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BT cuts electricity bill by 23% at emergency call centre with ABB drives

A new HVAC system at BT's centre for 999 calls in Nottingham, controlled by ABB drives, has reduced electricity costs by 23 percent. The site has also shown a reduction in gas usage to 12 percent of the previous figure, due to better control of the HVAC system.

Castle Wharf, a large BT site housing mainly offices together with the 24-hour call centre, is staffed by approximately 900 people. Steve Smith, BT's Energy Manager for the Castle Wharf site, says: "We needed to refurbish the HVAC system and wanted to install variable speed drives because we knew there was a potential for energy saving. As the fans were not speed controlled, this led to a large waste of energy. Also, the car park ventilation was not needed at night and needed to be controlled as well.

"Additionally, our Building Management System was not set up the way we wanted and so we decided to use a BACnet based system. This would allow us to zone the building and introduce time controls to take account of occupancy patterns."

The system was installed by ADT Fire and Security; the company having a contract to update and refurbish the building management controls in a number of BT installations around the country.

Pat Boyce, BMS Senior Projects Engineer for ADT says: "ABB is our preferred supplier of drives, mainly because they have the only native BACnet drive in the UK."

The 18 ABB HVAC drives, ranging in size from 5.5 to 30 kW, run air handling unit supply and extract air fans at the site. The ABB drives sit on a BACnet network centred on the ADT controllers. The BACnet network consists of a single twisted pair daisy-chained throughout the whole installation and relaying data between the user's graphical front end and the drives. This data can include the energy consumption in kilowatt hours used by the drive, a very useful piece of information in keeping costs down.

ABB's BACnet enabled drives can be directly connected to the BACnet based control system and take advantage of advanced features such as auto-discovery, dynamic binding, time synchronization and read/write variable requests, giving the end user a high degree of control.

Says Boyce: "There is always a requirement to be efficient with energy usage and produce a building management system which is user friendly and capable of producing the total control required by end users. The ABB HVAC drives and the ADT Controls system meet the need for a common protocol between building control equipment and drives."

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Caption: A new HVAC system at BT's centre for 999 calls in Nottingham has reduced electricity costs to just 23 percent of its previous figure.

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For more information please contact:

Layla Hewitt

Marketing Communications

Phone: 01925 741517

Email: layla.hewitt@gb.abb.com

ABB Ltd.

Daresbury Park

Daresbury

Warrington WA4 4BT

Emma Jenkinson

Armitage Communications

Phone 020 8667 2218

Email: emma.jenkinson@armitage-comms.co.uk