

New EU-funded project is expected to increase European biomethane potential by 66%

Over the next five years, 22 partners from nine European countries will join forces in the EU-funded project [BIOMETHAVERSE](#) meant to diversify the technology basis for biomethane production in Europe, to reduce production costs, and to contribute to the uptake of biomethane technologies. The project will support the scale-up of biomethane production to 35 bcm by 2030 proposed by the [REPowerEU](#).

Biomethane is a renewable and environmentally sustainable substitute of natural gas able to provide energy storage capacity and perform as a flexible renewable energy carrier and fuel. As such, biomethane is well placed to contribute to the achievement of climate goals and energy security alike.

BIOMETHAVERSE sets out to **increase the biomethane production potential in Europe**. Over the past decade, biomethane production has been steadily growing. Europe's total biomethane production in 2021 amounted to 3.5 bcm and is expected to increase in the coming years reaching 35 bcm by 2030 ([EBA Statistical Report 2022](#)). By then, BIOMETHAVERSE is expected to **boost the current biomethane production by 66%**. This upscaling of biomethane production could **enable 113 Mt CO_{2eq} GHG savings in Europe**, which is similar to the current GHG emissions of Belgium.

To this aim five innovative biomethane production pathways will be demonstrated in five European countries: France, Greece, Italy, Sweden, and Ukraine. The project's production routes cover one or a combination of the following production methodologies: thermochemical, electro-biochemical, and biological. As a starting point, four demonstration plants use conventional anaerobic digestion (AD), and one uses conventional gasification.

The project enables and encourages different energy sectors to work together. In BIOMETHAVERSE's demonstrators, CO₂ effluents from AD or gasification and other intermediate products are combined with renewable hydrogen or renewable electricity to increase the overall biomethane production. BIOMETHAVERSE therefore **contributes to energy system integration** by optimising and modernising the function of the energy system as a whole ([Biogases: Beyond Energy, Energy System Integration](#)).

BIOMETHAVERSE's innovations also aim to ensure that biomethane reaches gas grid quality standards at affordable production prices allowing the scale-up of biomethane production in Europe. Today, the production cost of biomethane ranges from €55/MWh to €110/MWh, depending on feedstock, technology and plant scale. The project is expecting to **reduce biomethane production costs by 44%**. In order to maximise the impact of the innovations, all partners are committed to ensuring the replicability and upscaling of the demonstrated production pathways while guaranteeing swift market access to the technologies.

In addition to the environmental benefits, BIOMETHAVERSE will also contribute to support the renewable energy sector in reaching the necessary workforce. By 2030, the project is expected to **create 294,000 additional jobs**. The biogas and biomethane industries are already responsible for 220,000 jobs today.



"All project partners are determined to steer BIOMETHAVERSE towards meeting its full innovation potential in biomethane production. Biomethane is a cornerstone of the present and future energy system, and BIOMETHAVERSE will strongly contribute to shape it.", states Stefano Proietti, Project Coordinator of BIOMETHAVERSE.

Contact

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About BIOMETHAVERSE

BIOMETHAVERSE aims to diversify the technology basis for biomethane production in Europe, to increase its cost-effectiveness, and to contribute to the uptake of biomethane technologies. Project website: <https://www.biomethaverse.eu/>

Partners

Istituto di Studi per L'Integrazione dei Sistemi, European Biogas Association, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Bioenergy Association of Ukraine, Bioaerio Lagada Anonymi Etaireia, Ethniko Kentro Erevnas Kai Technologikis Anaptyxis, Research Institutes of Sweden AB, Cortus Energy AB, WARTSILA Sweden AB, ENGIE, Aeris Tecnologías Ambientales S.L., Acondicionamiento Tarrasense Associacion, Danmarks Tekniske Universitet, Friedrich Alexander-Universitaet Erlangennuernberg, Cap Holding Spa, Energigas Sverige Service AB, PrJSC "MHP EKO ENERGY, Politecnico di Milano, Consorzio Italiano Compostatori, Società Italiana Acetilene e Derivati SpA, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Ellmann Engineering GMBH.

