Touchstone Energy Cooperatives

advanced energy

LIGHTING YOUR HOUSE

Lighting accounts for approximately 5 to 10 percent of your household energy bill. This amount may not seem like a lot, but it can add up quickly. Energy efficient lighting is easy and results in immediate energy savings to lower your bill.

Light-emitting diodes (LEDs) Save the most money on energy costs, upwards of 75 percent. Additionally, they can last 20-30 times longer than incandescent bulbs. Their versatility allows them to be used in a variety of applications, including as outdoor and holiday lighting.

POTENTIAL SAVINGS

Check out the potential savings you can see by replacing just five of your more frequently used bulbs with energy efficient alternatives.

TYPE OF BULB	Incandescent (60W)	CFL (13W)	LED (10W)
Approximate Cost	**$2.50** (5 bulbs at $0.50 each)	**$10.00** (5 bulbs at $2.00 each)	**$15.00** (5 bulbs at $3.00 each)
Life Span When Used 3 Hours/Day, 7 Days/Week	~10 months	~9 Years, 1 month	~22 years, 9 months
Number of Bulbs Needed in LED Life Span	125	13	5
Yearly Electricity Cost (11.3¢/kWh)	$37.12	$8.04	$6.19
Lifetime Savings with LED	$756	$62	---

RECYCLE BULBS

Check you local waste and recycling department. To find other recycling centers near you, visit the Earth911 website.

LIGHTING LINGO

Now that we know the current state of light bulbs, it is important to understand their terminology. Two critical features to keep in mind are watts and lumens.

- Watts (W): The amount of energy a bulb uses to produce light, or how much energy the bulb consumes. Lower watts = lower electric bills.
- Lumens: The amount of light that a bulb gives off, or how bright it is.

In the past, light bulb branding and packaging emphasized watts, and this made sense: with only one primary bulb available (incandescents), more watts = more light. The rise of more efficient bulbs, however, has caused this notion to be inaccurate: newer bulbs use much less energy to produce the same amount of light. As an example, a 10W LED bulb gives off approximately the same amount of light as a 60W incandescent bulb. So, more watts ≠ more light. Therefore, branding now emphasizes lumens, which is typically what consumers are interested in.

Another key aspect to consider when purchasing light bulbs is their appearance, or color temperature. Color temperature is measured in degrees Kelvin (K). Lower values, between approximately 2,600 K and 3,000 K, represent warmer light. Typical incandescent bulbs tend to give off light in this range. Higher values represent cooler and bluer light, such as daylight. Whitish light is in the middle of the scale. Different environments can benefit from different color temperatures. For example, a bedroom may be a better place for a warmer light, while a kitchen might be better suited with something a little whiter. Nowadays you can purchase energy efficient bulbs across the color temperature spectrum. The important thing is that you know the ambience you are getting.

LIGHTING KEY POINTS

Energy efficient bulbs are here to stay. And not only do they save you money, but they benefit the environment as well. Because there are a number of things to consider before purchasing, here is a recap of the key points.

- LEDs are the most efficient bulbs. Although they cost more upfront, they will save you the most money, and relatively quickly.
- Focus on lumens (brightness) more than watts (energy consumption).
- Consider what type of atmosphere you want to have with your bulb by looking at color temperature.
- Look for ENERGY STAR certification to be more confident in your bulb purchases.
- When replacing bulbs, be sure to handle old ones (especially CFLs) appropriately.

This article was provided by Advanced Energy, a nonprofit energy consulting firm. For more information, visit ***www.advancedenergy.org.***

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