Waste to Energy

Planning

Construction

Start up

Operation

Service

EnviTec Biogas

++ Every farm or food enterprise generates by-products which are eminently suited to biogas production. The targeted utilisation of organic waste can help generate energy and heat. This lowers overall production costs and is also good for the environment. In short: what you would normally dispose of is a valuable source of energy.

+ Energy from food waste at Premier Foods in Wales

LOCATION Rogerstone/Wales
CAPACITY 499 kW_{el}
IN OPERATION SINCE 03/2011
INPUT MATERIALS Food waste
FEATURES The ready-meals factory derives its energy supply from food waste.

The plant is located next to the Rogerstone Park ready-meals factory of RF Brookes, a subsidiary of food company Premier Foods. Its purpose is to generate energy from the food waste produced by the company. The biogas plant supplies about 10 percent of the electricity required for food production in the factory. In the process, the biogas plant contributes to an annual CO_2 savings of approximately 8,500 tonnes. In addition, the former costs for disposal of the waste have been eliminated.

In Great Britain, France or Germany
biogas production from waste mate

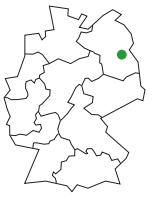
+ Cooperation of agriculture and industry in France

LOCATION Rohan/France
CAPACITY 526 kW_{el}
IN OPERATION SINCE 09/2010
INPUT MATERIALS Pig liquid manure, flotate fat, maize silage
FEATURES Flotate fats and oils from the food industry supply approximately 75% of the energy produced.

The electricity generated in the biogas plant in Rohan is sold in its entirety to the energy company EDF. The generated heat is used by the agricultural firm Le Crom itself in order to heat the fermenter of the biogas plant. In addition, the company uses the exhaust heat to dry fermentation residues and to heat the flotate fats and oils from the food industry. Flotate fats and oils account for 75% and thus the majority of the energy produced at the plant, which is also generated from manure and maize silage. The agricultural firm has established long-term contracts with farming and industrial companies from the region, who supply much of the waste materials utilised by the plant.

+ Pasteurisation of input materials in Pfaffendorf, Germany

LOCATION Pfaffendorf/Germany
CAPACITY 2 x 500 kW_{el}
IN OPERATION SINCE 08/2004 and 09/2007
INPUT MATERIALS Flotate fat, cattle liquid manure, DDGS, waste from biodiesel production
FEATURES The farming enterprise now utilises all fermentation residues as valuable fertiliser.



The input materials used in the biogas plant in Pfaffendorf are limited to animal fats from butcher's shops and cafeterias, cattle liquid manure, DDGS from agricultural operations and waste supplied from biodiesel production. The plant consists of two modules with a rated electrical output of 500 kW each. As the electricity produced is fed into the local grid, the exhaust heat from the co-generation units serves to pasteurise the input materials, all of which are heated for at least one hour at 70 degrees Celsius.

rials has long stood the test of time.

← In Wales, the food factory Rogerstone Park uses a biogas plant to supply itself with energy.

→ In Rohan, France, industrial partners supply waste such as fats.

→→ Waste materials from biodiesel production and animal fats from butcher's shops and cafeterias serve as input materials in Pfaffendorf.

++ Organic waste is continuously generated in the production of food and agricultural products. Using the right technology, these by-products can be utilised as valuable substrates for biogas production. This increases the economic efficiency of production enterprises and contributes to the generation of environmentally friendly energy.

+ Optimal technology

Biogas is produced through the fermentation of organic substrates. Many waste materials are suitable for this process, such as those permanently available in factories from the agricultural, food and vegetable-oil industries. Be it food waste, glycerine, slaughterhouse waste or vegetable/animal fat: our biogas plants have an optimal technical design to ensure that these waste materials produce the best possible yields as substrates.

+ Sustainable utilisation

The efficient utilisation of organic waste in biogas plants creates a cycle of economic sustainability: Continuously generated by-products can be profitably employed to produce electricity, heat or bio natural gas. This reduces the accumulation of waste which production plants would otherwise have to dispose

There's a lot of energy stored in you
You can put it back to work in your o

← Even packaged waste can be used for biogas production following an automatic separation from its casing.

→ Many different input materials are suited to biogas production.

→→ Food producers, such as manufacturers of potato products, generate residual material which can be used to extract biogas.

of, often at great cost. The benefit is twofold: The impact on the environment is reduced and the value-added chain is optimised. On top of that, farms can use fermentation residues as valuable fertiliser.

+ Customised concepts

Specific local conditions, locally available substrates, the most efficient possible utilisation of generated exhaust heat in the respective production facility – every biogas plant is different. We develop a customised concept for your project which accounts for the respective conditions. We can provide you on demand with a turnkey plant with which you can utilise the organic residues you have available for optimal energy production.

+ Years of experience

Organic waste is already being used as input material in many of our plants. Our success story in the utilisation of different substrates is marked not only by satisfied customers, but also accolades and awards. In 2010, for example, Frost & Sullivan presented EnviTec with the Best Practices Award in the category "Global Biological Waste-to-Energy Competitive Strategy Leadership".

+ Good CO_2 figures

Thanks to the high energy yield in EnviTec "waste-to-energy" biogas plants, the required amount of fossil fuels has been reduced, resulting in a considerable improvement in the CO_2 figures of production plants. This gives you an important competitive edge, as more and more consumers and companies are emphasising sustainable production when purchasing products.

r organic waste.
peration. Or sell it to others.

++ You can rely on our experience as plant manufacturers and our innovative technologies for producing biogas. These two factors guarantee that you will reach your goals and use your organic waste as an efficient source of energy. In this way, you can either supply yourself independently from the energy market or profitably market the bio natural gas or electricity and heat you produce.

+ Comprehensive service

Even after commissioning your biogas plant, our comprehensive technical and biological service is ready to help you at all times – with service contracts custom-fit to your needs. This is also reflected by the high plant capacity utilisation of our customers. Whether it's for co-generation plant maintenance or comprehensive service for the entire plant: we're there for you.

+ Maximum safety

CE

TÜV NORD
TÜV NORD CERT GmbH
DIN EN ISO 9001
Freiwillige Zertifizierung

Safety is one of the most important factors when constructing a biogas plant. EnviTec Biogas AG is among the few providers certified according to DIN EN ISO 9001 who exclusively commission plants with a CE mark. Our plants meet all safety-related EU regulations and are fully ready for TÜV certification.

The more progressive the technology, the better the yield.

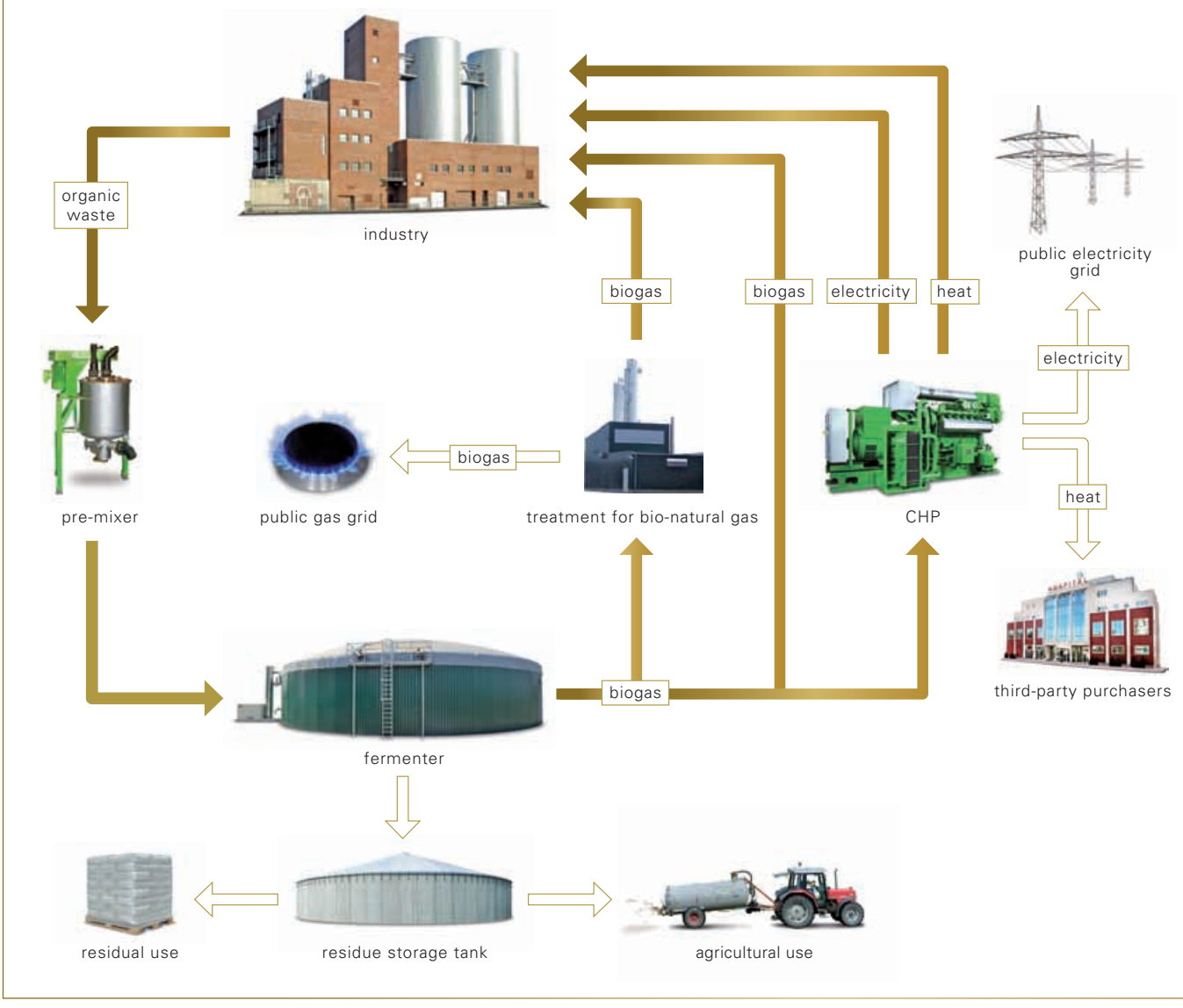
← Through pasteurisation, input materials are properly pre-treated according to EC regulations.

→ Co-generation plant of the latest generation.

→→ Increased efficiency through the use of optimised mixing technology: the Kreis-Dissolver.

→→→ The energy used for pasteurising waste materials is derived from the exhaust heat of the co-generation plant.

The working principle of a biogas plant



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