

1) **Save trips up that rickety old ladder!**

Compact Florescent Lights (CFLs) can last up to 10 times longer than incandescent bulbs so you don't have to change them as often.

2) **You can go to the movies more often!**

You can save as much as \$50.00 for each and every bulb you replace in your home.

3) **Fresh, clean air:**

Replacing just four (4) 75-watt incandescent bulbs used frequently throughout your house saves as much energy as that consumed by approximately 38 million cars in one year!³

4) **Safety and peace of mind.**

Changing your flood lights for a motion detector not only saves energy, but it also offers a safe, well-lit solution for high traffic areas.

5) **You'll be the hippest cat in town:**

with the newest technological trends in your home. Today's newest lighting option – the electron-stimulated luminescence (ELS) light bulb which uses electron stimulation instead of filament current for luminance.²

6) **Be chic:**

Watch how jealous neighbors follow your keen eye for fashion and trends. Today's lighting options come in a surprising array of shapes, sizes and options to meet any home décor needs.

7) **Feel your power!**

The U.S. EPA estimates that nearly 10 percent of the average home's electricity costs can be controlled with a light switch.¹ Now that's something to get lit up about!

8) **You have limitless options!**

Today's CFLs come in a range of designs and shapes to fit almost any fixture, indoors and out.

9) **Reduce your "carbon footprint".**

CFLs provide significant environmental benefits compared to incandescent products.

10) **Preserve the earth's natural resources.**

By using high-efficient lighting fixtures that consume less energy, you not only help conserve energy, you help reduce pollution and greenhouse gas emissions that are related to global warming.

Editorial

According to the folks at the U.S. Department of Energy (energystar.gov):

"If every American home replaced just one light bulb with an ENERGY STAR [compact fluorescent bulb], we would save enough energy to light more than 2.5 million homes for a year and prevent greenhouse gasses equivalent to the emissions of nearly 800,000 cars."

That's some pretty significant savings, just for switching a few light bulbs! But then I started to wonder about how that could translate into practical savings for individual families. Saving the planet is, after all, a significant and important effort, but if there are so many community benefits to changing my home light bulbs there must also be some direct benefits as well right?

Well according to Energy Star, you can calculate your savings at around \$30.00 in energy costs for every incandescent light bulb you replace with a compact fluorescent bulb (CFL). Okay, so \$30.00 doesn't seem like a lot, but then I started to make a few simple calculations.

Two lamps here, recessed lighting there, ceiling lamps in the garage, reading lamps in my office, the list started to add up. Before I knew it I had counted 46 incandescent bulbs, 8 globe bathroom bulbs, 2 outdoor floodlights, and 2 decorative candle bulbs (in a wall hanging).

All calculated, I will save approximately \$1,680 just for switching to a different light bulb! My cost for switching? About \$80.00. I don't know about you, but I'm ready to research vacation spots so I can spend my \$1,680 on health and relaxation! How are you going to spend the money *you* save? However you plan to spend the money you will save, you can also know that you are doing your part for the environment, and reaping the rewards for your efforts!

How green is your lighting

This survey will help you determine how “green” your lighting is. If you don’t score well today don’t despair! There are plenty of easy tips available here to help you on your way with low or no-cost solutions to help you make everyday improvements!

1. We turn off the lights when we leave a room.
 - a. Always
 - b. Sometimes
 - c. Never
2. When a light burns out, we replace it with an energy efficient one.
 - a. Always
 - b. Sometimes
 - c. Never
3. We use fluorescent light bulbs or lighting rated by Energy Star®.
 - a. Always
 - b. Sometimes
 - c. Never
4. We always refer to the Energy Saver Globe Wattage rating scale to choose the appropriate wattage for new energy efficient lighting.
 - a. Always
 - b. Sometimes
 - c. Never
5. We use sunlight for light or heat whenever possible.
 - a. Always
 - b. Sometimes
 - c. Never
6. In rooms with work areas we use desk lamps with Compact Fluorescent Lights instead of overhead lights.
 - a. Always
 - b. Sometimes
 - c. Never
7. When replacing Compact Fluorescent Lights we recycle instead of throwing them in the trash bin.
 - a. Always
 - b. Sometimes
 - c. Never
8. We have dimmer switches and 3-way lamps installed with Compact Fluorescent Lights specially rated for those fixtures.
 - a. Always
 - b. Sometimes
 - c. Never

9. We always check the packaging to be sure that lights that require open fixtures are not installed in enclosed ones.
 - a. Always
 - b. Sometimes
 - c. Never
10. Lights that are on the most during the day always have Compact Fluorescent Bulbs installed.
 - a. Always
 - b. Sometimes
 - c. Never

See how green your lighting is by adding up the number of questions you answered with an "Always" response. If you answered 0-4 questions with an "Always" response your lighting isn't green at all. Get started today! With 5-7 "Always" responses you are green, but you are open for improvement. If you provided 8-10 questions with an "Always" response congratulations! Your lighting is really green.

10 easy ways to save the planet

1. Turn off lights when you leave a room
2. Install energy efficient motion sensors, dimmers and timers for indoor and outdoor lighting
3. Match pot size to burner size and keep the lid on
4. Close blinds or shades in summer
5. Keep your car tuned up and its tires properly inflated
6. Replace furnace and air conditioning filters monthly
7. Caulk between window/door frames and walls
8. Weather-strip between doors and frames
9. Do laundry in cold water
10. Do full loads in dishwashers, clothes washers, and dryers

Title: Lighting facts

Illumination is not a new discovery. In fact, cave man founded the first solution to “lighting up the darkness” some 20,000 years ago. Since then we have evolved to better and better lighting solutions; today scientists are on the verge of even better lighting solutions that keep our planet safe, while providing lighting solutions that are healthy and enjoyable additions to our home and office.

Cave man – Fire pits can be found in neanderthal caves from as far back as 20,000 years ago.

Candles & lanterns – As early as 3000 BC Egyptians were developing beeswax candles, and between 221-206 BC the Chinese were using whale fat for their candles. Lanterns were first invented by King Alfred in 890, and in the US, rapid improvements were made in the mid-1800s in response to railroad developments.

Incandescent lightbulbs - In 1809 English chemist Humphrey Davy creates the first “arc lamp” using charcoal strips. This invention led to the independent development of incandescent lamps in 1879 by Thomas A. Edison and Joseph Wilson Swan.

Compact Fluorescent Lights (CFLs) – The modern day CFL was invented in 1973 by General Electric engineer Ed Hammer, in response to the American oil crisis.

Light Emitting Diode (LED) – LED lighting has been used in electronic equipment since 1962, but it wasn't until the white LED was developed in 1993 that its use in the home was realized. A C.Crane Flashlight was the first tool to use the new White LED bulbs.

Title: Efficient lighting lingo and quick facts

Energy efficiency: An energy efficient product is one that uses energy efficiently; you get more light per watt of power consumed.

Energy measurements: Power is measured in watts, light is measured in lumens and foot-candles, heat is measured in BTUs and power consumption is measured in kilowatt hours. 1 KWH = 1,000 watts per hour or 1 watt per 1,000 hours.

Compact Fluorescent Bulb (CFL): A compact fluorescent lamp (CFL), also known as a compact fluorescent light bulb, is designed to replace an incandescent bulb. Many CFLs can fit in existing incandescent light fixtures. CFLs radiate a different light spectrum from that of incandescent bulbs. Improved phosphor formulations have improved the subjective color of the light emitted by CFLs such that the best 'soft white' CFLs available today are subjectively similar in color to standard incandescent lamps.

Light-Emitting Diodes (LED): LED bulbs last a whopping 10 times longer than CFLs, and more than 100 times longer than incandescent.

Solar lighting: These lights generate and store their own power during the day and then release it at night. For indoor solar lighting, a solar panel is affixed to the outside of the home (typically a roof), to collect the sunlight needed to power the lighting. Outdoor solar lighting has self-contained solar panels that capture the sun's rays. These lights require no wiring making them especially useful for outdoor lighting.

Correlated Color Temperature (CCT): The color of light in a bulb is measured by its correlated color temperature (CCT), which is a measure of how warm or cool light is, and designated by Kelvin (the scientific measure of temperature). Most CFLs come in 2,700K, 3,000K, 3,500K and 4,100K—which range from warm white to a bluish white.

Color Rendering Index (CRI): The CRI rates a light bulb's ability to show colors "realistically" as compared to a standard incandescent. The CRI scale ranges from 0 to 100—the higher the number, the closer the CFL will render color like an incandescent bulb.

Title: Choose your lighting

Task	Color	Lamp type	Lumens ¹
Reading	For reading lamps, choose a light that offers a bright, white light to reduce eye strain	Triple tube lamps provide high light output in smaller spaces	450 - 1,210 Lumen
Home office	Office lighting should be a crisp, bright white	Spiral, lamp, or globe; use flood lamps for recessed lighting	1,210 – 2,780 for ceiling lamps; use Reading recommendations above for reading lamps
Living areas & bedrooms	Lighting for living areas not used for reading or study can use a warm or “cool white” bulb	Spiral, lamp, or globe; use flood lamps for recessed lighting; use Candelabra lamps for decorative lighting	1,210 – 2,780 for ceiling lamps; use Reading recommendations above for reading lamps
Bathrooms	Use a bright white for maximum lighting	Flood lamps or globe bulbs	1,210 – 2,780; check fixture for wattage recommendations
Outdoors	Bright white for maximum lighting	Flood lamps made for outdoor use	1,210 – 2,780
Special considerations	3-way lights and dimmer switches require special lamps; choose color as above based on location of fixture	Lamps designed specifically for the fixture	450 – 2,780 depending on the lighting needs of the room or area

¹Lumen recommendations for open fixtures; be sure to check fixture for wattage restrictions.

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You've replaced all your standard light bulbs with the futuristic spiral versions that will eventually become norm, but what about your cost savings? Do they really add up to a significant savings in cost and energy? Well the answer is, unequivocally, "Yes!".

Energy efficient light bulbs save energy because they offer the same amount of luminance as a standard incandescent version, but use far less wattage, thus, using less energy. Their energy consumption in fact, is only about one quarter of that of a standard bulb. So a bulb that offers 60 watts of illumination is only using 15 watts of energy!

Using this new efficient bulb for about 6 hours a day will save you approximately \$21.00 per year. Maybe that doesn't seem like a lot, but let us make a few calculations based on a typical home. Using the 60 watt illumination example from above, how much would a typical family save? The chart below shows how much money can be saved based on the number of bulbs used in the household at least six hours in a day. Now there's real savings you can put in the bank!

# of Bulbs	Energy savings	Greenhouse gas savings
1	\$30.00	400 pounds
10	\$300.00	4,000 pounds
15	\$450.00	6,000 pounds
20	\$600.00	8,000 pounds

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Home lighting

Baby night light- Innovative lighting options for a child's restful night and parent's piece of mind

Air-purifying CFLs- lighting options designed for practical energy efficiency and functionality

Full spectrum lighting Smart lighting control systems to fit the needs of your everyday light moods and desires

LED lighting – narrow spectrum lighting that creates bright lighting for flashlights, outdoor flood lamps and more recently, indoor applications

Solar lighting - Eco-friendly lighting that harnesses the energies of the earth without increasing harmful bi-products

Insect repellent CFL bulb - protecting your family from harmful bugs and mosquitoes without harmful chemicals

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Today's companies have come a long way in their attempts to make office lighting more environmentally friendly, but they still have a long way to go in providing efficient and effective task lighting for individual office employees. Modern lighting in the work environment can help keep employees from becoming fatigued too quickly, can improve motivational levels and help them to concentrate better. Several office lighting options are available to provide lighting in individual offices and on desks, which can also reduce energy use by eliminating the need for higher-energy ceiling lamps.

A couple of products to consider when 'greening' y our office lighting:

Concentration lamp – This Anion generating lamp provides a healthy work environment through negative ions, which are known to promote healthy metabolism and to help remove dust from the air. This light is also healthy for the planet, with an optical catalyst filter built in, to filter out organic compounds like nitric oxide, bacteria, and waste gases. Its unique compact design also makes it perfect for small area spaces.

Green plug – The quick and easy way to be green at the office: a plug that turns computer and electronic equipment off when it's no longer in use! These intelligent power strips save you hassle of trying to do your part; no more groping around behind the desk with the dust bunnies looking for the off switch. A smart British invention that's sure to be an office hit.

Hybrid solar lighting is an exciting new breakthrough in energy development. The new technology channels sunlight by means of optical fibers. Rather than converting sunlight into electricity, and then converting it back into light (as do most of today’s modern lighting systems), hybrid solar lighting uses a solar panel collector to funnel light directly into buildings through the optical fibers. This method is extremely efficient and provides a cool, full-spectrum natural light during peak usage periods. Conventional electricity is used to boost output on particularly dark days, or long evening use.

Tapping the power of solar energy is the key behind reducing dependence on non-renewable energy sources; hybrid solar lighting options appear to be breaking the way for further developments that even today, can reduce the dependence on electric consumption while providing a clean, renewable energy source. The table (below) indicates the energy efficiency of the standard incandescent bulb, newer fluorescent lighting, and hybrid solar energy options. For commercial buildings with hundreds of thousands of square feet, this could result in a significant cost savings.

Hybrid solar lighting technology could replace less efficient conventional electric lamps.	
Type of lighting	Typical energy efficiency (approx. lm/W)
Incandescent	15
Fluorescent	75
Hybrid solar	200

Solar powered outdoor lighting is already becoming a new trend in commercial building projects and results in even greater energy reduction savings. Relying upon solar energy alone, parking and street lamps powered by solar energy appear to be the dawning of a new generation of energy developments that will most likely lead to more energy savings for all, and less energy and bi-product waste for the environment.

Hybrid street lights – These amazing street lamps provide an innovative eco-friendly option for planet-friendly uses. These lamps are completely “grid free” and very simple to install. The lamps work through a unique combination of wind and solar power, essentially harnessing the earth’s natural resources to provide high illumination to remote and countryside areas, or for areas just looking for an energy-conscious solution to their large-area lighting needs.

Solar Traffic sign – Solar traffic signs provide yet another eco-friendly safety option for remote areas that may not have been previously economically feasible. Sun-generated power remains stored until use at night, when the sign’s bright LED lighting warns traffic of turns or changes in the road.

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Light Therapy

Light therapy involves the use of a special type of light fixture that produces much brighter light than regular indoor lighting. The intensity of the light is referred to as lux. Lux is measured a specific distance from a light source; for light therapy devices the distance is measured from the eyes.

It is well known that light affects mood; too little creates a depressive state, and too much can cause euphoric feelings. For some, light therapy helps to balance the energy needed for the body to function at an optimal rate. Light therapy products can help accomplish these goals in just minutes every day.

Special lamps have been designed specifically for those with special sensitivities to light deprivation. The Happy Light provides a way to make up for the lack of the healing properties of light during winter months. Natural sunlight is simulated through the use of these light therapy lamps, effectively reducing symptoms and bringing the body back into balance.

Lighting can also be a useful dermatology tool. The Acne Lamp provides light therapy of blue-red light for treatment of acne. A simple 15-minute daily regimen has been found to improve acne prone skin problems by up to 76%.

Even energy efficient lighting without these specific healing properties can benefit your health. High efficiency fixtures provide brighter illumination over a general area than incandescent or even halogen bulbs. High efficiency lighting also enhances productivity, which can be of particular use when it comes time to clean, do homework, or get that last “must do” off your list!

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Links

Title: Energy efficient lighting for your household

For the kitchen: [links to pages on your site]

For the living areas: [links to pages on your site]

For bedrooms: [links to pages on your site]

For outdoor lighting: [links to pages on your site]

For health and wellness: [links to pages on your site]

Plan your switch

We want to make it easier for you to do your share to save the environment and save yourself a little green, so we've developed this simple step-by-step action plan to help you "make the switch". Follow these simple step-by-step planning options and you'll be "green" before you know it!

- 1) First, walk from room to room and count all the light fixtures. For each light fixture, make a note of the following details:
 - a. Bulb wattage
 - b. Type of fixture – is it open or enclosed? Decorative or plain?
- 2) Next, determine the type of lighting "mood" you need in each room – office and study areas need bright, white lighting while other living areas can have a warmer light option
- 3) Armed with the above information, do a little research online before heading out to the store. In your research be sure to note the following:
 - a. Does the light you are considering offer a wattage exchange rate that matches your original bulb?
 - b. Does it offer the color you need to match the mood for the room?
 - c. Check that it conforms to the requirements of the light fixture – for example, some bulbs will work better in open fixtures than others
 - d. If your fixture has an attached dimmer or 3-way switch, ensure you choose the appropriate replacement
- 4) Shop online using this guide as a reference for the many products that are available. Check the links page to find items that suit the individual needs of each room in your home or office. Be sure to pay special attention to the lumens chart, and any special needs the fixture in question might have.
- 5) Finally, install your new lights. Depending on the number of lights you have, you may need to do this in two stages.
 - a. First, install easy-to-reach fixtures, like floor lamps and decorative lighting.
 - b. Next, find someone to help with hard-to-reach fixtures. An extra hand to hold the ladder, or hang on to old light bulbs will help make the process go quicker and smoother

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"[T]here need not be any conflict between the environment and the economy. We will find the way not only to reconcile (those), but to find new profits and new opportunities as we do the right thing."

Al Gore, 45th Vice President of the United States of America

As much as we tire from hearing about how fragile the environment is, and how we have to do our part to "save the planet" for our children's children, the fact remains that we enjoy the rewards and benefits of energy savings each and every day. Sometimes, we just forget how valuable those rewards are!

What are the rewards for our eco-friendly efforts?

- Money saved – as this pamphlet shows, there is a huge monetary savings for switching to energy-efficient lighting and other eco-friendly energy saving measures
- Time saved – energy efficient products tend to last longer, and require less maintenance
- Creating a more globally knit community – by recognizing that we're all in it together, we begin to come together as one group with a common purpose. This helps us relate to our neighbors and live more peacefully with one another
- Saving the planet (we had to add this one for good measure) – energy efficiency offers us the chance to "green" our future and protect the planet from irreversible damage in the future

Energy efficient living doesn't have to be a burden. It can be simple and easy, and even save you money!

Here's an extra quote. It's the next best one I found:

"There are many who still do not believe that global warming is a problem at all. And it's no wonder: because they are the targets of a massive and well-organized campaign of disinformation lavishly funded by polluters who are determined to prevent any action to reduce the greenhouse gas emissions that cause global warming out of a fear that their profits might be affected if they had to stop dumping so much pollution into the atmosphere."

References:

¹PowerSmart: The power is in your hands. Alliance to Save Energy, British Columbia Hydro & Power Authority, BC, 2005/06.

² Schwartz, Ariel. "New Lighting Technology Offers Alternative to CFLs and LEDs." Clean Technica. 1 Aug 2008. <<http://cleantechnica.com/2008/08/01/new-lighting-technology-offers-alternative-to-cfls-and-leds/>>

³Change a light, change the world. U.S. Environmental Protection Agency and U.S. Department of Energy, 2007.

⁴ Compact fluorescent lamp. Wikipedia, 2008.
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⁵ INNOVATIVE HYBRID SOLAR LIGHTING REDUCES WASTE HEAT AND IMPROVES LIGHTING QUALITY, U.S. Department of Energy, Oak Ridge National Laboratory, 2008.
<http://www.ornl.gov/sci/solar/pdfs/ldoc1838_hybrid_solar_lighting.pdf>

⁶ History of Candle Making. Wikipedia, 2008. <http://en.wikipedia.org/wiki/History_of_candle_making>