

Poultry farmer uses litter to boost sustainability and energy security

A Hereford-based poultry producer with a 90,000 broiler chicken operation has invested in an anaerobic digestion (AD) project to convert its chicken litter into biogas to generate electricity and heat for the chicken houses.

The new AD plant at Great Ynys Farm, which also has 125 acres of arable land, was commissioned in August and is expected to replace costly fuel oil and propane gas, as well as provide a new income stream as a renewable energy generator.

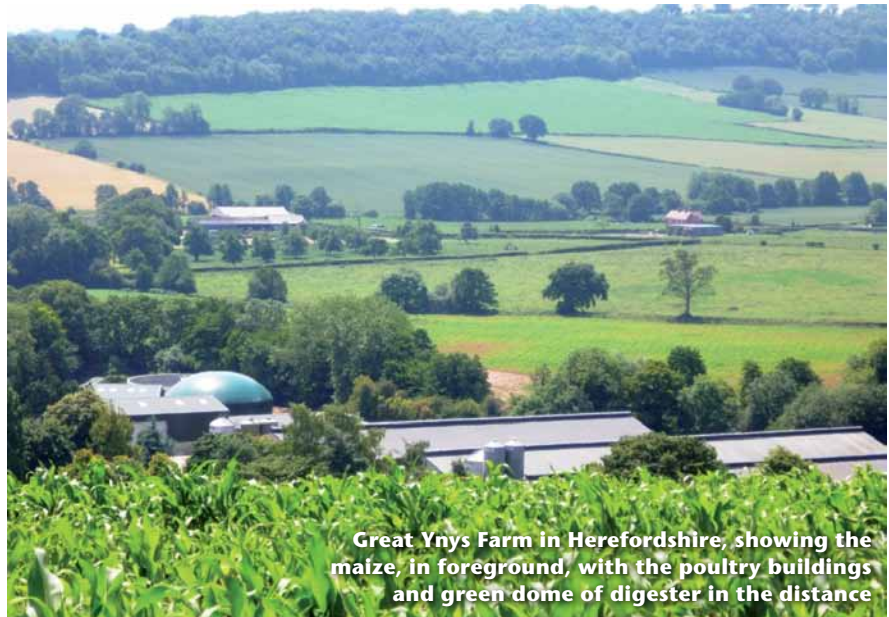
It will have capacity to process 700 tonnes of poultry litter and 1,000 tonnes of cattle slurry, mixed with 3,000 tonnes of maize silage per annum.

The farm's new green power company –Ynergy Ltd – contracted biogas generation experts ENER-G and biogas plant manufacturer PlanET Biogastechnik for project delivery.

The ground works were carried out by local contractors JJ Stanley and concrete tank construction by the Yorkshire-based company Galglass. Triangle Ltd supplied the low voltage electrical Panel.

The combined heat and power system will provide 250kW of electricity, sufficient to power 450 homes, and 200kW of heat.

This renewable energy source will qualify for financial payments from the government's Feed in Tariff (FIT) and the new Renewable Heat Incentive (RHI) programmes – providing 14p per kW on all electricity generated and 6.5p per



Great Ynys Farm in Herefordshire, showing the maize, in foreground, with the poultry buildings and green dome of digester in the distance

kW for the captured heat used on site.

Ynergy Ltd director Susan Shakesheff pointed out that the digestion process would also produce a residue of 5,000 cubic metres of odourless organic liquid fertilizer, which would be used to provide an enhanced nutrient source for the maize crop.

"The farm currently uses its poultry litter as a fertiliser, but by digesting it first, methane losses to the environment during spreading will be eliminated," she explained.

"A new poultry litter store has been created to protect the AD feedstock from the elements and prevent the risk of nitrate run-off and leaching into the soil."

She added that ENER-G and PlanET Biogastechnik had both provided her company with a modem link to their 24/7 monitoring operations, "which provided it with full visibility of system performance and efficiency data.

"The ongoing maintenance agreement with ENER-G and biological support from PlanET Biogastechnik will also help us to maximise efficiency and achieve the fastest possible pay back on our investment," she added.

"We are proud to be at the forefront of the move to anaerobic digestion, and to improve our sustainability, and energy self-sufficiency. We are also helping neighbouring dairy farmers to recycle their cattle slurry." ■

➔ See www.energ.co.uk and www.planet-biogas.co.uk for further details

Skid-mounted pump unit designed to cut AD costs

A Staffordshire business has produced a new skid-mounted pump unit for the front end of small-scale biogas plants, which it claims will eliminate the need for rotary mixing and feed units.

Complete with its own control panel, Börger's PL200 Rotary Lobe Pump and Macerator with auger-feed is already being used at

small to medium-sized anaerobic digestion plants, where it has helped to reduce capital and operational costs.

"Compact, self-priming and valveless, with speed-proportional flow, this tough ATEX-approved Borger pump range continuously delivers trouble-free pumping for biogas/AD feedstocks, as

well as raw, water-activated and thickened sludges," explained a company spokesman.

In addition, he said that life-cycle costs were reduced by quick and easy replacement of all fluid wetted parts – without the removal of pipes, drives or other components of the pump unit. ■

➔ See www.boerger.com