

## [How To Harness Solar Power In The Home](#)

It seems that fuel costs for the home rise above inflation each and every year. I'm not completely sure why this is the case. There have been many changes in the way utility companies are run in many countries. The biggest change is that many companies have become privatized. This means that they are responsible to their shareholders and their aim is to make a profit. This may explain why prices have been going up from a cynical perspective.

However the reason most often given for price rises is that the resources that create electricity are becoming scarce. Oil, natural gas and coal are finite resources and are becoming harder to find, harder to extract and harder to deliver to the consumer. Thus the consumer must cover the increased costs.

Within this context, people are embracing new ways to create power for the home that are considerably cheaper and have a longterm future. A popular option is solar power. Solar power in one form or the other has been around for thousands of years. In more recent times the technology has been developed to take advantage of sunlight energy. Before that it was principally the heat from the sun that was used. This article will discuss how to run a house on solar power using both these sources.

You can run a house using the heat energy supplied by the Sun. The most typical application of thermal energy is to heat water. This can be used as hot water to use or heat the home. Solar thermal energy can also heat a swimming pool.

The way this works is by exposing a metal surface to the Sun. The metal plate will absorb the heat and become hot. This process can be made more efficient if the metal surface is painted black and the areas that do not come into contact with the Sun are insulated to prevent the heat escaping.

When you allow water to come into contact with this hot plate the heat is transferred to the water. Thus you have hot water. This can be connected the plumbing of your home and used as a water source. In some cases it may not be hot enough for use and can still be connected to the standard water heater.

Energy used to heat household water is one of the most expensive items on most utility bills. This could be reduced if a solar water heating system is installed.

Using sunlight to create electricity is a fairly recent innovation. Photovoltaic (PV) cells were first developed in the 1950's. A PV cell is made from a silicon semi conductor. When photons, the elementary particles of sunlight strike the PV cell, an electron is thrown loose from the silicon atom. By controlling the flow of electrons using an electric field a current can be produced.

This is direct current (DC) that can be stored in a battery or transformed to alternating current (AC). This can be done using a power inverter. The resulting AC can be used to power the home.

Solar panels that you may have seen on a few roofs around your neighborhood are the practical application of photovoltaics. One panel is a group of PV cells aligned in a parallel or series configuration to increase the output of electricity. The efficiency of solar panels has improved over the years. The costs to create and install a solar panel have also reduced over the years.

Most people will start using solar panels as part of their existing grid supplied electricity. They are essentially joint venturing with the utility company. All the solar electricity that they create is sent to the utility company and this is deducted from their total bill at the end of the quarter.

The advantage of being connected to the grid is that if there is no Sun then you can use the grid electricity. There is less responsibility on the homeowner which can suit people new to solar power.

The next stage in solar electricity is to go completely off grid. This means you cut off the utility company and rely on solar power solely. This may be scary for some people new to solar power but it is possible but more work. You will need storage devices for your electricity and backup systems should the Sun not shine. Many people have fuel powered generators or have wind or water power systems as backup.

### About the Author

For more details on getting a [tax break for solar and wind power](#) and how [solar power can conserve energy](#) visit our website.