

Conservation *Wise*

Energy Conservation: You CAN Make a Difference!

Saving Energy in Your Home: Lighting

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Introduction

The average American household spends 11% of its energy budget on lighting costs. New technologies (for example, timers and photocells) can result in substantial energy savings by turning lights off when not in use. Using energy-efficient lighting is a quick and effective way to significantly reduce energy costs and reduce energy used by lights by 50–75%. Fluorescent bulbs convert more energy into light, rather than heat, and last much longer than standard incandescent bulbs. In comparison, incandescent bulbs use 10% of their energy to produce light and 90% to produce heat.

What Should I Do?

Indoor lighting

- **Use compact fluorescent bulbs (CFLs)** for indoor lighting. Not all lighting fixtures work with CFLs, so read fixture and CFL package information.
- **Look for IC-rated down-lights** when remodeling your home.
- **Use natural light as much as possible.** Light-colored, loose-weave curtains permit daylight to enter rooms while maintaining privacy.
- **Use compact fluorescent torchieres instead of fixtures** with halogen bulbs to reduce energy use by 60–80% per fixture.
- **Use automatic controls or manually turn off lights** when rooms are not occupied.



- **Use one higher-wattage bulb instead of several lower-watt bulbs** for fixtures with several light bulbs.
- **Clean dusty light bulbs.** Dusty bulbs can emit 20% less light than clean bulbs.

Outdoor Lighting

- **Use compact fluorescent bulbs in enclosed or covered fixtures.**
- **Use ENERGY STAR-qualified fixtures designed for outdoor use** with motion sensor detectors and automatic daylight shut-off.

How Can I Save Money?

- While compact fluorescent bulbs (CFLs) cost more than a comparable incandescent bulb, they have a quick return in savings. A 26- or 28- watt CFL can replace a 100-watt incandescent bulb, saving about 70 watts of energy. This results in electricity cost savings of approximately \$30 in electricity costs during the lifetime of the bulb.

- CFLs last longer (up to 5 years when used 4 hours per day) and save on frequent replacement costs. CFLs last about 8,000 hours, while standard incandescent bulbs last about 1,000 hours.
- Light-emitting diodes (LEDs) last longer and use less energy than standard incandescent bulbs or CFLs.

Lighting System Data

Light System	Lifetime (hours)	Power Consumption (watts)	Light Output (Lumens)
Incandescent	1,000	60	800
CFL	8,000	13	800
LED	40,000	6.7	300

(Source: *Lighting Life-Cycle Assessment*, University of California–Berkeley, May 2009)

Where Can I Learn More?

- eXtension website, Extension partnership website from U.S. universities, www.eXtension.org—Choose the “Resource Areas” menu, then look for “Home Energy.”
- ENERGY STAR website, U.S. Environmental Protection Agency and Department of Energy, www.energystar.gov—This site includes information about ENERGY STAR products, home improvement advice, “green” buildings, suggestions for new construction, and information about government rebates. It also provides a list of energy-saving light bulbs and fixtures, and information on how to find the right light bulbs for your light fixtures.
- *Energy Savers Booklet: Tips on Saving Energy and Money at Home* (PDF download: 3.5 MB), U.S. Department of Energy, www1.eere.energy.gov/consumer/tips/
- Energy Savers website, U.S. Department of Energy, www.energysavers.gov/



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