

Biogas plant Great Ynys Orcop, Herefordshire, England



Plant Concept and Supplier
PlanET Biogastechnik GmbH

Operator
Ynergy Ltd.

Commissioning
2011

Inputs

Maize silage (approx. 3.700 t/a)
Cattle slurry (seasonal, approx. 1.000 t/a)
Broiler manure (approx. 600 t/a)

Technical Data

Solid charger: PlanET Multirotor Vario 28 m³ incl. auger system, weighing cells, automation and system monitoring; critical components are made of stainless steel

Digester: d = 18 m, h = 6 m; V = 1,526 m³, with wall and base heating, wooden ceiling, PlanET gas storage roof (double membrane incl. desulphurification and gas regulation)
Agitators: PlanET eco paddle (15 kW incl. frequency converter), PlanET eco turbo (13 kW)

Digestate storage: d = 21 m, h = 6 m; V = 2,078 m³ incl. tanker connection
Agitators: Two PlanET eco turbo (13 kW)

CHP: 250 kW_{el.} /300 kW_{th.} MAN 8-cylinders gas engine including gas analyser

Technical Container: The pre-manufactured, containerised unit is situated between the tanks and includes the pumping station, electrics, automation, system monitoring and heat distribution.

The complete substrate and gas pipework is made of PE.

Energy Production and Local Heat Concept

Electricity production: Approx. 2,000.000 kWh/a

Heat production: Approx. 2,400.000 kWh/a

The self-made electricity powers the farm's poultry houses and the biogas plant before the surplus power is fed into the public grid.

The generated heat provides heat for the chicken houses and replaces a high amount of costly fuel (LPG, oil).


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