

## PRESS RELEASE

EnviTec HighGester lowers input costs by 10%

### **New digester technology scores with shorter substrate dwell time**

**Lohne 06 October 2016** – Just nine months in real-world operation and already exceeding expectations: the HighGester from biogas all-rounder EnviTec Biogas (Lower Saxony, Germany) is not only impressing the operators of the biogas plant in Bakum in the district of Vechta, where the vertical “plugflow” digester is currently saving them over 10% of their input costs. Compared to a conventional, fully mixed digester, operating costs are also lower: “As the digested suspension is not fully mixed and the volume is smaller, this technology requires less electricity and heat,” explains EnviTec’s Chief Technology Officer Jürgen Tenbrink.

Other benefits include the shorter dwell times of the digester substrate: “Our tests have shown that the gas yield is not actually lower even with dwell times of only about 20 days,” Tenbrink adds. In turn, this means that volumetric loading can be increased by over 300% without this increase causing any problems in the system’s biological processes. This can be explained by the fact that all of the process phases run sequentially in the plugflow digester, as spatially and chronologically discrete phases, each in its ideal environment. This is not possible in a fully mixed digester, where all of the process phases occur simultaneously. Apart from the system’s superior level of performance, methane yields are also greater.

### **Lower operating, input and maintenance costs**

Thanks to the novel digester technology developed by EnviTec Biogas AG, the system can also handle a higher proportion of dry matter, permitting the larger-scale use of problematic but cost-effective input materials such as poultry litter or solid manure, for example.

Biological processes have proven to be exceptionally stable, both in the internal tests conducted by the company a few years ago and in the current, large-scale commercial plant with a volume of 900 m<sup>3</sup>. It has been possible to ramp the digester up to its nominal load within 24 hours without any faults occurring.

Alongside lower operating and input costs, maintenance costs for the HighGester are also impressively low, since no rotating parts other than the central agitator are installed in the digester. EnviTec Biogas is receiving development funding for this technology until early 2018 from the German Federal Ministry for Economic Affairs and Energy (BMWi). A comprehensive programme of trials will be completed as a BMWi-funded “ZIM” project, whose end result will be a system that is optimised for a range of different operating models. The data obtained by this trial programme will be fed into an economic viability assessment, in order to present the Ministry with the final set of recycling options for the system.

### **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 full plant and operational management. In addition, EnviTec also operates its own biogas plants. In 2011, EnviTec Biogas along with EnviTec Energy GmbH & Co. KG and its 100% subsidiary EnviTec Stromkontor GmbH & Co. KG expanded its business operations into the direct marketing of upgraded biomethane as well as the marketing of green electricity and balancing energy. With a presence in 17 countries worldwide, EnviTec Biogas AG is represented by its own companies, sales offices, strategic partners and joint ventures. In 2015, EnviTec generated revenue of €174.9 million and EBIT of €3.4 million. The EnviTec Group currently has around 370 employees. EnviTec Biogas has been listed on the Frankfurt Stock Exchange since July 2007.

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