuels under the EU ETS Directive (FEETS).

At this stage, the reference prices cannot provide a fully accurate reflection of the prices paid for SAF by all aircraft operators throughout the reference year – particularly given the geographically localised and temporally variable nature of pricing in the still nascent SAF market during the first year of RFEUA implementation. As outlined in section 4.1, the EASA reference prices, including those based on real index pricing, currently primarily reflect upstream cost components only. It should also be noted that the reference prices presented in this chapter are reference prices for the year 2024, based on 2024 data, and therefore do not reflect price developments occurring in 2025.

[38] Refer to the dedicated methodology document on EASA's website.

Information provided to the European Commission by aircraft operators suggests that the prices for aviation biofuels currently charged to them exceed the EASA SAF reference prices determined via real index pricing, in some cases approaching levels close to double the established reference price.

As further communicated to the European Commission, in 2025 several aircraft operators faced challenges understanding SAF pricing in their contractual arrangements. These contracts included additional charges for RFEUA SAF minimum shares but lacked transparency on the actual SAF cost, its components, supplied quantities, and delivery locations. Taken together, these practices contribute to a divergence between the SAF prices paid by operators and the EASA SAF reference prices.

The 2024 reference prices for each RFEUA eligible aviation fuels subcategory are presented in the table below.

RFEUA AVIATION FUELS SUBCATEGORY[39]	REAL INDEX PRICE (EUR/tonne)[40]	PRODUCTION COST ESTIMATION (EUR/tonne)[41]
Sustainable aviation fuels (SAF)		
Synthetic aviation fuels[42] (weighted average)	N/A	Average 7,695 [6,820 – 9,405]
Synthetic aviation fuels from industrial CO_2	N/A	Average 7,695 [6,820 – 8,590]
Synthetic aviation fuels from biogenic CO_2	N/A	Average 7,695 [6,820 – 8,590]
Synthetic aviation fuels from atmospheric CO_2	N/A	Average 8,470 [7,575 – 9,405]
Advanced aviation biofuels	N/A	Average 2,715 [1,915- 3,655]
Aviation biofuels	2,085	1,461[43]
Recycled carbon aviation fuels	N/A	Average 2,280 [1,940 – 2,595]
Other eligible renewable and low-carbon aviation fuels		
Renewable hydrogen for aviation	N/A	Average 7,520 [6,550 – 8,515]
Low-carbon hydrogen for aviation	N/A	4,655
Synthetic low-carbon aviation fuels	N/A	Average 5,525 [5,180 – 5,870]
Other aviation fuels		
Conventional aviation fuels	734	N/A

[39] Refer to section 1.4 in this report for definitions of each RFEUA aviation fuels category. Note that "aviation biofuels" in this table includes the categories "aviation biofuels" (Annex IX Part B) and "other aviation biofuels" (non-Annex IX) as included in Table 1 (page 1) of that report. Also note that the aviation fuels subcategories under RFEUA generally align with the eligible aviation fuel subcategories outlined in the Annex of the Delegated Regulation on FEETS, with the following differences:

(1) recycled carbon aviation fuels are not eligible for support as FEETS; and

(2) FEETS additionally includes several co-processing-based aviation fuels subcategories. For the RFEUA eligible aviation fuels reference prices, co-processed fuels are included in their respective aviation fuels subcategory.

[40] Note that the reference prices are provided in EUR/tonne of product, without adjusting for energy content.

[41] Note that the reference prices are provided in EUR/tonne of product, without adjusting for energy content.

[42] The weighted average is calculated factoring in the currently announced production capacity per subcategory in the EU.

[43] Note that the production cost estimation for "aviation biofuels" is included only for informational purposes and to allow for comparison with the production cost estimations for other RFEUA aviation fuels categories.

Table 13 – 2024 reference prices per RFEUA aviation fuels subcategory.

Figure 13 provides a visual overview of the 2024 reference prices for the different RFEUA eligible aviation fuels subcategories. The bar chart also includes the 2023 reference price for each RFEUA eligible aviation fuels subcategory for informational purposes.

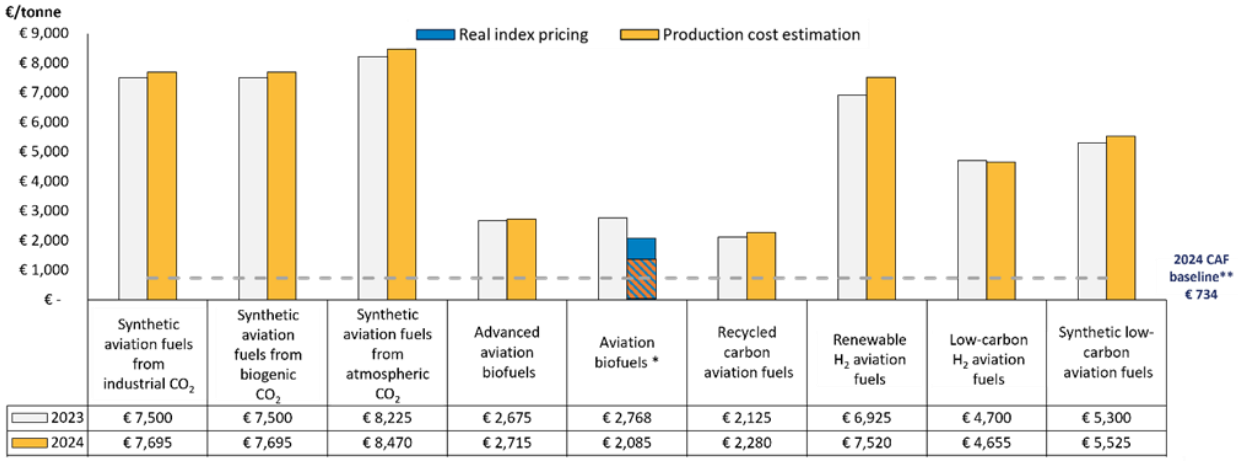


Figure 13 – 2024 reference prices per RFEUA aviation fuels subcategory.

Using the reference prices from the different RFEUA eligible aviation fuels *subcategories* as outlined above, EASA also determines reference prices for RFEUA eligible aviation fuels *categories*. These are provided to support EU Member States in the determination of penalties under RFEUA, in line with Article 12 in the Regulation.

The table below provides the 2024 reference prices per RFEUA aviation fuels category.[44]

RFEUA AVIATION FUELS CATEGORY		2024 REFERENCE PRICE (€/tonne)
(i)	CAF	734
(ii)	SAF	2,085
(iii)	Synthetic aviation fuels	7,695
(iv)	Aviation fuels	734

Table 14 – 2024 reference prices per RFEUA aviation fuels category.

[44] Refer to the dedicated methodology document on EASA's website for an explanation of how the reference price for each RFEUA aviation fuels *category* is determined based on the reference prices of the respective RFEUA aviation fuels *subcategories*.

5. Overview of Reported Data and SAF Market Status – EU Member States

This chapter provides an overview of the KPIs for each EU Member State. The KPIs are informed by data from the 2024 reporting period, submitted by aviation fuel suppliers and aircraft operators during the first reporting exercise under RFEUA in 2025. Each sub-section also includes a SAF activity fiche, featuring a map of both operational and announced SAF production facilities.

These indicators are essential for evaluating compliance with, and progress toward, the objectives of RFEUA. By comparing these metrics across EU Member States, it is possible to identify areas of success as well as those requiring further improvement.

Note: Analysis of SAF activity in EU Member States

This analysis was conducted to the best of EASA's knowledge, drawing on publicly available data and input from the EU Member States' authorities. It is acknowledged that some projects may have been overlooked and, as a result, are not included in this analysis. Stakeholders are encouraged to contact EASA and share information to ensure that any omissions are addressed in future reports.

KPI CATEGORIES	LIST OF KPIS FOR AVIATION FUEL SUPPLIERS[45]	DESCRIPTION
Reporting Status	**FS1:** Reporting status of aviation fuel suppliers	Percentage of aviation fuel suppliers that submitted reports.
Aviation Fuel and SAF Supply	**FS2.1:** Aviation fuel supplied at Union level **FS2.2:** SAF supplied at Union level	Amount of aviation fuel and SAF reported as supplied by aviation fuel suppliers for that Member State.
SAF Characteristics	**FS3.1:** SAF supplied per category of RFEUA eligible aviation fuel	Key characteristics of SAF supplied in EU Member State – Category of RFEUA eligible aviation fuel.
Emission savings	**FS4.** SAF CO_2e savings	CO_2e savings of SAF supplied per EU Member State.

Table 14 – KPI summary table for aviation fuel suppliers – Member State level.

KPI CATEGORIES	LIST OF KPIS FOR AIRCRAFT OPERATORS[46]	DESCRIPTION
Reporting Status	**AO1:** Reporting status of aircraft operators	Level of reporting of Aos to the respective Member State.
Anti-tankering Status	**AO2.1:** Fuel uplifted versus 90% of fuel required at Member State level (all RFEUA AOs uplifting in MS Union airports) **AO2.2:** Fuel uplifted versus the 90% fuel required obligation in Member State's Union airports	As AOs were not to comply with Article 5 in 2024, the two KPIs showcase the level of uplifts of all RFEUA aircraft operators departing from the Union airports of the respective MS.
SAF Purchased Summary	**AO3.1:** Amount of SAF purchased **AO3.2:** RFEUA eligible fuel category **AO3.3:** SAF claim by MBM scheme	These KPIs present the SAF information reported by the AOs of the respective MS.

Table 15 – KPI summary table for aircraft operators – Member State level.

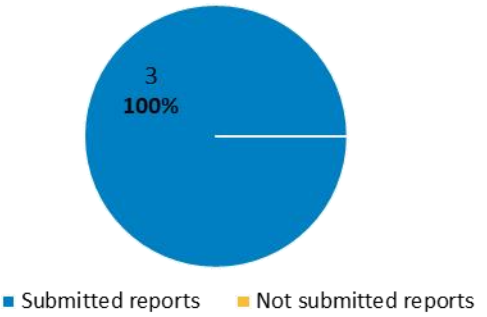
[45] Additional or alternative KPIs may be defined by EASA for subsequent reporting periods.
[46] Additional or alternative KPIs may be defined by EASA for subsequent reporting periods.

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



No SAF was supplied to Union airports

Aviation fuel

910.0 kt

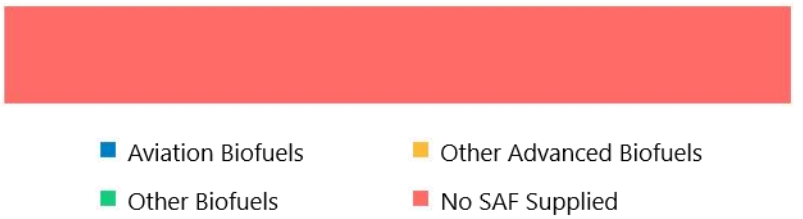
SAF

0.0 kt

0.00% of supplied aviation fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

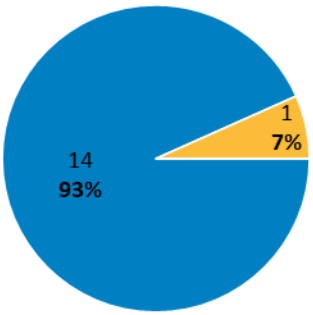
Austria

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

14 accepted reports from aircraft operators

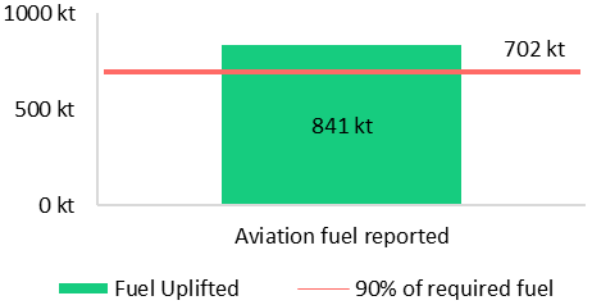
Reporting status of aircraft operators



Accepted reports — Not submitted / not accepted reports

841 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 50% of Union airports the uplift was above the 90% threshold

50%

1 out of 2

Union airports

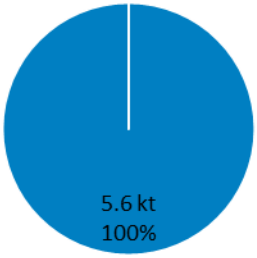
5.6 kt of SAF purchased by aircraft operators

SAF

5.6 kt

100% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



EU ETS — Other MBMs — Not claimed

100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	5.6 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Austria

Austria's SAF activity is primarily driven by the efforts of its national oil and gas company, OMV. In 2022, OMV began producing SAF at its refinery in Schwechat. The oil major has committed to supplying a cumulative total of 1.5 Mt of SAF by 2030 to several airlines.[47] Recently, the company announced a partnership with Airbus aimed at accelerating the testing, evaluation, and approval of new feedstocks and production pathways.[48]

The Member State's ambition to expand its SAF industry was underscored by the publication of a SAF roadmap in 2024 – updated in 2025 – by the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology of the Republic of Austria.[49] This document outlines key areas for the industry's development in Austria, including the regulatory landscape, SAF demand, economic potential, and future measures to support achieving national targets.

According to the roadmap, two additional initiatives have been launched that could support SAF production in Austria.[50] The first is led by AGRANA, a food and industrial goods group, which could supply additional CO_2 to feed into various industrial processes, including future SAF production.[51] The second is a demonstration plant in Graz operated by AVL List, focusing on demonstrating the production of synthetic aviation fuels.[52]

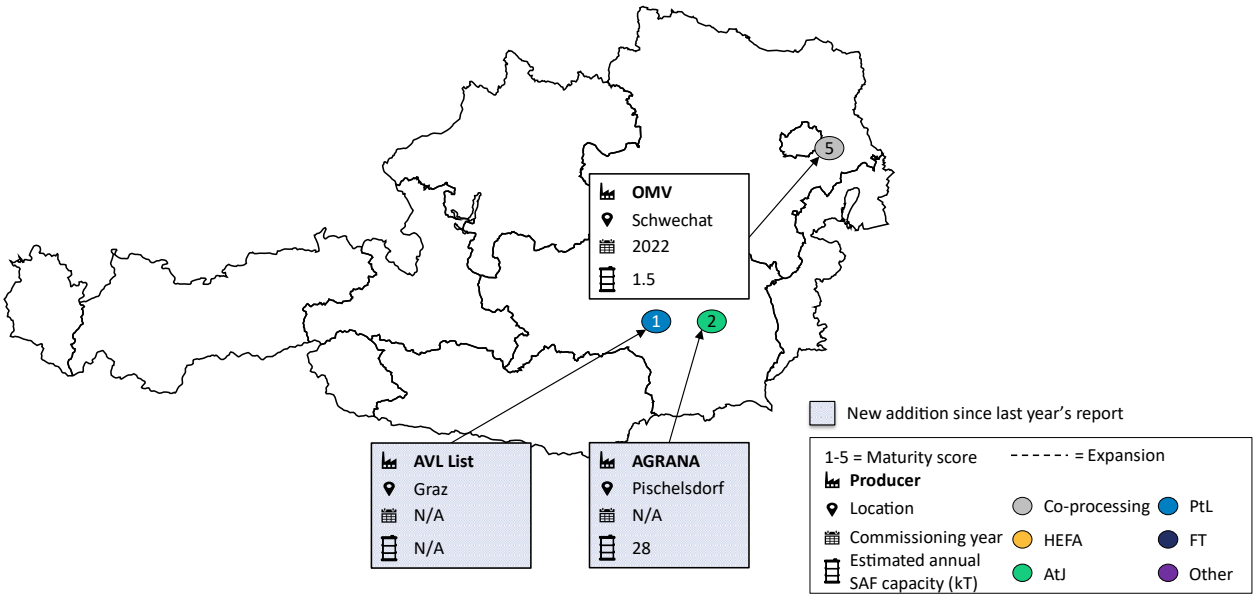


Figure 14 – Map of SAF production facilities in Austria.

[47] OMV and Airbus collaboration.
[48] OMV and Airbus collaboration.
[49] Austria SAF roadmap.
[50] Note: Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[51] Austria SAF roadmap.
[52] Austria SAF roadmap.

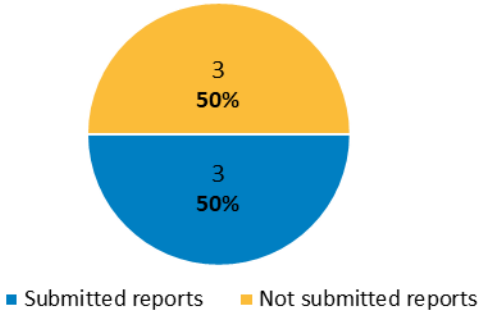
Belgium

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



No SAF supplied to Union airports

Aviation fuel

717.9 kt

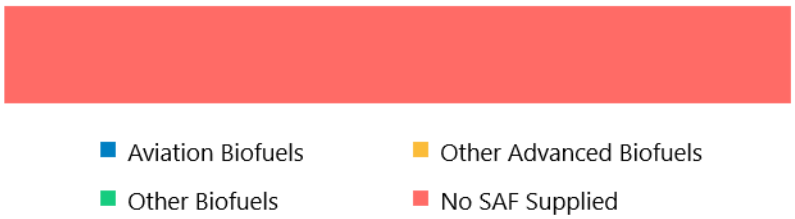
SAF

0.0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

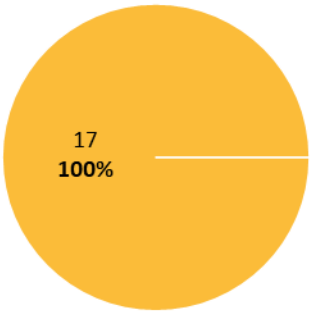
Belgium

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

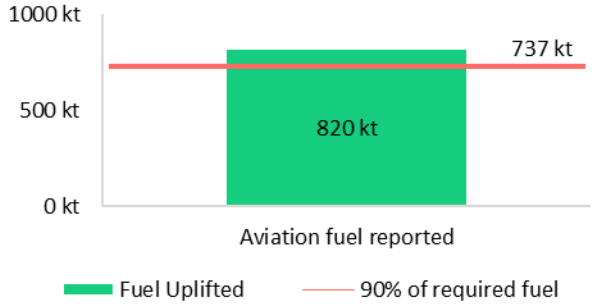
0 accepted reports from aircraft operators

Reporting status of aircraft operators



820 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

3 out of 3

Union airports

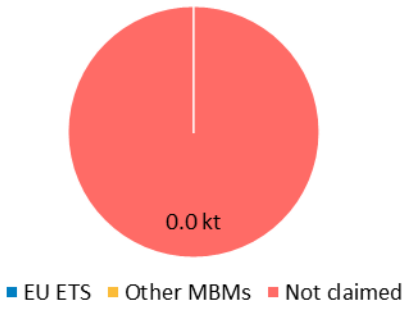
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Belgium

SAF Activity in Belgium

Although Belgium does not currently produce SAF domestically, it is among the Member States showing notable progress, with several production facilities announced since the publication of last year's *State of the EU SAF Market in 2023* report.[53]

Most recently, French oil and gas company TotalEnergies unveiled plans to reconfigure petrochemical operations at its refinery in Antwerp and add SAF production capacity via co-processing. The company aims to produce 50 kt of SAF annually and is expected to implement this capability in 2025.[54]

OMV has also announced plans for a SAF facility in Belgium.[55] Located in the Port of Antwerp, the Austrian oil and gas company intends to process 300 kt of organic waste per year into SAF and renewable diesel.

Additionally, a project by Terra Mater BV seeks to produce SAF in the North Sea Port near Ghent via the AtJ pathway, using feedstock supplied by the Brazilian group Petrom.[56] Key data such as the commissioning year and production amounts have not yet been disclosed.

Despite its lack of domestic SAF production, Belgium-based stakeholders are actively promoting SAF use by importing and supplying it to airports. Evos Ghent has been delivering SAF to Brussels Airport and recently received fuel from EcoCeres.[57] Brussels Airport incentivizes airlines to use SAF, helping to bridge the cost gap with conventional jet fuel.[58]

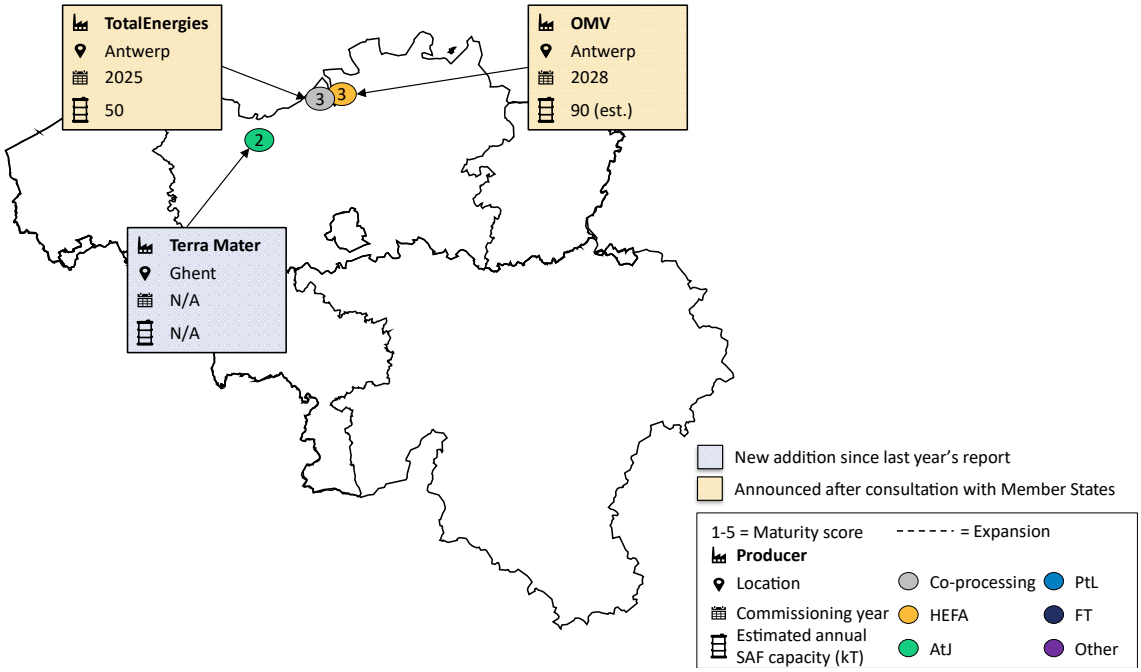


Figure 15 – Map of SAF production facilities in Belgium.

[53] *State of the EU SAF Market in 2023.*
[54] Recent announcement (April 2025) for a SAF production facility in Antwerp by TotalEnergies. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[55] Recent announcement (January 2025) for a SAF production facility in Antwerp port area by OMV. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[56] Terra Mater AtJ SAF plans.
[57] EcoCeres delivers SAF to Belgium.
[58] Brussels Airport SAF incentives.

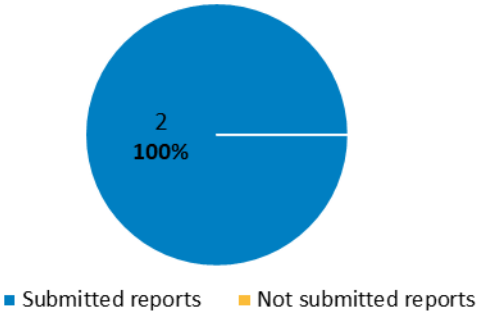
Bulgaria

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



0.04 kt of SAF supplied to Union airports

Aviation fuel

10.4 kt

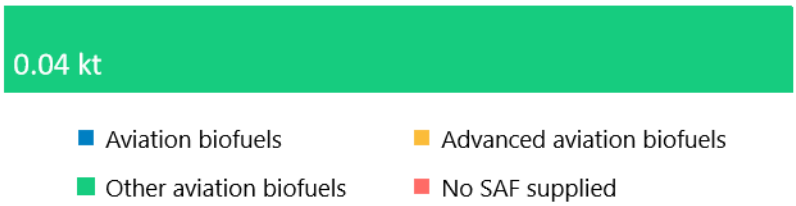
SAF

0.04 kt

0.38% of supplied fuel

100% of SAF supplied were "other aviation biofuels"

Category of RFEUA eligible aviation fuel



0.2 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

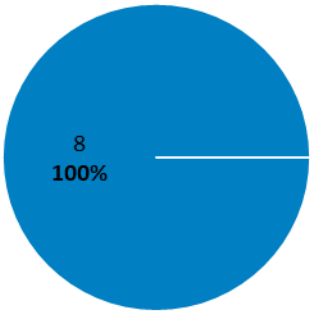
Bulgaria

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

8 accepted reports from aircraft operators

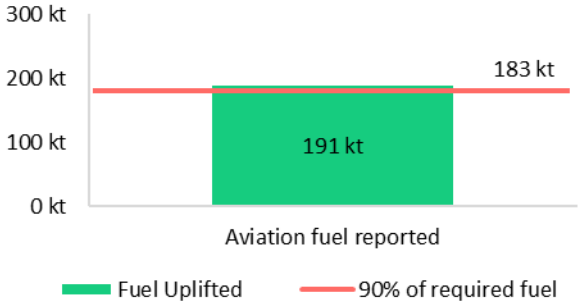
Reporting status of aircraft operators



Accepted reports Not submitted / not accepted reports

191 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

3 out of 3

Union airports

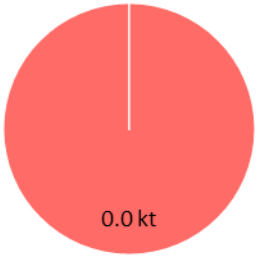
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



EU ETS Other MBMs Not claimed

No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Bulgaria

SAF Activity in Bulgaria

Bulgaria currently has no domestic SAF production capacity. The only publicly known plan related to SAF production in the country came from oil and gas company Lukoil in 2024.[59] However, this was merely a statement of intent to introduce SAF production at its refinery in Bulgaria, with no further details disclosed – leaving significant uncertainty about whether the plans will be pursued.

Despite the lack of domestic production, SAF has been delivered to Sofia Airport and supplied to airlines since the beginning of 2025. In early February, the airport announced that approximately 75% of all departing flights in the previous month had been loaded with a blend of Jet A1 and SAF.[60]

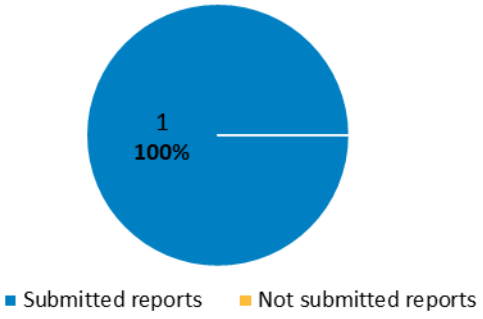
[59] Lukoil plans for SAF in Bulgaria.
[60] SAF delivery to Sofia Airport.

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1 aviation fuel supplier submitted a report

Reporting status of aviation fuel suppliers



0.01 kt of SAF supplied to Union airports

Aviation fuel

220.7 kt

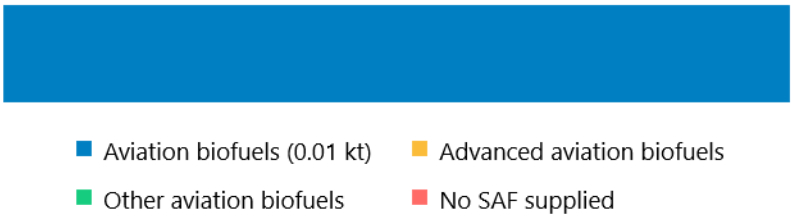
SAF

0.01 kt

0.003% of supplied fuel

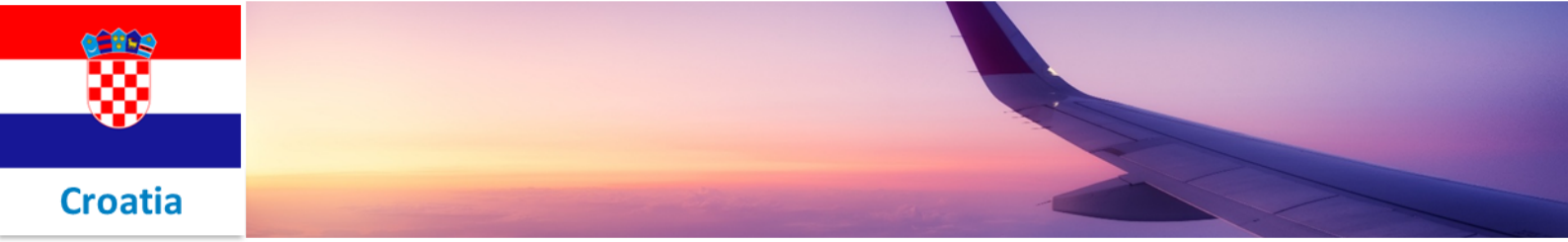
100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



0.02 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

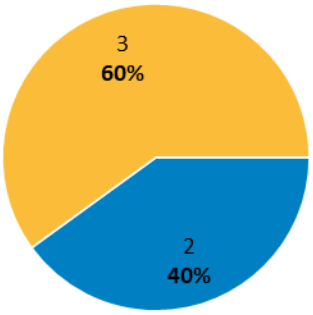


At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

2 accepted reports from aircraft operators

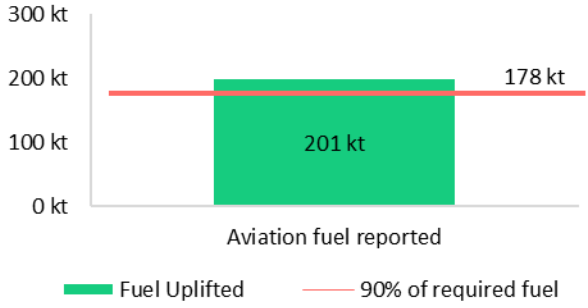
Reporting status of aircraft operators



Accepted reports — Not submitted / not accepted reports

201 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

4 out of 4

Union airports

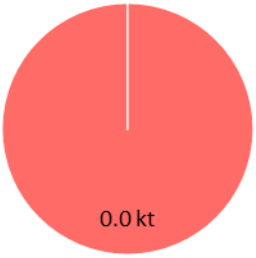
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



EU ETS — Other MBMs — Not claimed

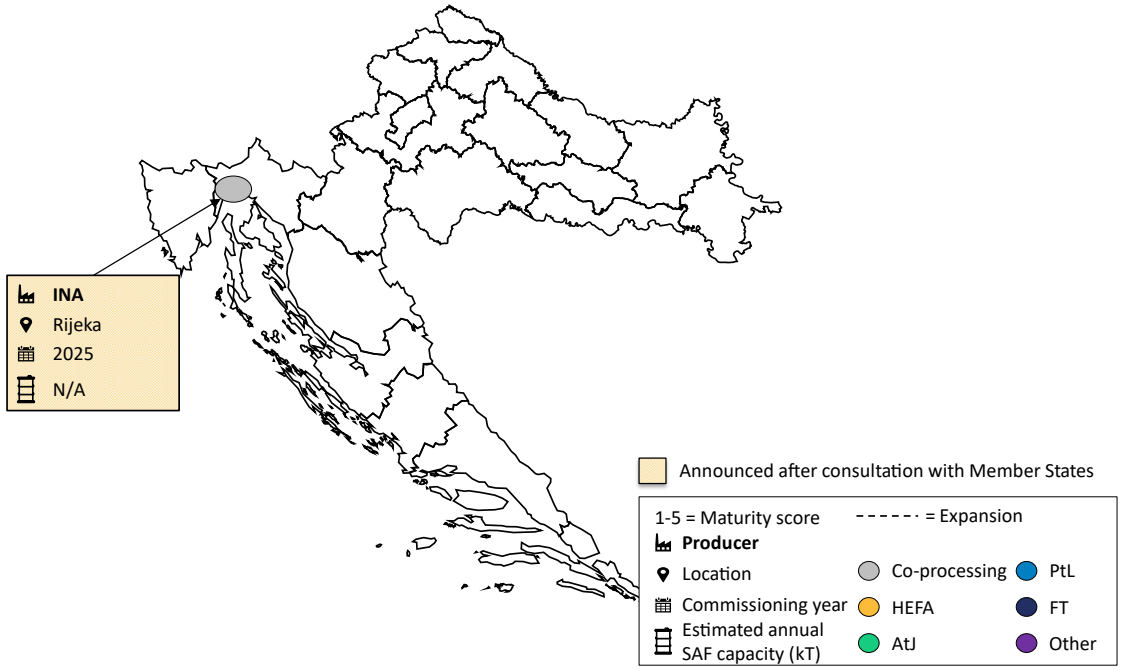
No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Crotia

Production of SAF in Croatia has recently (July 2025) been demonstrated by the oil and gas company INA.[61] The SAF was produced through co-processing at the Rijeka refinery. No other public announcements have been made regarding future projects related to SAF production in the country.

In 2024, Croatia Airlines used SAF for the first time on both domestic and international routes[62], with the fuel supplied by INA through its network of suppliers.



Note: no maturity score assigned as production has only been tested

Figure 16 – Map of SAF production facilities in Croatia.

[61] INA SAF co-processing. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.

[62] Croatia Airlines SAF trials.

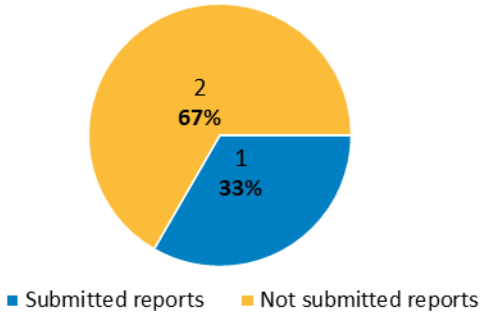
Cyprus

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1 aviation fuel supplier submitted a report

Reporting status of aviation fuel suppliers



0.0 kt of SAF supplied to Union airports

Aviation fuel

121.5 kt

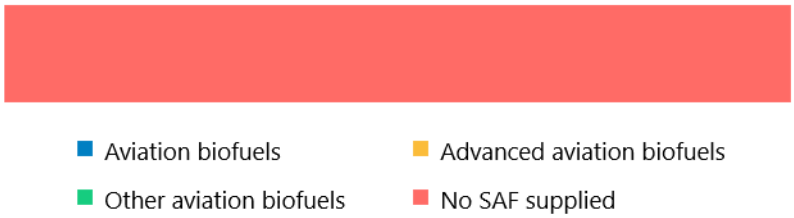
SAF

0.0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

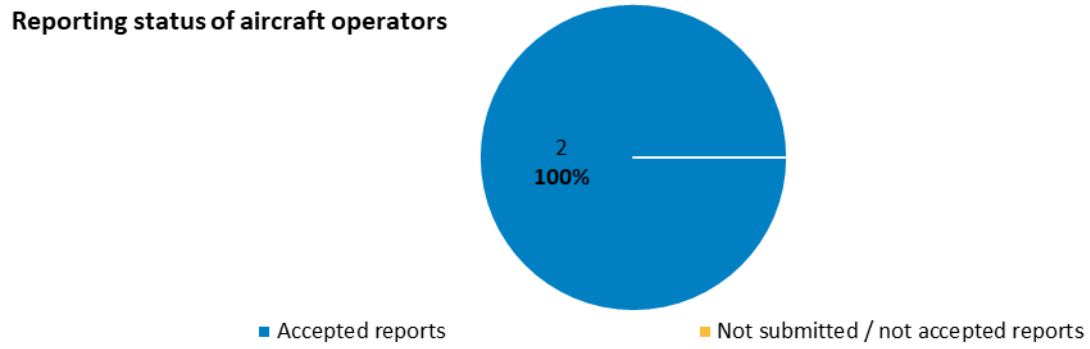
Cyprus

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

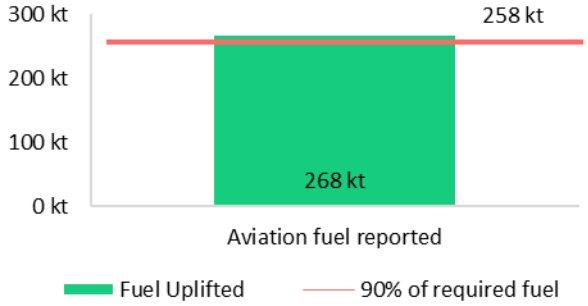
2 accepted reports from aircraft operators

Reporting status of aircraft operators



268 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 50% of Union airports the uplift was above the 90% threshold

50%

1 out of 2

Union airports

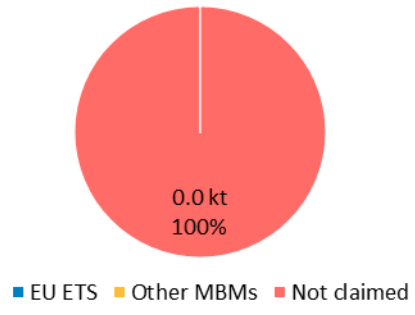
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Cyprus

SAF Activity in Cyprus

Cyprus currently does not have any domestic SAF production capacity, and no public announcements have been made regarding future projects related to SAF production in the country.

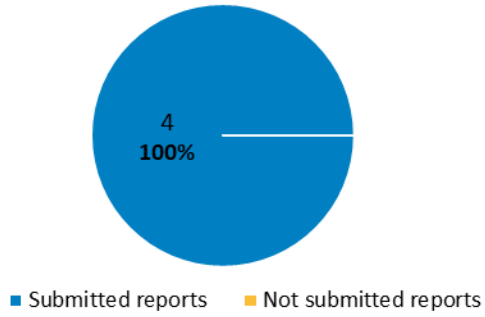
Czechia

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

4 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



No SAF supplied to Union airports

Aviation fuel

358.3 kt

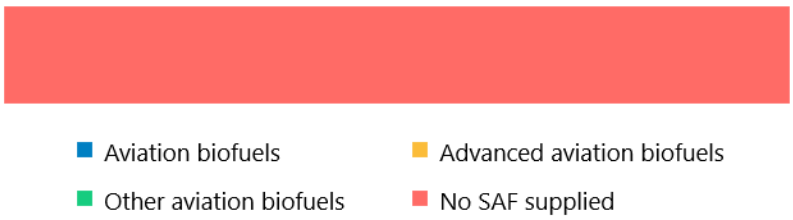
SAF

0.0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

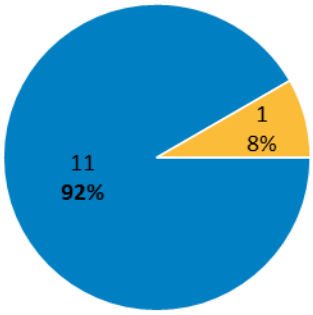
Czechia

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

11 accepted reports from aircraft operators

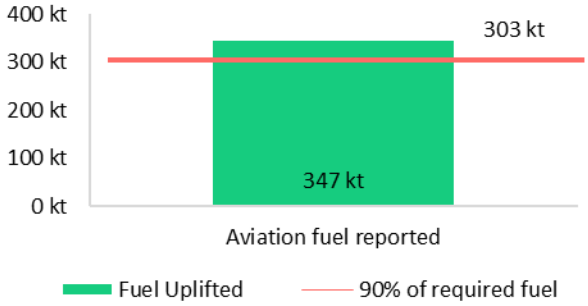
Reporting status of aircraft operators



Accepted reports Not submitted / not accepted reports

347 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

1 out of 1

Union airports

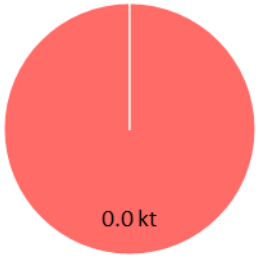
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



EU ETS Other MBMs Not claimed

No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Czechia

SAF Activity in Czechia

Czech Republic currently does not have any domestic SAF production capacity, and no public announcements have been made regarding future projects related to SAF production in the country.

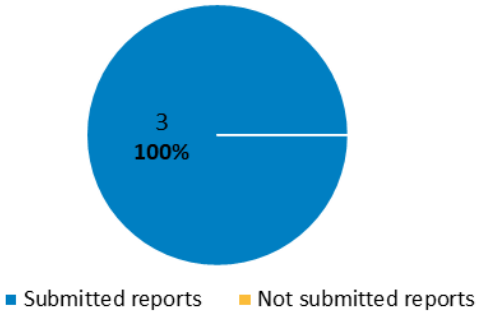
Denmark

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports

Reporting status of aviation fuel suppliers



0.6 kt of SAF supplied to Union airports

Aviation fuel

587.6 kt

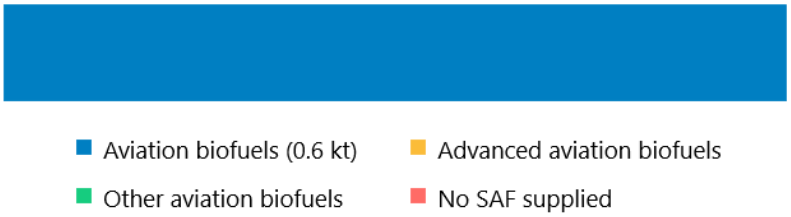
SAF

0.6 kt

0.10% of supplied fuel

100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



2 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

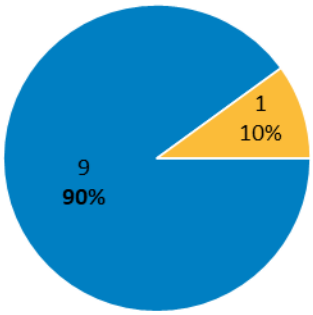
Denmark

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

7 accepted reports from aircraft operators

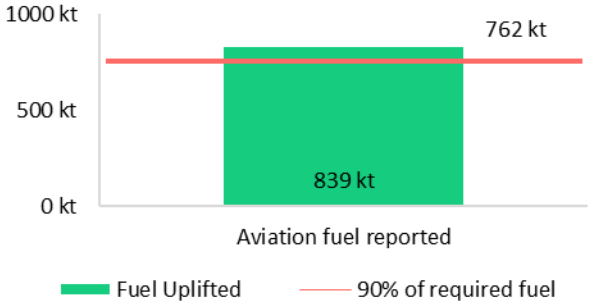
Reporting status of aircraft operators



Accepted reports — Not submitted / not accepted reports

839 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 33% of Union airports the uplift was above the 90% threshold

33%

1 out of 3

Union airports

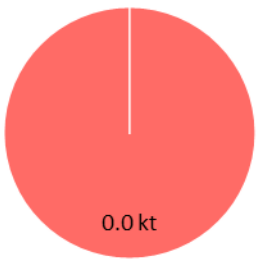
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



EU ETS — Other MBMs — Not claimed

No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Denmark

Planned SAF production in Denmark consists exclusively of synthetic fuels projects, with four active initiatives aiming to commercialise SAF output in the country.

The most advanced, Project Endor, is led by Arcadia eFuels and targets an annual production amount of approximately 70 kt of synthetic aviation fuels. The Vordingborg-based initiative completed its FEED stage in 2024 and aims to be commissioned in 2028.[63] Copenhagen Infrastructure Partners (CIP) is leading the development of Project Fjord PtX, which is also aiming for commissioning in 2029. The facility will be located in Aalborg, with an expected annual SAF production amount of 75 kt.[64] The other two projects utilise a production technology not yet ASTM certified, making use of methanol as an intermediate before conversion into SAF. As a result, their commercialisation risk remains higher. MeSAF (a consortium comprising European Energy, Kosan Gas and Vertimass) announced its pilot plant in Aalborg would be commissioned in 2024; however, no public information has confirmed its realisation.[65] A scale-up phase for this project has also been announced.

The final project is led by Swiss developer Metafuels in collaboration with European Energy, aiming to build a methanol-to-jet plant in Padborg with an annual SAF output of 30 kt. No timeline has been released for its commissioning.[66] Since the publication of the *State of the EU SAF Market in 2023* report, one project – Green Fuels for Denmark – has been cancelled. One of the leading consortium members, Ørsted, withdrew from the project.[67]

Denmark's government continues to support aviation decarbonisation and launched a tender for a green domestic route using high SAF blends as part of the 2023 Green Aviation Agreement.[68]

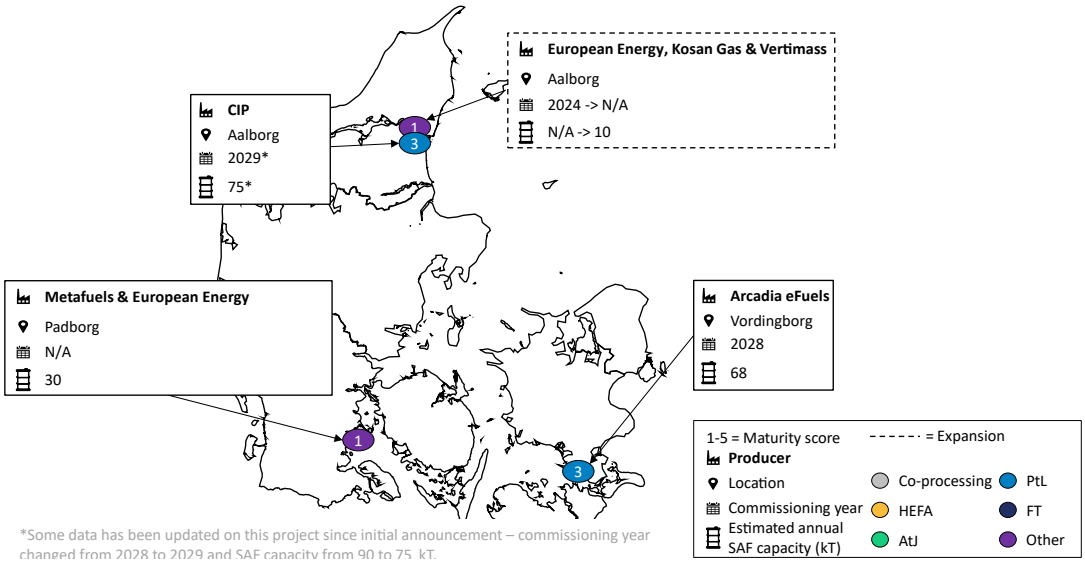


Figure 17 – Map of SAF production facilities in Denmark.

[63] Project Endor.
[64] https://www.fjord-ptx.com/. Initially, the published SAF quantity was 90 kt and the commissioning year was 2028 (https://www.safinvestor.com/news/146427/danish-aviation/). Since the production capacity scenarios were developed, the project's official website reports 75 kt and commissioning in 2029 instead.
[65] MeSAF project.
[66] Metafuels Denmark project.
[67] Ørsted drops from Green Fuels for Denmark project.
[68] Government tender for a green domestic route.

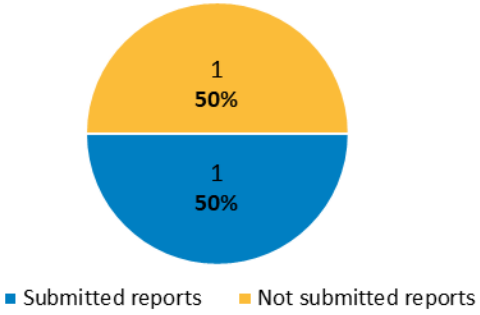
Estonia

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1 aviation fuel supplier submitted a report

Reporting status of aviation fuel suppliers



No SAF supplied to Union airports

Aviation fuel

31.1 kt

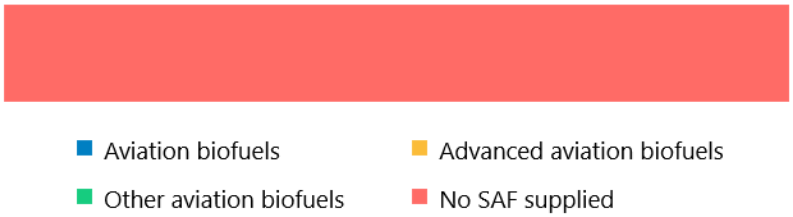
SAF

0.0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

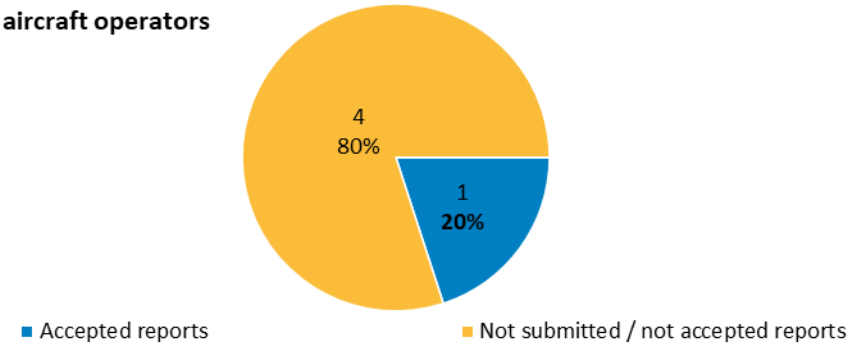
Estonia

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

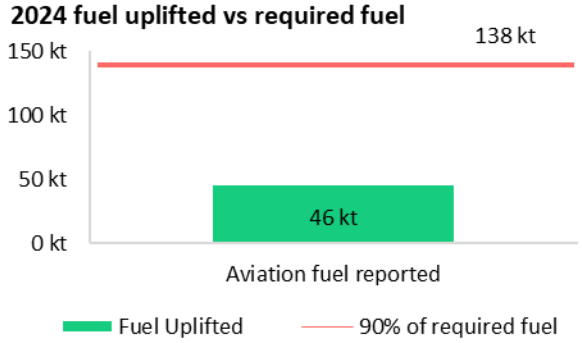
1 accepted report from aircraft operators

Reporting status of aircraft operators



46 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

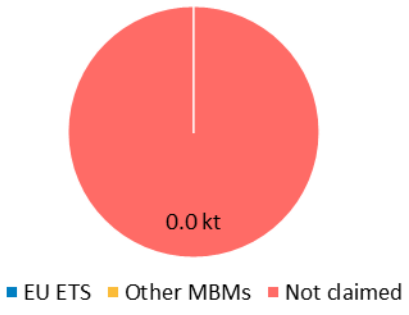
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Estonia

The only announcement regarding SAF production in Estonia is a project led by Protio. The U.S.-based company signed a Memorandum of Understanding (MoU) with the Port of Tallinn in 2024 to explore e-fuel production, including SAF, in industrial parks at Muuga Harbour.[69] The project is still in a very early phase, with no announced target production capacity or commissioning date, and is therefore not included in the capacity assessment for this report.

In parallel, a joint project between the governments of Latvia and Estonia is underway to assess the potential for SAF production in both Member States and to develop policy recommendations.[70] The project, for which 200 million EUR was allocated to both countries by the European Commission, is expected to run until November 2025.

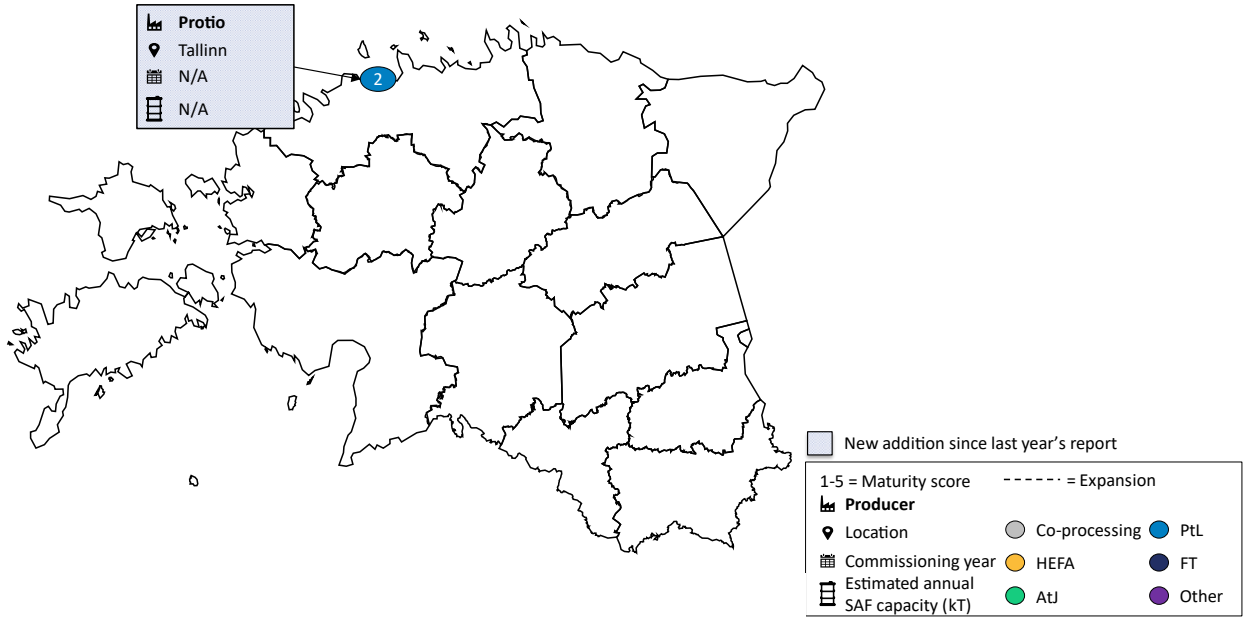


Figure 18 – Map of SAF production facilities in Estonia.

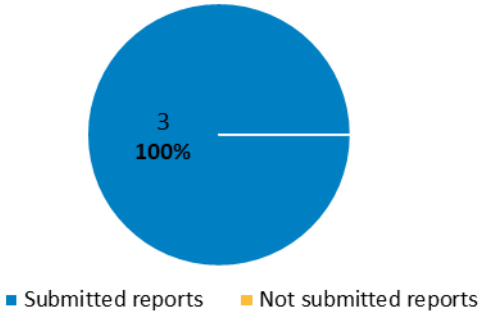
[69] Protio SAF plan.
[70] SAF feasibility study.

Finland

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports



0.3 kt of SAF supplied to Union airports

Aviation fuel

400.8 kt

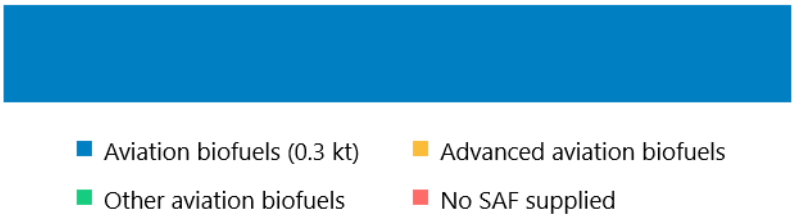
SAF

0.3 kt

0.06% of supplied fuel

100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



1 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

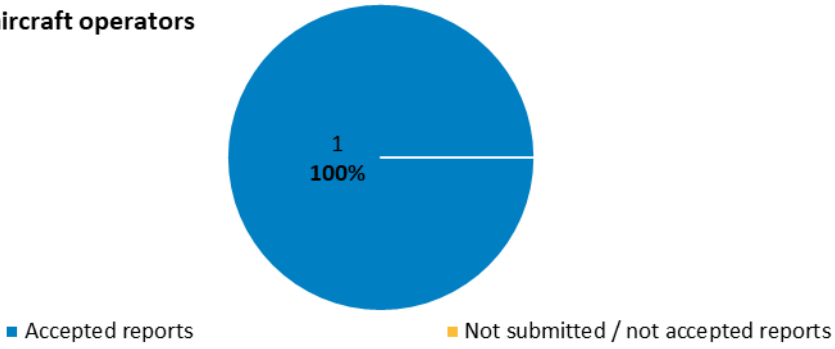
Finland

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

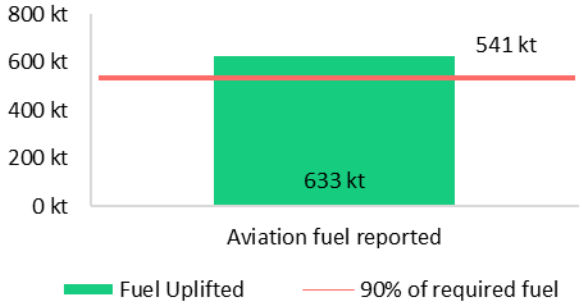
1 accepted report from an aircraft operator

Reporting status of aircraft operators



633 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

1 out of 1

Union airports

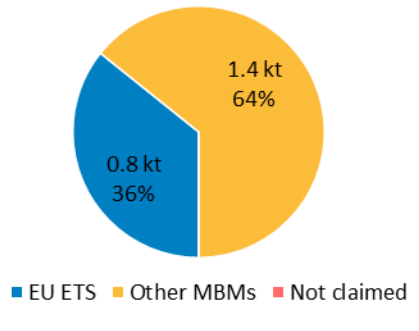
2.2 kt of SAF purchased by aircraft operators

SAF

2.2 kt

36% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% SAF reported was biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	2.2 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Finland

SAF production in Finland is currently limited to amounts from Neste, the world's largest SAF producer. Although its Porvoo site has a lower capacity than its biorefineries in Singapore and Rotterdam, it can supply up to 100 kt of SAF annually.[71] Neste plans to ramp up production to 1.5 Mt of SAF by the mid-2030s, although such long-term plans are subject to uncertainties.[72]

Beyond Neste, the SAF production market in Finland is expanding with new developments. AM Green Group, which acquired Chempolis Oy and Fortrum 3 B.V. in 2024, intends to use AtJ technology to process lignocellulosic biomass into SAF. The group targets a capacity of 500 kt of SAF by 2027, although it remains unclear whether the entire amount will be produced in Finland.[7374]

Two synthetic fuel projects are also under development in Finland. Norwegian fuel producer Norsk e-Fuel plans to produce up to 80 kt of fuels annually (estimated 44 kt of SAF) at its facility in Rauma.[75] This marks Norsk's first project outside Norway. Verso Energy has announced plans for synthetic aviation fuels production at the Port of Oulu, with a target capacity of 80 kt.[76]

Finland's SAF profile is further underscored by Finnair, which reported that SAF accounted for 0.2% of its jet fuel consumption in 2023. Finnair aims to double its voluntary SAF purchases in 2025 compared to 2024[77], supported by a recent agreement with Japan's Cosmo Oil Marketing to begin SAF supply in 2025.[78]

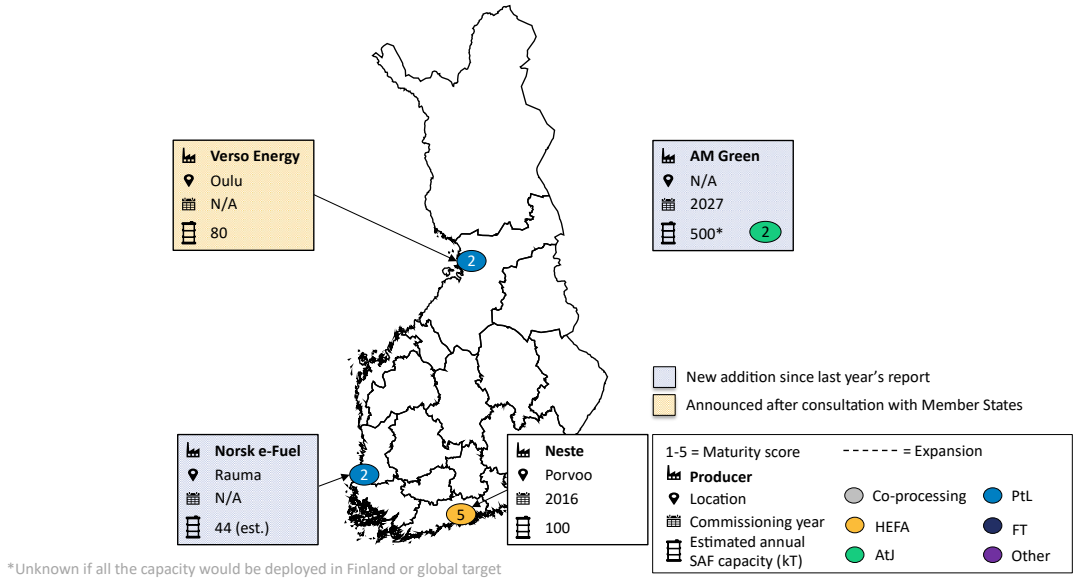


Figure 19 – Map of SAF production facilities in Finland.

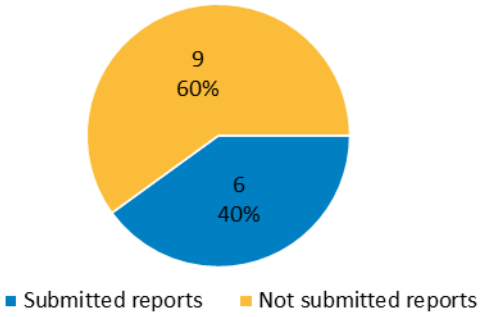
[71] Neste Porvoo, Finland.
[72] Neste Porvoo expansion plans.
[73] Acquirement of Chempolis.
[74] AM Green.
[75] Norsk e-fuel Rauma project.
[76] Recent announcement (February 2025) for a SAF production facility in Oulu by Verso Energy. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[77] Finnair SAF usage.
[78] Finnair-Cosmo Oil SAF offtake agreement.

France

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

6 aviation fuel suppliers submitted reports



59 kt of SAF supplied to Union airports

Aviation fuel

5.1 Mt

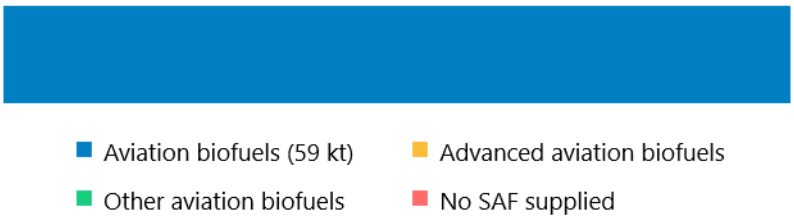
SAF

59 kt

1.16% of supplied fuel

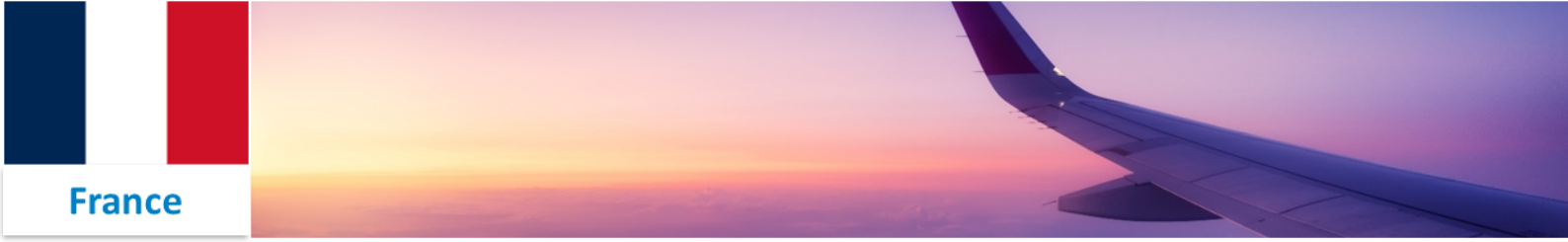
100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



217 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings



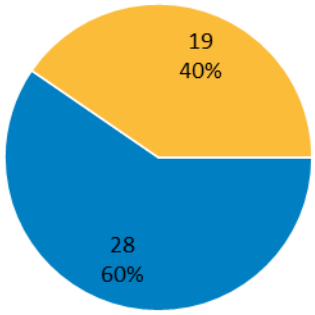
France

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

28 accepted reports from aircraft operators

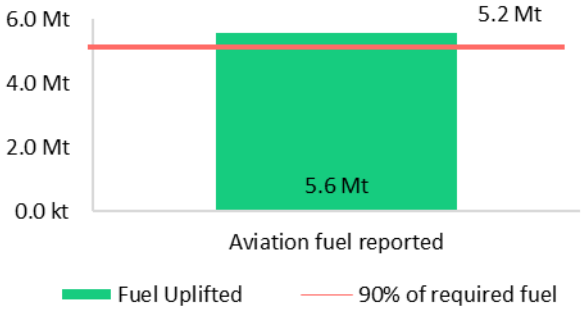
Reporting status of aircraft operators



Accepted reports Not submitted / not accepted reports

5.6 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 29% of Union airports the uplift was above the 90% threshold

29%

5 out of 17

Union airports

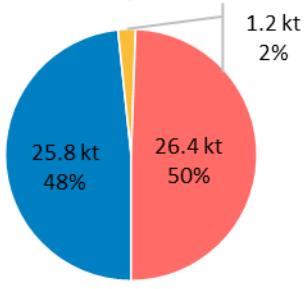
53.6 kt of SAF purchased by aircraft operators

SAF

53.6 kt

48% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



EU ETS Other MBMs Not claimed

98.6% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	52.9 kt	98.6%
Other aviation biofuels	-	-
Advanced aviation biofuels	0.6 kt	1.1%
Not categorised	0.2 kt	0.3%

SAF Activity in France

SAF production in France continues to progress, with three operational facilities currently active. TotalEnergies began producing SAF at its HEFA facility in La Mède in 2021 and through co-processing at its Normandy site in 2022.[79] The French energy major plans to expand the SAF capacity of both facilities and is developing an additional HEFA plant in Grandpuits.[80] Once all phases of the Grandpuits project are completed, its SAF capacity is expected to reach 285 kt per annum. However, limited information is available regarding La Mède's production capacity. All these developments are projected to come online between 2025 and 2027. ExxonMobil also demonstrated SAF production capabilities in France via co-processing at its Gravenchon refinery in 2023, with plans to expand output in 2025.[81]

In addition to conventional SAF production, projects using AtJ and FT technologies are under development in France, with two announced for each pathway. The largest of the four by expected annual capacity is Elyse Energy's BioTJet project in Lacq, which aims to produce 75 kt of SAF per year, beginning operations in 2030 using forestry and agricultural residues as feedstock.[82] The other FT-based initiative is a demonstration plant in Épinal, developed by EQTEC and CompactGTL. The two AtJ projects are led by Global Bioenergies with its 25 kt facility and by a collaboration between Haffner Energy and LanzaJet for a 30 kt plant—though public information on both remains limited.

Eleven synthetic aviation fuels projects have been announced in France, four of which are updates to – i.e. had not been included in – last year's *State of the EU SAF Market in 2023* report. Among these are Verso Energy's Ep'HyNE and LiCHEN projects, which aim to use the MtJ pathway to produce SAF starting in 2029.[8384] Verso Energy is also developing two additional MtJ SAF projects: ReSTart in Tartas and DEZiR in Rouen, both targeting annual outputs of 81 kt. Hy2GEn and H2V are collaborating on an MtJ project in Fos-sur-Mer, aiming to produce 50 kt of SAF per year, with commissioning targeted for 2030.[85]

Qair and Engie each plan to produce 70 kt of synthetic aviation fuels using PtL technology.[86] Qair's HyLann project in Lannemezan is set to begin production in 2030, while Engie's France KerEAUzen project in Le Havre is expected to be commissioned in 2031. Another notable project is Hynamic's Take Kair in Donges, which targets an annual output of 37.5 kt of SAF starting from 2030.[87]

Since the publication of last year's *State of the EU SAF Market in 2023* report, one synthetic jet fuel project in France has been cancelled. Located in Dunkirk, the Reuze project – led by Engie in collaboration with Infinium – had targeted 100 kt of synthetic fuel per year and aimed for commissioning in 2026. However, further development of the project has been discontinued.[88]

The French Government has actively promoted SAF within the Member State. For example, it set a 1% SAF target for jet fuel sales starting in 2022 and committed 200 million EUR in 2023 to support SAF production.[89] This commitment was recently underscored by 100 million EUR in funding allocated to four specific projects:

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[79] TotalEnergies La Mède, TotalEnergies Normandy co-processing.
[80] Grandpuits HEFA unit.
[81] ExxonMobil co-processing SAF.
[82] Elyse BioTjet.
[83] Verso Ep'HyNE.
[84] Verso LiCHEN.
[85] Hy2Gen and H2V collaboration.
[86] Project HyLann & Project KerEAUzen.
[87] Project Take Kair.
[88] Source: EU Member State feedback.
[89] 2022 SAF target, & Government announcement for SAF funding.

France KerEAUzen (Engie), TAKE KAIR (Hynamics), DEZiR (Verso Energy), and BioTJet (Elyse Energy). The funding is intended to support these initiatives through the FEED phase, which is essential for demonstrating project viability.[90]

Air France–KLM has also played a notable role in SAF uptake, having accounted for 17% and 16% of global SAF consumption in 2022 and 2023, respectively.[91] The airline group has entered into an agreement with TotalEnergies to receive 1.5 Mt of SAF between 2025 and 2035.

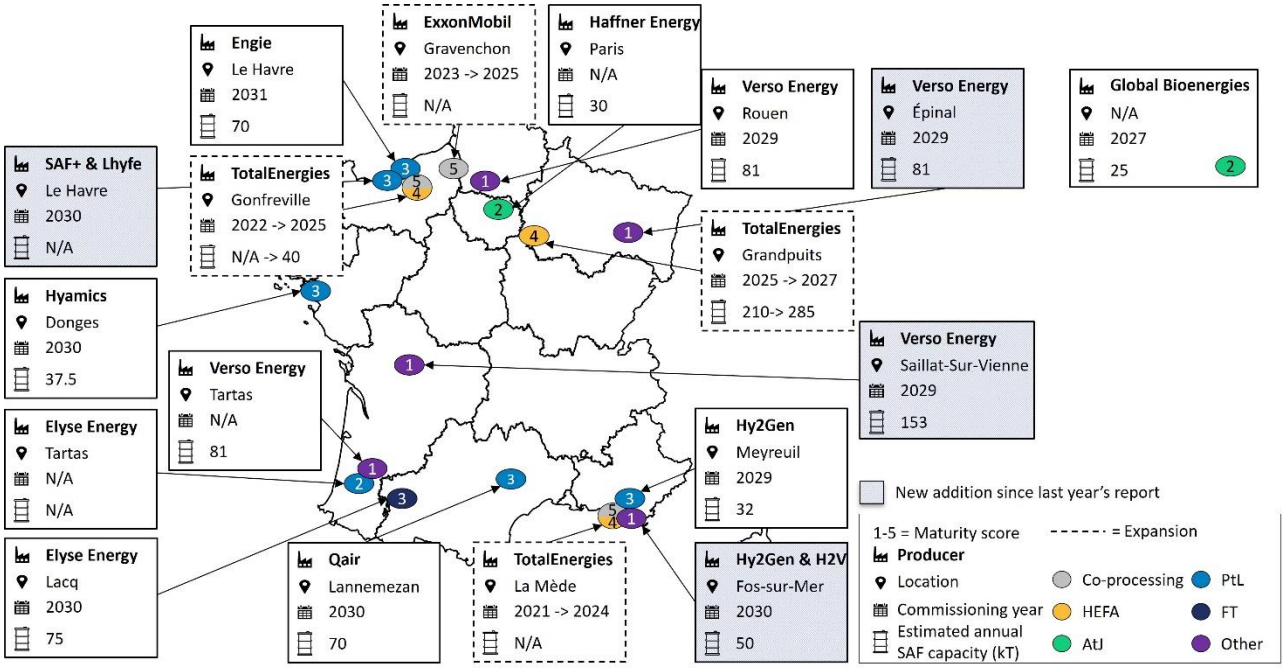


Figure 20 – Map of SAF production facilities in France.

[90] Government funding.

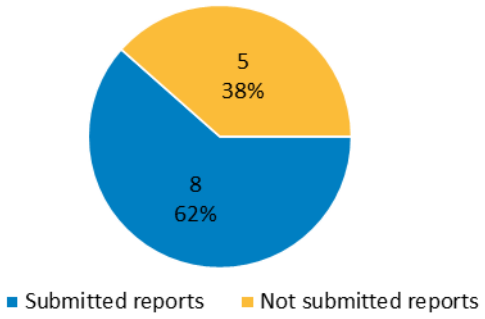
[91] Air France-KLM - TotalEnergies SAF offtake agreement.

Germany

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

8 aviation fuel suppliers submitted reports



17.3 kt of SAF supplied to Union airports

Aviation fuel

7.9 Mt

SAF

17.3 kt

0.22% of supplied fuel

94% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel

65 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

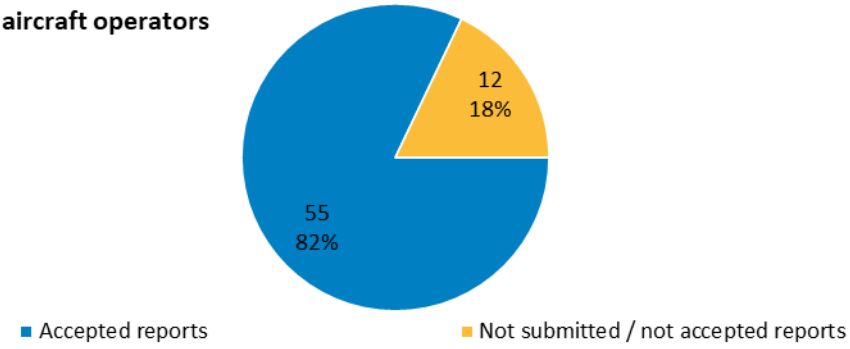
Germany

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

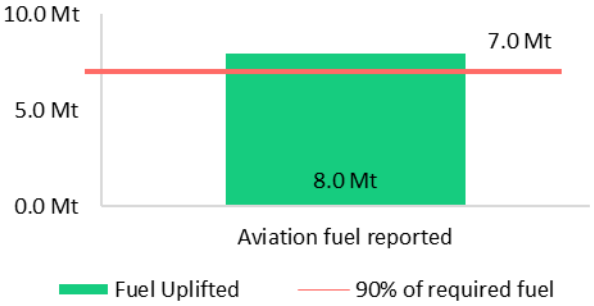
55 accepted reports from aircraft operators

Reporting status of aircraft operators



8 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 72% of Union airports the uplift was above the 90% threshold

72%

13 out of 18

Union airports

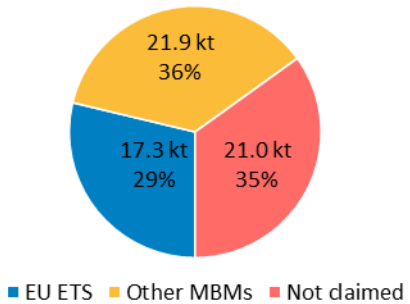
60.3 kt of SAF purchased by aircraft operators

SAF

60.3 kt

29% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



99.1% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	59.7 kt	99.1%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	0.5 kt	0.9%

Germany

SAF Activity in Germany

Among Member States, Germany has the highest number of announced SAF projects. The majority of these facilities are synthetic, although several are pilot or demonstration plants. The only facility currently producing SAF at a commercial scale in Germany is BP's Lingen refinery, which has produced SAF through co-processing since 2022.[92] The oil and gas major also plans to expand SAF production via co-processing at its Gelsenkirchen refinery.[93]

Apart from BP's platforms, all other projects in Germany aim to use more advanced pathways, making use of a more diversified feedstock base. A new announcement since last year's *State of the EU SAF Market in 2023* report is Flugplatz Straubing-Wallmühle GmbH's Bavaria Biofuels facility. Based in Straubing, the project intends to produce 10 kt of SAF per year from biogenic CO_2 via the FT pathway, starting in 2028. Using the AtJ pathway – converting forest residue-derived ethanol into jet fuel – HCS Group is developing a facility in Speyer, targeting commissioning in 2026, with an expected output of 50 kt of SAF per year.

Germany is a hub for synthetic aviation fuel projects, with over 15 currently in development. However, most are pilot or demonstration facilities focused on proving technical feasibility rather than delivering commercial-scale production amounts. Synthetic aviation fuels has been produced at Atmosfair's pilot facility in Werlte, with initial trials conducted in 2021.[94]

The largest announced synthetic aviation fuels project in the country – by output – is Net-ZeroLEJ, a joint venture between Sasol, DHL Group, HH2E, and Airbus. Based in Schkeuditz, Net-ZeroLEJ plans to use Sasol's FT technology and HH2E's green hydrogen to produce 200 kt of SAF per year beginning in 2029.[95] Sasol is also part of the Concrete Chemicals GmbH joint venture, which includes Enertrag and Cemex. By capturing CO_2 from Cemex's Rüdersdorf cement plant, the partnership aims to produce 15 kt of synthetic aviation fuels annually from 2027 in the project's first phase, and expand to a capacity of 35 kt per year in a subsequent phase.[96] Another sizeable synthetic initiative is Hy2Gen's Jangada plant, which aims to use the MtJ process to produce 64 kt of SAF per year.[97] Located in Brandenburg, operations are scheduled to begin in 2028. Xfuels and SkyNRG have each announced projects with planned capacities of 50 kt per year using PtL technology, located in Böhlen and Mergelstetten, respectively.[9899]

Also added since last year's *State of the EU SAF Market in 2023* report is Caphenia's Germany 1.[100] The German tech company intends to produce 8 kt of SAF annually from 2025 at its Frankfurt site, with output expected to rise to 80 kt per year by 2030 following the project's second phase.

Most recently, Synhelion successfully demonstrated its sun-to-liquid technology in 2024 at its plant in Jülich – this is the first facility of its kind to utilize solar energy for fuel production.[101] Also worth noting is a recent announcement regarding the synthetic fuel project SAF Reallabor by Greenlyte Carbon Technologies and

[92] BP Lingen.
[93] BP Gelsenkirchen co-processing plans.
[94] Atmosfair.
[95] Project NetZeroLEJ.
[96] Project Concrete Chemicals.
[97] Project Jangada.
[98] Project HyKero.
[99] SkyNRG and SCHWENK Zement project.
[100] Caphenia Germany 1.
[101] Project DAWN.

Düsseldorf Airport. Notably, this project aims to use Direct Air Capture (DAC) to supply the required CO_2, with a targeted annual SAF output of 250 tons.[102]

Four synthetic aviation fuels projects have been removed since last year's *State of the EU SAF Market in 2023* report, representing a combined capacity of approximately 400 kt of SAF per year.[103] These projects include: Shell's Wesseling PtL plant; CAC's KEROSyN100 project; Oxxynova & Caphenia's $EnZaH_2$ project; and Sasol, DHL, HH2E, and Airbus' Net-ZeroLEJ second-stage expansion.

Beyond SAF production announcements, Germany has also been the site of other notable SAF initiatives. The Aviation Initiative for Renewable Energy in Germany e.V. (aireg), founded in 2011, promotes SAF development among its members – including producers, aircraft manufacturers, and airlines.[104] Aireg's working groups focus on feedstock sourcing, production pathways, certification challenges, and evaluation of economic and production potential.

In 2021, the German Federal Government released a PtL roadmap and established a project tracker.[105] Multiple government agencies fund SAF development both domestically and internationally. Some airports, such as Munich, offer free SAF storage for airlines.[106]

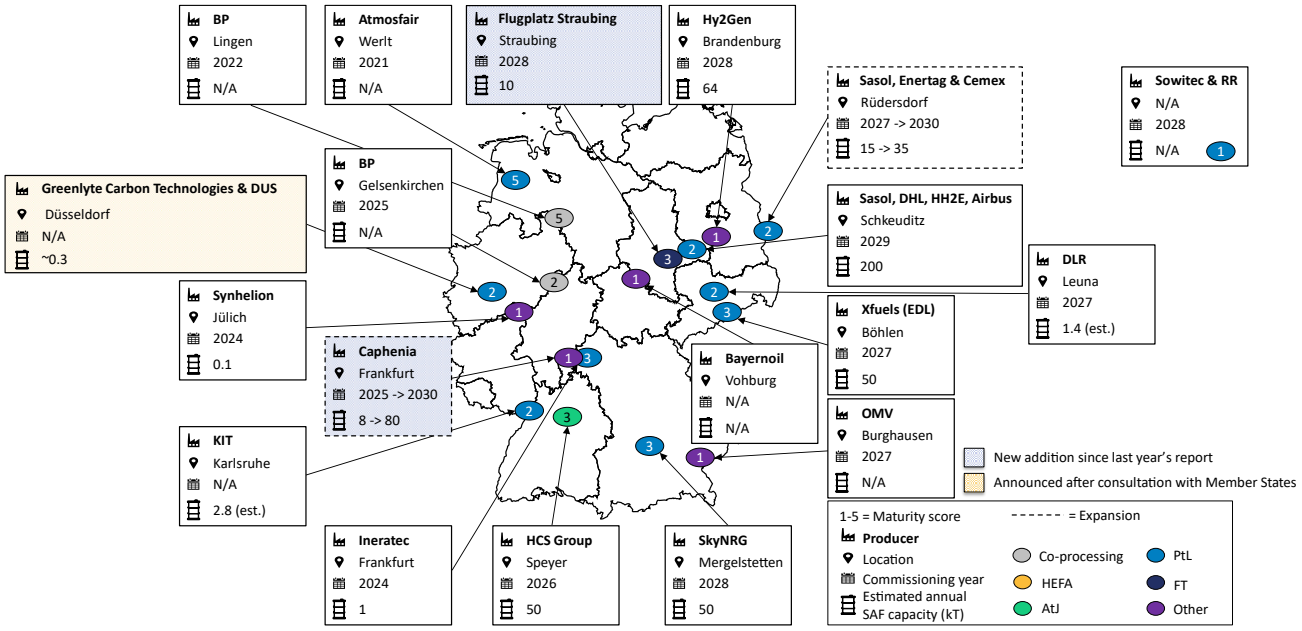


Figure 21 – Map of SAF production facilities in Germany.

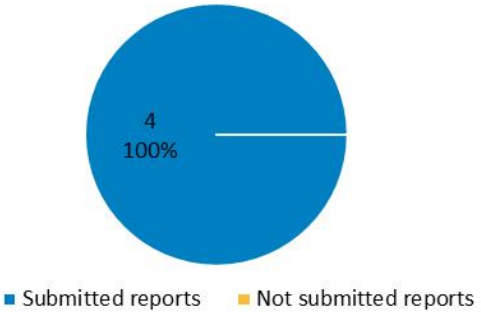
[102] Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[103] Source: EU Member State feedback.
[104] Aviation Initiative for Renewable Energy in Germany.
[105] Germany PtL roadmap.
[106] Munich airport SAF initiative.

Greece

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

4 aviation fuel suppliers submitted reports



0.8 kt of SAF supplied to Union airports

Aviation fuel

1.0 Mt

SAF

0.8 kt

0.07% of supplied fuel

100% of SAF supplied were "other aviation biofuels"

Category of RFEUA eligible aviation fuel

3 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

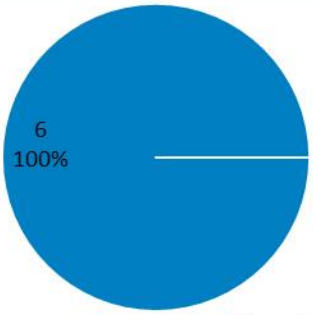
Greece

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

6 accepted reports from aircraft operators

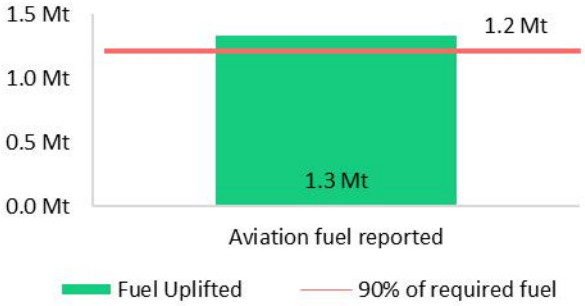
Reporting status of aircraft operators



Accepted reports — Not submitted / not accepted reports

1.3 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 55% of Union airports the uplift was above the 90% threshold

55%

6 out of 11

Union airports

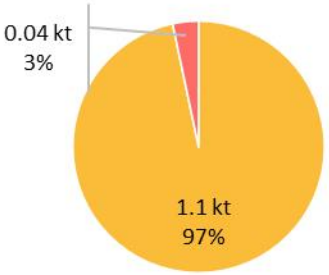
1.1 kt of SAF purchased by aircraft operators

SAF

1.1 kt

1.1 kt SAF was claimed under EU ETS

SAF claim by MBM scheme



Other MBMs — EU ETS — Not claimed

100% SAF categorised was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	1.1 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Greece

Public information regarding SAF production in Greece is limited. The only indication of a planned production facility relates to Dimensional Energy, which had proposed a synthetic fuel plant with a capacity of 44 kt per year. However, this data is outdated, and no further details have been made public – resulting in significant uncertainty surrounding the project.[107]

Greek oil major HELLENiQ Energy has collaborated with Finnish SAF producer Neste to supply SAF to Greece since 2022.[108] The agreement was expanded in 2024 to include bulk deliveries of SAF to HELLENiQ Energy's Thessaloniki facility. Additionally, Greece's Ministry for the Environment and Energy is expected to unveil a plan for domestic SAF production.[109]

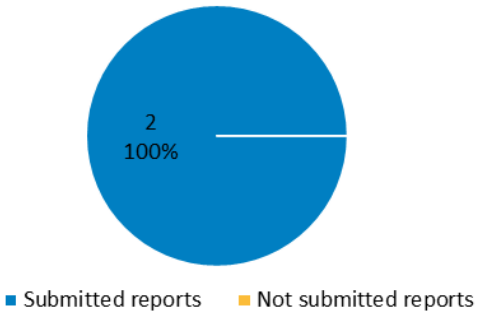
[107] Dimensional Energy Greece SAF plant & Project SkyPower insight report – Accelerating the take-off for e-SAF in Europe.
[108] Neste and HELLENiQ ENERGY collaboration.
[109] Domestic SAF production plans.

Hungary

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2 aviation fuel suppliers submitted reports



0.5 kt of SAF supplied to Union airports

Aviation fuel

358 Kt

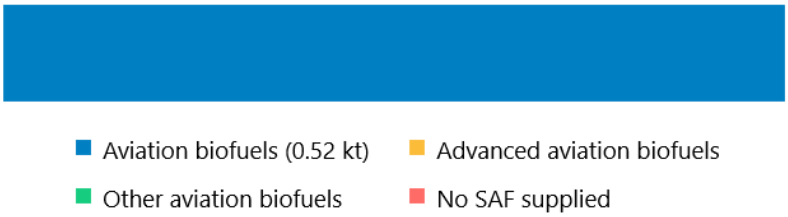
SAF

0.5 kt

0.15% of supplied fuel

100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



2 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

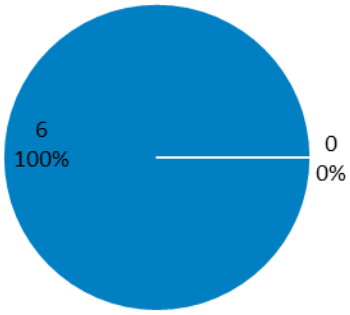
Hungary

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

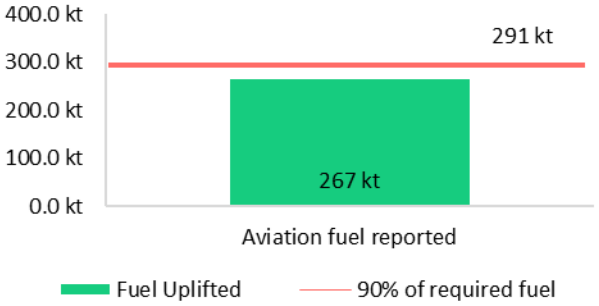
6 accepted reports from aircraft operators

Reporting status of aircraft operators



267 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

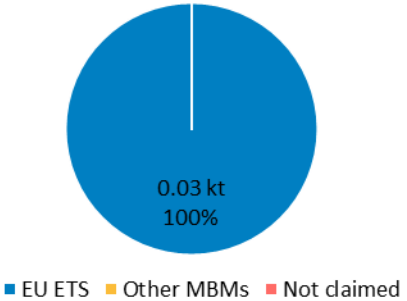
0.03 kt of SAF purchased by aircraft operators

SAF

0.03 kt

100% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	0.03 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Hungary

SAF Activity in Hungary

Hungary currently has no domestic SAF production capacity, and no public announcements have been made regarding future SAF-related projects in the country.

Despite the absence of production, there has been some activity. Budapest Airport has been testing the commercial viability of SAF supply in collaboration with MOL, Wizz Air, and AFS Ltd.[110] In 2025, the airport met the audit criteria for SAF use and is expected to begin supply.

Hungary-based Wizz Air has also taken steps toward SAF adoption. The airline has set a target of 10% SAF usage by 2030 and invested 5 million GBP in equity into UK-based SAF producer Firefly.[111]

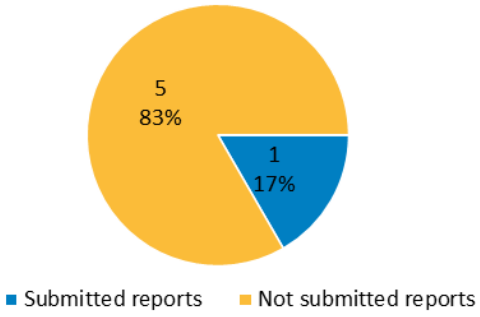
[110] Budapest Airport SAF.
[111] WizzAir SAF target.

Ireland

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1 aviation fuel supplier submitted a report

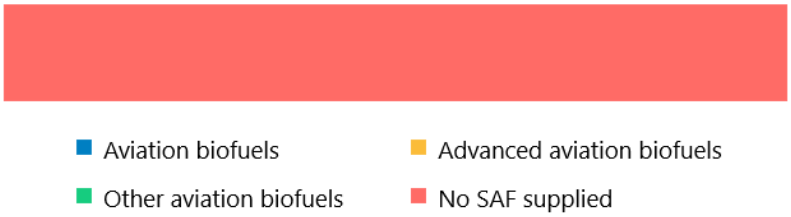


No SAF supplied to Union airports

Aviation fuel	SAF
333.6 kt	0.0 kt
	0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

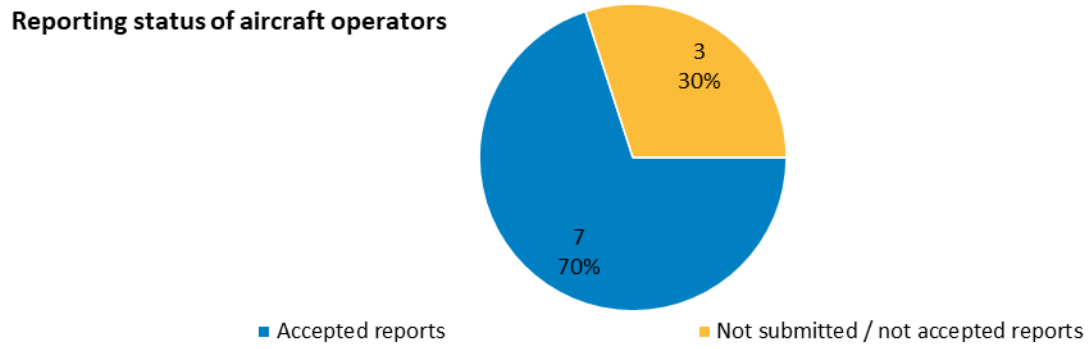
Ireland

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

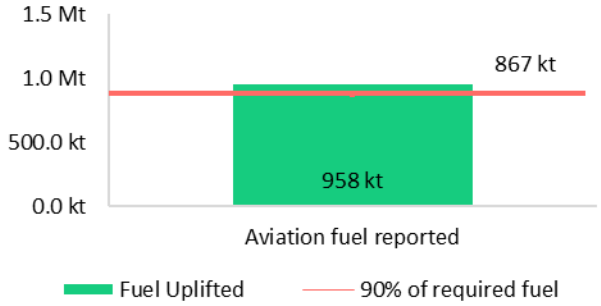
7 accepted reports from aircraft operators

Reporting status of aircraft operators



958 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

3 out of 3

Union airports

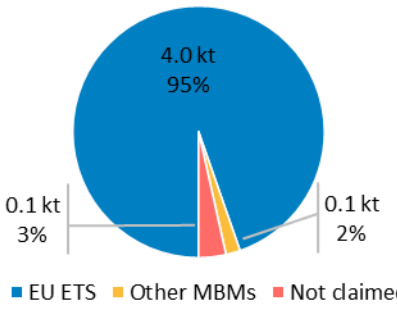
4.2 kt of SAF purchased by aircraft operators

SAF

4.2 kt

95% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	4.23 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Ireland

Ireland does not currently produce SAF domestically; however, efforts to establish a national SAF industry are progressing. In 2023, for instance, SkyNRG and SFS Ireland published a feasibility study on SAF development in the country. Simply Blue Group has announced plans to contribute to SAF production in Ireland.[112] The Irish renewable energy company intends to produce 300 kt of SAF annually across three international projects located in Ireland, Australia, and Canada. However, specific details for the Irish project, including location, production capacity, and expected commissioning date, have not yet been disclosed.

In December 2023 the Department of Transport commenced work on developing Ireland's first SAF Roadmap, including the establishment of a Task Force to help identify opportunities/barriers for Ireland in relation to SAF. This task force included government departments, airlines, oil and gas companies, and universities. Its scope includes assessing the potential for domestic SAF production, identifying funding streams, and acting as a facilitator for stakeholders. On the 21st of August 2025 the Department of Transport published Ireland's first National Sustainable Aviation Fuel Policy Roadmap. [113] The Roadmap represents an important first step in developing Ireland's national Sustainable Aviation Fuel policy, identifying a number of actions which will be built upon in future iterations, and setting a path for future SAF policy development.

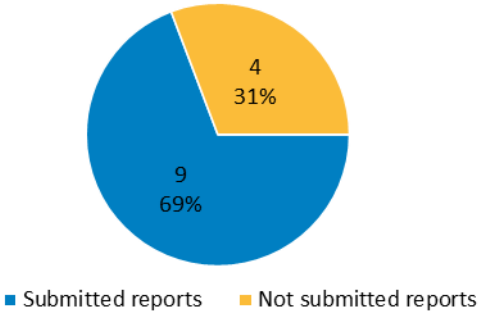
[112] Simply Blue Group Ireland SAF project.
[113] Ireland's SAF Policy Roadmap

Italy

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

9 aviation fuel suppliers submitted reports



0.2 kt of SAF supplied to Union airports

Aviation fuel

3.1 Mt

SAF

0.2 kt

0.01% of supplied fuel

96% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel

1 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

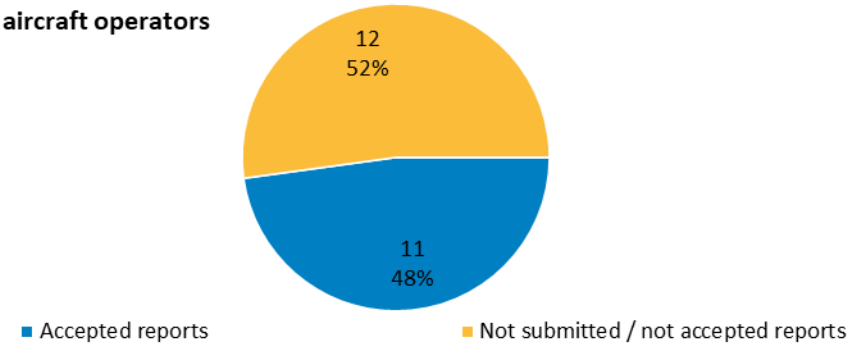
Italy

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

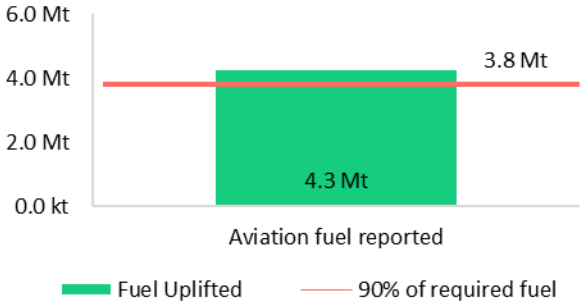
11 accepted reports from aircraft operators

Reporting status of aircraft operators



4.3 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 74% of Union airports the uplift was above the 90% threshold

74%

17 out of 23

Union airports

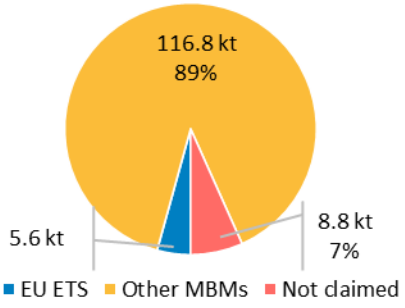
131.2 kt of SAF purchased by aircraft operators

SAF

131.2 kt

89% of SAF reported was claimed in other MBMs

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	131.2 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Italy

Italy is home to one of the largest SAF facilities in Europe – the Gela biorefinery operated by Bioraffineria di Gela S.p.A., a company belonging to the Enilive group. Having started production in early 2025, it has a production capacity of 400 kt per year, focused on HEFA derived from waste feedstocks such as used cooking oil (UCO) and animal fats.[114]

Eni S.p.A began SAF production trials in Italy in 2021 at its Taranto refinery[115] and continued at the Livorno site[116] in 2022, using renewable feedstock co-processing alongside conventional jet fuel feedstock. However, these refineries are not expected to produce more co-processed SAF in the future.[117]

Further production plans in Italy include an Enilive S.p.A. SAF plant in Porto Marghera, Venice, expected to produce 200 kt annually by 2026, pending construction permits.

SAF activity in Italy extends beyond production. Airport operator SEA Prime incentivizes SAF use at Milano Linate and Milano Malpensa airports, encouraging the uptake of renewable jet fuel.[118] Additionally, national carrier ITA Airways promotes SAF through its "Fly with SAF" program. [119]

The Italian Civil Aviation Authority published a SAF roadmap in October 2024, outlining current market initiatives and measures to support industry expansion.[120]

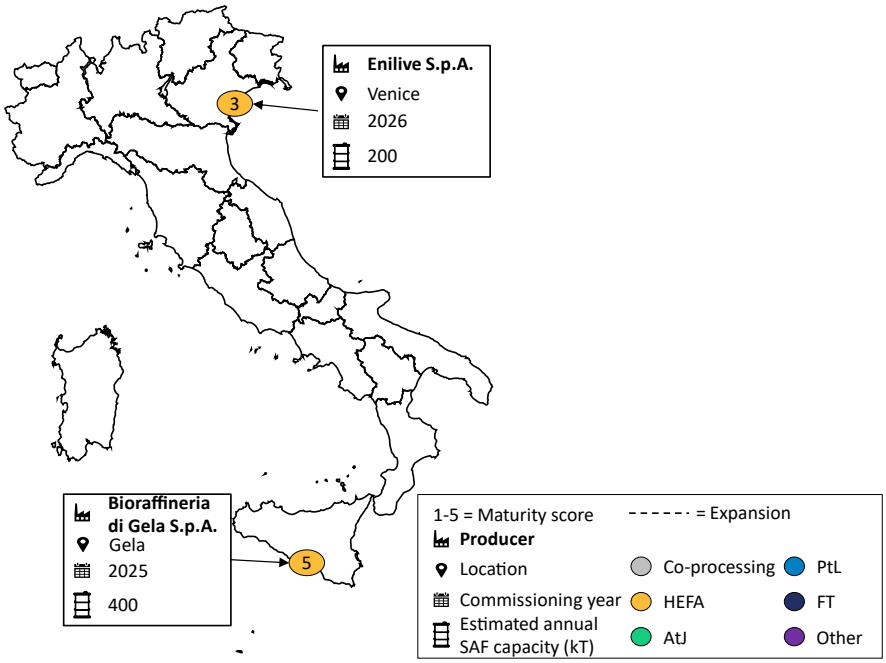


Figure 22 – Map of SAF production facilities in Italy.

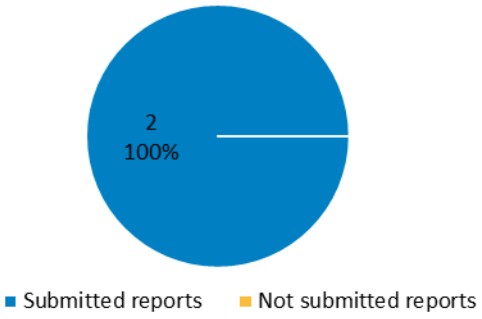
[114] Gela plant.
[115] Taranto refinery co-processing.
[116] Livorno refinery co-processing.
[117] Based on Member State feedback.
[118] SEA Prime SAF incentives.
[119] ITA Airways SAF program.
[120] Italy SAF roadmap.

Latvia

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

125.8 kt

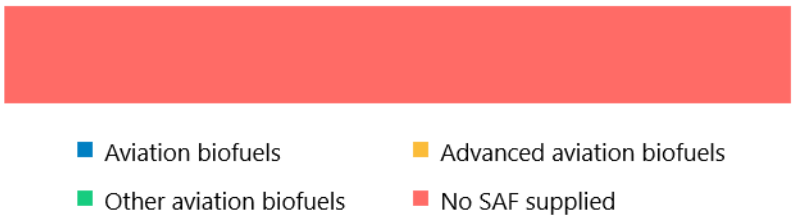
SAF

0 kt

0.00%% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

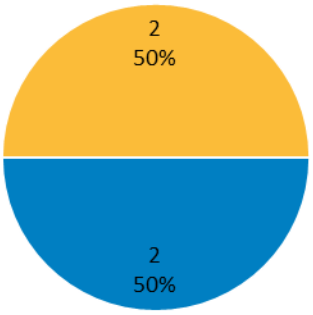
Latvia

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

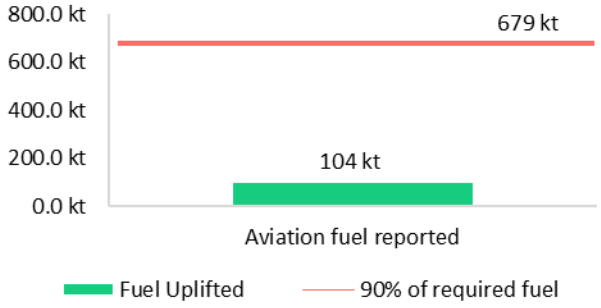
2 accepted reports from aircraft operators

Reporting status of aircraft operators



104 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

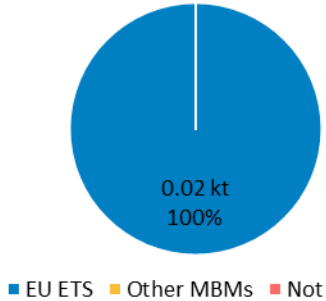
0.02 kt of SAF purchased by aircraft operators

SAF

0.02 kt

100% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	0.02 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Latvia

Latvia currently has no domestic SAF production capacity. However, since the publication of EASA's report *State of the EU SAF Market in 2023*, two SAF production projects have been announced in the Member State.

SIA Pars Terminals plans to produce 87 kt of SAF per year at the Port of Riga using HEFA technology.[121] Announced in December 2024, the project is estimated to cost 120 million EUR and take 20 months to complete. If the timeline proceeds as planned, SAF production is expected to begin by mid-2026.

NORSAF, formerly known as GI Termināls, is planning to produce synthetic aviation fuels at the Liepaja Sustainable Industry Hub.[122] The project aims to deliver 100 kt of SAF annually and involves an investment of 500 million EUR. Additional developments planned for the Liepaja hub include offshore wind infrastructure, hydrogen production, and carbon capture.[123]

Latvia's government is collaborating with Estonia to assess the potential for SAF production in both countries.[124] The project, supported by 200,000 EUR in funding from the European Commission, is expected to run until November 2025 and will include policy recommendations to stimulate domestic production.

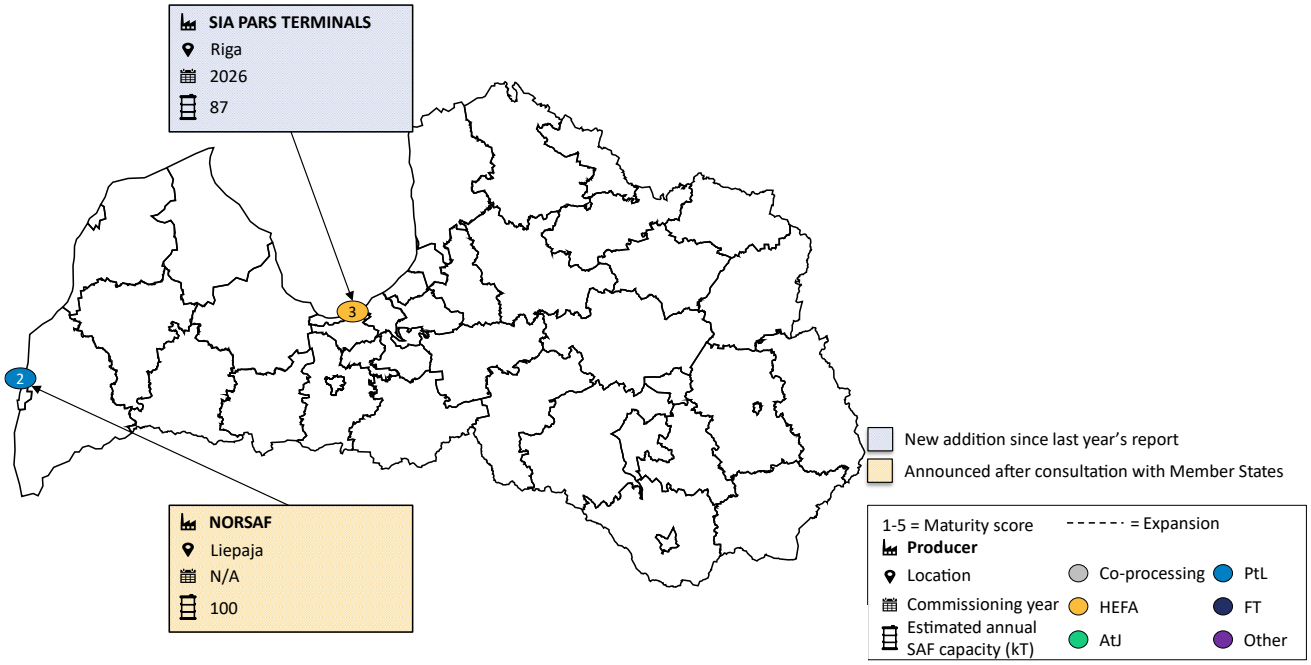


Figure 23 – Map of SAF production facilities in Latvia.

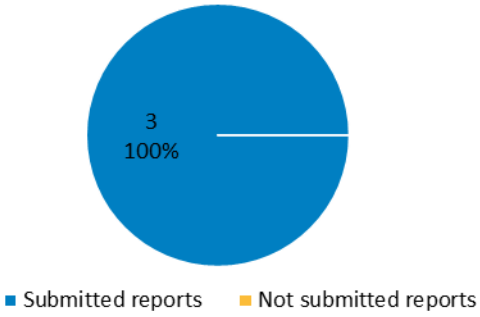
[121] SIA PARS TERMINALS project. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[122] NORSAF project. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[123] Liepaja sustainable industry hub.
[124] SAF feasibility study.

Lithuania

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports

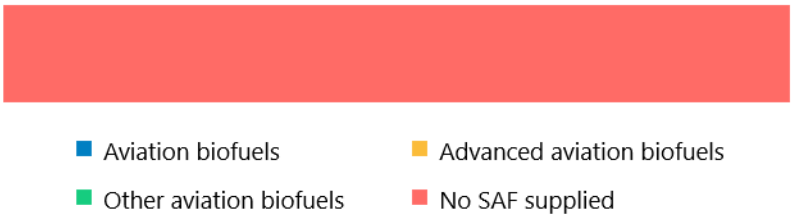


No SAF supplied to Union airports

Aviation fuel	SAF
102.8 kt	0 kt
	0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

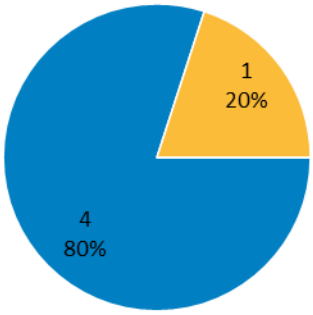
Lithuania

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

4 accepted reports from aircraft operators

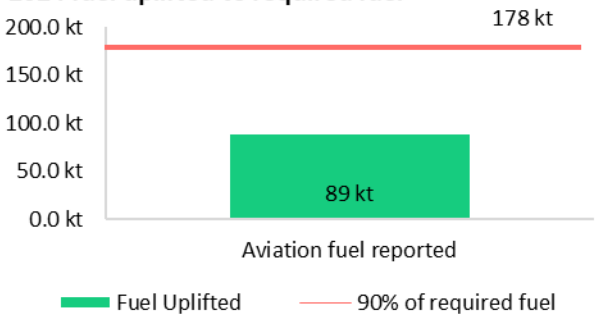
Reporting status of aircraft operators



Accepted reports — Not submitted / not accepted reports

89 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 2

Union airports

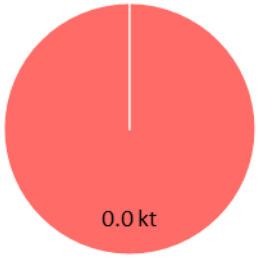
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



EU ETS — Other MBMs — Not claimed

No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Lithuania

SAF Activity in Lithuania

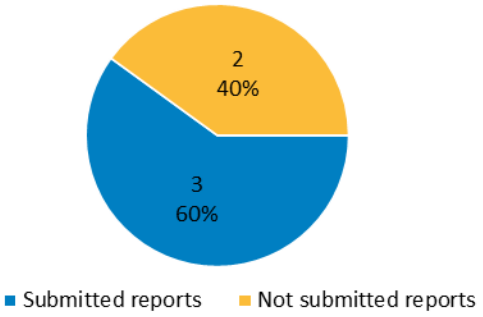
Lithuania currently has no domestic SAF production capacity, and no public announcements have been made regarding future SAF production projects in the country.

Luxembourg

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

590 kt

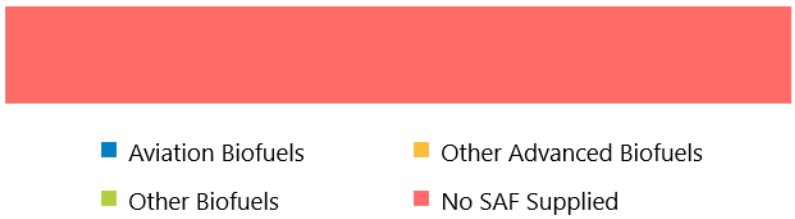
SAF

0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

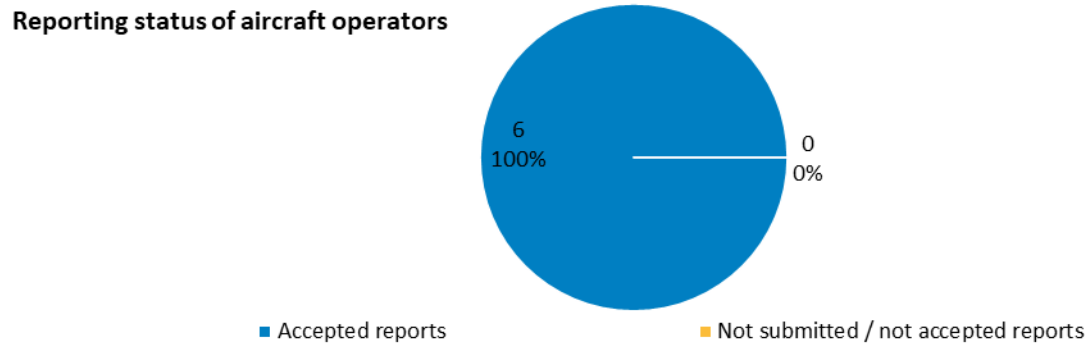
Luxembourg

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

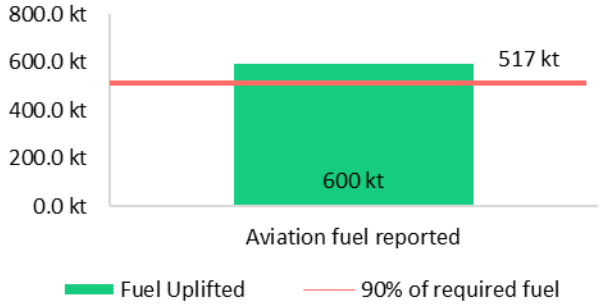
6 accepted reports from aircraft operators

Reporting status of aircraft operators



600 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

1 out of 1

Union airports

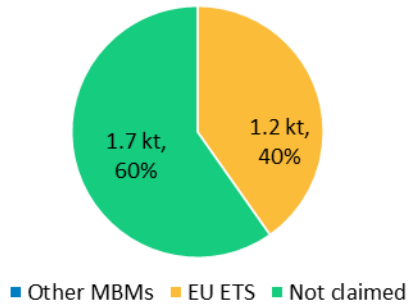
2.9 kt of SAF purchased by aircraft operators

SAF

2.9 kt

40% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	2.9 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Luxembourg

SAF Activity in Luxembourg

Luxembourg currently has no domestic SAF production capacity, and no public announcements have been made regarding future SAF production projects in the country.

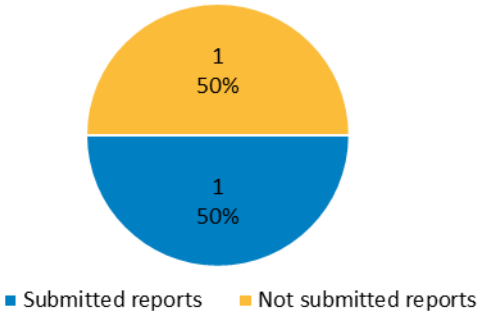
However, economic actors based in Luxembourg, namely Luxembourg Airport and Cargolux, are engaged in the SAF market. Lux-Airport has invested in the Norwegian e-SAF developer Norsk e-Fuel.[125] Additionally, Cargolux has signed an offtake agreement with Norsk e-Fuel, with supply expected to begin in late 2026 .[126] The carrier was also the first to uplift SAF at Luxembourg Airport in 2023.

[125] Lux-Airport investment in Norsk e-fuel.
[126] Cargolux-Norsk e-fuel SAF offtake agreement.

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

One aviation fuel supplier has submitted their report



0 kt of SAF supplied to the Union airports

Aviation fuel

34 kt

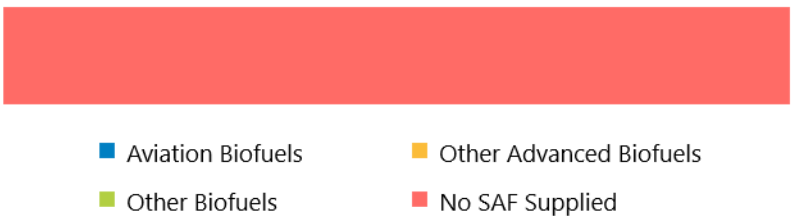
SAF

0 kt

0.00% of supplied fuel

None of the eligible SAF categories were supplied

RFEUA Category of eligible fuel for SAF at Union level



No CO_2e savings from SAF supplied

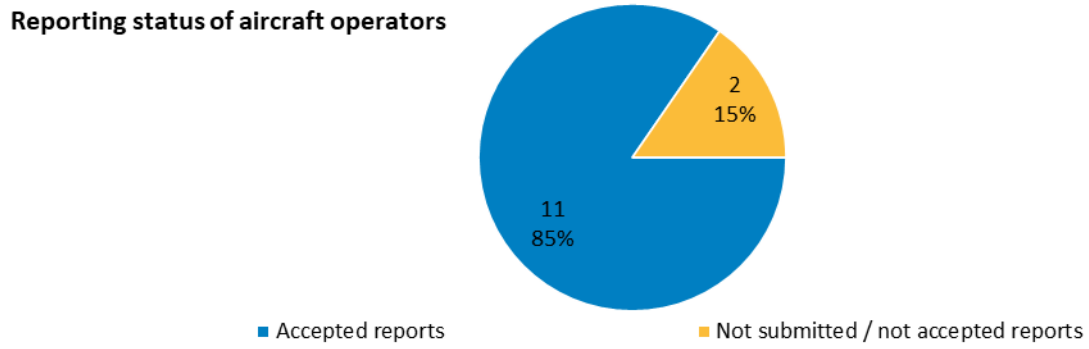
Total ReFuelEU Aviation SAF CO_2e savings

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

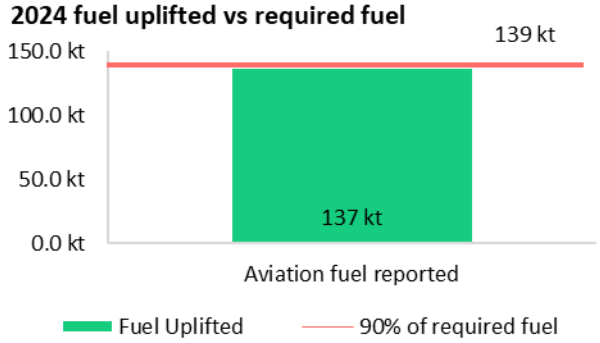
11 accepted reports from aircraft operators

Reporting status of aircraft operators



137 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

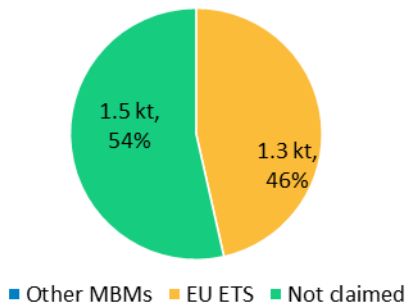
2.9 kt of SAF purchased by aircraft operators

SAF

2.9 kt

46% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	2.9 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Malta

SAF Activity in Malta

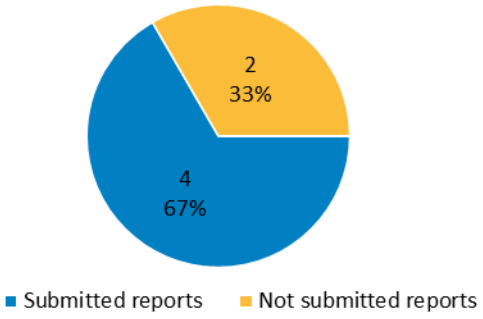
Malta currently has no domestic SAF production capacity, and no public announcements have been made regarding future SAF production projects in the country.

The Netherlands

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

4 aviation fuel suppliers submitted reports



48.5 kt of SAF supplied to Union airports

Aviation fuel

829.7 kt

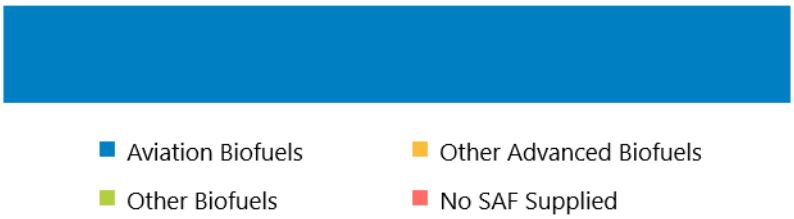
SAF

48.5 kt

5.85% of supplied fuel

100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



182 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

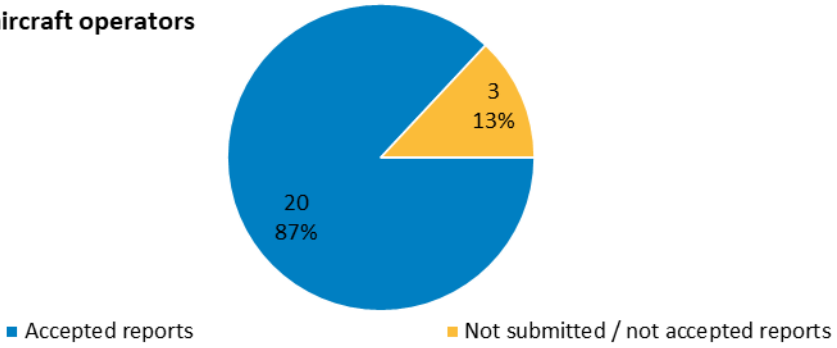
The Netherlands

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

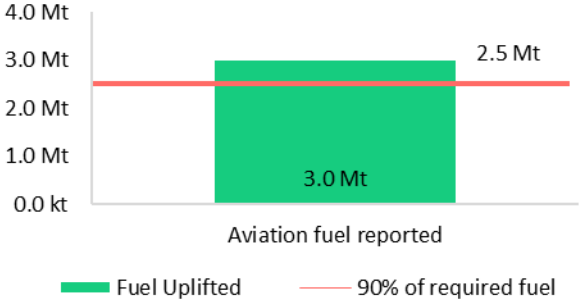
20 accepted reports from aircraft operators

Reporting status of aircraft operators



3 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

3 out of 3

Union airports

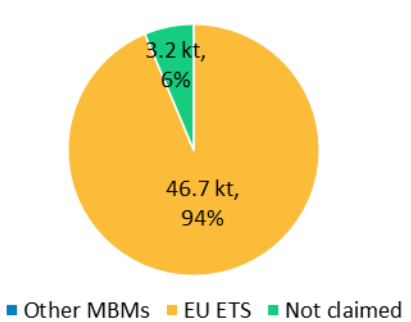
49.9 kt of SAF purchased by aircraft operators

SAF

49.9 kt

94% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	49.9 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in the Netherlands

The Netherlands host two operational HEFA facilities in Rotterdam: Neste Rotterdam and Chane Terminals' platform. Chane Terminals began producing SAF at its site in 2020 and plans to increase output with a new unit scheduled for commissioning in 2025.[127] Neste commenced production at its Rotterdam facility in 2024 with an annual SAF capacity of 500 kt, although initial amounts were limited. The facility is expected to ramp up production in 2025, and the Finnish producer aims to expand output to 1,200 kt by 2027.[128] Oil and gas majors BP and Shell have both cancelled their plans to develop HEFA-based facilities in Rotterdam.

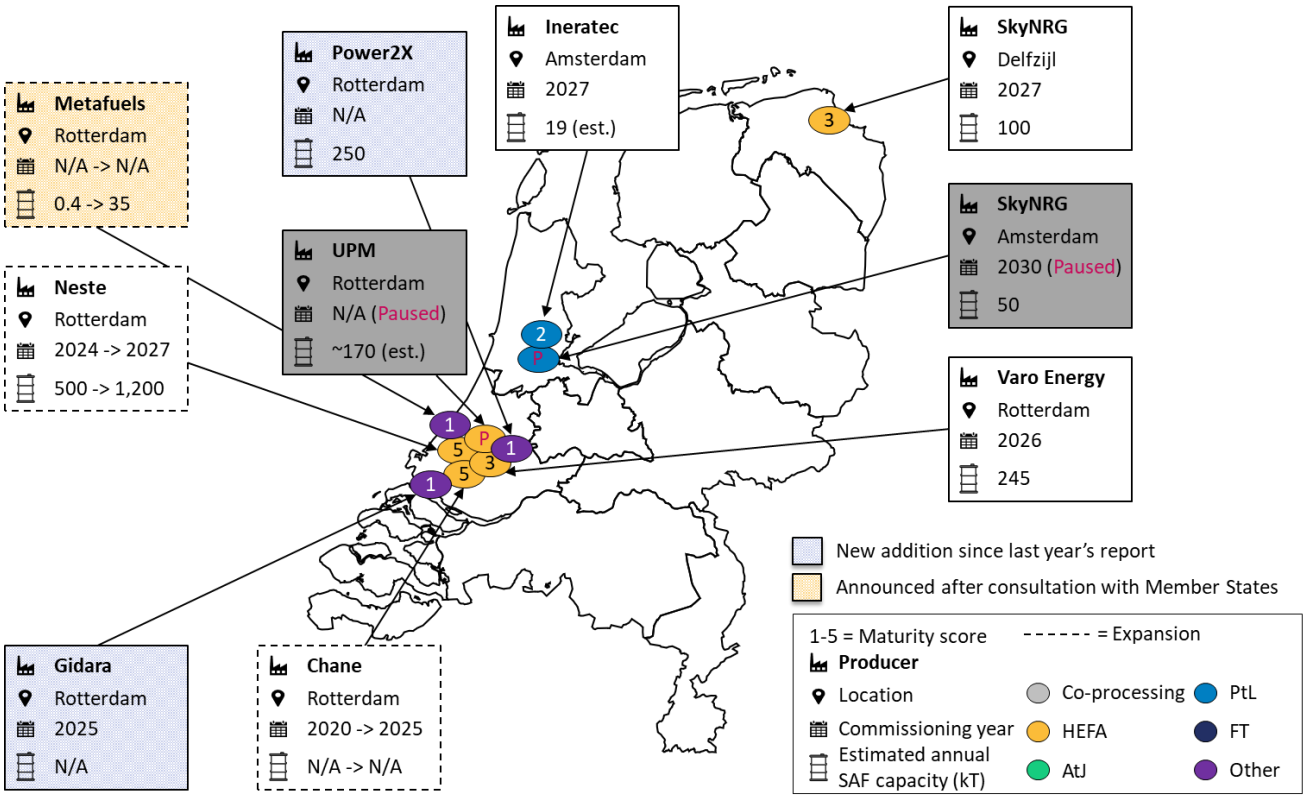


Figure 24 – Map of SAF production facilities in the Netherlands.

Three additional HEFA facilities are under development in the Netherlands, including Varo Energy and Gunvor's Rotterdam facility, and SkyNRG's Delfzijl project. The third is UPM Biofuels' Rotterdam plant, which was targeting the use of woody biomass as feedstock; however, development of this project has been paused.[129]

An addition compared to the analysis for last year's *State of the EU SAF Market in 2023* report is Gidara's Advanced Methanol Amsterdam project. Gidara's production process involves converting municipal solid waste (MSW) into bio-methanol, which could then be further refined into SAF.[130] The plant is expected to produce 88 kt of methanol.

There are also four synthetic aviation fuels projects currently under development. Notably, since publication of the *State of the EU SAF Market in 2023* report, Power2X and Advario have announced plans for a synthetic

[127] Chane Terminals expansion.
[128] Neste Rotterdam.
[129] Pausing of UPM Biofuels Rotterdam plant.
[130] Gidara plant.

aviation fuels hub in Rotterdam, with a projected capacity of 250 kt per year.[131] The facility, which is the largest announced synthetic aviation fuels project in the EU, aims to begin production in 2030. Two other synthetic aviation fuels projects are located in Amsterdam: Ineratec and Zenith Energy Terminals plan to produce 20 kt of SAF annually from industrial CO_2 starting in 2027, while SkyNRG's Synkero project has been paused, with no recent updates.[132] More recently, in May 2025, Metafuels and Evos announced Project Turbe at the Port of Rotterdam. The project aims to convert methanol into SAF, beginning with limited production and scaling up to 35 kt per year if viable. It is currently in the pre-FEED stage, with a final investment decision (FID) expected by mid-2026.[133]

In addition, several airports in the Netherlands have initiated SAF programs. Both Eindhoven Airport and Schiphol Group incentivize SAF uplift, with Schiphol additionally investing in SAF production facilities.[134]

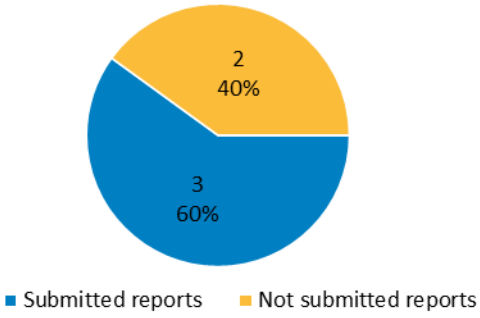
[131] Power2X Rotterdam.
[132] Pausing of Synkero project in Amsterdam.
[133] Project Turbe. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development
[134] Airports SAF initiatives.

Poland

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

3 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

366.4 kt

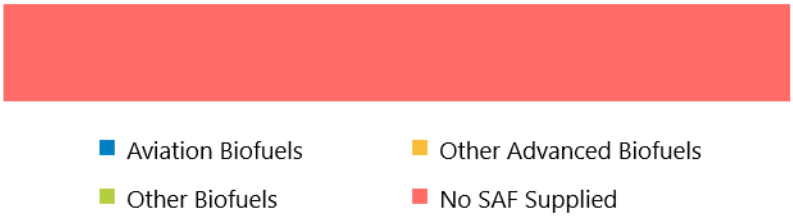
SAF

0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



No CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

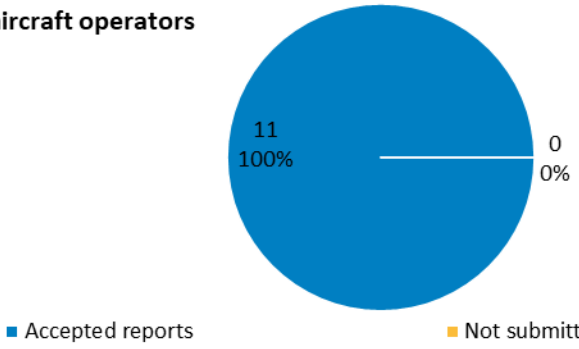
Poland

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

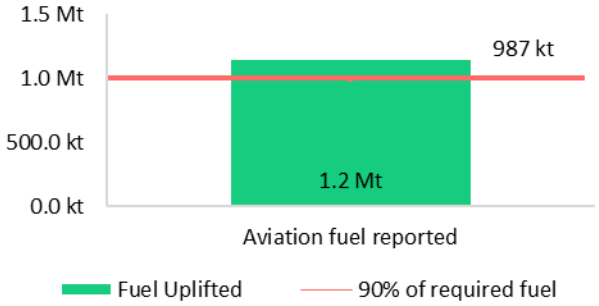
11 accepted reports from aircraft operators

Reporting status of aircraft operators



1.2 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

7 out of 7

Union airports

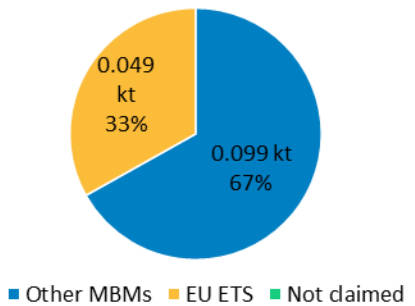
0.1 kt of SAF purchased by aircraft operators

SAF

0.1 kt

33% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	0.15 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Poland

Poland is expected to have its first domestic SAF production site operational in 2025. The project is led by the country's largest oil and gas producer, Orlen. The facility, currently under construction in Płock, will utilise used cooking oil (UCO) for SAF production. The announced amount for the site is 300 kt of SAF per year once operating at full capacity.[135]

The national airline, LOT Polish Airlines, is also making strides in supporting SAF development. For instance, in late 2023, it purchased SAF from SkyNRG through a book-and-claim mechanism.[136] Furthermore, LOT has signed an offtake agreement with Orlen for the delivery of SAF once the Płock facility becomes operational.[137]

In the first half of 2025, Poland received physical batches of SAF for the first time. The fuel was delivered to Katowice International Airport in Pyrzowice by Unimot Aviation.[138]

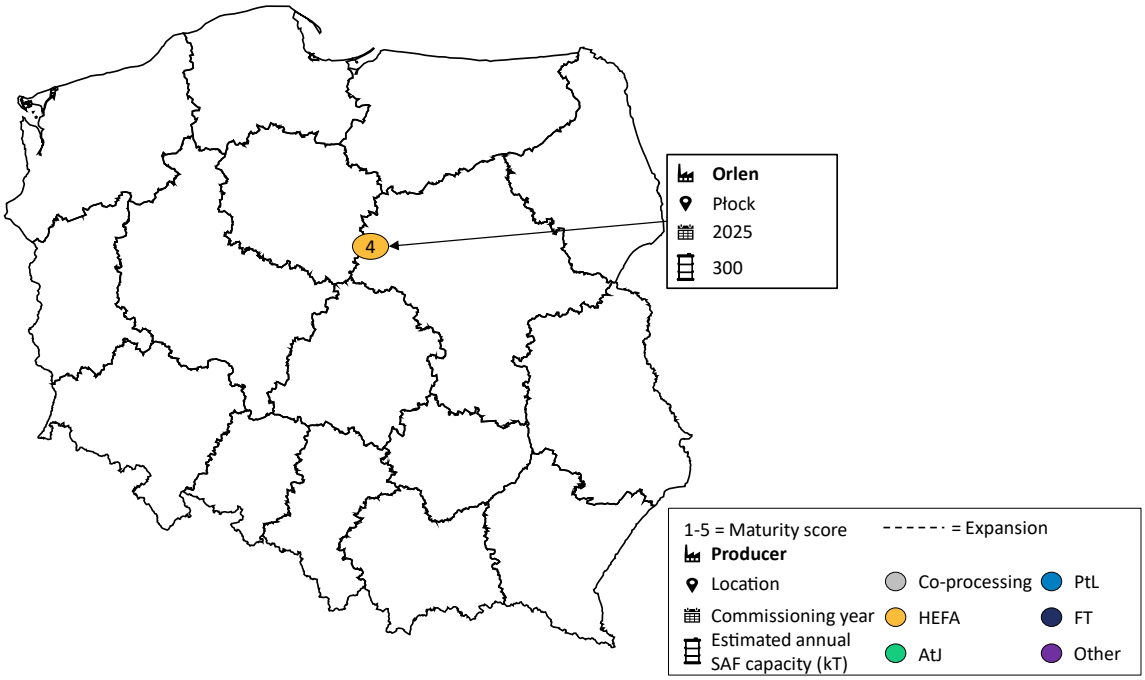
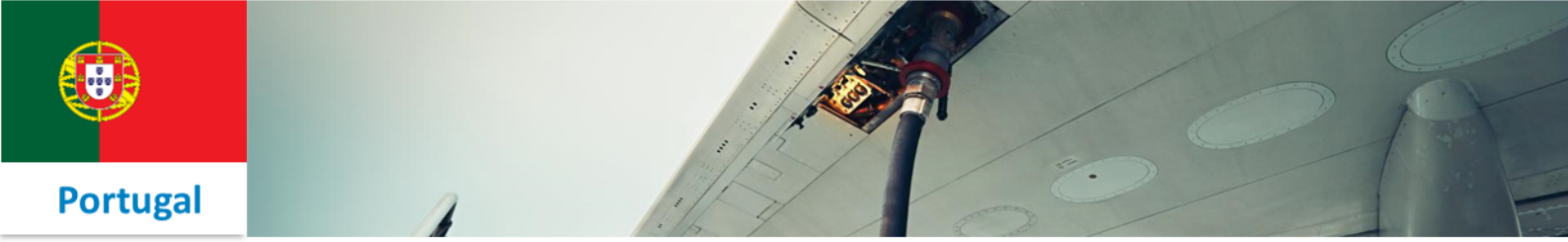


Figure 25 – Map of SAF production facilities in Poland.

[135] ORLEN SAF plant.
[136] LOT Polish Airlines SAF purchase.
[137] LOT Polish Airlines-ORLEN SAF offtake agreement.
[138] First SAF deliveries in Poland.

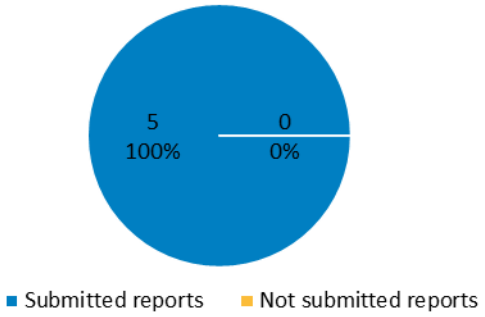


Portugal

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

5 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

1.7 Mt

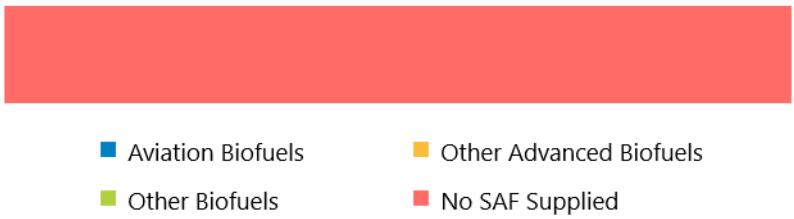
SAF

0 kt

0.00% of supplied fuel

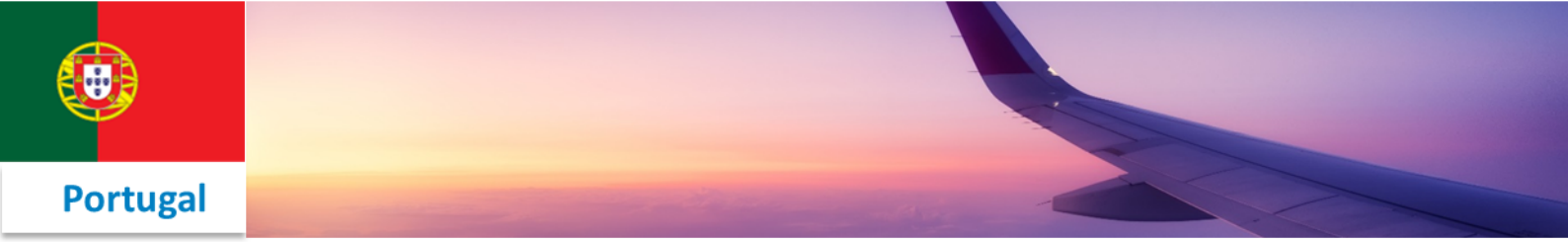
No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



0 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings



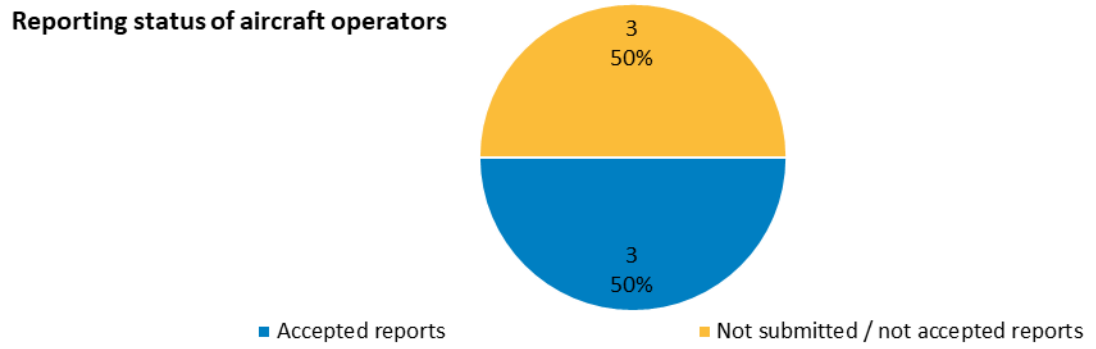
Portugal

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

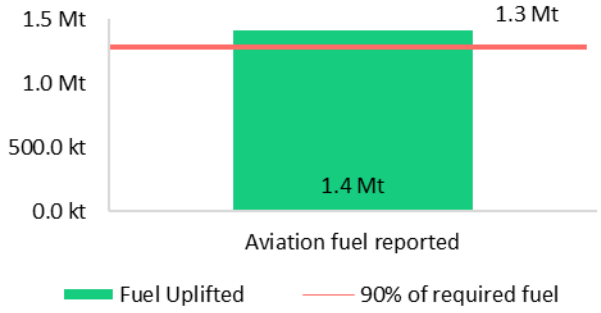
3 accepted reports from aircraft operators

Reporting status of aircraft operators



1.4 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 100% of Union airports the uplift was above the 90% threshold

100%

3 out of 3

Union airports

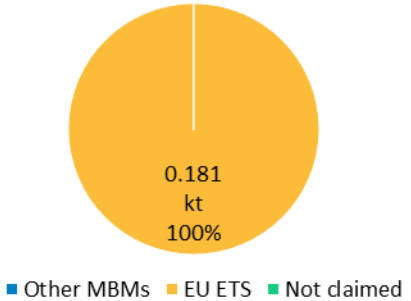
0.2 kt of SAF purchased by aircraft operators

SAF

0.2 kt

100% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	0.18 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Portugal

Although Portugal currently has no active SAF production facilities, six projects are under development. The most advanced is a collaboration between Galp and Mitsui. The Sines plant, scheduled to begin production in 2026, will use HEFA technology to produce 270 kt of HVO and SAF annually from feedstocks such as used cooking oil (UCO) and animal fats, with approximately 90 kt expected to be SAF.[139] With a total investment of 400 million EUR, the project reached final investment decision (FID) in September 2023.[140]

Five synthetic aviation fuels projects have also been announced in Portugal, including two involving waste treatment company LIPOR. The Leça H2 Green Valley project, a collaboration with Smartenergy and REN, aims to produce 50 kt of SAF annually using CO_2 from LIPOR and Smartenergy's green hydrogen.[141] LIPOR is also working with P2X Europe and Veolia to produce SAF at its Maia Energy Recovery Plant in Porto.[142] However, limited public information is available regarding the timeline for either project. P2X Europe, a German synthetic fuel developer, is also partnering with Navigator, a Portuguese pulp and paper company, on a project in Figueira da Foz called P2X-Portugal.[143] This initiative aims to produce 40 kt of synthetic SAF annually starting in 2030.

In addition to the Leça H2 Green Valley project, Smartenergy is planning two more synthetic SAF facilities. The Galileu Green H2 Valley project near Lisbon intends to use CO_2 from a cement plant to produce 155 kt of SAF annually.[144] Smartenergy is also assessing a site in Aveiro with a projected capacity of 230 kt per year; however, this project is less mature than the other two currently under development.

Portugal's government has also been active in shaping the SAF production landscape in the country. As of January 2025, it plans to launch tenders for domestic SAF production, which have already attracted interest from multiple companies.[145]

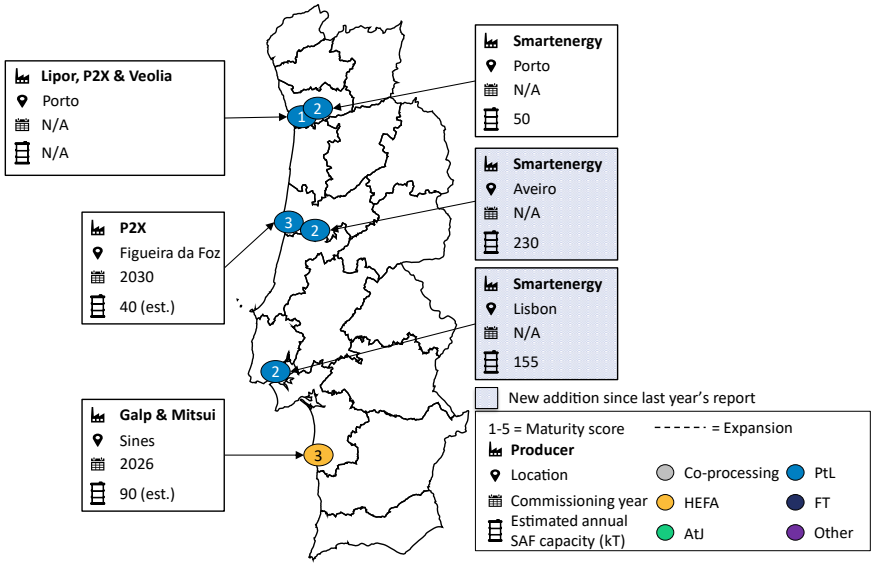


Figure 26 – Map of SAF production facilities in Portugal.

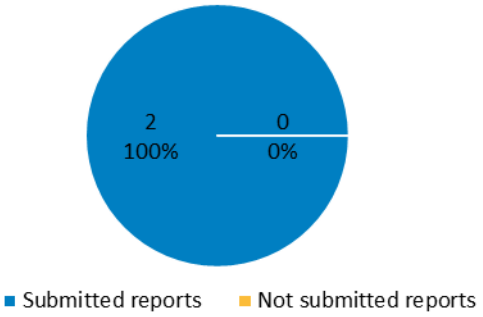
[139] Galp and Mitsui project.
[140] Galp and Mitsui project FID.
[141] Leça H2 Green Valley project.
[142] P2X Europe, LIPOR and Veolia project.
[143] P2X-Portugal project.
[144] Smartenergy SAF project plans. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[145] Government domestic SAF tender.

Romania

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

404.4 kt

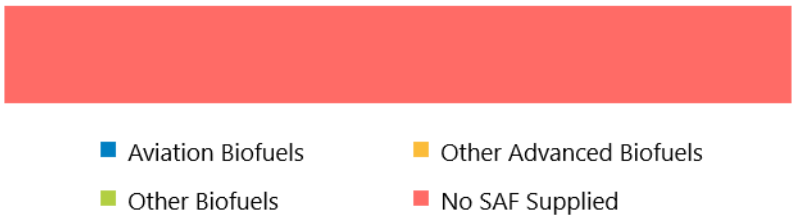
SAF

0 kt

0.00% of supplied fuel

No RFEUA eligible SAF supplied

Category of RFEUA eligible aviation fuel



0 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

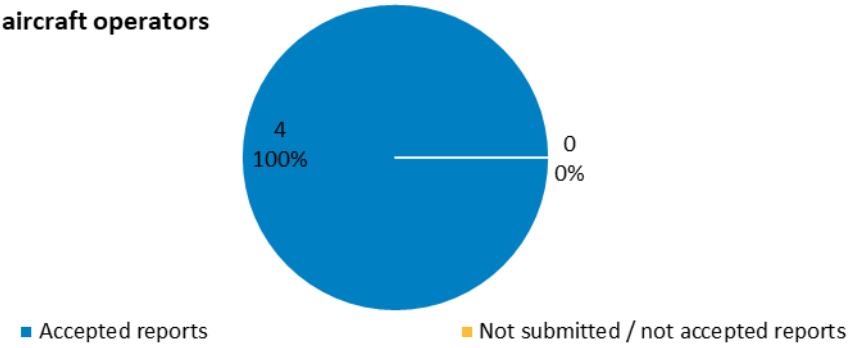
Romania

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

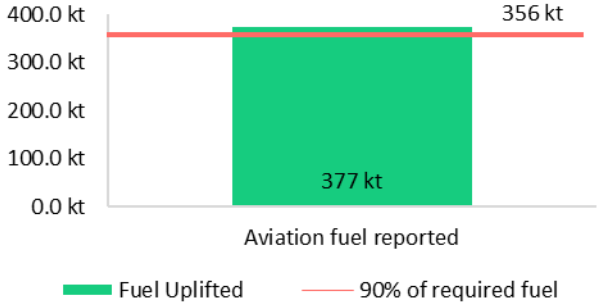
4 accepted reports from aircraft operators

Reporting status of aircraft operators



377 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 25% of Union airports the uplift was above the 90% threshold

25%

1 out of 4

Union airports

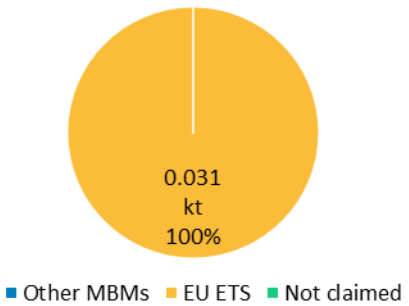
0.03 kt of SAF purchased by aircraft operators

SAF

0.03 kt

100% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	0.03 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Romania

OMV is advancing domestic SAF production in Romania. Operating the Petrobrazi refinery in Ploiești, OMV began SAF production trials in 2020 using renewable feedstocks alongside fossil inputs.[146] In early 2025, OMV commenced construction of a dedicated unit for SAF and HVO production, with a total capacity of 250 kt per year, including 90 kt of SAF. This 750 million EUR project is expected to begin operations in 2028.[147]

In parallel with the construction of its new unit, OMV Petrom is also supporting the delivery of SAF to airports across Romania. The oil and gas major has signed an agreement with TAROM, Romania's national airline, to supply SAF to four airports: Henri Coandă International Airport in Bucharest, Avram Iancu International Airport in Cluj, Traian Vuia International Airport in Timișoara, and Iași International Airport.[148][149]

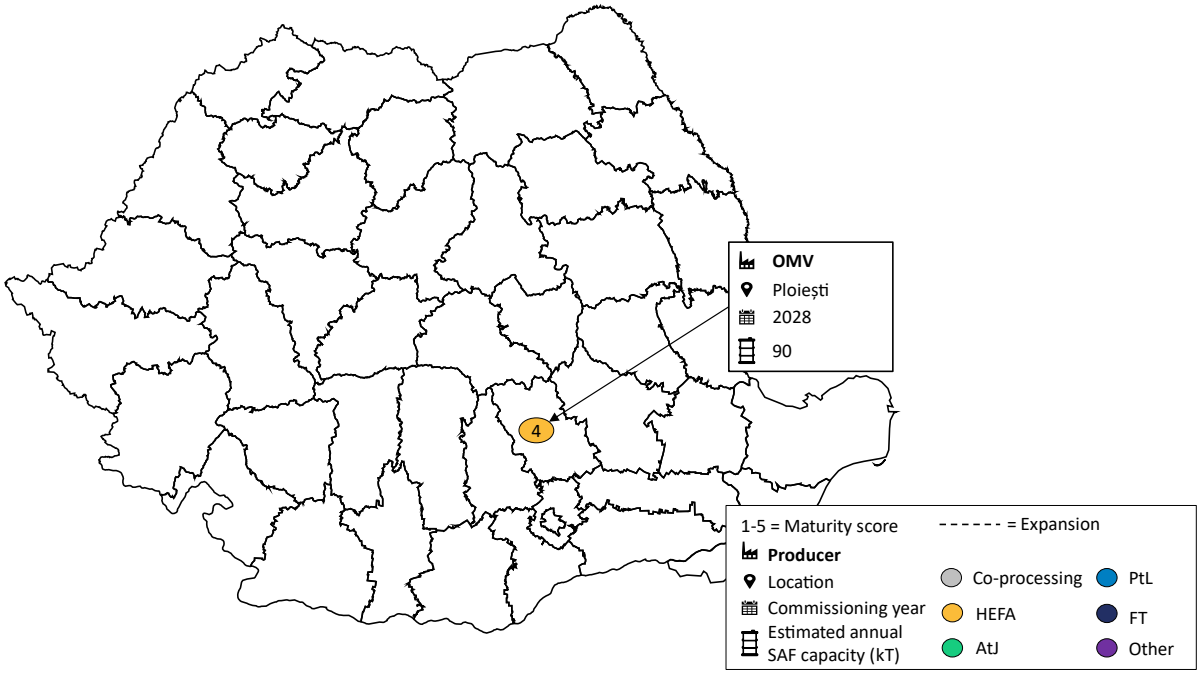


Figure 27 – Map of SAF production facilities in Romania.

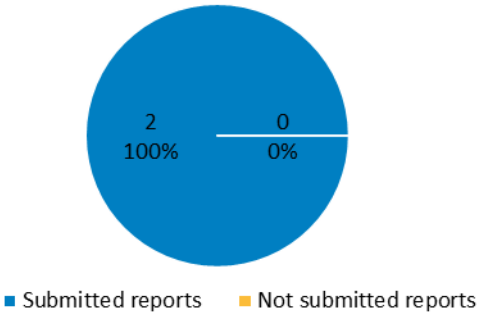
[146] OMV initial SAF trials in Petrobrazi.
[147] OMV Petrobrazi dedicated biofuels unit.
[148] OMV-TAROM agreement for SAF supply to airports.
[149] SAF supply to Romanian airports.

Slovakia

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

2 aviation fuel suppliers submitted reports



No SAF supplied to Union airports

Aviation fuel

38.4 kt

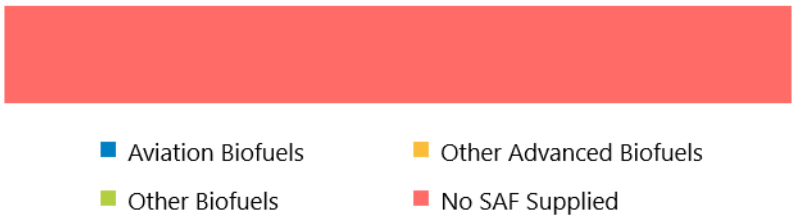
SAF

0 kt

0.00% of supplied fuel

No RFEUA eligible SAF supplied

Category of RFEUA eligible aviation fuel



0 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

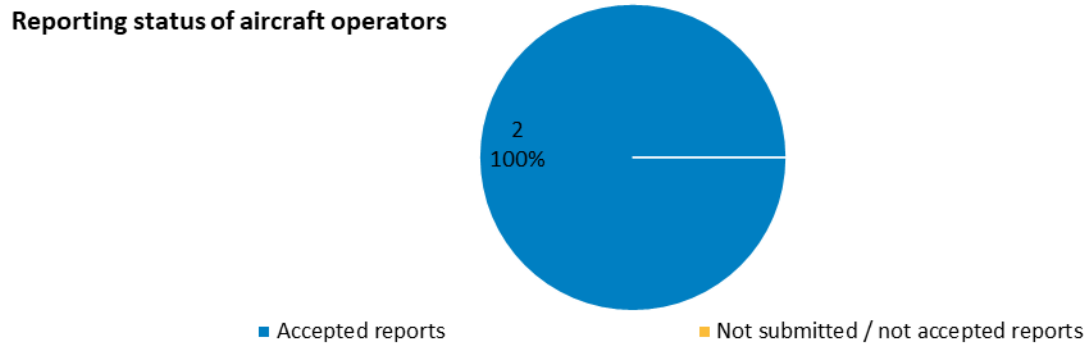
Slovakia

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

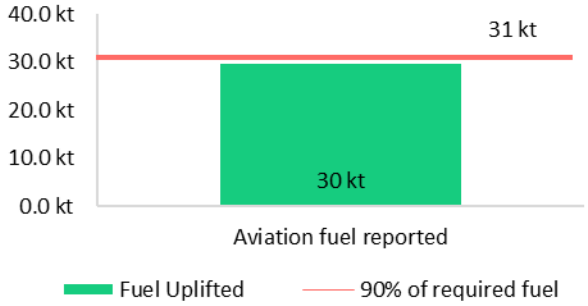
2 accepted reports from aircraft operators

Reporting status of aircraft operators



30 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

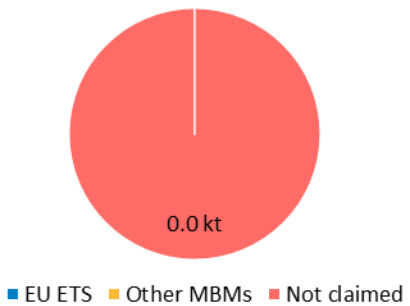
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



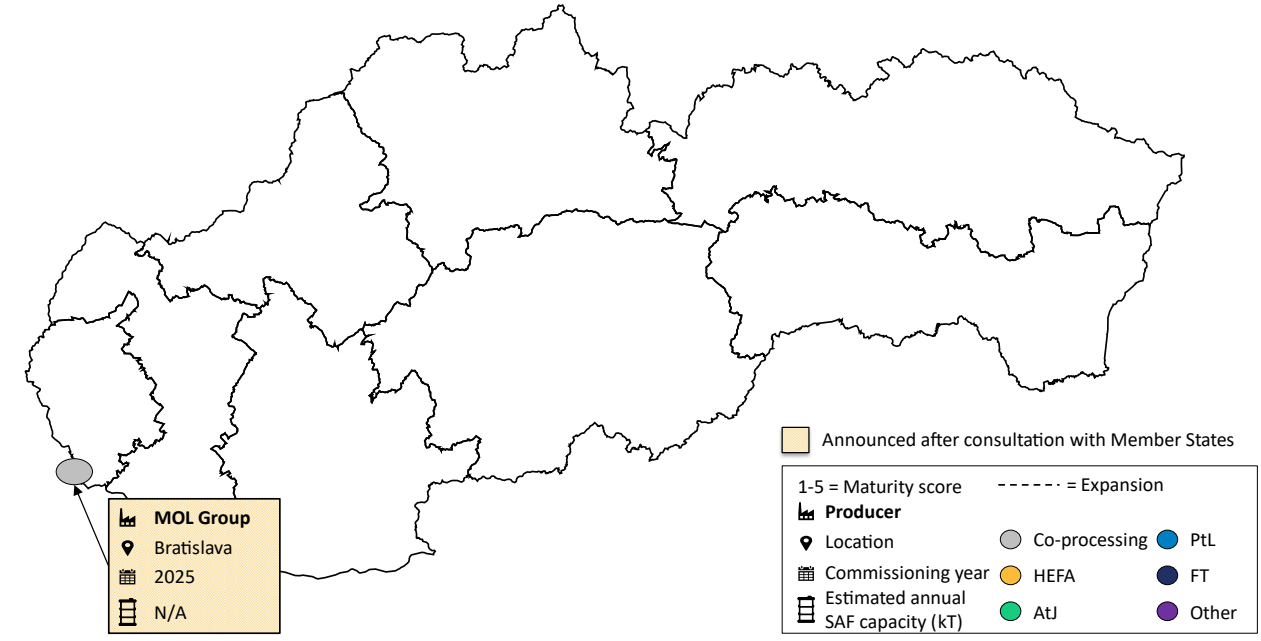
No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

Slovakia

SAF Activity in Slovakia

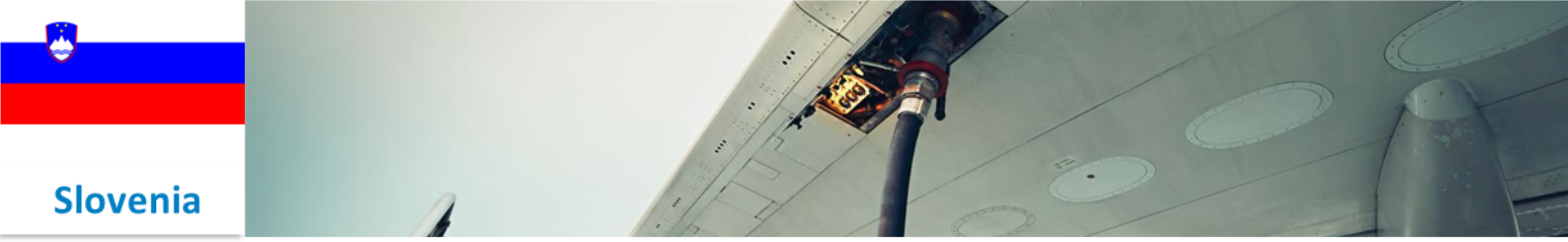
The only announced SAF production in Slovakia has come from MOL Group, which successfully tested SAF production at its Bratislava Refinery in early 2025.[150] The Hungarian oil and gas group co-processed used cooking oil (UCO) to produce SAF. Although MOL Group has stated that it is technologically prepared to produce SAF, though no explicit plans have been announced to continue SAF production in Slovakia.



Note: no maturity score assigned as production has only been tested

Figure 28 – Map of SAF production facilities in Slovakia.

[150] MOL Group SAF production test in Bratislava refinery. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.

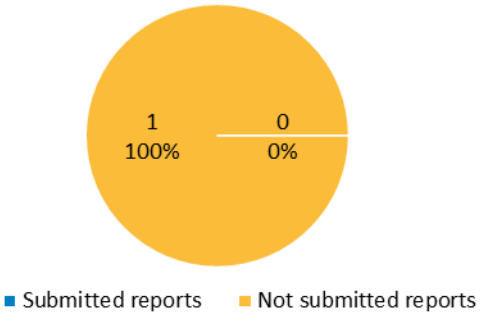


Slovenia

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

1 aviation fuel supplier submitted a report



No SAF supplied to Union airports

Aviation fuel

0 kt

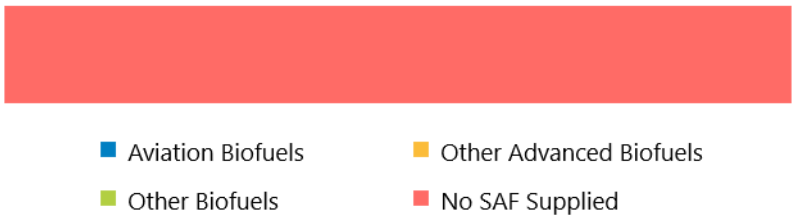
SAF

0 kt

0.00% of supplied fuel

No RFEUA eligible SAF was supplied

Category of RFEUA eligible aviation fuel



0 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

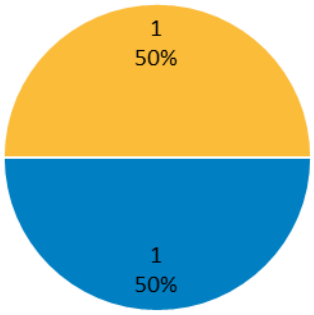
Slovenia

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

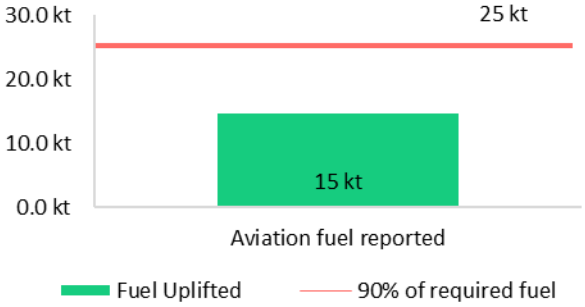
1 accepted report from aircraft operators

Reporting status of aircraft operators



15 kt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 0% of Union airports the uplift was above the 90% threshold

0%

0 out of 1

Union airports

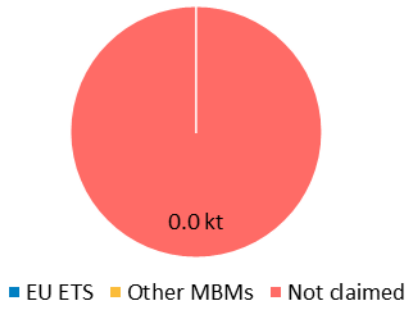
No SAF was purchased by aircraft operators

SAF

0 kt

No SAF was claimed

SAF claim by MBM scheme



No SAF was reported

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	-	-
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Slovenia

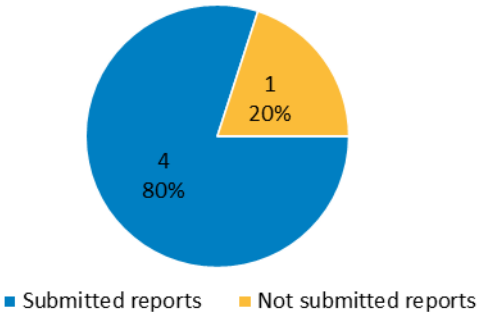
Slovenia currently has no domestic SAF production capacity. No public announcements have been made for future projects related to SAF production in the country.

Spain

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

4 aviation fuel suppliers submitted reports



42.1 kt of SAF supplied to Union airports

Aviation fuel

6.2 Mt

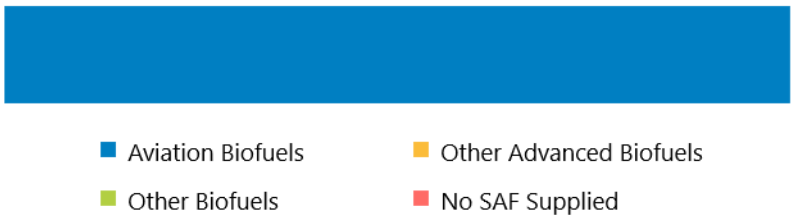
SAF

42.1 kt

0.68% of supplied fuel

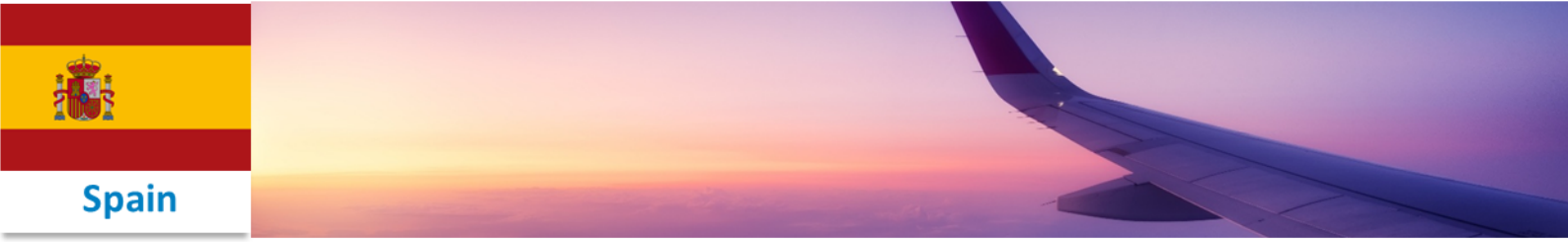
100% of SAF supplied were "aviation biofuels"

Category of RFEUA eligible aviation fuel



153 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings



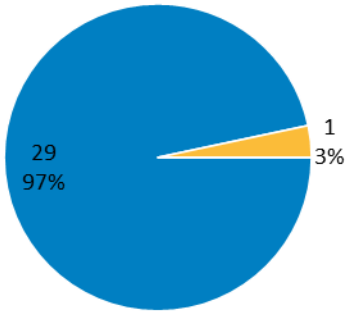
Spain

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

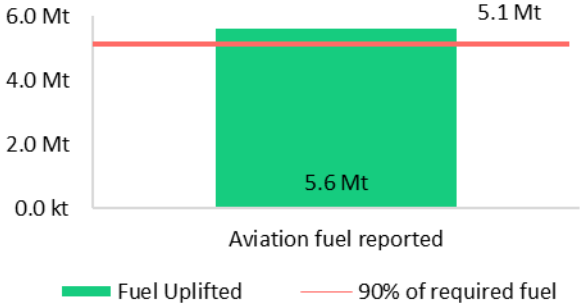
29 accepted reports from aircraft operators

Reporting status of aircraft operators



5.6 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 48% of Union airports the uplift was above the 90% threshold

48%

10 out of 21

Union airports

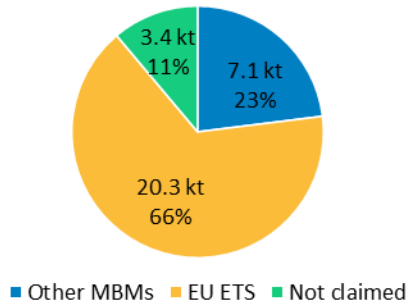
30.9 kt of SAF purchased by aircraft operators

SAF

30.9 kt

66% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



100% of SAF reported was aviation biofuel

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	30.9 kt	100%
Other aviation biofuels	-	-
Advanced aviation biofuels	-	-
Not categorised	-	-

SAF Activity in Spain

Oil and gas companies are leading the development of Spain's SAF industry. Six facilities have demonstrated the viability of co-processing renewable feedstocks to produce SAF. Repsol began domestic SAF production in 2020 at its Puertollano refinery.[151] The company has since expanded SAF capacity at three additional refineries and built a dedicated renewable fuel platform in Cartagena, which has been operational since 2024.[152] Repsol's annual SAF production across these five facilities, using used cooking oil (UCO) and animal fats as feedstocks, totals approximately 200 kt.

Since 2023, Moeve and BP have produced SAF in Spain at their Huelva and Castellón refineries, respectively.[153][154] Moeve plans to increase SAF production at Huelva by 400 kt per year through a dedicated HEFA unit starting in 2026, with a further 400 kt per year targeted by 2030.[155] BP had planned to expand biofuel production at Castellón to 650 kt per year by 2030, including SAF, but paused development in early 2025. The future of this project remains uncertain.[156][157]

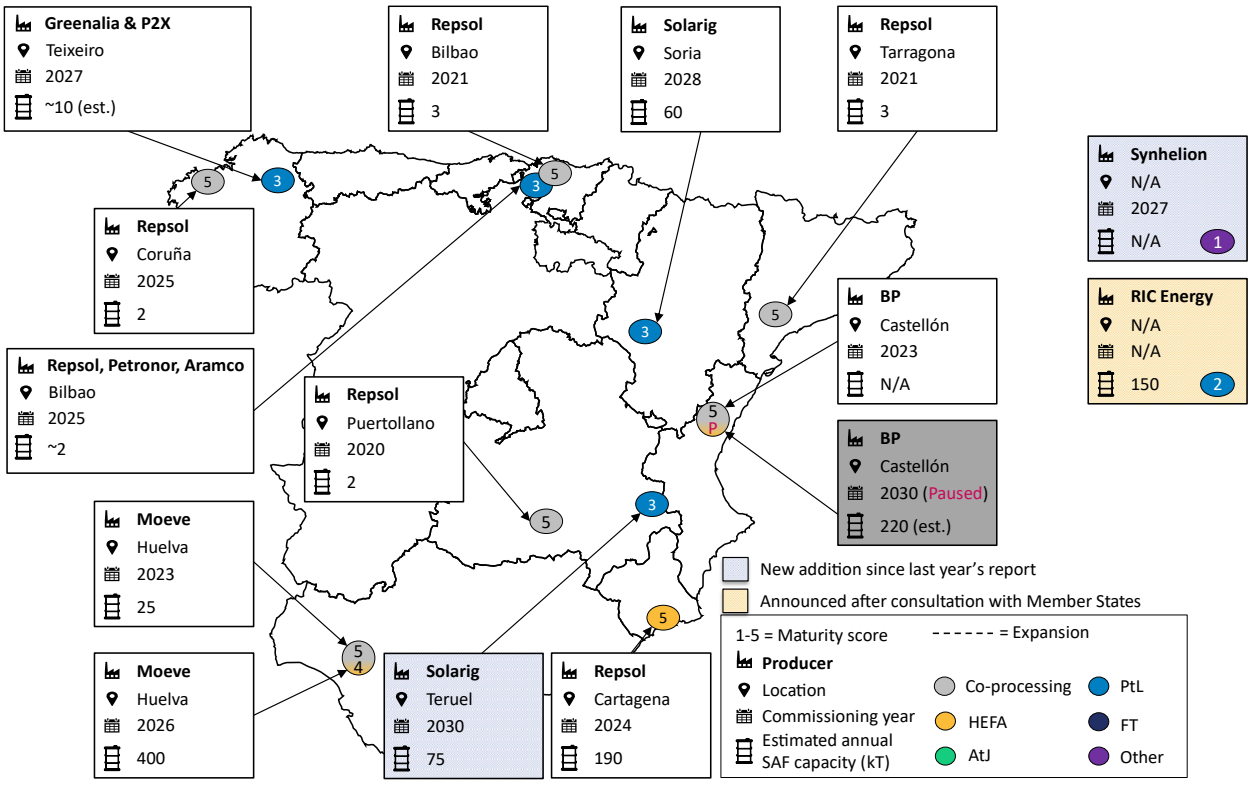


Figure 29 – Map of SAF production facilities in Spain.

Several synthetic aviation fuel projects are currently under development in Spain. Solarig is the most active player, with two announced initiatives. The Numantia project in Soria aims to produce 60 kt of SAF annually by 2028. The Turboleta project in Teruel, added to this year's report, targets 75 kt annually by 2030.

[151] Repsol Puertollano refinery co-processing SAF.
[152] Repsol Cartagena renewable fuel plant.
[153] Moeve SAF co-processing.
[154] BP Castellon co-processing SAF.
[155] Moeve Huelva expansion.
[156] BP Castellon refinery biofuels plan.
[157] Pausing of BP Castellon biofuels plans.

Another addition is Synhelion's Rise project, which plans to use sun-to-liquid (StL) technology to produce SAF starting in 2027.[158] Further details on this project have not been made publicly available.

RIC Energy has also announced plans to produce synthetic aviation fuels in Spain.[159] The renewable energy developer intends to produce 150 kt of SAF annually across three facilities; however, limited information is available about these projects.

International Airlines Group (IAG), the parent company of Spanish airlines Iberia, Iberia Express, Level, and Vueling, has been actively expanding its SAF uptake. In addition to international offtake agreements, IAG purchased 28 kt of SAF from Repsol in 2024.[160] Furthermore, Iberia, Iberia Express, and Vueling – alongside Moeve and BIOIRC – produced a roadmap in 2024 outlining how Spain could become Europe's SAF leader.[161]

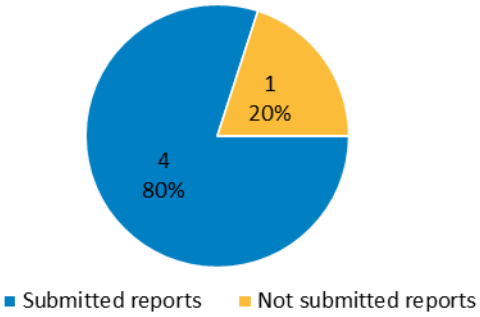
[158] Synhelion project Rise.
[159] RIC Energy SAF plans. Announced/identified after SAF production capacity scenarios development; therefore not considered for 2024 SAF production capacity scenarios development.
[160] IAG SAF purchase.
[161] SAF production roadmap.

Sweden

At a glance – Aviation fuel suppliers

Key performance indicators for the 2024 reporting period

4 aviation fuel suppliers submitted reports



23.4 kt of SAF supplied to Union airports

Aviation fuel

459.5 kt

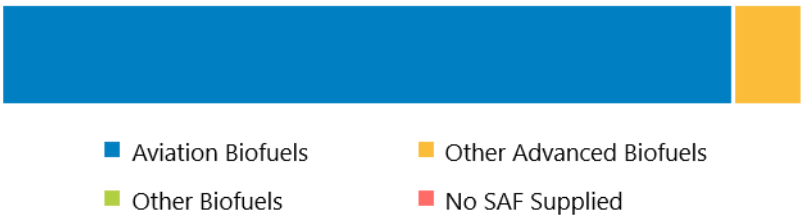
SAF

23.4 kt

5.09% of supplied fuel

93% of SAF supplied were "aviation biofuels". 7% were "other advanced biofuels"

Category of RFEUA eligible aviation fuel



87 kt of CO_2e savings from SAF supplied

Total ReFuelEU Aviation SAF CO_2e savings

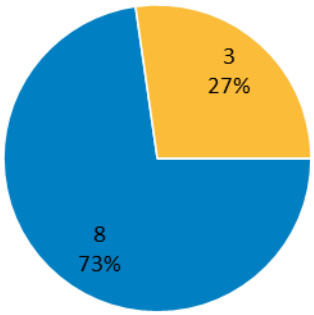
Sweden

At a glance – Aircraft operators

Key performance indicators for the 2024 reporting period

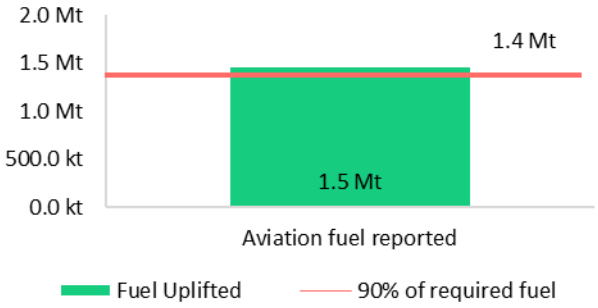
8 accepted reports from aircraft operators

Reporting status of aircraft operators



1.5 Mt of aviation fuel uplifted at the Union airports

2024 fuel uplifted vs required fuel



In 60% of Union airports the uplift was above the 90% threshold

60%

3 out of 5

Union airports

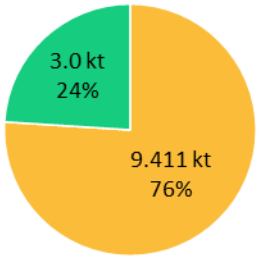
12.4 kt of SAF purchased by aircraft operators

SAF

12.4 kt

76% of SAF reported was claimed under EU ETS

SAF claim by MBM scheme



73.3% of SAF reported was not categorised

RFEUA eligible category	Fuel quantity	Share
Aviation biofuels	1.14 kt	9.2%
Other aviation biofuels	2.16 kt	17%
Advanced aviation biofuels	-	-
Not categorised	9.80 kt	73.3%

Sweden

SAF Activity in Sweden

SAF activity in Sweden continues to grow, with new production facility announcements made since the publication of last year's *State of the EU SAF Market in 2023* report. The Member State already hosts one operational HEFA-based facility.

Sweden's first operational SAF facility—St1 and SCA's Gothenburg plant—was commissioned in 2024 and has an annual renewable fuel capacity of 200 kt using HEFA technology.[162] Preem is also developing HEFA-based facilities in Sweden. The Gothenburg-based Viking project, with a total capacity of 800 kt (estimated 300 kt of SAF), is scheduled to begin operations in 2027.[163] Preem's Lysekil-based ICR project has announced an annual SAF capacity of 480 kt, with commissioning planned for 2029.[164]

Sweden has an abundance of forestry residue, which all four announced advanced aviation biofuel projects intend to use as feedstock. Among them is Colabit's biorefinery in Gävle, which aims to produce 400 kt of biofuels annually (estimated 200 kt of SAF) using AtJ technology.[165] St1 and SCA are also collaborating on BioÖstrand, a project that will process forestry residue using FT technology. BioÖstrand is expected to be commissioned in 2029, with an annual SAF capacity of 185 kt.[166]

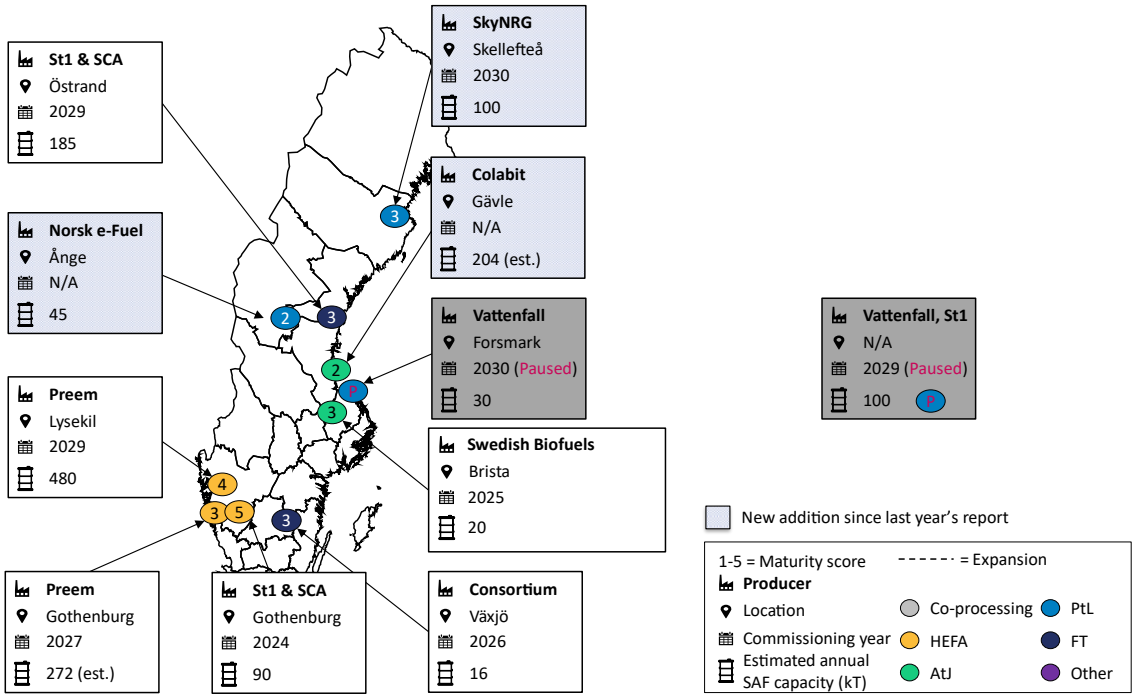


Figure 30 – Map of SAF production facilities in Sweden.

Sweden also has a growing share of renewable energy, leading to a growing interest for synthetic fuel projects.[167]

[162] ST1 and SCA Gothenburg facility commissioning.
[163] Project Viking.
[164] ICR project.
[165] Colabit biorefinery.
[166] BioÖstrand plant.
[167] Sweden renewable energy share trend (2000-2021).

Since the last *State of the EU SAF Market in 2023* report, two additional synthetic fuel plants were announced. SkyNRG and Skellefteå Kraft plan to produce 100 kt of SAF annually from 2030.[168] In February 2025, Norsk e-Fuel, in collaboration with Prime Capital, and RES announced the Ånge-based Alby project, aiming for 80 kt of synthetic fuels annually.[169]

Swedish energy company Vattenfall was also involved in two synthetic fuel projects. Project Hy X, in collaboration with St1, was aiming for production of 100 kt of SAF annually from 2029.[170] Additionally, Forsmark-based project HySkies planned to produce 80 kt of SAF annually starting in 2030 using biogenic CO2 from wood waste.[171] However, development of these projects has been paused with no indication of future plans.[172]

To stimulate SAF development and uplift in the country, Swedish airport group Swedavia has offered SAF incentives to airlines that operate at its airports for the past five years.[173] In both 2023 and 2024, Swedavia offered a pot of 40m SEK (3.7m EUR).

[168] SkyNRG and Skellefteå Kraft.
[169] Project Alby.
[170] Project Hy X.
[171] Project HySkies.
[172] Pausing of Vattenfall led projects.
[173] Swedavia SAF incentives.

6. Annexes

6.1 List of EU based SAF projects

COUNTRY	PRODUCER	PROJECT/FACILITY	COMMISSIONING YEAR	REFERENCE
Austria	OMV	Schwechat refinery	2022	[LINK]
France	ExxonMobil	Gravenchon refinery	2023	[LINK]
	ExxonMobil	Gravenchon refinery - Expansion	2025	[LINK]
	TotalEnergies	TotalEnergies Normandy	2022	[LINK]
	TotalEnergies	TotalEnergies Normandy - Expansion	2025	[LINK]
Germany	BP	Lingen refinery	2022	[LINK]
	BP	Gelsenkirchen refinery	2025	[LINK]
Italy	ENI	Livorno refinery	2022	[LINK]
	ENI	Taranto refinery	2021	[LINK]
Spain	Repsol	Tarragona refinery	2021	[LINK]
	Repsol	Puertollano refinery	2020	[LINK]
	Repsol	Petronor refinery	2021	[LINK]
	Repsol	Coruña refinery	2025	MS feedback
	BP	Castellón refinery	2023	[LINK]
	Moeve	Huelva refinery	2023	[LINK]

Table 16 - Operating/announced co-processing facilities.

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
Belgium	Terra Mater	North Sea Port	AtJ	N/A	[LINK]
Denmark	Arcadia eFuels	Endor	PtL	2028	[LINK]
	Kosan Gas, European Energy, Vertimass	MeSAF pilot plant	MtJ	2024	[LINK]
	Kosan Gas, European Energy, Vertimass	MeSAF – Expansion	MtJ	N/A	[LINK]
	Metafuels, European Energy	Metafuels plant	MtJ	N/A	[LINK]
	CIP	FjordPtX	PtL	2029	[LINK]
Finland	Neste	Porvoo	HEFA	2016	[LINK]
	Neste	Porvoo – expansion	HEFA	2035	[LINK]
	Norsk e-Fuel	Rauma	PtL	N/A	[LINK]
	AM Green	N/A	AtJ	2027	[LINK]

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
France	TotalEnergies	TotalEnergies La Mède	HEFA	2021	[LINK]
	TotalEnergies	TotalEnergies La Mède – Expansion	HEFA	2024	[LINK]
	TotalEnergies	TotalEnergies Grand-puits	HEFA	2025	[LINK]
	TotalEnergies	TotalEnergies Grand-puits - Expansion	HEFA	2027	[LINK]
	Global Bioenergies	Global Bioenergies plant	AtJ	2027	[LINK]
	Elyse Energy	BioTJet (au sein du projet E-CHO)	FT	2030	[LINK]
	Elyse Energy & Khimond Greentech	Avebio	PtL	N/A	[LINK]
	Hynamics	Take Kair	PtL	2030	[LINK]
	ENGIE	France KerEAUzen	PtL	2031	[LINK]
	Hy2Gen	Hynovera	PtL	2029	[LINK]
	SAF+ & Lhyfe	SAF+ France plant	PtL	2030	[LINK]
	Hy2GEn & H2V	H2V Marseille Fos	MtJ	2030	[LINK]
	Verso Energy	ReSTart	MtJ	N/A	[LINK]
	Verso Energy	DEZiR	MtJ	2029	[LINK]
	Qair	HyLann	PtL	2030	[LINK]
	Haffner Energy & LanzaJet	Paris-Vatry SAF	AtJ	N/A	[LINK]
	EQTEC & CompactGTL	EQTEC GTL demonstration plant	FT	N/A	[LINK]
	Verso Energy	Ep'HyNE	MtJ	2029	[LINK]
	Verso Energy	LiCHEN	MtJ	2029	[LINK]
Germany	HCS Group	Speyer plant	AtJ	2026	[LINK]
	DLR	Technology Platform PtL (TPP)	PtL	2027	[LINK]
	Hy2Gen	Jangada	MtJ	2028	[LINK]
	Ineratec	Frankfurt Hochst plant	PtL	2024	[LINK]
	PtX Lab Lausitz	PtX Lab pilot plant	PtL	N/A	[LINK]
	Sasol ecoFT, Enertag and Cemex	Concrete Chemicals	PtL	2027	[LINK]
	Sasol ecoFT, Enertag and Cemex	Concrete Chemicals – Expansion	PtL	N/A	[LINK]
	Sasol, DHL, HH2E, Airbus	NetZeroLEJ	PtL	2029	[LINK]
	SkyNRG	SkyNRG Germany	PtL	2028	[LINK]
	Atmosfair	Atmosfair Germany	PtL	2021	[LINK]
	Xfuels (EDL)	Hykero	PtL	2027	[LINK]
	Synhelion	DAWN	Other (StL)	2024	[LINK]
	Frauenhofer ISE	SAFari	MtJ	2026	[LINK]
	Sowitec & RR Power Systems	Sowitec pilot plant	PtL	2028	[LINK]
	Spark e-fuels	Spark e-fuels Germany	PtL	2025	[LINK]

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
	Consortium	TAKE OFF	PtL	N/A	[LINK]
	OMV	M2SAF	MtJ	2027	[LINK]
	KIT	reFuel	PtL	N/A	[LINK]
	Bayernoil (Varo Energy)	Bayosine	Other	N/A	[LINK]
	Sunfire	PtLdemonstration plant "Fuel1"	PtL	2016	[LINK]
	Flugplatz Straubing-Wallmühle GmbH	BAVARIA BIO FUELS	FT	2028	MS feedback
	Caphenia	Caphenia Germany I	Other	2025	[LINK]
	Caphenia	Caphenia Germany I – Expansion	Other	2030	[LINK]
Italy	ENI	Gela refinery	HEFA	2025	[LINK]
	ENI	Venice refinery	HEFA	2026	[LINK]
Netherlands	BP	Rotterdam refinery	HEFA	N/A	[LINK]
	Chane Terminals	Koole Tankstorage Botlek	HEFA	2020	[LINK]
	Chane Terminals	Koole Tankstorage Botlek Unit 4 - Expansion	HEFA	2025	[LINK]
	Neste	Neste Rotterdam	HEFA	2024	[LINK]
	Neste	Neste Rotterdam - Expansion	HEFA	2027	[LINK]
	Shell	Shell Rotterdam	HEFA	2025*	[LINK]
	SkyNRG	SkyNRG Delfzijl (DSL-01)	HEFA	2027	[LINK]
	UPM Biofuels	UPM Rotterdam plant	HEFA	N/A*	[LINK]
	Varo Energy & Gunvor	Varo Rotterdam	HEFA	2026	[LINK]
	Ineratec & Zenith Energy Terminals	Ineratec Amsterdam PtL plant	PtL	2027	[LINK]
	SkyNRG	SkyNRG Synkero	PtL	2030*	[LINK]
	Power2X & Advario	Powe2X Rotterdam e-SAF facility	MtJ	N/A	[LINK]
	Gidara	Advanced Methanol Amsterdam	MtJ	2025	[LINK]
Poland	PKN Orlen	Płock plant	HEFA	2025	[LINK]
Portugal	Galp & Mitsui	Sines plant	HEFA	2026	[LINK]
	LIPOR, P2X Europe & Veolia	LIPOR & Veolia PtL plant	PtL	N/A	[LINK]
	LIPOR & Smartenergy	Leça H2 Green Valley	PtL	N/A	[LINK]
	Smartenergy	Galileu Green H2 Valley	PtL	N/A	[LINK]
	P2X Europe & Navigator	P2X-Portugal	PtL	2030	[LINK]
Romania	OMV	Petrobrazi refinery - Expansion (HEFA unit)	HEFA	2028	[LINK]
Spain	BP	Castellón refinery - Expansion (HEFA unit)	HEFA	2030*	[LINK]

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
	Moeve	Huelva refinery - Expansion (HEFA unit)	HEFA	2026	[LINK]
	Repsol	Cartagena refinery	HEFA	2024	[LINK]
	Greenalia & P2X	Breogan	PtL	2027	[LINK]
	Repsol, Petronor, Aramco	Bilbao pilot plant	PtL	2025	[LINK]
	Solarig	Numantia SAF	PtL	2028	[LINK]
	Solarig	Turboleta SAF	PtL	2030	[LINK]
	Synhelion	RISE	Other (StL)	2027	[LINK]
Sweden	Preem	ICR project	HEFA	2029	[LINK]
	Preem	Viking	HEFA	2027	[LINK]
	St1 & SCA	St1 Oy Gothenburg	HEFA	2024	[LINK]
	Swedish Biofuels	Brista plant	AtJ	2025	[LINK]
	SkyNRG (consortium with others)	Smaland pilot plant	FT	2026	[LINK]
	Biorefin-eryÖstrandAB (St1 & SCA)	BioÖstrand	FT	2029	[LINK]
	Vattenfall & LanzaJet	HySkies	PtL	2030*	[LINK]
	Vattenfall, St1	Hy X	PtL	2029*	[LINK]
	Colabit	Colabit biorefinery	AtJ	N/A	[LINK]
	SkyNRG & Skellefteå Kraft	SkyNRG Sweden PtL facility	PtL	2030	[LINK]

Table 17 – EU SAF production projects apart from the co-processing facilities.[174]

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
Austria	AGRANA	Pischelsdorf facility	AtJ	N/A	[LINK]
Belgium	OMV	BioHy (Antwerp)	HEFA	2028	[LINK]
	TotalEnergies	Antwerp refinery	Co-processing	2025	[LINK]
Estonia	Protio	Port of Tallinn	PtL	N/A	[LINK]
Finland	Verso Energy	Oulu facility	PtL	N/A	[LINK]
Germany	Greenlyte Carbon Technologies	SAF Reallabor	PtL	N/A	[LINK]
Latvia	SIA Pars Terminals	Riga facility	HEFA	2026	[LINK]
	NORSAF	Liepaja facility	PtL	N/A	[LINK]
Netherlands	Metafuels	Turbe	MtJ	N/A	[LINK]
Portugal	Smartenergy	Mondego	PtL	N/A	[LINK]
Slovakia	MOL Group	Bratislava refinery	Co-processing	2025	[LINK]
Spain	RIC Energy	N/A	PtL	N/A	[LINK]

[174] Note: **The * symbol indicates a paused project**

COUNTRY	PRODUCER	PROJECT/FACILITY	TECHNOLOGY	COMMISSIONING YEAR	REFERENCE
Sweden	Norsk E-fuel	Alby	PtL	N/A	[LINK]

Table 18 – EU SAF production projects announced or identified after Member State feedback period.[175]

[175] Not used in the SAF pricing assessment or SAF capacity summary results.

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