

# 10 STEPS TO TAKE BEFORE INSTALLING SOLAR



As your electric cooperative, we want to be your trusted source for energy and information. Since solar power generation is rapidly becoming more widely available, we put together this resource to help answer questions you might have.

Contact us for more information about solar at your home.

As prices decline and technology improves, installing a residential solar system—also called a photovoltaic or PV system—makes sense for some consumers. However, even with recent improvements in PV, it's important to know the facts before committing to a purchase. Consider the points below as you explore whether solar is right for you.



#### MAKE YOUR HOME MORE ENERGY EFFICIENT BEFORE BUYING A SOLAR SYSTEM.

Sealing air leaks, adding insulation and completing other common fix-it projects make sense for several reasons. You can cut your energy costs immediately, and you'll be able to reduce the size of the PV system you purchase. Your cooperative may offer a free energy audit to members or might be able to provide a list of qualified auditors in your area. Check your cooperative's website for solar energy or renewable energy information.



## RESEARCH, RESEARCH, RESEARCH BEFORE INVESTING IN A SOLAR SYSTEM.

Your electric cooperative should be one of your first contacts. Experts at your co-op can answer common questions, provide resource materials, direct you to reputable websites and possibly have a list of trustworthy contractors and other experts in your region.



## REVIEW YOUR CURRENT ENERGY USE SO YOU CAN DETERMINE WHAT SIZE PV SYSTEM TO INSTALL.

Your electric cooperative staff can help you review your past energy use and determine how the projects you've undertaken to improve energy efficiency may help lower your future energy use. One action that will be useful is looking at how your energy use fluctuates throughout the day. Having that information will help you identify—with expert assistance—the size and type of system best suited to your situation.

To help determine your size and type of system, it is important to know how your



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#### UNDERSTAND HOW A SOLAR SYSTEM INTEGRATES WITH YOUR COOPERATIVE'S POWER GRID.

Most solar systems are designed and purchased to provide a portion of the electricity needed some of the time, and won't provide 100 percent of the needs all of the time. At night, on cloudy days and possibly at high-energy-use times, you'll need more power than your PV system can provide, so your home will pull from your cooperative's grid (you will still be connected to those power lines). Alternatively, during the middle of a sunny day, your home may use less power than the PV system produces, and you may be able to send that extra power back to the grid to be shared with your neighbors. Each electric utility-including your cooperative-sets policies and rates for connecting PV systems to power lines (the grid) and for possibly purchasing any excess energy your system might provide. As you begin to explore solar systems, be sure to ask cooperative experts about rate structures, interconnection, essential safety precautions and any other connection-related details.



Most electric cooperatives do not sell, install or maintain PV systems, so you will either purchase or lease one from a separate contractor. If you purchase a system, you will be the owner, and you'll be responsible for the purchase price as well as ongoing maintenance and repair costs. If leasing is the option you prefer, you will pay less initially, but you'll likely have higher ongoing costs. In either case, it pays to spend time figuring out the expenses you'll be responsible for during the life of the system (at least 20 years). These may include installation (in addition to the price of the system), interconnection costs, insurance, taxes and more. If you are leasing, ask contractors about the length of the term, if the contract is transferrable to a new homeowner, and about the potential for price increases, as well as the same questions you'd ask if you were purchasing the system. In the "credit" column of your price comparisons, look at any incentives, rebates and tax credits offered for either a purchase or a lease.



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Any financial incentives available will help reduce your investment costs. Opportunities vary by state and locale, and many have expiration dates. One database offering details is www.dsireusa.org. This site includes a clickable, interactive map showing federal and state incentives, credits, exemptions, grants, loans and rebates for residential and commercial/industrial projects. In addition, your electric cooperative staff and your contractor should have up-to-date details about incentives available where you live.





If you purchase a PV system, you'll need to meet the requirements of your electric cooperative's interconnection agreement. That includes paying any costs of connecting to the cooperative grid. Local and/or state officials are responsible for conducting safety inspections, but it's your responsibility to notify them in advance about your installation. After the interconnection requirements are met and the safety and integrity of your system are approved, your cooperative will take care of the connection to the grid. As the owner of the system, you'll be responsible for maintenance and system repairs. If you lease a system, your responsibilities will depend on the agreement you sign. Be sure you know and understand what those are.

### As the owner of the system, you'll be responsible for maintenance and system repairs.



Most solar systems are grid-connected. Because of the two-way flow of electricity, excess energy your PV system collects during the daytime flows into your cooperative's lines. This requires the installers and inspectors to ensure the safety of your cooperative line staff, others who may come in contact with a downed power line and your cooperative's equipment. Improper connection and maintenance of your system may endanger people and the reliability of the grid.



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Start with a list of options gathered from online research, your electric cooperative, local or state Better Business Bureaus, renewable energy associations, your state energy office, your state attorney general's office, extension service staff, neighbors and friends, and any other local experts you can call on for assistance and advice. Contact at least a few of those contractors and update your list as you learn more from asking questions, comparing bids (get at least three), checking references and examining contracts. If possible, ask a contract specialist or lawyer to review the contract before signing. (See our fact sheet Questions to Ask a Solar Contractor for more details.)



#### MAINTAIN GOOD RECORDS.

Keep files on your pre-purchase research and preinstallation data provided by your cooperative, as well as bids, contracts, inspection reports, maintenance records and all other details you may need to refer to in the future. In addition, you'll want to know about system performance, so set up a way to track and compare your actual performance with predictions provided by the contractor/installer.

**ENJOY.** Whatever path you decide to take, thank you for continuing to communicate with your electric cooperative as we all strive for a safe, affordable and reliable power supply.







