

What should I do if a CFL or tube breaks?

- Have people and pets leave the room.
- Air out the room for 5-10 minutes by opening a window or door to the outside.
- Shut off the air conditioner or furnace if they are running.
- Collect materials (stiff paper/cardboard, sticky tape, damp paper towels/wet wipes) needed to clean up the broken bulb.
- Be thorough in collecting broken glass and visible powder.
- Place cleanup materials in a sealable container (plastic bag or glass jar).

After cleanup

- Promptly place all bulb debris and cleanup materials outdoors in protected area until materials can be disposed of properly. Avoid leaving any bulb fragments or cleanup materials indoors.

See www.epa.gov/cfl/cflcleanup.html



Proper Disposal

Households can recycle LED, Halogen, or compact fluorescent bulbs and straight tubes in many places. Many local retailers accept the bulbs for recycling. Call your local Solid Waste Agency or your Regional Collection Center for their collection policies.

Tips from Kaya

What Can We Do?

You can replace inefficient incandescent or halogen light bulbs with fluorescent or LED bulbs. Also use dimmer switches and motion sensor lighting where appropriate.



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**A GUIDE TO:
MODERN
LIGHTING
TECHNOLOGIES**

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Modern Lighting Technologies

Selecting the most appropriate lighting for your home or business may seem confusing. The information below will help clarify the lighting technologies available.

Incandescent Lighting

Incandescent light bulbs date back to Thomas Edison with very little change over time. Incandescent light bulbs have been referred to as electric space heaters that give off light as a byproduct.



The purchase price is relatively cheap, yet they are VERY inefficient, waste most of the power they consume as heat, and have relatively short life spans. Most incandescent light bulbs are being phased out by 2014.

Fluorescent Lighting (Compact and Tubes)

Fluorescent lighting whether in tube form or compact form (CFL) is much more efficient than the traditional incandescent light bulbs.



Fluorescent tubes have been used for several years to light business and industry as well as shops and special fixtures in the home. Their purchase price is reasonable and the pay back comes from greater efficiency and the significantly longer lifespan over incandescent lighting.

Because fluorescent lighting contains a small amount of mercury, proper disposal through local collection locations is recommended.

Many retailers are offering collection location services as does your Regional Collection Center.

LED Lighting

LEDs have been around for years lighting up digital clocks and calculators and can produce light bright enough for everyday home or business needs.



LED lighting can have a tremendous impact on reducing electricity costs if used for night lights, exterior accent lights and task lighting. It is reported that LED lights last about 30 times longer than an incandescent bulb and 3 to 5 times longer than a fluorescent light.

Another advantage for LED lights is that when they begin to fail, you will notice it first by the light growing dimmer as opposed to an immediate failure.

Halogen Lighting

Halogen lighting is very similar to incandescent lighting in that when the bulb's filament is heated, light is given off. It's slightly better efficiency is a result of the filament being encased in glass with halogen gas.



Halogen light bulbs are similar in appearance to that of incandescent bulbs. Halogen fixtures must protect the hot bulb from coming into contact with water or the bulb may break. This is particularly true in outdoor, kitchen and bathroom settings.

Life Cycle Cost

Type*	Lumens	Watt	Average Cost, \$	Cost/Yr**, \$	Life, Years	Cost to operate 22 years	# of Bulbs used in 22 years
Incandescent Bulbs	860	60	\$0.60	\$7.23	0.9	\$173.45	24
Halogen Bulbs	750	43	\$1.50	\$5.18	0.9	\$150.08	24
CFL Bulbs	900	13	\$1.33	\$1.57	11.0	\$37.11	2
LED Bulbs	800	12	\$24.97	\$1.45	22.8	\$56.77	1

*Based on Phillips brand light bulbs sourced from Home Depot website.

**Based on 3 hrs per day at \$0.11 per kWh.