



## FACT SHEETS

# The Real Deal on Compact Fluorescent Light Bulbs

The incandescent light bulb is one of the most inefficient items in your home. Roughly 90% of its energy from electricity is converted into heat, and only the remaining 10% results in actual light. Compact fluorescent light bulbs (CFLs) are more efficient alternatives. A number of myths prevail on CFLs but the facts make CFLs a smart option for saving money and reducing global warming pollution.

CFLs perform best providing indoor area lighting, especially in lights that regularly stay on for extended periods. Frequent on/off cycling can reduce the bulb's life span as can extremely high outdoor temperatures. Very low temperatures can decrease a CFL's light output.

**Lighting accounts for 30% of all electricity used in our country.** A typical CFL uses only 25% of the electricity of an incandescent bulb to produce the same amount of light. So a 60 watt incandescent can be replaced by a 15 watt CFL to produce the same output. If every U.S. household replaced its most heavily used incandescent light bulbs with CFLs, electricity use for lighting could be cut in half. This would cut our annual carbon dioxide pollution by about **62.5 million tons**.

### MYTHS AND FACTS

#### **Myth: CFLs are Expensive.**

Actually, savings from using CFLs far out weigh the initial cost of purchasing the bulb. On average, a single CFL costs five dollars (and the costs are coming down). CFLs, however, have a much longer life span than incandescent bulbs, lasting 10 times longer, up to 4 to 10 years depending on the usage. Not only do CFLs last longer than incandescent bulbs, they also use far less energy so that you save on electricity bills as well.

#### **Myth: Light from CFLs is Off Color.**

A common complaint of CFLs is that their light is cool when compared to incandescent bulbs. Today's newer CFL bulbs, however, are much "warmer." "Warm white" and "soft white" CFLs are rated 2,700 to 3,000 degrees Kelvin which closely mimics an incandescent bulb's look and feel. Even bulbs with higher Kelvin ratings, which make the light appear cooler, can be warmed up with a warm colored lampshade.

### CFL Quick Facts

- If your electricity is produced from coal, **each CFL will cut carbon dioxide pollution by about 1,300 pounds** over its lifetime.
- If every household in the U.S. replaced just one incandescent light bulb with a CFL, **the pollution equivalent of one million cars would disappear.**
- Replacing three 60-watt incandescent light bulbs with CFLs in every American home would be equivalent to taking **3.5 million cars off the road.**
- On average, an incandescent bulb will **consume 82 pounds of coal** over its lifespan, **100 times** more than a CFL.



**Fact: CFLs Contain Mercury.**

Yes, CFLs contain a small amount of mercury, about three milligrams, equivalent in size to the tip of a ballpoint pen. But CFLs sharply reduce coal-fired power plant emissions, created by powering incandescent bulbs, preventing much greater quantities of mercury from being pumped into the atmosphere from smoke stacks — **coal fired power plants spew 45 thousand tons of mercury into the air each year.**

Mercury is toxic, but varies in its toxicity depending on exposure. In large amounts mercury can have severe effects on both humans and wildlife. Because the mercury in CFLs is contained within the bulb it poses minimal risk while greatly reducing the overall environmental risks caused by the burning of fossil fuels. CFLs must be disposed of properly and can be recycled. If you live in an area that has community hazardous material drop off centers, you can take your used bulbs in along with used paint cans, pesticides, car batteries, dead computers and the other things that shouldn't be headed for the local landfill or incinerator. Or visit [www.earth911.org](http://www.earth911.org) or [www.lamprecycle.com](http://www.lamprecycle.com) to search for disposal and/or recycling facilities in your zip code. Many business are also starting "take back" programs to dispose of spent CFLs properly.

**Myth: There are no CFL Bulbs to Match My Specialty Lighting Needs.**

There are, in fact, a great variety of compact fluorescent light bulbs available to match practically any lighting need. You can find CFLs in every type and shape — frosted candelabras, small bulbs, large bulbs, globe lights, recessed fixtures and even dimmable bulbs. For any fixture that requires the bulb to hang upside down, make sure you buy a CFL that is approved to work that way. There are even yellow bulbs for your porch that won't attract bugs. If you can't find the type of bulb you need, try [www.bulbs.com](http://www.bulbs.com) or [www.1000bulbs.com](http://www.1000bulbs.com). Better yet, ask the local grocery store, drug store or hardware store to stock a wider variety of bulbs. When stores realize there is a demand for these products, they'll do a better job stocking them.

**Myth: CFLs Make a Buzzing Noise.**

No, thanks to new technology, today's CFLs are quiet. New bulbs make use of electronic ballasts that utilize semiconductor circuitry reducing noise to practically inaudible levels.

**Myth: CFLs have an Annoying Flicker.**

No, modern compact fluorescent bulbs, thanks to improved technology, deliver an even light. Some bulbs may take a few seconds to warm up, but once the bulbs are turned on they generate high quality light equivalent to an incandescent bulb. Looking for the energy star logo is a good way of ensuring that you purchase a quality bulb.

**Fact: CFLs can Save Money on Your Energy Bills.**

Yes, compact fluorescent bulbs require less energy to produce the same amount of light as an incandescent bulb. Watts are a measure of energy consumption not the amount of light output.

- A CFL that uses 20-watts of electricity can produce the same amount of light as a 75-watt incandescent bulb.
- CFLs make 90 to 95 percent less heat than incandescent bulbs, making for cooler home in the summer and saving on air conditioning costs.
- Replacing three incandescent bulbs with CFLs will save on average 300lbs of carbon dioxide and \$60 dollars a year.

**Fact: Changing Incandescent Bulbs to CFLs Will Reduce Global Warming Pollution.**

Yes, **YES**, *yes* changing your incandescent bulbs to CFLs is one of the easiest ways to reduce your overall energy consumption therefore reducing the amount of greenhouse gases that you are responsible for.

With 95 percent of American households still using incandescent bulbs there is a long way to go before America realizes the full energy saving capacity of CFLs. Change all the bulbs in your house to save money and reduce greenhouse gasses.

**Myth: What I do has no Effect on Global Warming.**

Not so! With just five percent of the world's population, the U.S. produces 25 percent of the world's greenhouse gases, and is the world's largest emitter of global warming pollution. Changing your light bulbs to CFLs is a quick and easy way to have an impact on this problem. There are many other ways you can do your part to save energy *and* the planet. For more ideas, check out [www.aceee.org](http://www.aceee.org) for the *Consumer Guide to Home Energy Savings*. See Audubon Magazine's November-December 2007 issue for more on how compact fluorescent light bulbs can save emissions and dollars.

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