

Case Study: Countess Wear Sewage Treatment Works



South West Water leads the way with highly efficient biogas combined heat and power Technology, utilising otherwise harmful digester gas.

South West Water (SWW) provides clean water and sewerage services to over 1.6 million people, 365 days a year. Dedicated to environment and conservation issues, SWW is committed to using energy efficient Combined Heat and Power (CHP) generation systems.

SWW has used the biogas for a long period to generate high value electricity from waste, and then utilised the heat, generated as a by-product, in the process and around the site.

SWW's CHP equipment was in operation for 16 years when in 2003 the plant had reached the end of its lifespan. SWW tendered for the replacement of the four 165kW biogas CHP units for their Countess Wear Sewage Treatment Works in Exeter.

SWW was favourably impressed with the quality and the reliability of ENER-G's biogas CHP installations at comparable sites throughout the UK.

Also the comprehensive design and maintenance service offered by ENER-G far exceeded what SWW had previously encountered. ENER-G won the tender by offering the best value solution and has operated the units since 2003.

“The plant generates its own heat for the process and by using CHP, it saved 10120 tonnes of CO₂ emissions – the equivalent of 1,556,907 mature trees up to the end of 2008. ”

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The benefits of ENER-G's biogas Solution

We offer financial savings over conventional energy supply:

- ENER-G can carry projects that are conceptual, through to feasibility, construction and completion
- Reduced cost of project development
- Flexible approach to the utilisation of heat and power
- Live online system monitoring and operational maintenance
- Maximised operational output from the CHP system due to our nationwide network of service staff
- Full client support and assistance to maximise financial revenue of the electricity sale and ROCs

Anaerobic digestion can be applied for various types of biological waste, including:

- Sewage sludge
- Liquid manure
- Bio-wastes from households, slaughter houses, breweries and distilleries, dairies, sugar production, etc.
- Vegetables, Vegetable oils and animal fats
- Organic MSW

For all ENER-G systems, we offer long-term operational and maintenance contract to ensure smooth operation and long engine lifetime.

Like at any sites operated by ENER-G we can assist in selling the electricity to the local grid and administer the process for the recovery of Renewable Obligation Certificates (ROCs).

About ENER-G

ENER-G develops, delivers and finances sustainable energy solutions and technologies on a business to business basis worldwide. We offer a "one-stop-shop" for all commercial and industrial energy requirements, from combined heat and power (CHP), renewable electricity generation from biogas, heat pump technologies, efficient lighting, controls, metering and data solutions and energy from waste.

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