## The Demonstration of Waste Biomass to Synthetic Fuels and Green Hydrogen

### Fact Sheet

#### Project Information

<table>
<thead>
<tr>
<th>TO-SYN-FUEL</th>
<th>Funded under H2020-EU.3.3.3.</th>
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<tbody>
<tr>
<td>Grant agreement ID: 745749</td>
<td>Overall budget € 14 196 108,72</td>
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<td>Project website [🔗]</td>
<td>EU contribution € 12 250 528,13</td>
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<td>Status</td>
<td>Coordinated by</td>
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<tr>
<td>Ongoing project</td>
<td>FRAUNHOFER GESELLSCHAFT</td>
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<td>ZUR FOERDERUNG DER</td>
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<td>ANGEWANDTEN FORSCHUNG</td>
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<td>E.V.</td>
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<td>Germany</td>
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#### Start date

1 May 2017

#### End date

30 September 2022

### Objective

TO-SYN-FUEL will demonstrate the conversion of organic waste biomass (Sewage Sludge) into biofuels. The project implements a new integrated process combining Thermo-Catalytic Reforming (TCR©), with hydrogen separation through pressure swing adsorption (PSA), and hydro deoxygenation (HDO), to produce a fully equivalent gasoline and diesel substitute (compliant with EN228 and EN590 European Standards) and green hydrogen for use in transport. The TO-SYN-FUEL project consortium has undoubtedly brought together the leading researchers, industrial technology providers and renewable energy experts from across Europe, in a combined, committed and dedicated research effort to deliver the overarching ambition. Building and extending from previous framework funding this project is designed to set the benchmark for future sustainable development and growth within Europe and will provide a real example to the rest of the world of how sustainable
energy, economic, social and environmental needs can successfully be addressed. This project will be the platform for deployment of a subsequent commercial scale facility. This will be the first of its kind to be built anywhere in the world, processing organic industrial wastes directly into transportation grade biofuels fuels which will be a demonstration showcase for future sustainable investment and economic growth across Europe. This project will mark the first pre-commercial scale deployment of the technology processing up to 2100 tonnes per year of dried sewage sludge into 210,000 litres per year of liquid biofuels and up to 30,000 kg of green hydrogen. The scale up of 100 of such plants installed throughout Europe would be sufficient to convert up to 32 million tonnes per year of organic wastes into sustainable biofuels, contributing towards 35 million tonnes of GHG savings and diversion of organic wastes from landfill. This proposal is responding to the European Innovation Call LCE-19.

Field of science
/engineering and technology/environmental engineering/energy and fuels/synthetic fuels

Programme(s)

Topic(s)

Call for proposal
H2020-LCE-2016-RES-IA

Funding Scheme
IA - Innovation action

Coordinator

FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.

Address
Hansastraße 27C
80686 München
Germany

Activity type
Research Organisations

EU contribution
€ 6 230 931,33

Website
Contact the organisation
<table>
<thead>
<tr>
<th>Organization</th>
<th>Country</th>
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<td>ENGIE SERVICES NEDERLAND NV</td>
<td>Netherlands</td>
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<td>ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA</td>
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VERFAHRENSTECHNIK SCHWEDT GMBH (VTS-GMBH)

Germany

EU contribution € 1 851 129

Address
Passower Chaussee 3
16303 Schwedt Oder

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

HYGEAR TECHNOLOGY AND SERVICES BV

Netherlands

EU contribution € 519 071,88

Address
Westervoortsedijk 73
6827 AV Arnhem

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

SLIBVERWERKING NOORD-BRABANT NV

Netherlands

EU contribution € 0

Address
Middenweg 38
4782 AB Moerdijk

Activity type
Other

Contact the organisation

MARTECH GMBH

Germany
EU contribution
€ 594 685,12

Address
Strassberg 1
93185 Michelsneukirchen

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation [link]

Last update: 7 August 2020
Record number: 209765

Permalink: https://cordis.europa.eu/project/id/745749/

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