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To validate the results of the project, **ADVANCEFUEL** engages stakeholders from the entire value chain of liquid, renewable and advanced transport fuels.

The project has developed a dedicated Stakeholder Platform, offering subscribers the opportunity to share their opinions via personal interviews as well as by contributing to draft ADVANCEFUEL project tools and results.



Are you interested in the future market deployment of advanced, renewable fuels?

Join ADVANCEFUEL to support the uptake of advanced biofuels in Europe with the actions below:

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↓ PROJECT PARTNERS



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REMOVING BARRIERS TO

# RENEWABLE TRANSPORT FUELS



ADVANCEFUEL



## OBJECTIVES



### KEY CHALLENGES ON THE ROAD TO CLEANER TRANSPORT FUELS

Production of biofuels has grown rapidly since the early 2000s as markets have matured, driven in part by political targets and incentives to reduce greenhouse gas emissions. In the last years, however, experts have questioned the overall sustainability of conventional biofuels, including their impact on land use patterns and food prices, and their carbon emissions across the production value chain.

In response, a **new generation of advanced, renewable transport fuels** is emerging, but their commercialisation is held back by numerous barriers along the entire value chain, including limited public acceptance and policy uncertainties, considered as potential risks for investors.

### REMOVING BARRIERS TO RENEWABLE TRANSPORT FUELS

The ADVANCEFUEL project aims to **facilitate the commercialisation of liquid, renewable and advanced transport fuels (RESFuels)** by providing market stakeholders with new knowledge, tools, standards and recommendations to help remove barriers to their uptake.

To support commercial development of these fuels, the project has developed a **framework to monitor the current status, and future perspectives, of RESFuels** in Europe in order to better understand how to overcome barriers to their market roll-out. Following this, it is now investigating individual barriers in the fields of biomass availability, conversion technologies, sustainability as well as market framework, and advance new solutions for overcoming them.

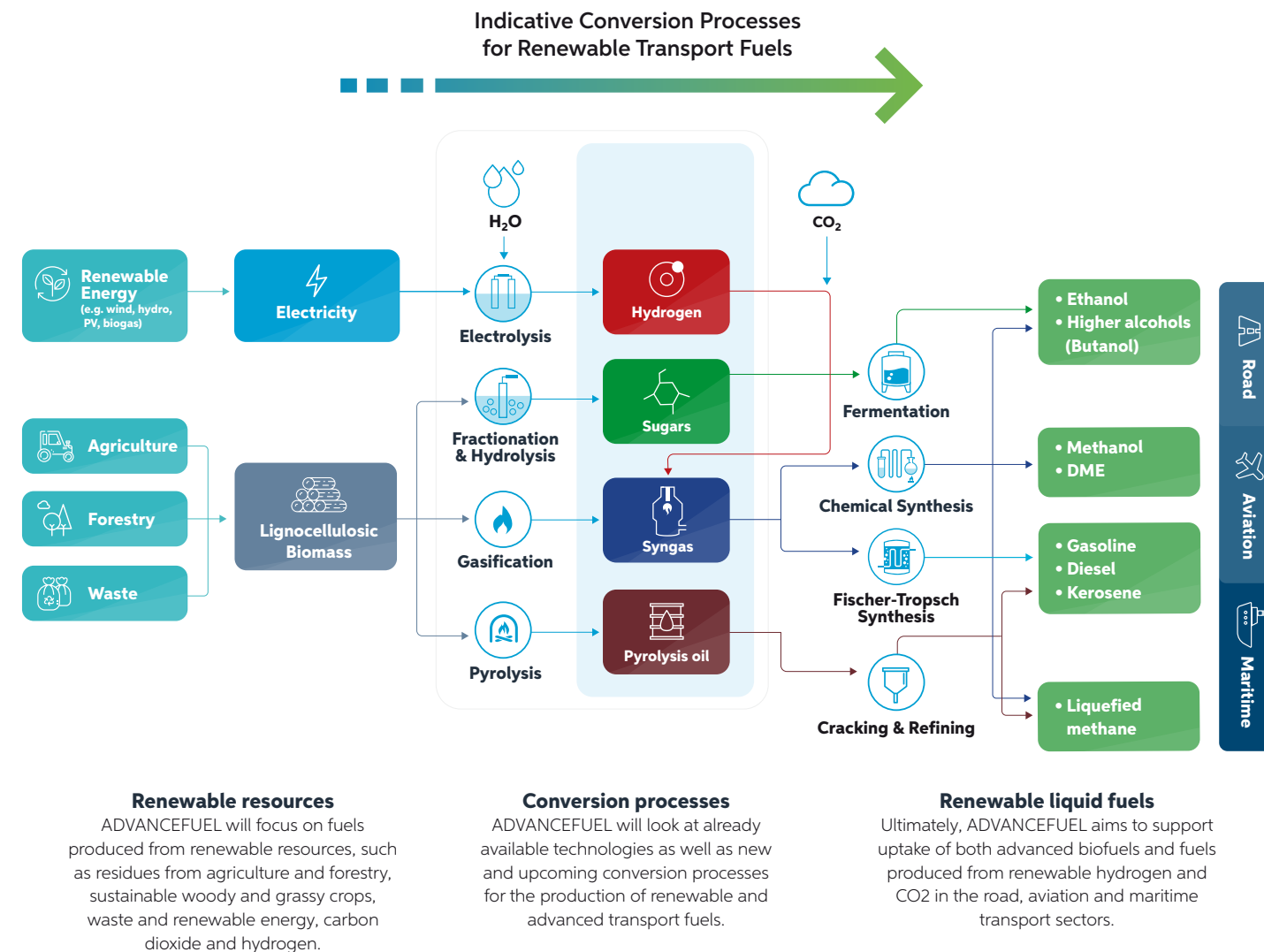
A decision support tool will then be created for policy-makers to enable a **full value chain assessment of RESFuels**. Key market stakeholders are involved throughout the whole process and are helping to define policy recommendations to support the successful market uptake of renewable transport fuels.

In this way, ADVANCEFUEL will contribute to achieving the EU's renewable energy targets and **reduce carbon emissions in the transport sector to 2030 and beyond**.

## RENEWABLE TRANSPORT FUELS?

### WHAT ARE RENEWABLE TRANSPORT FUELS?

The ADVANCEFUEL project will look into **liquid advanced biofuels** – defined as liquid fuels produced from lignocellulosic feedstocks from agriculture, forestry and waste – and **liquid renewable alternative fuels**, produced from renewable hydrogen and CO<sub>2</sub> streams (summarised in the term RESFuels). Within the project, different conversion processes for the production of advanced transport fuels will be considered and reviewed.

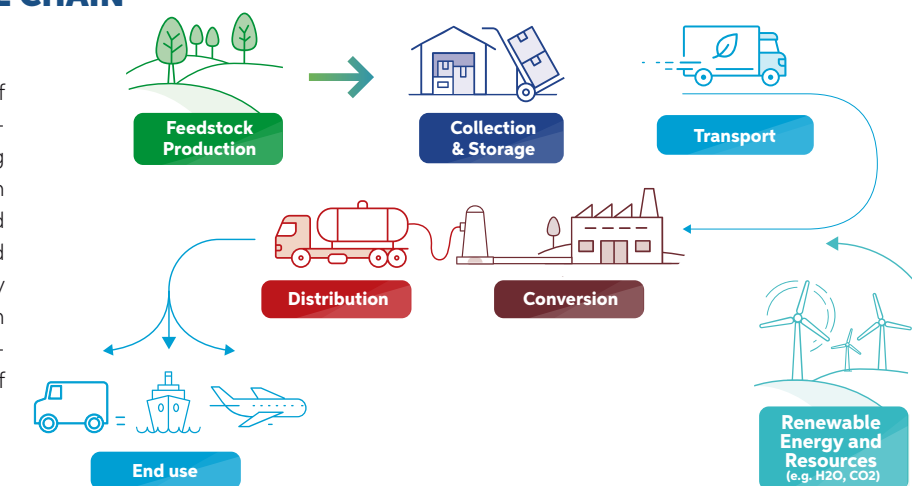


## ACTIVITIES

### PRODUCTION OF RESFUELS: ADDRESSING THE FULL VALUE CHAIN

#### BIOMASS AVAILABILITY

Advanced biofuels will rely on the provision of lignocellulosic biomass. ADVANCEFUEL is identifying and analysing the potential for upgrading feedstock supply chains in Europe, to provide an assessment of biomass supplies for the period 2030-2040. The project has already performed an assessment of non-food biomass availability and is now developing innovative crop rotation schemes and proposing region-specific strategies to increase the sustainable availability of lignocellulosic feedstock.



#### BIOFUELS CONVERSION

Improved technologies will be needed for the conversion of selected biomass and other renewable energy sources into RESFuels. ADVANCEFUEL is facilitating this by identifying required innovations in conversion technologies, including synergies with existing biomass supply chains and fossil fuel infrastructure. The project has developed a reference basis for the current status of conversion technologies, and future development of these technologies will be estimated through a dedicated timeline.

#### SUSTAINABILITY

Ensuring the sustainability of RESFuels requires socio-economic and environmental impacts to be taken into account across the entire value chain. ADVANCEFUEL has analysed existing standards and certification schemes, suggesting that new sustainability criteria are required, and the project will develop tailor-made indicators to assess the sustainability of advanced renewable fuel supply chains at regional scale.

On this basis, project partners will review national and European standards, and provide recommendations for their harmonisation. A dedicated stakeholder workshop on this topic additionally ensures that the major concerns of the market player are getting addressed in a realistic and adequate way.

#### MARKET UPTAKE

ADVANCEFUEL is evaluating the market potential of advanced biofuels, including market trends, growth rates and cost competitiveness, to help investors make informed decisions. Partners are developing a numerical tool to allow potential end-users to compare different RESFuels and to identify their advantages over their fossil equivalents. In this way, ADVANCEFUEL will provide evidence for future market uptake potential of advanced renewable fuels and communicate their benefits to the society.

**ADVANCEFUEL results are being integrated into a full-chain assessment tool, assessing environmental and socio-economic impacts of RESFuels along the whole value chain.**

Throughout their collaboration with stakeholders, experts are also identifying current policy gaps as well as efficient support mechanisms and provide tailored recommendations to stimulate market uptake.