

A close-up photograph of a hand pulling a brass pull chain for a lamp. The hand is on the left, and the brass pull chain is in the center. To the right, the brass base of the lamp is visible. The background is blurred, showing a window with blue light. The text 'eco@home' is in green at the top right, and 'lighting' is in large red letters with a yellow outline across the top. Below that is the subtitle 'SAVE ENERGY, MONEY, AND TIME AROUND THE HOUSE' in yellow. At the bottom left, there is a list of topics in yellow text.

# eco@home lighting

SAVE ENERGY, MONEY, AND TIME AROUND THE HOUSE

A Bright Idea

Worry-Free Lighting

4 Ways to Reduce Light Pollution

Labeling Lightbulbs

Since 2008, *eco@home* has provided readers like you with ways to save energy, water, and money around the house. And now we believe certain topics and rooms require special attention.

Let's put the spotlight on lighting. According to the U.S. Department of Energy, 10 percent of an average home's energy costs go toward lighting. However, a few easy updates can quickly reduce energy consumption and lower utility costs.

Discover ways to boost the efficiency of your fixtures and make the transition to energy-saving bulbs easier. You'll soon learn that saving energy and money can be as simple as using compact fluorescents (CFLs) or installing occupancy sensors.

Keep your home shining bright without sacrificing energy-savings or spending a lot of money. Use these tips and tricks to light your home for less.

**A 25-watt CFL  
may be as  
bright as a  
100-watt  
incandescent  
bulb, and it uses  
75 percent less  
energy.**

# A Bright Idea

Who says you have to burn up your home's energy budget every time a lightbulb burns out? Replace spent bulbs with energy-efficient compact fluorescent lightbulbs (CFLs), which use approximately 75 percent less energy and last up to 10 times longer than standard incandescent ones. This translates into a savings of \$30 in electricity costs during the bulb's lifespan. Learn more about these powerhouse bulbs:

**How they work.** Unlike energy-hogging standard incandescent bulbs, which use heat to generate light, a CFL has a gas-filled tube that produces a small amount of invisible UV light when electricity excites the gas. The UV light activates the white phosphor coating on the inside of the tube, emitting visible light.

**Abundant options.** CFLs come in a variety of shapes and sizes to fit your needs. For example, if you plan to install a dimmer, you can find bulbs that are made specifically for that purpose. Plus, their long lifespan makes them ideal for hard-to-reach fixtures. Need to replace a bulb outside? Look for CFLs specially rated for outdoor use. To take the guesswork out of determining which CFL you need, most packages list wattage equivalency.

## Do you own a smart phone?

If you do, download the FREE LightSmart app from Underwriters Laboratories. This awesome app is available on iPhones and Androids, and makes selecting energy-efficient lighting fun and informative.

**Earth-friendly impact.** The many benefits of CFLs extend beyond your home, so encourage family, friends, and coworkers to make the switch. According to ENERGY STAR®, if every home in America replaced one standard incandescent bulb with an ENERGY STAR-qualified CFL, we'd save enough energy to light more than 3 million homes and prevent greenhouse gas emissions equivalent to those of more than 800,000 cars. That's quite an impact!

**Best results.** To reap the benefits listed above, shop for ENERGY STAR-approved CFLs. Install the bulbs in open fixtures that allow plenty of airflow. And if you use CFLs in the bathroom, control humidity (which can shorten their lifespan) by running the ventilation fan.

## Mercury Matters

The secret behind a CFL's energy efficiency is a trace amount of mercury sealed within the bulb's glass tubing. Most bulbs only contain an average of 5 milligrams of mercury—equivalent in size to the tip of a ballpoint pen. But proper disposal is still essential. Rather than tossing a spent bulb into the trash, check out safer disposal alternatives in your area by contacting your local waste management agency or visiting [earth911.com](http://earth911.com).

If you must put the bulb in the trash, carefully wrap it in sealed plastic bags first, and make sure the bulbs will not be incinerated.

# Worry-Free Lighting

A close-up photograph of a hand flipping a white light switch. The switch is mounted on a light-colored wall. The hand is in the foreground, slightly out of focus, with the thumb and index finger gripping the switch. The switch itself is in focus, showing the 'OFF' position. The background is a plain, light-colored wall.

It's easy to break the habit of leaving lights on when you're not in the room. An occupancy sensor—a device that automatically turns the light on when a room is occupied and off when the room is vacant—can do it for you. Install one in rooms used only occasionally—such as the garage, basement, and utility closet—and you'll never have to remember to turn the lights off again. Plus, you'll reduce the amount of energy your lights consume anywhere from 15 to 90 percent, depending on the room, how frequently it's used, and the bulbs you choose.

Even better, you can set up occupancy sensors yourself. First, turn off the power and unscrew your current light switch from the wall. Then detach the wires and reconnect them to your new sensor using wire nuts. Gently push the new switch into the wall box and attach it with mounting screws. Finally, screw in the outlet cover, and switch the power back on. Voilà, effortless energy saving!

When the U.S. Department of Energy asked lighting manufacturers to create **energy-efficient alternatives to traditional lightbulbs**, Philips Lighting North America delivered with its 10-watt LED lightbulb. According to the U.S. Department of Energy, this long-lasting bulb has the power to save the U.S. close to \$4 billion in energy costs in just one year. To learn more about this energy-saving, award-winning technology, go to [usa.lighting.philips.com/connect/1prizealert/](http://usa.lighting.philips.com/connect/1prizealert/).

# 4 Ways To Reduce Light Pollution



You've felt the effects of light pollution when wandering headlights arouse you from sleep or streetlights block stars from view. But light pollution is more than an annoyance—it's a toxin that's hurting our nocturnal environment and depleting natural resources. Plus, it wastes money. According to [starrynightlights.com](http://starrynightlights.com), the United States spends \$5 to \$10 billion annually on misdirected outdoor lighting.

Do your part to prevent this pollution and save money by following these guidelines for your home.

1.) **Install fully shielded light fixtures**, which focus light, prevent glares, and spread light evenly. (Unshielded light fixtures may reduce the safety of your yard by casting deep shadows for intruders to hide.) Look for ENERGY STAR®-certified exterior lights, which emit no light above the fixture.

2.) Use motion detectors, timers, and dimmers to illuminate only what's necessary, when necessary.

3.) Choose the lowest wattage possible to get the job done. If you use shielded light fixtures, you can use even lower wattages because the light is being focused—and you may even see better. Softer lighting is gentler on our eyes, allowing them to adjust quicker.

4.) **Buy compact fluorescents (CFLs) with built-in deflectors.** CFLs distribute light differently than incandescents, so deflectors are necessary to maximize lamp output. If you plan to use CFL bulbs during cold weather, look for those with a cold-weather ballast. Otherwise, they take longer to warm up.

# Labeling Lightbulbs

In 2012, the Federal Trade Commission rolled out new labels for lightbulb packaging to help you decide between traditional incandescent bulbs, compact fluorescents (CFLs), and LED bulbs.

The labels play up bulb brightness—measured in lumens—rather than wattage. Watt numbers have been on lightbulb packages for years, but they actually reflected energy use, not brightness, making it hard to compare bulbs. For example, a 25-watt CFL may be as bright as a 100-watt incandescent bulb, and it uses 75 percent less energy.

The back of each lightbulb package now includes a Lighting Facts label modeled after the Nutrition Facts label on food packages. The Lighting Facts label lists the bulb's brightness, wattage, energy cost, life expectancy, appearance (warm or cool), and mercury content.

## Federal Lighting Facts label

The Federal Trade Commission designed this label to look like the federal Nutritional Facts label on food packaging.

### New back-of-package label for incandescent, halogen and LED light bulbs

Lighting Facts	
Per Bulb	
Brightness	820 lumens
Estimated Yearly Energy Cost	\$7.23
<small>Based on 3 hrs/day, 11¢/kWh Cost depends on rates and use.</small>	
Life	1.4 years
<small>Based on 3 hrs/day</small>	
Light Appearance	
Warm ————— Cool	
2700 K	
Energy Used	80 watts

### New back-of-package label for compact fluorescent (CFL) bulbs

Lighting Facts	
Per Bulb	
Brightness	870 lumens
Estimated Yearly Energy Cost	\$1.57
<small>Based on 3 hrs/day, 11¢/kWh Cost depends on rates and use.</small>	
Life	5.5 years
<small>Based on 3 hrs/day</small>	
Light Appearance	
Warm ————— Cool	
2700 K	
Energy Used	13 watts
<b>Contains Mercury</b>	
<small>For more on clean up and safe disposal, visit <a href="http://epa.gov/cfl">epa.gov/cfl</a>.</small>	

Mercury content warning