

RENEW Wisconsin

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Dear Editor:

What is the likelihood of a 200-foot wind tower coming near City of Madison residents? Consider the following facts.

1. There are no residential-scale wind turbines operating in Madison.
2. There are no residential-scale wind turbines in Wisconsin that are more than 165 feet tall. Any turbine taller than 170 feet would exceed the maximum height that would qualify for Wisconsin Focus on Energy incentives for renewable energy systems. Moreover, most jurisdictions would treat a 200-foot turbine as a commercial wind generator, requiring a conditional use permit.
3. At any elevation reachable with today's turbines, Madison's wind resource is too feeble to be economically viable for generating electricity.
4. Utilities like Madison Gas & Electric offer much higher rates for solar power than wind energy.

Even if there were 200-foot wind turbines available for residential use, anyone proposing to install one in Madison would be committing economic suicide. Of course, no one has and no one will, but that doesn't stop elected officials who ought to know better from voicing these phantom threats as if they were real.

While it may be fun to conjure up headline-grabbing visions of ordinary Madisonians being terrorized by alien wind generators looming over their houses, it has no basis in reality. Such tactics can't help but retard the City of Madison's laudable effort to adopt an ordinance for permitting solar and wind energy systems in a manner consistent with state law.

Ed Blume
Communications Director
RENEW Wisconsin

MADISON PROPOSED SOLAR ORDINANCE TESTIMONY

Mike Bernhard

My name is Mike Bernhard. I am the Master Electrician for Full Spectrum Solar, a local photovoltaic systems installation contractor. I also act as the supervising electrician for Seventh Generation Energy Systems, a local wind system installation contractor. I was formerly the Master Electrician/Photovoltaic System Designer for Progressive Electric LLC, a local electrical contractor that also installed photovoltaic systems. In addition, I teach electrical apprenticeship classes at Madison Area Technical College, and have been asked by my Dean to develop a two semester (32 week) Photovoltaic Theory and Applications course for electrical apprentices and a 15 hour, "Your Role in the Green Construction Environment" course for all incoming apprentices. These classes will start in the fall semester, 2008.

I am a member of several technical organizations including:

- Institute of Electrical and Electronics Engineers. (IEEE), the organization that develops the technical interconnection requirements for renewable energy electrical systems.
- National Fire Protection Association (NFPA), the organization that writes, edits, upgrades and publishes the National Electric Code and NFPA 70E, the national safety procedures for all electrical installations (including solar electric and wind systems).
- International Association of Electrical Inspectors (IAEI), the organization that enforces the National Electric Code.
- Founding member: Wisconsin Distributed Resources Collaborative (WIDRC), A voluntary collaborative comprised of Utilities, Tech Colleges, Public and Private Sector entities to promote an efficient and rational approach to Distributed Generation (includes pv).
- The Midwest Renewable Energy Association, an advocacy and education organization, and
- A former member of the International Brotherhood of Electrical Workers.

The proposed ordinance violates the State Electrical Licensing Statute in several areas. The proposal states that only NABCEP certified installers will be permitted to install Solar Electric Systems. The state electrical licensing law states that only licensed electricians will perform non-homeowner permitted electrical work in Wisconsin (this includes PV and Wind systems).

The proposal also states that homeowners will not be allowed to install Solar Electric systems on their own homes. The state electrical licensing law explicitly grants homeowners the right to install their own electrical systems (including PV and Wind).

NABCEP is a private, out of state, certifying agency that has no standing in the state of Wisconsin. The state Department of Commerce, Division of Buildings and Safety, which

is the authority having jurisdiction (electrical licensure, certification, and state electrical code making body) does not recognize NABCEP. An installer cannot obtain an electrical permit or anything else (except Focus on Energy system installation funding) with a NABCEP certification.

There is no state statutory or regulatory control over NABCEP. There is no mechanism to insure that this organization will not raise the cost of their certification or change the certification standards at their pleasure. Other municipal or county bodies may decide to implement another certifying standard in their area of jurisdiction, which would mean that solar installers would have to obtain several certifications as well as several local licenses to work in the state. The certification being developed by a working group at several of the state technical college campuses as part of the newly mandated journey level electrical license may not reference NABCEP.

As a stand alone certification, NABCEP is flawed. As the supervising electrician, I oversee the work of NABCEP certified installers and they may or may not have the necessary electrical understanding to install a code compliant Solar Electric System. NABCEP does not adequately address this issue.

The section of the proposed ordinance that states that systems will not be shaded more than 20% is meaningless. 20% of what? Measured how? What about multiple strings and inverters? What happens when panel technology permits bypassing a single shaded PV cell so as not to seriously degrade the string performance (a technology that will be here soon)? How about two sided panels (the bottom side uses reflected light not direct light)? Finally, the “who in the hell do you think you are” aspect: if I have the money to pay a contractor to install panels on the north side of my home or business, that is my right. If I want to impress my friends and neighbors with a very expensive but useless roof covering (generally referred in the trade as Eco-Bling) the city of Madison has no right to say no. Nor should the city have that right. State law 6604.01 clearly states that local governments can only invoke health and safety as a reason to refuse to permit a system.

WHAT IS TO BE DONE?

What the installer community wants is a set of state mandated and administered permitting, siting, and certification requirements. We want to know that our certifications and licenses are valid statewide and that the permitting and siting rules will be uniform statewide. Under no circumstances do we want the unmitigated nightmare and unnavigable morass that is local wind system installation siting and permitting to be allowed to creep into the Photovoltaic Systems installation arena.

The most productive and progressive approach to this issue would be for Madison to lobby our state representatives to find a home for state law 6604.01 (it currently is not administered by anyone at the state level), give it some regulatory teeth and work with other municipal and county governments to enact a comprehensive, uniform and rational

set of state guidelines in the area of renewable energy installation permitting, siting, and certification.

THANK YOU FOR YOUR TIME

Comments on the City of Madison's intent to incorporate State Statute 66.0401 into the Madison General Ordinances. August 11, 2008

The Focus on Energy Renewable Energy program supports the efforts by the City of Madison to formally incorporate the intent of Wisconsin State Statute 66.0401 into the Madison General Ordinances. This State Statute has been upheld in every instance, to our knowledge, in a number of challenges over the past several years. It prevents the arbitrary restriction of solar and wind rights to properties that should be allowed to take advantage of the renewable resources that are available at the site.

The three exemptions:

- (1) Serves to preserve or protect the public health or safety.
- (2) Does not significantly increase the cost of the system or significantly decrease its efficiency.
- (3) Allows for an alternative system of comparable cost and efficiency.

Allows enough flexibility, for those situations where there is disagreement on the system configuration, to make compromises to the satisfaction of all parties.

Liquid Systems

We suggest that the City of Madison make reference to the Focus on Energy requirements concerning "Liquid Systems – Piping and Penetration" rather than in developing unique and different requirements. The Focus on Energy requirements have been developed and amended over the past six years in concert with the plumbing and solar installation industry, and we believe represent the best information on these systems. Additional and different requirements will only make it more difficult and confusing for customers and installers to employ solar energy systems.

Wind Systems

In general we do not think wind energy systems are compatible with an urban environment. Wind energy is best utilized in high areas that are flat and not encumbered by obstacles, such as trees or buildings. Large turbines will likely not be located in cities because they are expensive and do not perform well in a city environment. Large turbines located in a city would also have problems passing the public health and safety requirement. Small turbines located on buildings do not perform well and Focus on Energy does not support their use at this point due to a lack of information on the turbine performance or their use in a city environment.

Thank you,

Don Wichert, Director
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Focus on Energy