

Welcome to the webinar:

From Demonstration to Deployment: Can Hydrogen Deliver SAF at Scale?

All participants are muted during the webinar.

Please submit any questions via the Q&A tool. If time allows after the discussion, selected questions will be addressed.

This webinar will be recorded.

Meet the Speakers



Dr. Maria Georgiadou,
European Commission



Henar Olmedo Gómez
CIDAUT/CHM



Elke Reuschenbach
German Aerospace
Center



Mariano Berkenwald
INTERATEC

Guiding today's
discussion:



Meriem Fikry
Bauhaus
Luftfahrt/WiGH



Dr. Maria Georgiadou

Senior Expert

Renewable energy R&I policy

European Commission



EU support on SAF technologies

Dr Maria Georgiadou
Senior Expert
Renewable energy R&I policy
European Commission
DG Research and Innovation

Development of outlook for the necessary means to build industrial capacity for drop-in advanced biofuels

Final Report

Edited by:

Maria Georgiadou, European Commission

Theodor Goumas, EXERGIA

David Chiaramonti, POLITO

Author: EXERGIA, E3Modelling, Wageningen University & Research, BEST, BTG, POLITO

The project was executed by a Consortium comprising:



Directorate-General for Research and Innovation
Horizon Europe Programme

2024

Mobilization of Industrial Capacity Building for Advanced Biofuels

Final Report

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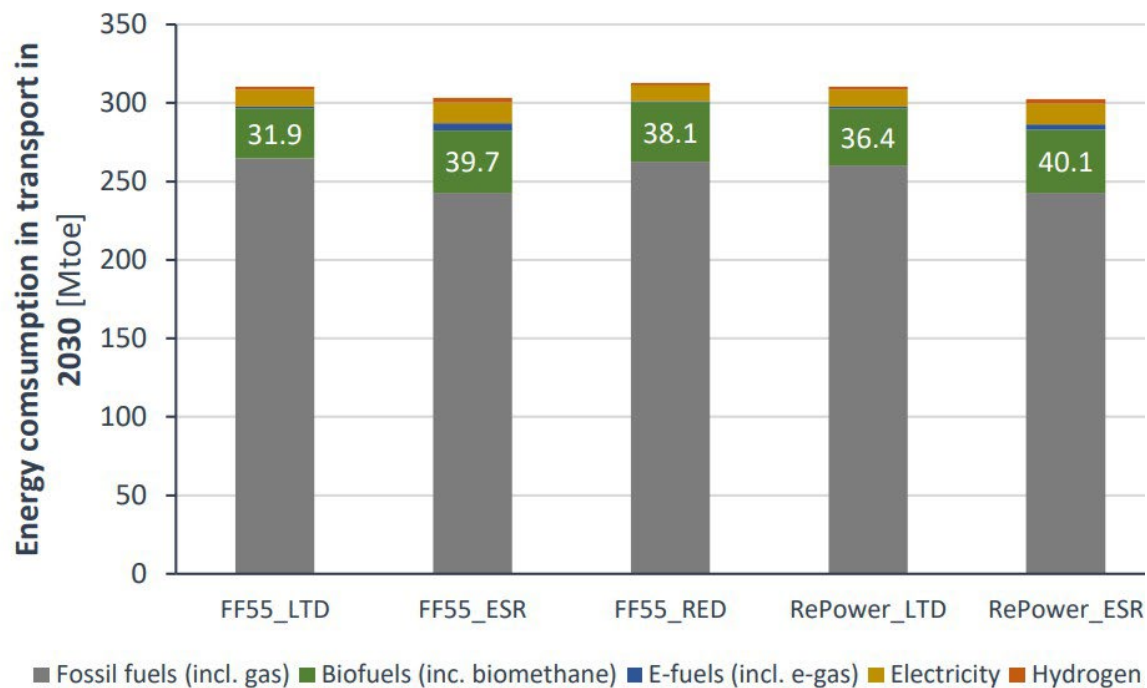
By **2030** demand in transport is driven still by combustion and mostly served by biofuels; by **2040** it shifts to (advanced) biofuels & RFNBOs focused on aviation and maritime with biofuels dominating by a **factor of 2**; by, **2050** demand is in aviation and maritime due to electrification and efficiency gains and served by **60%** advanced biofuels and **40%** RFNBOs.

Biofuel supply gap in 2030 under current market conditions, broad **alignment** of supply and demand in **2040**, **mature** and balanced system in **2050**; RFNBOs capacity development **very small** in 2030 (0.01-2.7 Mtoe), difficult to predict in 2050.

No single value chain can deliver more than 50% of the required sustainable fuels - portfolio of **complementary solutions** with a **diverse mix of technologies** needed.

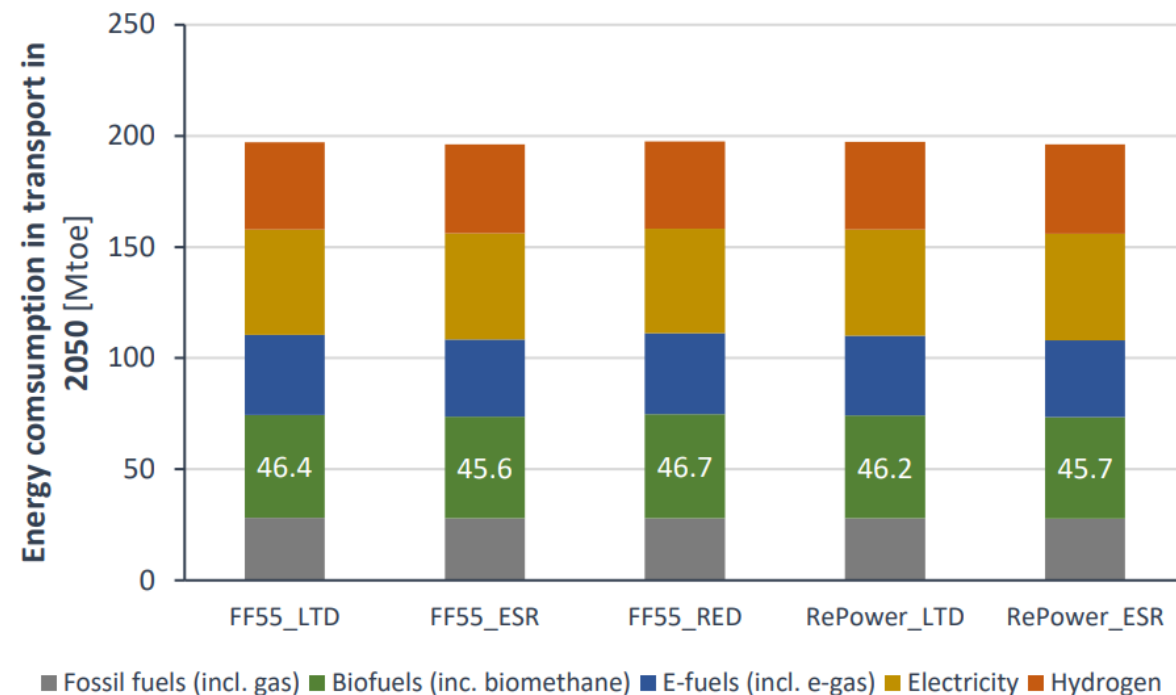
Scale-up of value chains towards these targets requires further **financial and administrative support**

Demand of renewable fuels in transport*



Source: PRIMES-TREMOVE transport model

Figure 7: Energy mix of the transportation sector in 2030 across the different variants

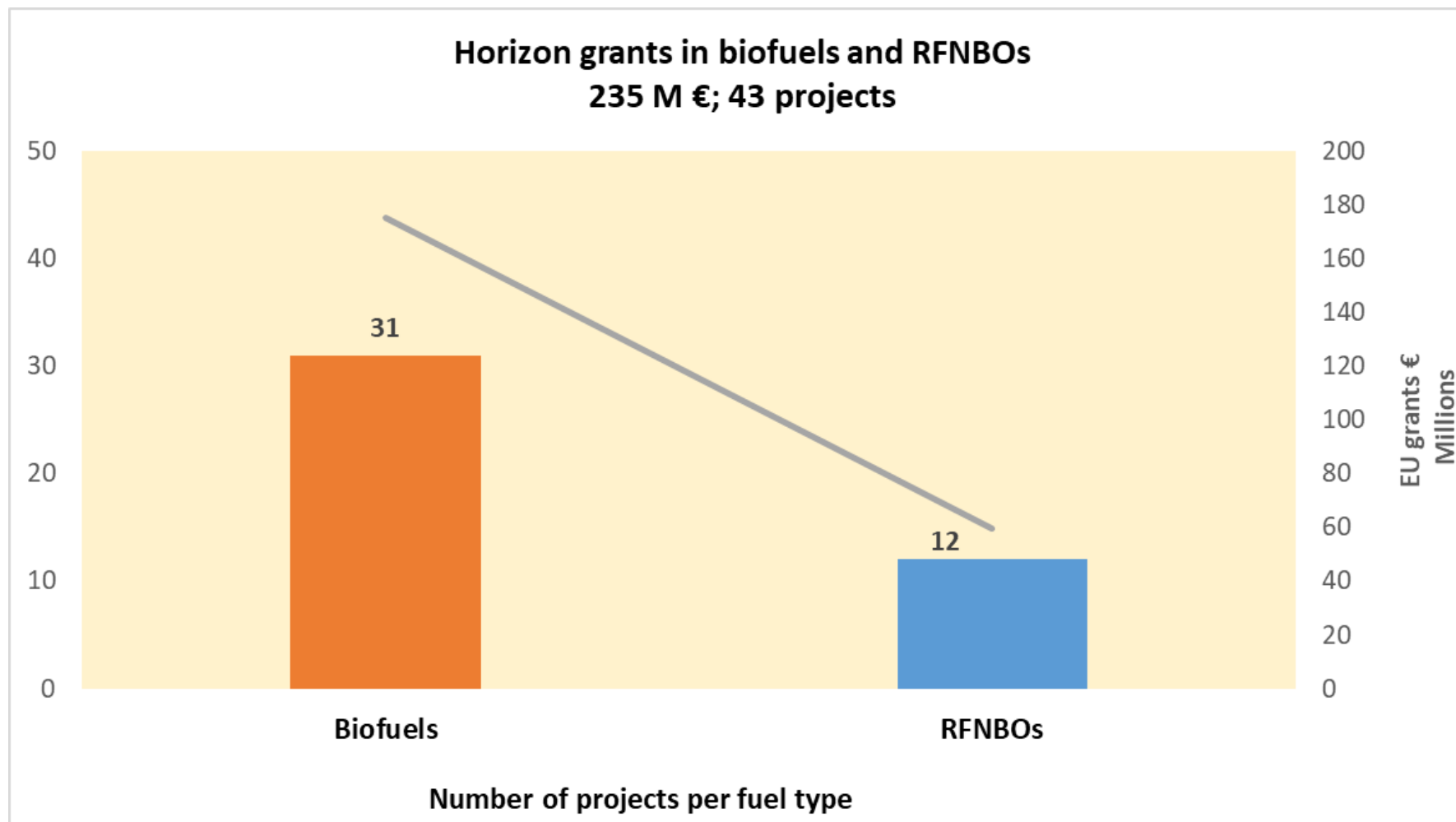


Source: PRIMES-TREMOVE transport model

Figure 9: Energy mix of the transportation sector in 2050 across the different variants

* [Development of outlook for the necessary means to build industrial capacity for drop-in advanced biofuels - Publications Office of the EU](#)

Horizon SAF Projects 2014-2024



HORIZON-CL5-2026-11-D3-04: De-risking renewable fuel technologies through transnational pre-commercial procurement of renewable fuel industrial value chains

- Create **market readiness** of **essential** renewable fuel technologies that can cost-effectively contribute to **domestic commercial production** beyond 2030, bringing their **industrial value chains** at **TRL 8**, and support **SET Plan** Renewable Fuels and Bioenergy Action
- **Pre-Commercial Procurement (PCP)**, **40 M**, **1** project, opens **4 Aug 2026**, closes **1 Dec 2026**

HORIZON-CL5-2027-02-D3-08: Co-funding Strategic Energy Technology (SET) Plan renewable fuel value chains at EU, national, regional, local levels

- Connect **regional** renewable fuel **value chain activities** across Europe, especially with partners from Eastern European MS and ACs, involving regions with lower innovation performances, to overcome fragmentation where different regions have different capacities (feedstock, technology, skills)
- **COFUND**, **30 M€**, **1** Project, opens **3 Dec 2026**, closes **31 Mar 2027**

Building Industrial Capacity of Advanced biofuels



Biofuels have a vital role to play in helping reduce emissions in the transport sector as part of the FF55 and the climate neutrality goals, while contributing to increasing the EU's industrial competitiveness, gross domestic product, and net employment.

Such role is expected to further increase in the future, when advanced biofuels will become more and more available thanks to scale-up to full commercial technologies, processes, and value chains, driven by ambitious policies and sectorial targets and fostered by an EU strategy and R&I support.

Mobilising Industrial capacity of Advanced Biofuels

A significant increase in biofuel production capacities based on RED/Annex IX feedstocks is required between now and 2030-2040 to meet the EU targets.



No single value chain can deliver more than 50% of the required sustainable fuels, thus we need a portfolio of **complementary solutions** with a **diverse mix of technologies** to utilise the full range of eligible feedstocks and produce the complete spectrum of necessary fuels.

The scale-up of value chains towards these targets requires further **financial** and **administrative support** to enable feedstock mobilisation and industrial capacity build-up

#HorizonEU

<http://ec.europa.eu/horizon-europe>



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SET Plan Flagship topics for Renewable Fuel Value Chains

EUR 70 million available to establish and mobilise industrial value chains of renewable fuel technologies

Topic: HORIZON-CLS-2022-02-03-08: Co-funding Strategic Energy Technology (SET) Plan renewable fuel value chains at EU, national, regional, and local level - Co-fund Action

Topic: HORIZON-CLS-2022-11-03-04: De-risking renewable fuel technologies through transnational pre-commercial procurement of renewable fuel industrial value chains - Pre-commercial Procurement



Thank you!



Henar Olmedo Gómez

Project manager

CIDAUT & the Clean Hydrogen Mission (CHM)



Assessment of the role of clean hydrogen across Sustainable Aviation Fuel (SAF) production pathways considering both bio-based and synthetic routes

30.06.2026 – Henar Olmedo Gómez, Project manager, CIDAUT on behalf of Clean Hydrogen Mission (CHM)

Online webinar "From Demonstration to Deployment: Can Hydrogen Deliver SAF at Scale?"



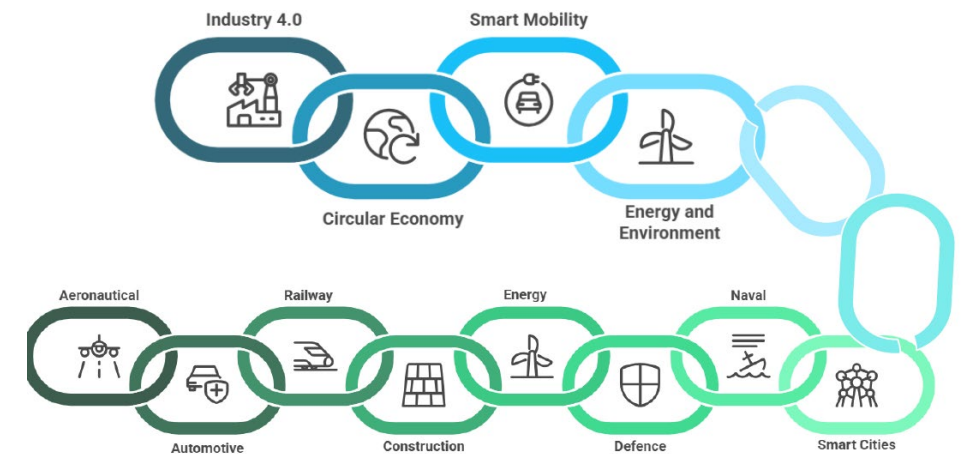


Our goal is to **boost competitiveness** and **industrial growth** of companies through innovation



Private Technology Center located in Boecillo
(Valladolid, Spain)

Henar Olmedo Gómez
Project Manager Office CIDAUT
WG1: H₂ integration in biorefineries



23,304m²

Built
Area

80M €

In R&D equipment
and facilities

24M €

Annual
revenue

+400

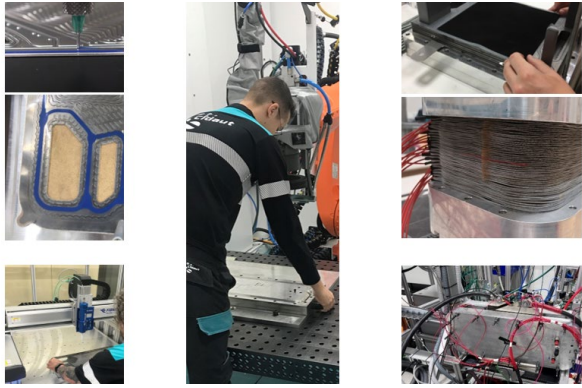
Industrial
clients

198

Researchers and technologists

24

Technology-based
companies



Technological
Developments for
Decarbonization of
energy systems with
H2



H2 Technologies for
Defense



Non-conventional
H2 Technologies



E-fuel
Synthesis and
Reforming
Technologies

Strategic Lines



1. CHM goal and ambition



- CHM is one of the 7 flagship initiatives of Mission Innovation launched in June 2021.

- **CHM goal:**

“The Clean Hydrogen Mission catalyses international collaboration in research and innovation for the development of a global clean hydrogen value chain.

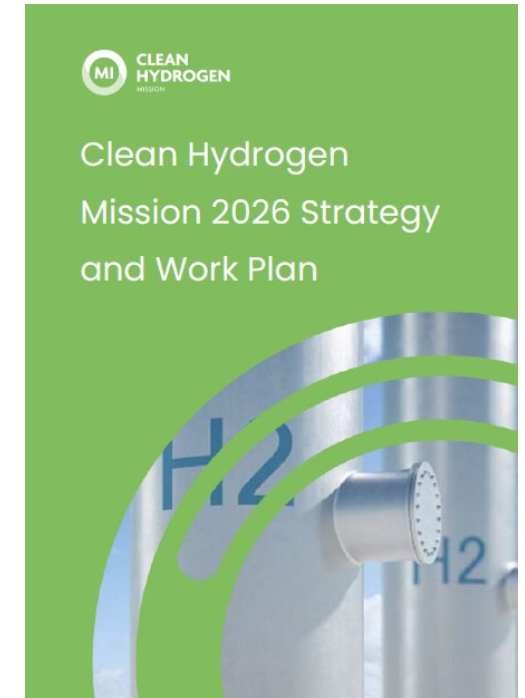
By demonstrating commercially viable hydrogen technologies by 2030, we will enable hydrogen to complement electrification and drive deep decarbonization in hard-to-abate sectors.”

- **CHM’s ambition** is to establish multiple hydrogen valleys in various regions around the world, particularly in emerging and developing countries, to build a strong global hydrogen economy.
- **Members:** 21 countries and several strategic partners including United Nations Industrial Development Organization (UNIDO), International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE), Clean Hydrogen Partnership (CHP) and Hydrogen Europe Research (HER).

2. CHM strategy 2026



- As highlighted by international organisations (IEA, the Hydrogen Council and UNECE Hydrogen Task Force), stimulating demand for hydrogen is essential for most production projects to move forward and for the hydrogen economy to develop and scale.
- **In 2026, the Clean Hydrogen Mission will focus on innovation in the use of low-emission hydrogen.**
- Following priority sectors have been shortlisted based on assessments by partners and CHM members:
 - Hard to abate transport sectors, such as maritime, aviation and mining,
 - Hard to abate industries such as refining, chemicals and metals,
 - Long-term energy storage and dispatchable power generation.



[Link to document](#)



Elke Reuschenbach

Research Associate

German Aerospace Center (DLR)

GERMAN AEROSPACE CENTER (DLR): HYDROGEN AND SAF RESEARCH ACTIVITIES

Elke Reuschenbach, DLR Institute of Future Fuels



DLR Research and Technology – Mission



AERONAUTICS



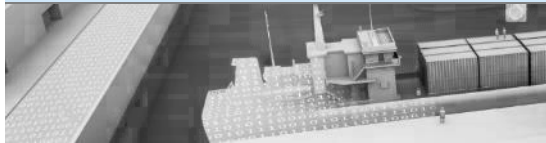
SPACE



ENERGY



TRANSPORT



SECURITY

civil security & defense research

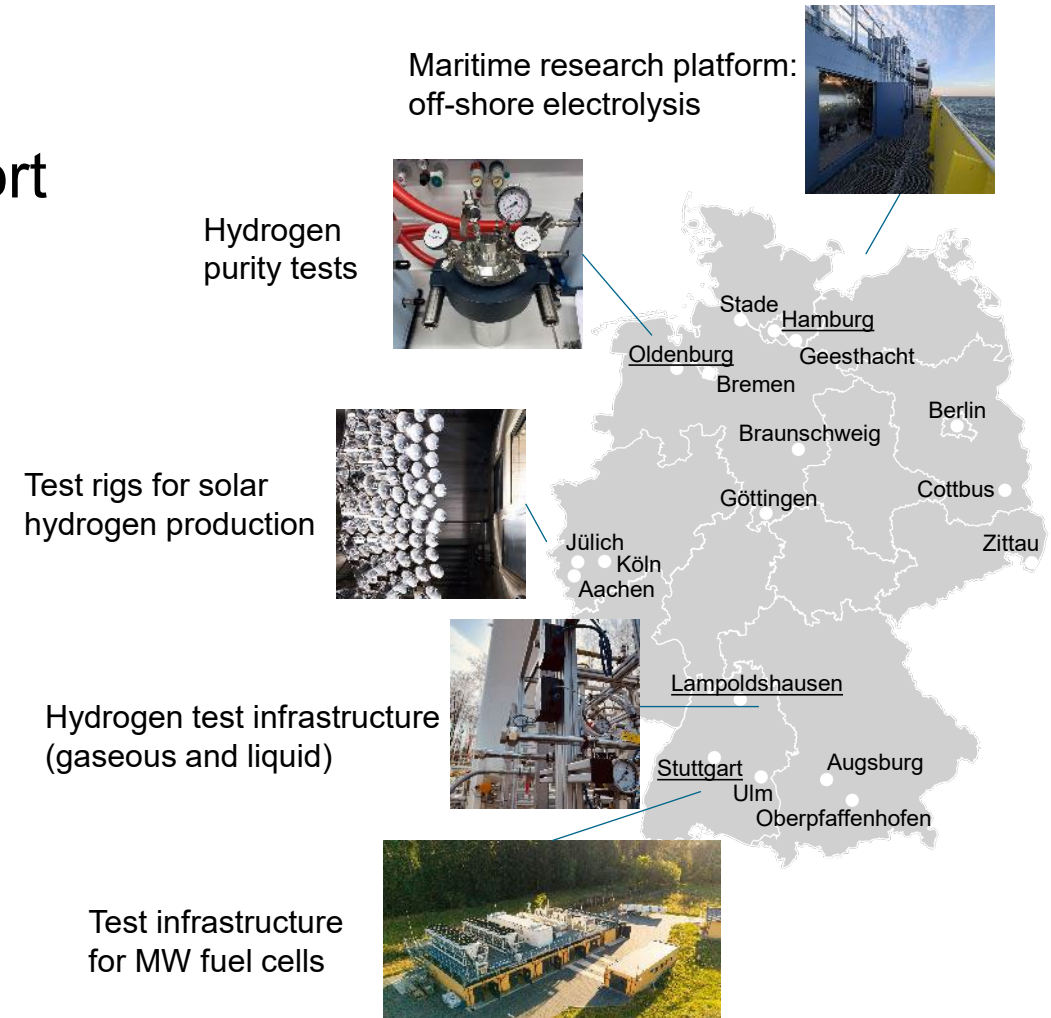


- Core competence: Top level technology science (hard- and software)
- Knowledge exchange with authorities and public stakeholders, transfer to business and industry
- Strengthening Germany and Europe as a business location
- Civil security and defense research with partners in Germany, Europe and NATO-Countries
- Operation of large-scale research facilities

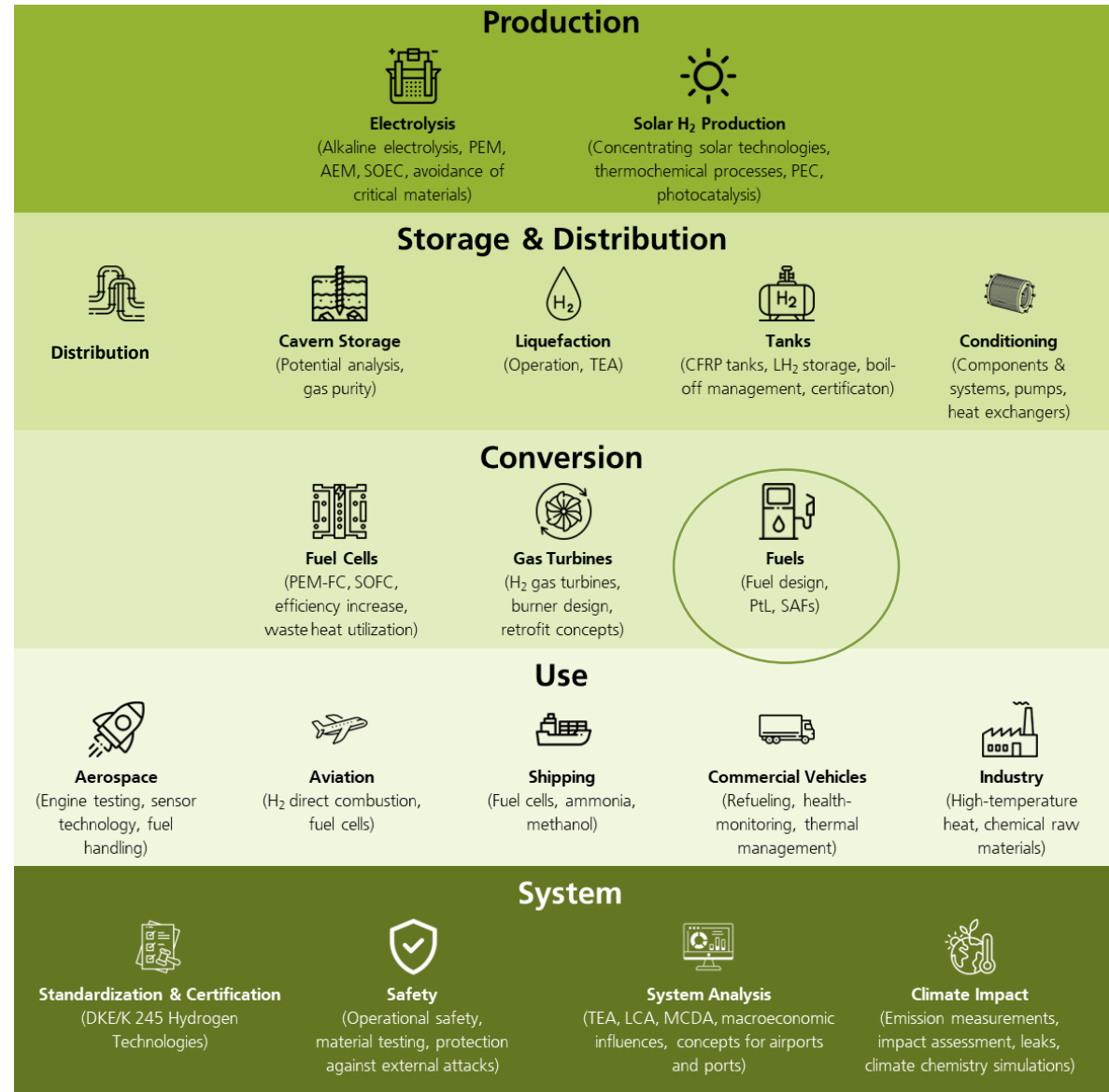
DLR Hydrogen Research Landscape



- Many years of hydrogen expertise in aerospace, aviation, energy and transport applications
- Hydrogen know-how at 18 sites in Germany
- Development of hydrogen technologies and validation in demonstration plants
- Opportunities for industry through hydrogen test environments



DLR's Hydrogen Expertise at a Glance



Sustainable Aviation Fuels (SAF)

Interdisciplinary collaboration @DLR



Lab-scale

Demonstration

Real world

Fuel Composition



Production



Performance



Climate impact



Energy

Aeronautics/Transport

Space

DLR's Power-to-Liquid Fuels Technology Platform (TPP)



- Integration of the entire process chain of Power-to-Liquid fuels on a semi-industrial scale
- Capacity of 2,500 tonnes per year
- Start of research activities planned for 2028
- Located in Leuna in Saxony-Anhalt
- Funded by the German Federal Ministry of Transport
- World's largest demonstration and test facility of its kind



Solar-thermochemical Hydrogen Production

Infrastructure in Jülich



DLR Synlight: World's largest solar simulator



DLR Solar Towers



Synhelion Demonstration Plant „Dawn“

Alternative Fuels and Basic Chemicals – From Lab to Business



Research and Development



Demonstration and Transfer



Large-scale Research Facilities

A low-angle photograph of a modern building with a glass facade and several white rocket-like structures in the foreground, all set against a clear blue sky. The rocket structures have the DLR logo on them.

THANK YOU!

Topic: German Aerospace center (DLR): Hydrogen and SAF
Research Activities

Date: 2026-06-30

Author: Elke Reuschenbach

Institute: DLR Institute of Future Fuels

Image sources: All images “DLR (CC BY-NC-ND 3.0)” unless otherwise stated



Mariano Berkenwald

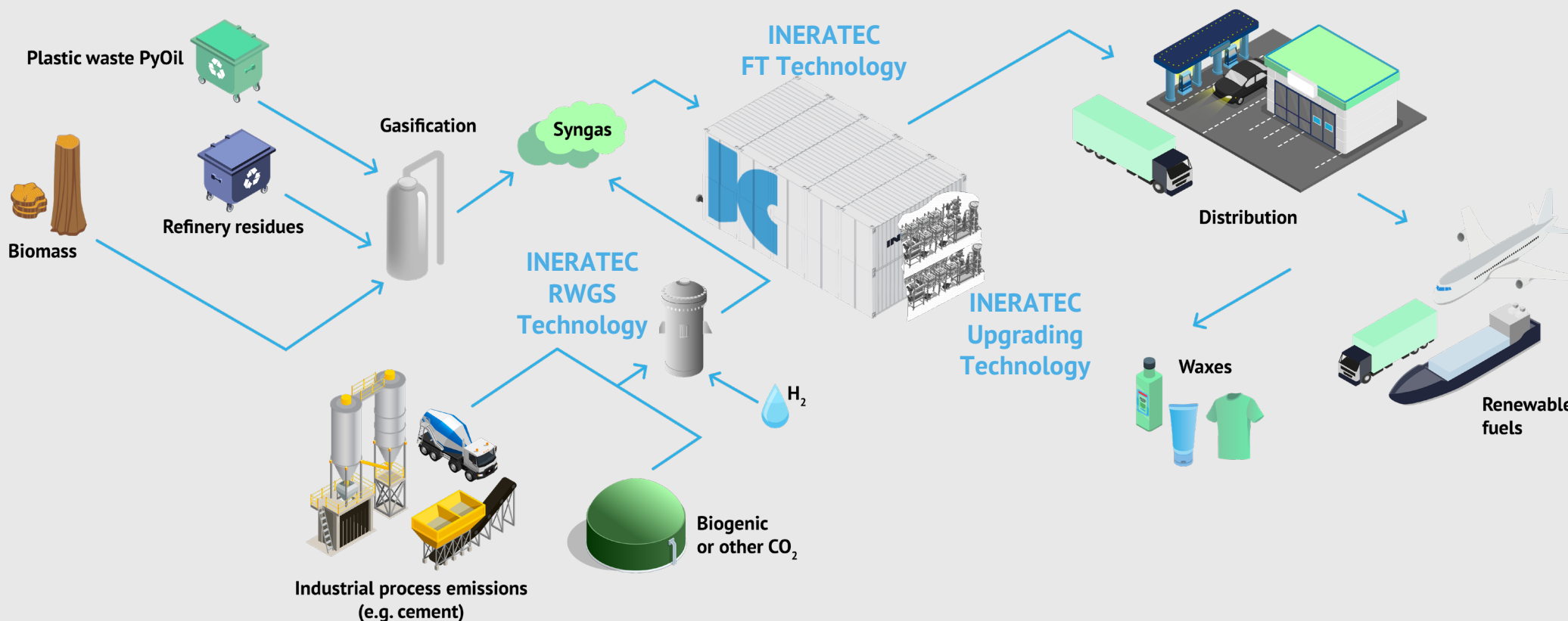
Head of Strategy

INERATEC

INERATEC technologies integrate into existing infrastructure



Producing synthetic drop-in ready e-SAF (Sustainable Aviation Fuel), other synthetic and biofuels and high-value chemicals



Upstream & industrial project partners



Downstream & logistics partners

ERA ONE

Frankfurt Höchst Industry Park

- Control Room
- Compressor Hall
- Synthesis Units
- Storage Tanks
- Upgrading

TARGET:

Production of up to 2.500 tons per year
Blueprint for worldwide operation of owned plants

STATUS:

- From FID in C&SU in < 2.5 years
- Start of production: 2025
- 3 out of 3 units operational
- First FT PtL plant to receive ISCC EU certification
- First batches successfully delivered to customers
- On-site upgrading operational in 2027

