

SWISS becomes world's first airline to integrate Synhelion solar fuel into its flight operations

Zurich, July 24, 2025

SWISS has become the first airline in the world to integrate the solar fuel manufactured by Swiss-based clean-tech pioneer Synhelion into its flight operations. The action marks a milestone for both partners on the journey to more sustainable aviation. Alternative fuels such as Synhelion's solar fuel are crucial to the industry's endeavors to achieve its ambitious carbon reduction objectives.

Swiss International Air Lines (SWISS) has become the first airline in the world to integrate the solar fuel manufactured by the Swiss-based Synhelion clean-tech company into its regular flight operations. Synhelion delivered a first 190-liter barrel of synthetic crude oil from its DAWN production facility to a refinery in Northern Germany, where the oil, which had been manufactured using solar energy, was processed into certified Jet-A-1 aviation fuel. The fuel was then fed into SWISS's flight operations infrastructure via the fuel supply system at Hamburg Airport.

The fuel supplied are some seven percent of the fuel required for a Hamburg-Zurich flight – a symbolic start, but a hugely significant one. It may sound little, but it's a landmark for the aviation sector, confirming that Synhelion's technology works and is ready for the next steps ahead. Its seamless integration into existing refinery processes is crucial to securing the swift global scalability of Synhelion's technology.

"This first delivery of Synhelion's solar fuel marks a genuine milestone in our long-standing partnership," confirms SWISS CEO Jens Fehlinger. "We have intentionally invested in a Swiss start-up; and we are delighted to celebrate this landmark achievement together. This is the first time that solar fuel has been used in civil aviation. And we are truly proud to be playing such a pioneering role, in partnership with Synhelion, in driving and developing this vital new technology for a more sustainable aviation sector."

"Sustainable fuels are a key lever in reducing air transport's reliance on fossil fuels," adds Synhelion co-founder and co-CEO Philipp Furler. "Our delivery of this first barrel to SWISS may be a symbolic action. But it's a concrete one, too, towards a more sustainable aviation sector. This milestone brings us one step closer to globally scaling up our solar fuel technology. And we're very grateful to have such invaluable support from our partners at SWISS and the Lufthansa Group as we continue on this journey."

Next steps: certification and scale-up

Sustainable fuels such as Synhelion's solar fuel are key if the aviation sector is to achieve its ambitious carbon reduction objectives. This is why it is so vital that all the parties involved play their full part and join other airlines, business and industry, the political world, the research field and consumers in driving and promoting the adoption of such fuels with all possible speed. SWISS has been serving as a strategic partner to Synhelion since 2020 to support the commercialization of the company's pioneering technologies. SWISS has also been an investor in Synhelion since 2022.

Further steps remain before solar fuel can be more extensively used in the aviation sector. The facilities required to ensure continuous production of the fuel and adequate production capacities are now being developed to permit a commercial market entry from 2027. The EU Renewable Energy Directive stipulates that sustainable synthetic fuels must achieve a reduction in greenhouse gas emissions of at least 70 percent compared to fossil kerosene. The life cycle assessment carried out by an independent institution confirms that the fuels from the DAWN production facility can significantly exceed this target. As a next step, Synhelion and SWISS are now jointly driving forward the sustainability certification of the production process and the fuel in accordance with the requirements of the EU directive.

Lufthansa Group: a long-standing commitment to sustainable fuels

As part of the Lufthansa Group, SWISS can both draw and build on decades of experience in the sustainable aviation fuel field. The Lufthansa Group is involved in research and pilot projects, is an active member of various industrywide alliances and offers numerous innovative sustainable aviation fuel products and incentives for both corporate and private customers. It has also concluded a number of long-term fuel procurement agreements which send a strong signal to the global fuel markets and help further drive and shape the industry's transformation.

About Synhelion

Synhelion produces renewable solar fuels to defossilize the transportation sector. The cleantech company has developed a scalable technology to produce synthetic fuels from solar energy. These solar fuels are nearly CO₂-neutral and fully compatible with today's global fuel infrastructure and conventional engines. Since the launch of its industrial-scale plant DAWN in 2024, Synhelion has been producing solar jet fuel, diesel, and gasoline and delivering them to its customers. Backed by international partners across various industry and transportation sectors, Synhelion is on a mission to replace fossil fuels with renewable solar fuels.

For further information visit www.synhelion.com.

About SWISS

Swiss International Air Lines (SWISS) is Switzerland's leading air carrier. With one of Europe's most advanced aircraft fleets, SWISS is a premium airline that provides direct flights from Zurich and Geneva to keep Switzerland connected with Europe and the world. Its Swiss WorldCargo division offers an extensive range of airport-to-airport airfreight services for high-value, time-critical and care-intensive consignments. SWISS embodies Switzerland's traditional values and is dedicated to delivering the highest product and service quality. The company has also set itself ambitious CO₂ goals, and plans to halve its 2019 net CO₂ emissions by 2030 and make its business and operations entirely carbon-neutral by 2050, particularly by promoting the use of sustainable aviation fuels. SWISS is part of the Lufthansa Group, and is also a member of Star Alliance, the world's biggest airline network.

Press picture ([download](#))

➔ Download further pictures [here](#).



Caption: *Jens Fehlinger, CEO of SWISS, and Philipp Furler, Co-CEO & Co-Founder of Synhelion, celebrate the delivery of the first solar jet fuel with the cabin crew. Source: Synhelion.*

Press Kit

Further information about Synhelion as well as image and video material are available in our press kit: <https://synhelion.com/press-kit>.

Contact for media inquiries

Synhelion Media Relations
Carmen Murer, Head Corporate Communication
+41 79 619 52 11
carmen.murer@synhelion.com

SWISS Media Relations
+41 44 564 44 14
media@swiss.com