

# Ask the right questions about wind

Interested in buying a wind turbine? Make sure to ask these questions first.

## **1. How reliable is the rated energy output? How did you calculate the output? What wind speeds did you use?**

Experts advise ignoring peak output and power curves provided by vendors. Rather, look for the monthly or annual energy output — in kilowatt-hours — for the turbine, estimated for the average wind speed that you expect or have measured at your site.

## **2. Is the inverter UL listed?**

If the inverter (required to convert direct current power from the turbine to alternating current power of the grid) is not Underwriters Laboratories, Inc. (UL), listed, find another vendor. Most electric co-ops require that an inverter carry a UL 1741 certification for interconnection with the grid.

## **3. What is the estimated total installed cost? What does the turbine cost? What does the tower cost? How much is installation estimated to cost? How much will interconnection cost? How much maintenance will be required and what will it cost?**

Budget for labor expenses as well as the cost of equipment rental, concrete and rebar, electrical components, shipping, and sales tax. It adds up fast.

## **4. How long is the warranty? What does it cover — parts? Labor? Can it be extended? If so, what will it cost?**

Warranties range from one to five years. The longer the warranty, the better. Make sure the warranty covers labor as well as parts. Ask owners of wind systems purchased from the same vendor about performance and reliability before making a decision on an extended warranty, if available.

If you live in an area prone to lightning strikes, you should strongly consider the option of lightning protection.

## **5. How long has the vendor been in business? How many turbines have they sold? Have their turbines been certified? Can they perform maintenance, or is there another licensed repair technician in the area?**

Look for vendors that have been in business

for at least five years or have acquired the product line of another vendor. In addition, ask the vendor for the names of at least two people who have installed a similar model wind turbine. Check with the references to ensure they are happy. Ask them if there was anything they wish they had known before investing in a turbine.

The Small Wind Certification Council has been conducting a small wind certification process in the U.S. ([www.smallwindcertification.org](http://www.smallwindcertification.org)). Small wind turbines can be certified using the International Electrotechnical Commission (IEC) standard, IEC 61400-2, for testing wind turbine power performance. This standard is increasingly used by U.S. manufacturers.

## **6. What are your electric co-op's interconnection policies? What will the co-op pay for any excess energy you may produce?**

Electric cooperatives must provide all of their members with safe, reliable, affordable electric service.

Most co-ops have interconnection policies designed to permit interested members to own their own generation without impacting the quality or cost of service received by other members. Knowing what those policies are before purchasing a wind turbine will help you better evaluate the full costs and benefits of the investment.

## **7. What local zoning laws, electrical codes, homeowners' association requirements or other local laws and standards apply to wind turbines?**

Some local zoning ordinances and homeowners' association policies restrict the height of wind turbines or require that they be set back a specified distance from the property line. Those restrictions may prevent you from taking advantage of the best wind resources or may require extra time to pursue a waiver or exception. Local electrical or building codes may also impose additional time or expense.

Mid-Ohio Energy Cooperative's website ([www.midohioenergy.com](http://www.midohioenergy.com)) shares the cooperative's experience with renewables. The site features a video examining the present and future of various forms of renewable energy. From here, members can also access real-time data from Ohio cooperatives' wind and solar projects.

