

Media release

May 3, 2016

Forward-Looking Reinvestment: Biogas Plant to use HZI BioMethan Gas Upgrading in Addition to Electricity Production

The operator of a biogas facility near Koblenz is realigning its plant's concept by turning to biomethane production, and has commissioned Hitachi Zosen Inova BioMethan to construct a membrane system with the capacity to handle 500m³/h of raw biogas.

At the beginning of April 2016, the plant operator commissioned the Zeven-based specialists Hitachi Zosen Inova BioMethan GmbH (HZI BioMethan) to construct a gas upgrading facility, to be realized with a membrane-based gas permeation system with a raw biogas capacity of 500 Nm³/h. The membrane technology separates the carbon dioxide (CO₂) contained in the biogas from the methane. The biomethane produced as a result of this scrubbing and subsequent upgrading to natural gas quality will be fed into the natural gas grid of the local network operator from February 2017.

The operating company has been producing biogas from organic and industrial waste and converting it into electricity in three CHP plants since 2002. In light of the imminent expiry of the feed-in tariffs for electricity under the German Renewable Energy Act (EEG), the operator was seeking economically viable alternatives for the future. HZI BioMethan was able to offer a solution that was ideally aligned to the performance requirements and the specific conditions at the location: gas upgrading to produce biomethane.

Part of the raw biogas will still be converted into electricity. The resultant CHP waste heat is used to provide the heating required for waste hygienization. The remainder of the biogas will be upgraded to high-quality biomethane. "Coupled with our development expertise and many years of project experience, it was the possibility to choose between two processes that was crucial," said Dr. Karsten Wünsche, CEO of HZI BioMethan, commenting on the decision to award the contract. Given that the CHP waste heat is required elsewhere, the pressure-driven membrane system fulfills the operator's needs. HZI BioMethan will deliver the system using a specifically designed modular container construction.

Fresh prospects for aging biogas plants

There are many biogas plants that have already been in operation for more than 15 years; cogeneration plants are due for renovation, and feed-in tariffs under the EEG are scheduled to expire. Looking to the future, retrofitting biogas facilities with a gas upgrading system offers attractive advantages from both the economic and ecological perspectives: "Selling gas is a lucrative and forward-looking business model for many operators of biogas plants," stressed Wünsche.

About Hitachi Zosen Inova BioMethan

Hitachi Zosen Inova BioMethan GmbH (HZI BioMethan) is one of the leading providers of gas upgrading systems, delivering its solutions with two processes for separating CO₂ from the biogas or flue gases.

The company was founded in spring 2015 as the result of an asset deal to acquire MT-BioMethan GmbH, one of the pioneers in the field of biomethane production through CO₂ separation and gas feed-in. HZI BioMethan combines its expertise with many years of practical experience in numerous reference projects across Europe. The company is part of the HZI Group, rounding out the latter's biological waste treatment portfolio.

Pressureless amine scrubbing is an efficient, heat-led process that makes sensible use of the waste heat from CHP facilities or gas boilers. HZI BioMethan also offers a three-stage pressure-driven process using membrane-based gas permeation. Both of these technologies deliver the highest degrees of purity with minimal methane slip.

Media contact

HZI Media Office, Nicole Fritz,
Hardturmstrasse 127, CH-8037 Zurich, T +41 44 277 13 05
Nicole.fritz@hz-inova.com, www.hz-inova.com