

BIOFUELS FROM WASTE TO ROAD TRANSPORT

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Biofuels from Waste to Road (WASTE2ROAD) is an EU funded project under the Grant Agreement No. 818120 within the LC-SC3-RES-21-2018 call, "Development of next generation biofuels and alternative renewable fuel technologies for road transport", as a Research and Innovation Action of the European Union's Horizon 2020 Programme. The project started in the fall 2018 and will run for 4 years.

In 2014, total waste production in the EU amounted to 2.5 billion tons. From this total only a limited (albeit increasing) share (36%) was recycled, while the rest was landfilled or burned, of which some 600 million tons could have been recycled or reused. Conversion of all sustainably available biogenic wastes and residues to biofuels could provide 27% of total transport fuel by 2050, achieving around 2.1 gigatons of CO₂ emission reductions per year. The increasing demand for biofuels¹ implies the need for the transformation of diverse bio-resources into liquid fuels, and includes transformation of the biogenic part of municipal and industrial wastes into such biofuels. This clearly is a stepping stone to achieve the European goals² but it also poses challenges, such as 1) diversity and inhomogeneity of wastes throughout Europe (variable composition depending on the type of waste and geographical location), 2) the complexity of the conversion of wastes compared to fossil oils, 3) the technological aspects of co-refining and 4) high overall costs with moderate process performance.

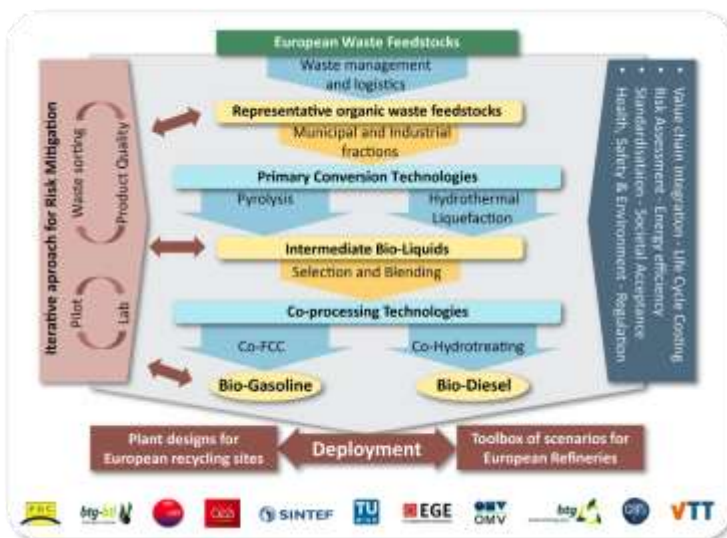


Figure 1 – The WASTE2ROAD concept.

While addressing these challenges, WASTE2ROAD aims to develop a new generation of cost-effective biofuels from a selected range of low cost and abundant biogenic residues and waste fractions, aiming to achieve high overall carbon yields > 45% while reducing greenhouse gases emissions (GHG) by > 80% compared to fossil fuels. The Consortium (involving 11 partners from 6 European countries) covers the full value chain from waste collection and recycling, to bio-conversion (liquefaction) and co-refining, through to validation of the biofuels for the use of road transport. The project will deploy risk-mitigation pathways to realise industrial implementation, with primary processing at European waste recycling sites and co-processing within European refineries, achieving pilot testing at TRL 5.

The WASTE2ROAD project is highly relevant to the themes of the Pyroliq 2019 Conference. The poster session will give an opportunity to the participants of the conference to learn about the project, its objectives and the main targets

¹ https://www.iea.org/publications/freepublications/publication/Biofuels_Roadmap_WEB.pdf

² <https://europeanclimate.org/wp-content/uploads/2014/02/WASTED-final.pdf>