

The global financial crisis and new Global Warming legislation are just some of the factors that are causing a rise in energy costs. With energy bills increasing, many homeowners are installing Residential Solar Power. This is a green, renewable energy source.

How Residential Solar Electricity Systems Work.

Using solar for all or part of your home's electrical needs makes sense. Grid-tied residential solar systems will reduce the amount of electricity you purchase from your local utility. Where rebate programs are available, you may be able to sell excess electricity to your utility. Your residential solar system will produce reliable, clean power to reduce the burning of fossil fuels and contribute to a healthier environment. Solar electric systems are quiet, operate automatically, require very little maintenance and need no fuel except sunshine!

Solar panels produce DC electricity that runs through an inverter to produce AC electricity. This energy flows into the AC power panel to power your home. Energy that is not utilized is diverted back to the utility grid, in which homeowners may receive rebates through their local power companies.



How Complete Green Systems' Solar Professionals Work to Solarize Your Home:

Photovoltaic Systems by Complete Green Systems

Photovoltaic, or PV for short, is a solar power technology that uses solar cells to convert light from the sun directly into electricity. This unique process uses no moving parts, thereby nothing can wear out. To explain the photovoltaic solar panel more simply, photons from sunlight knock electrons into a higher state of energy, creating electricity.

Four major components of the solar panel system:

1. **Solar Modules** – The solar modules or solar panels as they are commonly known, are the power generating device of the system. Whenever light is present (even on cloudy days) the panels will generate electricity.
2. **Racking System** – This is the permanent support system attached to the structure of a building or to the ground on which the solar panels are fastened.
3. **Wiring System** – This is the electrical set of wiring and disconnect switches between the solar modules and the meter.
4. **Solar Inverter** – This is a power conditioning device which changes the current coming from the solar modules in the form of Direct Current (DC Power) into Alternating Current (AC Power). The inverter is responsible for making the solar system power match synchronously the power coming from the utility.

A typical photovoltaic system consists of solar modules mounted on a roof, wired to a shutoff switch then to your power inverter. The AC power is fed into your central electrical panel and distributed throughout your home. If your home can't use all of the power, it flows back into the grid for your later needs.

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