<u>U.S. Phase-Out of Incandescent Light Bulbs</u> <u>Continues in 2014 with 40-, 60-Watt Varieties</u>





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The incandescent light bulb has been around since the late 1800s, but the venerable technology's dominance seems just about over. On January 1, 2014, in keeping with <u>a law passed by Congress in 2007</u>, the old familiar tungsten-filament 40- and 60-watt incandescent light bulbs can no longer be manufactured in the U.S., because they don't meet federal energy-efficiency standards.

It's the last part of a <u>gradual phase-out</u> that began in 2012 with 100-watt bulbs, and <u>progressed last year</u> with discontinuation of the 75-watt variety. But this final stage is the most significant, according to Noah Horowitz, a senior scientist at the Natural Resources Defense Council, a Washington, D.C.-based environmental organization. "The 40s and 60s represent more than 50 percent of the [consumer lighting] market," he said.

Until the supplies run out, the old bulbs still will be available on store shelves, alongside the electricitysaving alternatives that gradually will replace them, according to Paul Molitor, an assistant vice-president of the <u>National Electrical Manufacturers Association</u>, an Arlington, Va.-based industry group. Those new choices include compact fluorescent lamps (CFLs), light-emitting diode (LED) bulbs, and updated higher-efficiency versions of the incandescent bulb that use halogen gas to slow down deterioration of the tungsten filament.

The impending demise of the familiar old-fashioned light bulb has generated a backlash among some who see it as taking away consumers' free choice. (The conservative Heritage Foundation, for example, has proclaimed that <u>"The Government's Taking Away Your Light Bulbs on Jan. 1."</u>) But despite that, a <u>recent public-opinion survey</u> commissioned by lighting manufacturer Osram Sylvania indicates that only three in ten consumers intend to hoard supplies of the old bulbs and stick with them. Instead, most people say they'll switch to one of the newer lighting technologies. About half of Americans will switch to CFLs, while a quarter envision using the newer LEDs. (See related post: "Efficient Light Bulb Study Generates Heated Debate.")

NEMA spokesman Molitor said that the impending disappearance of conventional low-efficiency incandescent lights isn't really going to be a big deal to consumers, who already are moving to the new technologies. Prices of 60-watt equivalent compact fluorescent lights, for example, have dropped in price to the point where they're comparable to the old lower-efficiency conventional incandescent bulbs, and the newer technologies provide the same amount of light—measured in units called lumens—while utilizing fewer watts of electricity. "Truthfully, most people aren't really going to notice," he said.

NRDC's Horowitz agreed. "These new bulbs look and act the same," he said. "There's really no reason to hoard, unless you want to pay a little more on your electric bill." (See related interactive: "<u>Light Bulb</u> <u>Savings Calculator</u>.")

Both Molitor and Horowitz expect to see continued growth of LEDs, which emit light by transmitting electricity between two different semiconducting materials, and promise dramatic boosts in both energy efficiency and durability. (A 2012 paper by manufacturer General Electric claimed that its LED bulbs, in addition to using only a quarter of the electricity required by conventional incandescent bulbs, have a lifespan of 22 years, and can "virtually light a child's bedroom desk lamp from birth through college graduation.")

Though LEDs are still several times as expensive as the old incandescent bulbs, they're dropping rapidly in price. "In 2012, they were about \$40 apiece, but now you can get ones that cost \$10," Horowitz said. (See related post: "<u>Green Fridays, Smart Lighting and More: How National Geographic Cuts Its Energy Use.</u>")

LEDs still only make up less than one percent of the consumer lighting market, but "in last half of 2013, sales of LEDs have really blossomed," Molitor said.

Both experts also saw a continued market for high-efficiency incandescent light bulbs. Incandescent halogen bulbs now provide around <u>18 lumens per watt</u>—not as efficient as their CFL and LED counterparts, which can achieve 55-100 lumens per watt, but much better than the old 60-watt incandescents at <u>13-15 lumens per watt</u>. Horowitz predicted that halogen manufacturers eventually may be able to achieve more twice the efficiency than they can get now. "Theoretically, there's no reason they couldn't hit 45 lumens per watt," he said.

What do you think about the phase-out? Vote below and comment.