



The biogas plant in Nogarole Rocca (Italy)

Planning

Construction

Start-up

Operation

Service



← The shredder. Homogenization and crushing of the biomass input represent a strong point of EnviTec

→ The cover of the hopper. A hydraulic system allows to protect the solid biomass once they are taken from the trench and loaded into the hopper



Location:
Capacity:
In operation since:
Input materials:
Features:

Fact sheet

Nogarole Rocca / Italy

526 kW_{el}

3/2011

Ensiled corn, liquid manure (pig)

Plant equipped with shredder for all input materials, EnviTec Feedcontrol and Redox measurement for optimisation of the biogas production and feeding plan

Minimal environmental impact

Nogarole Rocca is a Municipality of about 3,500 inhabitants in the province of Verona. The F.lli Brutti farm, managed by the two brothers Andrea and Francesco Brutti, is a promoter of clean energy. While the farm's key activity is certainly pig farming, the two entrepreneurs are determined to diversify their investments. After having invested in a photovoltaic plant which, producing about 110,000 kWh, covers more than one third of the overall electric needs of the entire farm, they decided to focus on an EnviTec biogas plant.

The plant is made up of a fermenter which is about 4,080 m³ with a flexible roof and pressure-switch accumulator, the heating and mixing unit, a 480 m³ pre-tank for storage of the incoming sewage, also covered and equipped with agitators. The plant is already predisposed for a mixing trolley (next purchase forecasted within a year). The plant is fed with about 8,250 tons of ensiled corn and 15,000 tons of liquid pig manure. In the fu-

ture the Brutti brothers plan on inserting other biomass including by-products, which will be pre-processed in the mixing trolley.

The plant will produce about 4 million kWh of electricity/year in addition to the heat energy. The plant will also have a heat exchanger on the exhaust fumes of the motor. This allows recovery of the surplus heat in order to be able to use the plant's potential to the maximum.

Downstream of the biogas plant a post treatment plant for the digested sludge will operate (the residue coming from the anaerobic digestion), which will allow significant reduction of the nitrogen load (up to about 70%) in order to be able to transform the zootechnical nitrogen into useful energy and therefore into an added value with minimum environmental impact, in complete compliance with the nitrate laws.