

Bienvenue **Welcome**
Benvenuto

Willkommen

Velkommen **Bienvenido**

Welkom

Who I am...

Dipl.- Ing. FH

Hendrik Becker

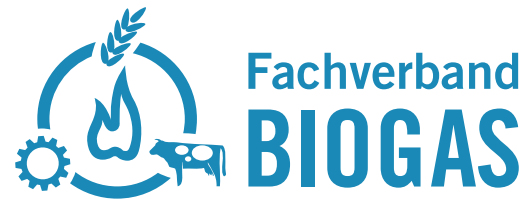


Founded 1998, more than 450 plants built.

Germany, France, Netherland, England, Canada, Japan, China, USA, Philippines

Since 2013 Vicepresident of the German Biogas Association

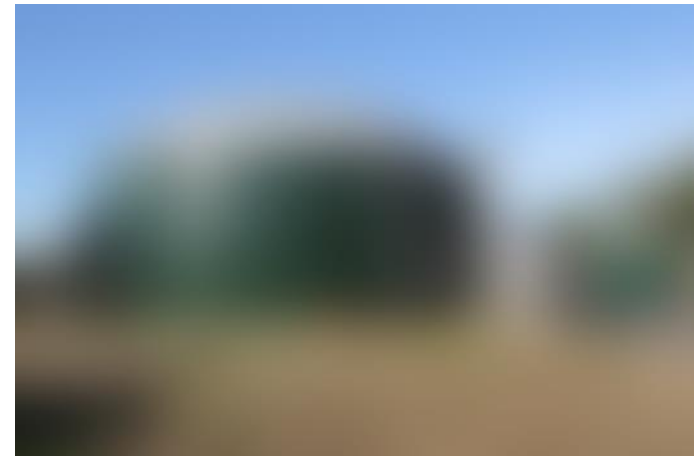
Start 2015 „only“ Partner at PlanET Biogas
Today mainly working in an honorary capacity in various renewable associations:



Industry perspective on biogas development

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**Where are we coming from-
where are we going to?**



1995 - 2005

- start with manure and waste
- for example 37 kW/h electricity & heat
first innovation like dry-feeder
- cycle economy/ environmental motivation

Theretime we get the money with:

D-Mark

Pound per ton (waste)

Franc



2005 - 2015

- **Germany & Italy add field crops to boost the potential to more than 500 kW el. per plant**
- **Wind & Solar guys believe still in „all electric“**
- **start with Biomethane and demand-driven production**

We get the money with:

Euro per kWh (electricity)



2015 - 2025

- back to the roots – manure & waste main source
- location and situation adjusted design from small to big plant´s. PlanET e.g. 30 kW- 3 MW el.
- biomethane in first line (especially in France) start to use Biogas as a fuel-source

today/ tomorrow we get the money with:

Euro per kWh (el. & th./m³)
Euro per kg or liter (fuel)

2025... ?

- large-scale production for small farm based Biogas ?
- heavy vehicles use BioCNG and BioLNG produced by green gas (Biogas/ PtG / PtX) ?
- first prevent CO₂ & CH₄ Emissions? Climate change-drives the market ? Biodiversity new business model?

In the future we will get the (main) money from

Bitcoin per avoided CO₂ emissions?

but- there are more things – not in our hand...



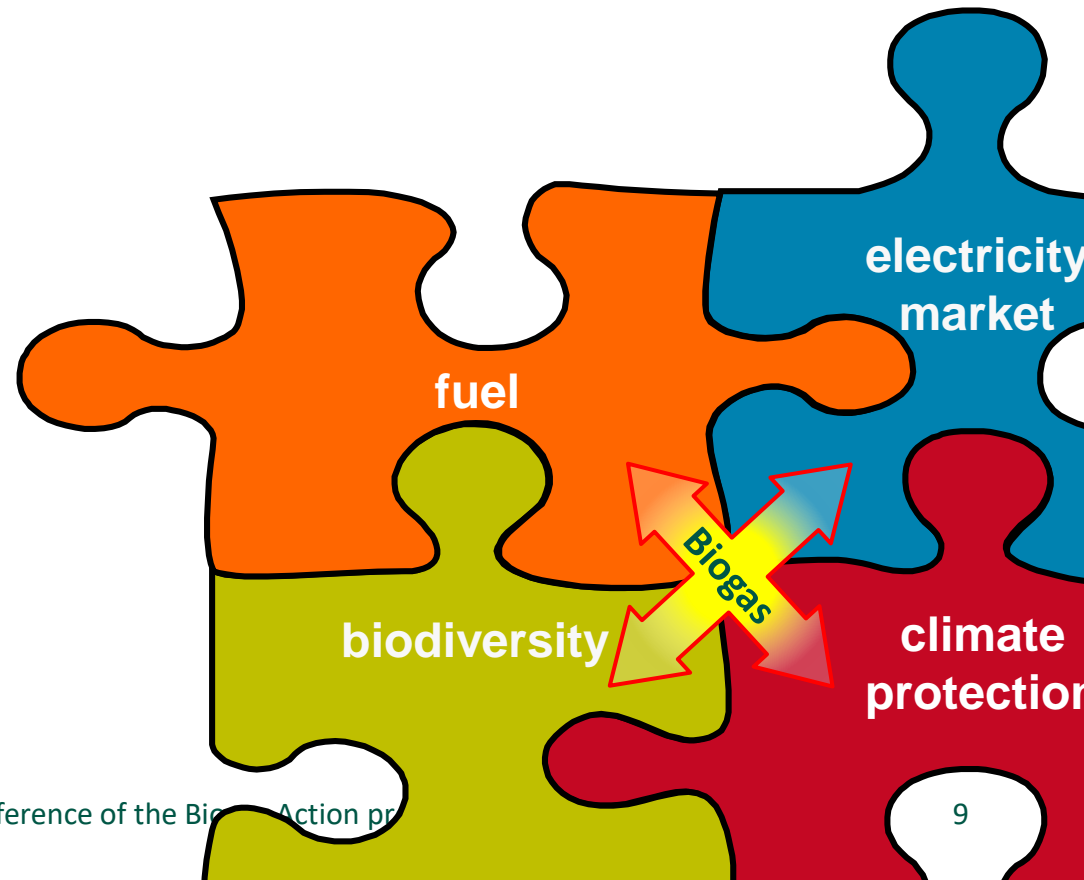
- Is there any sense for a natural gas network in long term- if it is NOT going green?
- Are any lokal emissions- beside a car or boiler- in future acceptable?
- What are we doing against plastic polution?
- Might be the world invest more in carbon capture technology- or ignore the climate problem completely?
- Who know´s Europe/ the World would be going on?
- Are the society is changing faster by digital age?

In the future we will get the money from

- different sources...

If our society accept, that

- biogas is complex and honors the different benefits of biogas !
- our leaders are strong enough to set the right rules!



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... set the right rules:

Not even set every day a „small and little“ new rule...

... work hard on a the right target!

For example: A good system for pricing all CO₂ emission's!



Vielen Dank für Ihre Aufmerksamkeit
Thank you for your attention

Dipl.- Ing. FH

Hendrik Becker



**Die Zukunft kann man am besten
voraussagen, wenn man sie selbst
gestaltet.**

**The best way to predict the future
is to invent it.**

[Alan Kay]