INDUSTRY:
Energy Management in Buildings
Product:
EPower controller

invensys
Eurotherm

This is an exciting application for Eurotherm because it offers a solution to building energy savings. This problem is encountered by just about every company in the world that employs people working in an office building environment. It's interesting to conceptualize this project as "heat treatment of people," with the office as the "furnace," and the heating registers as the "burners," with the temperature controlled by a building automation system as the "PLC."

Andrew Dudas—Eurotherm Sales Manager USA

Intelligent Control
Building Effective Climate Management

Our prestigious client has the same problem that most companies have, regardless of the complexity of the end product – keeping employees comfortable while they are at work.

This application is for building climate management via electric baseboard heating at one of our customer's large office buildings in St. Louis, Missouri.

The customer replaced old Barber Coleman SCRs using phase angle firing. Such control introduces noise resonance and interference, into the supply power line and is not recommended for areas with high concentration of workstations, computers, servers, and electronic office equipment. The EPower units control using zero cross burst firing, which reduces the amount of noise introduced into the supply power line.

The customer is also using our PLM function for peak demand power savings and power factor improvement. We will know the results of this study in Spring 2010.

The Eurotherm portion of the solution included EPower three-phase modules, receiving set point values via Modbus to a Field Controller, and driving Vulcan Radiator electric baseboard heaters.

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Goal

- Reduce existing noise interference from current system
- Power Savings
- Power factor improvements

Challenge

- Building effective climate management in a large older office building in St Louis
- To ensure a comfortable environment for all employees without huge energy bills

Solution

- EPower controller installed
- Using Predictive Load Management for peak demand power savings and power factor improvement

Result– Customer Benefits

- Improved energy savings and power factor with EPower
- Quantified results will be available in 2010
- Fully working solution specifically in this case for building energy savings.

A fusion of 40 years of technological development

Simple thyristor load control matures to sophisticated EPower™ energy controller

Reduces end user cost of energy with zero quality penalty

Multi EPower systems provide reductions in CO2 emissions

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Award Winning

Engineers' Choice Award

Award for Innovation from The Franco British Business Awards sponsored by Barclays bank, leading French business newspaper Les Echos, UK Trade & Investment and VisitLondon.

Through sophisticated sharing and shedding techniques, the EPower controller's Predictive Load Management capability enabled this provider to reduce facility-wide energy costs by providing more efficient distribution across a variety of loads and conditions.

The EPower controller's ability to continually and accurately predict, monitor and adjust to demand is creating more efficient energy production and distribution
for the customer.

Company executives estimate that the solution will reduce energy costs by improving overall process efficiency by as much as 10%.

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For further information about this application contact Global Marketing Communications +44(0) 1903268500
Case Study Compiled by Kate Merrick Global Marketing Communication email kate.merrick@invensys.com