

## PRESS RELEASE

EnviTec Bioenergie Güstrow GmbH leads the way towards a greener transport sector  
**Inauguration ceremony at Germany's largest integrated bio-LNG plant**

**31 August 2023** After a two-year conversion phase, three wide-ranging approval applications and capital investment of more than EUR 50 million, BioEnergie Park Güstrow has now entered the trial operation phase. With today's inauguration of Germany's largest integrated bio-LNG plant with CO<sub>2</sub> liquefaction, EnviTec Biogas AG has achieved a milestone in the production of advanced fuels. "We are more than proud to have led the way by pioneering our innovative plant design in the biogas industry and set the standards to follow for a greener transport sector," said CEO Olaf von Lehmden in his speech at the ceremony. With this plant, the engineering and operating company for biogas plants and gas upgrading plants now takes on the role of a supplier of carbon-neutral fuel to the utility/heavy goods vehicle market.

"Obviously, we would not be where we are today without the support of our entire EnviTec team," von Lehmden continues. "So, I'd like to take a moment to thank not only our employees, whose day-to-day work has made this achievement possible, but also all of the tradespersons, companies, partners and regulators whose stalwart support has ensured the trouble-free completion of the conversion project." Alongside EnviTec's CEO, government representatives such as Hartmut Höppner, Secretary of State in the Federal Ministry for Digital and Transport, also addressed the audience of more than 200 invited guests. Hans-Joachim Polk, Executive Board Member of Biogasrat\* e.V. and VNG AG, Stephan Ortolf, Head of Core Corporate Customers at DZ BANK, Przemyslaw Brozyna, Managing Director Gas & Cryogenics Business Unit at Air Liquide advanced Technologies and LNG customer Silvano Calcagno, Managing Director of LIQVIS GmbH also welcomed delegates to the event. "With the completion of this trailblazing project for the decarbonisation of the heavy goods vehicle transport sector in Germany, EnviTec has not only demonstrated its pioneering entrepreneurial spirit but has also offered conclusive proof that the sustainable production of a carbon-neutral biofuel for HGVs is already possible in Germany. As one of the main buyers of the bio-LNG produced in Güstrow, we are very pleased to have been invited to participate in this forward-looking project," said the LIQVIS managing director in his speech.

Before being acquired by EnviTec Biogas, the 500 GW biogas upgrading plant fed into the 25-bar natural gas grid. This required the use of around 400,000 t of substrate as input, which largely consisted of sweet corn, plus whole-crop/grass silage and cereals. The plant's new operating model involves reducing and reformulating these input materials. As a result, 100,000 t of dry chicken manure from poultry farms is now used, as well as only 40,000 t of renewable raw materials. Following the subsequent upgrading and liquefaction of biomethane into bio-LNG, plus CO<sub>2</sub> liquefaction, the plant now handles the entire biogas value chain at a single location. This process alone achieves potential savings of 100,000 t of CO<sub>2</sub>.

## 9,600 t of bio-LNG for the heavy goods vehicle sector

Using the EnviThan biogas upgrading method, which features hollow-fibre membranes made by Evonik, the raw biogas produced at BioEnergie Park Güstrow is upgraded to the natural gas standard. The permeate from the gas upgrading process, which is enriched with carbon dioxide (CO<sub>2</sub>), contains a very low volume of methane, and is handed over to the CO<sub>2</sub> liquefaction plant (LCO<sub>2</sub> plant) for downstream processing and the production of liquid carbon dioxide. “The bio-LCO<sub>2</sub> we gain from this process can be used in food production,” explains Frank Hinken, Managing Director of EnviTec BioEnergie Güstrow GmbH. “And not just by beverage makers but also in greenhouses, for example.” The off-gas produced as a by-product of the CO<sub>2</sub> liquefaction process, which contains a small percentage of methane as well as other non-condensing gases like nitrogen, oxygen and hydrogen, is piped to co-generation plants on the premises and used for on-site power generation. In the future, the plant will produce 9,600 t of bio-LNG for the heavy goods vehicle sector every year. In terms of mileage, this volume of green HGV fuel could power 50 million truck kilometres a year.

### Sidebar – EnviTec Bioenergie Güstrow GmbH

- Commissioning of Germany’s largest biogas plant, built by EnviTec Biogas, in 2009
- Purchase and transfer to EnviTec Own Investment in 2021
- When in regular service, production of around 9,600 t [bio-LNG \(liquefied natural gas\)](#) and 15,000 t LCO<sub>2</sub> every year
- To date, the 500 GWh biogas upgrading unit fed into the 25-bar natural gas grid. The former operator ran the plant on around 400,000 t of substrate. This was predominantly sweet corn, but also included whole-crop silage, cereals and grass silage.
- In the new business operating model, this will be reduced to 150,000 t per year, with the primary input being agricultural residues, and extra CHP units will be ‘docked on’ to supply 3.1 MWeI of on-site power to the facility. Digestate storage capacities have also been adjusted to match.
- Conversion work on the Güstrow site required investment in a CO<sub>2</sub> liquefaction plant and an LNG system for biomethane liquefaction, as well as extensive capital spending on replacements such as new roofs and agitators amounting to over EUR 50 million.



Inauguration ceremony at Germany's largest integrated bio-LNG plant  
(Jörg Fischer (CFO), Olaf von Lehmden (CEO), Hartmut Höppner (Segretario di Stato presso il Ministero federale per gli Affari digitali e i Trasporti), Jürgen Tenbrink (CFO))  
Photo: EnviTec Biogas AG

### **About EnviTec Biogas AG**

EnviTec Biogas AG covers the entire value chain for the production of biogas, including the planning and turnkey construction of biogas plants and biogas upgrading plants as well as their commissioning. The company takes charge of biological and technical services on demand, and also offers operational management services. EnviTec operates 89 of its own plants, making it one of the largest biogas producers in Germany. EnviTec's business activities also include the production and marketing of climate-neutral fuels (bio-LNG) for the transport sector as well as food-grade liquid carbon dioxide (LCO<sub>2</sub>). The company is represented in 15 countries worldwide by its own companies, sales offices, strategic partners and joint ventures. In 2022, the EnviTec Group generated revenue of EUR 382.8 million and EBT of EUR 66.6 million. The Group currently employs over 600 people worldwide. EnviTec Biogas AG has been listed on the Frankfurt Stock Exchange since July 2007.

### **Contact:**

Katrin Hackfort

EnviTec Biogas AG

Phone: +49 (0)25 74 88 88-810

Email: [k.hackfort@envitec-biogas.de](mailto:k.hackfort@envitec-biogas.de)

