



County Wind Ordinance Survey: A Resource for Community Wind

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Introduction

The permitting process in developing wind energy is critical; however, it can be complicated and confusing: permits may be required by several agencies, at different levels of government, and for many aspects of the project and multiple factors determine which permits will be required. Further, the application process will depend on which bodies have legal jurisdiction in the proposed project area. If a proposed project involves more than one jurisdiction, it becomes even more critical to coordinate all permitting procedures to minimize time delays, costs and complication.

This resource will be useful for all wind developers but specifically targets Community Wind developers who are interested in local permitting and siting rules as well as local officials who are working to develop wind ordinances for their area. The information provided in this survey creates a one-stop-shop to access the current local permitting and siting rules and provides additional resources for information relating to wind energy siting, such as wildlife interactions and federal permit requirements.

This resource fills an important role in supporting Community Wind by providing an easily accessible and understandable mechanism that will help rural residents to more easily navigate the local wind energy permitting and siting process and will assist local officials who are working to develop wind ordinances in their area. This first phase of our expanding county wind ordinance survey builds on the research performed by a university intern and focuses on Minnesota because of its leadership in successful Community Wind development.

What is Community Wind?

Community Wind is a vital and growing sector of the wind industry, and as such the definition has remained flexible to nurture its growth.

In the most general sense, Community Wind refers to **locally-owned wind projects that optimize local benefits**. Local benefits mean that one or more members of the local community have a **direct financial stake** in the project - beyond land lease payments and taxes or payments in lieu of taxes. The power generated can be used **on-site or sold wholesale**.

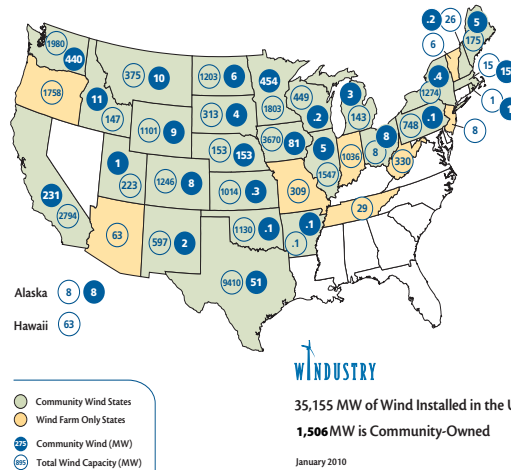
Community Wind refers to a **method and intention of development** that includes the local community in the development process. While Community Wind is not defined in terms of size, these projects are often smaller in nameplate capacity and geographically dispersed.

Local ownership increases local economic benefits from wind

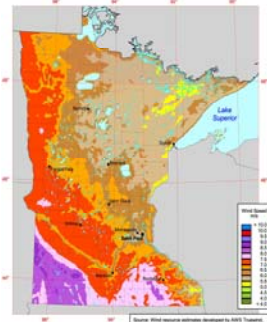
	Outside Ownership	Local Ownership
Annual Local Income (per-MW)	\$38,000	\$101,000
Job Creation (per-MW)	0.37	0.92

Table 1. Results from a 2008 National Renewable Energy Laboratory study comparing the projected state-level economic benefits between a 100% locally owned wind project and an absentee owned wind project in Colorado.

Installed Community Wind and Wind Capacity in the U.S.



Permitting Wind Projects in Minnesota



Proposed wind energy projects in Minnesota with a total nameplate capacity of 5MW and greater are subject to state regulation while projects under that threshold are subject to local regulation. Additionally, since 2007, counties may elect to assume the authority to permit projects up to 25MW.

In January 2008 the Minnesota Public Utilities Commission issued their "General Wind Turbine Permit Setbacks and Standards" for projects 25MW and under. These standards must be adopted as a minimum threshold for counties who assume the authority to issue permits to wind projects up to 25MW, though the county may impose more stringent requirements.

Category	State Minimum Setback
Wind Access Buffer (setback from land not under permittee's control)	3 rotor diameters on east-west axis and 5 rotor diameters on north-south axis
Internal turbine spacing	3 rotor diameters crosswind by 5 rotor diameters downwind
Noise	Distance sufficient to meet state standard of 50dBA at night
Homes	At least 500 ft and sufficient distance to meet noise standard
Public Roads	250ft
Meteorological Towers	250ft
Wetlands, Native Prairie, Sand and Gravel Operations	Variance required for approval

Table 2. Minimum setbacks established by the MN public utilities commission in their order dated January 11, 2008 in Docket M-07-1102. Individual counties may have more stringent requirements.

As of April 1, 2010, there are 87 counties in Minnesota, of which 62 had specific wind energy conversion system ordinances applicable to commercial scale wind projects. Our review of these 62 county ordinances currently regulating wind energy conversion systems in Minnesota focused on 15 specific categories:

Common categories of local regulation of wind turbines	# of MN Counties
Identification of certain zoning districts that are allowed to have wind turbines	44
Whether a permit is required	62
Setbacks , including those from neighboring properties, public roads and right of ways, and conservation lands	59
Density of turbines or internal turbine spacing and distance	18
Height requirements that regulate the total maximum allowed height of a wind turbine in the county	21
Clearance between the ground and the blades	37
Standards for creating and maintaining access roads	4
Regulations on treatment of feeder and communication lines , generally requiring them to be buried	44
Requirement of brakes or other safety equipment in the turbine to prevent catastrophic failures	24
Standards for color, finish and overall appearance of the wind turbines	54
Signs for safety and identification of owner or other emergency contact	57
Decommissioning requirements	53
Identification of potential for signal and broadcast interference	41
Maximum noise thresholds	52
Regulations on lighting of the turbines	52

Table 3. Regulations in Minnesota counties, as of April 1, 2010

References

- American Wind Energy Association www.awea.org
- Installed Community Wind and Wind Capacity in the U.S., Windustry, January 2010
- Lantz, E., & Teegen, S. (2008). *Variables Affecting Economic Development of Wind Energy*. Golden, CO: National Renewable Energy Laboratory, Conference Paper, NREL/CP-500-43506.
- Minnesota Association of Counties www.mnaco.org
- MN Public Utilities Commission, *Order Establishing General Wind Permit Standards*, January 11, 2008, M-07-1102
- Minnesota Statutes Chapter 216F, *Wind Energy Conversion Systems*
- Minnesota Wind Resource Map, National Renewable Energy Laboratory, 2010
- National Wind Coordinating Collaborative, *Permitting of Wind Energy Facilities*, Revised 2002, www.nwccollaband.org
- Windustry's County Ordinance Survey, data collection by Georges Tippens, Windustry intern, fall 2009

Benefits of Local Ownership

Community Wind has shown that local ownership increases jobs, promotes greater acceptance of wind energy, and supports growth of a stable and secure energy future by encouraging more distributed generation of renewable energy. Specifically, Community Wind:

- **Stimulates the local economy** by creating new jobs, new business opportunities, and bringing new investment to the community.
- **ushers in more renewable energy** and support for wind by getting local people involved.
- **Creates greater acceptance** of wind development in the community.
- **Strengthens rural communities** by broadening the tax base and generating new income for farmers.
- **Produces clean energy**, and reduces pollution, pollution-related illnesses, and emissions of greenhouse gases.
- **Keeps energy investment dollars local**.
- **Builds a new industry** in rural communities that is compatible with agriculture.
- **Addresses climate change** with local solutions.
- **Provides distributed generation benefits** that include supporting the nation's electrical grid and diversifying our electricity supply.

Using Windustry's County Wind Ordinance Survey

URL: www.windystry.org/county-wind-ordinance-survey

Minnesota Wind Ordinances

The Windustry county wind ordinance survey provides information about each county and a quantitative listing of the wind energy regulations that exist in that county, if applicable. Similarly this resource can provide a listing of the counties that regulate in a particular category. Also included in the Windustry county ordinance survey, is a listing of the many other informational resources that are available on permitting of wind energy conversion systems. In phase one of the project only Minnesota counties are available to search, however the survey will be expanded to include additional states in the future.

Once the user has selected the desired state, there are two ways to search for information:

Search by county

Searching for the regulations by county is particularly useful if you are interested in all the areas of regulation within a particular county. Also, this option allows for county officials to look at what regulations nearby counties or similar counties across the state have found to be important.

Search by category of regulation

Searching for county regulations in a particular category is particularly useful for local officials and state regulators who are interested in seeing which counties find a certain category of regulation to be important in their area.

Minnesota Wind Ordinances

Example: Pipestone County, MN



Pipestone county is located in some of the best wind resource in southwest Minnesota and is home to many existing wind turbines.

Pipestone county currently regulates wind energy conversion systems under 5MW in the following categories:

- Appearance
- Clearance
- Electrical
- Lighting
- Noise
- Permits
- Decommissioning
- Setbacks
- Signs
- Zoning

Example: Kittson County, MN



Kittson county is located in the most north west corner of the state and borders both North Dakota and Canada. The county does not yet have a specific wind energy ordinance.

The county has established a working group that is investigating ways to implement such an ordinance and it is anticipated that a wind energy conversion system ordinance will be adopted in 2010.

Additionally, other existing county rules may impact wind energy development or individual jurisdictions within the county may have their own regulations on wind energy development.

What are other states doing?

The County Wind Ordinance Survey began with the intention to expand into other states beyond Minnesota with high interest and potential for smaller, distributed Community Wind projects. The next phase of the project will incorporate information from additional states, including the ones below, chosen for their support and encouragement of Community Wind projects:

Vermont

All electric generation in Vermont must apply to the Public Service Board for a certificate of public good (30 VSA § 248). The Board is required to hold a public meeting in the location where the project is proposed, as well as an evidentiary hearing. There is a checklist of requirements that a project must meet in order to be issued a certificate of public good. The Board also generally conducts a site visit to evaluate the existing location and to get a sense of any proposed impacts. This is unique among the states considered for this analysis.

Maine

Commercial scale projects in Maine are almost completely under state regulation. There are some local regulations in place, but the state issues most of the site permits for commercial wind projects. Depending on the location of the project, the permitting agency is either the Department of Environmental Protection or the Land Use Regulation Commission.

Washington

In Washington the state Energy Facility Site Evaluation Council is the lead entity for all energy generation facilities greater than 350MW and any renewable energy project that chooses this process, regardless of size. All other energy facilities are subject to the local government process.