

CONSIDERING SOLAR?

As your electric cooperative, we are your source for energy and valuable energy information. Since solar power generation is now widely available, we put together this pamphlet to help answer questions that you might have as you explore whether solar is right for your household. As prices decline and technology improves, installing a residential solar system - also called distributed generation or a (DG) system - makes sense for some members. However, even with recent improvements in solar array systems, it is important to examine some facts and understand the process before committing to a purchase.

Please contact us for helpful information about installing a solar array before choosing a system and entering a solar purchase agreement.



UNDERSTAND THE INTERCONNECTION AGREEMENT.

Distributed generation (our way of saying solar) is a significant and complex undertaking and requires an interconnection agreement with CVEC. The interconnection agreement sets the rules for how our systems will work together. (Your DG system and our electric grid.) There are many safety specifications required to ensure protection of your family, home, and community. The Agreement for Interconnection and Distributed Generation Guidelines are both available on our website and are necessary steps in the process of connecting your solar array system to the cooperative's electric grid.

There are additional costs to the cooperative when providing service to a DG system and some of these costs are passed down to the DG owner through fees. There is a \$300 - \$400 (one-time) interconnection fee and a recurring \$15.25 monthly Residential DG Facility Fee. All residential members also pay our recurring \$24.75 monthly customer charge. (All fees and rates are subject to change. Please visit our website for more information on fees, rates, and buy-back pricing.)

Each interconnection agreement must be approved, and a pre-inspection must be completed prior to beginning construction on a solar array system. There are several regional and national solar installation companies to choose from, but it is important to remember that they are required to adhere to our interconnection agreement when installing your solar array system. It is your responsibility to notify CVEC in advance of your installation.

Please be aware that if you finance a solar array system, your payments may start prior to connection to CVEC's electric grid. CVEC's approval of the interconnection agreement may take up to 60 days (or longer) and in some situations we may require changes to your solar set up. All solar array systems MUST pass an inspection by a CVEC employee before the system can connect to CVEC's electric grid. We encourage all members to read our interconnection agreement before signing any contracts.

MAKE YOUR HOME MORE ENERGY EFFICIENT.

Adding insulation, sealing air leaks, and completing other basic energy-saving projects can help lower your electric usage and may reduce the size of the solar system needed.

UNDERSTAND HOW A SOLAR ARRAY SYSTEM WORKS WITH YOUR COOPERATIVE'S SYSTEM.

Normally solar array systems are designed to meet a PORTION of the household's energy needs and will not provide 100 percent of the household's electricity usage. You will still need to purchase electricity from your cooperative and that means your home will still be connected to the cooperative's power lines. Because solar array systems are grid-connected, energy can flow both ways. Every utility - including CVEC - sets appropriate policies and rates for connecting solar array systems to their lines and the grid. As you begin to explore solar array systems, please feel free to ask us about our rate structures, essential safety precautions, ideal placement for panels, the different types of equipment available and any other connection-related questions.

FOR MORE INFORMATION, PLEASE CONTACT CONCHO VALLEY ELECTRIC COOPERATIVE (325-655-6957) AND SPEAK WITH YOUR TRUSTED ENERGY ADVISORS.

REVIEW YOUR CURRENT ENERGY USAGE TO DETERMINE WHAT SIZE SOLAR ARRAY SYSTEM TO INSTALL.

You can review your past energy usage online through CVEC’s web portal, SmartHub, or by calling a member service representative. Knowing how your home’s energy use fluctuates throughout the day will help determine the size of your solar array. Having that information will help you determine the size and type of system best suited to your situation. CVEC advises members to contact us with the generation information provided by the solar company to compare with your hourly historical data to produce an accurate estimate of future electric bills.

BEFORE INVESTING IN A SOLAR ARRAY SYSTEM.

Research the equipment that you are considering installing. Please know that the type of solar panels used, the positioning of the array, and the type of inverter installed can make a positive or negative impact on the solar generation of electricity.

TALLY UPFRONT COSTS AND ASK SOME QUESTIONS.

There are numerous expenses associated with solar array systems that occur over the life of the system. These may include installation (in addition to the price of the system), interconnection costs, insurance, taxes, maintenance, system repairs, etc. CVEC advises members to consult their homeowner’s insurance company to determine the cost of coverage for their planned solar installation. Often, homeowner’s insurance will cover repairs to the roof, but not the cost of removal or re-installation of solar equipment.

Also, it is important to ask possible contractors about the length of the contract term and if the contract is transferrable if your home is sold. It’s important to determine the payback period and compare it to CVEC’s cost of service.

SEARCH FOR INCENTIVES, REBATES, AND TAX CREDITS.

Any financial incentives available will help reduce your investment costs. Opportunities vary by state and locale, but many have expiration dates. One database offering details is www.dsireusa.org. This site includes an interactive map, showing federal and Texas incentives, credits, exemptions, grants, loans, and rebates for residential and commercial/industrial projects. In addition, your contractor should have up-to-date details about incentives available where you live. CVEC recommends seeking counsel from a tax adviser for further information.

CHOOSE A REPUTABLE CONTRACTOR/INSTALLER.

Start with a list of options garnered from website research, local and state Better Business Bureaus, renewable energy associations, Texas

Solar Energy Society (txses.org/solar-organizations-and-reports), county extension service staff, and any other local experts you can call on for assistance and advice. Compare bids, check references and review installations the contractor has previously completed. Try to thoroughly examine contracts (looking at start dates and cancellation policies) to narrow your list. Ask a contract specialist or lawyer to review the contract before signing.

WE ARE A TEAM.

Solar systems are grid-connected, which means electricity not only flows in (when needed,) but it also flows out. Because of the two-way flow of electricity, excess energy produced by your solar array system will flow into the cooperative’s lines. This flow of energy is potentially harmful to CVEC linemen, others who can contact a power line, and the cooperative’s equipment. Improper connection and maintenance of your system may endanger people and the reliability of the grid, so we require inspections. These inspections, performed by CVEC, help to ensure the safety of your solar array system, community members, CVEC employees and will also help to protect CVEC equipment.

For the safety of everyone, your solar array system should not connect to CVEC’s electrical grid without CVEC’s knowledge. If a solar generation system is installed and energized without CVEC’s knowledge, CVEC can disable and lock out the system until the interconnection process is complete. If the solar array system is not easy to isolate, then CVEC can disconnect electric service until the system is visibly isolated. Any trip made to a location that does not meet the requirements for interconnection may incur a trip charge. If your home is located within the city limits of San Angelo, you may also incur trip charges from the City as well. CVEC recommends scheduling your city inspections after a successful post-inspection is completed by CVEC to help avoid any unnecessary changes.

Only CVEC technicians are authorized to remove the CVEC electric meter. A third party removing the meter for any reason can result in a tamper fee to the member.

MAINTAIN GOOD RECORDS.

Keep files on your pre-purchase research and pre-installation 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 the solar array system’s performance. We recommend setting up a tracking method to compare your actual system performance with the predictions provided by the seller of your system.

STANDBY OR PORTABLE GENERATORS

Be aware that it is a safety hazard to connect a generator to a home’s electrical system without a proper generator transfer switch. An improperly installed generator is a hazard to both members and CVEC lineman.

Read the CVEC Standby Generator Requirements prior to installing a standby generator at cvec.coop/energy/technology/standby-generators.



QUESTIONS TO ASK BEFORE INSTALLING SOLAR

WE HAVE COMPILED A SHORT LIST OF QUESTIONS MEMBERS CAN USE WHILE RESEARCHING SOLAR GENERATION SYSTEMS. THERE ARE MANY MORE QUESTIONS TO ASK, BUT THIS LIST CAN SERVE AS A GOOD STARTING POINT.

QUESTIONS FOR SOLAR CONTRACTORS

Regarding the estimate for annual savings, does the data reflect the utility billing and buy-back policies as stated in the utility’s interconnection agreement?

- Do the estimated savings from your solar project include assumed rate increases by your provider?
- Does the projected yearly savings include interest costs associated with your loan?

How long is the life of the loan?

What is the interest rate on the loan?

Is there a fee to transfer the loan?

Does your loan include a prepayment penalty?

What is the total cost of the solar installation after the loan term?

Is the loan transferrable if the property is sold?

When do my payments begin?

- Set number of days after contract is signed?
- When permission to operate is granted by the utility?
- When solar array construction is completed?

What type of solar panels will be installed?

- What is the efficiency?
- What is the life expectancy?
- How much will they degrade?

What type of inverter will be installed?

- What is the efficiency?
- How does the inverter compare to others?

What is the direction and pitch of the solar panels, and why?

What is the estimated production for each of the following?

- South facing? •East facing?
- North facing? •West facing?

What happens if my solar array system does not perform as promised?

What is the maintenance cost of the solar generation system?

What is the cost to remove the system and reinstall the system if I need to replace my roof?

Who covers the interconnection and application fees?

QUESTIONS FOR SOLAR CONTRACTORS

How long does it take to install a solar array system?

What is the cost per watt for the system?

Will the warranty transfer with the sale of the property?

QUESTIONS FOR YOUR UTILITY

What is the interconnection process from beginning to end?

How long does the interconnection process take?

What is my peak kW? What is kW (Demand)?

How much solar generation, in kW, is permitted?

Will the utility purchase extra kWh produced by my solar array system?

Will the utility provide an independent study of the system that I am considering installing?

When was the last time the utility had a rate increase and how much was the increase?

How long does it take to install a solar array system?

Will the approved interconnection agreement transfer with the sale of the property?

QUESTIONS FOR YOUR HOMEOWNER’S INSURANCE

Is the solar installation covered by my homeowner’s insurance?

How does it affect the premium of my insurance policy and what is covered?

Is the removal and re-installation of solar panels covered under roof repairs?

QUESTIONS FOR YOUR FINANCIAL ADVISOR

What are the current tax credits for solar?

Do I qualify for these tax credits based on my financial history?

AS WITH ANY MAJOR HOME IMPROVEMENT PROJECT, PREPARATION IS CRITICAL TO ENSURE THAT YOU GET THE BEST SYSTEM FOR YOUR NEEDS!

COMMUNITY SOLAR: AN EASIER OPTION

CVEC has developed “The Agnes Project”, a 15-acre community solar array, that allows members to buy into a solar energy system. For some, it is an appealing alternative to residential solar installations because there is no up-front investment to recoup, no maintenance to keep up with, no long-term commitment, and it is a hedge against potential rising energy costs.

CVEC's community solar project is a great option for those who want to participate in solar generation but do not have space on their roof or property. The 1-megawatt (MW) AC solar farm generates nearly 3 million kWh for CVEC members.

Members can participate by purchasing renewable energy shares in 200 kWh blocks up to a maximum of 800 kWh. The following blocks of solar energy are available for purchase and will offset the member's monthly electricity consumption during each billing period.

200 kWh @ \$24.00

400 kWh @ \$48.00

600 kWh @ \$72.00

800 kWh @ \$96.00

(The number of shares a member can purchase is based on their minimum usage.)

There are no activation or termination fees. You can opt in or out at any time!



For more information visit cvec.coop/services/solar or call 325-655-6957.