



Press release

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#### **Press contacts Enosis**

Nicolas Jensen - +33 6 72 25 51 28 - nicolas.jensen@enosis-energies.com

#### Press contacts Saur - Stereau

Saur / Stereau – Isabelle Scherrer – +33 6 50 87 13 88 – isabelle.scherrer@saur.com Havas – Oriane Teixeira-Leveleux – 06 46 58 43 81 – saur-rp@havas.com

# Stereau and Enosis join forces to integrate biological methanation into the wastewater treatment plants of tomorrow

Paris/Toulouse, November 20, 2025 – At the Mayors and Local Authorities Exhibition (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 with expertise in biological methanation, announced the signing of a strategic partnership to develop and deploy solutions for recovering CO<sub>2</sub> from sludge digestion.

This partnership is part of the evolution of the wastewater treatment plant model of tomorrow, driven by the Saur group's Valoriise offering, and aims to support local authorities in reducing the carbon footprint of their facilities. It is also part of the development of power-to-gas technologies, paving the way for the production of renewable energy from CO<sub>2</sub> generated by wastewater treatment.

## A pilot unit on a semi-industrial scale

As part of this partnership, Stereau and Enosis will deploy a new-generation pilot unit at a wastewater treatment plant. This installation will be a key milestone: it will enable biological methanation applied to sludge from wastewater treatment to be tested in real conditions for the first time in France in this context. These tests will complement those conducted by Enosis with its DENOBIO industrial demonstrator coupled with an agricultural methanization facility, the first French biological methanation facility to inject into the gas network, which will be commissioned in 2025 in the Hauts-de-France region.

At the end of this pilot phase, Stereau and Enosis plan to deploy a first commercial installation integrated into a municipal wastewater treatment plant. This step will make it possible to define a reproducible industrial model for CO<sub>2</sub> recovery and local renewable energy production, integrated into a wastewater treatment plant.

# Modular, proven technology adapted to urban constraints

Conventional methanization produces biogas composed of approximately 60% methane and 40%  $CO_2$ , of which only the methane portion can be recovered as energy. The biological methanation developed by Enosis goes one step further: it combines this  $CO_2$  with green hydrogen to produce additional methane. This reaction, which is at the heart of power-to-gas processes, uses hydrogen produced by electrolysis from green electricity to convert unused  $CO_2$  into renewable or low-carbon methane.





The biological methanation developed by Enosis thus increases renewable gas production by 30 to 50%, while eliminating  $CO_2$  emissions.

Available in modules, skids, or containers, Enosis technology integrates seamlessly with the urban constraints of wastewater treatment plants. It offers several advantages for local authorities:

- Easy integration, even on sites with limited space;
- Small footprint, suitable for urban environments;
- Robust operation despite variations in biogas quality;
- Gradual ramp-up according to needs.

## A major contribution to the ecological transition of wastewater treatment plants

The recovery of biogenic  $CO_2$  from wastewater treatment plants is a strategic lever for local authorities, which are required to improve the energy and climate performance of their facilities under the new European Urban Wastewater Directive (Directive européenne sur les Eaux Résiduaires Urbaines – DERU). The directive introduces stricter requirements for emissions reduction, energy efficiency, and the use of renewable energy in wastewater treatment infrastructure.

By transforming a gas that was previously discarded into renewable methane, biological methanation directly addresses these new requirements: it increases local green energy production, improves the carbon footprint of treatment plants, and contributes to achieving European climate neutrality targets.

**Vincent Guerré, President of Enosis**: "By combining our offering with Stereau's expertise in water treatment, we are taking a decisive step towards the large-scale deployment of solutions for converting  $CO_2$  into renewable or low-carbon e-methane. This is a key step forward for the energy transition in our regions."

**Hugo Bardi, President of Stereau**: "This partnership with Enosis is fully in line with our ambition to offer local authorities concrete solutions for decarbonizing 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 facilities that convert  $CO_2$  and renewable hydrogen into renewable or low-carbon methane, which can be injected into existing networks and used as a substitute for fossil-based natural gas. Enosis' modular solutions are designed for the methanation, pyrogasification, industrial, and energy infrastructure sectors.

www.enosis-energies.com

#### **About Stereau:**

Stereau, the engineering subsidiary of the Saur Group, designs, builds, and commissions drinking water production facilities and wastewater treatment plants for its local authority clients. Committed to meeting the highest standards of quality, performance, operability, and environmental protection, Stereau continually innovates to combat new forms of pollution, 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.

www.stereau.com