

## What's up with CFLs?

There is an increasing interest in replacing incandescent bulbs (IBs) with compact fluorescent lamps (CFLs) as a means of reducing energy consumption and the generation of greenhouse gasses that contribute to global warming.

President Gloria Macapagal Arroyo issued Administrative Order No. 183 which took effect on July 9, 2007 directing the use of energy efficient lighting/lighting systems (EELs) in Government facilities (PALIT-ILAW Program).



During the Energy Summit held on February 5, 2008, President Gloria Macapagal-Arroyo in her speech directed the phase out of incandescent bulbs by 2010.

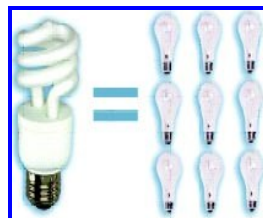
On the other hand, consumers have raised a number of questions and concerns regarding the operation, use and safety of CFLs. These range from the perception of poor color, concerns about flickering, questions about the life of CFLs when they are turned on and off frequently, questions about the performance of CFLs used outdoors in cold weather and concerns about the mercury used in fluorescent lamps and their proper disposal.

## What compact fluorescent lamp do I buy to replace a 60-,75-,100– or 150-Watt regular bulb?

While a regular (incandescent) light bulb uses heat to produce light, a fluorescent bulb creates light using an entirely different method that is far more energy-efficient, in fact, 4-6 times more efficient. This means that you can buy a 15-Watt compact fluorescent bulb that produces the same amount of light as 60-Watt regular incandescent bulb.

In case you're curious, here are the watts needed by regular incandescent bulbs to produce the same amount of light.

<b>Standard Bulb</b>	<b>CFL Bulb</b>
60W	= 13W-15W
75W	= 20W
100W	= 26W-29W
150W	= 38W-42W



Because the wattage of a CFL bulb is much lower than that of an incandescent bulb, you can use higher wattage CFL giving you the equivalent light of a higher wattage incandescent. For example: If your fixture says not to exceed 60 Watts, you can use a 15-Watt CFL to get the same amount of light as an incandescent bulb or use up to a 42- Watt CFL and increase the amount of light.

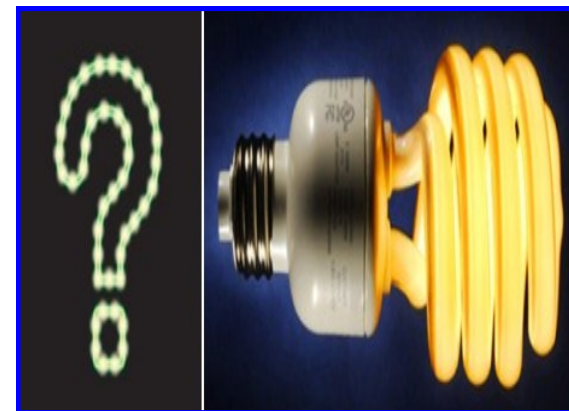


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# FAQs about Compact Fluorescent Lamps



# CFL FACTS and MYTHS

## What is a CFL?

CFL stands for Compact Fluorescent Lamp. It is an energy efficient light bulb and considered as the smaller version of the fluorescent lamps. These light bulbs last about 10 times longer than incandescent bulbs, and use about 75% less energy.



## Why are CFLs called *lamps* instead of *bulbs*?

In lamp-industry jargon, a lamp is a device that generates light when connected to electric power. The term **bulb** is used to describe the glassware before it is made into a functional lamp. In addition, the device that most users would call a **lamp**, is called **fixture** or **luminaire** in the lighting industry.

## How does a compact fluorescent bulb work?

Fluorescent light bulbs (including compact fluorescents) are more energy efficient than regular bulbs because of the different method they use to produce light. Regular bulbs (also known as incandescent bulbs) create light by heating a filament inside the bulb; the heat makes the filament white-hot, producing the light that you see. A lot of the energy used to create the heat that lights an incandescent bulb is waste. A fluorescent bulb, on the other hand, contains a gas that produces invisible ultra-violet light (UV) when the gas is excited by electricity. The UV light hits the white coating inside the fluorescent bulb and the coating changes it into light that you see. Because fluorescent bulbs don't use heat to create light, they are far, energy efficient than regular incandescent bulbs.

## Why do CFLs look so strange?

Most fluorescent lamps are constructed in long, thin tubes in order to generate light while using the least amount of electricity. In order to fit CFLs into a lighting fixture designed for incandescent lamps, the long, thin tube must be coiled into a spiral or folded back on itself multiple times. This accounts for the unusual shape of most CFLs.

## Why does the color of CFLs seem different at start-up?

The variation in lamp color at start-up of the lamp is the result of phosphor activation. Phosphor is the coating on the inside of the bulb that glows when bulb has an electrical charge to give the lamp a "white" light effect. Different phosphor combinations produce different color and may have slightly different response times. These differences are the reason why the lamp looks pink or purple when you start it.

## What's the difference between a compact fluorescent light bulb and a fluorescent bulb?

The primary difference is in size; compact fluorescent bulbs are made in special shapes (which require special technologies) to fit in standard household light sockets, like table and ceiling fixtures. In addition, most compact fluorescent lamps have an "integral" ballast that is built into the light bulb, where most fluorescent tubes require a separate ballast independent of the bulb. Both types offer energy-efficient light.

## Is it true that CFLs contain mercury? Why and how much?



CFLs contain a very small amount of mercury sealed within the glass tubing—an average of 5 milligrams (roughly equivalent to the tip of a ball-point pen). Mercury is an essential, irreplaceable element in CFLs and is what allows the bulb to be an efficient light source. By comparison, older home thermometers, contain 500 milligrams of mercury and many manual thermostats contain up to 3000 milligrams. It would take between 100 and 600 CFLs to equal those amounts.

## What should I do if I break a CFL bulb?

Because there is such a small amount of mercury in CFLs, your greatest risk if a bulb break is getting cut from glass shards. Research indicates that there is no immediate health risk to you or your family should a bulb break and its cleaned up properly. You can minimize any risks by following these proper clean-up and disposal guidelines:

- Sweep up-don't vacuum-all of the glass fragments and fine particles.
- Place broken pieces in sealed plastic bag and wipe the area with a damp paper towel to pick up any stray shards of glass or fine particles. Put the used towel in the plastic bag as well.
- If weather permits, open windows to allow the room to ventilate.

(Reference: GE Consumer & Industrial Lighting:  
Ask Us: FAQs –Compact Fluorescent Bulbs)