



ARCHITECTURA

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Tips on Saving Energy

The following information comes from an informational pamphlet put out by the Department of Energy Website for helpful ways to save energy. The site is at <http://www1.eere.energy.gov> . These ideas are good ideas in general, but more importantly, they should be included in the front end of your planning for your new or remodeled project.

- **Insulate:** Inspect the attic to see if you meet the recommended level of insulation in this area which is R-30 or 11" deep batt insulation in the attic. Your walls should be R-13 minimum (3-1/2" Batt). This will differ for other areas in the country. Be careful not to block your ventilation from your roof eaves as this helps control the moisture in your attic. Also older style recessed lights can let heat/cool out of your house. Newer "IC" can lights are designed to not allow as much heat/cooling loss. In addition a Radiant barrier should be considered to help reflect heat out.
- **Change Windows:** High performance glass that has "Low-E" (low-emissivity) coating will help considerably over older single pane windows. Get those windows Argon filled and you can help the U-factor of the window even more, the lower the U-value of the overall window the better the insulative properties. Another value to consider for the window is the SHGC (solar heat gain coefficient), as the name indicates this factor tells about the windows' ability to resist solar heat gain. Other things that relate to the windows and their ability to resist heat gain are having either internal or external sun screening devices. This is a very low tech way of controlling the sun.
- **Caulk and weather-strip doors, windows and openings:** Typical homes are full of leaks. Making sure that all doors and windows are caulked and sealing any penetrations where plumbing, electrical and other wires penetrate the house envelop.
- **Upgrade appliances:** If you have appliances that don't have an energy star rating you should consider changing them out. They will help you save energy. A refrigerator that is older than 2001 will use as much as 40% more electricity than the newer energy star units.
- **Upgrade HVAC:** Check your ducting for leaks and seal or replace the ducts. Get a programmable thermostat. Be sure your air conditioning unit is appropriately size, bigger is not better.
- **Plantings to shade house:** Landscape can be both beautiful and help cut down the solar heat gain of your home. If the trees shade you home it will help reduce the heat gain, well positioned trees can reduce your cooling cost up to 25% according to the DOE. If you have more ground planting and less concrete around your home this will help stop reflected heat gain into and around your home.



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- **Replace water heater:** Changing your tank water heater to a tank less hot water heater can save you money over time as you will not be continuously heating hot water as well as save you space.
- **Change Lighting:** Changing your incandescent lights to compact fluorescent lights or CFL's can save you energy as they use up to 75% less energy than a standard bulb and last 6-12 times longer. These lights are available in warm white lights and give similar but not exact color correctness. An issue with these lights is their ability to be dimmed. They do not dim as well as incandescent lights. Another light that is making headway is LED these lights are even more energy efficient and longer lasting. They are starting to make a foot hold in the consumer market and may soon take over for the CFL lights that have harmful chemicals in them and need to be properly disposed of after use or if broken.

Please see

[CFL Fact Sheet](#) on our website.

- **Renewable Energy:** Using renewable energy on the local level can be done by home owners using solar panels to heat water or photovoltaic panels to produce electricity. At present it appears that PV panels are a bit expensive, but there is some promise for the price coming down in the future. Geo thermal is another cooling & heating source that uses deeply drilled holes in the ground to capture the earth's natural constant temperature to cool and heat the home.