

ALGAESOL

"SUSTAINABLE AVIATION AND SHIPPING FUELS FROM MICROALGAE AND DIRECT SOLAR BES TECHNOLOGIES"

ALGAESOL project will develop and evaluate solutions for sustainable conversion of sunlight into fuels that can aid to **reduce aviation and shipping biofuel production costs up to 25%** and accelerate the replacement of fossil-based energy technologies.

To improve the efficiency of **converting solar energy, carbon dioxide (CO₂) and organic wastes into renewable methanol (CH₃OH), methane (CH₄) and biooils**, ALGAESOL will:

- Develop and improve cutting-edge bioelectrochemical system (BES) technology using a zero-waste approach
- Increase biooil (microalgal lipids) production through improvements in microalgal pathways or photosynthetic bioconversion (bioelectrochemical technology, improved algal strains, cultivation protocols, harvesting and lipid extraction)
- Improve purification yield and quality of biofuels from algal lipids
- Employ novel simulation approaches and sustainability assessments to ensure enhanced sustainability (environmental, economic, social) of the developed fuels and market penetration

INPUTS



CONVERSION ROUTES

Direct solar BES technologies



Intermediates



Purification



Microalgae based BES



Intermediates



Processing



Contamination control



OUTPUT



Purification

Processing

SAF

CH4

SAF

CH4

SAF

CH4

SAF

CH4

SAF

CH4

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Get in touch to find out more about ALGAESOL technology and material innovations!

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