

FACT SHEET

CALIFORNIA SHIFT TO MORE EFFICIENT LIGHT BULBS EFFECTIVE JAN. 1, 2018: WHAT YOU NEED TO KNOW

Light bulb energy efficiency standards in effect in California as of January 1, 2018, continue the gradual transition from the more than 125-year-old incandescent light bulb to significantly more efficient alternatives. The new bulbs are just as bright, use a lot less energy, last up to 25 times longer, and will save California consumers and businesses more than \$1 billion every year on their electric bills once they are installed in the roughly 250 million sockets across the state that still have inefficient bulbs.



HOW DO THE STANDARDS WORK?

The standards cover the everyday light bulbs used in our homes and require new bulbs to meet a minimum efficiency level of 45 lumens per watt (LPW), which means they must be roughly three times more energy efficient than the old incandescent bulbs. (Lumens measure the amount of light a bulb produces, and watts measure the power it consumes.) There are no incandescent or halogen bulbs on the market today that meet these levels, so consumers will be choosing between new compact fluorescent lamps (CFLs) or LED (light-emitting diode) bulbs. Given that LED bulbs deliver superior performance relative to CFLs, they are likely to be the bulb of choice going forward.

The standards apply to all state-regulated bulbs manufactured on or after January 1, 2018, and offered for sale in California. Retailers can sell through their inventories of bulbs manufactured prior to January 1.

WHAT BULBS ARE COVERED, AND WILL REPLACEMENTS BE AVAILABLE?

The standards apply to most medium screw-based bulbs used in our homes and businesses, including the ubiquitous pear-shaped bulbs used in table and floor lamps, the globe or round bulbs of more than 40 watts used in bathroom vanities, and the candle-shaped lamps of more than 40 watts used in chandeliers and sconces. A wide assortment

of energy-saving LED bulbs in every shape and light output level already can be found on the shelves of leading retailers across the state. These bulbs are from well-known lighting companies such as Philips, GE, and Sylvania as well as newer companies that specialize in efficient lighting such as Cree, TCP, Feit, and Maxlite.

California's light bulb regulations currently exempt some types of bulbs, such as those used in ovens, most reflector/flood bulbs, bug lights, and three-way bulbs.

ARE LEDS AS GOOD AS THE OLD INCANDESCENTS?

LED bulbs are as bright as the inefficient bulbs they replace and provide the additional benefits of lasting up to 25 years under normal operation of three hours per day. Most LEDs are also dimmable, and some of the newer LEDs can even be controlled remotely through a cell phone app. LEDs are so efficient that they use roughly 80 percent less energy than the equivalent incandescent. For example, the old 60-watt incandescent bulb can be replaced by a 10-watt LED bulb that produces the same amount of light.

HOW MUCH WILL THESE CALIFORNIA STANDARDS SAVE?

With roughly 250 million sockets in California that still contain inefficient bulbs, the savings from the standard will be quite large. Once all of these sockets have been converted, the standard will lower California consumers'

SHIFTING FROM YOUR OLD BULB TO GET THE SAME LIGHT OUTPUT

OLD INCANDESCENT	LIGHT OUTPUT (LUMENS)	TODAY'S LED
40 watts	450	5 watts
60 watts	800	10 watts
75 watts	1,100	12 watts
100 watts	1,600	17 watts

For more tips on how to buy a new energy-saving light bulb, see the guides from the [California Lighting Technology Center](#), the [ENERGY STAR labeling program](#), and by [NRDC](#).

electric bills by more than \$1 billion per year and prevent the emissions that would have been caused by generating the additional electricity that incandescents require.

HOW MUCH DO LED BULBS COST?

LED bulbs have come down dramatically in price over the past few years. They now cost between \$2 and \$5 per bulb when purchased in a multipack; the brightest bulbs and some specialty bulbs such as three-ways cost a little more. Over the longer life of an LED bulb, the savings really add up and can range from \$50 to as much as \$150 for the brighter bulbs rated to last 25,000 hours. With LED bulbs, consumers also avoid the hassle and expense of having to replace their burned-out incandescent or halogen bulbs every year or two.

HOW DO I KNOW WHICH LED BULB TO BUY?

The great news is that there is an LED bulb available to replace every conventional incandescent bulb. This table can help you figure out which one to purchase. For example, if you previously had a 60-watt incandescent, you will want an LED that gives off 800 lumens of light and consumes around 10 watts of power.

WHERE DID THESE STANDARDS COME FROM?

As part of the 2007 national energy bill passed by Congress with bipartisan support and signed into law by President George W. Bush, energy efficiency standards were established for new light bulbs that ensured a smooth and gradual national transition to energy-saving bulbs. The

first phase of the standards required that incandescents use roughly 28 percent less power beginning in 2010 in California, and that new bulbs be even more efficient starting in 2020 nationally and as early as 2018 in California. Manufacturers and retailers have known about the standards for more than 10 years and have had ample time to update their supply chains.

WHAT HAPPENS TO THE EXISTING INVENTORY OF INCANDESCENT AND HALOGEN BULBS?

Retailers are allowed to sell through their inventory of bulbs manufactured prior to January 1, 2018. To help with enforcement, the California regulations require new bulbs and/or their packaging to include information about the date of manufacture.

DOES CALIFORNIA HAVE OTHER EFFICIENCY STANDARDS FOR BULBS?

California has two other sets of standards that also go into effect in 2018 for certain types of light bulbs. The first are for small-diameter directional lamps, the bulbs that are less than 2.25 inches in diameter and are typically used by retailers in track lighting and in the smaller recessed cans that are increasingly being installed in new and remodeled homes. These bulbs must be at least 70 lumens per watt, which eliminates the energy-wasting incandescent and halogen versions, and must have a minimum rated life of 25,000 hours. In addition, the state set higher efficiency and additional performance requirements for most LED bulbs to help ensure their quality. For more information, see the California Energy Commission's [Regulatory Advisory](#).