

SynLink

Synthetic e-fuels as key enabler for sector linking

Key Facts



Funding Agency

German Federal Ministry of Economic Affairs and Energy (BMWi)



Project Call

Weiterentwicklung von Technologien und Wertschöpfungsketten zur kommerziellen Einführung strombasierter Kraftstoffe für konventionelle sowie innovative Antriebstechnologien in mobilen Anwendungen



Duration

01/2019 - 12/2021



Coordinator

sunfire GmbH



Partners

- Climeworks Deutschland GmbH
- DLR-Institut für Technische Thermodynamik
- Fraunhofer CBP
- Fraunhofer IKTS
- Fraunhofer IMWS
- Fraunhofer ISE
- Karlsruhe Institute of Technology (KIT IFKM)
- ASG Analytik-Service Gesellschaft mbH

Associated Partners

- EDL Anlagenbau Gesellschaft mbH
- Total Research & Technology Feluy
- Airbus Defence and Space GmbH

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Supported by:



on the basis of a decision by the German Bundestag

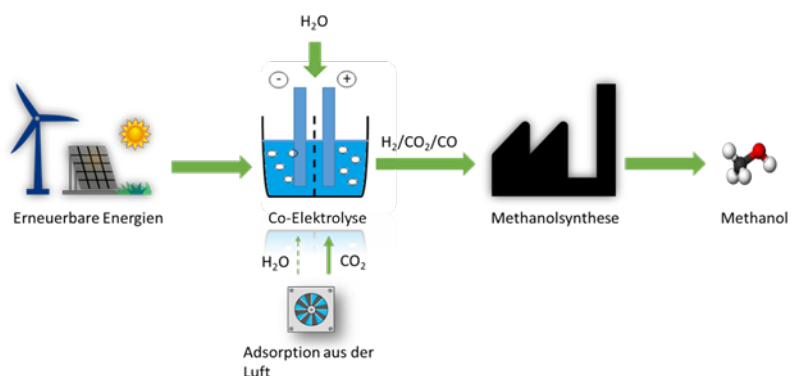
Project Objectives

The core idea of the "SynLink" project is the substitution of molecules (methanol, gasoline, diesel, liquid hydrocarbons) previously obtained from crude oil and natural gas in the chemical and refinery industries by chemically identical molecules obtained from CO₂, water and renewable energy. In the project, the entire value chain from synthesis gas production from H₂O, renewable electrical energy and CO₂ from the air via chemo-catalytic production of fuels to application tests of these fuels in passenger cars and trucks is being investigated.

The production of synthesis gas using Co-SOEC (co-solid oxide electrolyser cell with 150 kW) is investigated in order to couple renewable electrical energy into the chemical value chain. The synthesis gas is converted via methanol synthesis or Fischer-Tropsch synthesis. The raw product produced is further refined via various refining steps to produce e-fuels.

EIFER's Contribution

EIFER participates in the further development of cells and stacks to increase the performance of co-electrolysis.



From electrolytic synthesis gas production using H₂O, renewable electrical energy and CO₂ from air to methanol synthesis.

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