

LEDs Still Not Ready To Take On Compact Fluorescents

Replacing incandescent and halogen lights with next generation LEDs is a no brainer. But compact fluorescents are hard target to topple.



The payback to replace a compact fluorescent with an LED bulb can be 4.5 to 12.9 years.

The results of a recent [study](#) of commercial and residential lighting costs suggest LED bulb makers still have a distance to go before becoming the obvious choice for businesses and consumers hoping to save money and cut greenhouse gases through lower energy use.

The study from Cleantech Approach found LEDs modestly improve upon compact fluorescents with lower power consumption, longer bulb life and better optical control. LEDs also don't require the use of mercury in manufacturing. But they cost four to eight times more, making the payback period about five years or longer.

The observations illustrate the challenges facing LED light makers as they continue to improve their products, lower their costs and hope to find a beachhead in the massive lighting market. Lighting consumes up to 25 percent of the nation's electricity and accounts for \$389 billion in energy spending. Buildings account for about 40 percent of the total.

LEDs get a hands-down go-ahead against incandescent bulbs. LEDs last 20 times longer and electricity costs are four to six times less. Payback occurs in 1.7 to 3.4 years.

But compact fluorescents are a difficult foe. LEDs last only six to nine times longer and the energy costs of a compact fluorescent are only 10 to 40 percent greater. This means the payback period can be as short as 4.5 years but also as long as 12.9 years.

As LED development continues, obviously this will change. But for now, LEDs are a market opportunity yet to arrive.

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