CHP case study

Lister Hospital

The Site:
480-bed district general hospital in Stevenage
Part of the East and North Herts NHS Trust
Provides hospital services to people across Hertfordshire and South Bedfordshire
Underwent £150 million investment programme (including this CHP project)

Location: Stevenage
Date Operational: October 2012
CHP Installed Capacity: 1.4 MWe
Investment Cost: £2.7 million
Annual Cost Saving: £0.65 million

Project Objective: Improve the energy centre at Lister hospital through installation of a CHP plant to increase energy efficiency and reduce energy costs.
**The Need:**
- Hospital patient care is sensitive to the stability of energy supplies
- Site is full of energy intensive facilities
- Energy was provided solely by the National Grid
- Significant electricity costs
- Carbon emissions targets to be met

**Implemented Solution:**
- 1.4 MWe CHP plant and three new boilers delivering heating, hot water and electricity to the hospital
- One of the new boilers is linked to the CHP system as a waste heat/fired boiler
- New waste heat pipework
- Steam calorifiers replaced with new plate heat exchangers

**The Benefits:**
- Annual Cost Savings: £0.65 million
- The Trust’s annual carbon emissions reduced by 20% (4,040 tonnes)
- Carbon emissions reduction target was met 3 years early
- Hospital now pays less under the carbon tax
- £1.3 million backlog for heating and hot water system repairs was cleared