

The changing of the bulb

By PHIL WRIGHT
Staff Writer

The 100-plus-year-old tungsten-filament incandescent light bulb is dead in the U.S.

Congress, if you recall, passed a law in 2007 to phase out the U.S. manufacture of those light bulbs by 2014 because they do not meet federal energy-efficiency standards.

But any trip down the light bulb aisle shows customers have more choices than ever, from shapes to brightness to color tone and costs. Energy expert Lizzie Rubado with Energy Trust of Oregon, the independent nonprofit organization that helps utility customers with energy solutions, said customers now can really get what they want or need in efficient bulbs.

Light bulb makers provide halogen incandescents, compact fluorescent light bulbs and light emitting diodes bulbs. The incandescents are the cheapest off the rack, but they also have the shortest working life, sometimes just a 1,000 hours of use, which means replacing it in about a year. A four-pack of 72-watt incandescents run about \$4-\$4.90 in local stores.

A four-pack of comparable 23 watt CFLs cost about \$6. Those bulbs can last more than six years according to manufacturers and Energy Trust. A single 13-watt LED goes for about \$14-\$20, but the upside is you might not have to replace it for a decade or longer.

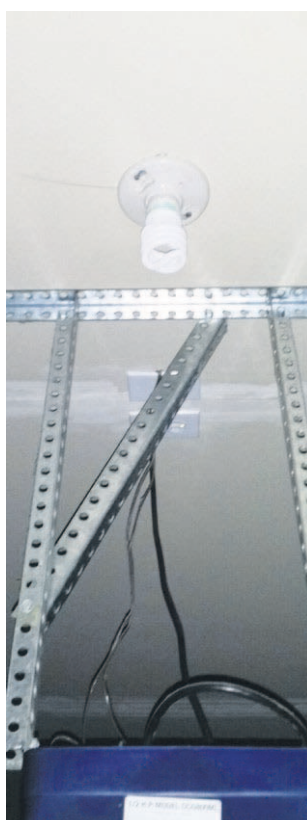
Rubado said Energy Trust also provides discounts to some bulbs in certain retail stores of \$3-\$8 per LED and 50 cents to \$2 per CFL. Look for the Energy Trust of Oregon logo when you shop.

CFLs and LEDs might cost more upfront, but they save in the long run. A CFL bulb uses about 75 percent less power than a comparable incandescent, Rubado said, and that pencils out to a savings of about \$3 per year. An LED uses about 85 percent less and saves about \$4 per year.

Some surveys show the average home in the United States has 45-plus lights or more. EnergyStar.gov, the federal program to promote energy efficiency, pegs the number of sockets at 40 on average. Replacing 40 incandescent bulbs, then, with CFLs produces a \$120 reduction in your energy bill per year. Over seven years, that's \$840.

But Rubado said convenience also is a factor. Folks may want to have an LED light in that hard-to-reach socket and not have to replace it for a long time.

Businesses, too, she said, can benefit from low-



STAFF PHOTO BY PHIL WRIGHT

Hard-to-reach sockets, such as this one in a high garage ceiling in Pendleton, can be good places to use compact fluorescent lamps or light-emitting diode bulb, both of which use less energy than incandescent bulbs and can last several years.

er electric bills and labor costs when switching to CFLs and LEDs.

Costs, though, are not the only consideration. How light looks matters.

Lumens are the measure of a bulb's brightness. Knowing just what a lumen is, Rubado said, is not as important as knowing the higher the number of lumens, the brighter the light.

And for a lot of people, she said, color tone is important. Maybe you want a bright white for a work area or kitchen, and warm yellow for bedrooms and living rooms. Kelvin is the measurement for light appearance. Lower Kelvin numbers, around 2,700, have a soft, yellow light. Higher Kelvin numbers, around 5,000, have a bright, white lights. Light goes into the blue range around the 6,500K mark.

While a lot of this might seem like a lot to take in when shopping for a light bulb, the Lighting Facts label on packages provides a lot of easy-to-understand information about a bulb's brightness, color tone and energy use. Rubado said the labels look like the nutrition labels on cereal boxes so people can easily compare one product to another.

Rubado also said the organization has an app to help you shop for just the right bulb at www.energy-trust.org/lightbulb.

To see and learn more about energy efficient light bulbs, visit www.energy-trust.org and www.energystar.gov.



FILE PHOTO

A Umatilla High School student shows off the insulation they used for the Columbia Basin Student Home in 2014 during an open house.

MORE HEAT FOR LESS

By GEORGE PAVLEN
Staff Writer

Fall has arrived in Eastern Oregon, with mild temperatures bringing a merciful end to the hottest summer on record throughout the Northwest.

And, while the cooler weather feels good now, energy experts say homeowners should be taking steps to prepare for winter before the snow starts to fly.

There are a number of simple, inexpensive things you can do to make your home more comfortable while saving money on utility bills, said Lizzie Rubado with the Energy Trust of Oregon. Now is definitely the time to get started, she said, as the days get shorter and the air gets nippier.

Rubado recommends people start with their thermostat, setting the heat between 65-68 degrees during the day and 58-60 degrees at night, or when nobody's home.

For every degree lower on the thermostat, homes can save 3 percent more on their energy bills, Rubado said. Basic programmable

thermostats can be bought for \$20-\$50 at most hardware stores, which takes forgetting to set the dial out of the equation.

"We've all got better things to do with our time than think about what's going on with the thermostat," she said.

Next, Rubado said to check furnace filters every month during fall and winter. At a minimum, she said filters should be replaced every three months.

"A dirty filter slows down air flow and makes the system work that much harder to provide the same level of comfort," she said.

Replacing filters takes only a couple minutes, and most are available for less than \$10.

Finally, Rubado said homeowners ought to check for any gaps, cracks and leaks where warm air can escape and cold air enters the house — places such as around doors, windows, plumbing fixtures, dryer vents and drains.

All those tiny leaks might seem small, but Rubado said the total

amount of energy lost adds up to the same as if a window was left open all year.

Basic tools like caulk, weather stripping and spray foam can fix those problems for cheap, she said, and prevent uncomfortable drafts from blowing inside.

"There's both permanent and temporary options you can use in your house," Rubado said. "It just makes it more comfortable."

The Umatilla Electric Cooperative also recommends installing do-it-yourself storm windows and motion-sensor lights for long winter nights. These measures might cost a little more, but pay for themselves in less than two years, according to the co-op.

Homeowners can add insulation or upgrade heating systems to further increase efficiency, though those are usually longer projects that require the help of a contractor. Energy Trust does provide free assistance and incentives for that work.

Like homeowners, fall is the time when farmers and ranchers should also start

thinking about making energy efficient upgrades to their irrigation equipment. Doug Heredos, Energy Trust program manager for agriculture, said rebates are available for everything from small fixes — like replacing a worn out sprinkler or leaky gasket — to major system overhauls, like replacing wheel lines with a center pivot irrigation to the tune of thousands of dollars.

Rebates can be up to 50 percent, Heredos said, and more efficient equipment can save up 20-30 percent of electricity use on farms.

"If you're a grower, you're paying for electricity to pump that water," Heredos said. "We'll work more and more with these growers toward the end of the year to get their system up for the next irrigation season."

For more information on ideas and programs through the Energy Trust of Oregon, call 503-546-3614 or visit www.energytrust.org.

Contact [George Plaven](mailto:gplaven@eastoregonian.com) at gplaven@eastoregonian.com or 541-966-0825.

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