



## SMART ENERGY SOLUTIONS

# Lighting Your Home 101

Lighting is one of the most simple yet effective ways you can begin to reduce your energy consumption, which in turn, reduces the number one global warming pollutant, carbon dioxide (CO<sub>2</sub>). According to the International Energy Agency, a global switch to efficient lighting would reduce the world's energy usage by 10%. In the average household lighting accounts for nearly 20% of electricity costs. By making the change from incandescents to CFLs and LEDs, you save money and reduce your contribution to global warming.

### *Incandescent Bulb*



Incandescents are the most common type of lightbulb used in homes today. With their rounded shape, they rely on a small piece of metal called a filament inside the bulb to produce light.

Cost per Bulb: \$0.95 - 2.19

Lifetime: 1,750 hours

Equivalent # of incandescent: n/a

Carbon Output per Year\*: 98.96 lbs

### *Compact Fluorescent Lamp*



Compact Fluorescent Lamps, more commonly known as CFLs, can generally be found for household use in the spiral form. CFLs use an electrode to charge a small amount of mercury in the bulb which in turn produces light.

Cost per Bulb: \$1.00 - 7.49

Lifetime: 12,500 hours

Equivalent # of incandescent: 8

Carbon Output per Year\*: 2.92 lbs

### *Light Emitting Diode*



Light Emitting Diodes, also called LEDs have only recently been introduced to households. These bulbs can be found more commonly in traffic lights, headlamps, and sometimes Christmas lights. LEDs utilize semiconductors to produce light.

Cost per Bulb: \$14 - 18

Lifetime: 525,000 hours

Equivalent # of incandescent: 225

Carbon Output per Year\*: 0.16 lbs



### Pros

### Cons

#### Incandescent Bulb

- fits into standard fixtures
- least expensive upfront cost
- sizes fit with lampshades

- only converts a fraction of the energy consumed to light
- get hot when in use
- must be replaced often

#### Compact Fluorescent Lamp

- fits into standard socket
- runs relatively cool
- produces less CO<sub>2</sub>
- lasts longer

- contains mercury which must be recycled
- must “warm up” before achieving full brightness

#### Light Emitting Diode

- runs cool
- lasts the longest
- produces the least CO<sub>2</sub>

- expensive
- not yet widely available

### ***Compact Fluorescent Lamps & Mercury***

CFLs contain a very small amount of mercury sealed within the glass tubing – an average of 5 milligrams – about the amount that would cover the tip of a ballpoint pen. By comparison, older thermometers contain about 500 milligrams of mercury. It would take 100 CFLs to equal that amount.

Mercury currently is an essential component of CFLs and is what allows the bulb to be an efficient light source. No mercury is released when the bulbs are intact or in use. Many manufacturers have taken significant steps to reduce mercury used in their fluorescent lighting products. In fact, the average amount of mercury in a CFL is anticipated to drop by the end of 2007 thanks to technology advances.

It is important that you recycle your dead CFLs.

### ***CFL Recycling***

#### **Chicago Household Chemicals & Computer Recycling Facility**

1150 N. North Branch Street  
 Tuesday (7:00 am–12:00 pm)  
 Thursday (2:00 pm–7:00 pm)  
 First Saturday of every month (8:00am–3:00pm)

#### **Naperville**

1971 Brookdale Rd.

#### **Rockford**

3333 Kishwaukee  
 Fire Station #4  
 (630)420-6700 #7559  
 (815)967-6737

#### **More Locations**

<http://www.epa.gov/bulbrecycling>

<http://earth911.org>

#### **Lake County**

Information and collection schedule at  
[www.swalco.org](http://www.swalco.org) or (847) 336-9340.

#### **Schaumburg**

Ikea - 1800 E. McConnor Pkwy.

#### **Bolingbrook**

Ikea - 750 E. Boughton Road



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