

## 2012 Case Study

# Green Lodging Circuit Rider

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Greater Kansas City Area



### *Company background*

The 2012 green lodging intern worked primarily with hotels in the greater Kansas City area in partnership with the lodging association. The 2012 green lodging project work focused on energy and water conservation, and environmental policy statements.

### *Project background*

In year three of the green lodging intern program, the intern was assisted by lodging association member, Joe Andrick, who helped her gain access to several interested lodging facilities. After contacting interested hotels, facilities were provided a list of services and asked to prioritize the services based on their facilities' needs. The services included the following:

- Environmental policy statement
- Water conservation opportunities
- Energy conservation opportunities including lighting and appliance upgrades

This year, facilities were required to commit to adopting an environmental policy statement if they did not already have one. The green lodging intern drafted and provided five environmental policy statement samples. After each hotel determined what additional services were most important, a site visit was scheduled. Once all information pertaining to the hotel was gathered, conservation opportunities were researched and subsequently documented in individual facility reports which were sent to the facility contacts.

### *Incentives to change*

Like other industries, lodging facilities are looking for ways to stay competitive while cutting costs and reducing their environmental footprint. In fact, according to an Energy Star report, reducing energy use by 10 percent across the lodging industry would save \$745 million per year. Furthermore, the hospitality industry spends an average of \$5 billion every year on energy and consumes almost four

billion kilowatt hours of electricity, five million therms of natural gas, and seven billion gallons of water. The ever-expanding tourism industry creates an enormous demand on the nation's energy resources. Cooling, lighting, water heating, cooking, refrigeration, and ventilation account for 85% of total electric usage in hotels. Consequently, many hotel guests are now looking for environmentally friendly facilities to stay in and those hotels that practice sustainability initiatives not only save dollars, but also encourage guests to choose their hotel over the competition.

Therefore, to help assist in their efforts, the hotels in the greater Kansas City area have partnered with the K-State Pollution Prevention Institute and requested green lodging services in an effort to identify opportunities for cost savings and reduction of energy and water usage. Taking these steps and establishing a sustainability policy demonstrates to their staff and guests that environmental conservation is a priority. By implementing the intern's recommendations, hotels will be able to focus their resources towards guests' needs, while also reducing their carbon footprint and serving as an example in the lodging industry.

### *Projects reviewed for E2/P2 potential*

1. Environmental policy statements  
Facilities were required to commit to adopting an environmental policy statement used to guide practices for employees. The statement is a strong public display of environmental commitment that facilities can use as a public relations tool. Hotels are recommended to incorporate a policy that fits their facility, train employees about the importance of the policy, and then display it at the front desk and on their websites. The green lodging intern developed and provided five sample statements for the facilities to consider. Although a few facilities already had a corporate policy statement, the green lodging intern encouraged each individual facility to have its own

<sup>1</sup> <http://www.treeo.ufl.edu/greenlodging/content/nrg.htm>

statement detailing its unique and specific goals and initiatives.

## 2. Water conservation

Water conservation projects were investigated at all 11 hotels and were primarily focused on guestroom water use. Installation of low-flow faucet aerators was found to have a rapid return on investment, generally only a few months. Even though the most efficient aerator is a 0.5-gallon-per-minute (GPM), a 1.0-GPM aerator was selected instead as the pressure of water generated by the 0.5-GPM aerator was insufficient to meet the standards of the hospitality industry. Due to the low cost and fast installation of these aerators, installation was recommended in all 11 cases. If installed at all facilities, the aerators would result in an estimated annual savings of \$14,870 and 3,546,802 gallons of water.

Similarly, replacing current showerheads with high-efficiency, 1.5-GPM showerheads could save the hotels an estimated \$18,027 and 4,981,834 gallons annually.

## 3. Energy conservation

### A. Lighting

Many of the hotels visited this summer had already installed energy-efficient lighting such as compact fluorescent lamps (CFL) in guest rooms and hallways, and T8 fluorescent lamps in lobby, common, and service areas. A few of the older hotels needed

lighting upgrades where older, less-efficient lamps such as T12s, halogens, and incandescents were in use. If all recommended lighting upgrades are implemented, the hotels could save an estimated total of \$179,805 and 2,010,523 kWh of energy annually, all within a reasonable payback period.

Occupancy sensors and dusk/dawn timers were also evaluated for use in certain areas of the hotels, including restrooms, gyms, business centers, and service areas. If installed at all facilities, hotels could save an estimated total of \$27,484 and 326,564 kWh of energy.

### B. VendingMiser

Many of the hotels have multiple vending machines throughout their facilities. The green lodging intern determined the vending machines are not constantly in use and recommends installation of the VendingMiser to reduce energy waste. VendingMiser is an energy-efficient tool for vending machines that helps save money and energy by switching off lighting and managing compressor cooling cycles when they are not being used. VendingMiser is easy to install and can reduce energy use and costs by 46%. There are several models available that fit with different types of vending machines. With shipping, each unit costs about \$200. If installed at all facilities, the VendingMiser would result in an estimated annual savings of \$8,109 and 170,820 kWh.

### Summary of 2012 E2/P2 intern recommendations for green lodging Kansas City area hotels

Project description	Annual estimated environmental impact	Annual estimated cost savings	Status
Water– faucet aerators	3,546,802 gal	\$14,870	Recommended
Water– showerheads	4,981,832 gal	\$18,027	Recommended
Lighting upgrades	2,010,523 kWh	\$179,805	In progress
Occupancy Sensors	200,416 kWh	\$16,348	Recommended
Timers	126,148 kWh	\$11,136	Recommended
VendingMiser	170,820 kWh	\$8,109	Recommended
<b>Total savings *</b>	<b>8,528,634 gal, 2,507,907 kWh</b>	<b>\$248,295</b>	
<b>GHG reductions *</b>	<b>2,032.1 metric tons CO<sub>2</sub>e</b>		

\* Does not include projects that are “not recommended” or “further research is needed.”