PRESS RELEASE

EnviTec Biogas completes commissioning for third EnviThan plant in Estonia
Biomethane goes mobile without a gas grid

Lohne/Saerbeck, 24 June 2021 – Estonia shows that three is a charm The construction and successful commissioning of two EnviThan gas upgrading plants in Tartu and Vinni has now been followed by the third EnviThan plant in Estonia for EnviTec Biogas, the plant engineering company from Northern Germany that has made a name for itself internationally with its environmentally friendly EnviThan biogas upgrading technology and its made-to-measure biogas plants. The new plant in Oisu, featuring EnviTec's tried-and-tested systems, was completed on schedule in just six months from signature to handover.

Lars von Lehmden, Managing Director of EnviTec Anlagenbau GmbH & Co. KG: "Our customer here was again AS EG Ehitus, a subsidiary of gas network provider AS Elenger, who had previously commissioned us to build the two plants in Tartu and Vinni." The combined gas upgrading (capacity 427 Nm^3/h) and CNG (compressed natural gas) compressing plant runs on raw gas from wet manure and feed waste. Although the first two plants completed by EnviTec feed the biomethane produced into the existing gas grid, Oisu will be using tank trailers. With a total of three filling points for these swap-body trailers, the biomethane will be transported to urban filling stations without the need for a gas grid.

Technical challenges successfully mastered

"We had a number of technical difficulties to overcome here," explains Stefan Laumann, Head of the Gas Upgrading Department at EnviTec. From connectivity with the CNG unit to the integration of various customers components such as a gas chromatograph or flow rate meters with EnviTec's containers – effective solutions were needed throughout. "This was where our wealth of experience in plant engineering really helped out," Laumann continues. The fact that all EnviThan containers are planned and 'built' as a 3D model first was naturally very useful in fulfilling these customer needs. An additional instrumentation and control system was not needed, for example, thanks to existing customer components.

To ensure raw biogas can be compressed to the green natural gas equivalent biomethane and later to bio-CNG, it is first purified and conditioned. As with the other plants, the Oisu plant also uses innovative EnviThan biogas upgrading for this step. For this environmentally friendly and highly cost-effective process, EnviTec Biogas has been equipping its gas upgrading plants with membrane modules from Evonik Fibres for over nine years now. The hollow fibre membranes purify the raw biogas generated in the biogas plants to yield a final methane content of over 97% purity by volume. This also keeps 'methane slip' – the portion of methane that goes unused – to well under 1%, which makes the plants very efficient.

Biomethane: a lasting contribution to climate change mitigation

"As a substitute for diesel in the transport sector, biomethane can make a lasting contribution to climate protection and the existing infrastructure can be re-used for filling vehicles without needing to make large additional investments," emphasises Lars von Lehmden. According to a recent press release from Tallinn-based public transport company Aktsiaselts Tallinna Linnatransport (TLT), 100 CNG buses are already serving Estonia's capital, with the acquisition of another 100 buses planned for this year. The city has also invited bids to supply up to 150 methane-powered buses. By 2025, the city aims to have replaced all of its existing diesel buses with environmentally friendly alternatives such as CNG buses.

The three plants completed by EnviTec Biogas could play a key role in the transition of Estonia's local public transport network. All in all, the EnviThan plants supply 8.2 million kg of CNG each year, "which could, depending on journey type and bus size, power 400 vehicles for about 20 million km," says Stefan Laumann – while also saving some 26,000 tonnes of polluting CO_2 in comparison to Euro VI diesel buses.

The Republic of Estonia is the smallest Baltic state, with just 1.3 million inhabitants—roughly the same population as Lower Saxony in Germany. Estonia joined the European Union in 2004 and also has the lowest national debt of any EU member state: this gives it a positive entrepreneurial climate that also benefits those in the renewable energy sector.

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 the operational management. EnviTec operates 75 of its own plants, making it the largest biogas producer in Germany. EnviTec's business interests also include the direct marketing of upgraded biomethane as well as the marketing of electricity and balancing energy. With a presence in 16 countries worldwide, EnviTec Biogas AG is represented by its own companies, sales offices, strategic partners and joint ventures. In 2020, the EnviTec Group generated revenue of EUR 192.3 million and EBIT of EUR 17.2 million. The Group currently employs 477 people. EnviTec Biogas AG has been listed on the Frankfurt Stock Exchange since July 2007.

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