Wise Up and Power Down

Getting the Most Out of Your Investment: CFL and LED Bulbs

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Energy saving LED and CFL bulbs are not as interchangeable in ALL fixtures as incandescent bulbs. Therefore, it is important to look at how and where you plan to use your new energy efficient bulb in order to make the best decision about which one to purchase.

When considering a new energy-efficient bulb, it is important to think about not only the purchase price but also the overall cost (what it will cost to *power* the bulb plus the purchase price). The chart below reveals that LEDs represent the least expensive lighting option.

Making the Best Lighting Choices for You and Your Family

In addition to overall cost, there are a number of other factors to consider. Please review the questions below to determine your needs and preferences for your new energy-efficient bulb.

1. ***Where am I going to put this bulb? How long will it be on each day? Will it be on for at least 15 minutes at a time?***

   For lights left on less than 15 minutes, continuing to use an incandescent or switching to an LED is the best choice. A CFL bulb's life will be greatly reduced if used continually for on/off applications (turned on for a very brief period and then extinguished). To optimize your purchase of a more expensive, energy-efficient bulb, you may want to place it in a fixture that is on a considerable amount of time during the day. Incandescent bulbs could remain in fixtures that are not used very often (until they burn out).

2. ***Does the fixture have a dimmer switch or a three-way switch?***

   If you answered "yes" to either of these questions, you need to check the package label to determine whether or not the bulb can be used for these functions. If it is not advised, do not purchase.

3. ***Is the fixture enclosed?***

   Using an LED bulb in an enclosed fixture is a concern because of the mechanisms within the bulb. Generally, the bulb requires air space to dissipate the heat that is generated, although the heat is less than that produced by an incandescent. This need for air space is a concern with CFL bulbs as well. If you plan to use the CFL or LED in an enclosed fixture, make sure the label indicates it can be used in this type of fixture.

Light Emitting Diode (LED), Compact Fluorescent Lamp (CFL) and Incandescent Cost and Energy Use Comparison (60 watt and 60 watt equivalent)

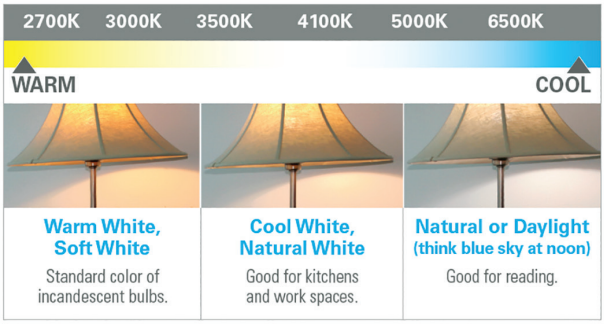
	Store Purchase Price	Operating Cost (for 25,000 hours — life of LED)	Total Cost
LED	$15.00 (25,000 hours)	$24.75	**$39.75**
CFL	$15.00 ($6.00 x 2.5 bulbs = 25,000 hours)	$29.25	**$44.25**
Incandescent	$6.25 ($0.25 x 25 bulbs = 25,000 hours)	$135.00	**$164.25**

4. ***What type of directional light do I want?***

   For light that illuminates in all directions, choose an omnidirectional (light goes out in all directions) bulb. Directional lamps are preferable for recessed fixtures that primarily shine light downward.

5. ***What type of color of light do I prefer? What type of tasks will be completed in this area?***

   By considering what tasks will be performed under a light, you will be able to make a more informed decision about what color of light will be best. Many people also have a particular preference on color so it is best to purchase the color of lighting you like. Refer to the table below for information on the different types of light. When choosing the color of your bulb, refer to the K-scale on your packaging. If you want a soft, yellowish tint (the traditional color of incandescent bulbs), choose a bulb in the 2700-3000K range. If you prefer a more white or bluish tint, look for something in the 5000-6500K range. Blue and white colors are good for reading, whereas a yellow bulb is often preferred in living areas for its softer glow.



Source: energystar.gov

6. ***Is the bulb Energy Star and what does that mean?***

   Energy Star is a specific certification that guarantees the lightbulb meets the Environmental Protection Agency's (EPA) strict energy-efficiency standards.

Note: Do you hate climbing ladders to change lightbulbs? LEDs last for many more hours than your traditional bulbs and that means changing them much less often.

Resources:

Energy Star lighting: Tools and tips for home lighting. Retrieved January 5, 2015, from http://www.energystar.gov/index.cfm?c=lighting.pr_lighting_landing

Gall, E. 2014. Solar electricity for the home or farm: Conservation and efficiency. SP-758-C. University of Tennessee Extension.

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