



The Most Effective Energy Upgrades for Existing Buildings



Use Compact fluorescent Light Bulbs

Replace your incandescent light bulbs with compact fluorescent light bulbs (CFLs), or even better; with LED replacement bulbs that use even less electricity.

For example; replacing 4 100 watt incandescent bulbs with 4 CFLs on average will save over \$100 in energy bills over 3 years.

CFLs also last up to 10 times longer than incandescents, and LED bulbs last even longer.



Maintain Your Furnace or Air Conditioning Filter

Clean or replace your furnaces or air conditioning filter monthly. Dirty filters block normal airflow and significantly reduce the efficiency of the system, which wastes your money.



Plug Those Leaks

Air leaks are typically one of the greatest energy wasters in older buildings. Installing weather-stripping and caulking leaks is inexpensive and almost anyone can do it. Very often an older building will also have significant leaks in the hvac duct system. Consult a licensed mechanical contractor to see if your duct system can be made more efficient.



Install Low Flow Faucets and/ or Showerheads

An efficient showerhead will save a typical family of 4 about 27 cents per day on water and about 51 cents per day on electricity, which adds up to about \$285 per year. Installing them is very easy; they generally screw on; don't forget to use some teflon pipe tape or pipe dope on the threads.



Use a Programmable Thermostat

You may save 10% on your heating and/ or cooling costs just by setting back your thermostat when you're not home and while you're sleeping. Program your thermostat for 78 degrees F or higher in the summer and 65 degrees F or lower in the winter. If you program your thermostat to return to your preferred temperature before you return home; you never know the temperature changed; until you see the reduction in your energy bills.



Insulate Your Water Heater or Replace It With a Newer Tankless Water Heater

If you don't have one already; place an insulating jacket around your water heater, and also insulate the pipes around your water heater. Also; many people have the temperature in their water heater set too high. Turning the temperature down to 120 degrees F maximum will not only save money, it will help prevent children from being scalded by too hot water.

Newer tankless water heaters are more efficient than older tank type water heaters. A tankless water heater only uses gas to heat the water when hot water is turned on in the house. Generally tankless gas water heaters are most easily installed on the outside of an exterior wall. In some cases an upgrade of the gas lines may be required to meet the gas demands of a new tankless water heater. Consult a licensed plumber for further information.



Increase Your Building Insulation

If the insulation in your building is substandard increasing the insulation value in the exterior walls, the roof, and under the floor is one of the most cost effective ways of making your building more energy efficient and has an additional bonus; your well insulated building will be more comfortable; warmer in the winter and cooler in the summer.

Insulation is measured by "R-value"; the greater the number the higher the insulation value.

Exterior walls in the Culver City area should generally be a minimum of R-19, exterior roofs and floors should generally be a minimum of R-30.

There are many types of insulation that may be added; roll or batt insulation (typically fiberglass), loose-fill insulation, rigid foam insulation, or foam in place insulation.

Batt or loose-fill insulation may be the easiest to install in an attic space, loose-fill or foam in place insulation may be best for filling existing exterior walls, batt insulation may be best for installing in crawl spaces.

Be careful about placing insulation around existing light fixtures unless the light fixture is marked IC; designed for direct contact with insulation.

If you hire a contractor to install insulation in your building use a state licensed contractor.



Request a Blower Door Test

A blower door test will uncover the holes and cracks that are one of the main sources of energy loss in existing older buildings.

One of the following organizations should be able to provide a blower door test:

California Home Energy Efficiency Rating Service (CHEERS) 1-800-424-3377

Energy Inspectors 1-800-808-7192

CalCERTS 1-916-985-3400

The Building Doctors 1-323-646-2534

U-Save Energy 1-818-667-9145

(Culver City Building Safety does not officially recommend any of the firms noted; use at your own risk)



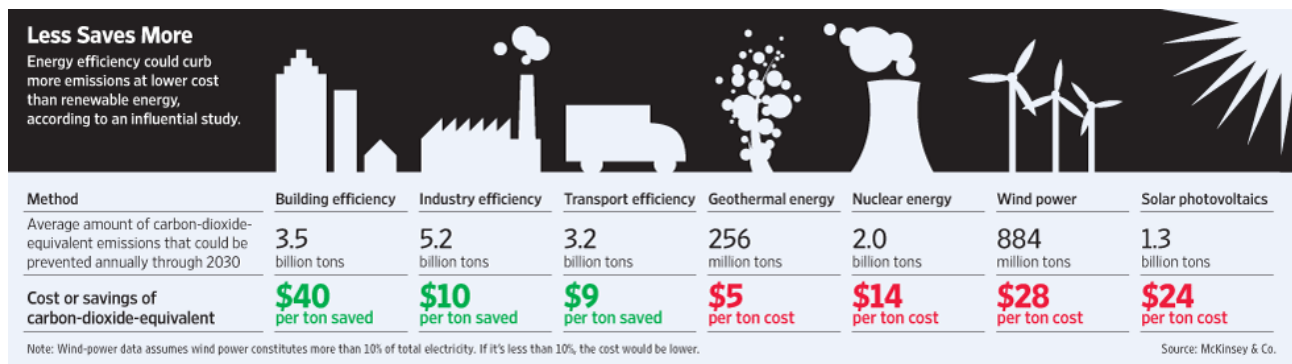
Energy Star Appliances

Whenever replacing appliances; select Energy Star qualified products. Whenever replacing your water heater, furnace, or air conditioner, you also should select only Energy Star qualified products, which will save 10-30% on energy costs compared to non-qualified products.



Only after all the previous items have been considered should you consider installing any alternative energy system in an existing building

Alternative energy systems such as solar power are an excellent way to help the environment. Solar photovoltaic power systems use the energy of the sun to produce electricity and emit no greenhouse gases and have very long lifetimes. Solar photovoltaic systems are even more financially attractive when the longer-term, ever increasing costs of fossil fuel power are considered. Home solar photovoltaic systems typically use a "grid-intertie" type of system; where any excess power produced by the system is fed back into the utility grid, and you receive a credit on your electricity bill for any excess power produced. You can see a lot of great information on solar power and find licensed solar installers at <http://www.gosolarcalifornia.ca.gov>. But alternative energy systems such as solar photovoltaic power systems are the least efficient way to save energy; unless all the previous items have already been addressed in your building.



(Source: The Wall Street Journal March 2009; "Packing Heat; The Firepower of The Lowly Caulking gun".)