

# MyGen™ General FAQ's

## **Where do I find good sources about solar?**

The Solar Energy Industries Association (SEIA) (<http://www.seia.org/>) is an excellent source since 1974 to learn about solar energy, its history, industry data, resources and the case for solar. To familiarize yourself with the types of solar energy systems available for residential use, check out the Consumer Guide to Energy and Efficiency and Renewable Energy produced by the U.S. Department of Energy's Energy Efficiency and Renewable Energy Office (<http://apps1.eere.energy.gov/consumer/>).

## **How does a MyGen™ system work?**

The solar cells in the modules convert the sun's energy into a DC electrical current. This DC current flows into an inverter which changes the DC electricity to AC electricity in order to run household appliances. The AC electricity flows into your electrical service panel to supply power to your home. If your MyGen™ system produces more electricity than you use, the excess electricity is re-routed to your utility line and, in states with net metering laws, is sold to the utility. The utility provides power at night and during the day when your electrical demand exceeds what your solar system produces. During a power outage, your solar system automatically shuts down unless the system includes battery backup.

## **Will my MyGen™ system work at night and on cloudy days?**

Your MyGen™ system will not work at night because solar modules need sunlight to produce power. Solar modules will still produce power on a cloudy day although they will probably only produce about half as much as under full sun.

## **How do I know if my home is suitable for a MyGen™ system?**

Solar electric systems are a viable power solution for most homes. MyGen™ systems are engineered for roof installations in almost any location of the United States where direct sunlight is available. You'll need an unobstructed area of about 258 square feet for an RESI 2520, and up to 778 square feet for a RESI 7560 system. The site must be free from shading. If any portion of the solar panel is shaded, the entire module power output is lowered. A south-facing roof area is ideal, but a west or east facing roof can still produce approximately 90 percent of the power of a south-facing roof.

## **Can I install the MyGen™ system myself?**

No. MyGen™ systems must be installed by a qualified electrical contractor or solar installer.

## **I'm planning on building a new house, when is the best time to install a MyGen™ system on my roof?**

Before laying the roof, you can install flashable mounting brackets that provide the highest level of protection from leakage.

## **What MyGen™ system do I need to produce enough electricity to run my house?**

The solar system size depends on your average electrical usage, climate, roof angle and many other factors. We recommend using the 5 step MyGen sizing system to more accurately determine your electrical needs and the size of your solar system.

### **Do I need a building permit?**

In most areas a permit is required. Your qualified solar installer will know how to obtain the necessary permits from your local government.

### **Do I need approval from my homeowners' association?**

If you belong to a homeowners' association, consult your covenants for details. Many states prohibit homeowners' associations from restricting solar devices.

### **Can Restrictive Covenants/HOA Rules stop me from putting a PV system on my roof?**

Across the country, local zoning laws and homeowners' associations (HOA) govern the approved uses of a property. While these rules are often created to ensure uniformity or uphold a community's aesthetic standard, they may unwittingly prohibit the installation of solar panels, solar water heaters or solar heating and cooling technologies. The tide is shifting and zoning laws are now being used to protect a homeowner's right to solar access from California to Maryland. SEIA aims to eliminate zoning laws and HOA rules prohibiting the installation of solar technologies nationwide. Please see the following related legislation:

[H.R. 2848 Solar Opportunity and Local Access Rights \(SOLAR\) Act](#)

[S. 1016 Solar Opportunity and Local Access Rights \(SOLAR\) Act](#)

### **Do I need permission from the local utility to connect my MyGen™ system to the grid?**

The local utility has rules and procedures that must be followed to connect any generator to the grid safely and legally. Your solar dealer will help you with the documentation and procedures.

## **MyGen™ Consumer / Economic FAQ's**

### **What are the economic benefits for purchasing a MyGen™ system?**

#### **1. Save on electricity costs**

You can cut or virtually eliminate your electric bill. With the excess solar power, you can actually run your electric meter backwards and save!

#### **2. Increase the value of your home**

If you're concerned that you won't be in your home long enough to enjoy all the benefits of the solar system or long enough for the system to pay off, you should note that you could gain from increased home value as soon as your system is in. The Appraisal Institute has published articles showing a \$10 to \$20 increase in home value for every \$1 in reduced utility costs.

Systems can pay for themselves and provide attractive returns with energy and tax savings. With system financing, up front costs are minimized or eliminated and, frequently, the monthly loan payments are less than your energy and tax savings. The best part is when the loan is paid you continue to enjoy free electricity.

#### **3. Significant state rebates and federal tax credits**

Take advantage of various state/local incentives and Federal tax credits to help pay for your system - frequently 1/3 of your system cost or more.

#### **4. Gain energy independence and freedom from increasing electricity rates**

Rates have gone up an average of 5.5% annually over the past 20 years and have gone up 15-20% for many utilities in the past couple of years. With solar you are insulated from expected rate increases.

#### **5. Achieve environmental benefits for purchasing a MyGen™ system**

Obtain energy from a clean, non-polluting, renewable, dependable source. A typical 5 KW system eliminates more than 6 tons of CO2 emissions annual. This is the same as planting more than 2.5 acres of trees or cutting your weekly gas consumption by 25 gallons. Feel good about doing your part to save the planet and be a role model for your community.

#### **How do the changes to the Investment Tax Credit (ITC) for residential solar projects affect the MyGen™ system?**

The following information is intended as general guidelines and not authoritative advice. Consult a tax professional for advice on how the ITC applies to specific situations.

##### **1. When will the new ITC be in effect?**

The new ITC will apply to projects placed into service between January 1, 2009 and December 31, 2016. The new rules for the ITC will not be retroactive, so the restrictions on residential installations will remain in effect through 2008.

##### **2. How did the residential ITC change?**

Homeowners will be able to claim the full 30 percent of the cost of a solar installation as a federal tax credit; the \$2,000-cap will no longer apply.

##### **3. What happens if a homeowner can't use the full credit in the year of installation?**

Any unused portion of the residential ITC can be carried into future years.

##### **4. How does the alternative minimum tax (AMT) affect the ITC?**

Tax payers who claim the ITC should no longer be penalized by the AMT calculations, so AMT filers should be able to claim the full ITC.

##### **5. Are there size limits on residential projects eligible for the ITC?**

No, projects of any size or cost are eligible.

##### **6. Is the funding for the ITC limited?**

No, there are no limits on the number of taxpayers that can claim the ITC.

##### **7. Can members of a homeowners association (HOA) claim the ITC for an HOA-owned system?**

Yes, members of the HOA are able to claim the residential ITC in proportion to their share of the HOA's expenses; typically a homeowner's monthly HOA payment should be directly related to their share of the HOA's expenses.

# MyGen™ Installer FAQ's

## INVERTER

### **When mounting the inverter, where can I locate the inverter?**

The inverter is meant to be located either inside a garage or outside exposed to the elements. Do not mount the inverter in a southern exposed location.

### **Why is there no neutral, other inverters require a neutral?**

A neutral is not required per the revised UL1741 specification. A neutral measurement was required which PV Powered developed an alternative measuring technique without the need to pull a separate Neutral wire. The NEC 2008 Section 690.62 describes the ampacity of a Neutral Conductor. 690.62 is a conditional statement dictating the size of the wire IF a neutral is used. PV Powered inverters do not require a neutral wire.

### **Where can I find the dimensions of the PV Powered Inverters?**

The data sheets contain detailed physical dimensions for the Inverter enclosure and knockout locations.

### **Can the PV Powered inverter be combined with a generator?**

No, PV Powered manufactures Grid Tied Inverters only. It is not recommended nor supported the use of our inverters in applications beyond Grid Tied.

### **Can the PV Powered Inverter be used for Multiple Pitch and or Multiple Orientation applications?**

The general rule of thumb for roof pitches and orientation angles are no more than 10% variance. PV Powered inverters are designed around a single MPPT (maximum peak power tracking) principle. Greater flexibility is possible, contact PV Powered for application assistance and assessment of design impact.

### **The inverter is reading Ground Fault Code: 0400 0000. What does this mean?**

Check to make sure the proper ground bond jumper has been installed. If no jumper is installed a Ground Fault error will be present. If the installation has the proper jumper installed follow the Installation and Operation Manual for the steps required to determine if a ground fault is present.

## RACKING

### **What attaches the rack to the roof?**

L Feet mounted through the decking to the roof's rafters.

### **How do the rails attach to the roof?**

The rails mount to the L Feet.

### **How do the PV panels attach to the rack?**

End clamps and mid clamps mount over the frame of the panels via a t-bolt placed in to the top channel of the rail.

### **How many PV panels can one kit mount?**

One kit will mount 4 Kyocera KD210 series PV modules.

**Where do the grounding lugs mount?**

On the side of the rail. One per rail and one on each side of a splice bar if the splice bar is used.

**What attaches to the grounding lugs?**

Copper wire.

**How do I attach to a standing seam roof?**

Use the optional 3/8" S5! clamps.

**Why is a 6" stand off used with a Spanish tile roof?**

The stand off sets the height of the rack 6" above the Spanish tiles.

**What is a "flashing" and when would I need it?**

A flashing seals an area on the roof where a stand off has been used to lift the rack higher above the plane of the roof.

**How can you minimize the chances of causing a leak when mounting an L Foot?**

Use a stand off and flashing. Other options are available.

**How do I connect rails together to make a longer span?**

Use the Splice bars included with the MyGen™ kit.

**An installer wants to mount 12 PV panels to a roof. How many MyGen™ kits will I need?**

Three kits as each MyGen™ kit can rack up to four Kyocera KD series modules.

**How do I add tilt to a PV array?**

Use the optional low profile tilt legs, (qty 3 per kit), attached to a stand off to add an angled tilt to the PV array.