

# WINDLETTER

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## **SMALL TURBINE COLUMN:**

### **Planning Your Wind System (3)—Utility Requirements**

**--Mick Sagrillo, Sagrillo Power & Light**

In planning the wind power system that will go on your property, you've worked closely with your local zoning administrator or building inspector (see *Windletter*, July 2006), and the required permits are near at hand. Your wind generator will be erected any day now, right? Well, maybe. You still have two major forces to contend with: your utility company (if your wind turbine is going to be connected to the grid) and your insurance company.

Anyone interested in installing a utility-intertied wind system should contact his or her local utility before purchasing any equipment. Without permission from your utility, you will not be connecting your wind system to the grid. Besides the formal contract with the utility, there are a few "small details" they are concerned with including ensuring that required safety devices are part of the installed equipment, requiring liability insurance, possibly doing an inspection, and addressing the all-important "buy back" rate for any electricity that you back-feed onto the grid.

#### **Getting through to the utility**

Making initial contact with the utility could be one of your most formidable tasks. In all likelihood, there is no one specific person within the utility who deals with the permitting process for customer-owned, small scale generation or wind generators. Subsequently, often no one wants to make the crucial decision as to how you can interconnect your equipment to the utility grid. In addition, lots of "old wives tales" are circulating around utility hallways about linemen being electrocuted by runaway wind generators and other such nonsense.

Under the Public Utility Regulatory Policies Act (PURPA) of 1978, utilities are required to allow customers with wind generators and other renewable energy capabilities to interconnect their systems to the grid. While most utilities are well aware that they are so required, getting them to cooperate may be another matter entirely.

With that in mind, it often pays to contact your state's public utility commission, the folks who regulate utilities, even before approaching the utility itself. These people

should know the permitting process for the various utilities and may even be able to put you in touch with the appropriate contact person at your own utility. When you do finally contact your utility, it does not hurt to mention that you've been in touch with the public utility commission.

### **Working through the details**

Once in contact with the utility, try to find out who is responsible for processing your interconnection application, and who will be making the final decision on your application. Be very prepared to answer all of that person's questions. If you cannot answer a question, admit it, then go out and find the answer yourself. Your project is not their priority. The utility is not interested in researching a project it may be skeptical about in the first place.

Your utility may ask for blueprints, electrical schematic diagrams, block diagrams, and component placement of the electrical installation. Its two most important concerns, however, will be an assurance that you have liability insurance and that your equipment includes some sort of system for automatically disconnecting the wind turbine from the grid should there be a power outage. All utility-connected wind systems currently on the market incorporate some sort of automatic disconnect mechanism should there be a power outage or in the event that the "grid goes down." Still, the utility may require a demonstration, or, at the very least, an inspection. Do not allow its lack of familiarity with such systems to be used as an excuse to not allow you to interconnect to the grid. Nor should you allow them to charge you thousands of dollars in engineering fees to review your electrical schematics or test your system. Utility interconnection of wind systems has been in use for over 28 years now, and literally tens of thousands of such systems are now interconnected to the grid across the U.S., to say nothing of world-wide installations. This is not a brand new or unproven technology.

The utility may require an external disconnect switch for line workers to pull when working on the grid in the vicinity of your installation. Even though these items are rarely if ever used, do not fight your utility on this. In this and other situations, always remember: utilities often consider "allowing" you to hook up your wind system to their grid analogous to "doing you a favor," even though they are required to by federal law (PURPA).

### **Fostering a productive relationship**

When working with your utility, keep in mind that there is no bigger turn-off than having to deal with an arrogant know-it-all. While you may be in the right, the utility is a lot bigger than you are, with much more legal expertise and more resources to fight your installation than you could ever dream imaginable. Your utility can make your permitting process very fast or unbelievably difficult. It has all the marbles, and it has the bag too. And it knows it. Few homeowners have the resources to challenge a utility in court, so your best bet in a case of irreconcilable differences is to work with your public utility commission.

If you go into the process armed with the proper knowledge, however, it is unlikely to ever come to that. And how much better it is to invite your utility out to inspect your wind system, test the automatic shutdown features, and become a believer when the staff members actually witness for themselves your wind turbine generating electricity and back-feeding onto the grid. I know of one homeowner who did just that, inviting the entire utility cooperative out to visit his installation. He ended up hosting the entire company, and he essentially gave a four hour workshop on wind generated electricity, answering questions along the way. The upshot? Besides allowing this homeowner to interface his wind system with the grid, the utility became educated on home-sized wind systems and are now advocates for the technology.

[Editors Note: The opinions expressed in this column are those of the author and may not reflect those of AWEA staff or board.]