WINDLETTER

THE MONTHLY NEWSLETTER OF THE AMERICAN WIND ENERGY ASSOCIATION

Volume 24 Issue No. 1 – January 2005

SMALL TURBINE COLUMN:

Caveat Emptor

--Mick Sagrillo, Sagrillo Power & Light

The wind farms in California are in the process of "re-powering," which means that wind farm owners are decommissioning smaller wind turbines installed in the early 1980's and replacing them with 1.5- to 1.8-MW turbines that are the standard in today's commercial wind industry. Most of the older and smaller equipment has reached its useful design life, and it's time to replace it anyway. As a result, a large number of wind turbines sized in the range of 20 kW to several hundred kilowatts have become available in the used wind generator market. Some of these turbines can be bought for less than it costs to take them down.

On another front, a number of states now have renewable energy buy-down incentive programs designed to offset the cost of installing a wind system. Some of these programs are quite generous. And, with the advent of favorable net metering regulations in many states, interest in wind is again on the rise. As a result of these three events (re-powering, renewable energy incentives, and net metering), a number of dealers in used equipment are rebuilding or remanufacturing the turbines coming out of California, and reinstalling them across the country. Unfortunately, there are a few companies who are taking advantage of the situation, leaving a very bad taste in the mouths of homeowners who are stung by the experience and casting a shadow on the reputable companies selling remanufactured equipment.

The purveyors in question are unscrupulous companies or individuals making outrageous claims about the wind equipment they are selling. They may be selling the equipment as "rebuilt" or "remanufactured" even though little has been done to it other than a superficial cleaning and maybe a fresh coat of paint. They may be making incredible claims about the energy production that the customer will see. They may be suggesting that homeowners can take advantage of various income tax advantages, such as the Production Tax Credit or accelerated business depreciation, that are actually available only to businesses selling the electricity to another party. They may be dismissive of a homeowner's legal obligations regarding utility interconnection requirements. They may tout the superior quality of their equipment, installations, and customer satisfaction, although details about any of these claims may be mysteriously hard to come by.

While unrealistic claims are made about the equipment and what it can produce, technical realities are often ignored. Electrical requirements and safety systems are played down. Sometimes, shady companies install larger blades on a turbine and tower than the original designs specify as a means of boosting production. Engineering and construction specifications are ignored, or dismissed as unreasonable, unrealistic, and unnecessary.

All of this invariably results in a wind turbine that operates poorly, if at all. In many cases, the owner simply cannot get the wind turbine to function properly. On occasion, towers have collapsed, foundations have failed, or machines have toppled from towers. A re-configured wind turbine may be

damaged during sustained high winds, or during a thunderstorm. The upshot is that the owner totally loses his or her investment on the "rustoleum rebuilds," and a black mark is registered in the community against wind turbines.

Is there anything that homeowners, farmers, and small business owners can do to protect themselves from such scams? Absolutely, but it will take a bit of research.

If you find a remanufactured wind turbine for sale, closely investigate the party selling the system and his or her qualifications for rebuilding such equipment. If the company has no reputation that you can unearth, proceed carefully. A few "satisfied customers" may be no more than shills set up by the seller. However, this is a small industry, and word gets around about who is doing quality work and who is not. Keep digging until you find the information you need to help you make an intelligent decision.

At the very least, you need answers to the following questions:

- Where did the machine come from, and what is its "work history"?
- What has the supplier done to extend the life of the machine? Can the supplier provide an itemized checklist of system components, disclosing what was done to each component to bring it back up to new specifications, along with the warranty provided for that component? All repairs, parts, and items remanufactured should be listed in the contract you receive from the supplier. Check them over carefully.
- Has the supplier done anything to change the original configuration? If the original manufacturer is still around, contact it about "upgraded" components, such as larger blades than came with the original piece of equipment.
- What exactly does the supplier's warranty cover, and what is not covered? Parts? Labor? Mileage? Shipping? What period of time does the warranty cover, and what are the exclusions? Does this seem reasonable? Is it in line with what other suppliers offer in warranties? If need be, check with a consultant in the wind industry on this. While you may be hesitant to spend the money on a "second opinion," it is money well spent considering the amount you stand to lose by being less diligent.
- Ask the supplier to disclose any history or complaints, lawsuits, or, especially, settlements with former clients. Check with your state Better Business Bureau or state attorney general's office about this. Also check with your state public utility commission and state energy office about any feedback they might offer on the supplier.
- Likewise, contact your local utility about any dealings it may have had with the supplier. In addition, it can supply you with the utility interconnection requirements that your system will need to meet. Will the equipment you are considering installing meet the utility's criteria for interconnection? Get the electrical characteristics for the wind turbine or inverter from the supplier and ensure its compatibility with utility requirements.
- Check with your state energy office about your potential wind resource, and check this against the output that the supplier is claiming. Remember the old adage: "If it sounds too good to be true, it probably is."
- Check with your accountant regarding the applicability of tax credits or other tax advantages. If your accountant doesn't know the answers, find someone who does rather than assume what the supplier is telling you is indeed correct.
- If your state has a renewable energy equipment buy-down program, make sure that the equipment you are interested in installing qualifies under the program criteria.

One turbine manufacturer mentioned that buying a used wind farm machine is like buying a used lawn mower from a golf course. The original owner got every blade of grass it could out of the equipment. This doesn't mean that the wind turbine cannot be remanufactured, but you do need to have a

guarantee that that indeed has happened. Nor does it mean that remanufactured equipment is unreliable. In fact, the case can be made that the used machinery that is remanufactured has a long track record on performance and reliability, something newer designs do not have. You can determine this by asking questions from a variety of sources with the rose-colored glasses off and put away.

The caveat "buyer beware" applies equally to new products as it does to used or remanufactured products, and in all items and services we purchase, not just wind turbines.

Don't be swept up by the sales pitch of seemingly bargain-basement prices after a state renewable energy rebate, compounded by assuming that your local utility will purchase everything you can generate at retail prices. No one is going to look out for your interests if you are not diligent about these issues yourself.

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