



ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – International Aviation and Climate Change

EUROPEAN POLICY ACTIONS TO PROMOTE SUSTAINABLE AVIATION FUELS (SAF)

(Presented by Czechia on behalf of the European Union and its Member States¹ and the other Member States of the European Civil Aviation Conference², and EUROCONTROL)

EXECUTIVE SUMMARY

The aim of this paper is to inform the Assembly on the European States' current policy actions to promote the supply and use of Sustainable Aviation Fuels (SAF).

At the Third ECAC Environmental Forum (October 2019), the need was highlighted for sharing best practices and experiences to facilitate technical understanding and to further stimulate SAF policies in European Civil Aviation Conference (ECAC) Member States. With these objectives, an *ad hoc* Sustainable Aviation Fuels Task Group (SAF-TG) was launched in November 2021. Its experts from different European States and organizations are tasked to develop guidance material to support SAF promotion in Europe.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective – <i>Environmental Protection</i>
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1. INTRODUCTION

1.1 An increasing number of European States are taking policy actions to promote the large-scale development and supply of sustainable aviation fuels (SAF), in line with Resolution A40-18³, which requests States to accelerate the appropriate development, deployment and use of SAF. The aim of this paper is to inform the Assembly on the current European States' policy actions to promote the supply and use of Sustainable Aviation Fuels.

1.2 At the Third ECAC Environmental Forum (October 2019) the need for sharing good practices to further stimulate SAF policies in ECAC Member States was highlighted. An *ad hoc* Sustainable Aviation Fuels-Task Group (SAF-TG) was launched in November 2021, with experts from different European States and organizations, tasked to develop guidance to support SAF promotion in Europe.

¹ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden.

² Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Iceland, Republic of Moldova, Monaco, Montenegro, North Macedonia, Norway, San Marino, Serbia, Switzerland, Türkiye, Ukraine, and the United Kingdom.

³ https://www.icao.int/environmental-protection/Documents/Assembly/Resolution_A40-18_Climate_Change.pdf

2. THE EUROPEAN SUSTAINABLE AVIATION FUELS (SAF) POLICY LANDSCAPE

2.1 Sustainable aviation fuels (SAF) have the potential to significantly reduce aircraft emissions and ECAC Member States are embracing their large-scale introduction in line with Resolution A40-18 referred above and with the 2050 ICAO Vision⁴.

2.2 With today's large proportion of aircraft relying on kerosene operating through to 2050 and beyond, SAF are expected to play a key role in the reduction of CO₂ and non-CO₂ emissions.

2.3 A number of European States have established, or announced, national policy actions to promote the supply and use of SAF. The European Commission has also adopted in 2021 a proposal for an EU harmonised SAF regulatory framework - ReFuelEU Aviation⁵ – which proposed a SAF blending mandate applicable to the European Union (EU) industry, including fuel suppliers, airports and airlines across the EU. A summary of those policy initiatives is included below.

2.4 It should be noted that some of the national initiatives from EU States* summarised below, were developed before the launch of the proposal for an EU regulation and may require adaptation in line with the future regulation.

European States' SAF policies and national roadmaps

2.5 **Denmark***: The Danish prime minister announced in her 2022 New Year address that the ambition is to have at least one 100 % green domestic route by 2025. By 2030 all domestic aviation in Denmark should be 100% green (fully fossil-fuel-free). The prime minister noted that Denmark's private sector and universities are working to develop greener technologies and fuels for planes. The Government will in 2022 present a plan for the realisation of the ambitions. In 2019, the Government introduced a climate partnership with the aviation sector, among other sectors, tasked with presenting a proposal on how the sector could contribute to CO₂eq reductions in a just way, supporting Danish competitiveness, exports, jobs, welfare and prosperity. The aviation sector proposed an aviation climate fund to subsidize SAF to make it competitive with conventional jet fuels. The proposal would, according to the climate partnership, lead to a minimum of 70% CO₂eq reductions on domestic air travel by 2030 compared to 1990 levels, and a minimum of 30% CO₂eq reductions on international air travel by 2030 compared to 2017.

2.6 **Finland***: The Program of the Finnish Government⁶ (page 125) aims to reduce aviation emissions by introducing a blending obligation for sustainable aviation fuels, with a target of 30% renewables by 2030. In this context, an impact assessment report presenting a variety of distribution obligation implementation paths to reduce air traffic emissions was published in December 2020.

2.7 **France***: The French government defined at the end of 2019 its French roadmap for the deployment of sustainable aeronautical biofuels⁷ which sets a SAF blending trajectory of 2% in 2025, 5% in 2030 and 50% in 2050. In July 2021 it launched a call for projects for the development of a French production sector for SAF in line with the SAF annual blending mandate, introduced to reach the roadmap objectives and starting in 2022.

2.8 **Germany***: The 2019 German Government's *Climate Action Program 2030*⁸ sets programs and measures for research and development (R&D) funding as well as financial support for the market uptake of climate-neutral e-fuels for aviation. In the national implementation of the EU Renewable Energy Directive (REDII), Germany agreed to a blending quota for Power to Liquid (PtL)-kerosene starting from 2026 with a quota of 0.5 % PtL-kerosene, 1% in 2028 and 2% in 2030 of kerosene volumes sold in Germany, while at the

⁴ <https://www.icao.int/environmental-protection/GFAAF/pages/ICAO-Vision.aspx>

⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12303-Sustainable-aviation-fuels-ReFuelEU-Aviation_en

⁶ <https://julkaisut.valtioneuvosto.fi/handle/10024/161935>

⁷ <https://www.ecologie.gouv.fr/sites/default/files/Feuille%20de%20route%20fran%C3%A7aise%20pour%20le%20d%C3%A9ploiement%20des%20biocarburants%20a%C3%A9ronautiques%20durables.pdf>

⁸ <https://www.bundesregierung.de/breg-en/issues/climate-action>

same time addressing market distortion. The *National Hydrogen Strategy*⁹ and its implementation reiterates among others the support of hydrogen derivatives such as PtL for aviation. The Federal Government, the German states, the aviation industry, the petroleum industry as well as plant manufacturers and operators developed in 2021 the PtL Roadmap for Aviation¹⁰: a joint roadmap for the market ramp-up of sustainable aviation fuel from renewable energy sources.

2.9 **Netherlands***: In March 2020, the Dutch government announced the introduction of a SAF blending obligation by 2023, if an equivalent European obligation is not put in place by this time. This announcement was made on the basis of a Study on the potential effectiveness of a renewable energy obligation for aviation in the Netherlands¹¹ carried out for the Dutch government in 2019.

2.10 **Norway**: The Norwegian government established a blending obligation to aviation fuel suppliers for a 0.5% minimum content of advanced biofuel from 1 January 2020. The Norwegian government has stipulated that the biomass to produce it should come from wastes and residues. The fossil-free aviation roadmap was established as goal in the Norwegian aviation industry sustainability report in 2020¹². A dedicated aviation industry SAF roadmap¹³ was then published in 2021.

2.11 **Spain***: In 2019 the Spanish government proposed two legislative frameworks which included a SAF obligation to aviation fuel suppliers: The Spanish 2021-2030 Integrated Plan for Energy and Climate¹⁴ submitted to the EU in 2019, which recognises the relevance of SAF, in particular the development of advanced biofuels. The Spanish Climate Change Law¹⁵ approved in 2021, enables the government to establish annual renewable energy targets in the aviation sector, with special focus on advanced biofuels and other renewable fuels of non-biological origin. A public-private value-chain platform¹⁶ was created in 2011 as a means to stimulate cooperation in setting a SAF roadmap and to enhance deployment and R&D. The Spanish Centres of Excellence, promoted by the Civil Aviation Authority (AESA), have also a section devoted to defining the key actions for SAF deployment as a central element of aviation decarbonisation.

2.12 **Sweden***: The Swedish Government has established a regulation¹⁷ for GHG emissions reduction obligation for jet fuel suppliers to promote the use of SAF, which came into force on 1 August 2021 and stretches until the end of 2030 with decreasing GHG intensity of fuels each year. SAF blend ratios will be needed to meet the reduction obligation, increasing approximately from 1% by volume in 2021 to 30% in 2030. There is a national industry roadmap for fossil free aviation, including both SAF and electric aviation, under the *Fossil Free Sweden* initiative¹⁸ of the Swedish Government.

2.13 **Switzerland**: In its long-term climate strategy, the Swiss Federal Council has identified synthetic SAF as the most promising measure to lower emissions of aviation and thus contribute to the national goal of reaching net-zero CO₂ emissions in 2050. Based on this, a legislative proposal is in a consultation stage and includes financial support for the development of SAF production technologies and SAF quota.

2.14 **Turkey**: The Turkish government is planning to develop SAF dedicated regulations in the short term, to create incentive opportunities and promote SAF producers in the country. The DGCA works on obliged blend ratios percentages to serve SAF on airports. There are national industry initiatives in the R&D phase, targeting to be in the production phase between 2025 and 2030.

⁹ <https://www.bmwi.de/Redaktion/EN/Publikationen/Energie/the-national-hydrogen-strategy.html>

¹⁰ https://www.bmvi.de/SharedDocs/DE/Anlage/G/ptl-roadmap-englisch.pdf?__blob=publicationFile

¹¹ <https://www.rijksoverheid.nl/documenten/rapporten/2020/03/03/bijlage-1-onderzoek-e4tech-sgu-obligation-for-aviation-in-the-netherlands-final-v3>

¹² <https://avinor.no/globalassets/konsern/om-oss/rapporter/en/aviation-in-norway-sustainability-and-social-benefit-2020.pdf>

¹³ <https://avinor.no/globalassets/konsern/om-oss/rapporter/en/programme-for-increased-production-and-uptake-of-sustainable-aviation-fuels-2021.pdf>

¹⁴ <https://www.miteco.gob.es/es/prensa/pniec.aspx>

¹⁵ https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-8447

¹⁶ https://www.mitma.gob.es/recursos_mfom/11033001.pdf

¹⁷ https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-20171201-om-reduktion-av-vaxthusgasutslapp_sfs-2017-1201

¹⁸ <https://fossilfrittserverige.se/en/start-english/#:~:text=Fossil%20Free%20Sweden%20is%20an.opportunities%20by%20going%20fossil%20free>

2.15 **United Kingdom:** The UK Government ran a consultation¹⁹ in 2021 on the introduction of a SAF mandate to drive SAF uptake in the UK and reduce GHG emissions from the sector. The consultation set out a variety of potential SAF uptake scenarios, which deliver up to 10% SAF by 2030 and up to 75 percent by 2050. Officials are currently reviewing the responses received to the consultation and aim to confirm a mandate as well as targets, timescales and practicalities in a second consultation in 2022. In addition, *Sustainable Aviation*, which is an industry coalition bringing together UK aviation stakeholders, developed a SAF roadmap in 2020. The UK also launched in 2020 the Jet Zero Council which is an industry-government partnership with the aim of accelerating the decarbonisation of the aviation sector, and which has a SAF delivery group, providing advice on how government and industry can work together to establish UK production facilities and accelerate the delivery of SAF.

The European Union's ReFuelEU Aviation initiative

2.16 The European Commission presented in July 2021 the *ReFuelEU Aviation*²⁰ proposal, establishing a harmonised SAF regulatory framework across the European Union. It aims at boosting the supply and demand for SAF in the EU, through a blending obligation on entities distributing fuel to EU airports²¹. The obligation would commence from 2025 at 2% SAF, gradually increasing to 63% in 2050. The proposal also includes a sub-obligation of 0.7% for synthetic fuels²² from 2030, gradually increasing to 28% in 2050. To avoid fuel tankering, an obligation is also placed on aircraft operators²³ to uplift fuel from EU airports. This proposal is undergoing the EU legislative process. Once it is completed and the new regulation is adopted, it will become applicable in the territories of EU Member States.

2.17 As a flanking measure accompanying the ReFuelEU Aviation proposal, the European Union is funding a preparatory action managed by EASA to set up a European Clearing House for SAF. The primary aim of an EU Clearing House would be to support fuel producers wishing to certify SAF against the fuel specification standards by providing a single and independent European capability. It would aim to remove technical barriers to facilitate increased SAF use and work in close cooperation with other such clearing house initiatives.

2.18 The *Renewable and Low-Carbon Fuels Value Chain Industrial Alliance* is another flanking measure launched in April 2022. The alliance focuses on boosting production and supply of renewable and low-carbon fuels in the aviation and waterborne sectors and remains open to all relevant stakeholders.

3. THE SUSTAINABLE AVIATION FUELS TASK-GROUP

3.1 As of November 2021 the ECAC/EU Sustainable Aviation Fuels Task Group (SAF-TG), formed by experts from different European States and organizations, aims to develop guidance material promoting technical understanding, exchanging on good practices, and information on harmonised policy developments to boost SAF deployment in ECAC States.

3.2 The guidance should help States to develop SAF strategies or policies, and to adopt/adapt good practices to promote supply and demand at commercial scale once a policy framework is in place. The SAF-TG is tasked to formulate recommendations on good practices aimed to share positive experiences and facilitate mutual learning. The guidance may also facilitate a progressive nearing of approaches across ECAC States and is intended as an initial step towards harmonisation in Europe.

— END —

¹⁹ <https://www.gov.uk/government/consultations/mandating-the-use-of-sustainable-aviation-fuels-in-the-uk>

²⁰ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12303-Sustainable-aviation-fuels-ReFuelEU-Aviation_en

²¹ Airports where passenger traffic was higher than 1 million passengers or where the freight traffic was higher than 100,000 tons in the reporting period, and are not situated in an outermost region

²² In the regulatory proposal (COM(2021) 561 final, Page 135) Synthetic fuels are defined as *sustainable aviation fuels based on non-biologic origin (RFNBOs), where the source of energy is not based on crops, or residues or waste, but obtained from renewable electricity*

²³ Who performed at least 729 commercial air transport flights departing from Union airports in the reporting period