



The biogas plant in Pozzaglio ed Uniti (Italy)

Planning

Construction

Start-up

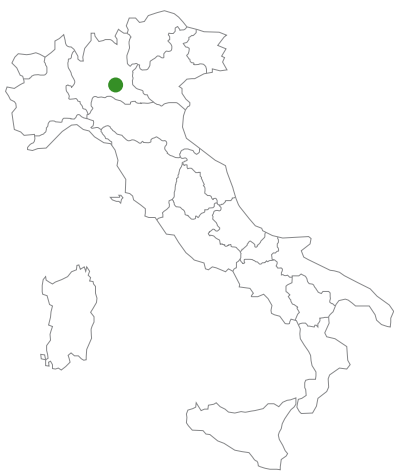
Operation

Service



← The safety valve allows to control the overpressure

→ The torch is an emergency device in case of engine stop. The column recirculation is used to control the dry matter in the fermenter



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

Fact sheet

Pozzaglio ed Uniti / Italy

526 kW_{el}

3/2011

Ensiled corn and 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

A cutting-edge plant

Pozzaglio ed Uniti is a Municipality in Lombardy in the province of Cremona with 1,400 inhabitants. There on Via Ruggeri, the De Poli family built its first 526 kW_{el} biogas plant. The De Poli family has always worked in the agricultural sector. Originally also raising dairy cattle to then, in the last twenty years, concentrate on specialised cultivation like seed corn, tomatoes and sugar beets. The De Poli family is decidedly convinced that investments in the renewable energy sector can guarantee a secure future for the farm: so much so that they are evaluating the opportunity to produce electrical energy through photovoltaic panels as well.

The De Poli family, from among the various technologies on the market, chose EnviTec for several reasons, first and foremost of which is the modular structure of the plant. Followed by: careful mixing of the biomass before introduction into the digester, vast experience in plant management with agricultural derivative input and the EnviTec Feedcontrol system, which has been awarded as the "Machine of the year 2010". This system allows to precisely gear the timing and dose the feeding of biomass into the plant according to the pressure of the biogas in the digester.

A first, immediate advantage is the optimisation of managing the inputs, with a proven savings of about 20,000 Euros per year for a 526 kW plant. All of these are conditions to be able to double the plant, foreseen by the De Poli family and easily possible by means of a line identical to the existing one to be added within the next two years.

The cutting-edge plant realised by EnviTec Biogas Italia is made up of a fermenter which is about 2,570 m³ with a flexible roof and pressure-switch accumulator, the heating and mixing unit, a 300 m³ covered pre-tank equipped with stirrers for storage of the incoming sewage and a storage tank with stirrers for the digested material.

A peculiarity during construction of the plant was the proposal, accepted by the customer, to install innovative agitators which, at the time the contract was stipulated, had not yet been tested. This was to take advantage of EnviTec's technological progress. 3 "Midsized" 7.5 kW agitators were installed instead of 4 traditional 13 kW agitators, for a decrease in auto-consumption in mixing of about 30%. The new "Midsized" agitators are convincing due to the numerous advantages over traditional mixers: more propulsion with lower consumption, better performance with less revolutions and less loss due to friction, less wear on the propellers and fewer maintenance operations.

The plant is fed with 8,600 tons of ensiled corn and 8,000 tons of liquid pig manure. The cogenerator is located outside of the technical building in a pre-assembled container and produces about 4.5 million kWh of electrical energy per year.