Example: <https://www.solarenergy.org/solarize-faqs/>

The following is a guide for answering frequently asked questions during a Solarize program. Its intended use is as a resource on the Solarize web page, or as an available guide to program coordinators for reference throughout the program.

**Q: How does rooftop and ground mount solar work?**

**A:** A solar electric system – using photovoltaic panels (PV) – generates electricity that can be used throughout your home or you can even get credited for excess energy generation that rolls back to the grid. PV panels generate direct current (DC), that is converted to alternating current (AC) by an inverter (AC). This allows the power to be consumed by your home or business. To learn more about how this works, we welcome you to attend an outreach event.

**Q: What are watts, kilowatts, and kilowatt hours?**

**A:** The size of a solar electric system is often described in Watts (W) or kilowatts (kW). 1 kW = 1,000 W. Watts are a unit of power, just like the horsepower of an engine. They express the maximum possible output of energy the system can produce at any point in time. When sunlight strikes solar electric panels, they produce electricity that is measured in kilowatt-hours (kWh). One kilowatt-hour is a kilowatt of power sustained for one hour. Kilowatt-hours are the units of energy you buy from your utility and use in your home to run your appliances, lighting and electronics. Your kWh usage will help to dictate the size of system you need to offset your energy usage with solar power. By submitting your monthly usage we can get you started with a free remote site assessment.

**Q: Is Western Colorado Sunny Enough for Solar?**

**A:** You bet! One of the first pieces of information solar installers use to determine if a location is an ideal spot for solar is determining solar irradiation, or sunlight intensity. This measurement over time is known as solar insolation. At 300 days of sunshine, Colorado has some of the best solar insolation in the country! Installers can then take solar insolation data and plug it into PV performance software to predict the kWh potential of an install site. Using this information we can determine that each kW of installed solar in Western Colorado will produce about twice as much energy as the same kW in Germany, the world leader of installed PV! Now we just need to determine if your home or business is right for solar.

**Q: Is my neighborhood/geographic region sunny enough for solar?**

**A:** You can get an estimate of how much electricity you can generate by visiting [pvwatts.nrel.gov](http://pvwatts.nrel.gov) and entering in your address and site information. This site uses weather information and specifics for your location, including a feature you can use to draw where your solar array will be located on your property to estimate output. If you have a limited obstructions, chances are you are a good candidate for solar.

**Q: Is my house right for solar?**

**A:** Solarize will examine your property and let you know if it is suitable for solar. In general, solar works well on south, west, southwest and even sometimes east-facing roofs. There should be little or no shading from trees, buildings, chimneys or roof gables on or adjacent to your home.

If your roof is old or damaged, you may need to replace part or all of your roof before installing solar. If your rooftop is not suitable, you might consider a ground-mounted system. In some instances, an electrical upgrade may be needed if your home has older wiring. Your installer will help you assess these issues.

**Q: What are my options for solar if I am not a homeowner?**

**A:** Options for renters include leasing power from a community solar array or purchasing green power credits through your utility.

Community solar arrays allow you to ‘buy in’ to an array that generates power to offset your power use, no matter where you are located on the grid. [Search for an array in your area here.](https://www.energysage.com/community-solar/projects-companies/?rc=seia)

 Green power is often offered by utilities usually at a slightly increased price, and they use these funds to purchase wind or solar energy for their portfolio and your grid-tied use. You can inquire with your utility about this program, or [search here](https://www.green-e.org/certified-resources) for verified green power providers.

**Q: What is grid-tied solar electricity, and do I need to be tied to the grid to participate in Solarize?**

**A:** Grid-tied solar uses your local electric utility grid for storage of the power produced by your solar system. Your system generates power that flows back on to the grid during sunny hours, and in turn, you use power from the grid during cloudy or dark times of use. Off-grid systems store power in battery systems.

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Typical Solarize programs tout incentives provided by local utility grid-tied systems, but may not exclude off-grid installations. Check with your Solarize **organization** to find out if off-grid systems are eligible.

**Q: What is net metering?**

**A:** When you install solar panel and complete a net metering arrangement with your utility, your electric meter will be replaced. Your new meter will measure both the electricity you are purchasing from your utility and the electricity you are sending to the grid. The utility tracks both of these when it reads your meter, and you are charged only for your “net” energy use – the electricity you purchased minus what your solar system sent to the grid. If your solar system generates more kilowatt-hours than you purchase in a given month, you receive a credit on your account for those excess kilowatt-hours at the full retail rate. That credit can be used up in later months. INSERT ANNUALIZATION POLICY OF UTILITY I.E. CANCEL OUT OR END OF YEAR CHECK.

**Q: Can I benefit from state and federal tax credits?**

**A:**

Well many incentives and rebates have tapered off in recent years as the price of solar has dramatically dropped, some still exist most notably the Federal Income Tax Credit. Through the end of 2019, those that purchase solar can earn a 30% deduction on their income taxes and if your liability is lower than the deduction, it can be carried over to the next year. It’s a dollar for dollar reduction and even includes a roof upgrade if one is needed. You must own the system and have tax liability. After 2019 the deduction lowers to 26 percent in 2020 and 22 percent in 2021 before sunsetting. The Colorado legislature allows locales to dictate whether solar is exempt of sales and property taxes. Contact your city and county to learn more.

**Q: Can a non-profit or government entity benefit from tax credits?**

**A:** A non-profit does not benefit from tax credits because they are tax exempt. However, there are often other incentives for solar installations, such as selling Renewable Energy Credits (RECs) back to your utility. Non-profits can take advantage of potential grant or rebate opportunities as well as join a community-solar garden. Some projects have even been grouped together to attract larger developers.

**Q: What financing option are available for installing solar?**

**A:** Banks will often offer ‘green’ loans to their customers for efficiency upgrades and/or solar installations at **competitive** interest rates. Some states are starting to offer financing and some local utilities may even offer on-bill financing. Check with your local financial institutions, state energy office and utility to learn more. The Solarize team has also compiled a list of loan providers that I can share with you including the C-PACE program and statewide RENU residential loan through Elevation Credit Union.

**Q: What maintenance will my system require?**

**A:** In general, the PV modules should be kept clean of debris such as excessive dust, leaves, sticks, bird droppings, etc. Accumulation of such material on the panels can affect power output, but rainfall in Colorado is generally adequate to wash off the panels and keep that effect to a minimum.
We advise performing a visual inspection of the PV array and checking the system output production on inverter or monitoring system at least once per month to ensure proper operation. More than likely, everything will be working just fine. However this is a great habit to help catch any potential issues early and minimize any downtime.

**Q: How long will the installation process take?**

**A:** Once your contract is signed and your contractor is on site, installation will likely only take one or two days. Following installation, installers will submit your net-metering application with the utility and the next step is to await interconnection and energization.

**Q: What kind of permits will I need?**

**A:** Permitting varies in different areas, but your solar contractor and local Solarize organizer will get you started and help through each step of the permitting process.

**Q: Does the material or condition of my roof matter?**

**A:** Solar arrays can be installed on most roof types including shingle, metal and tile. If your roof needs replacing in the next twenty, you’ll need to replace it or consider a ground-mounted system. Your installer can help you determine the condition of your roof and what steps to take.

**Q: How much space do I need on my roof?**

**A:** A good rule of thumb is that 1 kW of solar electric panels require about 100 square feet of space and will typically produce 1,000-1,500 kWh of electricity each year. Once you share your annual utility usage with us, we can get a better idea of system size and subsequent roof space needed.

**Q: How does my participation in Solarize benefit the community as a whole?**

**A:** Solar power offers energy independence from foreign sources, as well as keeps money in your local economy by providing jobs. Additional dollars are kept local because they are not going to the large power-supplying companies that are based far-away, where many utilities purchase their power.

Solar reduces our dependence on non-renewable energy and is a wise investment- Nowadays, the average system pays for itself in 9 - 12 years.

**Q: Why go solar with the Solarize program?**

**A:** Solarize programs provide an easy, streamlined process for going solar. They combine pricing incentives with resources that help clients like you through each step of the process. Solarize campaigns are usually time-limited and provide a simple process and package solutions for those who would like to go solar but were unable to afford it in the past, were overwhelmed by technical details or confused by having to choose between contractors. Solarize assures ‘safety in numbers’ when communities and neighbors are going solar together, as well as trusted help through the process.

**Q: Are there building upgrades I should consider before going solar?**

**A:** Yes- If you have high electric utility expenses that can be lowered with efficiency upgrades, get those done first. The cheapest kWh is the kWh not consumed. Additionally, if you are planning on a roof-mounted system, your roof should be sturdy and not need replacing within the next 20 years.