

Top 10 Considerations Before Installing a Distributed Generation System

The following are 10 key pieces of information to consider before installing a solar or wind distributed generation (DG) system. As you work through the process, additional information may emerge as key items to consider.

Above all: Make safety your top priority when considering any type of system that will be interconnected to the power grid.



1. Energy efficiency.

Completion of an energy efficiency audit is an important precursor to considering distributed generation. Implementing energy efficiency measures can save you money by reducing your overall energy or water consumption, which subsequently reduces the size of the distributed generation system you'll need to meet your energy needs.

2. Do your homework.

First and foremost, if you are considering investing in a distributed generation system, talk to St. Croix Electric Cooperative at the outset of your process. Also talk to local skilled professionals who are knowledgeable in distributed generation systems. They can advise you of resources to help you understand the economics of a distributed generation system; what type of renewable energy technology would be best for your property; and financing, potential incentives, and other requirements, such as insurance.

3. Analyze your electric load and understand the DG system's capabilities.

Understanding your electricity use and overall energy needs are among the first steps in the process of determining whether a distributed generation system is a good investment for you. A thorough examination of your electricity needs helps determine the size and type of the system you will need, and how your energy use fluctuates throughout the day, seasonally and over time. By researching when various distributed generation systems produce peak energy, you can correlate that information with your current and expected energy use. You'll most likely still need power from a centralized energy grid, so it's important to realize that distributed generation is intended for supplemental power to meet your own energy needs.

4. Determine the costs upfront.

St. Croix Electric Cooperative does not install or maintain member-owned distributed generation systems. The member-owner of the distributed generation system is responsible for the initial upfront costs to install the system as well as ongoing maintenance and repair costs. Doing your homework before investing in a system will help you to understand what costs will be involved, such as installation and interconnection costs, insurance, taxes, etc. Costs will vary if you buy a new or used system, and there are variables such as incentives and tax credits. Your research will help determine if a distributed generation system is economical for your energy needs.

5. Know St. Croix Electric Cooperative's rate structure, interconnection and purchased power polices.

As distributed generation becomes more common, many utilities, are examining their rate structure to ensure rates are non-discriminatory between distributed generation member-owners and non-distributed generation member-owners. St. Croix Electric Cooperative can help you understand the rate structure under which you will take service and what type of charges are likely to be incurred, as well as how you may be compensated for the excess energy you don't use that is generated by your distributed generation system.

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6. Research potential incentives, tax credits.

It's important to know what types of financial incentives are available to offset your investment costs. Incentives often are driven by laws or policies, have expiration dates, and can vary by type and size of system, whether for residential or commercial/industrial use, and other factors. The Database of State Incentives for Renewables & Efficiency (www.dsireusa.org) is one source of information on incentives and policies that support renewables and energy efficiency in the U.S. The site features an interactive map, which allows users to click on a state to see a comprehensive listing of federal and state incentives, credits, exemptions, grants, loans and rebates for residential and commercial/industrial projects and programs. Talking to a representative from St. Croix Electric Cooperative can also be helpful.

7. Know safety requirements.

Distributed generation systems on St. Croix Electric Cooperative's lines are interconnected to the grid. To have reliable electric service available at times when your system isn't producing sufficient energy to meet your needs, SCEC provides backup electricity. Because of this connection, distributed generation owners must work with St. Croix Electric Cooperative to meet all requirements to keep the grid reliable and safe. This also will help protect your investment so if the grid experiences an outage, your system does not burn up trying to fulfill the electricity needs of other member-owners on the grid.

All interconnection and safety requirements must be met prior to operating a distributed generation system in parallel with St. Croix Electric Cooperative's electric distribution system. This is necessary to protect other member-owners, Cooperative employees, public safety personnel and the general public from risks that could result from the improper installation of a distributed generation system.

8. Understand responsibilities.

Installing a distributed generation system requires that certain responsibilities are met by all parties involved. For example, the member-owner of the distributed energy system is responsible for obtaining the proper equipment and ensuring all requirements of St. Croix Electric Cooperative's interconnection agreement are met, including paying any necessary costs. Local and/or state officials are responsible for conducting safety inspections, but the member-owner of the distributed generation system must notify the local and state officials in order to set this in motion. Once all interconnection requirements are met and the safety and integrity of the system meet all necessary criteria, then the Cooperative is responsible for the final stages of interconnection. Ongoing maintenance and system repairs are the responsibility of the generation system member-owner.

9. Choose a reputable contractor.

If you decide to install a distributed generation system, it's important to find a reputable installer who will size the system properly after you have implemented energy efficiency measures, and who will give you realistic expectations. Ask for references, check online consumer reviews and ask for third-party input from credible resources. Refer to the North American Board of Certified Energy Practitioners (NABCEP) at NABCEP.org to locate certified installers and practitioners in your area or contact St. Croix Electric Cooperative for a list of local installers familiar with SCEC's interconnection requirements.

10. Keep thorough records.

Establish a thorough record-keeping process. Retain all data and research that you gather as well as information that is provided by St. Croix Electric Cooperative, vendors and other credible third-party sources. If you proceed with a distributed generation system, track and compare actual system performance with expected performance based on vendor information.