

THE SUSTAINABLE AVIATION FUEL COALITION

WHO WE ARE

The Sustainable Aviation Fuel (SAF) Coalition is made up of the world's leading business aviation industry associations representing manufacturers, operators, FBOs, fuel suppliers and others. The associations are the European Business Aviation Association (EBAA), the General Aviation Manufacturers Association (GAMA), the International Business Aviation Council (IBAC), the National Air Transportation Association (NATA) and the National Business Aviation Association (NBAA).

The coalition is committed to educating the community about the use of SAF and promoting its use around the world. We hope that this brochure answers your questions about sustainable aviation fuel.



These FAQs come directly from the Sustainable Aviation Fuel Coalition's Business Aviation Guide To The Use of Sustainable Alternative Jet Fuel (SAJF), May 2018



COALITION MEMBERS



FREQUENTLY ASKED QUESTIONS

WHAT IS SAF AND HOW IS IT MADE?

SAF is a blend of conventional Jet A/A-1 fuels and synthetic fuel blending agents produced via one of five following ASTM-approved pathways:

1. Fischer-Tropsch synthesized isoparaffinic kerosene (FT-SPK)
2. Hydroprocessed fatty acid esters and fatty acids (HEFA)
3. Synthesized isoparaffins (SIP)
4. Fischer-Tropsch synthesized kerosene with aromatics (FT-SKA)
5. Alcohol-to-jet (ATJ)

DO I NEED SPECIAL APPROVAL FOR MY AIRCRAFT TO FLY WITH SAF?

No. Not if it is produced to the requirements of ASTM D7566 and re-identified as ASTM D1655 fuel. FAA Special Airworthiness Information Bulletin (SAIB) NE-11-56R213 summarizes, “jet fuel made from ... synthetic blending components that meet the requirements of ASTM International Standard D7566 are acceptable for use on aircraft and engines certificated for operation with D1655 Jet A or Jet A-1 fuel if they are re-identified as D1655 fuel... and meet the approved operating limitations for aircraft and engines certificated to operate with D1655 fuel, unless otherwise prohibited by the engine or aircraft type certificate (TC) holder.” The bulletin states:

1. “These fuels are acceptable for use on those aircraft and engines that are approved to operate with Jet A or Jet A-1 fuels that meet the D1655 standard.
1. Aircraft Flight Manuals, Pilot Operating Instructions, or TCDs that specify ASTM D1655 Jet A or Jet A-1 fuel as an operating limitation do not require revision to use these fuels.
1. Current aircraft placards that specify Jet A or Jet A-1 fuels do not require revision and are acceptable for use with these fuels.
1. Operating, maintenance, or other service documents for aircraft and engines that are approved to operate with ASTM D1655 Jet A or Jet A-1 fuel do not require revision and are acceptable for use when operating with these fuels.
1. There are no additional or revised maintenance actions, inspections, or service requirements necessary when operating with these fuels.”

WHAT SORT OF ACTUAL EMISSIONS REDUCTIONS CAN I EXPECT TO ACHIEVE BY USING SAF?

The use of SAF results in a reduction in carbon-dioxide (CO₂) emissions across its life cycle. That is, even when considering the emissions produced in growing, transporting, harvesting, processing, and refining a particular feedstock, SAF has been shown to provide significant reductions in overall CO₂ lifecycle emissions compared to fossil fuels. For example: a large cabin modern business jet on a 1,000 nautical mile mission might burn enough fuel to produce ~22,787 lbs. of CO₂. If such a flight were to use SAF (HEFA-SPK pathway) at a blend of 30% SAF to 70% conventional Jet-A fuel, the same mission would result in a net reduction of CO₂ emissions of ~4,100 lbs. (18%) on a lifecycle basis.

IS SAF MORE EXPENSIVE THAN TRADITIONAL JET FUEL?

Currently, the cost of a sustainable blended fuel is typically higher than the price of petroleum-based Jet-A. Please contact your fuel supplier for cost specifics.

WILL MY AIRCRAFT PERFORM THE SAME UNDER ALL CONDITIONS (EG, EXTREME HOT AND COLD TEMPERATURES)?

SAF blended fuel is fully approved to meet the specifications of petroleum-based fuels. This means that it performs just like conventional fuel as it meets the specifications contained in ASTM D1655.

DOES THE USE OF SAF HAVE AN IMPACT ON APU AND MAIN POWER PLANT PERFORMANCE, OTHER COMPONENTS INCLUDING FUEL TANKS AND FUEL SYSTEMS, AIRFRAME, MAINTENANCE PROCEDURES/ REQUIREMENTS, AND/OR PRODUCT WARRANTIES?

Selected aircraft OEMs, engine and APU manufacturers, as well as manufacturers of other components, participated in the testing process and that testing found that SAF is compatible for use in their products with no modifications required, and with no need for recertification or additional validation.

IS SAF THE SAME AS ALT FUEL OR BIOFUEL OR SYNTHETIC FUEL?

There are various terms used to describe non-fossilbased hydrocarbon fuel. Often, the term “biofuel” is used. However, the aviation industry avoids this terminology as the term is not sufficiently broad to cover all envisioned feedstocks, nor does it specify the sustainability aspect of these fuels (which aviation highlights). Some biofuels, if produced from nonsustainable feedstocks, such as unsustainably produced crops that foster significant land use change, can cause additional environmental damage, making them unsustainable for aviation’s purposes.

ARE THERE SPECIAL QUALITY CONTROL PROCEDURES REQUIRED FOR STORAGE AND DELIVERY OF SAF?

FBOs should follow the quality control procedures recommended by their fuel supplier for the SAF, which should tend to be identical to those used for any jet fuel.

IF AN FBO IS INTERESTED IN PURCHASING AND SELLING SAF, WHAT SHOULD IT DO?

It is important for an FBO desiring to sell SAF to:

1. become well acquainted in advance with the relevant ASTM D7566 standard, to ensure that only qualified fuels are involved in any supply transactions.
2. understand how, if at all, the FBO could participate in the acquisition and handling of fuel to facilitate the introduction of SAF by contacting their fuel supplier for more information.

HOW SHOULD AN FBO HANDLE CLIENT CONCERNS REGARDING COMPATIBILITY OF SAF WITH AIRCRAFT COMPONENTS?

Aircraft OEMs, engine and APU manufacturers, as well as manufacturers of other components, participated in the testing process and that testing found that SAF is compatible for use in their products with no modifications required, and with no need for recertification or additional validation. If clients still have concerns, the FBO should direct clients to contact their OEM regarding any compatibility issues.