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Press Release

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New standards for sustainable biogas facilities: Bilfinger and Reverion sign letter of intent for strategic partnership

- **Unique all-in-one solution: first system to simultaneously substitute fossil fuels, produce green gases and enable large-scale carbon capture**
- **Doubling of electricity production from biogas with negative carbon footprint**
- **Bilfinger to support market launch as experienced technology integrator with comprehensive single-source services**

Mannheim, Germany. Bilfinger and Munich-based cleantech startup [Reverion](#) have signed a letter of intent to collaborate in the field of sustainable biogas plants. The aim of the strategic cooperation is to bring Reverion's innovative technology - a modular power plant based on fuel cells for efficient power generation and energy storage - to the market and to expand it on an industrial scale.

As a unique all-in-one solution, Reverion's patented technology enables not only efficient power generation from biogas with particularly high electrical efficiency, but also the generation and storage of green hydrogen or synthetic natural gas, as well as the cost-effective capture of clean, storable CO₂. After completion of the pilot phase, Bilfinger will support the spin-off from the Technical University of Munich in converting existing biogas plants to the new technology with a combination of comprehensive industrial services from various trades.

“We are pleased to support Reverion in the market launch of this pioneering solution for sustainable and efficient energy production. As a long-standing partner to the industry, we have extensive experience in the construction of complex plants and the necessary expertise in the integration of technologies,” says Bilfinger Group CEO Thomas Schulz. “Our cooperation promises to establish an innovative technology in the energy industry that will secure the future profitability of existing biogas plants, bring flexibility to the market and enable long-term energy storage.”

Volatile renewables require technologies that can balance the grid and store energy. Biogas is already an important part of the energy transition and the only renewable energy source that can provide both secure baseload power and balancing power for intermittent wind and



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photovoltaics. However, conventional biogas combined heat and power (CHP) plants typically operate with gas engines that have a maximum efficiency of 40 percent, offer no storage option, and emit several million tons of CO₂ per year. Modern fuel cell systems achieve higher efficiencies of 50-60 percent, but due to significantly higher costs do not yet have an economic advantage over gas engines.

Reverion's skid-based power plants, on the other hand, are designed to increase electrical efficiency up to 80 percent. In addition, the power plants can run “backwards” in reversible mode to produce and store green hydrogen or a renewable natural gas substitute in electrolysis mode when there is a temporary surplus of wind and solar power. This multiple use creates a high degree of flexibility and, for the first time, economic superiority despite higher investment costs. By capturing pure CO₂ or converting it to natural gas substitute, the entire process becomes significantly carbon negative, enabling low-cost removal of CO₂ from the atmosphere.

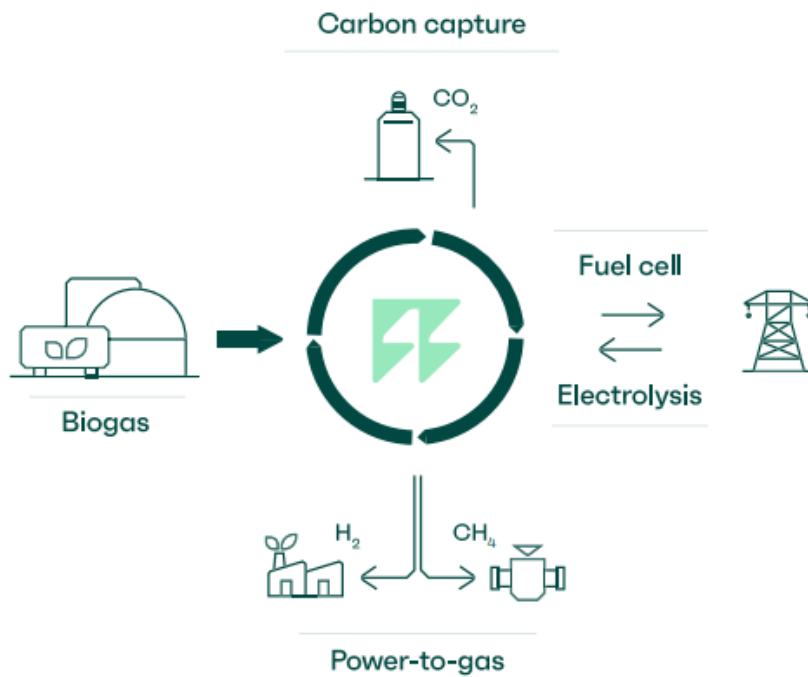
“Our technology offers a unique triple effect and opens new horizons for environmentally friendly energy conversion. This fundamental approach to efficiency and sustainability is what we seek in our partnerships. We are therefore pleased to have found in Bilfinger a strong and experienced partner who can support us with comprehensive industrial services from a single source,” says Stephan Herrmann, CEO and co-founder of Reverion.

Upon completion of the pilot phase in 2023, the 100 kW systems will go into series production. According to the letter of intent, multidisciplinary teams from [Bilfinger Engineering & Maintenance GmbH](#) and [Bilfinger Life Science Automation GmbH](#) will support the start-up of the skid production and the conversion of existing biogas plants to the innovative technology. The services include pipeline construction, installation of process technology components, production of special components and skid assemblies, as well as instrumentation and electrical engineering.

Bilfinger supports customers in the process industry with a comprehensive portfolio of services to increase the efficiency and sustainability of their plants. From established technologies such as energy efficiency, [hydropower](#) or [wind power](#) to newer areas such as [Carbon Capture, Utilization and Storage \(CCUS\)](#) or [green hydrogen solutions](#), Bilfinger is constantly developing its services to optimally support its customers along the entire value chain of their plants and to deliver solutions for a more sustainable industry.



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Reverion's system is the first all-in-one biogas solution with a reversible system design. © Reverion



Standardized units in containers provide simple installation and easy scalability. © Reverion



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Volker Sembill, Managing Director of Bilfinger Engineering & Maintenance GmbH, with Stephan Herrmann of Reverion at the signing of the letter of intent in Gersthofen, Germany. © Bilfinger

Bilfinger is an international industrial services provider. The aim of the Group's activities is to increase the efficiency and sustainability of customers in the process industry and to establish itself as the number one partner in the market for this purpose. Bilfinger's comprehensive portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance and plant expansion to turnarounds and digital applications.

The company delivers its services in two service lines: Engineering & Maintenance and Technologies. Bilfinger is primarily active in Europe, North America and the Middle East. Process industry customers come from sectors that include energy, chemicals & petrochemicals, pharma & biopharma and oil & gas. With its ~30,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenue of €4.3 billion in financial year 2022. To achieve its goals, Bilfinger has identified two strategic thrusts: repositioning itself as a leader in increasing efficiency and sustainability, and driving operational excellence to improve the organizational performance.

You can find additional information, photographs and videos at 