

 The Netherlands

Methane recovery from manure through biogas

Generating sustainable energy with farming communities

Emission Reductions



45,000t
CO₂ e p.a.

Project Technology



Renewable
Energy – Biogas

Project Standard



Agricultural and livestock practices have been shaping the landscape and the way of life in the Dutch provinces of North Brabant and Limburg for several centuries. Even today, these regions remain predominately rural with limited heavy industry, and the agro-swine industry continues to hold considerable importance. In fact, these provinces hold most of the swine farms in The Netherlands. This high concentration of livestock has already led to a situation where the soil's nitrogen absorption limit has been reached, preventing the complete disposal of manure on local fields. In the wintertime, livestock manure is stored in tanks for a period of six months or more before being utilized as fertilizer for farmlands. The manure, when kept in pits, tanks or lagoons undergoes anaerobic fermentation and releases greenhouse gases (CH₄, CO₂ and N₂O) into the atmosphere.

The activities of the three project sites (Aben, Houbensteyn and Wilbertoord) have implemented an anaerobic digestion setup with a grid connected Combined Heat and Power plants (CHP) attached, using primarily pig and cattle manure for fermentation, as well as co-ferments such as food wastes from agricultural and industrial food production processes. The three projects generate about 100 GWh of green electricity annually. The biogas projects avoid uncontrolled methane emissions from manure management and reduce greenhouse gas (GHG) emissions by replacing fossil fuels, using the renewable heat for producing organic pellet fertilizers, drying substrates or heating livestock stables.



info



about project standards
and technologies:
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**Supported Sustainable
Development Goals**



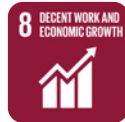


Sustainable Development

Beyond removing carbon emissions, all our climate protection projects generate multiple additional benefits for people and the environment. These projects support the United Nations Sustainable Development Goals.



The projects produce clean and renewable energy in the form of biogas. Biogas is used to generate electricity and heat by means of CHP engines, which displace non-sustainably produced electrical and thermal energy.



The projects provide a safe and healthy work environment for locals. On-the-job training is provided as well as special training on the environmental impacts of renewable energy production. The projects have enabled the creation of several permanent full-time positions.



Traditional storage of livestock manure and application of unprocessed manure results in environmental impacts such as GHG emissions, odor pollution, and water/soil contamination. When fresh manure is fed into biogas plants, these impacts are minimized. Also, sustainably sourced products like organic fertilizers made from digestate without the use of fossil fuels, are brought to the market.



The three projects contribute to climate action by reducing methane and carbon dioxide emissions. Around 15,000 tCO₂ e per project are avoided annually.



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