



Top 6 Energy Savings Measures Hospitality

New higher performance lighting may reduce energy costs by 40%.

TOP 6 ENERGY EFFICIENCY OPTIONS TO REDUCE COSTS IN THE KITCHEN, LAUNDRY, AND GUEST AREAS

Approximately, 35% percent of the electricity used in California hospitality facilities is used for lighting, and 40% is used to operate Heating, Ventilation, and Air Conditioning systems (HVAC). Advances in energy-efficient technologies can significantly decrease energy consumption — and costs. Research indicates that reducing energy use by 10% across the hospitality industry would save an estimated \$285 million.

The top six key measures to consider implementing in your hospitality facility are:

- High performance T8 lamps
- Programmable thermostats
- Adjustable speed drives (ASD)
- Exhaust hoods
- HVAC controls
- An ozone system

When these approaches are combined to maximize energy efficiency, hospitality facilities become more cost effective and gain a competitive edge. The environment receives a break too — fewer greenhouse gases are emitted and fossil fuel is conserved.

High performance T8 lamps provide energy-efficient lighting

The T8 fluorescent systems available now are up to 40% more efficient than T12 systems and as much as 20% more efficient than first-generation T8 systems. The latest T8 systems offer longer lamp life, better color quality, improved lumen maintenance, improved control and dimming options, and better fixture optics.

Depending on the particular lighting application, T8 lamps can replace either high-wattage incandescent or metal halide lighting. Where occupancy controls or dimming is needed, often in hospitality facilities — rooms, conference rooms, and bathrooms — linear T8s may be the most efficient and flexible option.

Programmable thermostats mean decreased heating and cooling costs

Standard thermostats are set manually. For a large facility such as a hotel, this method of adjusting heating and cooling as conditions change is inconvenient and impractical. Programmable thermostats store and repeat six or more temperature settings daily and can be overridden manually when necessary.

Occupancy sensor-based thermostats reset temperatures when the guest leaves the room. This has become the most popular mode of room conditioning control for saving energy. The potential for energy savings by utilizing programmable thermostats in the hospitality industry appears significant and a real growth area for customer energy efficiency.

Adjustable speed drives increase operating efficiency

ASDs allow an AC motor to run slower than standard induction motors; thereby, increasing operating efficiency and lowering energy costs. They also lower maintenance requirements, ease machine startup and shutdown, and offer more precise process control and greater equipment reliability than conventional controls.

Evaluating how the motor, controls, and drive system work together — and how they influence other building systems — makes it possible to significantly reduce the cost of purchasing, operating, and maintaining the equipment.





Energy-efficient equipment and systems emit fewer greenhouse gases into the environment.

Optimized exhaust hoods and demand controls have high impact on commercial kitchen ventilation efficiency

Commercial kitchen ventilation (CKV) can easily account for half of a restaurant HVAC system's energy use. Kitchens with efficient CKV systems move less air; saving energy on exhaust and makeup-air fan power as well as makeup-air heating and cooling. For best results, the kitchen designer and mechanical engineer should work together on the CKV system design to incorporate the most effective and efficient ventilation strategies.

The path to efficient CKV includes the following steps:

- Specify UL-listed exhaust hoods and high-efficiency exhaust fans in new construction or building retrofits
- Optimize exhaust hoods and make-up air systems for maximum capture and containment at the lowest effective air volumes
- Consider "demand ventilation" controls for both new and existing exhaust hoods. A demand-controlled ventilation system senses when cooking is occurring under the exhaust hood and varies the speed of the exhaust and makeup-air fans as needed



HVAC controls minimize the cost of maintaining comfortable spaces

The best way to reduce the electric demand of HVAC systems is to purchase the high-efficiency packaged system that is most compatible with other building systems or to custom design a system.

To reduce energy consumption in your existing system:

- Optimize temperature, run time and fan controls
- Add an economizer for free cooling
- Install indirect evaporative cooling modules

Ozone water treatment systems protect the environment, your employees, and your linens

Ozone is a colorless substance. It is a powerful oxidizer and a potent germicide that disinfects even more effectively than chlorine. According to several studies of ozonated water used in the laundry process, the following results were reported:

- Linens washed in ozone-treated water are whiter, softer, and smell fresher than those washed in chemically treated water.
- The use of ozone reduces dryer use, lint, and temperature
- Ozone enhances chemical reaction in the wash wheel for superior cleaning
- Ozone systems conserve natural gas and water



Optimizing the energy efficiency of your business, reduces your energy costs and allows you to earn incentives.

Hospitality industry customers can use ozone to treat water and to replace less effective forms of air purification such as ionization.

HOW CAN PG&E HELP?

Pacific Gas and Electric Company (PG&E) can help you control your operating expenses by building energy efficiency into your hospitality facility. Services include energy analyses of existing facilities, design assistance for planned projects, equipment rebates, project incentives, and education and training.

Contact your local PG&E Representative or call the **Business Customer Service Center** at **1-800-468-4743** for more information. Your representative will work with you to create a comprehensive energy efficiency plan for your business.

RESOURCES

Consortium for Energy Efficiency
www.cee1.org

Energy Design Resources
www.energydesignresources.com

Fishnick
www.fishnick.com/ckv/designguide
www.fishnick.com/ckv/demandventilation



