

Royal United Hospitals Bath



CUSTOMER

Royal United Hospitals Bath

SECTOR

Healthcare

FOCUS

Building Management System upgrade



UPGRADED HOSPITAL BMS SYSTEM ON TRACK FOR 18-MONTH ROI



KEY SUCCESSSES

- Upgrade based on client-specified Panasonic PLCs
- Rapid ROI thanks to impressive energy savings
- Roll-out to further areas planned for near future

Project overview

BG Energy Solutions has played an integral role in upgrading the BMS (building management system) at Royal United Hospitals Bath. Based on the installation of client-specified Panasonic PLCs (programmable logic controllers) and newly designed control panels, Estates Manager Brian Gubb estimates that payback will be as little as 18 months due to the impressive energy savings being delivered. As a result, the facility plans to roll out the solution to more areas in the near future.

Background

Royal United Hospitals Bath, an NHS Foundation Trust, provides acute treatment and care for a catchment population of around 500,000 people in Bath and the surrounding towns and villages of northeast Somerset and west Wiltshire. The 52 acre site offers 565 beds, 17 operating theatres and employs around 4800 staff.

Keeping the hospital functioning at full strength is the responsibility of the Estate Facilities Department, which is headed up by Mr Gubb. He and his highly skilled team of 30 have ambitions to be the best estate facilities department in the country. Mr Gubb takes a pioneering approach to the technology used to manage the estate, with BG Energy Solutions playing an integral part in delivery.

Royal United Hospitals Bath

THE CHALLENGE

The site's previous BMS controlled approximately 300 items of equipment, including air handling units, generators, heating systems and lighting systems. The system was based upon a proprietary BMS top end that allowed users to control and change set points.

The problem was that the top end software was very specialised and expensive to maintain, while users of the system needed many months of training to achieve familiarity. Furthermore, the outstations were also provided by



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Brian Gubb
Head of Estates
Royal United
Hospitals Bath



the same supplier and only their staff could work on the equipment. Licensing was another issue. Not only is licensing expensive but, once tied in with a BMS provider, there is an obligation to use their equipment – at often uncompetitive prices.

The solution

To help address the issue, Mr Gubb, who is a trained SCADA development engineer, set about creating a SCADA management system as the overarching framework for the BMS. Importantly, the system features Panasonic PLC outstation equipment that communicates back to the servers via software interfaces supplied by OPC Systems, a specialist in SCADA applications.

The system has been configured to allow data transfer from the BMS to SCADA and vice versa. This allows staff and technicians to control and monitor plant from any of the 24" touch-screens located around the site.

The new control panels for the system were built and commissioned by BG Energy Solutions. "I selected

BG because they had successfully completed a previous large project at the hospital to re-furnish the whole energy centre controls in our biggest boiler houses – and did an excellent job," he says. "BG is now our preferred supplier and, if required, their engineers can log in remotely to rectify any issues."

Results and outcome

Although the hospital will not know the precise savings of the new control panels for the system until 6-8 months of operation, Mr Gubb's calculations suggest that each one will save £5000 a year. On that basis, payback is anticipated within 18 months.

Today, Royal United Hospitals Bath is the UK's biggest user of Panasonic PLC technology. BG engineers have been fully trained on Panasonic PLCs and are now as proficient as Mr Gubb's own staff. This is an important differentiator as there are few control panel providers with the required know-how to work with PLCs.

"BG is also excellent at keeping me informed and updated without having to ask," states Mr Gubb. "First class communications makes life a lot easier."

The SCADA approach is certainly innovative. In fact, Mr Gubb believes that no other hospital in the UK is implementing SCADA-based software. Furthermore, because in-house staff can write the PLC code, this saves both time and money as faults can be addressed quickly without having to wait for a supplier. This is clearly vital to such a pivotal healthcare facility.

Mr Gubb now intends to roll out the solution to further parts of the hospital, which is about to embark on its biggest challenge to date – a major estate redevelopment programme with BG Energy Solutions taking a leading BMS role.