

[Schneider Electric Case Study]



The Christie NHS Foundation Trust

Manchester



Schneider Electric partners with The Christie NHS Trust to drive healthy energy savings

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In Brief

Goal

The task was to take urgent action through a comprehensive review of the energy setup, enabling The Christie to continue to deliver exceptional quality cancer care whilst maintaining financial sustainability.

Solution

Schneider Electric was able to unpick the complexity of the energy management brief to deliver a simple, fast and complete modernisation programme. At every stage, the focus remained on reducing the carbon footprint, generating savings to re-invest, promoting sustainable business practice and, in turn, improving the patient experience.

Results

As part of a long-term financial model, Schneider Electric predicts total energy savings of over £170,000 in year one, rising to over £400,000 per annum by year 15 based on forecasted energy inflation. As such, the project will pay for itself and deliver a surplus after 15 years of circa £3.2m.

Background

In continuing to drive sustainability targets in the healthcare sector, Schneider Electric has completed a modernisation of the Trust's energy infrastructure for one of Europe's leading cancer centres, The Christie NHS Foundation Trust.

Located in Manchester, The Christie is a specialist cancer centre which offers high-tech diagnosis, treatments and care for patients, world class research, and education in all aspects of cancer. Every year the Trust treats more than 40,000 patients.

In common with many older healthcare sites, The Christie was faced with the complex combination of an ageing infrastructure, maintenance backlog and utility inflation, leading to growing operational costs and corporate risk. Added to this, the centre was very aware of the legislative pressures of the Carbon Reduction Strategy from the NHS Sustainable Development Unit (SDU), and the desire to improve performance in relation to The Christie's position in the Carbon Reduction Commitment (CRC) league table.

Upon review, the task was to take urgent action through a comprehensive review of the energy setup, enabling The Christie to continue to deliver exceptional quality cancer care whilst maintaining financial sustainability.

And so, The Christie held a tender process to find a specialist partner with the expertise to develop and deliver a solution. Schneider Electric was awarded the contract, equating to a value of £1.37m, which commenced in spring 2013 and was completed in March 2014.

Working in close partnership with The Christie, Schneider Electric was able to unpick the complexity of the energy management brief to deliver a simple, fast and complete modernisation programme. At every stage, the focus remained on reducing the carbon footprint, generating savings to re-invest, promoting sustainable business practice and, in turn, improving the patient experience.

Solutions include a comprehensive scheme of sub-metering throughout the site enabling insight into energy use, low loss transformers with harmonic filters to aid efficiency and negate electrical failures, and a completed LED lighting upgrade. Plus, the team implemented mechanical upgrades to HVAC systems to increase efficiency and upgraded the steam pipe insulation to reduce heat loss; thus further optimising energy savings.

The existing Building Management system has also been enhanced to enable increased visibility and interrogation of equipment, repairs to damaged or removed controls and expansion of sensor coverage. This will enable The Christie to benefit from greater management of the internal environment.

The result is that The Christie is working towards its numerous objectives of delivering major operational savings that can be used to re-invest in the NHS and creating a more sustainable Trust, while ensuring world-class cancer care. In addition, the project is aiding the corporate objective of ensuring carbon emissions fall within the lower half of NHS organisations in annual benchmarking, therefore adding to the centre's ecological credentials.



“Schneider Electric boasts not only a complete energy management product portfolio but a wealth of experience in the field of sustainable healthcare. “

*Alex Tighe,
Capital Projects and Energy Manager
at The Christie*





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Already, the results to date have been significant. Since the project began, The Christie has seen a reduction in CO₂ of over 1200 tonnes and a financial saving of just over £150,000. To place into context, this equates to enough energy to power a Linac radiotherapy machine, an essential piece of The Christie equipment, for 7,419 days, providing treatment for 234,000 patients.

Yet, this is just the beginning. As part of a long-term financial model, Schneider Electric predicts total energy savings of over £170,000 in year one, rising to over £400,000 per annum by year 15 based on forecasted energy inflation. As such, the project will pay for itself and deliver a surplus after 15 years of circa £3.2m. In terms of lessening environmental impact, the figures are just as significant. This year alone, the hospital is expected to see a carbon saving of 29% and energy saving of 14%.

Alex Tighe, Capital Projects and Energy Manager at The Christie comments: "This was by no means an easy brief. In addition to an aging infrastructure and the scale of project, the nature of operations and patient treatments on site presented further challenges. It was important for us to not just source a partner who had the expertise and resource to deliver on the sustainability front but also had an understanding of the acute needs of the hospital environment.

"Working with us on a one-to-one basis every step of the way, the people at Schneider Electric were able to get to grips with the complex requirements; delivering fast and significant results while ensuring minimum disruption for patients."

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Alex Richards, Business Development Manager at Schneider Electric comments: “As part of a concerted focus on the healthcare sector, we pride ourselves on being able to make sustainability solutions for the modern hospital environment.

“Through the implementation of this holistic project coupled with our continual expertise and support, this project has helped transform the previous facilities into not only a healthier hospital all round but a future-proofed operation.”

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