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Reaching Community Wind's Potential

Windustry Analysis of "*Community Wind: A Review of Select State and Federal Policy Incentives*," written by Farmers' Legal Action Group

The Farmer's Legal Action Group (FLAG) report, "Community Wind: A Review of Select State and Federal Policy Incentives," is intended to help local policy makers identify the key policy initiatives that will best support community wind development in their jurisdictions. This supplement to FLAG's report provides Windustry's overview and analysis of these key policies.

What is Community Wind?

Community wind is a growing sector of wind development that promises to increase local energy independence and prosperity without contributing to global warming.

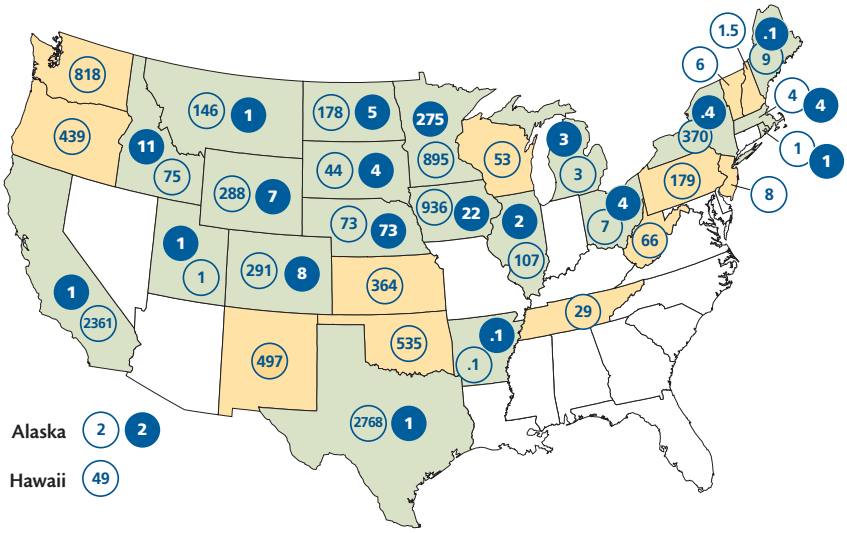
Rural landowners who possess windy land currently benefit from the wind resource, primarily by leasing their land to large wind developers who sell the wind energy, and its benefits.

Others have installed their own wind turbines, individually or through local small businesses including farms, and local organizations such as schools, universities, Native American Tribes, rural electric cooperatives, municipal utilities, and even religious institutions. These projects keep more dollars in local communities, preserve local energy independence and protect the environment. This is the growing field of community wind.

The key feature of community wind is that local community members own and have a significant financial stake in the project beyond just land lease payments and tax revenue. Community wind projects can be any size, ranging from a single turbine to more than one hundred, yet typically serve local communities or consumers. Community wind projects have been installed throughout the country and are in the planning stages in virtually every state with wind power development underway. Figure 1 shows where and how much community wind is operating today.

Figure 1.

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



Community Wind States
Wind Farm States
275 Community Wind (MW)
895 Total Wind Capacity (MW)

11,603 MW of Wind Installed in the U.S.
421 MW is Community-Owned

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Why is Community Wind Important?

Community wind provides all of the benefits of wind development, including generation of clean, renewable electricity, advancing national energy independence and a strengthened national economy, but it also provides:

Greater Stimulation of Local Economies Community wind projects keep more trade, jobs and profit in local economies than do projects owned by external developers. According to a recent study from the University of Minnesota, Morris, a community wind project can provide five times more local economic impact and create more than three times as many local jobs than projects owned by external developers.

Increased Local Energy Independence Community wind projects allow local interests to take control of their energy futures. Once built, wind turbines produce reliable power at a fixed cost. This helps local interests avoid wide fossil fuel energy cost fluctuations in the future.

Increased Competition in Energy Markets Community wind projects are often small businesses. Competition from these small businesses increases economic efficiency by enhancing competition. In areas where wind resources are marginal, community wind projects owned by governments or nonprofits can thrive.

Delayed Need for New Transmission Lines Community wind is often built to serve local energy needs and does not need new transmission lines. Even when projects sell power to customers far away, their dispersed nature allows community projects to fit onto existing power grids more easily than big projects. With increasing constraints on regional transmission systems, community wind can play a vital role in meeting demand for renewable energy.

Community wind strengthens rural communities by expanding local entrepreneurial ingenuity and fostering a sense of hope for the future.

Greater Acceptance of Wind Power Community wind gives local people a greater say in where and how much wind energy is developed. Further, since more local people and businesses benefit, local support for community wind projects can be greater than for wind projects by large developers. In areas with sensitive habitats and landscapes, this support can be critical.

Stronger Rural Communities Because most wind projects are built in rural areas with limited opportunities for economic advancement, community wind diversifies local economies and creates new income sources for farmers, landowners, and communities. It also strengthens rural and often depressed communities in more subtle – yet important – ways by expanding local entrepreneurial ingenuity and fostering a sense of hope for the future.

Windustry Analysis of Community Wind Policies

The FLAG report examines policies that increase the viability of community wind projects, but does not indicate the relative merit of these policies. To provide policy makers with additional guidance, Windustry evaluated and ranked each policy summarized in the FLAG report on a 1-to-5 scale (*5 being the most effective*) with regard to the following factors:

Financial Impact including the degree of "market push," or the degree that a policy decreases the cost and increases the economic viability of community wind projects.

Practicality including design, administrative, and enforcement simplicity; political viability; cost containment and certainty; understandability; and feasibility for state-level and national application.

Addresses Key Market Barriers including the net reduction in institutional barriers, transaction costs and legal hurdles such as interconnection and project permitting.

In some cases, rankings were impacted by the policy's suitability to develop a sustainable community wind industry, in light of the fact that some financial incentives have been short-term. Scores for each category represent an average of existing policies, taking into consideration unintended consequences that run counter to the ultimate objective (*i.e.*, adding a new layer of institutional challenges and costs.)

Windustry Policy Recommendations

Figure 2 shows Windustry's ranking of the overall effectiveness of existing community wind policies reviewed in the FLAG report. The following briefly describes each of these policy options and discusses its advantages and disadvantages.

Windustry considers this ranking to be an important guide because policy success depends on effectively integrating policies into a package that ultimately leads to the creation of sustainable business models. For example, lowering the costs and barriers for community wind does not necessarily lead to increased development if there is no assured buyer for a project's electricity. The policies also need to work well with existing incentives and regulations, and not be too prescriptive. These policy descriptions are summary in nature; for more information about these policies, please contact Windustry.

Advanced Renewable Tariffs (ARTs) rate highest because they are proven to work, eliminate market barriers and, according to recent studies in Europe, result in lower energy costs. Finding a buyer for a project's electricity and building a feasible project cash flow are two of the major challenges for community wind developers. Advanced Renewable Tariffs can address both of these obstacles by setting prices and terms that make community wind projects viable. These tariffs make implementation practical without requiring regular renewals or straining state budgets.

ARTs operate by requiring utilities to purchase power from community wind projects at a price set by regulators based on cost plus profit with adjustments needed to

Minwind Energy: A Success Story

Perhaps the best example of how community wind can benefit farmers is the story of Minwind Energy, which not only installed seven locally-owned wind projects in 2004, but linked these new clean electricity sources to a new ethanol production cooperative to help reduce pollution from automobiles. "Our goal was to help as many rural people as we possibly could," commented Mark Willers, Minwind Energy's CEO. "If you are looking at owning some wind turbines, you need to understand where you're going. Does the revenue come back to one person, a group, a school, a hospital?" he added.

Minwind Energy began in 2002 when each original shareholder invested $500 in research and development to get the concept off the ground. In addition, each of the seven Minwind community wind projects completed in 2004 was able to access US Department of Agriculture grants of almost $180,000 to help cover engineering, transmission, equipment and construction expenses. The Government Accountability Office has calculated that local ownership of these wind turbines increases local economic benefits by a factor of three. Today, a total of nine community wind projects are up and running and delivering enough clean electricity to power 3,800 homes.

In the end, participants in Minwind Energy's community wind projects are sporting big smiles for a job well done. David Kolsrud, a farmer and Minwind shareholder says, "Putting the Minwind projects together began with a vision. That vision would not have come about without the cooperation and commitment of the project members to see it through. Minwind investors are taking ownership and control of our community's energy future."

Mark Willers, CEO of Minwind Energy, and Tom Arends, President of Minwind II, have led a group of farmers to form an innovative business structure allowing over 200 local investors to own 11 turbines totaling 15.35 MW in Beaver Creek, Minnesota.

Photo: Lisa Daniels, Windustry

An effective package of policies leads to sustainable business models.

accomplish specific policy needs (a process similar to utility pricing used the U.S. except in deregulated markets). The market then determines the amount of wind energy required.

In Europe, countries that established ARTs (some more than 15 years ago) have the highest wind energy development rates in the world. Between 1990 and 2005, Denmark, Germany and Spain used ARTs to install 31 gigawatts of wind energy capacity, equal to 53% of the global total.

By providing predictable cash flow, ARTs reduce project risk and thereby lower the cost of development and the overall cost of energy. They avoid the up-and-down cycles of tax credits and unstable markets that cause projects to fail. Because they reduce risks, ARTs are particularly useful for supporting risk-averse market participants, such as community wind developers and smaller rural entities.

Production Incentives also rank highly because they can provide a stable revenue stream to augment the prices that electric utilities are willing to pay for clean energy. Several states and the federal government provide direct financial incentives for the production of wind energy, based on the amount of energy generated.

Production incentives are provided in the form of either an income tax credit or a direct cash payment to energy producers. They increase the profitability of wind projects, but require careful structuring to properly target community wind project owners. The Minnesota Renewable Energy Production Incentive, for example, was a highly effective incentive for the first 200 MW of community wind, but is no longer available.

Figure 2.

Windustry Analysis of Existing Community Wind Policies

To be effective, production incentives must be bankable – that is, they must be guaranteed for a fixed period before the project is built. Also, finding ways to fund these production incentives, for example through ratepayer or tax structures, is an ongoing challenge. (One possible source of funds is clean energy funds, as described below.)

Clean Energy Funds provide direct financial support needed to help launch a state's first few community wind projects. Public investment in these early projects creates know-how and interest that then move additional projects forward.

A growing number of states have established financing programs to build markets for renewable energy resources. All told, these funds represent more than $5 billion in investment over the next decade and include some support for community wind demonstration projects and feasibility studies. Some of the funds are derived from a charge assessed on each customer's electric bill; others are capitalized in lump sums as a result of a settlement of a utility merger or sale of generation assets. The source of funding for these programs is, however, an open question. Rate-based or tax-based clean energy funds serve as the most common funding sources.

Net Metering Cap Increases permit more utility customers with their own wind generation sources to send back excess power to the grid, allowing their electricity consumption meters to spin backwards. Typically, states impose size restrictions on net-metered projects. However, a number of states have increased their project size caps, which is the key for making net metering work for community wind projects. In New Jersey, for example, net metering is available for wind systems up to 2 MW. The disadvantage of these programs is that relatively few utility customers can use the energy of a commercial scale community wind project, so the number of participants in these programs is limited.

Renewable Portfolio/Energy Standards (RPS/RES) allow the state to determine the amount of renewable energy required and let markets determine the price. The recent wave of state renewable portfolio/energy standards (RPS/RES) legislation mandating the use of renewable energy, and recent national initiatives calling for a national goal of producing 25% of our energy from renewable sources by 2025 ("25x25"), indicate that billions of dollars will be invested in wind energy development every year for decades to come.

This success indicates that RPS/RES standards could be highly effective in creating a market for community wind, but only if the standard contains minimum purchase requirements for community wind and strong enforcement provisions. Otherwise, such standards do not encourage community wind more than they promote large wind developments. However, market-

based and regulatory policies are critical for setting the stage and creating a fertile market environment for community wind.

Minnesota and Iowa have seen substantial community wind development because rural landowners and local communities engaged in policymaking. They organized themselves and lobbied elected officials to put community wind policies in place.

Standard Utility Contracts can help community wind projects get in the door with utilities and reduce transaction costs for developers by avoiding negotiations that "reinvent" purchase agreements. All new wind projects must negotiate interconnection with grid managers and power purchase agreements with utilities. State and federal governments can require the standardization and simplification of this process for community wind projects.

To help community wind projects, standard contracts need to have clear terms that simplify the development process and work with feasible business models. They also must provide sufficient motivation for utilities to enter into contracts. However, while this policy tool can open doors, it does not ensure long-term stable markets.

Government Financing Many states and the federal government provide subsidized financing to new wind energy facilities, often in the form of grants or low interest loans. Some of these mechanisms are set up as partial revolving loan programs or loan guarantee programs that minimize the financial outlay required by the operating governmental unit. Recent efforts have focused on providing access to various types of government bonds as an additional source of affordable financing for community wind projects. Federal Clean Renewable Energy Bonds and Section 9006 of the Farm Bill are two such notable programs that have helped community wind. The primary challenge of using these programs is the difficulty of providing a stable funding source that can support development of the community wind sector over the long-term. (Again, clean energy funds are one possible funding source.)

Other Tax Incentives are non-production based tax incentives that can make community wind projects more financially feasible. They include provisions for the accelerated depreciation of wind-related assets, tax credits calculated based on eligible installation costs, and property and sales tax reductions or exemptions for wind projects. Many states with significant wind resources have already instituted tax incentives that give advantage equally to both community and non-community wind projects, with the result that there is no relative benefit for community wind projects.

State Siting/Zoning Process While the land use permitting process for wind facilities traditionally happens on a local level, states can act to simplify regulatory hurdles for siting wind projects. It is best for local governments and community institutions to help guide such state efforts to streamline the zoning process to facilitate community wind development. As with other policies that provide regulatory relief, siting and zoning policy does not ensure that a market exists for community wind.

Wind Property Rights State property laws can impact the feasibility of wind development by eliminating any ambiguity about who owns what rights to wind resources. Some states have also encouraged development by statutorily limiting the permissible length of wind option agreements, providing for the termination of some wind easements if projects are not developed within a specific period of time. Thus, this policy option can remove barriers to community wind development, but it also does not ensure a market for community wind.

Palmdale Water District uses the power from this 950 kW turbine to provide electricity for the municipal water treatment plant 50 miles north of Los Angeles, California.

Photo: Frank Collett, Palmdale Water District

Summary

Community wind is taking hold in the Midwest, and interest is growing throughout the country. The successes in Minnesota and Iowa have created a template for development that can help guide the future development of community wind in other active wind energy markets.

Advanced tariffs, targeted incentives, and standardized regulations are needed to level the playing field. Generic pro-wind power policies – such as sales tax exemptions, low-interest loans, bonds, and streamlined zoning – can help community wind energy, but targeted incentives are critical as well. Minnesota and Iowa provide FLAG's new report with good models for how to target policy support for community wind, but each incentive package must be tailored and fine-tuned for each individual state electricity market.

Minnesota and Iowa have seen substantial community wind development because rural landowners and local communities engaged in policymaking. They organized themselves and lobbied elected officials to put community wind policies in place. So far, these polices have not been perfect, but they have jump started the community wind market. With the proper combination of policies, community wind can build a foundation of economic renewal and environmental stewardship throughout rural America.

State Experiences

Minnesota Minnesota has relied upon an evolving policy package. In the past this package included production incentives combined with a special tariff that together led to the nation's first community wind successes. In 1997 the state adopted the Minnesota Renewable Energy Production Payment of 1.5 cents/kWh designed to support locally owned wind projects up to 2 MW. At first, local wind developers had trouble using the production payment because they had to individually negotiate interconnection and power purchase agreements with utilities. It wasn't until 2001, when Xcel's merger settlement established a tariff with a fixed power purchase rate and standard interconnection procedures, that community wind projects became feasible. After this tariff was created, the initial allocation for the Minnesota Renewable Energy Production Payment was quickly fully subscribed, and a second round was fully subscribed within 6 months. It took the pairing of these complementary policies to launch the state's community wind market. This policy approach ended due to a shortage of funding.

To overcome funding problems, in 2005 Minnesota enacted its Community-Based Energy Development (C-BED) legislation, which requires all of the state's electric utilities to offer front-end loaded advanced renewable energy tariffs for locally owned wind projects that meet the definition of a C-BED Qualifying Owner. Utilities are not required to enter into these contracts, but the Minnesota Public Utilities Commission periodically reviews and evaluates utility efforts to purchase electricity from community wind projects. Since its passage, utilities have entered into several C-BED power purchase agreements and many more projects are in negotiation stages.

Carleton College in Northfield, Minnesota, installed a 1.65 MW turbine in 2004, becoming the first college in the U.S. to own a commercial-scale wind turbine.

Photo: Lisa Daniels, Windustry

Iowa The evolution of community wind in Iowa took a different course. A handful of projects were started by schools that took advantage of state financing and net metering arrangements to develop projects with one to two commercial-scale wind turbines. This challenged rural landowners and local community groups to create a model of wind development that would also work for them. A more substantial push for community wind began in 2005 and 2006 when the state legislature provided a production tax credit of 1.5 cents/kWh. Unlike the federal Production Tax Credit, which is primarily suited for large-scale projects, Iowa's tax credit is applicable to state personal income tax and is transferable or tradable. The state tax credit is paired with the sale of renewable energy certificates (RECs), which have increased the attractiveness of community wind to the point that almost 200 MW of community wind is expected to come on-line in the next few years. But this level of success will hinge on upon the willingness of the state's utilities to purchase power from community wind projects. Despite the absence of a Renewable Energy Standard, the state's biggest utility, Mid American Energy, has demonstrated a robust interest in developing wind projects that it owns, which is unique for the US.

At present, community wind makes up only about 4 percent of the more than 11,000 megawatts (MW) of energy from wind turbines operating in the U.S. Nonetheless, states, such as Iowa and Minnesota, have proven that simple, cost-effective policies create markets in which community wind projects compete successfully with large developers.

Spirit Lake (Iowa) School District's 250 kW wind turbine installed in 1993 was so successful that they installed a 750 kW turbine in 2001.

Photo: Lisa Daniels, Windustry

Jane and Steve Tiedemann own two 1.65 MW turbines to supplement their farming operations in Pipestone, Minnesota.

Photo: Windustry

Resources for More Information

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See also www.windustry.org and the community wind information clearinghouse at www.communitywindenergy.org

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See also www.flaginc.org and FLAG's full report *"Community Wind: A Review of Select State and Federal Policy Incentives"*

Database of State Incentives for Renewable Energy
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Publications

The Law of Wind: A Guide to Business and Legal Issues
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Community Wind: An Oregon Guidebook
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