SUSTAFUELS is a collaborative cluster of innovative projects focused on the development of sustainable transport fuels from microalgae.

By combining the strengths of individual projects as Alfafuels, Cocpit, Fuelgae and SusAlgaeFuel, SUSTAFUELS aims to accelerate the transition to a more environmentally friendly transport sector.



Cost efficiency

•Minimising raw-

material expenses

Resource

maximisation

Improved

effectiveness of lipid

extraction

- •Thin-film reactors
- •Semi-transparent
- photovoltaic shellNutrient recovery
- •Novel membrane system for CO2 utilisation



- process optimisation
- •Zero-waste approach
- Microbial production
- Solar powered photochemistry
- •Monitor and manage bacterial contamination
- Algae-specific TCR-HDO purification method

- Develop a unified marketplace
- •Address challenges in hypothermal liquefaction
- Optimising catalytic
- conversion

  •Whole Life cycle Analysis

  (WLCA)
  - Scalability

 Develop a fully circular and integrated approach for fuel production
 Ensure ASTM

•Ensure ASTM standards are met

Sustainable Transport Fuels

ALFAFUELS, COCPIT, FUELGAE, and SUSALGAEFUEL use algae to produce sustainable biofuels and contribute to decarbonization. These projects focus on using algae to capture CO₂ and convert it into biomass, which can be transformed into renewable energy sources.

They focus on minimizing waste by converting CO<sub>2</sub> and organic materials into valuable biomass, promoting resource efficiency. These projects help reduce reliance on fossil fuels and foster a closedsystem where resources are continuously recycled and reused. By integrating circularity, they contribute to both environmental sustainability and economic growth.

The projects share a common goal: to enable sustainable and economically competitive industrial production through the development of technological roadmaps, comprehensive LCA/TEA assessments, and dedicated decision-support tools for investors.

By harnessing algae's ability to grow rapidly and efficiently, they aim to create scalable and cost-effective solutions for reducing greenhouse gas emissions.

They aim to reduce production costs through technological advancements and resource efficiency, making their solutions economically viable for large-scale implementation. These projects also prioritize using locally available materials to minimize costs and increase scalability.







COCPIT



FUELGAE



SUSALGAEFUEI

