



Overview

Modern Energy Partners (MEP) is a cross government collaboration project delivered by the Energy Systems Catapult. The MEP programme was driven and funded by BEIS Energy Innovation Programme and overseen alongside the Cabinet Office, Treasury and the BEIS Public Sector Decarbonisation team.

The programme received £22 million of funding to deliver decarbonisation to 42 testbed sites, of which Goole District Hospital was a one of four pathfinders.

MEP Case Study – Goole District Hospital

Goole and District Hospital takes the first steps towards decarbonisation



Key facts

- Timeframe: 10 months.
- Removal of existing coal fired boilers
- New, fully integrated Building Management System
- Improved hot water distribution system with plate heat exchangers
- Energy efficient LED lighting installed across site.
- Building fabric upgrades – Cavity wall and loft insulation
- Estimated savings of £250,000 and 1,387 tCO₂e per annum for the hospital
- A reduction in energy usage of 3.8 Gigawatt hours on site (9% of annual usage) 3.45 GWh per annum (45%)

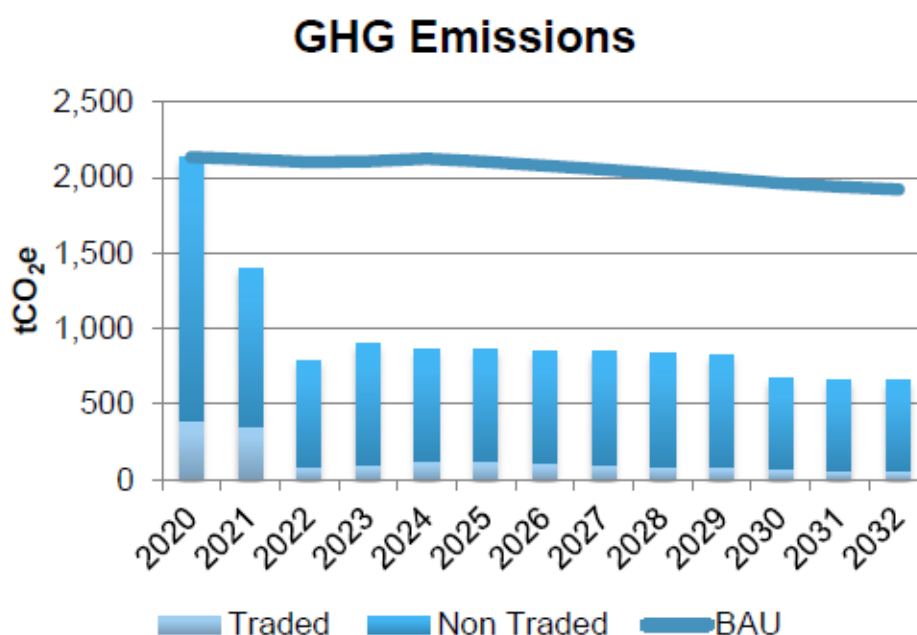


The challenge

Goole and District Hospital is one of 3 hospitals that form Northern Lincolnshire and Goole NHS Foundation Trust. Opened in 1988, it is home to the Goole neuro-rehabilitation centre, which treats patients with brain injuries and other neurological conditions from across the country.

The ambitious MEP innovation programme set out to reduce the site's emissions and achieve at least 50% carbon emission reduction by 2032 (against a 2017 baseline) in line with the governments' decarbonisation targets.

In 2019, the site had an annual energy consumption of 7.5GWh and an energy bill of circa £350,000.



The solution

MEP developed a decarbonisation plan for the site that demonstrated how a £2.8m investment could decarbonise the site by 66%.

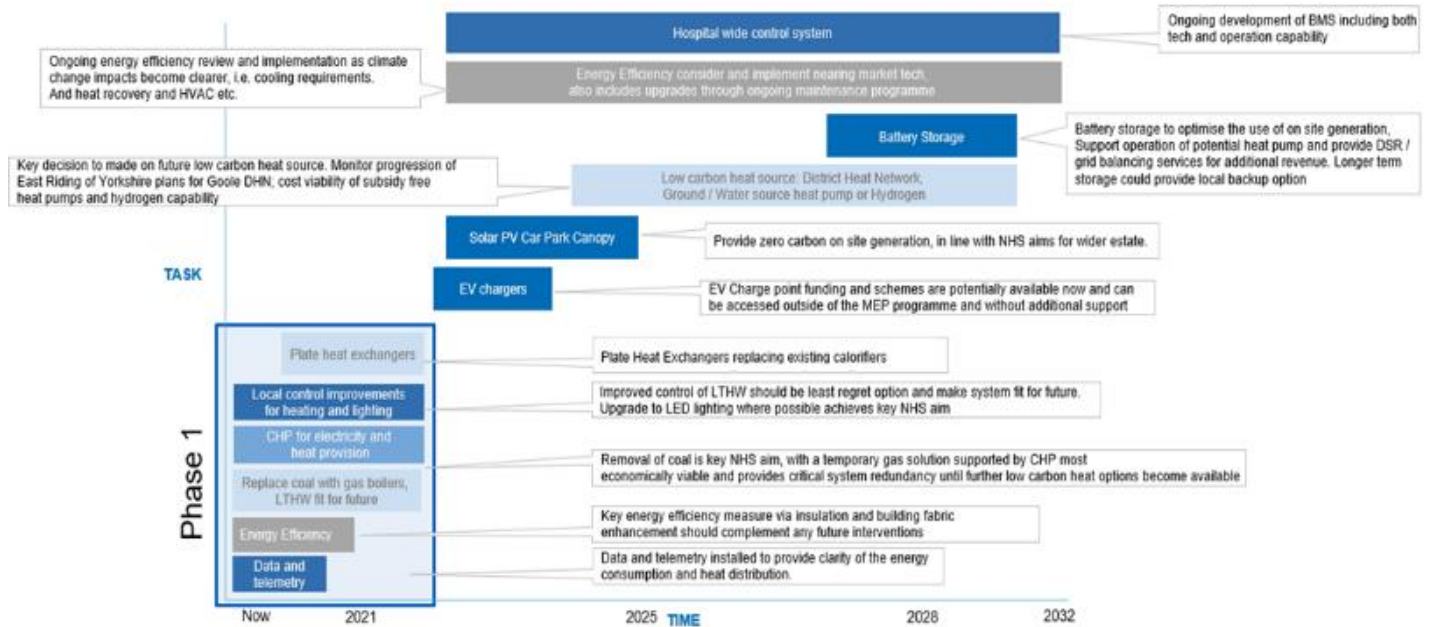
As part of the plan, the first no regret measures were implemented between March and December 2021.

The measures included the following site-wide improvements, delivered following in accordance with safety guidance during the COVID-19 pandemic:

- Removal of 2 existing coal fired boilers, replaced with dual fuel energy efficient boilers and a Combined Heat and Power generator
- Remediation of the existing Low Temperature Hot Water (LTHW) system
- New, fully integrated, Building Management System
- LED upgrade to cover 100% of site, with improved controls
- Building fabric upgrades - Loft & cavity wall insulation
- Replacement of existing water calorifiers with plate heat exchangers



The pathway



The total works cost came in at £2,775,000, with the funding 50 / 50 split between BEIS and Northern Lincolnshire and Goole NHS Foundation Trust via PSDS funding. The project will deliver an estimated saving of circa £250,000 per annum, based on yearly energy savings of 3.45GWh. The lighting upgrade also provides better light in some spaces improving safety.



Further information required: Please email Energy Systems Catapult - MEP@es.catapult.org.uk

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