



Make the Connection. Power the Future.

AN INTRODUCTION TO SOLAR ELECTRICITY FOR YOUR HOME

ABOUT SUNLIGHT SOLAR ENERGY, INC



Bend Oregon office and staff with new 3.6-kW SunPower System

Sunlight Solar Energy, Inc (SSE, www.SunlightSolar.com) is a certified contractor with the Energy Trust of Oregon (ETO) and the State of Oregon's Tax Credit Certified Technician programs. In addition to our Bend, Oregon office, Sunlight Solar also has offices in Milford, Connecticut and Framingham, Massachusetts. We use the highest quality solar products available and industry leading installation techniques. We are fully-insured, licensed, and bonded. We offer a turn-key solar installation complete with all paperwork, permits, taxes and interconnection agreements. We strive to make the process of going solar an easy and hassle-free transition for you. Our prices reflect the current market rates of materials and the highest quality installation and service available.

TYPICAL SOLAR ELECTRIC SYSTEM EXPENSES

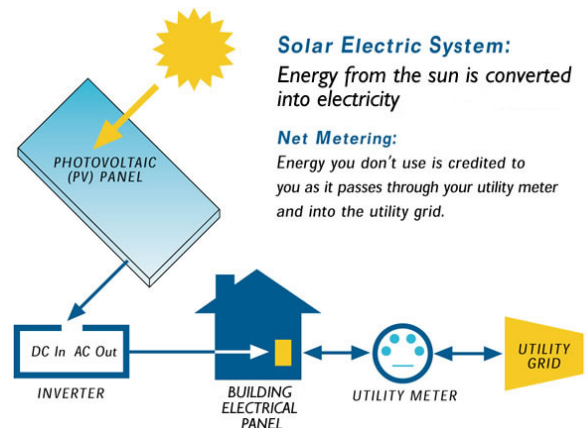
In general, our minimum system size is a 10-panel solar electric system (around 2-kW) for approximately \$14,000 total installed system cost. For Pacific Power customers, the Energy Trust of Oregon incentive decreases your out-of-pocket cost to around \$10,000 for this system size. The final total cost after state and federal tax credits are applied is around \$986. There may, however, be additional costs associated with your home's site-specific needs. Our System Designers will let you know if any of these apply to your home and system.

HOW A GRID-TIED SYSTEM WORKS

Energy from the sun strikes the photovoltaic (PV) panel and makes DC energy. An inverter changes it to AC current which can be used by your home appliances, etc. Instantaneously, as the solar electricity is produced, your electric meter will slow down or could even spin backwards! The electric company will install a new bi-directional meter at no cost to you, to accurately measure how much electricity your system produces. Furthermore, some inverters have the built-in capability to connect to your home computer or the internet so that you may monitor your system's activity while at home or away!

SITE SURVEY

Our free site survey allows us to accurately assess your home's solar potential and provide you with a detailed estimate on prices and energy production. During the site survey, we will evaluate a number of factors including roof age and type, roof orientation, annual shading, potential solar panel location(s) and the suitability of your electric service panel. With this information, we can build multiple system scenarios for your review. These solar quotes will include the manufacturers' names, number and type of solar panels and inverter(s). You will also be able to see exactly how much energy each system scenario will produce along with relevant financial information such as available incentives and estimated annual energy savings. Our System Designers will work with you to create the perfect solar electric system to match your location and needs.



SHADING

Shading has a significant impact on the efficiency of the solar panels and overall system. The Energy Trust of Oregon and Oregon Department of Energy will not issue financial incentives for systems with less than a 75% Total Solar Resource. We cannot overemphasize the negative impact shading can have on a PV system's performance- shading is one of the most common factors prohibiting a potential system installation on one's house or property.

SOLAR PANEL AESTHETICS

We suggest using the natural grade or pitch of your home's roof to install the panels parallel to the shingles. We use a high quality racking system to raise the panels approximately 3 inches above, yet parallel, to the roof's pitch. This method encourages airflow under the panels, thus improving system efficiency while also preventing leaves and snow from accumulating under the panels. We can quickly show you how much electricity your system would generate by entering various roof orientations and roof pitches into our computer model.

ROOF INSTALLATION AND WEIGHT LOAD

You must have at least a 15-year life expectancy with your existing roof material to be eligible for the Energy Trust of Oregon cash incentive. Throughout your installation, we use industry-leading practices and the highest quality materials to prevent any leaking or damage to your roof. Our five-year labor warranty guarantees your roof will not have any exposed rafter lags and is protected from the water and sun. The solar panels and racking system are engineered by the manufacturer and designed by Sunlight Solar to withstand severe weather conditions, including 120-mph winds and 50-mph hail stones.

SOLAR PANELS

Solar panels are composed of either rigid crystalline or flexible thin-film cells. Rigid crystalline panels are usually made of silicon and act like a semi-conductor. They are anywhere from 12-22% efficient, while thin-film solar panels are a relatively new technology and are currently only 6-9% efficient. Solar panels have no moving parts and so require little maintenance and have a long expected life. Generally, the manufacturer's warranty guarantees the panel will produce 80% of its rated capacity for the warranty period (usually 25 years). Once installed, experts say solar panels can produce electricity for 35 years or more, but with possibly less efficiency due to degradation. Our primary maintenance suggestion is to keep the panels and equipment clean from dirt and debris as much as possible.



9.89 kW SunPower 205 Black Modules- Bend, Oregon

Many of Sunlight Solar's installations include SunPower high-efficiency solar electric panels. We are the only authorized SunPower dealer in Oregon. SunPower solar panels are not only the highest efficiency modules available (20+% efficiency), they are also the most beautiful. One model, the SPR-225 is the most aesthetically pleasing to homeowners and neighbors alike. Its metal casing, cover glass, inter-cell spaces, and solar cells are all black. In addition, SunPower panels have a 25-year warranty. They truly live up to their motto as, "The rare combination of beautiful design and intelligent engineering."

ENERGY PRODUCTION

At this point, you might be wondering how much electricity a system will produce. This is based on panel and inverter efficiency, roof orientation and pitch, annual shading and other factors. A simple method to estimate energy production is the online PVWATTS Calculator from the National Renewable Energy Lab available at: <http://rredc.nrel.gov/solar/calculators/PVWATTS/> (Use Version 1).

A typical 10-panel system can generate approximately 10 kWh of electricity on average per day, throughout the year. Each utility shows your electrical usage in Average kWh per day, usually seen in the upper right-hand corner of your monthly electric bill. Please keep in mind that these energy production estimates might be lower if your roof orientation, roof pitch and annual shading present less-than-optimal conditions. We use fairly conservative methods when estimating your energy production and payback information. However, some homeowners have recorded significantly higher daily production numbers. Once your system is installed, the power is in your hands!