

## Industrial Power-to-Liquid Pioneer Plant 2022 in Germany

INERATEC plans an industrial pioneer plant for the production of sustainable synthetic fuels starting in 2022. Up to 3,500 tons or 4.6 million liters of INERATEC e-Fuels can be produced annually from up to 10,000 tons of biogenic CO<sub>2</sub> and renewable electricity. The pioneer plant will be the largest one yet and will serve as an enabler for further worldwide power-to-liquid projects of INERATEC.

An essential step towards the broad availability of sustainable, synthetic fuels in Germany is the implementation of Power-to-Liquid (PtL) technology on an industrial scale. With Industriepark Höchst in Frankfurt am Main, INERATEC has identified a site that provides access to low-cost, renewable hydrogen (H<sub>2</sub>) and a biogas plant as a CO<sub>2</sub> source. In 2022, the world's first PtL plant with a production capacity of up to 3,500 tons, i.e. 4.6 million liters of fuel per year, is to be commissioned there. Every renewable liter of INERATEC e-Fuel produced replaces one liter of fuel from fossil sources. The pioneer plant recycles up to 10,000 tons of CO<sub>2</sub> annually, which is currently released unused into the atmosphere.

The pioneer plant produces a range of sustainable fuels. The clean diesel has drop-in quality and can be used directly in cars and trucks. The naphtha and wax fractions can be refined into CO<sub>2</sub>-neutral gasoline and e-kerosene as well as synthetic chemicals. Especially the sustainable e-kerosene is considered a promising solution for climate protection in the aviation industry. An expansion of additional generation capacities for PtL kerosene is therefore being sought. For this purpose, separate talks are being held on the application for federal subsidies.

The sustainable products are marketed through a tendering process. Interested parties can apply for the offtake (minimum purchase quantity 500,000l/a) directly via INERATEC.

Since 2016 INERATEC supplies modular chemical plants for Power-to-X and Gas-to-Liquid applications as well as sustainable fuels and products. With the pioneer plant in Frankfurt Höchst, INERATEC introduces its standard product for industrial applications. In further projects, larger capacities are achieved by multiplying the modules. The renewable application of the processes is enabled by the innovative chemical reactors. With the first-time application of the pioneer plant in Frankfurt Höchst, a demonstration of the technology is implemented in Germany, which serves as a pioneer for numerous other projects worldwide.

**“Sustainable, CO<sub>2</sub>-neutral and affordable e-fuels & e-products for everyone.”**