

## Biogas Plant BRETAGNE



Location	Plouédern, France
Construction Period:	2007
Input Substrate:	Pig manure, Sludge, fat, food residues
Fermenter:	Steel tank 1,060 m <sup>3</sup>
CHP	Gas engine 370 kW
Special Features:	Digester and secondary digester with gas holder roof, two reception tanks, one buffer tank, external heat use, decanter for digestate

The biogas plant BRETAGNE in France, built and operated by Ferti NRJ SA, is a biogas plant for the digestion of waste with mesophilic operation. The facility is designed to process 16.900 m<sup>3</sup> residuals as sludge, fat, pig manure and food residues, to produce 1,04 Mio m<sup>3</sup> biogas. The single stage biogas plant consists of two reception tanks (one reception tank (76 m<sup>3</sup>) for food residues and pig manure and another reception tank (147 m<sup>3</sup>) for fat only), a buffer tank (300 m<sup>3</sup>), and a digester and a secondary digester, both with gas holder roof. The fats are pumped separately from the reception tank into the digester. The substrate is pumped with a progressive cavity pump quasi-continuously from the mixing tank to the digester. The produced digestate is separated in a decanter. The solid phase is used as fertilizer, the liquid phase is further processed. The produced biogas is used in a gas engine with an electrical power of 370 kW. The electricity generated is fed into the local grid. The heat produced in cogeneration is used to dry the digestate and to heat the digester. Start-up of the biogas plant was in summer of 2011.