Industry overview



EU CONTEXT

In 2022, the power industry and the transport sector experienced an increase in their GHG emissions, unlike other sectors in the EU, such as buildings. Transport is one of the leading sectors in the EU that witnessed a high increase (of 15%) in CO₂ emissions during the last 30 years (1990-2021). To decarbonise these sectors, an array of policies is suggested, such as increasing taxes for polluting aviation fuels and reducing the use of fossil fuels.

At the same time, waste and residue feedstocks can be utilised to produce biofuels for transport, effectively reducing GHG emissions. The International Energy Agency (IEA) highlights the need to diversify the biofuel production technology and use advanced feedstocks to minimise environmental impacts.

The use of RFNBOs (Renewable Fuels of Non-Biological Origin) is another promising alternative, as these fuels demand much less use of water resources and land to be produced than crop-based biofuels, deriving from feedstocks, such as maize and wheat. Another way of sustainable fuel production is through algae cultivation, but their use is still being researched and developed.





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The European Commission proposes a 55% reduction of emissions from cars by 2030 (EC) by speeding up the transition towards zero- and low-emission vehicles (Council of the EU).

42% of the hydrogen used in industry should come from RFNBOs by 2030 (Council of the EU).



By 2030, hydrogen and e-fuel from **RFNBOs need to account** for 1% of fuels used in the transport sector ($T\Delta E$).



Biofuel demand increased by 6% in 2022, following an increasing interest in its use from numerous sectors (IEA)

- Delivering the European Green Deal • RESOURCES

 - Biofuels Energy System
 - RED III Fact sheet hydrogen efuels RFNBO
 - Press release on RED •

Project Overview

FUELPHORIA aims to create sustainable value chains for advanced biofuels and RFNBOs. The project will contribute to the electrification and replacement of fossil-based heat and fuel in buildings, industry, and the transport sector, in line with the REPower EU Plan.

Feedstock suppliers, technology providers, and end-users will collaborate during the project to ensure the supply of sustainable feedstock, its conversion to renewable fuels, and the transportation of the end-products. FUELPHORIA plans to overcome existing technical issues and establish innovative business models. The project will test nine value chains in Europe and will explore the market opportunities and challenges for the commercialisation of advanced biofuel and RFNBOs in Africa.

8385858 I FEEDSTOCK BIOGAS PLANT WINERY PLANT BIOGAS PLANT WASTE TREATMENT PLANT SUPPLIER **FEEDSTOCK** DIGESTATE / CO. DIGESTATE / CO. ORGANIC URBAN WASTE Lipids Fermentation 2-step Hydrogenation extraction and catalutic ermentation with green H from algae nrocess FINAL PRODUCT BIODIESE POWER AT AVIATION ROAD ROAD GAS FIRED ROAD **END USER** ROAD TRANSPORT MARITIME POWER PLAN SYSTEMS 4 00 0

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KEYWORDS

PROJECT FACTS

- Renewable energy sources
- Advanced biofuels
- Renewable Fuels of Non-Biological Origin
- Value chains
- 10 countries 26 partners 48 months duration EU Funding: 9 678 598,55€

For more information about Partners and Budget visit CORDIS.