

# [***-Virent's bio-based fuel used in historic commercial passenger flight using 100% sustainable aviation fuel***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6471-2M61-JD3Y-Y209-00000-00&context=1516831)

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**Body**

MADISON - Virent contributed to an aviation industry first, as United Airlines flew an aircraft full of passengers using 100% sustainable aviation fuel (SAF) in one engine and petroleum-based jet fuel in the other.

Virent, a Marathon Petroleum Corp. subsidiary, used its BioForm process to produce synthesized aromatic kerosene (SAK) a critical component that made the 100% SAF possible.

'Virent's proprietary technology converts widely available, plant-based sugars into fuels that are 100% renewable and 100% compatible with today's aviation fleet,' said Virent president and general counsel Dave Kettner. 'For this flight, Virent used corn sugar to manufacture the fuel component that made petroleum blending unnecessary, and so yesterday's flight demonstrates that we can power sustainable aviation without modifying today's modern airline engines or the infrastructure that serves the airline industry.'

Most SAF - typically made from used cooking oil or vegetable oil - has to be blended with petroleum products because SAF doesn't have a component called 'aromatics,' which is required to meet today's jet fuel specifications. Virent's SAK, made from renewable plant sugars, provides those aromatics.

Because Virent's SAK is made from plant-based feedstocks, the carbon impact on a lifecycle basis is less than that of petroleum-based fuels. Virent is targeting greater than 50% reduction in greenhouse gas ***emissions*** for SAK from a commercial project, with the potential to achieve net zero ***emissions*** using options such as renewable electricity, renewable natural gas and carbon capture and sequestration. Virent has also developed data from engine testing that shows an SAF blend using its SAK is cleaner burning and has lower particulate matter ***emissions*** than conventional jet fuels.

Passengers on the historic demonstration flight included media, elected officials, and executives from the companies that collaborated on the effort: United Airlines, Boeing, CFM International (a joint venture between GE and Safran Aircraft Engines), Virent, Marathon Petroleum and World Energy a sustainable aviation fuel manufacturer. 'SAF is a relatively new fuel technology, and it's critical that companies like this group come together to bring SAF into more widespread use,' said Kettner.

United Airlines yesterday also announced additional corporate participants in the airline's Eco-Skies AllianceSM program to collectively contribute toward the purchase of SAF. 'Partnering with other companies that are committed to leading in sustainable aviation is an important part of moving SAF forward,' said Ray Brooks, executive vice president of refining for Marathon Petroleum Corporation. 'Eco Skies Partners are a great example of the kind of demand signals necessary to bring SAF production to industry scale.'

Brooks pointed out that air transport will continue to be one of the primary ways people build connections with each other and the world around them, and today's modern airline industry requires energy-dense liquid fuels. 'Virent's technology is helping to broaden our ability to meet the world's aviation needs sustainably,' he said. 'We're proud to join forces with these forward-looking companies that are leading the way in sustainable aviation. This is a great opportunity to meet the needs of today while investing in an energy-diverse future.'

About Virent

Virent is a wholly owned subsidiary of Marathon Petroleum Corporation, an integrated refining, marketing and midstream logistics company. Virent uses its patented BioForming technology to create the fuels and chemicals the world needs from a wide range of naturally occurring, renewable resources. Virent's patented chemistry converts biobased carbohydrate feedstocks into products molecularly identical to those made from petroleum. Virent's technology can produce a range of fuel products, including gasoline, diesel, and jet fuel, as well as chemicals used for plastics, fibers and films. Virent is currently working with Johnson Matthey to further develop the BioForming technology and license it for future commercialization.

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