

Performance of Global Bioenergies' sustainable aviation fuel confirmed: injection and combustion tests carried out

Injection tests defined in collaboration with Safran Aircraft Engines and carried out by CERTAM

Combustion tests performed by ONERA

Evry, 19 March 2025 – 05:45 p.m.: Global Bioenergies' Sustainable Aviation Fuel (SAF) has been tested in collaboration with Safran on the injection phase, and with ONERA on the combustion phase.

The Company supplied a batch of SAF to Safran, the world's second-largest aircraft equipment manufacturer, to evaluate the specific properties of Global Bioenergies' SAF, used in its neat form, during the fuel injection phase prior to combustion in the engine. This phase is crucial to ensure, among other things, high efficiency and therefore lower fuel consumption. A test campaign was carried out near Rouen at CERTAM (regional innovation center of technological exchange in aerothermal and engines).

Frédéric Ollivier, CTO at Global Bioenergies, says: " *The various simulations carried out by the CERTAM demonstrator have enabled us to test the behavior of our fuel under various conditions representative of an aircraft engine. Injecting Global Bioenergies' SAF, without blending it with kerosene, produces a spray of fine, homogeneous droplets, very similar to the spray from Jet A-1, the standard fossil kerosene. These tests are feeding into the data that enable a better match between engine and fuel.*"

ONERA, the French aerospace research center, has also carried out tests on a laboratory burner to quantify the particles emitted during combustion of Global Bioenergies' SAF.

Emission levels were measured using neat SAF from Global Bioenergies, Jet A-1 as a control, and a blend of 50% SAF and 50% Jet A-1 (the maximum proportion currently authorized by ASTM when certifying Global Bioenergies' process). These three batches of fuel were injected into the laboratory burner in order to quantify and characterize the non-volatile particles emitted during combustion, i.e. soot. Several representative conditions were tested to simulate soot emission levels, both on the ground and in flight.

The results obtained using neat SAF from Global Bioenergies show a 40-99% reduction in soot emissions compared with Jet A-1 fuel, depending on the conditions tested in the laboratory. The results obtained from the 50-50 blend show a reduction in particulate matter that is globally proportional to the SAF incorporation rate.

Louise Ganeau, research engineer at ONERA, explains: "Soot emitted during fuel combustion has an impact on air quality in airport areas. Incorporating SAFs such as Global Bioenergies' into the fossil fuel landscape would help reduce soot emissions locally, and cut particulate pollution. Furthermore, from an environmental standpoint, SAF have a role to play in reducing net CO₂ emissions thanks to the way they are manufactured."

Marc Delcourt, co-founder and CEO of Global Bioenergies, concludes: "The properties of our fuel had already been validated when it obtained ASTM certification. The tests carried out today in the best French laboratories go even further in characterizing our product. These validations strengthen the attractiveness of our offer."

About GLOBAL BIOENERGIES

As a committed player in the fight against global warming, Global Bioenergies has developed a unique process to produce SAF and e-SAF from renewable resources, thereby meeting the challenges of decarbonising air transport. Its technology is one of the very few solutions already certified by ASTM. Its products also meet the high standards of the cosmetics industry, and L'Oréal is its largest shareholder with a 13.5% stake. Global Bioenergies is listed on Euronext Growth in Paris (FR0011052257 - ALGBE).

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