



# The biogas plant in Bergharen (Netherlands)

Planning

Implementation

Commissioning

Operation

Service



← The farm has 185 dairy cows, 130 youngstock, 5 bulls and 300 chicken

→ The CHP has its own building, which makes the operation and maintenance much easier.



## Fact sheet

<b>Location:</b>	<b>Bergharen / Netherlands</b>
<b>Capacity:</b>	<b>625 kW<sub>el</sub></b>
<b>In operation since:</b>	<b>04/2009</b>
<b>Input materials:</b>	<b>Manure (poultry/pigs/dairy cows/rabbits), maize silage, residue materials (allowed by the Dutch government)</b>
<b>Features:</b>	<b>Separation digestate; 9000 m<sup>3</sup> lagoon; Joint venture between P. Theunissen (50%) (owner of the farm) and EnviTec Biogas AG (50%).</b>

## The biogas plant in Bergharen (Netherlands)

This is the first biogas plant which EnviTec Biogas has realized as a co-owner outside its home country Germany. Both the family Theunissen and EnviTec Biogas AG own 50 % of the plant.

The biogas plant has a CHP unit with a capacity of 625 kW<sub>el</sub>, which will be extended to 1 MW in the near future.

The plant is currently running at full load and meets the expectations. The installation processes various types of manure, maize silage and residue materials (allowed by the Dutch government)

The maize silage is taken from a storage or silo on-site and added to the storage bunker, which is equipped with a walking floor. The walking floor and connected screw feeders feed the input substance into the mixing tank.

The various types of manure are first mixed with the lactose permeate in a tank of 300 cubic meters, then added to the mixing tank.

The input substances, which are transported by screw conveyors and substrate pumps, are homogenised in the central mixing tank. Once the agitation process is complete, the substrate pump (which is upstream of the solids shredder) pumps the substrate into the fermenter. The pumping process is controlled by a weighing system, which is located beneath the mixing tank.

After the fermentation the digestate is separated. The thick solid fraction is disposed of as fertilizer and some of the liquid fraction is returned to the digester. The other part of the thin fraction is stored in the lagoon and will be used as fertilizer.