

Synhelion collaborates with Saipem for the development of a commercial-scale synthetic fuel plant

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Synhelion has selected Saipem to conduct pre-FEED (pre-Front-End Engineering Design) engineering services for a synthetic fuel plant to be developed at RWE's site Hürth-Knapsack in Germany. The project aims to produce RED-compliant renewable fuels and represents another milestone in Synhelion's strategy to scale low-carbon drop-in fuels for the aviation and transportation sectors. The pre-FEED engineering is a key step in consolidating the technical and economic basis of the project ahead of the subsequent FEED phase and final investment decision, which enables the project to proceed to the EPC phase.

Synhelion has commissioned Saipem, a global leader in the engineering and construction of projects for the energy and infrastructure sectors, to support the development of a commercial-scale renewable synthetic fuel plant in Germany. The project combines Synhelion's proprietary fuel technology with Saipem's engineering and execution expertise and RWE's industrial infrastructure and site integration capabilities. Synhelion has reserved a site for the project at RWE's Knapsacker Hügel in Hürth, Germany.

Laying the engineering foundation

The facility is expected to produce 30'000 tons of renewable synthetic fuels per year, with a primary focus on sustainable aviation fuel (SAF), together with synthetic diesel and gasoline for shipping and road transportation. It complements Synhelion's broader pipeline of commercial synthetic fuel projects, including the planned expansion in Jülich.

In its pre-FEED work, Saipem will work closely with Synhelion to advance project engineering and refine the facility's technical configuration. This includes the process integration of Synhelion's proprietary technology with the downstream fuel synthesis and upgrading processes, as well as the definition of utilities and offsites required for the proper operation of the facility.

Strategic location for commercial deployment

The facility is planned to be located within RWE's site area Knapsack in Hürth, Germany, which is transforming toward circular economy applications. The co-location within an established industrial area offers a strong basis for the timely and cost-efficient development of the plant. It enables integration with existing site facilities, such as pipelines and main utilities, while also benefiting from RWE's support throughout site development and permitting.

"Scaling our technology is key to making renewable fuels commercially competitive. Our joint pre-FEED work is an essential step in that direction, establishing a robust engineering basis for one of our commercial-scale plants. Saipem and RWE are strong partners for this scale-up phase," says Philipp Furler, Co-CEO and Co-Founder of Synhelion.

The project in Germany addresses the growing demand for renewable synthetic fuels driven by regulatory frameworks such as the EU's ReFuelEU Aviation initiative, which mandates rising SAF blending quotas from 2025 onward. By enabling fuel production within Europe, projects like this also strengthen regional energy security.



About Synhelion

Synhelion is a cleantech company developing scalable, competitive technology to produce renewable synthetic drop-in fuels for aviation, road, and marine transportation. Its proprietary technology enables the production of nearly CO₂-neutral fuels that are fully compatible with today's engines and fuel infrastructure. By supporting local fuel production, the technology reduces dependence on fossil fuel imports and strengthens energy security and resilience. Since 2024, Synhelion has operated DAWN, its first industrial-scale renewable fuel plant, producing renewable synthetic jet fuel (SAF), diesel, and gasoline. Backed by strategic investors and international partners from various industries and transportation sectors, Synhelion is committed to replacing fossil fuels with synthetic fuels to contribute to a net-zero transportation sector.

For more information, please visit www.synhelion.com.

Press picture ([download](#))



Caption: Visualization of Synhelion's commercial-scale synthetic fuel plant in Hürth, Germany. For illustration purposes only. 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>.

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