

Liège (Belgium) and Toulouse (France), March 6th, 2023

John Cockerill joins forces with Enosis for the supply of biomethane production plants and CO₂ recycling

Intending to meet the demand for cleaner fuels, John Cockerill, a leader in the supply of wastewater and biowaste treatment installations and alkaline electrolyzers to produce green hydrogen, and Enosis, a French specialist in recycling CO₂ into renewable and synthetic fuels, entered a Global Partnership Agreement today. Coupling its thermal hydrolysis and its anaerobic digestion or co-digestion technologies with Enosis' biological methanation ENOBIO®, allows the partners to offer the biogas industry an integrated waste-to-energy solution contributing to the security of energy supply. This comprehensive and scalable solution is to produce renewable methane by combining the CO₂ from biogas with green hydrogen. Dedicated to municipalities, the agri-food industry and agricultural applications, it is to significantly boost the production of renewable methane all while capturing and transforming waste CO₂ into a resource.

By combining Enosis' innovative and patented biological methanation systems ENOBIO®, with John Cockerill's high-performance digestion, the integrated solution, called LysoThane H₂™, increases the production of renewable methane from fermentable biomass by 60% without requiring any additional feedstock. Moreover, this high-performance process recycles the carbon dioxide (CO₂) contained in the biogas. Based on an annual average, a 1 MW ENOBIO® methanation plant reduces the related CO₂ emissions by 1,500 tons. By taking advantage of the energy contained in the biomass, this integrated solution results in a positive energy balance, all while preventing the use of natural gas which needs to be extracted from the ground. ENOBIO® can either recycle the CO₂ emitted by existing biogas purification units, or straightforwardly process the biogas generated by the digestion units prior to its injection into the natural gas grid, substituting the existing purification units. Consequently, LysoThane H₂™ significantly improves the environmental footprint of wastewater sludge and biowaste anaerobic digestion treatment plants.

When implemented into a "Power-to-Gas" architecture, the LysoThane H₂™ solution includes the production of green hydrogen by electrolysis, which enables the flexible storage of surplus power from solar and wind parks into the existing gas network, with no capacity limitation.

Under this Global Partnership Agreement, the two companies will jointly promote and sell this high-performance solution in France (including the French overseas departments and territories), Belgium, Luxemburg, Switzerland, and Canada. Beyond the commercial synergies, the Global Partnership Agreement will also provide Enosis with a secured access to John Cockerill's

manufacturing facilities. In addition, Enosis and John Cockerill will also work on the development of disruptive technologies in the domain of green fuel and gas processing.

President of John Cockerill Environment, Christophe Cassant, commented: *“While we were looking to expand our biogas solution offering, John Cockerill Environment soon realized that Enosis’ products were a good market fit for us. With our Group being the worldwide leader in the manufacture of electrolyzers, it was even more important to grasp this opportunity allowing us to offer unique integrated solutions to all waste-to-energy, carbon capture and power-to-gas markets. When Industria, the venture capital fund in which John Cockerill is a key shareholder, decided to invest in Enosis some months ago, a deeper relationship became the natural way forward. We are very happy to enter an industrial partnership with Enosis and we are convinced that on the back of a drastically growing need for renewable fuels and carbon capture, this collaboration will very quickly prove fruitful for both partners. “*

Enosis CEO, Vincent Guerré, said: *“We are extremely pleased and honoured to partner with John Cockerill, an international group with a strong industrial and entrepreneurial culture, and a key stakeholder in the waste management and biogas market. John Cockerill and Enosis share the commitment to develop solutions aimed at reducing CO2 anthropic emissions, while enabling the production of fuels from renewable feedstocks in a local and circular approach. While respecting Enosis independence, this partnership is strategic and will support our growth.”*

About John Cockerill.

Driven since 1817 by its founder's entrepreneurial spirit and thirst for innovation, John Cockerill develops large-scale technological solutions to meet the needs of its time: facilitating access to low-carbon energy, enabling responsible industrial production, preserving natural resources, contributing to greener mobility and enhancing security. Today the Group is a key player in the energy transition and the circular economy offering companies, states and local authorities services and associated equipment for the energy, defense, industry, environment, transport and infrastructure sectors. With over 6,000 employees, John Cockerill achieved a turnover of €1.049 billion in 2022 in 23 countries, on 5 continents.

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John Cockerill's Environment Division designs and supplies treatment solutions for water, solids and waste as well as air, gas and odors. Based on its innovative and partnership driven culture, John Cockerill Environment develops and commercializes technologies and process solutions addressing municipal and industrial markets worldwide. For the deployment of its solutions on international markets, John Cockerill Environment benefits from the global footprint of the Group, while its agile organization allows for the rapid industrialization of its products and solutions.

johncockerill.com/environment

About Enosis.

Enosis designs and sells equipment recycling CO2 into renewable or synthetic methane, which can be injected into the existing gas networks for heat and transport usages, in substitution to natural gas extracted from the ground. Enosis solutions are suitable for the processing of biogas from anaerobic digestion or landfills, syngas from pyrolysis or gasification, and CO2 industrial effluents. Combined with hydrogen electrolysis, Enosis solutions can also be used as gateways between electric and gas networks, providing flexible storage capabilities to renewable power surplus from wind and solar parks. Enosis products are either fully containerized and mobile (BIMOTEP® product range) or stationary (ENOBIO® product range). Enosis solutions are based on an in-house patented biological methanation technology, environmentally friendly, developed in collaboration with French public research laboratories (part of CNRS and INRAE).

enosis-energies.com





Legend: Handshake between Vincent Guerré (left), CEO of Enosis and Alain Desvignes (right), Head of John Cockerill Environment's Water Business Line so seal the partnership agreement.

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