

Fact Sheet on US Energy Efficiency Standards for Everyday Light Bulbs

In 2007 the U.S. Congress adopted energy efficiency standards for new screw-based light bulbs. Beginning in 2012, these standards will phase-out the 125-year-old inefficient incandescent light bulb and require new bulbs to use 25 to 30% less energy. As there are over 4 billion screw-based sockets in the U.S., the transition to more efficient lighting provides massive national benefits including:

- Annual electric bill savings of > \$10 billion/yr
- Avoided global warming pollution of approximately 100 million tons of CO₂/yr
- Save as much energy as that produced by 30 large power plants

Replacing all the nation's inefficient bulbs with energy efficient ones will save as much electricity each year as is consumed by all the homes in Texas.

Why phase-out inefficient light bulbs? Today's incandescent light bulb wastes up to 90% of the electricity it consumes as heat. Standards are needed because more than 3 billion screw-based sockets in the U.S. still contain these wasteful inefficient bulbs that are based on 125-year-old technology.

How does the standard work? The standards are technology neutral: any type of bulb can be sold provided it meets the efficiency requirements. The standards do NOT ban incandescent light bulbs, just inefficient ones. The first phase of the standard requires new bulbs to use 25 to 30% less energy. In 2020, the second phase of the standard will go into effect and will require new light bulbs to be at least 70% more efficient.

How does this impact consumers? Consumers will continue to have a wide choice of light bulbs to select from. These will include new energy saving halogens (a type of incandescent light), compact fluorescent light bulbs (CFLs), and light emitting diodes (LEDs). These new bulbs will also save consumers money. For example, because it lasts longer and is so much more efficient, a single CFL can save \$30 dollars or more of electricity over its lifetime.

Do lighting manufacturers support the standards? Yes. Through their trade association, the National Electrical Manufacturers Association (NEMA), all the leading lighting manufacturers have [publicly expressed their support](#) for the standards. The standards provide the industry with several years lead time to transition their supply chains over to the more efficient alternatives.

What about jobs? The standards have jump started domestic industry investment in R&D and production of more efficient lighting products. As a result of the standard, a lot of new lighting related jobs have been created.

- Osram Sylvania has retooled their current St. Marys, PA incandescent factory to produce new energy saving halogens that will meet the standards.
- In 2011, TCP, one of the world's largest makers of CFLs, is opening a new factory in Ohio to meet some of the new demand.

- Several thousand U.S. jobs have been created by companies like Cree in North Carolina, Lighting Sciences Group Corp in Florida and Philips Lighting, the world's biggest lighting company, to produce the next generation of efficient LED light bulbs.
- While GE has recently announced the closing of an incandescent plant in Virginia, they invested \$60 million to create a global center of excellence for linear fluorescent lamp manufacturing in Bucyrus, Ohio, an action that will double that plant's jobs.

Will I have to buy a CFL? No. A wide range of products meeting the technology-neutral standards are already on the market. These include CFLs, energy-saving halogens and LEDs, all of which are available from multiple manufacturers. Product offerings will only increase as the implementation date of the new standards approaches. Consumers will have their pick of efficient options.

Are CFLs a good choice? Today, CFLs represent the best value for consumers as they use ¼ the power of a comparable incandescent light bulb and last up to 10 times longer. As a result, each CFL will save the consumer at least \$30 in the form of lower electricity costs over the life of the bulb. Energy-saving halogens will save less, but some consumers may still prefer to stick with products that are more similar to traditional incandescents.

What about the mercury contained in a CFL? In order to operate, CFLs require very low levels of mercury. Today's CFLs contain 2 to 5 milligrams of mercury. By comparison, older thermometers contain about 500 milligrams of mercury – an amount equal to the mercury in over 100 CFLs. In the event a CFL is broken, the EPA website provides simple to follow guidance on how to safely clean it up.

Buying CFLs reduces the environmental impact of lighting because efficient bulbs reduce power plant emissions, including CO₂, mercury and sulfur dioxide. On a life cycle basis, CFLs put a lot less mercury into the environment than incandescents because they need less electricity from coal burning power plants to operate. In addition, several major retailers including Lowes, Home Depot and IKEA now offer free nation-wide collection points for CFL recycling

What about specialty lamps? Specialty lamps that are designed to operate in unique environments are exempted from the standards. For example, things like refrigerator or oven bulbs, aquarium lights, etc are not covered.

When does the standard go into effect? The effective dates for the standard are shown below. Each of these dates goes into effect one year earlier in California.

Today's Bulbs		After the Standard	Effective Date
100 W	➔	≤ 72 W	1/1/2012
75 W	➔	≤ 53 W	1/1/2013
60 W	➔	≤ 43 W	1/1/2014
40 W	➔	≤ 29 W	1/1/2014