



Top 10 considerations before installing a distributed generation system

Prepared by Dawson Public Power District in cooperation with the Iowa Association of Electric Cooperatives.

As you work through the process, other items also may emerge as key items to consider. As always, make safety your top priority when considering any type of system that will be interconnected to the power grid.

1. Implement energy efficiency.

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

2. Do your homework before you write the check.

First and foremost, if you are considering investing in a customer-owned generation system, talk to Dawson PPD at the outset of your process. Then, we recommend you also talk to skilled professionals who are knowledgeable about generation systems. Once you share some of your preliminary research with them, they can advise you of additional resources to help you understand the economics of a generation system: what type of renewable energy technology would be best for your property; and financing, potential incentives, and other requirements.

3. Know Dawson PPD's rate structure and interconnection and purchased power policies.

As customer-owned generation is becoming more common, many electric utilities are examining their rate structure to ensure that its rates are non-discriminatory. Dawson PPD can help you to understand the rate structure and what type of charges are likely to be incurred. They will also explain how you will be compensated for the excess energy produced by your generation system.

4. Analyze your electric load and understand the customer-owned generation system's capabilities.

Understanding your electricity use and overall energy needs is one of the first steps in the process of investigating whether a generation system is a good investment for you. A thorough examination of your energy consumption helps you determine the size and type of the system you will need, and how your energy use fluctuates throughout the day, seasonally and over the year. By researching when various customer-owned 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 customer-owned generation is intended for supplemental power to meet your own energy needs.

5. Determine the upfront costs.

As an individual owner of the generation system, you will be 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 to determine if a customer-owned generation system is economical for your energy needs.

6. Research potential incentives and 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 it's for residential or commercial/industrial use, and other factors.



7. Understand responsibilities.

Installing a customer-owned generation system requires that certain responsibilities are met by all parties involved with the process. For example, the owner of the generation system is responsible for obtaining the proper equipment and ensuring that all requirements of Dawson PPD's interconnection agreement are met, including paying any necessary costs. Local and/or state officials are responsible for conducting safety inspections, but the owner of the 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 Dawson PPD is responsible for the final stages of interconnection. Ongoing maintenance and system repairs are the responsibility of the generation system owner.

8. Know safety requirements.

Customers who choose to install generation systems are connected to the grid. To have reliable electric service available at times when your system isn't producing sufficient energy to meet your needs, Dawson PPD provides backup electricity. Because of this connection, generation owners must work with Dawson PPD to meet their requirements to keep the grid reliable and safe. This also will help to protect your investment so that if the grid experiences an outage, your system does not burn up trying to fulfill the electricity needs of other customers on the grid. All interconnection and safety requirements must be met prior to operating a customer-owned generation system in parallel with Dawson PPD's electrical distribution system. This is necessary to protect other customers, Dawson PPD employees, emergency personnel, and the general public from risks that could result from the improper installation of a customer-owned generation system.

9. Choose a reputable vendor.

If you have decided to install a 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.

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 Dawson PPD, vendors and other credible third-party sources. If you proceed with a customer-owned generation system, you will want to track and compare actual system performance with expected performance based on vendor information.