



Lodging logic

An industry guide to natural resource conservation

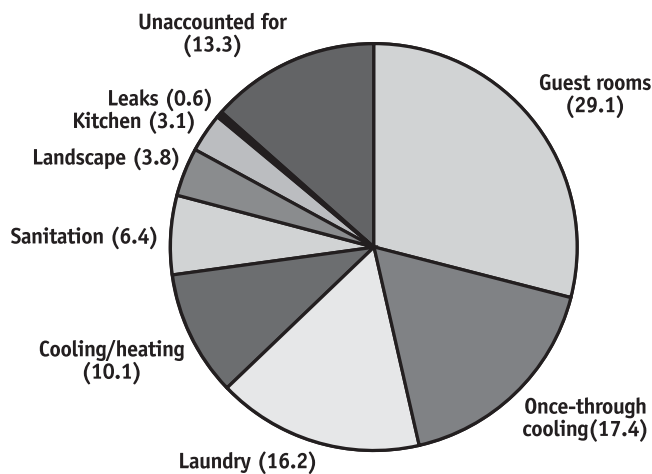
Can you attract new clients and reduce costs by moving towards an environmentally conscious or "green" image? In this competitive and image-driven industry, that is just what many national and locally owned facilities are doing. Read on to see if you can "green" your facility, improving your image while reducing costs related to water, energy, and solid waste.

Make that bed, but don't change it!

The U.S. Environmental Protection Agency estimates that, on average, hotels use about 200 gallons of water per day for each occupied room. Up to 30 gallons of water per room can be saved each day through a bed linen and towel reuse program. In addition to water savings, facilities participating in linen reuse programs experience savings by using less detergent and electricity. Less washing means

less wear and tear on linens, and decreased labor expenses from both housekeeping and laundry departments. Many facilities find it the perfect program—they save money and send an ongoing message to their clients about conserving natural resources.

Water use: hotels and motels (percentages)



Data courtesy of Texas Water Development Board

Data provided by the Texas Water Development Board shows guest room water consumption accounts for nearly 30% of all water use at lodging facilities, and laundry comes in at just over 16%. So it makes sense to target these areas for water conservation at your facility. If you do not participate in these linen reuse programs but are interested in doing so, contact SBEAP at 800-578-8898 for materials and information that can help you get started.

Case study

One 77-room Kansas hotel discovered it uses 90 gallons of water each time its washer fills. To complete a full cycle of towel linens, the washer fills four times using 360 gallons of water for each complete load. Before instituting the towel reuse program, the hotel did about 23 loads per week, consuming some 8,280 gallons of water. If just a third of its clients participate in the reuse program, it could see a savings of 2,760 gallons of water per week or 143,520 gallons per year through the towel reuse program alone. Potential related energy savings could be between \$500 and \$14,000 per year.

According to the P2Pays Program at www.p2pays.org, another 281-room facility documented its costs have dropped more than 30% through use of a towel and linen reuse program, dropping its costs per load from \$1.15 to \$.75.

In the laundry room, front-loading washing machines use nearly 50% less water to wash the same amount of clothing as top-loading machines.

Fixtures in guest rooms can also represent potential savings, and saving water means saving energy since most of the water is heated. Measure these guest room flow rates, and then use this chart to calculate your potential savings.

	Sink faucet flow rate (GPM)	Showerhead flow rate (GPM)	Toilet usage (GPF)
A. Measured rate			
B. Ideal conservation rate	2.0	2.5	1.6
% Savings per use $[(A-B)/A] \times 100$			

Other areas to consider for water conservation include installation of automatic faucets and toilets in public restroom areas. What about the kitchen—what are the flow rates at these faucets? Certainly pool and spa water quality and maintenance can impact water consumption rates, as does lawn care. Many lodging facilities have made the move to Xeriscaping or groundcover that requires less watering and maintenance. See the resource list at the end of this fact sheet for more information on these topics.

Energy conservation can equal big savings

According to Energy Star, the hospitality industry spends about \$5 billion dollars every year on energy. In fact, Energy Star claims that if hotels improve their energy performance by an average of 30%, an average of \$365 per available room per night per year for every hotel in the county could be saved. Lighting can account for 30 to 40% of commercial electricity consumption. Lighting energy needs can be reduced through a combination of common sense conservation and use of energy-efficient lamps and fixtures, including low-mercury regular and compact fluorescent lamps, LED exit signs, motion sensors or timers, and task lighting. Compact fluorescent lamps can save up to 80% on energy and can be retrofitted

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in most fixtures designed for incandescent lamps, both in guest rooms and in corridors.

Hotel solid waste reduction and recycling

Hotel waste audits show each guest room contributes anywhere from .5 pounds to 28.5 pounds of waste per day. Certainly the majority of waste in a hotel is not produced in the rooms but in the food and beverage department. These audits indicate that a large property can generate as much as eight tons of waste per day. Up to 60% of this waste is recyclable.

According to a hotel waste-generation study done by the city of Los Angeles in the early 1990s, a typical hotel waste stream reflects the following:

Typical hotel waste stream, based on volume	
Food and non-recyclables	46.2%
Paper	25.3%
Cardboard	11.7%
Plastics	6.7%
Glass	5.6%
Metals	4.5%

So how can you reduce wastes and start or improve a recycling program at your lodging facility? First, identify a source that will accept recyclables and obtain a list of which items will be accepted and in what form. If your city or town does not have a program, consult your trash hauler or the Kansas BIRP at <http://www.kansasbirp.com/> for a listing of collection centers. Then start simple with easily recyclable items or items that may be most problematic or bulky. At lodging facilities this is often cardboard, newspaper, aluminum cans, and office paper.

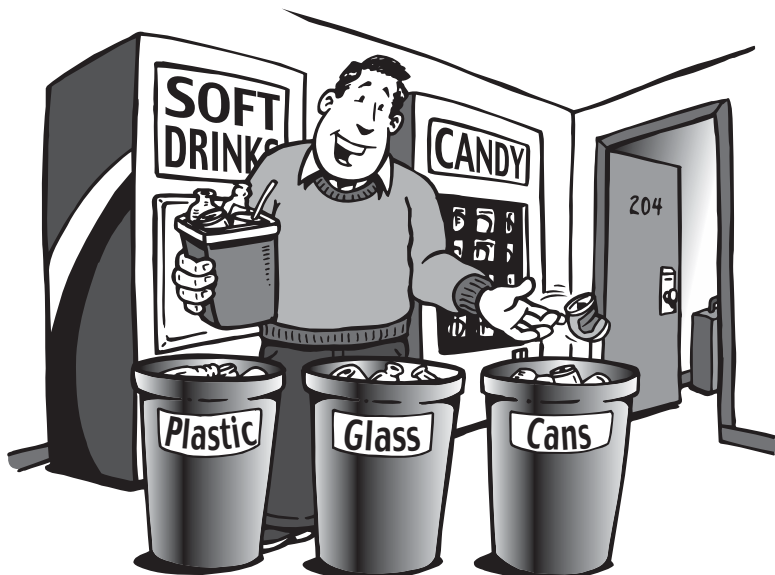
Next locate workstation collection points and establish how the recyclables will be transferred to the collection center. In some instances, trash haulers may provide a cardboard recycling container, service it periodically, and send you a rebate check. Whether you just recycle aluminum cans or have a full-blown program in place, be sure to instruct and promote it to your clientele. Waste

Case study

According to the EPA, the Hilton Hotel chain has embraced the Energy Star approach, saving thousands of dollars by instituting the following:

- Installed CFLs in guest rooms, bathrooms, foyers, corridors, and elevators.
- Installed photo sensors on exterior and landscape lighting.
- Implemented a maintenance program to include group re-lamping.
- Educated housekeeping staff about turning off lights and setting back air conditioners.
- Added roof and wall insulation and/or reflective coverings.
- Purchased ENERGY STAR-labeled electronic products for guest rooms and offices.
- Replaced older, less-efficient boilers and furnaces, and cooling equipment.

One of the Hilton hotels installed digital thermostats that monitor room occupancy and automatically adjust the temperature when occupants enter (or exit) a room. This measure has documented a savings of almost \$270,000 per year in energy costs.



reduction through “green” purchasing can complete the recycling loop and further reduce a hotel's waste stream. Consider these “green” purchasing ideas:

- Purchase items made from recycled materials.
- Reduce packaging waste by purchasing in bulk or concentrate.
- Repair and reuse items instead of buying new ones.
- Reduce toxicity by purchasing products with fewer hazardous ingredients.

So the next time you sit down to pay the water, electric, and trash bills, consider whether you could do more to conserve financial and natural resources. Studies indicate that 70% of guests will

participate in these programs if offered and properly instituted. Encourage your clients to “choose to reuse,” and train and reward your staff for promoting these programs. If you need help identifying these cost-saving opportunities, contact SBEAP at 800-578-8898 for free, confidential, nonregulatory assistance.

Resource list:

- North Carolina Division of Pollution Prevention and Environmental Assistance:
<http://www.p2pays.org/hospitality/>
- EPA WAVE program:
<http://www.epa.gov/owm/water-efficiency/faq.pdf>
- Texas Water Development Board:
<http://twri.tamu.edu/twripubs/WtrSavrs/v3n1/article-4.html>
- EPA Energy Star: <http://www.energystar.gov/>
- EPA Waste Wi\$e program:
<http://www.epa.gov/wastewise/>
- Green Purchasing (Pacific Northwest Pollution Prevention Resource Center):
<http://www.pprc.org/pprc/pubs/topics/envpurch.html>
- Buy Recycled Business Alliance:
<http://www.nrc-recycle.org/brba/>
- International Hotels Environment Initiative:
<http://www.greenhotelier.com/>
- American Hotel and Lodging Association:
<http://www.ahma.com>

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The Small Business Environmental Assistance Program's (SBEAP) mission is to help Kansas small businesses comply with environmental regulations and identify pollution prevention opportunities. SBEAP is funded through a contract with the Kansas Department of Health and Environment. SBEAP services are free and confidential. For more information, call 800-578-8898, send an e-mail to SBEAP@ksu.edu, or visit our Web site at <http://www.sbeap.org>. Kansas State University is an EEO/AA provider.