



# SECURING THE FUTURE WITH BIOMETHANE

PlanET Biogastechnik GmbH

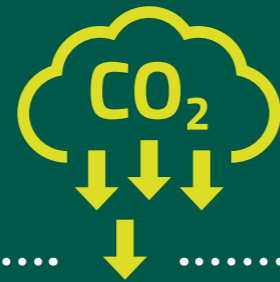




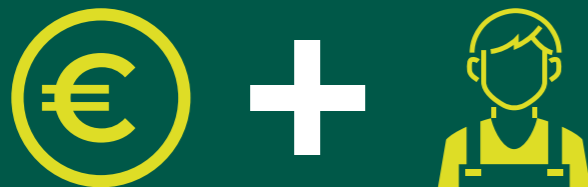
# BIOMETHANE...

is friendly for the climate and for the environment

has a better carbon balance than fossil energies



IMPROVES REGIONAL VALUE CHAIN AND SECURES LOCAL JOBS



reduces emissions

has a high market potential due to the strict international climate targets



is an alternative for the feed-in tariffs



meets the **RED II** requirements

# PlanET

AMONG THE WORLD'S LEADING BIOMETHANE PLANTS MANUFACTURERS

870+  
BIOGAS PLANTS WORLDWIDE,  
INCLUDING 150+ BIOMETHANE PLANTS



25+  
YEARS  
OF EXPERIENCE



OUR CUSTOMERS ARE



Gas industry



Electricity suppliers



Companies processing biogenic waste and residue materials



Beverage and food industry



Fuel companies



Goods transport and logistics



Agricultural businesses



Municipalities (Smart City)



Companies pursuing sustainability



# CUTTING-EDGE TECHNOLOGY GUARANTEED



Biogas consists of 50-60% methane. The upgrading of biogas to biomethane means removal of non-flammable parts from it.

**SUSTAINABLE MEMBRANE POWER**  
The biogas upgrading takes place in highly efficient gas separation modules. This state-of-the-art technology doesn't require use of heat and chemicals. It can be applied at low investment costs and with short installation times in all performance classes.

**PSA PLANTS**  
Pressure Swing Adsorption technology (PSA) uses the principle of gas separation on a carbon molecular sieve. This special material adsorbs the carbon dioxide from the, thus obtaining biomethane.

In addition to its use in the, biomethane presents itself as an alternative to fossil fuels..

**BIOMETHANE AS FUEL**  
In addition to its use in the electricity and heat market, biomethane presents itself as an alternative to fossil fuels. Liquid biomethane is used as Bio-LNG or in gaseous form as Bio-CNG. As Bio-LNG, biomethane is especially suitable for freight traffic, while Bio-CNG is more suitable for cars, delivery traffic and local public transport.

**CO<sub>2</sub> LIQUEFACTION**  
Biomethane production produces CO<sub>2</sub>, which can be used in the beverage and food industry, the chemical industry and greenhouses.



Please refer to our website for references and success stories



Or download the brochure with biomethane reference projects at:

[planet-biogas.com/news-press/brochures/](http://planet-biogas.com/news-press/brochures/)

## OUR SERVICES FOR YOU

- Site analysis
- Evaluation of the existing biogas or biomethane plant
- Advice on the various biogas upgrading technologies
- Advice on biomethane markets
- Advice on the feedstock
- Planning, technical design and approval procedures of the biomethane plant and production of bio-CNG, bio-LNG, bio-CO<sub>2</sub>
- Construction of the biomethane plant
- Commissioning
- Biological and technical support service for the plant



## ADVANTAGES OF OUR SYSTEM

- Up to 100% methane yield
- Selected high-quality plant components
- Good energy efficiency and low operating costs
- Fully automated system, easy to operate
- Online monitoring of the plant



# REFERENCES

## LETHBRIDGE BIOGAS

### CANADA



## A unique biomethane plant in North America

Lethbridge Biogas is a pioneer in biogas development in Canada. Its processing capacity is 100,000 tonnes per year.

Lethbridge Biogas works with the thermal hydrolysis system: a two-step procedure with which organic waste is boiled under high pressure and then decompressed. This procedure makes the organic waste degradable, which improves the biogas yield.

Lethbridge Biogas has expanded the biogas plant with a STATERON biomethane plant based on PSA. With this unit, Lethbridge Biogas produces biomethane that is directly fed into the gas grid. This plant is the largest biogas plant in western Canada, and, in terms of design and technical implementation, it is unique in North America.

### Facts and figures

- Commissioning: 2013
- Reception pit: 2 x 14 m / 8 m, 1 x 7 m / 7 m
- Digester: 3 x 25 m / 8 m (per 3,926 m<sup>3</sup>)
- Digestate storage: 1 x 30 m / 8 m (per 5,645 m<sup>3</sup>)
- Feed-in technology: 1 x Vario 74 m<sup>3</sup> incl. sluicing solution PlanET eco<sup>®</sup> flow
- CHP: 2 x 1,425 kW<sub>el</sub>
- Biomethane production: 1,000 nm<sup>3</sup>/h with PSA

### Feedstock

- Slaughterhouse waste and animal carcasses
- Waste from food production
- Liquid manure
- Solid cattle manure
- Dry chicken manure
- Waste and wastewater from food production

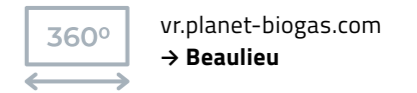
## A flagship plant in France

With its biomethane plant, SCEA Couvé & Fils provides electricity and heat to more than 4,000 households in the town of Argentan.

The company's structure makes it possible to feed the biogas plant with 60% livestock manure and 40% plant material. Additionally, approx. 250 to 350 hectares of silage from catch crops are fed into the biogas plant. Due to the large livestock and the large cultivation areas, the biogas plant can be provided with the local feedstock.

This project enables SCEA Couvé & Fils to reduce carbon emissions by almost 7,000 tonnes every year. This amount is equal to the CO<sub>2</sub> footprint of 65,000,000 kilometres driven by car. This is how the farming contributes to the carbon reduction!

### BEAULIEU FRANCE



### Figures and facts

- Commissioning: 2020
- Digester: 2 x 26/8 m (je 4.247 m<sup>3</sup>)
- Digestate storage: 1 x 32/8 m (6.434 m<sup>3</sup>)
- Feed-in technology: 2 x Vario 96 m<sup>3</sup>
- Biomethane production: 125 nm<sup>3</sup>/h with membrane technology

### Feedstock

- Solid cattle manure
- Grass silage
- Intercrops / Green rye
- Liquid manure



Video





**WE PROMOTE THE RENEWABLE  
ENERGY BIOGAS SUSTAINABLY  
TO PROTECT THE CLIMATE**

**Please contact us!**



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