

The SEMPRE-BIO project: Securing doMestic PRoduction of cost-Effective BIOMethane



SEMPRE-BIO Project...

SEMPRE-BIO aims to demonstrate novel and cost-effective biomethane production solutions and pathways, deemed essential to achieve the European Green Deal and climate and energy targets for 2030 and the net zero greenhouse gas emissions by 2050, and to increase the market up-take of biomethane related technologies.

...in numbers

42

Months



16

Partners



6

Countries



9.9M

Funding



... in OUTCOMES

SEMPRE-BIO expects to meet 4 specific outcomes of the Horizon Europe call resulting in a CLEANER, MORE SUSTAINABLE AND SECURE ENERGY SUPPLY.

1. Increase cost-effectiveness of biomethane conversion production.
2. Diversify the conversion technology basis for biomethane product.
3. Contribute to market up-take of biomethane-related technologies in the gas market.
4. Contribute to the demonstration of innovative conversion technologies for biomethane production from wastewater and woody biomass, at nearly industrial-scale operations.

...in INNOVATIONS & DEMONSTRATIONS

SEMPRE-BIO will take technological solutions FROM MODELS TO REALITY in 3 European Biomethane Innovation Ecosystems (EBIE) where 5 biomethane innovations technologies will be tested. SEMPRE-BIO will demonstrate novel and cost-effective biomethane production solutions to support circular economy and reduce dependence on fossil fuels.



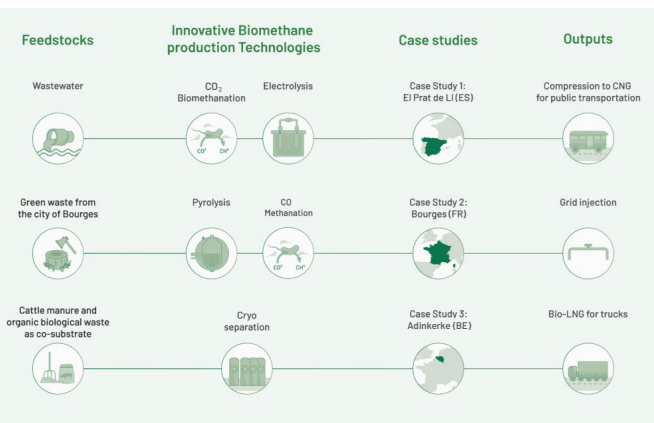
CS1: Aigües de Barcelona, Barcelona, Spain

CS2: Bourges, France

CS3: De Zwanebloem, Adinkerke, Belgium

SEMPRE-BIO partners:

... in PILLARS



The SEMPRE-BIO EBIEs - progress

- CS1:**
- Basic engineering phase of PEMEL, and PID and HAZOP processes commenced (PROPULS).
 - Stack manufacturing underway (SINTEF & ProPuls).
 - Biomethanation plant in conceptual engineering stage, based on initial from DTU and previous lab/pilot scale experiments.
- CSII:**
- Design in progress based on data from DTU and previous lab/pilot scale experiments.
 - Biomethanation equipment purchased.
 - Site's civil works ready. Lease agreement signed.
 - Pyrolysis equipment purchased. Manufacturing in progress.
- CSIII:**
- AD plant construction finished. Biogas production by Nov 2023.
 - Permits for the Demo Plant in progress.
 - Continuous pilot tests: AD tests with pure manure finalized. Microalgae production, CO₂ capture & Cryopolish.
 - AD plant construction finished. Biogas production by Nov 2023.
 - Permits for the Demo Plant in progress.
 - Continuous pilot tests: AD tests with pure manure finalized. Microalgae production, CO₂ capture & Cryopolish.



ProPuls



NV De Zwanebloem



The SEMPRE-BIO project has received funding from the European Union's HORIZON-CL5-2021-D3-03-16 programme under grant agreement N° 101084297. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.