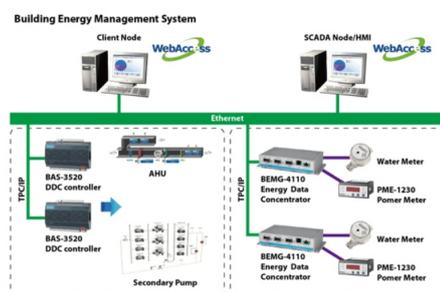


26 Febbraio 2012

Energy Conservation and Efficiency in a Shanghai Office Building with Advantech

Project Introduction:

Conservation of energy resources through energy management solutions are receiving considerable attention in the modern office building sector. Specific questions were directed towards average monthly energy costs and energy consumption. Meanwhile administrators need to have sufficient information about the state of their facilities' to plan energy conservation. For those reasons, new office buildings are usually embedded with advanced technology energy efficiency features to monitor their electricity and water resources to detect leaks in the building's plumbing and facilities usage to reduce energy costs as well as providing a comfortable office environment.



System Requirements:

The Shanghai Hung-Xiang Building was completed in June, 2011. This new office building with 15 floors and 3 basement levels, implemented the Building Energy Management System (BEMS) to effectively monitor its equipment usage, especially in terms of electricity and water. Because of its large building area, the building needed more than a thousand monitoring points to collect details of the facilities' conditions and control several subsystems, including fresh air handling units, heat pumps, water supply and the facilities' energy conservation devices. All of the data has to be transmitted to the energy management system to help the supervisor to fully understand the situations of each floor.

System Description:

Advantech's Building Energy Management System (BEMS), combines two major hardware devices. The first item is a 20-ch BAS-3520 Web-enabled DDC Controller which delivers various onboard I/O's to satisfy versatile application requirements and is installed on each floor to control and monitor the chiller plant, AHU and plumbing facilities. The second device is a

BEMG-4110 Energy Data Concentrator which is in charge of data collection from water and power meters.

In addition, the browser-based HMI/SCADA software - WebAccess is another key segment for any BEMS. Advantech's WebAccess applications provides remote control and management allowing users to easily view, control, and configure automation equipment in building automation systems. Through the use of data acquisition devices and real-time data control software, the administrator can easily control and manage all the devices in a building via Advantech's BEMS.

Conclusion:

In this case, the new architects adopted Advantech's building automation solution to acquire the facilities data and generate energy consumption reports so that the building administrator can effortlessly control the facilities in real time whilst being able to receive periodic reports to help them to analyze and adjust the building's energy consumption to achieve greater energy efficiencies. Furthermore, Advantech's solution can provide more I/O points for the future expansion.

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