



FAA FACTS

Oct. 2023

pressoffice@faa.gov

Putting Sustainable Aviation Fuels to the Test

If we want to achieve America's goal of net-zero aviation emissions by 2050, sustainable aviation fuel (SAF) will carry us for a large part of the way. But what emissions do we create when SAF is burned in a jet engine?

During October, the FAA is participating in an [environmental project](#) that will measure aircraft emissions and ice crystal formation from a Boeing aircraft flying with 100 percent sustainable aviation fuel derived from vegetable oils and waste oils. The FAA is providing more than \$2.5 million in funding to purchase the SAF for the aircraft and for the work of scientists and academic researchers.



Gaining knowledge about the effect of sustainable aviation fuels on our environment will accelerate the use of SAF and the development of low-emission aviation technology. This supports the FAA's [\\$300 million in funding](#) for infrastructure projects aimed at producing more sustainable aviation fuel and building up regional SAF supply chains.

The SAF emissions and contrail measurement flights will operate with GE LEAP 1B engines on a Boeing 737 Eco-Demonstrator aircraft owned by United Airlines. A B737 crew will operate multiple flights from Paine Field in Seattle throughout this month using 100 percent sustainable aviation fuel. A NASA jet aircraft will trail the B737 to measure the size and composition of emissions and analyze any contrails created. Here is information about [SAF emissions](#), [contrail analysis](#), and on [contrails in general](#).

Co-participants in the initiative are the FAA, Boeing, NASA, GE Aerospace, United Airlines, the German Aerospace Centre, World Energy Fuel, Aerodyne Research, the Massachusetts Institute of Technology, and Missouri University Science & Technology (MS&T).

The FAA has purchased the SAF from [World Energy](#) for both aircraft and is funding the work of the science and academic analysts and researchers from Aerodyne, M.I.T. and MS&T.

Find more information about the FAA and its sustainability efforts at its [Sustainability Gateway Page](#).

A NASA jet aircraft will trail the B737 Eco-Demonstrator plane to measure the size and composition of emissions and analyze any contrails created. The FAA is funding the purchase of the sustainable aviation fuel and its researchers will provide the post-flight analysis.



