



Wye Valley
NHS Trust

Case study

Integrated energy strategy to achieve net zero by 2040

centrica
Business Solutions



£5M Hereford County Hospital project marks a significant step towards net zero for Wye Valley NHS Trust

Hereford County Hospital is a 236-bed acute general hospital managed by Wye Valley NHS Trust (WVT), located in Hereford, in the United Kingdom. The original hospital was completed in 1937 and replaced by a new facility in 2002. The site includes wards and facilities in separate buildings.

With an estimated annual turnover of around £250 million, the hospital employs around 3,000 staff and prides itself on building relationships between staff, patients, service users, carers, and the wider community.

Since 2008, the NHS has tracked and reported its carbon footprint, continually improving its methods and monitoring its progress against the Climate Change Act (2008). As part of its plans to significantly improve sustainability, WVT initiated an approximately £5 million energy upgrade project, scheduled for completion by the end of 2021.

510

tonnes CO₂
saved yearly

3,170

low-energy
lights

300

rooftop solar
panels

The road to net zero

The project is part of a wider national decarbonisation plan supported by the Department for Business Energy & Industrial Strategy (BEIS), which helps public sector organisations work towards net zero goals.

Centrica Business Solutions completed a site-wide audit and identified a series of energy-saving measures that will benefit WVT for a 15-year period and beyond. Centrica Business Solutions was then contracted to deliver upgrades to provide greener energy to the main hospital and six older buildings on the site.

These works form the first phase of a net zero pathway to decarbonise the hospital and achieve 80% CO₂ emissions reductions by 2032 and be net zero by 2040.

“We are committed to reducing the impact our activities have on the environment by introducing these new technologies, which will reduce our carbon emissions at this site by 510 carbon tonnes per year.”

Alan Dawson, Director of Strategy and Planning,
Wye Valley NHS Trust

Technical overview

The first phase of the works includes the installation of an ambient loop heat network and ground array with c. 50 vertical 200-metre closed-loop boreholes, providing geothermal heat to electric driven heat pumps, supplying all the heating and hot water needs for seven satellite buildings on site, with (n+1) resilience. Gas boilers in smaller satellite buildings were replaced with air-source heat pumps.

Other key works include over 3,000 low-energy LEDs, a 100 kW-peak rooftop solar photovoltaic (PV) installation, and cooling controls and mechanical services insulation.

The next phase of the works has a planned start date of 2023 and will include the expansion of the ambient loop heat network with additional ground arrays and heat pumps to decarbonise the remaining satellite buildings. The main hospital steam heating system will be replaced with a central, high-temperature air source heat pump solution capable of providing the heating and cooling requirements of the hospital with (n+1) resilience.

“We’re very pleased to receive this grant to enable us to undertake this exciting and significant move forward to help reduce our carbon footprint and improve our environmental sustainability.”

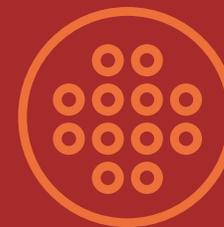
Alan Dawson, Director of Strategy and Planning,
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Significant strides for decarbonisation

In line with the NHS's ambitious commitment to reach net zero by 2040, Centrica Business Solution's installations will form a crucial foundation to ensure that WVT achieves this goal ahead of target. The range of technologies implemented will also generate significant improvements in efficiency and sustainability across the Hereford site.

"We're very pleased to receive this grant to enable us to undertake this exciting and significant move forward to help reduce our carbon footprint and improve our environmental sustainability," says Alan Dawson, Director of Strategy and Planning at Wye Valley NHS Trust.

"We are committed to reducing the impact our activities have on the environment by introducing these new technologies, which will reduce our carbon emissions at this site by 510 carbon tonnes per year."



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