

The Facts of Light



Americans use electricity to power our lives. In homes and offices all over the country, people rely on electricity to operate most of our appliances, computers, and entertainment systems. Electricity cooks our food and warms our bodies. And, at the flip of a switch, electricity gives us light. Almost half of the electricity used by industry is for lighting. In the residential sector, up to 25 percent of our electric bill is for lighting.

Most of the light is produced by **incandescent light bulbs (ILs)**, using the same technology developed in 1879 by Thomas Edison. These bulbs are surprisingly inefficient, converting up to 90 percent of the electricity they consume into heat. There are better ways. If the country converted to state-of-the-art technologies, the electricity consumed to produce light could be reduced by up to 70 percent! This would lower carbon dioxide emissions equivalent to removing one-third of the nation's cars from the highways. Reducing the electricity consumed by just one percent would eliminate the need for an average-sized power plant.

Recent developments have produced **compact fluorescent lights (CFLs)** that are four times as efficient as incandescent bulbs and last up to ten times longer. These new bulbs fit almost any socket, produce a warm glow and, unlike the earlier models, no longer flicker and dim.

Over the life of the bulbs, CFLs cost the average consumer less than half the cost of traditional incandescent bulbs for the same amount of light. In addition, CFLs produce very little heat, reducing the need for air conditioning in warm weather.

Why doesn't everyone use CFLs? There are three reasons: lack of education about CFLs, the high initial cost (\$5 to \$10 per bulb) and consumer buying habits. Lots of people have never heard of CFLs, and few know that converting to CFLs can save so much money and electricity. Many people see the price tag and think they're getting a great bargain when they buy eight incandescents for the same amount of money. They don't understand that they can reduce their electric bills 25 to 50 percent by converting to CFLs.

Another consideration is consumer buying habits. Most people buy light bulbs at the supermarket or local discount store. It's a lot easier to hand over five dollars for ten incandescents than a hundred dollars for ten CFLs.

It will take a massive education campaign to change Americans' buying habits. People must be convinced that lighting is a long-term investment that can really save money, as well as save energy and contribute to air quality.

COST OF 10,000 HOURS OF LIGHT

