

Switching on big energy savings

Cogeneration is the cornerstone of an energy services scheme we've designed, funded and implemented at Royal Shrewsbury Hospital. This is reducing the hospital's carbon footprint and energy bills, while improving the patient environment.



Meeting the cost and carbon reduction challenge

Shrewsbury and Telford NHS Trust faced the challenge of meeting stringent carbon reduction targets, while reducing energy costs and finding a way to fund the replacement of ageing heating, lighting and energy control systems.

In 2004, we were selected to supply, finance and help operate and maintain a major energy services package. Our investment is being re-paid via the energy savings and providing additional cost savings that the Trust can use for patient care. We also helped the Trust to obtain a Community Energy grant of £547,000.

Win-win solution

This was a win-win solution that included the installation of an ENER-G 1150kWe combined cooling heat and power (CCHP)/trigeneration system, together with new boilers, replacement of the asbestos lagged district heating main, new energy efficient lighting, and a new building energy management system.

Our trigeneration technology provides the hospital with both medium temperature hot water and steam. This is supplemented by a new composite boiler and a gas fired boiler. We created an innovative chilled water system to convert the waste heat generated by the CHP into chilled water for the hospital cooling system. This included a chilled water ring main, which linked a variety of chilled water plant, including a new 700kWe absorption chiller.

Delivering on objectives

The Trust's aim was to maximise energy cost and CO₂ emissions savings through innovation; reduce the maintenance backlog of energy infrastructure; transfer risk from the Trust; secure grant funding, and create a self funded, cash neutral scheme.



zero capital investment
required by Trust



annual energy and
operational cost
savings



annual reduction in
CO₂ emissions

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ENER-G was the only supplier that would guarantee us savings and this is a marriage between the company and the Trust. They have brought their expertise to the table with a future-proven system and we have formed a solid partnership with them.”

Mr. Andy Hudson
Shrewsbury and Telford NHS Trust



All of these objectives have been met and the project has enabled the hospital to save more than £780,000 a year, simultaneously shrinking its carbon footprint by some 2,000 tonnes annually.

Increasing patient and staff comfort

One of the most popular benefits is the improvement in comfort throughout the hospital. Temperatures had typically been around 27°C, but ward temperatures are now down to more comfortable levels, with cooling available as required.

Expert after-care

We have delivered integrated energy projects across more than 50 hospitals and provides proven expertise in replacing dated plants with state-of-the art low and zero carbon alternatives that place no financial burden on hospitals or UK tax-payers.

The ENER-G CHP system is monitored in real-time via its in-built computer, which enables our service centre engineers to constantly view the system and make adjustments remotely to optimise performance. This is backed by a comprehensive service contract, providing a full operation and maintenance package.

Why choose ENER-G CHP?

- Offers financial savings of up to 40% over conventional energy supply
- Reduces CO₂ emissions by up to 30%
- Addition of chillers provides efficient low-carbon cooling
- Can be used as a replacement for inefficient boilers or work alongside existing boilers
- Avoids Climate Change Levy
- Offers flexible procurement options, including shared savings initiatives and zero CAPEX
- Provides greater security of supply and plentiful heat
- Remote real-time monitoring and national servicing and engineering support
- Experienced in delivering complex integrated energy projects.