



European
Commission

Policy brief: Competitiveness of clean energy technology – Sustainable biogas

October 2023

Headline findings

- The EU accounts for **67%** of global biogas and bioenergy is an important contributor for the EU to achieve energy autonomy and climate neutrality quickly and cost-effectively.
- The EU aims to replace about **10%** of natural gas a year with sustainable biomethane by 2030, facilitated by the integration of biomethane into the gas network.
- Turnover in the EU biogas sector was around **EUR 5.5 billion** in 2021 and the sector provides over **47 000** direct and indirect jobs.

Key (competitiveness) challenges for Advanced biofuels

Challenge 1

Several technologies for the production of biogas and biomethane are available and more are coming online. However, the efficiency of the processes still needs to improve. High capital expenditures are still currently needed for a biofuels plant. There is a significant potential of 25-50% cost reduction through technology innovation, market incentives and a stable regulatory and investment framework.

Challenge 2

Biogas feedstock is varied and locally sourced within Europe. Still, the availability of sustainable biomass and competition for biomass resources could prove challenging, particularly for waste and residues for fuels, energy, and materials.

Challenge 3

Expanding the infrastructure for advanced biofuel distribution and compatibility with existing fuel systems and engines can be challenging and costly.

Key policy recommendations

Recommendation 1

Continuous research and innovation support will be important to secure supply and increase production.



Recommendation 2

New and promising biomass feedstock not yet addressed by the legislation could substantially increase advanced biofuel generation capacity. The separation of organic municipal solid waste (from 2024) will unlock one new source of feedstock.

Recommendation 3

Price signals from potential binding biomethane production targets could facilitate deployment.



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