Affordable' energy efficiency at \$50 a bulb

LIGHT BULBS FROM Al

gy-efficient incandescent, pact fluorescent and LED -emitting diode) bulbs, in a pulsory transition that has apted some conservatives to acterize the law as an unfair en on consumers and an "isf freedom," as Rep. Michele mann (R-Minn.) put it.

e L Prize was meant to ease ransition by enticing manurers to create affordable to replace the most common the traditional 60-watt.

Philips spokesman declined k in detail about the bulb or ice because the product has be formally launched. It is ited to hit stores within and is available online. But pokesman said the L Prize costs more because, as the ist required, it is even more y-efficient, running on 10 instead of 12.5 watts. It is brighter, renders colors better asts longer.

Il, the contest set price goals.
rding to the L Prize guide-

manufacturers were ngly encouraged to offer acts at prices that prove costive and attractive to buyers, herefore more successful in market." The target retail including rebates from utilivas to be \$22 in the first year, a the second year and \$8 in aird year.

ergy Department officials ded the award, saying that expect the cost of the L Prize to drop over time. "The L competition played a critical a driving manufacturing and the industry and helping ake the next generation of y-saving LED lighting opmore affordable for conrs," said department spokes an Niketa Kumar.

ficials added that they are ing with utilities to provide es for consumers. That could the price of the L Prize bulbs. Existing rebates, which max round \$10, are too small to big slice out of the \$50 price By comparison, the typical att bulb that it would replace ost as little as \$1.

Meet the L-Prize winner

This Philips bulb won the Department of Energy contest that sought an affordable, energy-saving alternative to a 60-watt incandescent. The bulb is indisputably energy-efficient but costs \$50.

TECHNICI COV

Light-emitting diodes (LEDs) produce light with electrons, which shed light waves as they travel across a semiconducting chip. LED bulbs produce less heat than incandescents and don't contain hazardous mercury as fluorescents do.

ENERGY USAGE

The bulb uses 10 watts to produce as much or more light than a 60-watt incandescent bulb, or one-sixth the energy.

ASSEMBLY VS. MANUFACTURE

The contest originally required the winner to be made in the United States, but rules were relaxed to require U.S. assembly only. Philips says the chips are made in California and the bulbs are assembled in Wisconsin.

DURABILITY

In lab tests, the L-Prize bulb withstood heat, cold, humidity and vibration better than its fluorescent counterparts. (However, no mention was made of a real-world test involving accidentally letting one roll off a kitchen countertop.)

LIGHT QUALITY

Color was deemed warm and true in test settings. Most of the light emitted by LEDs is visible compared with 10 percent from an incandescent bulb.

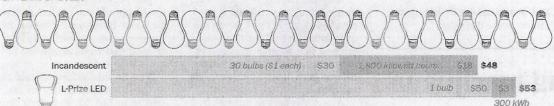
BULB LIFE

This bulb is expected to last up to 30,000 hours — 30 times the lifespan of an incandescent bulb. That means if you use it for eight hours a day, it may last 10 years or more. LED bulbs don't burn out but wane over time.

COST

The lifespan of the L-Prize bulb and the electricity it uses mitigate the initial cost. In addition, power companies including Pepco and Dominion Power are considering rebates for customers who buy LED bulbs.

TEN YEARS OF BULBS



Sources: Department of Energy, Phillips Corp., Pepco, HowStuffWorks.com

PATTERSON CLARK AND BONNIE BERKOWITZ/THE WASHINGTON POST

bulbs. Many retailers said they were reluctant to speak on the record for fear of endangering their relationship with Philips, a major supplier.

Two other manufacturers, General Electric and Lighting Science Group, announced last year that they were developing entrants to the competition. But before they could submit, the prize was awarded and the competition

The Philips bulb will be assembled in Wisconsin, and the chips will be made at a Philips plant in San Jose, the company said.

In many ways, however, the L Prize may have been irrelevant. According to retailers, consumers are already embracing LEDs, which were the focus of the prize, and CFLs, or compact fluorescent lights, faster than many in the industry expected. The new bulbs

said. And he predicted that the percentage of LED bulbs sold would rise from 5 percent to 35 percent over the next three years.

In part, that's because manufacturers are offering LED bulbs for far less than the L Prize bulb.

For example, at Home Depot, one can find LED bulbs for much less than \$50. Lighting Science Group, under the EcoSmart label, offers another for \$23.97. It is as-

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