

Going Solar in San José

The sun is waiting to turn your roof into its own miniature electrical power plant. Using solar energy to power your home or business not only lowers your electric costs over time, but also generates clean electricity.

Environmental Benefits

By “going solar,” you can dramatically reduce your carbon footprint. Each solar kilowatt hour (kWh) offsets more than a pound of carbon dioxide (CO₂). For example, by installing a 4kw PV system, the average size for a California home, you can reduce your carbon emissions equal to driving more than 12,000 miles in an average passenger car, or equal to the amount of CO₂ absorbed by approximately 1 acre of trees. Additionally, solar systems are extremely reliable since they produce clean energy from the sun for up to 25 years.

Financial Benefits

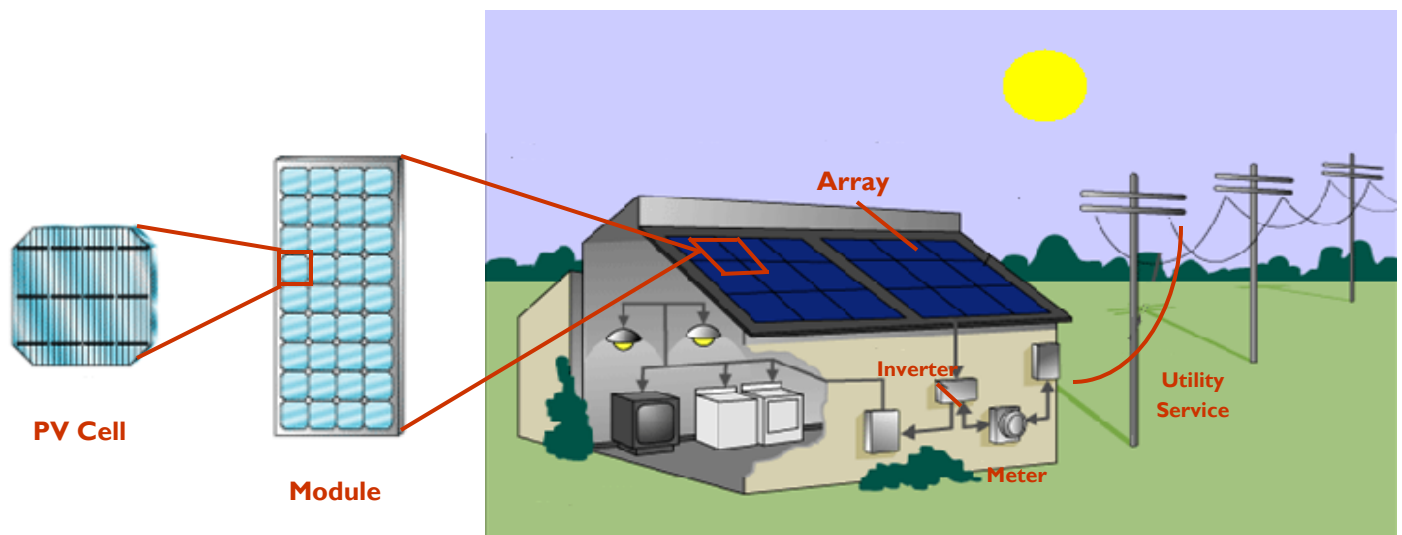
Thousands of Californians already rely on the State’s most abundant natural resource, the sun, for their power while taking advantage of the financial benefits of going solar. With energy costs rising, there has never been a better time to take advantage of solar. By making the choice to use solar as your primary energy source, you can help lower your monthly electric bill and receive a federal tax credit of up to 30 percent.

What is solar energy and how can it be used?

The sun’s rays that reach earth can be converted into electricity using photovoltaic technology (PV). A solar cell is the basic building block of a PV system. These cells are made of silicon, a semiconductor material similar to what is used in computer chips. When light energy (photons) strikes the solar cell, electrons are knocked loose from the atoms in the semiconductor material, enabling them to flow, forming an electrical circuit that can be captured in the form electric direct-current (DC electricity).

An individual PV cell is quite small, producing about 1-2 watts of power. To boost the power output of PV cells, they are connected together to form a larger unit called a **module**. Modules, in turn, can be connected to form even larger units called **arrays (see below)**. Before sending the electricity to power a home, an inverter converts the DC current generated from an array into alternating current (AC electricity) which is compatible with home appliances.

Most urban PV systems are connected to the utility grid. Surplus electricity generated from an array during the day is transferred to the electric grid, measured and recorded by your electric meter. PG&E will then credit back the electricity generated from a PV array to customers; this process is called **net metering**.



This home shows how electricity is generated through the use of solar panels.

Save Money!

California has set a goal to create 3,000 megawatts of new, solar produced electricity by 2017, moving the state toward a cleaner energy future. The California Solar Initiative (CSI) program was created to provide an incentive to homeowners, businesses and non-profit agencies. PG&E administers the incentive in Northern California. An incentive from CSI reduces the cost of installing solar panels for all PG&E electric customers who want to generate their own solar energy.

Visit www.gosolarcalifornia.ca.gov

Is Solar Right For Your Home?

1. Site Analysis:

- Determine if you have a south or west facing roof
- Determine the type of roofing you have and the compatibility of installing solar (i.e.: new, old, shingle, tile)
- Determine the potential shading issues such as, trees or nearby structures

2. System Size:

- Calculate your average kWh monthly usage over the last year (PG&E bills)
- Implement energy efficiency measures to reduce your energy usage, which decreases the size of the PV system needed:
 - Replace incandescent bulbs with CFL's and turn off lights when not in use
 - Use Energy Star™ appliances
 - Unplug electronics when not in use

Visit www.sanjoseca.gov/esd
(search "energy tips")



Getting Started

Going Solar is a relatively easy process and typically your solar installer handles most of the work. Following these basic steps will show you how to make the transition to solar:

Step 1 - Complete a Quick, Free Energy Audit

An energy-efficient home maximizes the value of your solar installation. PG&E provides a free audit to help assess your energy usage and identify areas that could become more efficient. The audit is a requirement of CSI and can be completed over the phone at 1-800-933-9555 or www.pge.com/solar by clicking on "Installing Solar at Your Home."

Step 2 - Contact and Choose an Installer

Qualified contractors are key to getting the most productive PV system for your home. Contact a solar installer to determine the solar system that best meets your energy needs and budget.

Visit www.gosolarcalifornia.ca.gov/retailers for a list of licensed solar installers. Interview at least three potential installers and obtain their bids before making your selection.

Step 3 - Solar Installer Completes Paperwork

In most cases, your solar installer will complete the CSI application and submit all the relevant forms to PG&E and local city agencies for you.

Step 4 - Solar Installer Manages Building and PG&E Inspections

Your solar installer will schedule an appointment with your local building permit agency to have an inspector approve the solar installation. Your installer will send the final approval to PG&E. Following an on-site inspection by PG&E engineers, your new solar installation will be connected to the electric grid.

Step 5 - Claim Your Incentive and Tax Credit

PG&E and CSI will reward you for choosing to go solar by providing you with an incentive once you complete an application. The incentive will be disbursed to your designated party (you or your installer).

In addition to an incentive from CSI, you are eligible for a federal investment tax credit (ITC) that equals 30 percent of the total cost of your PV array. For more information visit the Tax Incentives Assistance Project at:

www.energytaxincentives.org/consumers/solar.php