Johnson Matthey and bp chosen by EDL to support production of SAF at HyKero plant in Germany
18 October 2023

- Johnson Matthey and bp’s co-developed Fischer Tropsch (FT) CANS™ technology selected for the project.
- The EDL HyKero power-to-liquids SAF plant would be the first of its kind at commercial scale in Germany.
- The licence is the 7th sustainable technologies project contributing to JM’s milestone of winning more than ten additional large-scale projects across Catalyst Technologies and Hydrogen Technologies by end of 2023/24.

Johnson Matthey (JM), a global leader in sustainable technologies, and bp, an international energy company, today announced that EDL Anlagenbau Gesellschaft mbH (EDL) has selected their co-developed, award-winning Fischer Tropsch (FT) CANS™ technology for EDL’s HyKero plant located in Böhlen-Lippendorf, south of Leipzig, Germany.

The HyKero plant is planned to produce 50,000 metric tons (MT) of sustainable aviation fuel (SAF) per year when fully operational, including eSAF from a power-to-liquids (PtL) route, and would be the first plant of its kind at commercial scale in Germany. The PtL route is the conversion of renewable electricity and carbon dioxide into sustainable liquid fuels. Current international certification for this SAF requires a blend of up to 50% with fossil kerosene to create drop-in SAF. Based on a typical widebody aircraft fuel consumption rate1 travelling the distance from Frankfurt to New York, the HyKero plant’s planned SAF production capacity, after blending, is equivalent to the fuel required for over 1,000 transatlantic flights annually.

When fully operational, the HyKero plant is also planned to produce 14,000 MT of sustainable naphtha2, and approximately 1,000 MT of electrolytic (green) hydrogen per year.

Strategically located to serve Leipzig-Halle international airport, this first phase of the plant is planned to be online by 2027. Project realisation and plant operations will be under the responsibility of EDL’s subsidiary XFuels HyKero GmbH. EDL anticipates a potential future phase could add 75,000 MT of eSAF capacity per year.

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1 https://simpleflying.com/narrowbody-vs-widebody/
2 Naphtha is a liquid hydrocarbon mixture that can be used as building blocks in industrial processes, or as a source of lighter hydrocarbons when broken down using steam cracking.
Alberto Giovananza, Managing Director, CT Licensing at Johnson Matthey, said: “At JM we are committed to helping our customers decarbonise. We are therefore very excited that EDL has chosen our FT CANS technology, developed in collaboration with bp, to supply airlines with sustainable aviation fuel that can be used in their existing fleets. Projects like this are very important to increase the production of SAF as the industry works to achieve its net zero ambitions.”

Noemie Turner, VP Technology development & commercialisation at bp, said: “We are delighted that EDL has joined a growing number of businesses choosing our innovative FT CANS technology, developed through world-class research and development in partnership with Johnson Matthey, to enable commercial scale production of sustainable aviation fuels at EDL’s HyKero plant.”

Dr. Michael Haid, CEO at EDL and XFuels HyKero, said: “We are proud to use the FT CANS technology in our HyKero plant to produce eSAF, thus making an important contribution to the defossilization of the aviation sector in Germany. The FT CANS technology enhances the value of our HyKero plant for converting sustainable carbon sources like bio-methane, together with renewable power and carbon dioxide into eSAF. We look forward to working with Johnson Matthey and bp as we build out the HyKero plant portfolio in Germany and abroad.”

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About Johnson Matthey
Johnson Matthey is a global leader in sustainable technologies. For over 200 years we’ve used advanced metals chemistry to tackle the world’s biggest challenges.

Many of the world's leading energy, chemicals and automotive companies depend on our technology and expertise to decarbonise, reduce harmful emissions and improve their sustainability.

And now, as the world faces the challenges of climate change, energy supply and resource scarcity, we're actively providing solutions for our customers. Through inspiring science and continued innovation, we're catalysing the net zero transition for millions of people every day. For more information visit www.matthey.com.

Johnson Matthey and its partners have developed a suite of technologies to enable SAF production. Our solutions convert waste and biomass feedstocks, or electrolytic (green) hydrogen and CO₂, into sustainable crudes.

About bp
bp’s purpose is to reimagine energy for people and our planet. It has set out an ambition to be a net zero company by 2050 or sooner and help the world get to net zero, and a strategy for delivering on that ambition. Visit bp.com for further information.
About EDL
EDL Anlagenbau Gesellschaft mbH is one of the leading technology-oriented plant engineering companies in Germany and has a corporate history of Edeleanu and Chemieanlagenbau Leipzig-Grimma going back to well over 100 years. Since 2003, EDL has been part of the Austrian Pörner Group. In more than 50 major projects the company has developed into a specialist for refinery modernizations and revamps.

As partner of the refinery, petrochemical and chemical industries as well as the energy sector EDL offers the entire engineering portfolio from feasibility studies up to turnkey deliveries of plants. With pioneering innovative technologies such as power-to-X (PtX) and biomass-to-X (BtX) for the production of sustainable synthetic fuels and chemical products or with residue and lube oil technologies EDL provides eco-friendly and economic solutions for its customers. For more information visit www.edl.poerner.de and www.xfuels.de.

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