



BIOGAS 



NOVATECH
Biogas · Solar · Fotovoltaik



Invest in the future: With electricity and heat from biogas.

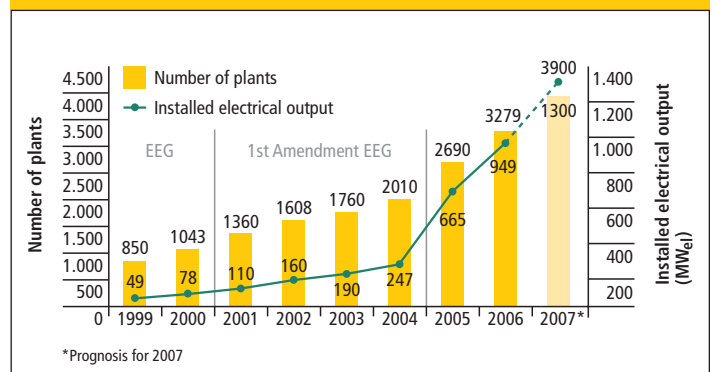
Biogas represents one of the most important regenerative energy sources of the future. Being almost totally independent from spontaneous, natural conditions, such as sun and wind, biogas constitutes an indispensable factor in the production of electricity as a component of our future energy mix. Moreover, biogas will also have an important role to play as a fuel of the future.

The legislative bodies have also recognized the great advantages of biogas technology and, accordingly, have created the required framework conditions. The legally determined remuneration rates for inputting electrical power have been moderately increased and are guaranteed for 20 years.

Biogas is produced by the fermentation of organic recycling materials from agriculture, from all kinds of organic waste and from plants deliberately planted for this purpose, the so-called renewable raw materials.

Thanks to its many ecological and economic advantages, biogas technology is a highly interesting proposition. It serves as a reliable pillar of economic viability in agriculture and to provide whole communities, residential and/or commercial areas with an independent and, at the same time, environment friendly means of producing energy.

Plant inventory and installed electrical output of the biogas plants



Novatech GmbH – the experts at your service for renewable energies.

The corporate objective of Novatech GmbH is to develop, manufacture and distribute environment friendly technology and to provide advisory services in regard to its application. The term "environment friendly" is used in reference to technical means and technologies which, in contrast to technical solutions applied up to now, conserve raw materials, reduce the emission of pollutants, ensure socially compatibility and are valuable to the economy.

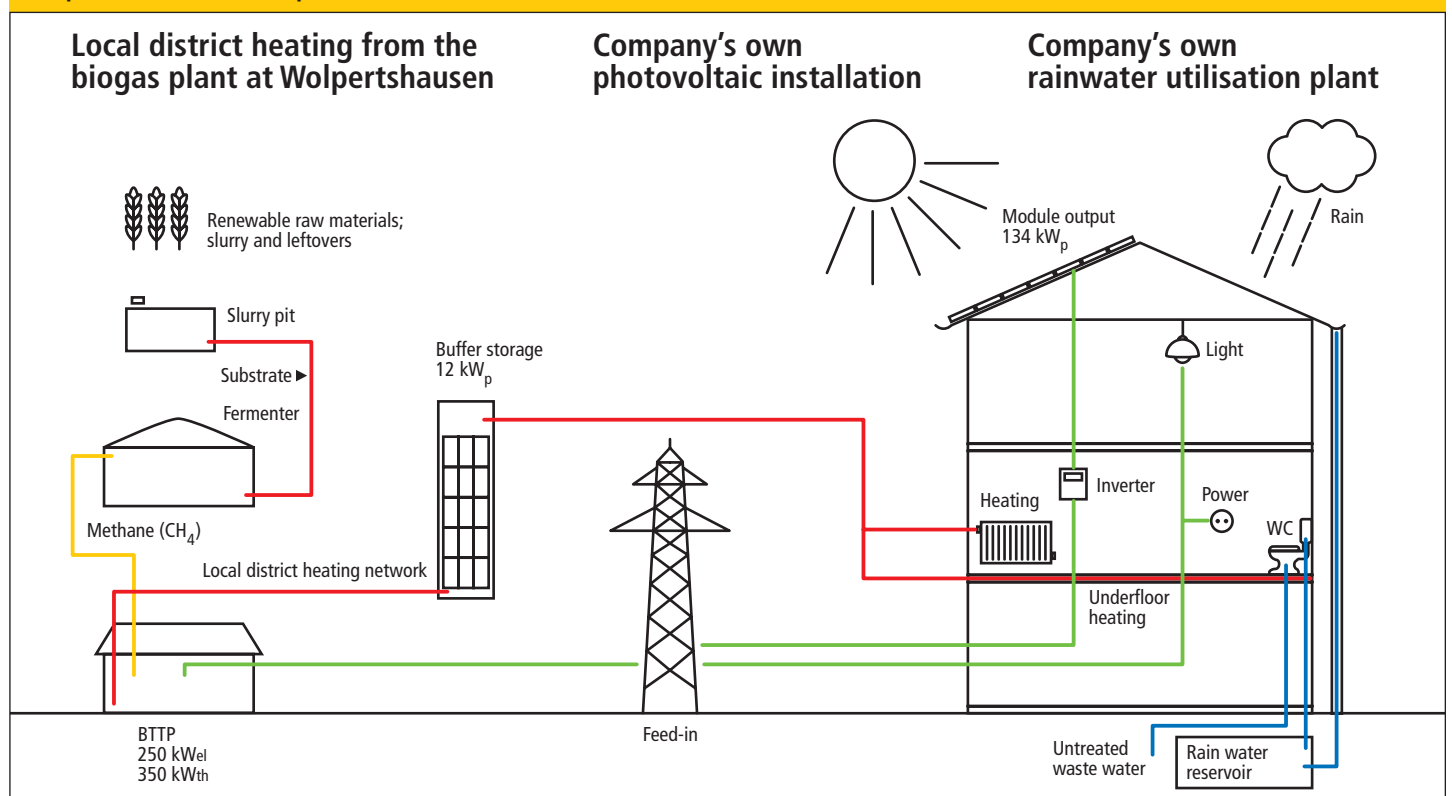
- 1985 the company Novatech GmbH was founded on the former Vellberg site.
- 1990 the first Novatech biogas production plant was connected to the network.
- 1996 a community biogas production plant with a local district heating system was realised for the municipality of Wolpertshausen.
- 2006 the company Novatech GmbH moved into its new company headquarters in Wolpertshausen – with a connection to the local biogas district heating system.



The new company building of Novatech GmbH in Wolpertshausen.

Thus, as you see, for many years already, Novatech has been focusing its efforts on energy derived from biomass and, therefore, belongs to the true pioneers in the region. For example, also in the field of community biogas production plants for municipalities: Whereas local district heating systems are just becoming a topic for many providers, we can already look back on 10 years of experience in this field. Now the opportunity is yours. Take advantage of it!

Energy concept of the company Novatech – implemented at the Wolpertshausen site





Our All-round Service Offer:

We offer production plant concepts, ranging from the exclusive utilisation of industrial fertilisers to the use of renewable raw materials and including a mix of organic recycling materials.

Individual Advisory Service

Everything is possible, but not everything is economical. This is why we give absolute priority to independent, individual and comprehensive consultancy. Avail yourself of our 18 years of experience in the construction of custom-built biogas production plants.

On the basis of your individual framework conditions, we analyse the optimal design for your plant and provide you with a non-binding, easily understandable overview of the potential chances and risks.

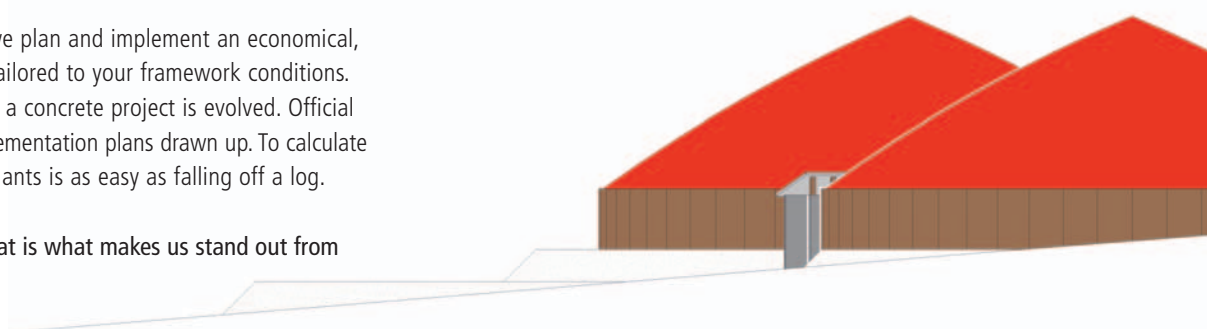
This mode of operation has enabled us to secure the confidence of a large number of clients.

This is also your opportunity - take advantage of it!

Planning

In close cooperation with you, we plan and implement an economical, custom-built production plant, tailored to your framework conditions. On the basis of the design data, a concrete project is evolved. Official approvals are obtained and implementation plans drawn up. To calculate economical biogas production plants is as easy as falling off a log.

We keep our promises – and that is what makes us stand out from the crowd.



Execution

The planning is followed by the execution. In the construction phase, a team of specialists implements the plans for your tailor-made biogas production plant. The construction is monitored every step of the way in order to ensure an outstanding quality of the building work.

In the execution phase, Novatech takes care of such details as the planning of the assembly work, technical drawings, calling for tenders and evaluating the bids, assisting and guiding you in carrying out your own construction work, if required, providing the equipment of biogas-specific construction components, professional construction management and/or supervision, the final handover and commissioning of the plant. On request, Novatech is also happy to supply you with a complete, turnkey plant. Contact us for further information!

We shall be pleased to discuss with you the optimal way to proceed in your individual case.



Follow-up Support

Our all-round services in connection with the operation of your biogas production plant, also after the commissioning of the plant by Novatech, ensure the optimal operation and the accompanying high economical efficiency of your plant.

Our support programme, personally customised to your needs, is divided into three work areas:

- **Logging the Parameters**

In this step, we record the performance and operating parameters of your biogas plant. The relevant parameters are input volumes, running times, electricity and heat production, the volumes of gas consumed and produced and many others.

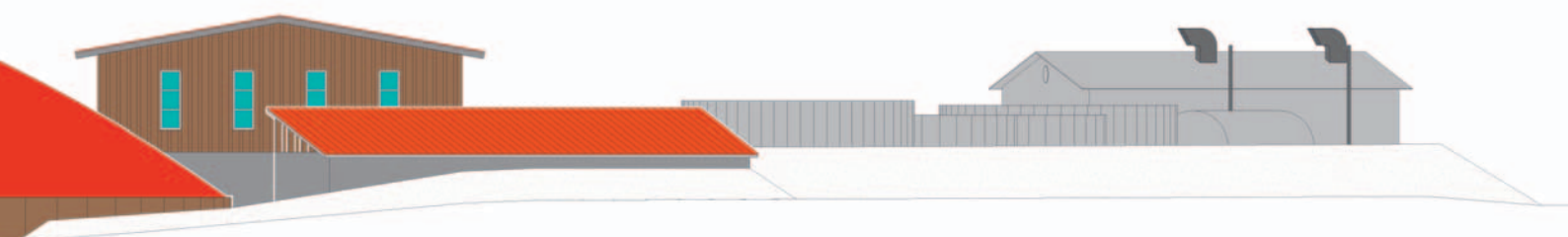
- **Laboratory Analyses**

In our own company laboratory, the biogas values of input materials and fermentation contents are analysed and evaluated. In this way, we virtually control the "vital functions" of your biogas plant.

- **The Evaluation of Data by Means of Our Own, Specially Developed Software**

Now, all of the recorded parameter and laboratory analyses data are collated. The values obtained in this way enable us to assess the efficiency and performance of your plant.

All test results are, of course, available to you at any time. We are glad to interpret these data for you and, in this way, in consultation with you, to arrive at concrete recommendations for action.





The Use of Local District Heating in the Energy Village of Wolpertshausen.

Already 10 years ago, the co-fermentation plant in Wolpertshausen was built by Novatech. This courageous pioneering spirit has paid off, both for citizens and investors alike: The plant, and in which organic recycling materials and industrial fertilisers are used to produce biogas, supplies not only environment friendly electricity but also district heating for the adjacent industrial area and ecological residential estate. Thus, the biogas production plant makes a considerable contribution to the independent supply of energy to the municipality of Wolpertshausen.

At many locations in Germany, this concept is attracting widespread interest. In cooperation between the municipalities, farmers and citizens, economically interesting projects can be developed for the region. Take advantage of our long years of experience!

The Local District Heating Network in Wolpertshausen



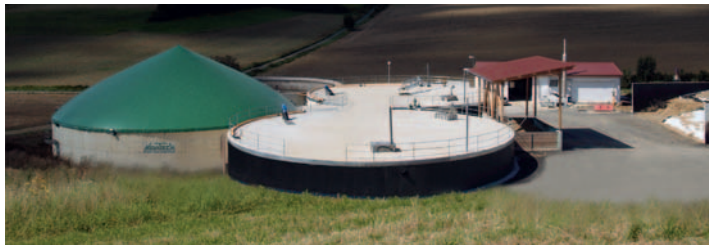
Energy Consumption Wolpertshausen

Inhabitants	2.025
Working places	750
Power production biogas plant	1.500.000 kWh/a [25%]
Power production photovoltaic installations	880.000 kWh/a [15%]
Power production wind generators	1.500.000 kWh/a [25%]
Power production water power plants	500.000 kWh/a [8%]
Sum total of power produced by renewable energies	4.380.000 kWh/a [73%]
Power consumption of the community	6.000.000 kWh/a [100%]
Self-produced electrical power supply	73%
Heat output of the biogas plant	14 commercial businesses 8 residential buildings 1.5 million kWh

Two of more than 90 Novatech Biogas Production Plants.

By the end of 2007, Novatech GmbH will have participated overall in the planning and construction of biogas production plants with a total output of 19.000 kW. Given a number of 8,000 operating hours per year (max. of 8760 hours possible), these plants, therefore, produce 150 million kWh of electrical energy per year. Thus, a calculated number of 40,000 four-person households are supplied, in an environment friendly manner, with electrical power. Given an average production of 670 g/kWh CO₂, more than 100.000 tonnes of greenhouse gases are saved in this way each year.

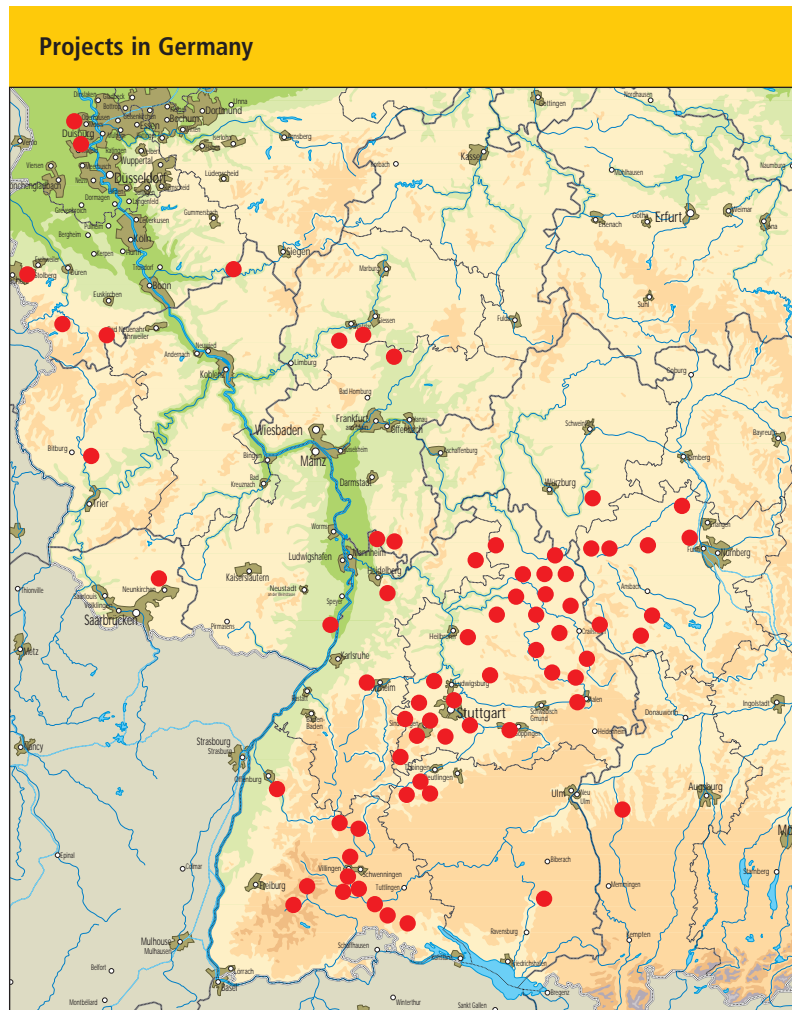
Novatech's highly satisfactory environmental track record has also been contributed to by fermenter following plants:



- Fermenter 1:** Concrete fermenter with concrete ceiling, 2,281 m³
- Fermenter 2:** Concrete fermenter with concrete ceiling, 2,281 m³
- Post-fermentation storage tank:** Post-fermentation tank with air-supported plastic roofing, 2,714 m³
- Substrate storage tank:** Open substrate storage tank, 2,714 m³
- BTTP:** Gas motor 526 kW



- Fermenter:** Concrete fermenter with double-membrane plastic roof, 1,885 m³
- Post-fermentation storage tank:** Post-fermentation storage tank with double-membrane plastic roof, 1,885 m³
- Substrate:** Slurry, NaWaRo
- BTTP:** 2 x 250 kW beam ignition engines
- Local District Heating:** Power supply for an industrial plant





You, too, would like to profit from the advantages of a biogas production plant?

Our sales and support team is looking forward to your non-binding enquiry.



The Novatech sales and support team from left to right: Dipl.-Ing. Mischa Hammann, Dipl.-Ing. (FH) Thomas Ehrmann and Dipl.-Ing. (FH) Rolf Kaplan.

NOVATECH
Biogas · Solar · Fotovoltaik

Novatech GmbH

Frankenstraße 6-8

74549 Wolpertshausen

Tel. 0 7904/943-0

Fax 0 7904/943-1700

info@novatechgmbh.com

www.novatechgmbh.com

