

Press Release

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Stereau and Enosis partner to integrate biological methanation into the wastewater treatment plants of tomorrow

At the Salon des Maires et des Collectivités Locales (SMCL), Stereau — the engineering subsidiary of the Saur Group specializing in the design and construction of water treatment facilities — and Enosis, a French company recognized for its expertise in biological methanation, announced the signing of a strategic partnership to develop and deploy solutions in France and Switzerland for recovering CO₂ generated from sludge digestion in wastewater treatment plants. This partnership supports the evolution of tomorrow's wastewater treatment plant model, driven by Saur Group's Valoriise offering, and aims to help local authorities reduce the carbon footprint of their facilities through a solution that transforms CO₂ from wastewater treatment into renewable energy.

A semi-industrial-scale pilot unit

As part of this partnership, Stereau and Enosis will deploy a next-generation pilot unit at a wastewater treatment plant. This installation will mark a key milestone: for the first time in France in this context, it will enable real-world testing of biological methanation applied to sludge from wastewater treatment.

These trials will complement those conducted by Enosis with its DENOBIOL industrial demonstrator, which is coupled with an agricultural methanization facility and represents the first French biological methanation installation, commissioned in 2025 in the Hauts-de-France region.

At the end of this pilot phase, Stereau and Enosis plan to deploy the first commercial installation integrated into a municipal wastewater treatment plant. This step will make it possible to define a reproducible industrial model for CO₂ recovery and the local production of renewable energy within a wastewater treatment facility.

A modular, proven technology suited to urban constraints

Conventional methanization produces a biogas composed of roughly 60% methane and 40% CO₂, of which only the methane portion can be recovered. The biological methanation developed by Enosis goes one step further: it combines this CO₂ with green hydrogen to produce additional methane.

This reaction, at the core of Power-to-Gas pathways, makes it possible to use hydrogen produced by electrolysis from green electricity to convert an unutilized CO₂ stream into renewable or low-carbon e-methane.

The biological methanation developed by Enosis increases renewable gas production by 30 to 50% while eliminating CO₂ emissions.

Available in modular, skid-mounted, or containerized formats, Enosis technology fits seamlessly within the urban constraints of wastewater treatment plants.

It offers several advantages for local authorities:

- easy integration, even on constrained sites;
- small footprint, well suited to urban environments;
- robust operation despite variations in biogas quality;
- progressive scaling according to needs.

A strong contribution to the ecological transition of wastewater treatment plants

Recovering the biogenic CO₂ from wastewater treatment plants is a strategic lever for local authorities that, under the new European Urban Wastewater Treatment Directive (DERU), must strengthen the energy and climate performance of their facilities. The directive introduces stricter requirements for emissions reduction, energy efficiency, and the use of renewable energy within sanitation infrastructure.

By converting a gas that was previously released into renewable methane, biological methanation directly addresses these new obligations: it increases local green energy production, improves the carbon footprint of treatment plants, and contributes to achieving Europe's climate-neutrality goals.

Statements

Vincent Guerré, President of Enosis:

"By combining our solutions with Stereau's expertise in water treatment, we are taking a decisive step toward the large-scale deployment of technologies that convert CO₂ into renewable or low-carbon e-methane. This is a major advancement for the energy transition of local communities."

Hugo Bardi, President of Stereau:

"This partnership with Enosis is fully aligned with our ambition to provide local authorities with concrete solutions to decarbonize their infrastructure. Biological methanation paves the way for a new generation of wastewater treatment plants that produce renewable energy."

About Enosis

Founded in 2014, Enosis develops biological methanation systems that convert CO₂ and renewable hydrogen into renewable or low-carbon methane, which can be injected into existing gas networks and used as a substitute for fossil-based natural gas. Modular in design, Enosis' solutions serve the sectors of anaerobic digestion, pyrogasification, industry, and energy infrastructure.



About Stereau

Stereau, the engineering subsidiary of the Saur Group, designs, builds, and commissions drinking water production facilities and wastewater treatment plants for local authorities. Committed to meeting the highest standards of quality, performance, operability, and environmental protection, Stereau continuously innovates to combat emerging pollutants, conserve water and energy resources, and recover value from effluents. With nearly 2,500 water treatment plants built in France and abroad, Stereau stands out for its innovative technological choices and exemplary project execution.

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