

Real-time energy monitoring

An online real-time energy monitoring solution is the driver behind engaging buildings contractors and staff in identifying opportunities to make energy, carbon and costs savings.

Barking, Havering and Redbridge University Hospitals NHS Trust (BHRUT)

Energy and carbon



What was the issue being addressed?

The financial impact on utilities on budget alongside the legal requirements presents an opportunity for organisations like the NHS to reduce their buildings energy consumption and help the environment.

What action was taken to overcome the issue?

The Trust's Carbon Management Plan which is an integral part of SDMP, makes clear the need to know building energy consumption by type, seasonal patterns, and high/low demand periods. This helps to engage buildings maintenance contractors by bringing the energy consumption of the buildings into a clear and instant visibility. The Sustainability team invested and installed the ecoDriver online Real-time energy monitoring solution to monitor energy consumption in their Queen's Hospital and King George's Hospital buildings.

What was the impact?

This resulted in bringing the anomalies in energy consumption especially, during out-of-hours and holiday periods into visibility. Following investigations appropriate actions were taken to avoid wastage. The live data and its reporting tool helped the team to identify more opportunities and plan in advance for weekends, bank holiday, Christmas and New Year switch-offs.

Such actions resulted in immediate savings. The Trust has saved around £142k in the first two years through low/no cost initiatives. %.

Lessons learned / success factors?

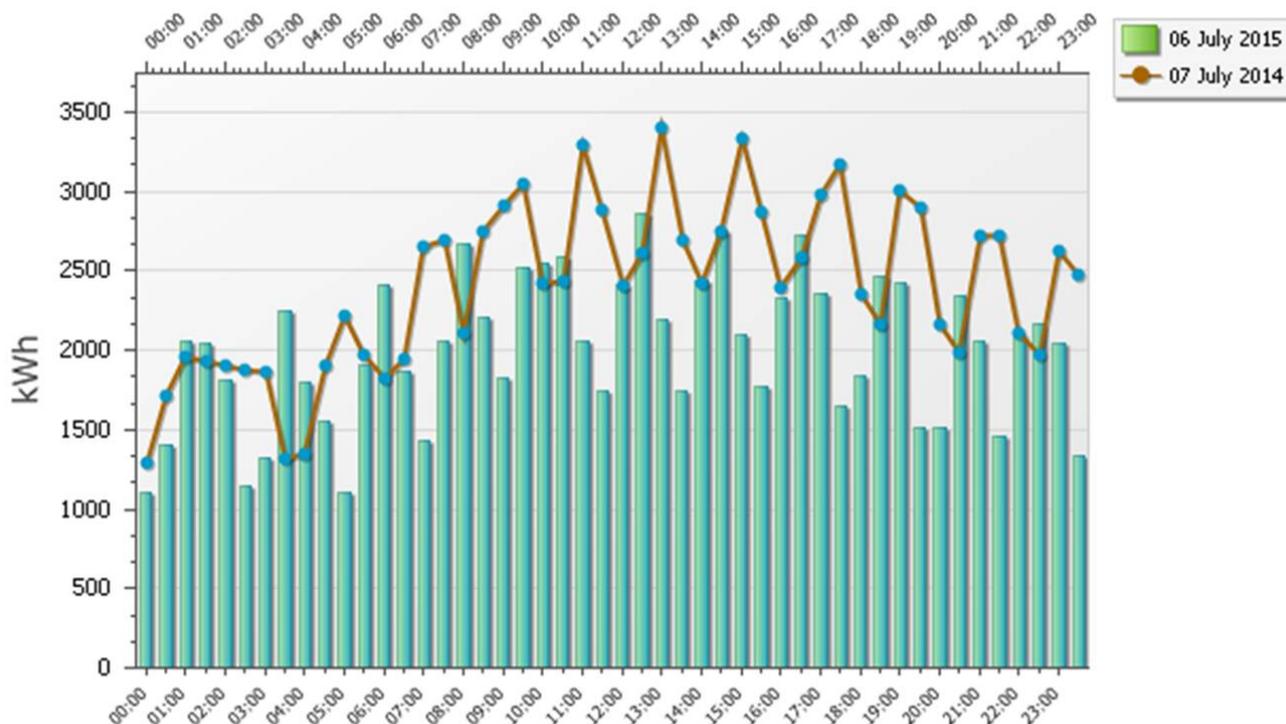
Realising the benefits of sharing with the buildings maintenance contractors and staff, the Trust expanded this real-time monitoring system with alert notifications to other meters. These included combined heat and power (CHP), LV switchboards, boilers and individual departments.

The team has taken a progressive approach in its expansion by engaging occupants and taking financial, energy, carbon savings factors into account. The chart over the page shows an example of the difference in consumption patterns before and after taking actions at their largest site, Queen's Hospital in Romford.

½ Hourly Unit Period Comparison Report

Report Created Using ½ Hourly Data for Total Imported Energy, QH

Report Generated for Data: 06 July 2015 and 07 July 2014



Scaling up

In the present financial climate it is difficult to fund a complete monitoring & targeting solution using multiple sub meters, especially for PFI managed sites. The Trust's approach therefore is to start with monitoring & targeting using mainly, existing fiscal meters then building upon this by taking a progressive approach. The project is also helping to build relationships with the contractors and occupants to bring both carbon and costs savings.

An instant monitoring system is a key to engage contractors by bringing it into a clear visibility to take appropriate actions.

The team has plans to expand this tool to water management, waste and recycling

"the tool is simple to understand, and it has helped to bring the energy consumption patterns into a clear visibility – which prompted many questions and helped us identify opportunities."

Jason Davie,
Sodexo, Energy Manager, Queen's Hospital

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