

# WINDLETTER

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## **SMALL TURBINE COLUMN:**

### **Residential Wind Turbine Ailments in View of the Public Eye**

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

One of the issues that comes up most often at zoning hearings for small wind turbines is neighbors' concern about what will happen to the installation if the turbine is abandoned, or allowed to become derelict by the owner. However, an applicant for a wind system has the ability to increase the acceptability of his or her installation simply by making a few suggestions and concessions at the hearing.

Zoning hearings for home improvements or additions to one's property often allow for neighbors' input. In some cases, neighbors are notified by the zoning committee of a pending building permit application, and are even invited to attend the hearing to voice any concerns that they might have. In a strange twist on the concept of local control, disgruntled neighbors have sometimes been able to nix the applicant's proposed project, simply by showing up at a hearing and voicing opposition. This scenario has, unfortunately, occurred at a few zoning hearings for residential wind turbines.

The concern about derelict wind turbines is rooted in residential wind's history, dating back a few decades. During the Carter and Reagan eras from 1979 to 1985, as a result of the renewable energy tax credits, dozens of back yard manufacturers—along with several bona fide businesses—set up shop turning out a few to a few hundred residential-sized wind turbines. Homeowners and back-to-the-landers bought anything and everything. Some of this equipment lasted years, but some of it survived only months or maybe a few weeks before the first good wind brought about its demise.

Some owners, disgusted with poor equipment that reflected their poor consumer judgment, quietly removed their systems. But others just left the remains of the non-functioning turbine on top of the tower. Entropy set in, and some of these monuments to lack of design or manufacturing standards slowly fell apart, bit by bit, from atop of their towers. The upshot of these failed systems was that, for many years, small wind was saddled with the moniker that "small wind turbines don't work."

Fast forward two decades, and if you look around the small wind landscape today, without any kind of incentives—except for recent cost-sharing in a few states—you will find that only a handful of manufacturers remain in business in the U.S., with a few foreign manufacturers represented by U.S. distributors. The equipment that is available today is available because it survived the shakeout of the 1980s. And unlike some of the designs that came out of the 1980s, the equipment available today will generate electricity for years if properly taken care of.

Be that as it may, local zoning committees or the neighbors may not understand this history. Their memory is of wind turbines either jumping off of towers or slowly disintegrating over several years, the worst kind of advertising any technology can have. As a result, these folks may be justifiably concerned when an applicant approaches them to install what they may see as an eventual eyesore, even if

they are pro-renewables. While lots of 1980s-era solar and other renewable energy systems failed along with some wind systems, small wind turbines walked away with the black eye. Rightly or wrongly, home-sized wind earned a terrible reputation from derelict equipment primarily because of its visibility.

If you look at the situation from the point of views of the neighbors and zoning committee, they don't want a repeat of the abandoned equipment that often marred the earlier tax credit era. They just don't want to look a piece of equipment falling apart piece by piece over time from a tower. Nor should they. Indeed, it can reasonably be argued that such a situation poses a safety threat to the neighborhood.

Most zoning ordinances have language imbedded in them that deals with projects that are never completed, abandoned, or that become neighborhood hazards under a heading such as "public nuisance." These codes call for the removal of the building or equipment if the applicant fails to complete or abandons the project mid-construction. An applicant for a home-sized wind turbine could suggest such language to a zoning committee that is balking due to abandoned-equipment concerns.

Language that I have offered up to zoning committees has been as simple as: "Any wind turbine owner whose equipment is inoperable for six months will be notified by the zoning committee that the owners have six months during which to get their system back in operating condition. If the owner fails, the wind turbine must be removed from the tower, for neighborhood safety reasons, after this six-month grace period. The tower may, however, remain in place, but would be managed under the Public Nuisance language of this zoning ordinance."

Wind turbine owners must be responsible neighbors, just as they would want their neighbors to be. Repairing the wind system within a reasonable period of time is not an unrealistic request for a zoning committee or neighborhood to make. And it will go a long way towards refuting the accusation that "residential wind systems don't work."

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[Editor's Note: The opinions expressed in this column belong solely to the author.]