



GIVING WING TO SUSTAINABLE BUSINESS AVIATION - GULFSTREAM & ROLLS-ROYCE

News / Business aviation, Manufacturer



The announcement is just so very impressive - business-jet industry first original equipment manufacturer to fly on 100% sustainable aviation fuel - Gulfstream Aerospace! The flight took place on a Gulfstream G650 from Gulfstream's worldwide headquarters in Savannah and was flown in partnership with engine supplier Rolls-Royce on the G650 BR725 engine. Gulfstream sustainability strategy encompasses three pillars — energy and emissions; operations; and culture and learning — and supports industry goals established by the National Business Aviation Association, the General Aviation Manufacturers Association and the International Business Aviation Council. The goals are a 2% improvement in fuel-efficiency per year from 2010 to 2020; carbon-neutral growth from 2020 onward; and net-zero carbon dioxide emissions by 2050.

Mark Burns, president, Gulfstream, commented: "At Gulfstream, leading our industry closer to decarbonization is a long-standing priority, and testing, evaluating and promoting new

developments in SAF takes us another step closer to that goal. We are grateful for our partnership with Rolls-Royce to be able to demonstrate yet another milestone in these efforts. Gulfstream has long prioritized sustainable products and practices through innovations in aerodynamics, aircraft technologies, engineering, manufacturing and infrastructure, as well as in facilities operations and our investments in SAF research and development,” said Burns.

The SAF that was used in the test consists of two components: Hydroprocessed Esters and Fatty Acids, produced from waste fat and waste plant oils by low-carbon fuel specialist World Energy in Paramount, California, and Synthesised Aromatic Kerosene made from waste plant-based sugars by Wisconsin-based Virent Inc. This innovative and fully sustainable fuel in development eliminates the need for the addition of further petroleum-based components and enables a 100% drop-in SAF that can be used in existing jet engines and infrastructure without any modifications. This sustainable fuel has the potential to reduce net CO2 lifecycle emissions by about 80% compared to conventional jet fuel, with the possibility of further reductions in future.

Dr Joerg Au, Chief Engineer – Business Aviation and Engineering Director Rolls-Royce Deutschland, said: “Sustainable aviation fuels are essential for the decarbonisation of the skies, as they have the potential to significantly reduce the carbon emissions of aviation and we have already proved they can be used as a drop-in fuel to power existing engines. This flight test with Gulfstream is another proof point that demonstrates the compatibility of our engines with SAF, bringing us another important step closer to enabling our customers to achieve net zero carbon emissions.”

This in-development and fully sustainable fuel eliminates the need for the addition of further petroleum-based components and enables a 100% drop-in SAF that can be used in existing jet engines and infrastructure without any modifications. This sustainable fuel has the potential to reduce net CO2 life cycle emissions by nearly 80% compared with conventional jet fuel, with the possibility of further reductions.



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