

Acorn Bioenergy and Hexagon Agility: Enabling the UK's biomethane revolution

CASE STUDY



Acorn Bioenergy, a United Kingdom (UK) based developer of anaerobic digestion (AD) facilities, is on its way to becoming the nation's leading producer of biomethane and green CO₂.

With more than a dozen AD sites under development across England and Scotland, Acorn is poised to generate over 1.5 TWh of biomethane annually - enough to heat more than 100,000 homes - while delivering carbon savings equivalent to planting 15 million trees.

A Vision for Decarbonisation

Acorn's approach to decarbonisation is rooted in circularity and local impact. Their AD plants convert agricultural residues, wastes, and break crops grown as part of sustainable crop rotations into biomethane and green CO₂, which is captured and reused in industrial and transportation applications. This not only displaces fossil-derived natural gas and CO₂ but also supports the UK's energy transition goals.

More than a dozen
biomethane plants under development

1.5 TWh/year
of biomethane generated

100,000+ homes/year
supplied with renewable gas

15 million
trees worth of carbon savings

Zero pipeline
deployment needed thanks to Mobile Pipeline®



"We made the decision to exclusively use modules with Type 4 cylinders in our virtual pipeline for both technical and commercial reasons. Hexagon Agility's Mobile Pipeline X-STORE® modules offer the most storage capacity of any Type 4 equipment on the market, which is crucial for reducing road movements and minimizing mileage."

Daniel Lambert
Downstream & Innovation Director, Acorn Bioenergy

For more information about our Mobile Pipeline solutions, contact us at mobilepipeline@hexagonagility.com

hexagonagility.com



The Infrastructure Challenge

With the scale of its ambition, and its focus on agri-based feedstocks, Acorn faced a familiar challenge:

Many of its, largely rural, production sites are difficult if not impossible to connect to the national gas grid.

Direct connection to the grid in rural areas is not always feasible, or can be prohibitively expensive and time-consuming.



The Solution: Hexagon Agility's Mobile Pipeline®

To overcome this logistical challenge, Acorn partnered with Hexagon Agility, selecting its Mobile Pipeline® solution to transport biomethane from their remote production sites to end users and grid injection points.

Mobile Pipeline® modules use Type 4 composite cylinders, which are 75% lighter than steel alternatives and corrosion-free, while offering the most storage capacity of any composite cylinder.

Acorn's virtual pipeline is not only efficient – it is also self-sustaining.

The company can fuel its own fleet of heavy-goods vehicles and trucks (HGVs) that make up its virtual pipeline with the very biomethane it produces, creating a closed-loop logistics model that reduces emissions and costs, while maximizing the environmental benefit of every molecule transported.



"We were impressed by Hexagon Agility's excellent customer service and technical knowledge throughout the procurement process. Now that the first units are in operation, we are convinced we made the right decision and look forward to a long and successful relationship."

Daniel Lambert

Downstream & Innovation Director, Acorn Bioenergy