

"MICHAEL'S TOP TEN"

Things you can do in your home to save lighting energy

A significant amount of energy can be saved in our homes today with the use of energy-efficient lighting technologies; many of these approaches also improve lighting quality and comfort. The following is a list of some of the best technologies you can use today. Some of these retrofits involve electrical work and may require a qualified electrician. However, many involve simple replacements and can be done by the homeowner. Always ensure that proper safety procedures are followed, particularly through de-energizing circuits when working with exposed wiring.

1) CFL'S FOR EXISTING EDISON BASE

FIXTURES. Compact Fluorescent Lamps (CFLs) are a vast improvement from what we've seen in the past, with good light color, no flicker and long life. One of the best things you can do is to replace many of your incandescent lamps throughout the home with compact fluorescent lamps. Some of the newer reflector-style CFLs are designed explicitly for dimming lights. If you use a CFL on a dimming circuit ensure that it is labeled for that purpose. Also, try to start with an Energy Star labeled lamp.

2) OCCUPANCY SENSORS FOR BATHROOM, LAUNDRY ROOM AND BEDROOMS.

Occupancy, or more accurately, vacancy sensors, can save a significant amount of energy by turning off the lights when no one is there. This is perhaps one of the biggest energy saving opportunities for homeowners because energy is a function of power (wattage) and time, time being the operative term here. Replace the existing light switch with a sensor switch within the same junction box. Make sure that these sensors are manual on - automatic off. Timeout functions can be adjusted and some systems have an integrated nightlight, which provides added amenity.

3) CFL TORCHIERE. Many homeowners still have the dangerous and inefficient 300 watt halogen torchieres. Replace these with 50 to 70 W CFL torchieres that produce the same amount of light for a fraction of the energy. They typically run at much cooler temperatures and are therefore much safer to have in the home, with the added benefit of lasting a very long time. Consider using an Energy Star or higher-quality CFL torchiere.

4) DEDICATED CFL DOWNLIGHTS (LIGHTS THAT DIM).

Typically most kitchen remodeling involves a change in the lighting system. When remodeling your kitchen, consider using a layout of dedicated compact fluorescent downlights as opposed to incandescent. A typical CFL downlight will use a third of the energy in comparison to incandescent and will last three or four times longer. A secondary benefit with this approach is reduced heat in the kitchen, resulting in lower air-conditioning costs and increased comfort.

5) TUBULAR SKYLIGHTS. Install tubular skylights to save energy by displacing electric lights with daylighting (light that comes in your home naturally from the sun). A single 12 inch diameter tubular skylight will provide adequate illumination for approximately a 100 to 150 ft. space. Walking into a daylit space will often reduce the number of times the lights are switched on as well as providing high quality lighting. A couple of websites you might look into are: <http://www.solatube.com>, and <http://www.tubularskylight.com>.

6) LED HOLIDAY LIGHTS FOR INTERIOR AND EXTERIOR.

Next holiday season, consider replacing all of your Christmas tree lighting with newer style LED systems. These come in a variety of colors and use less than 25% of the energy that your older style incandescent lamps used. If you use exterior lighting system for your holiday lighting, consider plugging them into a simple plug-based timer that will limit the hours of operation.

7) PORCH LIGHTS. Porch lights are an excellent opportunity to save lighting energy as they are

typically left on for long hours and use old-style incandescent lamps. The simplest choice here is to retrofit using compact fluorescent lamps. Another option is to replace the fixture with a new one that has a built-in occupancy sensor. This allows you to maintain the aesthetic look of the incandescent while saving energy by energizing the lamp only when needed.

8) T12 TO T8 FLUORESCENT LAMPS. Many of our homes have the old-style T12, four-foot fluorescent lamps in the kitchen (T refers to tubular lamp and 12 refers to the diameter in 1/8's of an inch). These lamps are both inefficient and have relatively poor color rendering. Replacing these lamps with T8 (1-inch diameter) four foot lamps will increase efficiency as well as color quality within the space. This retrofit will require a new electronic ballast and will involve some wiring work, but is a straightforward retrofit for the ambitious do it yourselfer.

9) DIMMING CIRCUITS. For dedicated incandescent fixture applications where CFLs do not work well, like chandeliers, wall sconces, hanging pendants, etc., consider changing out light switches with high quality electronic dimmers. Typically when people have access to dimming they use it and when a circuit is dimmed less energy is used.

10) OCCUPANCY SENSOR PLUG STRIPS. A variety of plug strips that are controlled by a simple occupancy sensor are available in the marketplace. These plug strips automatically turn off any electrical appliance that is plugged into them after a preset period of time. To learn more, visit: <http://www.wattstopper.com/getdoc/1105.pdf>



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