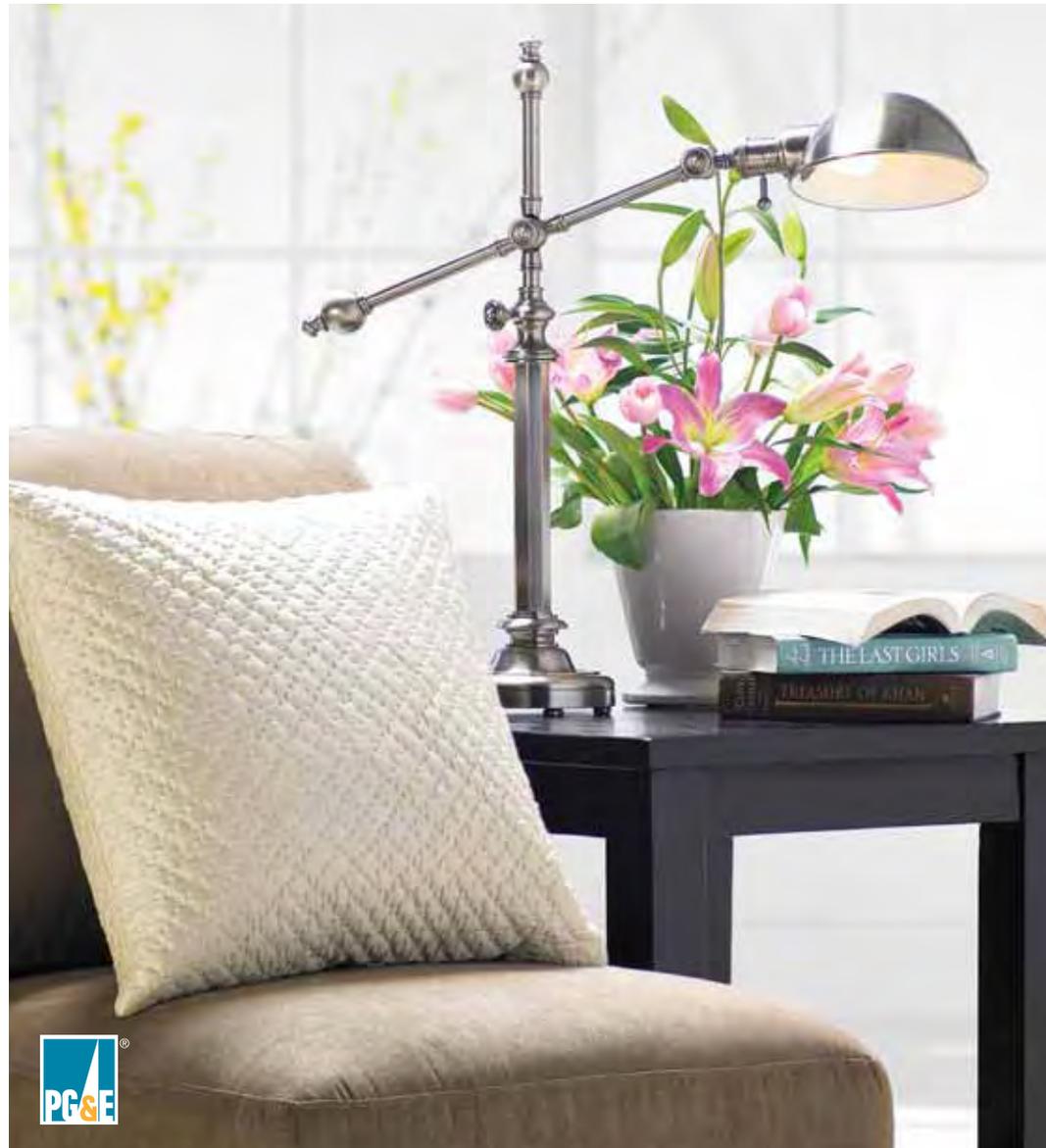


See Your Home in a New Light

Discover the Beauty of Energy Efficiency



Designing with Energy-Efficient Lighting

Energy-efficient lighting has a beautiful new quality. The old perception of fluorescents giving off flickering, unappealing light is just that—a thing of the past. Improvements in the quality of energy-efficient lighting will add a warmth and radiance to your home while saving you energy and money. Plus, they help the environment by reducing CO₂ emissions.

In the past few years, the versatility of compact fluorescent lamps (CFLs) and other energy-efficient lighting products has extended to every room of your home. This guide can help you discover new lighting applications and allow you to see your home in an entirely new light. Refer to page 11 for lighting terminology.



Bright Exteriors

A. PORCH LIGHTS – *CFLs*. Use CFLs in porch lights left on for hours at a time. CFLs will last for years to come at a fraction of the cost compared to incandescent bulbs. To save more money, install an ENERGY STAR® qualified fixture with a photocell to automatically keep lights off during the day.

B. FAÇADE LIGHTS – *CFLs*. For exterior fixtures, long-lasting screw-in or pin-based CFLs emit inviting light with minimum energy. For security lights, use halogen bulbs with fixtures that have a motion sensor to keep them on only when people are present. Use a photocell to ensure lights remain off during the day.

C. LANDSCAPE LIGHTS – *LEDs*. Landscape and pathway lighting can provide an excellent accent for your yard. Solar powered, energy-efficient LED fixtures require no electrical wiring. For greater illumination, install ENERGY STAR® qualified CFL fixtures.



Tip 1: When replacing incandescent bulbs with CFLs, match the light output to find the correct replacement bulbs. For instance, a 26W CFL has equivalent light output to a 100W incandescent bulb. For more information refer to the Lighting Attribute Comparison Chart on page 14.

Inviting Living Spaces

A. TABLE LAMPS – CFLs. Table lamps with CFLs create an inviting atmosphere while conserving energy. An ENERGY STAR® qualified 13W CFL provides the same light as a standard 60W lamp at a fraction of the cost, and will work with most standard fixtures. For three-way fixtures, use only three-way CFLs for proper operation.

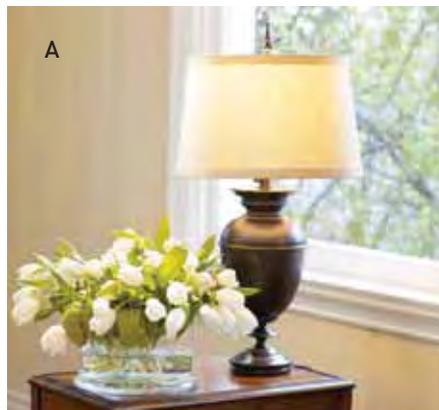
B. SCONCES – CFLs. Sconces provide pleasant accent lighting for living spaces and other common areas. Switch to screw-in CFLs or replace the sconce with a pin-based, ENERGY STAR® qualified CFL fixture for a more energy-efficient and longer lasting light.

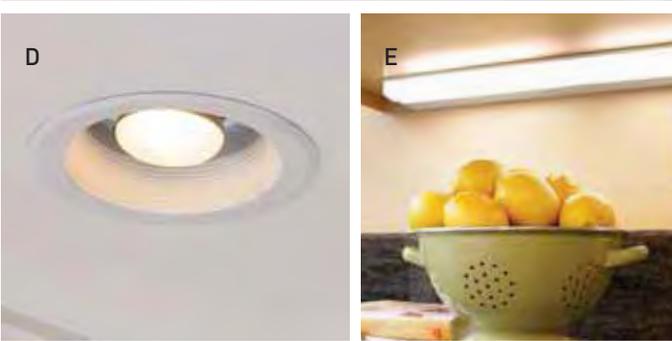
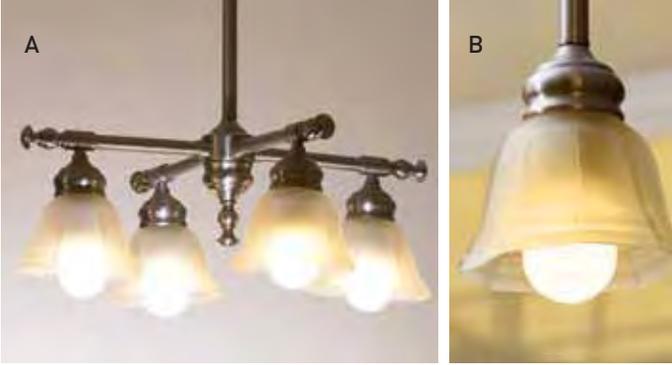
C. FLOOR LAMPS – Three-way CFLs. New versatile three-way CFLs let you replace three-way incandescent bulbs to maintain familiar lighting tones while improving efficiency. If you are upgrading your floor lamp, consider an ENERGY STAR® qualified fixture. For more information refer to the Fixture Compatibility Chart on page 12.



Tip 2: Using automatic timers ensure that floor or table fixtures aren't left on unnecessarily, and they provide security lighting when no one is home.

Tip 3: Using dimmers for fixtures with incandescent bulbs can help conserve energy. For even greater energy efficiency, use new dimmer-compatible ENERGY STAR® qualified screw-in CFLs.





Tasteful Kitchen and Dining Spaces

A. CHANDELIERS – CFLs or incandescents. The right lighting level can complement a great meal. New ENERGY STAR® qualified chandeliers are available today in varying designs with features including dimming. You can use a standard incandescent chandelier with a dimmer to regulate light and save energy. For greater energy savings, use dimmer-compatible ENERGY STAR® qualified CFLs for standard chandeliers.

B. PENDANT FIXTURES – CFLs. High-use areas benefit from direct light using energy-efficient technology. Look for ENERGY STAR® pendant fixtures for good quality light and energy savings. Most existing standard pendant fixtures accept screw-in CFLs. For more information refer to the Fixture Compatibility Chart on page 12.

C. TRACK LIGHTING – Halogen with dimmer. Low-voltage halogen track lighting provides focused light that accentuates decorative features, while the dimmer gives you the flexibility to lower light levels and save energy.

D. RECESSED LIGHTING – CFLs. Recessed downlights, or “cans,” are common in the kitchen and throughout the home. For greater energy savings, lamp life and lighting quality, consider replacing incandescent fixtures with ENERGY STAR® qualified recessed CFL fixtures or ceiling-mounted, decorative CFL fixtures.

E. UNDER/OVER CABINETS – Fluorescents. For task lighting located under cabinets, add a new ENERGY STAR® qualified fixture for even light and greater energy efficiency. For efficient, high-quality ambient lighting, mount new ENERGY STAR® qualified upright linear fixtures above cabinets.



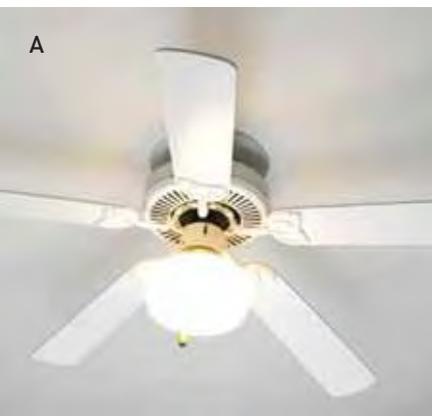
Comfortable Bedroom Lighting

A. CEILING FANS – CFLs. An ENERGY STAR® qualified ceiling fan with CFLs is about 50% more efficient than conventional fan/light units. Plus, the fan will help keep you comfortable by circulating the air.

B. READING LAMPS – CFLs. The right reading lamp can be easy on the eyes. An ENERGY STAR® qualified 13W CFL gives off the equivalent of a 60W incandescent bulb. For three-way fixtures, use only three-way CFLs for proper operation.

C. FLOOR LAMPS – ENERGY STAR® qualified torchieres. Torchieres direct light upward, reflecting it off the ceiling for a softer, warmer tone. Replacing halogen torchiere fixtures with highly-efficient ENERGY STAR® torchiere fixtures can save up to \$44 per floor lamp each year. If you would like to upgrade to a dimmable torchiere, all new ENERGY STAR® qualified torchieres feature dimming.

D. CLOSET LIGHTS – CFLs. Your wardrobe can be seen in the best uniform light by replacing incandescent bulbs with long-lasting ENERGY STAR® qualified CFLs, and you'll also save energy and money.



Tip 4: Match the warm tone of incandescent bulbs by replacing them with CFLs that have a warmer color temperature of 2700-3000K.

Fashionable Bathrooms

A. VANITIES/SINKS – CFLs or halogen bulbs with occupancy/vacancy sensor. In bathrooms, flattering light is an important consideration. Vanity and over-sink fixtures equipped with CFLs can provide warm, even light. For vanities with a large number of bulbs, switching to CFLs also eliminates the excessive heat generated by standard incandescent bulbs, while using about one-fourth of the energy. For incandescent fixtures that cannot accommodate screw-in CFLs, install an occupancy sensor to ensure the lights are only on when needed.

B. SHOWERS/TOILETS – CFLs. Downlight fixtures in the bathroom provide even light while conserving energy. Fixtures over showers and tubs should only be those specified for use in wet areas. A dedicated, pin-based CFL fixture is recommended for greater energy efficiency.



Tip 5: To ensure lamp and fixture compatibility when using an occupancy sensor or when using a three-way fixture, refer to the Fixture Compatibility Chart on page 12.



Lighting Terminology

CFL: Abbreviation for Compact Fluorescent Lamp – a type of fluorescent bulb that fits into standard light bulb sockets (exception: pin-based CFLs). Screw-in CFLs have a longer life and use less electricity than standard incandescent bulbs.

Pin-Based CFL: A type of compact fluorescent bulb that plugs into a dedicated fixture instead of screwing into a standard incandescent fixture. Pin-based CFLs have a longer life and use less electricity than incandescents.

Halogen: A type of incandescent bulb with two to three times the lamp life of standard incandescent bulbs. Halogen bulbs are available for many uses, including reflector lamps and low voltage applications.

LED: Abbreviation for Light Emitting Diode – a semiconductor device that emits visible light. LEDs are an emerging technology with the potential benefits of longer life and energy savings versus standard incandescent bulbs.

Photocell: A light sensor used to control a fixture in response to the surrounding light levels. It will automatically turn the fixture off when enough daylight is detected and turn the fixture on when it becomes dark.

Solar Cell System (or Photovoltaic Cell System): A device that converts sunlight into electricity to generate solar power.

Occupancy Sensor or Vacancy Sensor: Occupancy sensors automatically turn lights on (and off) when someone enters (or leaves) an area. Vacancy sensors automatically turn lights off when an area is empty. Both devices can also be operated manually, like a switch.

Fixture Compatibility for CFLs

There are many different types of CFLs available to suit the most common household fixtures. Review the chart below for CFL compatibility guidelines.

Fixture Compatibility Chart

Fixture Type	CFL Compatibility
Standard screw-in fixtures	Most existing standard incandescent fixtures accept screw-based CFLs.
Fixtures with dimmers	Only certain ENERGY STAR® qualified screw-in CFLs are compatible and available. Dimmable CFLs are constantly being improved and introduced. Check packaging to ensure the CFL is dimmer compatible. Using a CFL that is not designed for dimmers can shorten its life significantly and create problems such as flickering or noise.
CFL-specific fixtures	All ENERGY STAR® qualified fixtures require pin-based CFLs.
CFL lamps	Always read product packaging for specific performance and compatibility requirements.
Occupancy sensors	Always read product packaging for specific compatibility with CFLs.
Thermal considerations	Using screw-in CFLs in a fixture designed for incandescent bulbs may not reduce the heat adequately and can affect the CFLs light output and shorten its lifespan.



How do CFLs Compare to Standard Incandescent Bulbs?

You may find the following statistics illuminating. When comparing products, look for these attributes on the products' packaging.

Lighting Attribute Comparison Chart

Attribute	Standard Incandescent 	VS.	Compact Fluorescent 
Tone and light quality	Warm tones, no flicker		Warm or cooler tones, no flicker
Power consumption and light output (lumens)	60W – 800 lumens 75W – 1100 lumens 100W – 1600 lumens		13W – 800 lumens 18W – 1100 lumens 26W – 1600 lumens
Energy usage	A CFL is four times more efficient in producing light than a comparable incandescent bulb		
Lifespan	800 hours		8,000 hours
Emissions savings	0		Hundreds of pounds less CO ₂ over lifetime
Money savings	Save \$0		Save up to \$90 over lifetime of one 26W bulb
Energy-efficient products and applications	Three-way, dimmer, occupancy sensor		Three-way, dimmer, occupancy sensor
Heat index	A 26W CFL produces the same amount of light, but 75% less heat than a 100W incandescent lamp		

Why Switch to CFLs?

Lighting accounts for close to 20% of the average home's electric bill, so switching from incandescent bulbs to CFLs is an effective way to reduce energy use. The benefits are evident, for both the consumer and the environment:

- ENERGY STAR® qualified bulbs and fixtures use about 75% less energy than standard incandescent bulbs, and last up to 10 times longer.¹
- Maximize your energy savings when you replace your most-used fixtures and light bulbs, typically kitchen ceiling lights, living or family room table and floor lamps, and outdoor porch or post lamps.
- If every household in the United States replaced five incandescent bulbs with CFLs we would save close to \$8 billion each year in energy costs — preventing the greenhouse gases equivalent to the emissions from nearly 10 million cars.²

How to Recycle CFLs

CFLs are completely safe to use in your home, but they do contain a very small amount of mercury. Like paint, batteries, thermostats and other hazardous household items, CFLs should be disposed of properly.

There are a growing number of CFL recycling and disposal options, so chances are there's one close by. To find disposal options for your zip code, go to www.earth911.org or call 1-877-EARTH911.

For more information about recycling CFLs, visit www.pge.com/cfl.

¹Source: ENERGY STAR®. Actual savings over incandescent bulbs range from 60%-80%. Many qualified screw-in bulbs exceed the 6,000 hour minimum and many pin-based bulbs included with qualified fixtures exceed their 10,000 hour minimum. Manufacturers may accurately assert higher hours on packaging.

²Source: ENERGY STAR®.



Changing to eye-pleasing, energy-efficient lighting is just the first step in lowering your monthly energy bills and saving energy. For more energy-saving tips, recommendations, rebates, and recycling information from PG&E, visit www.pge.com/cfl or call the PG&E Smarter Energy Line at 1-800-933-9555.



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