

## FAQ – Frequently Asked Questions

Are you thinking about buying a solar electric system for your home or business? If so, this FAQ contains basic information that can help you evaluate whether solar is right for you.

Solar Electric Systems, also known as PV systems (photovoltaic), are reliable and renewable ways to generate energy. They make use of the most abundant source of energy – the SUN! A PV system can be a substantial investment, but between attractive state and federal incentives and generous financing programs, solar is now affordable for everyone!

### How solar works

1. The solar panels you see are made up of tiny cells made up of treated silicon - each one collects solar radiation and converts it into an electrical current.
2. These panels are wired together in series to create an array and the electrical output from that array travels through wires & conduit to an inverter.
3. The inverter converts the electrical current called "Direct Current" (DC) into "Alternating Current" (AC) which is used to run TVs, appliances, computers, etc.
4. Once this AC current is wired into your breaker box it will generate clean power right on your roof!



So instead of the sun's energy just bouncing off the roof of your house, you're actually harnessing it to safely and quietly generate energy.

### How do I get credit for the solar energy produced?

1. Any power that you don't use from your solar electric system literally spins your meter backwards, and you receive a credit from your utility company. This is called "net metering"
2. The credits can be applied at retail rates, and in the middle of the day that means your credits stack up quickly. you then draw the power at night when rates are low. What a deal! This is called "time of use" metering.

3. Further, in most states, the more power you use, the more you are charged based on your tiered usage. Solar helps by eliminating your usage in the high tiers and thus brings down your bills by shaving off the expensive power first. This is called tier shaving.
4. Lastly, electric rates have historically gone up at a higher rate than inflation over time. So the ability to fix your long term cost of energy yields a higher and higher return on your investment over time. So why not fix your electricity while you can?

### **Why should I buy a Solar System?**

ELIMINATE YOUR ELECTRIC BILL  
FIX YOUR COST OF ENERGY  
PROTECT THE ENVIRONMENT  
INCREASE YOUR PROPERTY VALUE

### **Is my home or business a good place for a PV system?**

A well designed solar system needs clear access to the sun with limited or no shading issues. You can often make a good determination yourself by identifying optimal roof lines and evaluate any shading hazards like trees, chimneys, and neighboring homes. Typically, the best orientation for solar systems is Southern facing, however west or east faces may also be acceptable.

You also want to evaluate the age of your roof. If your roof is older and needs replacement, you would want to take care of that upgrade prior to installing solar. After all, your solar system will last for 25 years and likely more!

### **What is the permit process like?**

Each county/city will require you to apply for a permit with the building department. The requirements of each building department vary, but they tend to ask for the following documents:

1. Line diagram
2. Manufacturer cut-sheets
3. Roof drawing / array layout
4. Application
5. Small Fee



If this sounds complicated, don't worry! At Solar Universe, we handle all permit, rebate and interconnection paperwork so you don't have to!

### **Which Panels do you work with?**

We only work with the best of breed products that we have personally tested to perform at the highest standards, to that extent we are technology agnostic and will recommend various technology platforms for different purposes. For us to install and recommend a system it must be cost-effective, available and come from a reputable company that will have a meaningful warranty.

### **What Size System Do I Need?**

Typically 100 sq. ft of roof space will generate 1 kilowatt of electricity. An average 2,500 sq. ft. home will use 5,000 kilowatt-hours of electricity per year. This results in the need for a 3 kW (AC) system, utilizing 300 sq.ft. of roof space and will generate most of the electricity required for such a home.

### **Is it proven technology?**

The technology has been around for over 50 years and some of the initial solar cells are still operating today. The panels are designed to produce at least 80% of their initial power even after 25 years. The efficiency and cost has significantly improved in the last 5 years. Solar has never been so affordable or safe investment.

Solar Panels come with a 25 year warranty  
The Inverter comes with a 10 year warranty  
Workmanship comes with a 10 year warranty.

So with this kind of guaranty, there is nothing to fear, but saving money!

### **What rebates and incentives are available?**

Paying for your SunGen solar electric is quite economical with state rebates, federal tax credits and plentiful financing options. However, most rebates decline over time.

### **Important Links:**

- Click here for more information on the California Solar Initiative (<http://gosolarcalifornia.ca.gov>)



Disclaimer: You should confirm the availability of the incentives and consult your tax advisor about the financial benefits you may be eligible for.

### **Didn't they just extend the the Investment Tax Credit (ITC)?**

The ITC is a reduction in the overall tax liability for individuals or businesses that make investments in a variety of pre-determined areas. For solar-electric and solar water heating, the credit is 30 percent of the cost, un-capped for both residential and commercial solar installations. The ITC tax credit would be realized when you file your tax returns.

### **Do I need to notify my home owner's insurance?**

Prior to installing your solar electric system, we recommend you contact your insurance carrier to determine the impact on the yearly premium. Typically, a solar electric system will impact your premium very little, however its best that you ensure coverage at the start of your project. Solar systems come with a long term manufacturer and workmanship warranty, however, we highly recommend your home owners or liability insurance cover the cost of unexpected accidents, radical snow loads or weather related issues.

### **Why Solar Universe?**

- Our crews use fall safety gear. Its not just a talking point, its a way of life ... literally.
- We consider customer service our top priority. We track all project information via a centralized web database, not on scrap paper.
- Our installers are friendly and wear a uniform.
- Our SunGen packages are predesigned, engineered and ready to be permitted. We save time, you save money.
- Each of our offices is individually owned and operated. We are naturally motivated and use best of breed install techniques.
- Once you say "go" we take care of the permits, equipment, install, rebates ... everything!
- Solar done right. Its that simple!



## How do I get Started?

Start with a SunQuote - its a free, easy, no hassle solar assessment for your home. Its done on line, and there's no commitment. You can see the estimated cost, financing options, and your bill offset. Aren't you just a little curious?

Once you are ready to get a customized quote, you simply schedule a site survey with one of our owner-operator SUN advisors who will come to your home, measure your roof, get its orientation to the sun, calculate your rebates/incentives and provide you with a customized quotation specific to your home.

Get started at: [www.solaruniverse.com](http://www.solaruniverse.com)

Solar Universe Network – The S.U.N. works for Everyone!

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