



Don't be fooled: The utility companies (and even some enviro-politicians) do *not* want individuals messing with alternative energy. In the early seventies when America was suddenly shocked by escalating oil prices, major power companies were concerned that the flurry of alternative energy activity might erode their control. Power is power. Their pretense of interest in alternative energy is only real to the degree that they can maintain control. The rest of their rhetoric is – well, wind.

- During this period a major energy supplier actually tried to patent the concept of capturing energy from the sun.
- I knew of an innovator in my town of residence in Colorado that built his own power system and went off the grid. He was heavily fined and harassed and eventually compelled to reconnect! Granted, this was before such things became the new American dream, but even today radical and practical solutions are a dangerous no-no.
- I managed to bootleg an illegal woodstove into a modest modern house near Colorado Springs and remember paying – I believe it was \$27 – one month for our gas bill, while neighbors on either side in similar houses paid well over \$100 the same month. We received a brochure from the utility company warning of the heat that is wasted and of the economic impracticality of fireplaces. Our more compliant neighbors received no such notices.
- I learned of a school district that was considering major solar-electric installations for all new construction. When the utility company learned of it they offered them a 10% discount if they would drop such plans. The school district complied.

One lonely teenage Christmas season in Oklahoma, over a thousand miles from home I found junk from an ancient telephone in an old shed. I somehow managed to bolt an automotive fan blade to the generator of this relic, and wired some laths to the blades to extend their reach. I clamped the contraption in a vice mounted on an old stump outside, and ran some wires into the shed.

I had the simple nerdy pleasure of watching significant sparks. I have no idea of what the voltage or power was, but I was very impressed when I stupidly offered it a finger. It was even more impressive when I connected it to an unsuspecting friend who was napping nearby.

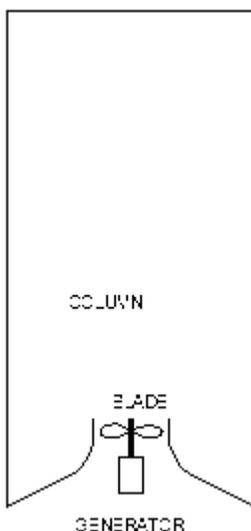
Beyond such play I have never done any wind-electric experiments, but that hasn't kept me from thinking. So I'll dump a couple concepts for somebody else to try – or not.

Consistent with public-versus-private faces, it has been made extremely difficult to build wind powered systems in towns. The ruling reads that you must first calculate the maximum distance a windmill blade could be thrown if it came off at maximum speed as it was spinning in an upward portion of the arc. This distance must then be the minimum distance to the property line nearest your windmill. Most city lots are not that big, and I doubt if even decorative plastic garden ornaments actually qualify.

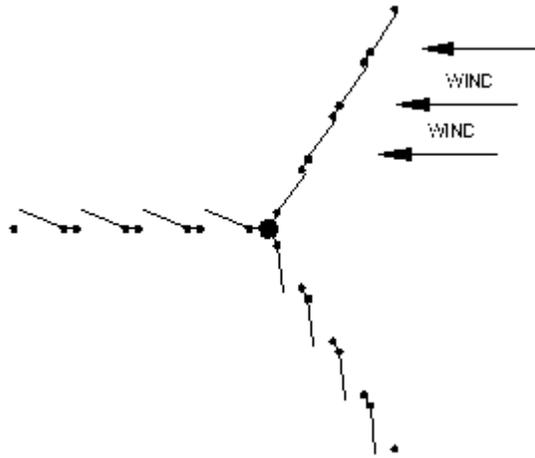
In contemplating this obstacle, I envisioned a vertical column covered with light-weight flaps that

would open with the vacuum caused by passing wind. If you mounted a much smaller blade in a venturi built into its base, the neighbors would be quite safe from any potential mishap, and if you called it a silo you might even be safe from the energy police.

While contemplating light-weight flaps, consider a vertical axis turbine with flaps that would catch the wind on one arm while releasing it on the other. This too would be an omni-directional system.



Both these systems, being vertical axis, and omnidirectional, are much simpler mechanically than conventional pole-mounted windmills. The electrical wiring doesn't have to keep up with changing wind directions, and all the generator servicing takes place at ground level.



Given the fickle nature of wind, I personally would relegate it to a status of "auxiliary power." In a site where wind is fairly consistent, it could be a significant contributor to the over-all energy package.

One technical detail I should toss in here for those truly interested is the fact that the energy available in wind increases with the cube of its velocity.