

OUR USE OF ELECTRICITY



IS SHOCKING!

www.sgvenergywise.org

*I want to save money on my electric bill,
What can I do now?*



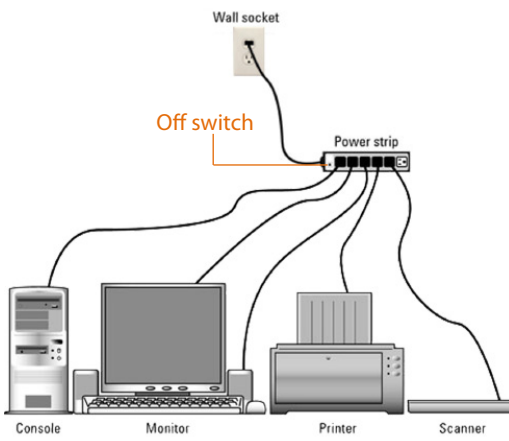
Replace lights

- Use Compact Fluorescent Lights (CFL); they last 10 times longer and use 75% less electricity than incandescent.
- Light Emitting Diode (LED) lights are even more efficient and last longer.

Unplug electronics not in use

Consumer electronic products account for 15-30% of household electricity use. Part of this is the standby mode on devices that are never fully off. These devices draw energy known as phantom load.

- Use power strips for your TVs, computers, game consoles, and any other electronics, then turn off the power strip's switch when you will be away for 2 or more hours.



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Appliances, Electronics, Lights...

How else can I save on electricity?

San Gabriel Valley Residents & Businesses spend upwards of 60 million dollars for electricity every month (that's almost three quarters of a BILLION dollars a year).

WE CAN'T LIVE WITHOUT ELECTRICITY BUT WE CAN GREATLY REDUCE ITS OVERALL USE...



- During the daytime, lights shouldn't be necessary if windows and skylights are placed correctly and glare is controlled with shades.



- Purchase energy-efficient "Energy Star" products especially for appliances that are constantly running, like your refrigerator.

A building's interior & exterior lighting systems are major consumers of electricity. Lights inside the building also add to air conditioning loads. To learn more about this, please see our handout for **HVAC**.



Additional Info: <http://www.sce.com/>
http://asset.sce.com/Documents/Shared/08Apr_ResidentialEnergyGuide.pdf

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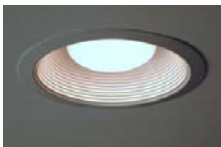
What is there to learn about lights?

How to choose your lights.

When buying light bulbs, “watts” is the term commonly used to measure brightness. With improvements in technology, that isn’t a reliable way to buy light bulbs anymore.



Standard, LED, and CFL
light bulbs. (above)
Recessed light. (below)



Terms YOU need to know

- *Watts* - measurement of energy used.
- *Lumens* - measurement of light that is emitted (this is really how light efficiency is measured).

How do they compare?

High efficiency luminaries are fixtures that produce more lumens (light) using less power (watts) and lasting longer.

For Example:

- Standard incandescent light bulbs that produce **1,600 lumens** uses **100 watts** of power (low efficacy).
- CFL light bulbs offer **1,600 lumens** using about **23-30 watts** (high efficacy).
- LED light bulbs offer **1,600 lumens** using about **16-20 watts** (high efficacy).

Lighting Controls



The Energy Code is now requiring vacancy sensors. These are sensors that require someone to turn the light on but will automatically turn the light off when no one is detected in the room for a set amount of time.

More than 20% of the electricity we use in our homes is for lighting.

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Changing or adding light fixtures

Is there anything I need to know before I start?

The Energy Code has lighting standards that need to be applied to permanent light fixtures such as track or recessed lights. Here are some minimum requirements in the Energy Code:

In the Kitchen: While there is no limit to the amount of watts installed, at least half (50%) of the watts used should be high efficacy lighting (You can add more low efficacy lights if all lights are controlled by vacancy sensors).

In the Garage, Laundry Room, and Walk-in or Utility Closets (bigger than 70 square feet):

- All lights must be high efficacy lighting AND must be controlled by vacancy sensors.

In the Bathrooms:

- At least one light must be a high efficacy luminaire.
- All low efficacy lighting must be controlled by vacancy sensors.

The 3 options for all other rooms (such as bedrooms, living rooms, hallways):

- Must be high efficacy luminaire (lighting).
- Must be controlled by vacancy sensors, OR by dimmer.



Occupancy sensors can be good for rooms like closets or laundry rooms because they turn on when they detect motion and turn off when they don't. Vacancy sensors are better for bedrooms and TV rooms because they turn off automatically but they turn on manually.

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Building Department Checklist

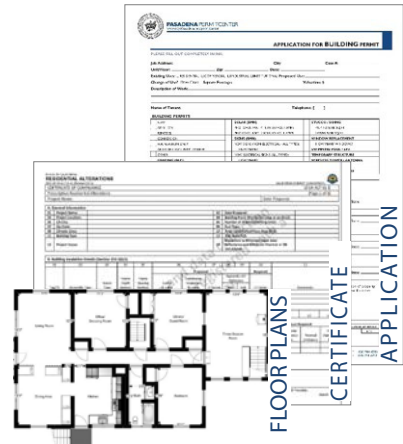
Plans, Permit, and Inspection

When changing or adding permanent light fixture, with new wires, junction boxes and housing, a permit is required. Changing light bulbs does not require a permit.

For PLANS and PERMIT

TO OBTAIN a PERMIT, submit

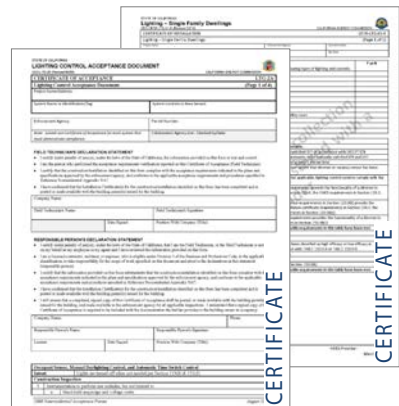
1. Building Permit Application and Fees.
2. Complete **Certificate of Compliance Form CEC-CF1R-ALT-01-E** Residential Alterations for Lighting/Electrical Conformance.
3. Construction Plans & Photos.



For CLOSEOUT

TO COMPLETE THE PROJECT:

1. Schedule inspections with the City.
2. Complete **Certificate of Installation Form CF2R-LTG-01-E** Single Family Dwellings for Lighting.
3. Complete **Certificate of Acceptance Form CEC-LTG-2A** Lighting Controls and Switches.



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Check out other improvement ideas...

A collage of seven energy-saving brochures, each with a colored border and a label. The brochures are: "A HOME ADDITION WITHOUT SUBTRACTING SAVINGS" (blue border, label "Addition"), "CREATE SHADE TO STAY COOL" (purple border, label "Shade"), "INSULATE YOURSELF FROM HIGHER ENERGY COSTS" (orange border, label "Insulate"), "A WINDOW ON SAVINGS" (teal border, label "Windows"), "A COOL ROOF OVER MY HEAD" (green border, label "Cool Roof"), "CHOOSE THE RIGHT HVAC EQUIPMENT TO KEEP YOU COOL" (dark green border, label "Air Conditioning"), and "COOK UP SOME KITCHEN IMPROVEMENT SAVINGS" (pink border, label "Kitchen").



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SGVCOG
San Gabriel Valley Council of Governments

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