

Case study

An Integrated Ultra Low Carbon Energy Solution : Nottingham University Hospitals NHS Trust, UK

The project

Nottingham University Hospitals NHS Trust is one of the largest acute Trusts in the UK. The Trust faces unprecedented challenges associated with increasing energy costs; the pricing of carbon; the need for flexibility in building use in the face of changing healthcare provision; and the goal of a substantial reduction in CO2 emissions. Another problem facing the Trust is that they have a number of older, energy inefficient buildings, some of which are of heritage status.

For the last 35 years the primary source of heat to the City Site has been a coal fired boiler which is now coming to the end of its useful life. The Director of Estates and Facilities saw this as an opportunity to fundamentally rethink the Trust's approach to energy and reduce the hospital's carbon intensity, and in doing so, reduce exposure to rising energy prices, the pricing of carbon, and the impact of future low carbon legislation.



The need to replace the coal fired boiler presents an opportunity to explore innovative technologies and services.

The Trust have therefore set themselves the ambition to achieve more than a step-change reduction in energy demand and emissions; they want to reverse historical trends and deliver continuous efficiency improvements across the Trust over the next 20 years.

A new approach to procurement - stimulating an innovative response from the supply chain

Initially the Trust commissioned consultants to advise on the replacement of the site's energy systems. The resulting recommendations, based primarily around large centralised energy generation on site, would deliver a significant one-time reduction in energy use and emissions, but would not necessarily achieve the long-term flexibility, carbon reductions, and reduced exposure to rising energy prices that the Trust requires.

The project team agreed that new, more efficient Combined Heat and Power systems would only be part of the solution and that in isolation would not deliver the outcomes they were looking for. An innovative response was needed from the supply chain, and this meant that the Trust needed a new procurement approach.

Working with the support of the UK Department for Business, Innovation and Skills and the Department of Health, and with the backing of the CEO, the Trust decided that Forward Commitment Procurement was the most appropriate way forward.



"We are using this opportunity to fundamentally re-think the way we generate, use, and procure energy services across the whole Trust and ensure that the Trust's energy provision is fit for the future."

Peter Homa
Chief Executive

The first step was to identify the unmet need, in outcome terms:

'The Trust needs to procure an innovative and integrated ultra-low carbon energy supply and management solution for the City site that is able to adapt to meet the Trust's power, heat and cooling needs now and in the future. The energy solution needs to be reliable, low maintenance, and flexible enough to meet the shifting demands of healthcare over the next 20 years. It should be cost effective, deliver progressive improvements and be future proofed; i.e. take advantage of new and emerging technologies and anticipate increases in the cost of energy and carbon and in emissions standards.'
Extract from the market sounding prospectus

The team then set out to communicate this to the market and get feedback from potential suppliers through a market sounding exercise.

A number of questions will be posed in the Market Sounding, to be launched in Autumn 2011:

- Given the context we are operating in, does the supply chain believe a holistic approach to energy is the right solution?
- Does the supply chain have the appetite for, and it is capable of, delivering this approach?
- What technical and financing options are, or could be, available to enable the Trust to address its needs?
- What might the Trust do to support the delivery of an optimal solution?

'This market sounding exercise signals our intent to work with the supply chain to identify and overcome the barriers that currently prevent delivery of such an integrated, and holistic, energy solution.'

Extract from the market sounding prospectus

Next steps

The Trust will launch the market sounding exercise via a Prior Information Notice (PIN) in the Official Journal of the European Union (OJEU) and is developing a pro-active communication strategy to make sure that the supply chain is aware of the opportunity.

Interested companies will be invited to a site visit and to respond to the market sounding. The feedback will enable the Trust to design a pro-innovation procurement strategy to support the delivery of a cost effective solution that meets their needs.

"Early on, we recognised that we needed to encourage the supply chain to develop credible, innovative and competitive proposals which meet our needs. The Forward Commitment Procurement approach gives us a really useful framework to work with."

Andrew Camina

Assistant Head of Estates Operations
for the City Hospital Campus



The Nottingham Radiotherapy Centre is a recent example of the direction the Trust is taking in renewing its infrastructure to a low carbon standard. This building was designed to comply with a 'BREEAM Excellent' standard and incorporates a number of sustainable technologies.

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Keep up-to-date with the LCB-HEALTHCARE pilot projects at: <http://lowcarbon-healthcare.eu>
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