

Biogas Plant FORCATE



Location	Fontanafredda, Italy
Construction Period:	2009/2010
Input substrat:	Corn- and wheat silage (Triticale), annual input 7,200 t/a
Fermenter:	Steel/ concrete tank 1,726 m ³
CHP	Gas engine 365 kW
Special Features:	Separation of digestate, gas holder on top of secondary digester, thermophilic operation
Cost:	Approximately EUR 1,2 Mio

The biogas plant was built and is operated by the agricultural holding “Azienda Agricola Pezzutti Lucia”. This biogas plant is a pure NawaRo- dry fermentation design with thermophilic operation. With Wheat- and corn silage are the only feedstocks. The fully automated feeding system consists of one solid input device connected to a reception tank with a moving floor. From there, the input material is pumped into the primary fermenter. The biogas plant consists of a primary upright digester with a top mounted mixer and a secondary digestion tank with a gas holder roof. Final digestate is stored in an open top tank. The biogas is recovered in an Otto gas engine with 365 kW_{el} capacity. The electricity is supplied to the Italian public grid and is paid for in accordance with the Italian renewable energy tarif system. The CHP heat is used to maintain thermophilic operation within the primary digester. After digestion, the solids are separated from the liquid phase and stored within a separate hall. Both solids and liquid are used as a fertilizer. The Start-up of the biogas plant has been in 2010.