CONSORTIUM

Siemens Energy

Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB

Johnson Matthey Plc

AVL List GmbH

Budapest University of Technology and Economics

Axiom angewandte Prozeßtechnik Ges.m.b.H

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EcoFuel

Renewable Electricity-based, Cyclic and **Eco**nomic Production of **Fuel**

The EU-funded EcoFuel project will create and demonstrate an innovative process chain for production of synthetic fuel via **electrocatalytic CO_2 conversion.**

This **next-generation** process chain will allow the production of **renewable fuels for transportation,** with an enhanced energy conversion efficiency and economically viable production.

www.ecofuel-horizon.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006701.

CONCEPT and OBJECTIVES

The EcoFuel process is based on the direct electrocatalytic conversion of CO_2 into ethylene and propylene. These light olefins are oligomerized and further refined to yield liquid drop-in hydrocarbon fuels for transport applications.

Technical objectives of EcoFuel are to develop and demonstrate

- a novel technology for direct CO_2 capture from air
- an electrocatalytic process for CO_2 conversion into C_2/C_3 olefins
- a new and effective process for separation of gaseous products
- new technologies for liquefaction of C_2/C_3 olefins and further refining of product mixtures into transport-grade fuels
- Suitability of produced fuels as drop-in alternatives

Overarching EcoFuel objectives are to

- enable reduced primary energy demand as well as enhanced resource and cost efficiency of production compared to conventional technologies
- minimize emissions and environmental footprint
- reduce the number of involved conversion steps to intensify the process chain.

Complete process chain powered by renewable energy and based on electrochemistry to deliver truly green (CO_2 neutral) fuels with unprecedented overall energy conversion efficiency.