A380 takes to the skies with 100 per cent SAF | Photo source Airbus S.A.S - photo by A. Doumenjou / Master Films

AIRBUS A380 COMPLETES FLIGHT POWERED ENTIRELY BY SUSTAINABLE AVIATION FUEL

MOBILITY & TRANSPORT

Airbus has announced that it has completed a test flight of the A380 using 100 per cent sustainable aviation fuel from cooking oil and other waste fats

Spotted: Aviation accounts for around 2.5 per cent of global carbon dioxide, but its actual contribution to climate change is much higher. This is because air travel not only emits CO2, but also a number of other pollutants—such as nitrogen oxides and particulates—along with water vapour, which triggers cloud formation. These emissions are also released higher up in the atmosphere than with other forms of transportation, resulting in a greater warming effect. For this reason, replacing aviation fuel with more sustainable options has become something of a holy grail in the sustainability sector.

Now, Airbus has made new progress, with an A380 flight powered entirely with sustainable aviation fuel (SAF). The flight used an A380 test aircraft MSN 1 and lasted around three hours – taking off from Blagnac Airport in Toulouse. The 27 tonnes of SAF fuel used in the flight was provided by TotalEnergies, and was produced locally, in Normandy.

Like other brands of SAF, the TotalEnergies fuel is made from hydroprocessed esters and fatty acids (HEFA). These are free of aromatics and sulphur, and were made primarily using used cooking oil and other waste fats, such as animal waste fat as feedstock. These fats are then refined to produce a fuel that has a very similar chemistry to traditional jet fuel. However, in addition to being produced from waste, rather than fossil fuels, SAF also contains fewer impurities (such as sulphur), which means fewer emissions.

According to Airbus, this is the third Airbus aircraft type to fly on 100 per cent SAF in the past year. Earlier flights included an Airbus A350 in March 2021, and an A319neo single-aisle aircraft in October 2021. However, the A380 is the largest of the three to fly entirely on SAF. The company claims that, “Increasing the use of SAF remains a key pathway to achieving the industry’s ambition of net-zero carbon emissions by 2050.”

At the moment, each passenger on a round-trip flight between New York and London requires more emissions than used by an average person in Paraguay during an entire year. So it’s no wonder that SAF is increasingly in the spotlight. Springwise has seen this with innovations such as an SAF made using captured CO2. And in 2021, United Airlines completed the world’s first commercial flight powered entirely by SAF.

Written By: Lisa Magloff

11th April 2022
Website: airbus.com
Contact: airbus.com/en/airbus-contact-us

Download PDF

Takeaway:

While SAF is already in relatively common use, it is almost always blended 50/50 with traditional jet fuel. While this blend has been shown to reduce overall CO2 lifecycle emissions by up to 80 per cent, compared to traditional jet fuel, the use of 100 per cent SAF could result in much greater reduction in pollutants and particulate matter. This is important because air travel is continuing to grow rapidly – from around 2.4 billion passengers in 2010, to an estimated 8.2 billion by 2050. In order to tackle climate change, aviation is going to need to become a lot more sustainable – and fast.