TREND CASE STUDY

University of Bristol and Trend Controls join forces to give a lesson in energy saving

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One of the original red brick universities, the University of Bristol is an internationally distinguished seat of learning with an enviable reputation for the research that is carried out there. The quality of the teaching it offers has also made it one of the most popular places in the world to study, with an applicant to place ratio of 11:1.

It first opened its doors in October 1876 with two professors, five lecturers and 99 students, and, uniquely for the time, admitted men and women on an equal footing. The University's reputation grew steadily and it became known as an institution with formidable academic strengths and an unshakeable commitment to quality – attributes it maintains today.

Located in the heart of Bristol, the university comprises 45 departments and 15 research centres. Part of The Russell Group, an association of 20 leading UK universities dedicated to maintaining the very best research, Bristol University offers an outstanding teaching and learning experience and unrivalled links with business and the public sector.

The University has a long-standing commitment to reducing its carbon footprint by the efficient use of energy and first started to scrutinise its energy usage in 1989 and set up an advisory group on energy management to look at how its consumption could be reduced.

It subsequently introduced an energy policy and invested heavily in energy saving projects such as the installation of building controls. 'It was around this time that we first became involved with Trend Controls,' comments Jeni Cummins, the University's senior engineer. 'We recognised that the most effective way to reduce energy use was by implementing a Building Energy Management System (BEMS) to ensure that our building services operate in strict accordance with demand.'

The BEMS was initially installed locally in specific areas and was gradually networked. Some of the controllers that were fitted 20 years ago are still working perfectly well, however, the University is in now in the process of upgrading the equipment on a project-by-project basis.

When it comes to retrofitting or updating a BEMS, backwards compatibility is crucial. Trend Controls' strategic marketing manager, Chris Monson, states, 'Trend Controls is unique in this respect and one of its modern controllers is able to talk peer-to-peer with the very first device that we manufactured back in 1982.'

The BEMS is being networked via a new campus-wide fibre optic cabling infrastructure that will replace the previous copper cabling that has started to degrade. This will also enable newly installed sub-meters to feed energy -based information to the BEMS for analysis.

As well as being ISO 140001 certified, the University's sustainability strategy aims to achieve a 15 per cent reduction in CO_2 emissions by 2016 from a 2007/08 baseline. It is also working towards the so-called 20-20-20 targets outlined in the EU climate and energy package. These consist of a 20 per cent reduction in greenhouse gas emissions based on 1990 levels by 2020, 20 per cent of energy to come from renewable sources by 2020, and a 20 per cent reduction in primary energy use by 2020.

For Cummins and her team, being able to analyse, understand, reconfigure and improve the site's energy usage and costs by having information presented in an organised and informative way is of great importance. A Trend Controls' IQView is therefore a highly valued part of the University's BEMS.

IQView is a touchscreen display that provides a self-configuring user interface to a Trend BEMS. Its software presents the user with a familiar Windows operating environment with visual access to all of the controllers and devices on a site. It enables the user to view and adjust operating times, monitor alarms and make adjustments to controller parameters. Access to information can be restricted to designated personnel and it has the ability to display schematics that provide live information from the system, making it simple to use and easy to understand.

'We have set ourselves some deliberately tough carbon reduction targets in order to make ourselves as energy efficient as possible,' concludes the University of Bristol's Jeni Cummins. 'Having a BEMS from Trend Controls allows us to focus and act upon the practical day-to-day issues of implementing good energy management and the system's full backwards compatibility means that we are able to upgrade it on an on-going basis with minimal disruption.'

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