Energy conservation success

Rising energy bills and outdated building management systems and equipment in Van Allen Hall made it a good candidate for energy-related improvements.

The University of Iowa Utilities & Energy Management team led an initiative to:

• Upgrade the building systems
• Boost energy performance
• Reduce operating costs
• Increase occupant comfort

Van Allen Hall

196,452 ft² building, circa 1962

Energy Upgrade Investment: $145,713
Annual Cost Savings: $32,000/year
MidAmerican Incentives: $75,263
Payback: 1 year

Building management system upgrades save energy dollars

Background

Van Allen Hall was constructed on the University of Iowa campus in 1962. This 196,452 ft² building was posting an annual energy cost of approximately $948,134 which included electricity, district chilled water, and steam.

What was done

Energy and control engineers at The University of Iowa determined Van Allen Hall lacked a building management system which would give engineers the ability to better control the heating, ventilation and air conditioning equipment (HVAC), and optimize energy savings.

The UI Building Controls group designed and installed the direct digital controls systems and implemented other energy conservation measures such as installing variable frequency drives and sensors on the HVAC system. This upgrade also set the stage for the next phase of energy-saving improvements such as the installation of room temperature controls, lighting and occupancy sensors, and new HVAC fan coil units.

“They focused the first phase of the upgrades on the most critical and beneficial parts of the existing system, making it perform better,” said Bob Cozine, manager of shop services in Facilities Management. “People who come to work in Van Allen Hall are more comfortable and the building managers can see the building is running more efficiently.”

The actual energy savings resulting from the project exceeded $127,000 in the first 8 months of operation after completion of the upgrades.