

SunPower SunTile®



SunPower Solar Panels



SOLAR BASICS

How do I turn the SunPower system on?

The system turns on and off automatically every day.

How do I know if my system is working properly?

Check for a green light on your inverter during daylight hours, or check the SunPower Performance Monitoring Website (sunpowermonitor.com).

Will my system work at night?

At night, your home draws electricity from the local utility and the inverter displays that it is offline. Sunlight must be present for the system to generate electricity.

Will my system work on cloudy days?

Yes, though it will produce less electricity depending upon the thickness of the cloud cover.

Will my system work during blackouts?

Since there is a chance that the SunPower system could feed electricity into the electric grid, safety requirements prohibit the system from producing electricity during blackouts. The system will restart automatically when power is restored.

Should I limit shading from trees?

Yes, if possible. Panels must receive full sunlight to work at their peak efficiency. If any portion of a panel is

shaded, the entire panel's electrical output—even those sections still exposed to sunlight—decreases.

How long will my SunPower system last?

Because they have no moving parts and are made of inert materials, SunPower SunTile and Solar Panels are inherently durable. Their cells are backed by a 25-year power output warranty, and the related system components are designed to last for many years without incident.

Are solar electric systems good for the environment?

Energy created through the SunPower system produces no pollutants. By offsetting peak electricity demand, SunPower systems reduce the need for oil and gas-fired power plants. Over a thirty-year period, a 2.3 kWp system typically offsets the same amount of greenhouse gases as 30 acres of trees.*

What are solar cells and solar panels?

A solar, or photovoltaic (PV), cell is the smallest element of a system that converts sunlight into electricity. Each cell is made of silicon, which is the same material found in computer chips. Silicon in photovoltaic cells is treated so that it generates a flow of electricity whenever it is exposed to light. A series of solar cells are wired together to form solar panels.

*Source: EPA EGRID2000 database

Are solar cells new technology?

Modern solar cells were invented in the early 1950s and were used to power satellites. In the 1970s, they were used for remote telecommunications and navigational aids. In the 1980s, they were used for roadside emergency telephones and traffic signs. Now in the 21st century, they help power your home.

Are solar electric systems safe?

Yes. Solar cells are mostly silicon, the primary component of sand. Solar electric systems produce no exhaust or toxic materials. The electricity coming through the inverter is like the electricity coming from household wall sockets. Homeowners should use the

same care they do with any electricity. All components are approved for utility interconnection and are installed according to the best construction practices.

What maintenance is required?

No maintenance is required. The system turns on automatically in the morning and turns off automatically at night.

Can I increase the size of my system? Why isn't the system larger?

Homeowners cannot increase their system size. Your system has been optimized for your inverter, roof layout, and home. It is designed to be cost effective, offsetting your home's most expensive electricity consumption.

ELECTRICITY

Can I generate heat for my home with a residential solar electric system?

Not usually. Solar electric systems are designed to provide electricity to operate lights, appliances and other electric devices in the home, which may include electric heating systems.

Does my SunPower system make hot water?

No. SunPower Solar Panels and SunTile convert sunlight directly into electricity to operate appliances, light fixtures, televisions, and other electronic devices.

What is a kilowatt-hour (kWh)? How many kWh does my home consume?

A kilowatt-hour is a measure of electricity. It is the amount of power (kilowatts) used over a period of time (hours). A 60-watt light bulb that is illuminated for one hour uses 60 watt-hours of electricity, or .060 kilowatt-hours. If it is illuminated for a half-hour, the bulb will consume .030 kWh of electricity, or half as much. The average home consumes about 20 kilowatt-hours of electricity per day, or 600 kWh per month. Depending on size, time of year, and weather, SunPower systems produce from 1 kWh to more than 10 kWh per day.

THE LOCAL UTILITY AND INTERCONNECTION

Can my system produce enough energy to meet all of my electricity needs?

Not usually, but solar electric systems do not need to provide all of a home's electricity to be of significant value to homeowners. Cutting electricity usage by 40 to 50 percent is typically the most cost-effective approach for home solar power.

Can I be completely independent from the utility? Can I store my electricity?

No, though homeowners can purchase a backup storage system, which SunPower neither provides nor sells. The SunPower system credits any surplus electricity with the utility at market rates. The utility essentially acts as your storage system.

How do I sell my surplus electricity back to the utility?

At certain hours and on certain days, homes with solar electric systems will often produce more electricity than they consume. Through a "net metering" arrangement with the local utility, your surplus electricity is credited against your bill.

What else can I do to reduce my energy costs?

Homeowners can increase their savings by making wise energy decisions. This includes turning off lights and appliances when not in use and selecting Energy Star appliances, including refrigerators, dishwashers, washing machines, and dryers.