

Lighting

One of the easiest ways to reduce energy use is to **replace traditional incandescent light bulbs with energy efficient Compact Fluorescent Lamps (CFL)**. Lighting can account for about 10% of your total annual electricity consumption.

Replacing an incandescent bulb in a high use or hard to reach location with a CFL, **reduces energy use by about 75%** - and will yield the same amount of light! CFLs also save on material costs because they **last ten times longer**, usually 10,000 hours compared to about 1,000 hours for a traditional incandescent. CFLs cost more to buy, but pay for themselves quickly with reduced electricity consumption. The longer the hours of operation, the faster they pay back. For example, a CFL used during 'business hours,' say 2,000 hours annually, will pay for itself in one to two years, and will still last up to 4 years more!

Using CFLs, the **total lifetime lighting cost will be about 1/3rd** that of a comparable traditional incandescent bulb. The chart below shows how these savings can add up.

Bulb Type and Size	Retail Cost	Lifetime Electricity Cost	Lifetime Total Cost
75 watt Incandescent	\$10 (\$1 x 10*) *10 bulbs for 10,000 hours of lighting	\$75 10x75 watt bulb running for 1000 hours at 10 cents/kWh	\$85 \$10 + (\$7.50 x 10 bulbs)
20 watt CFL Equivalent	\$10 (\$10 x 1*) *1 bulb for 10,000 hours of lighting	\$20 20 watt bulb running for 10,000 hours at 10cents/kWh	\$30 \$10 + (\$20 x 1bulb)

Need help selecting the right CFL?

CFLs come in a variety of shapes and sizes, from 5 to 28 watts (equivalent to 20 to 100 incandescent watts). Different shapes provide different light distribution and fit better in certain fixtures. Look for the CFL that produces the same amount of light (measured in lumens) as the bulb you are replacing. Typically, the following conversions apply and can be found on bulb packaging:

Incandescent (watts)	CFL (watts)	Light output (lumens)
60	15	800
75	20	1,200
90	23	1,500
100	28	1,750

CFLs, because of their long life, don't have to be changed as often and are therefore **best for high use and hard to reach places**, where they offer the highest payback and convenience. They are not recommended for rooms where lights are turned on and off frequently, nor are they designed for use with dimmers and certain timing devices.

Dimmers, Sensors and Timers

Use of lighting controls such as **dimmer switches, automatic sensors and timers also reduce energy consumption.**

Dimmer switches, which can be purchased for as little as \$5, and used with incandescent bulbs and halogens, save power and create subtle light effects. **CFLs are currently not designed for use with dimmers.**

Motion sensors work well - both indoors and out. A great outdoor security solution, sensors ensure lights go off when they aren't needed, and stay on while a person is within sensing range. When hands are full, they are helpful in the laundry room, and they are great for kids who forget to turn off bedroom lights.

Automatic **timers** provide another savings option. They can be programmed to turn lights on and off at desired times of the day. **Mechanical rotary and new, low wattage electronic timers can be used with CFLs.** Timers can also be used on **pool and pond equipment** and on simple **lawn and garden watering systems**, anywhere where 24-hour equipment operation is not necessary.