

# Solar Electric Systems

## Frequently Asked Questions

### What is a “Photovoltaic (PV)” or “Solar Electric” system?

PV or Solar Electric systems use the sun’s energy to produce electricity. These systems have been around for decades but have recently become more financially attractive and are becoming a popular home or business upgrade. Frequently these systems are confused with “solar thermal” or hot water systems that use the sun’s energy to heat water for use in a home or swimming pool. These were the systems that were popular in the 70’s and 80’s.

### Why Should I Consider Buying a PV System?

A PV system reduces or eliminates the amount of electricity you purchase from your utility or electric service provider. You’ll save money on your electric bill and help guard against future price increases. The electricity generated is safe, clean, renewable and reliable. You also help your community by reducing electricity demand on the grid, especially during peak periods.

### Where can I install a PV system?

Your site must have clear, unobstructed access to the sun. Buildings, trees or other vegetation should not shade your site. South and west facing roof exposure is best, but roofs facing east may be OK. If a rooftop is not available, your PV system can also be mounted on the ground or even on a patio cover.

As a rule of thumb, 100 square feet of PV area produces one kilowatt of electricity. A typical home system would need anywhere from 200 sq. ft. to 600 sq. ft. of roof space. For those concerned about appearance, there are new technologies that look like roof tiles or can disguise the panels within your house’s roofline. Both options are more expensive than traditional solar panels.

### How big a system do I need?

The size of your system depends on your location, electricity needs, and budget. California, especially Corona, is a great place for solar since the sun shines more than most US locations.

### How much electricity will a PV system produce?

In California, a PV system will produce the most electricity in summer when sunlight hours are the longest and the sun is positioned higher in the sky. A 1 kW system can produce from 1,400 kWh to 2,000 kWh per year depending on the location within the state. Generally, a PV system in the southern part of the state will produce more energy than in the northern part of California.

### How much does a PV system cost?

Although many factors affect the price, an average PV system currently costs from \$8 to \$10 dollars per watt including installation, or about \$16,000 to \$20,000 for a 2 kW system before rebates.

### What is Net Metering?

Net metering allows you to “bank” (with your utility) any surplus electricity your system generates. Most PV systems are sized to generate more electricity during the day than is actually used. During this time, the meter runs backwards. Later, you can pull an equal amount of electricity without incurring a cost.

If you use more electricity from the grid than your system has banked on an annual basis, your utility charges you for the difference. If your system produces more electricity than you use, the excess energy is delivered back to the grid, unless your utility enters into a written purchase agreement for the excess energy.

### What about tax credits?

The federal government currently offers a 30% tax credit on the total system cost. The credit is capped at \$2,000 for residential systems. There is no cap on business systems.

### Can you Finance a PV system?

Yes – subject to your ability to secure credit. By making monthly payments to the utility you are already essentially financing an indefinite, variable rate loan from your utility company. Installing a solar power system allows you to “refinance” this loan at a fixed rate and term, pay less every month, and have your loan payments go towards ownership of a valuable asset. Additionally, borrowing using a home equity or mortgage loan can have tax advantages. Because of tax deductions available on interest paid, your monthly system payment could be lower than your old electric bill – consult a tax specialist for further details.

### What else do I need?

You must enter into an “Interconnection Agreement” with your utility which specifies the terms and conditions under which your system will be metered and safely connected to the grid.

### Where can I get more information?

California Energy Commission-  
[www.consumerenergycenter.org](http://www.consumerenergycenter.org)

California Public Utilities Commission-  
[www.cpuc.ca.gov](http://www.cpuc.ca.gov)