Muntons
Passionate about malt

Creating a sustainable economy

We're helping Muntons reap the sustainability benefits of an anaerobic digestion facility – cutting their costs and increasing CO_2 savings.

They were looking to create a circular economy

Muntons wanted to invest in the Anaerobic Digestion (AD) project as part of its 'Practical Sustainability' strategy. Creating an AD facility would allow them to provide bio-fertiliser from digestate to local farms who supply Muntons with its barley. As Muntons buys almost all its malting barley from within a 50-mile radius, they would also be creating a sustainable circle of recycling

By running their own AD facility they could cut their carbon emissions and provide sustainable power and heat for on-site processes – whilst increasing their resilience and reducing reliance on the grid.

It would also allow them to avoid the cost and environmental impact of waste disposal from processing residue – that's £750,000 ($1m) every year to cover 3,000 truck-loads of residue being removed from the site. This residue could be utilized
in the AD plant to create a methane rich biogas and digestate.

Our role is the process

Following an extensive tendering process, which included trials and pilot plans, we were selected to supply and fit a high-efficiency 499kW ENER-G CHP system to the AD facility.

How it works

- The methane rich biogas created by the AD process powers the ENER-G CHP engine
- This generates electricity and heat which is used to pasteurize the sludge that comes off the reactor
- The sludge is subsequently centrifuged to render it dry enough for spreading back onto local farm land as an organic fertiliser

11% OF SITE HEAT AND POWER
now generated by ENER-G CHP

$1m SAVED ANNUALLY
on removal of residue

100% SUSTAINABILITY
achieved

"The generation of highly nutritive fertilizer is a genuine cradle-to-cradle process by returning to our growers material generated solely from malting barley."

Dr. Nigel Davies
Manufacturing and Sustainability Director at Muntons

centrica
Business Solutions

The ENER-G Cogeneration provides the main factory with green electricity, and heat to supply the digester conditioning tank and pasteurizer with hot water.

Not only does it generate a significant amount of the site's electricity, but it also provides a vital energy supply during the winter months, when there's the risk of potential electric shortages.

The results

The ENER-G CHP unit is now supplying 11% of the site's electrical baseload and heat for use in the AD process – resulting in significant cost and carbon savings for Muntons:

- 400 tonnes of CO_2 cut a year through the removal of 3,000 truck journeys between the two Muntons sites in the UK
- 466 tonnes CO_2 annual reduction is achieved by displacement of energy from conventional fossil fuel sources
- Around 3,000 tonnes of bio-fertiliser each year is produced in the AD plant to supply to the local farmers. As such, all products used in the AD plant are totally traceable and food safe
- The AD process has helped Muntons malt to be classified as 100% sustainable, endorsed by the Sustainable Agriculture Platform Initiative
- Our biogas CHP system is helping Muntons in its aim to reduce the carbon footprint of farming cereals by at least 50%
- The payback on investment is expected to be 4.6 years or less

Why choose ENER-G CHP?

- Helps you achieve energy cost savings of up to 40%
- Reduces CO_2 emissions of up to 30%
- Provides greater security of supply and plentiful hot water
- It can provide efficient cooling by adding chillers
- It can be used as a replacement for inefficient boilers or work alongside existing boilers
- Offers flexible procurement options
- Requires Zero CAPEX
- May benefit from potential Government funding for energy efficient schemes and possible grant funding