

Check in for Savings at Holiday Inn Hotel & Suites

CASE STUDY

Focus on Energy, a statewide service, works with eligible Wisconsin residents and businesses to install cost-effective energy efficiency and renewable energy projects. We provide technical expertise, training and financial incentives to help implement innovative energy management projects. We place emphasis on helping implement projects that otherwise would not get completed, or to complete projects sooner than scheduled. Our efforts help Wisconsin residents and businesses manage rising energy costs, protect our environment and control the state's growing demand for electricity and natural gas.

To learn more about Focus on Energy,SM call 800.762.7077 or visit focusonenergy.com

Holiday Inn Hotel & Suites in Madison saved \$24,000 on its electricity bill in one year, thanks to a technology called guest room energy management (GREM) controls. Although this energy efficient technology is relatively new to the United States, it has a long, proven record in European and South American hotels. Holiday Inn Hotel & Suites partnered with Focus on Energy, Wisconsin's energy efficiency and renewable energy program, and the product manufacturer on the energy saving project.

The GREM technology was installed to control the hotel guestroom heating and cooling use, which can average 50 percent of a typical lodging business's energy bill.

"Energy costs represent a large operating expenditure in our industry," said David Phaneuf, the hotel's general manager. "By installing these controls, we were able to lower our hotel's energy costs and positively impact our operating profit margins." Phaneuf noted that, based on the extremely positive cost saving results in the Madison property, the hotel's owners, Wisco Hotel Group, will likely install GREM systems at their other lodging properties.

The GREM system selected by the Holiday Inn Hotel & Suites is called ENTERGIZE; this product is manufactured by DBS Lodging Technologies of Grosse Pointe, Michigan. The system utilizes miniaturized radio frequency (RF) technology—similar to that used for automobile remote locking systems—in conjunction with a standard keycard door lock system. Other manufacturers offer similar products.

GUEST ROOM ENERGY MANAGEMENT SYSTEMS: A QUICK HISTORY

When a guest leaves the hotel room, the control system sends a signal to the thermostat. This signal reduces operation of



When the guest room keycard is inserted into the master entry wall switch (right) upon arrival, the guest has full control over the temperature in the guest room via the digital thermostat (left).

the HVAC system to a predetermined set point for an unoccupied room. When the hotel guest returns to the room, the system readjusts to meet guest comfort requirements and the guest regains control of room temperature. In short, guest room energy management controls reduce the energy wasted by heating and cooling unoccupied rooms.

"Lodging facilities use energy to operate lights, swimming pools and business centers," said Matthew Matenaer, an Energy Advisor with Focus on Energy. "However, when it comes down to it, 40 percent to 80 percent of a hotel's energy costs result from heating and cooling guest rooms. It's an important cost control area that can be maintained by using guest room energy management controls."

HOW THE CONTROL SYSTEMS WORK

The Holiday Inn Hotel & Suites' existing heating, ventilating and air conditioning (HVAC) equipment was modified only to accommodate the installation of the guest room energy management system. This project involved installing the ENTERGIZE™ entry wall switch and the temperature control panel and modifying wall switches and outlets in each guest room. No additional major wire modifications were required. Most of the work was done by one person in approximately one-half hour without rooms being taken out of service.



FOCUS ON ENERGY'S MEASUREMENT AND VERIFICATION FINDINGS

Focus on Energy conducts detailed measurement and verification (M&V) studies of certain projects or technologies to study their actual operations and quantify energy savings. In early 2005, M&V engineers began studying the guest room energy management installation at the Holiday Inn Hotel & Suites in Madison. The control system was installed in 110 guest rooms at the hotel. Guest rooms comprise only 28 percent of the total space in this hotel due to the attached bar/restaurant, conference facilities, and pool/indoor water park.

Focus on Energy reviewed the hotel's utility bills prior to and after completing the project; this step later quantified this project's energy savings. The months of January 2004 through December of 2004 were used to establish the baseline energy use. The months of April 2005 through March of 2006 were used as current months for comparison.

The table below compares the projected savings for this project with nine months of actual findings from the M&V study. Holiday Inn Hotel & Suites reduced electricity use by 381,908 kWh during the nine month period of the study, slightly more than was originally estimated for one year. After 12 months of operation, the ENTERGIZE™ energy control system at the Holiday Inn & Suites in Madison continues to provide (and exceed) the energy savings projected for this project.

HOLIDAY INN HOTEL & SUITES, MADISON M&V STUDY FINDINGS		
Projected Annual Electricity Savings	Calculated Savings For A Nine Month Period	% of Annual Savings Attained
378,673 kWh	381,908 kWh	100.01

It should be noted that 70 percent of the total savings (267,463 kWh) occurred in the four cooling season months of June through September. In this facility, the hotel rooms adjoin the water park; accordingly, the rooms' cooling load increases even more due to the high humidity level.

The M&V report also noted that the facility's management team has done an excellent job educating hotel staff and guests about the operation of the system. This education component enhances the project's overall success.

Focus on Energy is a public-private partnership offering energy information and services to energy utility customers throughout Wisconsin. The goals of this program are to encourage energy efficiency and use of renewable energy, enhance the environment, and ensure the future supply of energy for Wisconsin. **800.762.7077 focusonenergy.com**



The front desk clerks of the Holiday Inn Hotel & Suites educate their guests about the EnterGize control system upon check in.

OTHER ENERGY SAVING STRATEGIES FOR HOTELS

There are many other ways hotels and lodging facilities can save energy and better manage rising energy costs. These include installing low flow showerheads and aerators, installing daylighting controls, upgrading HVAC systems to energy efficient units, adding energy efficient laundry water reclamation systems and switching to compact fluorescent light bulbs (CFLs) and other high efficiency lighting options.

HOW CAN FOCUS ON ENERGY HELP YOU?

If you are interested in learning more about guest room energy management control systems or other energy efficiency opportunities in the lodging industry, contact Focus on Energy at 800.762.7077 and ask to speak with a member of the Hospitality Team. Or visit our Website at www.focusonenergy.com.

