

International Newsletter #2

September 2023



BIOMETHAVERSE (Demonstrating and Connecting Production Innovations in the Biomethane Universe) sets out to diversify the technology basis for biomethane production in Europe, increase its cost-effectiveness and contribute to the uptake of biomethane technologies. To this aim, 5 innovative biomethane production pathways will be demonstrated in five European countries: France, Greece, Italy, Sweden and Ukraine.

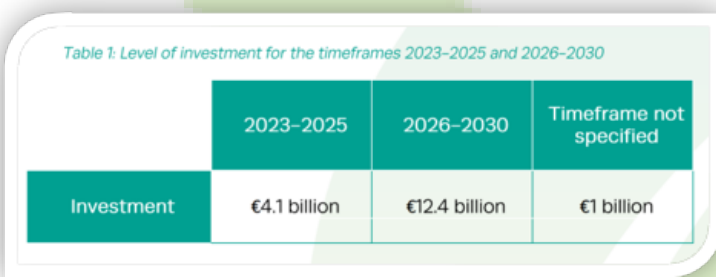
News from the biomethane universe

Find out what is trending in the biomethane, biogas and renewable energy sector

€18 billion investments to scale-up biomethane production already in the pipeline, according to 1st EBA Investment Outlook on Biomethane

The 1st EBA Investment Outlook on Biomethane launched in June 2023 shows that a first tranche of €18 billion has been set aside by the industry up to 2030 to ensure the scale-up of biomethane production and support both Europe's energy security and climate mitigation ambitions. These investments make additional whole-system benefits available to our society, worth up to 7.9 billion euro per year. Matching policies, stable framework conditions and pathways for long-term end-use is critical to secure the announced capital injection.

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Download the Biomethane Investment Outlook



New record for biomethane production in Europe shown on the EBA/IE Biomethane Map 2022-2023

Biomethane production has enjoyed remarkable growth in the last decade. The 2022-23 edition of the Biomethane Map reports nearly 30% more biomethane plants compared to the 2021 edition. Europe reached a total of 1,322 biomethane-producing facilities by April 2023. These 299 new plants represent nearly 30% more than the ones reported in the previous edition of this map in 2021.

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Pills from the project

Discover project activities and insights coming from BIOMETHAVERSE's research team

Happy 1st Birthday, BIOMETHAVERSE!

This October 2023 BIOMETHAVERSE will turn 1. We can't say the project's first steps have been 'baby' ones! This first year has been packed with exploration, dialogue, and consolidation of the network of [project partners](#), setting the stage for research to flourish over the coming years.

The 2nd General Assembly (13-15 June 2023) [took place in Uppsala](#) to discuss the project's progress and share relevant updates. Key workplans – such as the project management and [data management](#) plans and the [communication and dissemination strategy](#) – are already in place. The same is true for the framework to support the implementation of innovative biomethane pathways in our five demo sites. With the delivery of the [Implementation Activity Plan](#) (led by [EBA](#)), guiding the execution of the demonstration activities, the demo sites can operate under a coherent plan of detailed activities, process flow, milestones, challenges, risks, exploitation perspectives and outlooks on market viability. The latter implementation plan, together with the [Evaluation Framework and Data Collection Strategy](#) (led by [ENEA](#)), which provides the methodological approach and guidelines to be adopted based on international recommendations for environmental and social life cycle assessments (i.e., ISO, EC ILCD and UNEP guidelines), equipped demo sites with a solid structure to begin operations.

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Fuelling Change: The Impact of National Policies on Biomethane Expansion in Europe

BIOMETHAVERSE is empowered by its diverse geographical ecosystem, including France, Italy, Sweden, Greece, and Ukraine. Each of these nations has its unique set of biogas and energy regulations in place, and they find themselves at various stages of the biogas evolution. Through their respective national case studies, these countries offer valuable insights into how national policies can influence – either by supporting or hindering – the expansion of biomethane production in Europe. Additionally, they shed light on the primary obstacles faced by biogas plant development across the continent.

National biogas/energy policies are undergoing transformations in alignment with overarching EU regulatory trends and innovation scenarios as outlined in the REPowerEU Plan, introduced in May 2022.

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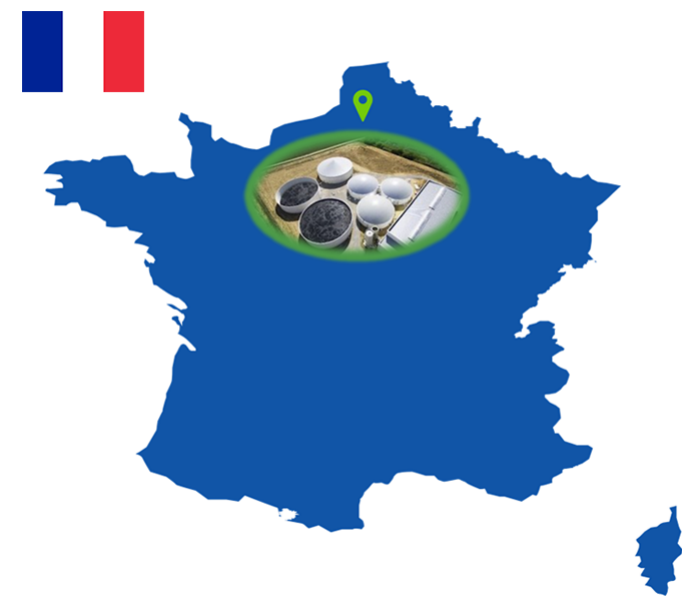


2nd Technical Workshop and Italian Demo site visit
MILAN, 29 Nov - 1st Dec, 2023

Flashes from our Demos/Countries

Updates from our pilot demonstration sites, where innovations in the biomethane universe happen!

In-Situ and Ex-Situ Electro-methanogenesis (EMG) in France



The Anaerobic Digestion (AD) unit on which the French electromethanogenesis pilot will be installed has undergone a significant upgrade, pushing its performance to new heights. The production of biomethane has nearly doubled, going from 1,815,000 m³ (about 18 GWh/year) to 30 GWh/year, catering to the needs of 5,000 people previously and now to 2,520 households. The injection capacity into the gas network has been increased from 230 to 350 Nm³/h, and the substrate feeding has been enhanced to 38,000 tons per year. These advancements were obtained without modifying the total surface area and digestion volume, which remained unchanged at 2.5 hectares and 6,000 m³ respectively.

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Ex-Situ Biological Methanation (EBM) in Italy



The Italian demo-site has the ozonolysis pre-treatment facility on lay-out optimization, procurement of equipment and instruments as well as the security requirements. Once the project has been approved by the corresponding authorities, the construction work has started and is estimated to last for the next 3 months. [CAP](#), together with [SIAD](#), will follow the operations in detail as to ensure these are on schedule and correspond to technical features required.

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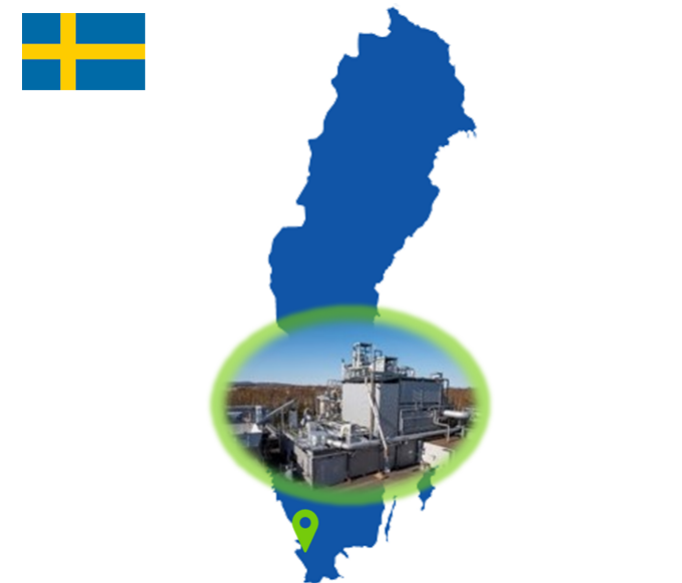
Ex-Situ Thermochemical/catalytic Methanation (ETM) in Greece



Research on catalyst properties to conduct first-stage experiments has begun and process flowcharts are under design. The technology of the Greek demo pilots is primarily based on a catalytic methanation reaction that takes place at high temperature and pressure. Currently, the specific properties of the catalyst to be procured are thoroughly examined and identified while an extensive market research on catalysts available is being conducted. After the provision of the most suitable catalyst, we will be ready to conduct some first stage experiments to ensure the efficiency and accuracy of the reaction.

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Ex-Situ Syngas Biological Methanation (ESB) in Sweden



By 2030, at least 10% of all heavy trucks in Sweden could run on biomethane. To strengthen the role of biomethane in the transport sector, during the spring, the Swedish Gas association stated, together with its associated members, that "By 2030, at least 10% of all heavy trucks in Sweden can run on biomethane". Today, just under 3% of all Sweden's heavy trucks have vehicle gas as fuel, where the proportion of biomethane is about 96% for both liquefied and compressed gas. With a clearer sector goal, biomethane is highlighted as one of the types of energy needed to achieve 100% conversion of the vehicle fleet.

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In-Situ Biological Methanation (IBM) in Ukraine



The Ukrainian biogas sector has potential in terms of both the availability of raw materials and the demand for biogas. The total annual energy potential of biogas/biomethane production in Ukraine is estimated at 21.8 bcm CH₄ (18.7 toe). The main production of biogas/biomethane can be achieved due to the use of agricultural crop residues, increasing the area under energy crops, as well as developing the practice of growing cover crops. Currently, there is a great interest in the production of biomethane from large agricultural companies that have sufficient amount of their own raw materials. The first Ukrainian biomethane was generated by Gals-Agro company in March 2023.

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Meet the BIOMETHAVERSE Team

The BIOMETHAVERSE multidisciplinary consortium includes 22 partners from 9 European Countries on a 5-year mission to test and deliver market-ready innovations in biomethane production.



Co-funded by the European Union

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