

PRESS RELEASE

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BioTheRos – Collaborative actions to bring novel BIOfuels THERmochemical ROutes into industrial Scale

The EU-funded BioTheRos project (upcoming website: biotheros.eu) has officially started in October 2023, and the project's first consortium get-together is scheduled to take place during its kick-off meeting on the 18th of October in the beautiful city of Athens.

Background

Reducing emissions and promoting sustainability is of critical importance to the EU transportation sector. While other sectors are lowering greenhouse gas (GHG) emissions, transportation is still exceeding 1990 levels, making up 22% of Europe's GHG emissions. To meet mid-century goals, transportation must cut GHG emissions by at least 60%.

To achieve EU climate and renewable energy targets, urgent action is needed to boost renewable energy sources in aviation and shipping. Sustainable biofuels, especially from lignocellulosic biomass, are viewed as crucial for decarbonization and can be easily integrated into existing infrastructure. However, today most sustainable biofuels come from limited waste feedstocks. Thus, scaling up lignocellulosic biomass conversion technologies for the production of advanced biofuels is essential, and best practices are necessary to overcome technical and non-technical obstacles and promote sustainable biofuel adoption worldwide.

BioTheRos Project

Through the use of thermochemical conversion technologies, the BioTheRos Project aims to develop a comprehensive approach that will accelerate the production of sustainable biofuels. The project will bring together important players on a European and global scale, including technological and social specialists, associations focused on renewable energy, and industrial stakeholders. For the scaling up and commercialization of biofuels, international cooperation is of large importance as several projects and initiatives already exist on global level. Thus, BioTheRos will establish close collaboration links with ETIP Bioenergy and Technology Collaboration Programmes (TCPs) within the International Energy Agency (IEA).

The assessment of current pre-treatment technologies and the availability of biomass feedstocks is the first step of the BioTheRos concept. Using predictive AI models for biomass demand, potential globally abundant biomass feedstocks suited for sustainable pyrolysis and gasification biofuel value chains will be selected. Pilot experimental validation of pyrolysis and gasification value chains will be implemented. Despite the differences between these technologies, the project anticipates synergies by using a multidisciplinary stepwise approach that includes feedstock selection, pilot experimental validation, as well as simulation and modelling for scale-up.

Furthermore, market dynamics will be evaluated by calculating the energy demand for renewable fuels in 2030, determining the applicability and costs of renewable fuels for each transport sector, performing a high-level analysis of the availability of renewable fuels, and



developing a set of fuel mixtures for the three transport sectors (marine, road, and aviation), taking into account demand for renewable energy outside the transport sector.

The BioTheRos project is coordinated by CERTH and the project consortium comprises 6 partners from 5 countries: Greece, Netherlands, Spain, Germany and Austria. As we work toward establishing a more circular and sustainable approach to the transportation sector, we are happy to launch the project and share our efforts and findings with you.

Follow us on [LinkedIn](#) and [X \(Twitter\)](#) to stay tuned!



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