



ENSPAR Biogas GmbH Biogas plant in Eastern Europe – 1,6 MW

ENSPAR Biogas GmbH

Profitable recycling of residues

ENSPAR is a proprietor-run company operating on an international stage from its headquarters in Bad Wünnenberg, North-Rhine Westphalia. Founded by Michael Hannes, a seasoned veteran of over 150 successfully completed projects, ENSPAR is among the leading providers in the area of biogas technology.

Employing a multinational team of engineers and energy and environmental technicians with long-standing experience and comprehensive expertise, ENSPAR guarantees ideal, integral solutions for a broad range of sectors.

Individual design for your biogas plant

Poland has enormous potential to expand the renewable energy sector. The EEG in Poland, passed in 2015, offers good conditions for the construction of renewable energy plants. Funded are wind, solar and biogas plants. There is also the possibility of special support from regional energy clusters that can be supplied with these energies independently.

Municipality

A combination of solar, biogas and wind energy offers municipalities the possibility of almost self-sufficient supply from renewable energies. Biogas can deliver the stable base load in this energy mix. A clever combination of several combined heat and power units and gas storage can even absorb peak loads and thus provides a stable energy supply. In addition, wind and solar energy can support the energy supply when needed.

Food production

Food production companies have an increased need for energy and heat. Organic waste from production can be used as raw material for in-house power and heat production. Here, energy costs can be reduced and the energy supply stabilized.

Agriculture

Farms have a large supply of substrates for biogas production and good opportunities to recycle fermentation substrates as fertilizer. Conceivable use in addition to the production of electricity and heat from biogas is the use of biogas as a fuel.

ENSPAR, Range of services,

A customer-centric, full-service provider, we develop and build high-end, stainless steel biogas plants for a range of substrates that can be designed to suit your individual conditions on the ground. We guarantee high product quality and the best technologies, sophisticated planning and project management, as well as hassle-free construction.

Our long-standing experience and innovative, flexible approach allow us at all times to find viable and economically interesting solutions for agriculture, industry and local government. Our market share in Poland for agricultural biogas plants is over 7%.



Biogas plant in the Baltic States

Substrates: pig manure and slaughterhouse waste, electrical power 90 kW



Biogas plant in East Asia

Substrates: food waste, grass, cereals, grease separator residues, electrical power 370 kW

Plant design of a biogas plant in rural area

Small biogas plant, 150 kW

Plant design for 500 inhabitants, average total demand 1370kWh per day, location agricultural operation near the village. Substrates for the biogas plant can be cow manure, pig manure, bio waste, sewage sludge and renewable raw materials. Electricity and heat are generated from the produced biogas. The biogas plant has an installed capacity of ~ 150 kW and is equipped with a digester and storage tank with a large gas storage including pump dosing and control technology. Electricity and heat production is provided by two CHPs of 75kW each.

The heat from CHP is used to supply the farm and other buildings within ~ 1.5km, and the electricity is fed into the local grid or sold. At peak load times, for example at lunchtime and in favorable weather conditions, solar and wind energy can be put into operation to cover the peak load and / or the

second CHP. For primary energy storage, ENSPAR offers large dimensioned gas storage. In addition to the second CHP, several solar panels can intercept the load peaks occurring at lunchtime in good weather conditions as an alternative.

For 90% capacity utilization of both CHP units the following substrates are required :

- 60kg/per capita organic waste
- 15,9kg/per capita sewage sludge
- 300 dairy cows
- 500 fattening pigs
- 4,4t maize silage

Large gas storage, all buffer volume

Solarpanel:

- 3kW/theo ~2700-3000kWh, orientation south, 45° tilt.

Text

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Biogas plant in Poland

Substrates: cattle slurry, silage, organic waste, electrical power
999 kW