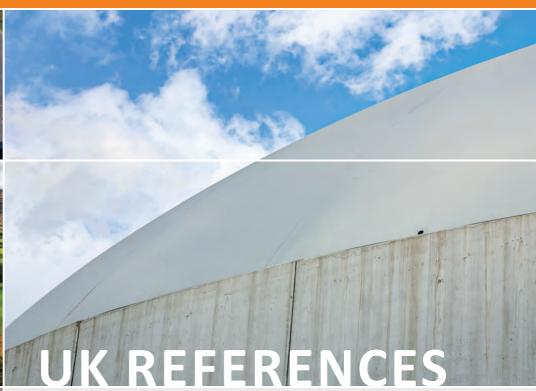
$reliable \cdot efficient \cdot profitable$ 





# Pipeline to 1.26 TWh of biogas per year

UK Market Leader in Biomethane/G2G

# Advantages at a glance

- Funder-proven track record
- Awarded performance
- Versatile system from solid to liquid / from waste to agro
- High Load Process enables small footprint and low OPEX.
- EPC wrap or technology provision

agraferm

# **Our UK Pipeline to Success**

## Rainbarrow Farm, Poundbury, Dorset (2014)



### 1<sup>st</sup> agricultural gas-to-grid plant in the UK

**Biogas Production** 5.4 M m<sup>3</sup> pa Biogas Utilisation 400 kW<sub>el</sub> CHP &

Cornwall, local farmers from JV Farming Ltd. and Active Business Partnerships Ltd. This was the UK's first agricultural he development pathway for the UK biogas upgrading secto Biomethane supply to the households of Poundbury n "A Vision of Britain".



Biogas Production 5.4 M m<sup>3</sup> pa First plant built for our long term operates a number of resource recovery and recycling (waste



Hibaldstow, North Lincolnshire (20

Biogas Production 7.1 M m<sup>3</sup> pa

Biogas Utilisation 499 kW<sub>el</sub> CHP &

First plant with seasonal feedstock

management including sugar beet and a

cost efficient digestate reduction solution.

### Reepham Road, Norfolk (20

hit the 50 M m<sup>3</sup> pa

capacity milestone

Biogas Production 5.9 M m<sup>3</sup> pa Biogas Utilisation 1,500 kW<sub>el</sub> CHP Sister plant to nearby Taverham.



### Doncaster, South Yorkshire (2013)

Biogas Production 7.2 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 350 m<sup>3</sup>/h Biomethane

First gas-to-grid plant for Future Biogas Ltd.

# Scottow, Norfolk (2013)

Biogas Production 7.2 M m<sup>3</sup> pa Biogas Utilisation 2000 kW<sub>el</sub> CHP

At the time of construction, Scottow was Agraferm's largest plant using CHP in the UK. Vibrating screens for further digestate treatment.



# Chittering, Cambs (2014)

Biogas Production 11.7 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 1,000 m³/h Biomethane

Agraferm's first EPC project in the UK. First in-house membrane upgrading unit for biomethane.



Biogas Production 8.6 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 420 m³/h Biomethane

Very efficient AD plant, classically based on energy crops. High share of sugar beet.



# Methwold, Norfolk (2016)

Biogas Production 7.6 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 375 m³/h Biomethane

Including 30,000 t pa solid pig manure and straw. With this plant our client Future Biogas Ltd. bought their 10th Agraferm system, becoming UK's biggest G2G provider with 20 M m<sup>3</sup> pa.

# graferm's UK plants



Biogas Production 16.8 M m<sup>3</sup> pa Biogas Utilisation 4,500 kWel CHP Underlines efficiency of Agraferm's High Load Digestion: only 2 digesters, producing 4.5 MW<sub>el</sub>.

waffham, Norfolk (2015)



### Decoy, Cambs (2015)

Biogas Production 9.2 M m<sup>3</sup> pa Biogas Utilisation 2,800 kW<sub>el</sub> CHP Third plant for Material Change Ltd. Combination of food waste, biowaste and energy crops.



### Mona, Anglesey (2017)

Biogas Production 7.2 M m<sup>3</sup> pa Biogas Utilisation 2,000 kWel. CHP Co-digestion of chicken muck, dairy effluent and glycerol. Digestate treatment with vacuum support drying and composting.

# 6 East Anglia II (2016)



processing more than 300,000 t/a feedstock

Biogas Production 55 M m<sup>3</sup> pa Biogas Utilisation 15,500 kWel. CHP & ORC rankine cycle (ORC) for excess heat utilization



# ymonds Farm, Suffolk (2

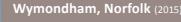
Biogas Utilisation 1,400 kW<sub>el</sub> CHP partner Material Change Ltd. who treatment) sites.



350 m³/h Biomethane

Biogas Production 7.1 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 350 m³/h Biomethane

Set in a renewable energy park, this site is spectacular to look at.



Biogas Production 6.2 M m<sup>3</sup> pa Biogas Utilisation 1,500 kW<sub>el</sub> CHP

This plant uses a wide variety of available feedstocks including sugar beet.



# British Sugar, Bury St. Edmunds, Suffolk (201



Biogas Production 5.1 M m<sup>3</sup> pa Biogas Utilisation 1,400 kW<sub>el</sub> CHP Agraferm's 1st plant in the UK and begin of our long term cooperation with Future Biogas Ltd.

# Spridlington, Lincolnshire (2014)

Biogas Production 5.3 M m<sup>3</sup> pa Biogas Utilisation 499 kW<sub>el</sub> CHP & 430 m<sup>3</sup>/h Biomethane

This site uses UK manufactured pre-cast concrete tank elements.



# Helmdon, Northamptonshire (20

Biogas Production 5.8 M m<sup>3</sup> pa Biogas Utilisation 235 kW<sub>el</sub> CHP & 300 m<sup>3</sup>/h Biomethane

Co-digestion of organic waste, membrane based biogas upgrading technology.



Agraferm's UK plants to hit the 200 M m<sup>3</sup> pa capacity milestone



Biogas Production 20 M m<sup>3</sup> pa Biogas Utilisation 5,000 kWel. CHP

# 2005

First AD plant based on Agraferm's and 250 kWel. from 100% grass only:

Majority engagement in BTA International GmbH

First AD plant doing chicken muck

Agraferm AD concept and

Ketzin, Germany or stabilisation of the biological

from bioethanol product

Mestecko, Slovakia

membrane based gas-to-grid

power, biomethane and ORC

# 2016

2017

# **Agraferm Profile**

Agraferm is one of the few globally operating European EPC contractors and technology providers for anaerobic digestion and the utilization of the respective biogas/biomethane. Our High Load Process has been awarded "Best Practice" by the German Government. Their Monitoring Program especially highlighted the methane productivity and minimum parasitic load. By this, our bespoke systems provide maximum liability and flexibility, minimum foot print and very low OPEX.

Our Clients belong to food industry, energy suppliers or just profitably thinking farmers. We built Europe's maybe largest agro biogas plant providing 55 mio m³ biogas – about 35 MW for electricity, ORC and BioCNG in parallel. Our in-house branch BTA International provides hydro-mechanical pre-treatment and digestion of polluted wastes – the recognized BTA process®. Together, the group installed more than 140 references worldwide.

# Our services include:

- Planning & design
- Supply or EPC
- Operation & maintenance
- Biological & technical support
- Process optimization, expansion & refurbishment

# **Testimonials**



»We appreciate the high quality of design and engineering in all our Agraferm plants. They are constructed to professional standards to ensure reliable long life operation and consistently exceed our expectations.«

Philinn Lukas

Managing Director Future Biogas Ltd.
Director ADBA and Chairman EBA-CAC

»As a waste operator, being able to process a wide range of feedstocks is important to us. This feature, along with the solid and robust construction, led us to choose Agraferm technology for several projects «



Charles Course
Chairman of



Nick Finding
Director JV Energen LLP

»We chose Agraferm for the quality and superior technology of their plants, and have enjoyed a good working relationship with them. The AD plant has performed well and was integral in how we pioneered the biomethane injection work in the UK.«





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