

Biogas plant „Hainersdorf“ Kurt Tauschmann Biogasanlagen GmbH

The Tauschmann family owns a business with about 1,100 fattening pigs in Obgrün near Hainersdorf in the political district of Fürstenfeld. After passing an agricultural business seminar they came up with the idea of constructing a biogas plant. The plant (250 kW_{el}) was started up in July 2005 after only one year of construction. The plant allows for the “dream of autonomy” to come true and for the business to supply itself with heat and electricity.

The biogas plant is operated in a continuous process with completely mixed digesters and uses the liquid pig manure from the pig fattening business (approx. 2,000 m³/a) and maize silage (approx. 5,100 t/a). The feedstock is added to the first digester using a feeder for solids. The first digester is equipped with a lying and the second digester with a standing agitator in order to avoid the formation of floating or bottom layers. Underground drains were built for the liquid pig manure (there are two slurry tanks with a total of around 1,700 m³) to prevent any smell nuisance to neighbours. The digesters (each around 2,000 m³) are covered with sheet metal panels on the outside. After a retention time of around 40 days and an average fermentation temperature of 39,5° the substrate is pumped into a repository (3,000 m³) that is equipped with a tractor agitator and stores the produced biogas in a gas retention hood (approx. 2,400 m³).



Quelle: Energieregion Oststeiermark, RMO

Biogas Plant Hainersdorf © Energieregion Oststeiermark, RMO

Around 150 m³ of biogas are produced and used to generate electricity and heat in the CHP plant. The “biogas fertilizer” is spread on an area of around 120 ha and represents a valuable and natural fertiliser for agriculture. The generated heat is used to heat the residential building, the piggery and the neighbouring houses. The electricity is fed into the public grid.

Kurt Tauschmann (operator)

“We chose to operate a biogas plant because on the one hand we have access to renewable resources and on the other hand we had a desire to become autonomous. The goal was to supply 100% of the energy needed by the business ourselves.”

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Biogas Regions Shining Example



key data

Start of Operation	2005
Type of corporation.....	Ltd. Company
Amount of gas produced	150 m³ per hour
Investment costs	1 400 000 €

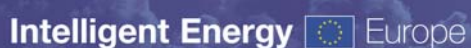
feedstock

Liquid manure (pig).....	2000 m³ per year
Maize silage	100 tons per year

production data

Available area for the output of the biogas fertilizer	120 ha
Thermal power rating of the gas engine	300 kW
Generated thermal energy.....	2 500 MWh per year
Utilisation of heat	residential buildings piggery neighbouring houses
Electric power rating of the gas engine	250 kW
Generated electric energy.....	2 000 MWh per year
Annual delivery of electricity to the (regional) electric grid company	2 000 MWh per year

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technical plant description

Clamp silo	5 000 m³
Digester	2x2 500 m³
Repository (with gas storage tank).....	3 000 m³
Gas storage tank	2 400 m³ each
Slurry tank.....	1 700 m³ total
Residence time in the digester	~ 40 days
Temperature of the anaerobic digestion (operational)	39.5°C
Average expenditure of human labour	2 hours per day

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