

Beware of Voodoo Wind!

Not long ago, it came to my attention that there was a local family who had purchased a small wind turbine. Furthermore, it was relayed to me that this family (let's call them Family X) was quite displeased with said wind turbine. Apparently, after several months of production, their wind project had yielded exactly zero savings and they were severely irritated. To exacerbate this situation, the dealer who sold and installed their system was not only none too excited about attempting to rectify the problem, but had suddenly become MIA. The last I heard, Family X was reaching out (with great verbal ferocity and frequency) to anyone who would listen, to include their electric company, various government entities, elected officials and assorted media outlets.

Why did this occur and how had it happened? The answer is, at the same time, very simple and incredibly complex. That answer is voodoo wind. And what, you ask, is voodoo wind? Is it as scary as it sounds? Although it does not involve the sacrifice of small farm animals or ritualistic, drug induced frenzies, it can cost you tens of thousands of dollars. That is scary indeed. Voodoo wind encompasses a wide range of misinformation put out by people, professional and amateur alike, about wind turbines. Sometimes the people are well-meaning, but misinformed. Other times their intentions are only to further their own greedy self interests. Voodoo wind practitioners wildly over-promise and grossly under-deliver. In a worse case scenario, these actions are borderline fraudulent and may cost the customer a great deal of money. This misinformation also casts wind projects in an extremely unfavorable light.

Let's further examine the specific example of Family X and how they were victimized by voodoo wind. Their site is actually in a region that has a decent average annual wind speed. Their specific geographic location encompasses no anomalies that would render a wind project ineffective. Thus, based on the location of their home, they should be able to have a wind project that is both functional and economically feasible.

So where did the best of intentions go astray? The average American home uses 24,000 kWh/yr. Family X uses a significant amount more than that. Their electricity bill approaches \$1000.00 per month. The dealer that they chose to purchase their system from promised that they would realize a 50% savings on their electricity bill. That by itself was not the problem; there are readily available residential systems that can produce that quantity of power and much more. The problem was that the dealer convinced Family X that they could realize these savings by utilizing a turbine rated at less than 3kW. In reality, that particular model would only produce about 2500 kWh annually; barely over 10% of their annual usage. Additionally, the dealer in question sold Family X a tower of less than 60 ft. in height on which to mount this inadequate turbine. Mounting a turbine on a short tower is akin to installing a solar panel in the shade! The height limitation makes it impossible to capture the full potential of the wind at that site. Unfortunately, northeast Ohio is not exactly the Saudi Arabia of wind; the winds are

often marginal and in order to harness its full power, you need to erect a tower of at least 100 ft. in height.

Here are some signs that your wind turbine dealer is perhaps a little bit less than authentic:

-The dealer is vague about the turbine's production capability. Make certain that they show you a production curve and that they thoroughly explain it. You are interested in the turbine's capability at your average wind speed, NOT its rated output. Ask to see the manufacturer's power curve in addition to those from any available third party, but beware as manufacturers have been known to exaggerate their own products' abilities (yes, that is shocking).

-The dealer wants to mount your turbine on a tower of less than 100 ft in height. There are exceptions to this rule: Some sites are so poor as to render even the most practically tall tower ineffective. While others, even in this region, are so geographically blessed as to require a tower of a slightly shorter stature. Anything under 80 feet tall will drastically hamper both your power production and return on investment.

-The dealer is not recognized by the State of Ohio as a certified wind installer. Only those organizations who have earned such a status are able to apply for and receive grant money from the Ohio Department of Development.

-The dealer makes fantastic claims about the percentage of your project that the government will pay for. As it currently stands, it is possible to get up to 50% of your project subsidized by various government entities. Anything above this number should be considered circumspect. More programs are being put into place, so a good installer needs to stay current on funding issues.

-The dealer makes fantastic claims about the payback period or Return on Investment (ROI). Expect that a project large enough to meet 50% of the electricity demands of the average American household will take 10 years or more to pay for itself. Anything better than that is being based on best case scenarios that aren't typically possible with the wind speeds in our area.

-The dealer says that his wind turbine can be installed anywhere. They are actually correct on this point. A turbine can be installed practically anywhere; it just might not be functional. No one wants a 5000 lb. lawn ornament.

-The dealer says that you will make good money selling electricity back to the utility company. A general rule of thumb is that you would have to install about 2 megawatts of wind turbines to have a project that is economically feasible purely as a business venture. You will be able to sell excess production back to the utility company if your project is grid-tied, but the rate will be rather paltry. Consider this an additional incentive, not primary incentive; icing on the cake.

-The dealer says that you will be able to go off of the grid. Less than 5% of people who have a wind turbine are off of the grid. The wind is just not that constant; it ebbs and flows. Going “off grid” takes a major lifestyle change that requires a lot of patience, discipline and planning.

The bottom line is that residential wind turbines are often economically and functionally feasible in northeast Ohio. A good, conscientious dealer will be able to help you determine whether or not a wind project is right for you. If a claim seems too good to be true, it probably is! Do your best to confirm all information given to you via an independent source. Remember, the best defense against being victimized by these high priests of voodoo wind is by being a well educated consumer.