

reliable · efficient · profitable



UK REFERENCES

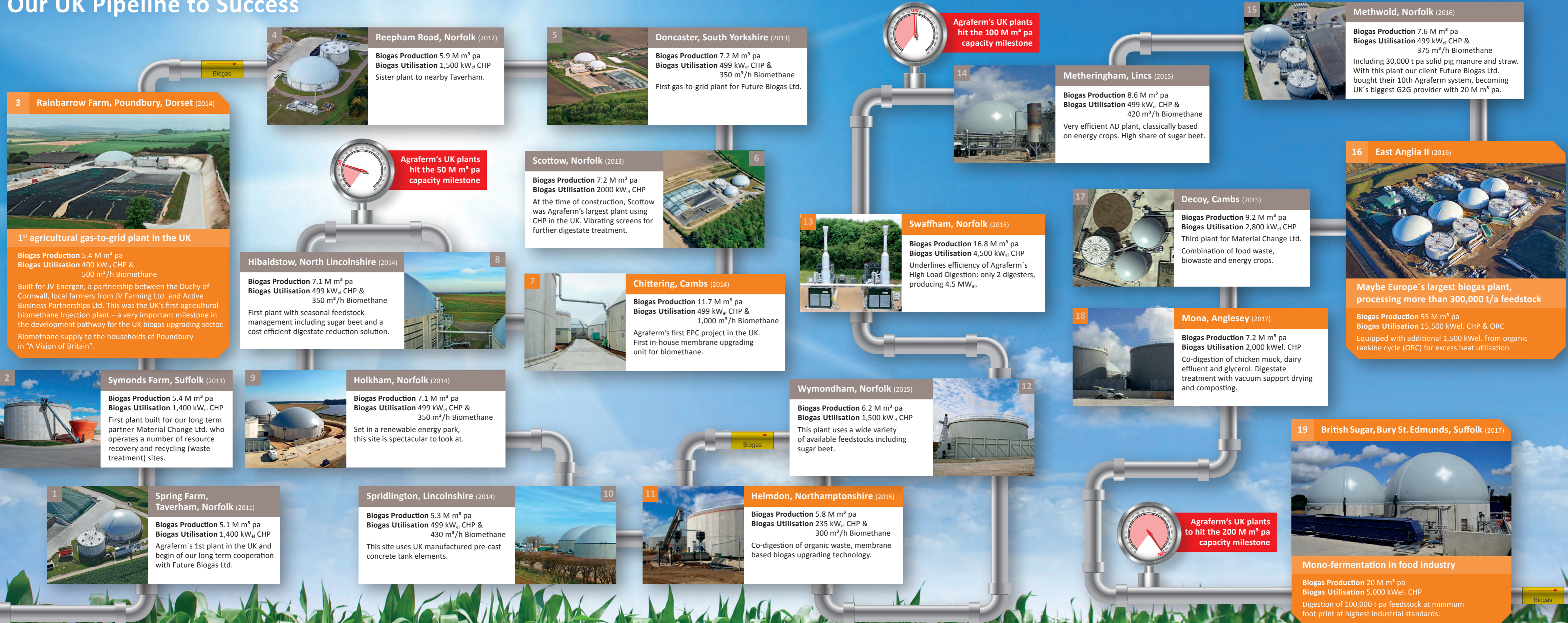
Pipeline to 1.26 TWh
of biogas per year

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

Our UK Pipeline to Success



2005	2006	2007	2008	2009	2010	2011	2012	2014	2015	2016	2017
First AD plant based on Agraferm's patented High Performance Digestion and 250 kW _{el} . from 100% grass only: Hohenwart, Germany	German Governmental Biogas Monitoring: Ranking among Top 5 plants out of 60	First patents on Agraferm laminar paddle mixers Majority engagement in BTA International GmbH – adding waste treatment to the portfolio First AD plant doing chicken muck	Itzig, Luxemburg, first project based on combination of Agraferm AD concept and BTA waste treatment concept	Best Practice Award German Agricultural Ministry	Agraferm goes international: Italy, Czech Republic, Belgium	Kalsnava, Latvia Industrial mono-fermentation: treatment of 160,000 t pa waste from bioethanol production	Mestecko, Slovakia AD from cattle dung	Perezhir, Belarus Plant for the National Academy of Agriculture Mechanization	Europe's biggest AD plant? 17.5 MW _{el} . equivalent: power, biomethane and ORC	5 MW _{el} . plant in sugar industry	India: second AD plant for sugar industry

3 Rainbarrow Farm, Poundbury, Dorset (2014)

1st agricultural gas-to-grid plant in the UK

Biogas Production 5.4 M m³ pa
Biogas Utilisation 400 kW_{el} CHP & 500 m³/h Biomethane

Built for JV Energen, a partnership between the Duchy of Cornwall, local farmers from JV Farming Ltd. and Active Business Partnerships Ltd. This was the UK's first agricultural biomethane Injection plant – a very important milestone in the development pathway for the UK biogas upgrading sector. Biomethane supply to the households of Poundbury in "A Vision of Britain".

2 Symonds Farm, Suffolk (2011)

Biogas Production 5.4 M m³ pa
Biogas Utilisation 1,400 kW_{el} CHP

First plant built for our long term partner Material Change Ltd. who operates a number of resource recovery and recycling (waste treatment) sites.

1 Spring Farm, Taverham, Norfolk (2011)

Biogas Production 5.1 M m³ pa
Biogas Utilisation 1,400 kW_{el} CHP

Agraferm's 1st plant in the UK and begin of our long term cooperation with Future Biogas Ltd.

4 Reepham Road, Norfolk (2012)

Biogas Production 5.9 M m³ pa
Biogas Utilisation 1,500 kW_{el} CHP

Sister plant to nearby Taverham.

8 Hibaldstow, North Lincolnshire (2014)

Biogas Production 7.1 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 350 m³/h Biomethane

First plant with seasonal feedstock management including sugar beet and a cost efficient digestate reduction solution.

9 Holkham, Norfolk (2014)

Biogas Production 7.1 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 350 m³/h Biomethane

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

Agraferm's UK plants hit the 50 M³ pa capacity milestone

5 Doncaster, South Yorkshire (2013)

Biogas Production 7.2 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 350 m³/h Biomethane

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

6 Scottow, Norfolk (2013)

Biogas Production 7.2 M m³ pa
Biogas Utilisation 2000 kW_{el} CHP

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

7 Chittering, Cambs (2014)

Biogas Production 11.7 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 1,000 m³/h Biomethane

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

10 Spridlington, Lincolnshire (2014)

Biogas Production 5.3 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 430 m³/h Biomethane

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

11 Helmdon, Northamptonshire (2015)

Biogas Production 5.8 M m³ pa
Biogas Utilisation 235 kW_{el} CHP & 300 m³/h Biomethane

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

12 Wymondham, Norfolk (2015)

Biogas Production 6.2 M m³ pa
Biogas Utilisation 1,500 kW_{el} CHP

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

13 Swaffham, Norfolk (2015)

Biogas Production 16.8 M m³ pa
Biogas Utilisation 4,500 kW_{el} CHP

Underlines efficiency of Agraferm's High Load Digestion: only 2 digesters, producing 4.5 MW_{el}.

Agraferm's UK plants hit the 100 M³ pa capacity milestone

14 Metheringham, Lincs (2015)

Biogas Production 8.6 M m³ pa
Biogas Utilisation 499 kW_{el} CHP & 420 m³/h Biomethane

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

17 Decoy, Cambs (2015)

Biogas Production 9.2 M m³ pa
Biogas Utilisation 2,800 kW_{el} CHP

Third plant for Material Change Ltd. Combination of food waste, biowaste and energy crops.

18 Mona, Anglesey (2017)

Biogas Production 7.2 M m³ pa
Biogas Utilisation 2,000 kW_{el} CHP

Co-digestion of chicken muck, dairy effluent and glycerol. Digestate treatment with vacuum support drying and composting.

Agraferm's UK plants hit the 200 M³ pa capacity milestone

15 Methwold, Norfolk (2016)

Biogas Production 7.6 M m³ pa
Biogas Utilisation 499 kW_{el} 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 m³ pa.

16 East Anglia II (2016)

Maybe Europe's largest biogas plant, processing more than 300,000 t/a feedstock

Biogas Production 55 M m³ pa
Biogas Utilisation 15,500 kW_{el} CHP & ORC

Equipped with additional 1,500 kW_{el}. from organic rankine cycle (ORC) for excess heat utilization

19 British Sugar, Bury St. Edmunds, Suffolk (2017)

Mono-fermentation in food industry

Biogas Production 20 M m³ pa
Biogas Utilisation 5,000 kW_{el} CHP

Digestion of 100,000 t pa feedstock at minimum foot print at highest industrial standards.

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



Philipp Lukas

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

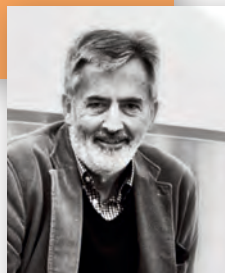
»We appreciate the high quality of design and engineering in all our Agraferm plants. They are constructed to professional standards to ensure reliable long life operation and consistently exceed our expectations.«

»As a waste operator, being able to process a wide range of feed-stocks 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
Material Change Ltd.



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 bio-methane injection work in the UK.«



**BIOGAS &
ANAEROBIC DIGESTION
BIOMETHANE
WASTE TREATMENT**

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