Home Lighting Information

The End of an Era

Incandescent Lamp

In 2007, Congress passed and President Bush signed into law, an 822 page energy bill that mandated increased fuel efficiencies for vehicles and among other things, began the systematic phase-out of the incandescent lamp.

- In January 2013, 75 and 100 watt incandescent lamps could no longer be manufactured or imported into the United States.
- In January 2014, the ever popular 40 and 60 watt incandescent lamps were also phased out. (Current retail supplies are dwindling)

*Exceptions include the 40 W incandescent appliance lamp and the 3 way incandescent lamp which remain on the market.

Alternatives to the Incandescent Lamp

Halogen Lamp

Halogen lamps can be up to 40% more energy efficient and reach operating temperatures comparable to incandescent lamps. They are slightly more expensive than incandescent lamps and have approximately the same life expectancy (1 to 2 Yrs.). Halogen lamps may also go by the wayside in the near future. By the year 2020, lamps will be required to be 70% more efficient than the incandescent lamp. Halogen lamps may not be able to meet this new standard.

Compact Florescent Lamp (CFL)

Compact Florescent Lamps also commonly known as CFL's, use the same technology as florescent lamps in schools and office buildings. They use a ballast (regulating device) to control the flow of electrons through the glass tube. The lamp is coated with a phosphorescent material on the inside of the glass which aids the illumination. Two key elements when considering the purchase of CFL's over other lamps are that (1) CFL's contain Mercury which aids in converting the electron flow to visible light in the light spectrum and (2) that most CFL's are not designed to be used in electrical circuits with dimmer controls. While a typical CFL costs $3, a dimmable CFL may cost $8.

*Use of a standard non-dimmable CFL in a dimmer circuit may cause overheating of the CFL, early lamp failure or could even pose a fire hazard.

**Typical CFL's contain about 1/100th of the amount of Mercury found in Mercury thermometers used to measure body temperature in humans.

Light Emitting Diode Lamp (LED)

Light Emitting Diodes have been used for decades in electronic devices such as remote controls, indicator lamps and electronic displays. Only in recent years has the technology improved and costs come down to allow them to be used for general lighting purposes. The market for LED flashlights, home lighting lamps and even stage lighting has exploded in recent years. Costs will no doubt continue to decrease and this technology will continue to be more widely accepted.

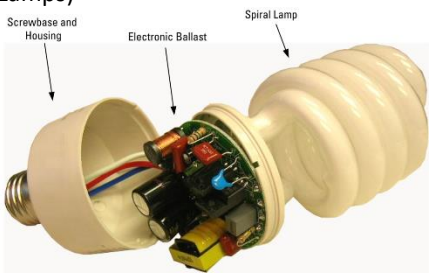
*Most LED's may be used in a dimmer circuit, but may require a new dimmer (more modern).

Home Lighting Information

Lamp Comparisons

Annual Energy Savings (Compared to 60W Incandescent Lamps)

Lamp Type	Energy Savings
Halogen	$2.05
CFL	$5.54
LED	$6.09



10 Year Cost Comparison (Lamp used 3 hrs. per day - 11¢ per kWh - 60W Incandescent Comparison)

Lamp Type	Lamp Life	Electricity Consumed	Purchase Price Each	10 Year Cost for Energy & Replacement Lamps
Incandescent	1 Year	60 Watts	$0.66	$72.30 + $ 6.60 = $78.90
Halogen	1 Year	43 Watts	$1.00	$51.80 + $10.00 = $61.80
CFL	8 Years	14 Watts	$8.00*	$16.90 + $16.00 = $32.90
LED	22 Years	9.5 Watts	$10.00**	$11.44 + $10.00 = $21.44
				Energy + Lamp Costs

*Of the lamps listed above, only the standard CFL is typically non-dimmable. Therefore, the more expensive dimmable CFL price was used to make a more appropriate lamp comparison.

**If the cost comparison above was extended to 20 years, the LED overall cost would be considerably less due to the long life of the lamp. (1 lamp may last for 20 years or more)

Additional Strengths & Weaknesses

Lamp Type	Strength	Weakness
Incandescent	Cheap	Not Energy Efficient
	Dimmable	Hot Operating Temperature
	Versatile	Short Life Expectancy
Halogen	Cheap	Only slightly more energy efficient
	Dimmable	Hot Operating Temperature
	Versatile	Short Life Expectancy
Compact Florescent (CFL)	Energy Efficient	More Expensive
	7 to 9 Yr. Life	Contains Mercury
		Requires special CFL for dimming
Light Emitting Diode (LED)	Very Energy Efficient	More Expensive
	22 Yr. Life	Limited Wattage Ratings Available
	Dimmable	Needs air circulation for long life!
	Very Versatile	Creates much less heat!

**Typical CFL's contain about 1/100th of the amount of Mercury found in Mercury thermometers used to measure body temperature in humans. (Recycling helps minimize Mercury levels in landfills).