



# Community Wind Incentives

A summary of select policies in Iowa, Minnesota, and Kansas

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## Introduction

The goal of this report is to provide insight into the economics of community wind incentives by looking at various policies in select states. Community wind (CW) is defined differently by different states and organizations. Most states and organizations define CW by both the project size and percentage of local or state ownership. While the definitions consistently define CW projects as having at least 51% of ownership coming from the local community or from within the state,<sup>1</sup> the size of projects varies by incentive or has changed with time.<sup>2</sup>

Because most CW projects tend to be small compared to utility-scale projects such as the Gray County or Elk River Wind Farms, they tend to cost more due to poorer economies of scale. There have been studies that conclude that CW's economic benefits to the community and state in which they are located are as much as ten times greater per unit of energy than large-scale wind generation owned by out of state companies, which may explain why some states are incentivizing locally-owned projects.<sup>3</sup> It is these benefits and the direct and indirect benefits of new money in rural economies that make community wind so appealing.

The information in this report was gathered in several ways. Existing reports on community wind incentives were consulted for their analysis and overviews. The websites of state energy offices in Minnesota and Iowa – the two states with the greatest CW activity – and the non-profit groups that advocate for CW - Windustry ([www.windustry.org](http://www.windustry.org)) and C-BED ([www.c-bed.org](http://www.c-bed.org)) - were visited for more current information. Finally, program managers and local experts from states that have CW were contacted by phone or e-mail to get the most current information and in-sight into the success of various incentives.

There are a number of incentives in place in various states that affect community wind developments. As of March 2007, there were 421 Megawatts (MW) of community-owned wind projects in the United States. Figure 1 shows both the amount of installed CW projects and total wind projects by state. Some of these incentives are geared specifically for CW, while other incentives include CW development indirectly among broader targets for renewable energy development. Table 1 shows various state

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<sup>1</sup> Windustry, a non-profit who works as an information clearinghouse for land-owners and locally-owned wind projects, defines community wind on their web-site (<http://www.windustry.org/community/default.htm>) as “locally owned, commercial-scale wind projects that optimize local benefits. Locally owned means that one or more members of the local community has a significant direct financial stake in the project other than through land lease payments, tax revenue, or other payments in lieu of taxes.” The Minnesota C-BED legislation requires that at least 51% of the project benefit's go to “qualified owners”, which are defined as residents of the state. Minnesota Statutes 2006 216B.1612, <http://www.revisor.leg.state.mn.us/bin/getpub.php?type=s&year=current&num=216B.1612>.

<sup>2</sup> For example, the State of Minnesota has had a production incentive and standardized power purchase agreement (PPA) policies that were designed for community-owned wind projects smaller than 2 MW, the Montana RES applies to projects 5 MW or smaller, and the State of Oregon defines CW as up to 10 MW.

<sup>3</sup> Galluzzo, Teresa Welsh, *Small Packages, Big Benefits: Economic Advantages of Local Wind Projects*, The Iowa Policy Project, April 2005, p. 6, <http://www.iowapolicyproject.org/2005docs/050405-wind.pdf>.

incentives that encourage CW development. Table 2 is a checklist that shows all the incentives used by selected states.

## Federal Incentives

Several Federal policies have provided incentive for general renewable energy development, though none were specifically designed for community-owned renewable projects. Federal incentives are equally available to community wind projects in all states. These include:

- **Production Tax Credit** – this is the primary Federal incentive for wind development in the United States. This tax credit is now worth approximately 2 cents per kwh and is available for the first 10 years of the project. This incentive has not been useful to all CW projects, since owners do not always have the tax appetite to take full advantage of it (esp. not-for-profit organizations). One 1.5 MW wind turbine can qualify for as much as \$90,000 per year in production tax credits.<sup>4</sup>
- **Farm Bill** – USDA Renewable Energy Grants are available competitively each year for all states. Community wind projects in Minnesota and elsewhere have used these projects to reduce project expenses. Most states, Kansas included, have USDA staff that will help individuals navigate these grants.<sup>5</sup>
- **REPI** – The Federal Renewable Energy Production Incentive is an incentive that provides financial incentive payments for electricity produced and sold by new qualifying renewable energy generation facilities. This incentive is only available to tax exempt entities, such as schools, municipalities, tribes, and others. Funding has been inadequate in the past to provide full payments to all eligible projects, and that is not expected to change. The REPI expired in September 2003, but was re-authorized in the 2005 Energy Bill and extends to projects in use before Oct. 1, 2016.<sup>6</sup>
- **Clean Renewable Energy Bonds** – Clean Renewable Energy Bonds are tax credit bonds with an interest-free finance rate. Governmental bodies, including tribal governments, municipal utilities and rural electric co-ops can take advantage of this incentive, which was included in the 2005 energy bill.<sup>7</sup>
- **Depreciation** – This incentive allows double-declining balance on a five-year depreciation schedule. The accelerated cost recovery system can be found in further detail in the Internal Revenue Code Subtitle A, Ch. 1, Subch. B, Part VI, Sec. 168 (1994). This incentive is not useful to tax-exempt organizations.<sup>8</sup>

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<sup>4</sup> This assumes a 35% capacity factor. A 30% capacity factor would yield annual tax credits of \$78,000 and a 40% capacity factor would yield \$105,000 in annual tax credits.

<sup>5</sup> Some of this information came from Mark Bolinger, *A Survey of State Support for Community Wind Power Development*, Berkeley Labs and the Clean Energy States Alliance Report, March 2004, p. 6. Available at: [http://eetd.lbl.gov/ea/EMS/cases/community\\_wind.pdf](http://eetd.lbl.gov/ea/EMS/cases/community_wind.pdf).

<sup>6</sup> Shoemaker and Brekken, *Community Wind – A Review of Select State and Federal Policy Incentives*, Farmers' Legal Action Group, Inc., August 2006, p. 13, <http://www.flaginc.org/topics/pubs/arts/CommWindAug06.pdf> (last accessed May 2007).

<sup>7</sup> Community Wind Energy - Public Policy, Windustry, <http://www.windustry.com/community/policy.htm>.

<sup>8</sup> Wind Energy Policy, Windustry, <http://www.windustry.org/resources/legislation.htm>.



**Table 1: Incentives That Encourage Community Wind by State**

State	Incentive	Used (Y/N)	Limit on System Size	Limit on Overall Enrollment	MW Funded	Cost to state	Cost <sup>10</sup> (\$/MW)	Year Enacted	Sunset
Kansas	Property Tax Exemption	Y	No	No	363	Unknown	?	1999	None
Iowa	Tax Credits for Wind and Renewable Energy	Y	yes	180 MW		~\$7 million/yr	<i>\$459,900</i>		
Iowa	Tax Credits for Wind and Renewable Energy	N	cap	450 MW		~\$11.8 million/yr	<i>\$306,600</i>	2005	
Iowa	Iowa Energy Bank - low cost financing	Y				Unknown		1989	None
Iowa	Net-metering	Y	< 0.5 MW		?	Unknown			None
Iowa	Equipment Sales Tax Exemption	Y	No	No	?	Unknown			
Iowa	Replacement Generation Tax Exemption	Y	No	No		\$1 million/yr	<i>\$36,792</i>	?	None
Iowa	Revolving Loan Program	Y	No	No	17+	\$5.9 million	unknown	1999	None
Minnesota	Production Incentive	Y	< 2 MW	225 MW	225	\$125 million	<i>\$459,900</i>	1997	10 yrs
Minnesota	Xcel Energy wind mandates	Y	No	1,125 MW	1,125	Unknown	?	1993	2010
Minnesota	Department of Commerce Grants	Y			5.3	\$600,000	\$113,208		
Minnesota	Community-Based Energy Development (C-BED)	Y						2005	
Minnesota	Renewable Energy Objective	Y	No	No	?	~\$0	?	2001	2015
Montana	Renewable Energy Standard (CW provisions)	?	5 MW	75 MW		?	?	2005	2015
Oregon	Energy Trust Fund (PBF)	Y				\$12 million			
Oregon	Anemometer Loan Program	Y							
Oregon	CW project Seed funding (See RFP)		10 MW			\$3.5 million		2006-7	

<sup>10</sup> Data in *italics* were calculated by author from known data with an assumed 35% capacity factor. For the Iowa and Minnesota tax credits, the value is for the 10-year life of the incentive. The Iowa Replacement Generation Tax Exemption was assumed for 20-year life of turbines. For data without italics it is a one-time expense.

**Table 2: Checklist of Incentives That Encourage Community Wind Incentives by State**

<b>Incentive</b>	<b>Iowa</b>	<b>Minnesota</b>	<b>Kansas</b>	<b>Oregon</b>	<b>Wisconsin</b>	<b>Montana</b>	<b>Colorado</b>	<b>Massachusetts</b>	<b>Illinois</b>
Renewable Portfolio Standards (specific to CW)		X				X			
Production Tax Credits/Incentives (specific to CW)	X	X							
Anemometer Loan Program				X		X	X	X	
Seed Grants	X	X		X	X			X	X
Revolving Loan Programs	X								
Clean Energy Funds		X		X	X			X	X
Property Tax Incentives	X	X	X	X		X		X	X
Equipment Sales Tax Incentives	X	X	?		X			X	

## Minnesota Incentives

Minnesota is leading the way on community wind development in the United States. Of the 421 MW of locally-owned, community wind operating in the U.S. as of March 2007, 275 MW were in Minnesota, with more planned. Over the years, this state has used a variety of incentives and mandates to create more renewable energy. Increasingly, the emphasis for development in Minnesota has been on locally-owned renewable energy projects. The most vital of these incentives are detailed below.

In general, the biggest driver in Minnesota has been renewable energy mandates to the state's largest electric utility, Xcel Energy. While the mandates originally directed the utility to purchase any renewable energy, these directives have increasingly required the purchase of locally owned electrical generation. Other incentives such as State Energy Office grants and renewable energy production incentives have also been implemented. While some of these have been more successful than others, the state is currently relying on their newest program – Community-Based Energy Development (C-BED) – which is expected to become THE future for community wind and other locally owned energy generation in Minnesota, despite it not being an incentive in the purest sense.

### *Xcel Energy wind energy mandates*

In exchange for being allowed to store nuclear waste in dry cask at their Prairie Island nuclear power plant, Xcel Energy was mandated by the Minnesota State Legislature to purchase wind energy. The original mandate in 1993 required Xcel (then known as Northern States Power) to acquire 425 MW of wind power by 2002.

Separately, in 1998, the Minnesota Public Utilities Commission (MPUC), the Minnesota equivalent of the Kansas Corporation Commission, required Xcel to add an additional 400 MW of wind power by 2012 as part of the utilities integrated resource plan.

Transmission line constraints from wind-rich SW Minnesota led Xcel to seek a Certificate of Need from the MPUC to build new transmission lines. The new transmission lines were granted in 2003, but with the stipulation that the compliance date for the 400 MW of wind be moved up to 2006, in order to ensure the lines were not underutilized until 2012. Of this additional 400 MW, the MPUC required that **60 MW come from locally owned projects.**

In May 2003, Xcel's mandate was increased by another 300 MW to 1,125 MW in exchange for extended storage of nuclear waste. Of this last 300 MW, the **utility must utilize at least 100 MW of wind power from small, less than 2 MW,** wind projects.<sup>11</sup>

Therefore, Minnesota has mandated that Xcel buy **at least 160 MW of wind power** from locally owned projects.

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<sup>11</sup> Bolinger, 2004, p. 4.

***Renewable Energy Production Incentive***

Wind projects of 2 MW or less were eligible for the Minnesota renewable energy production incentive (REPI) of 1.5¢/kwh for the first ten years of operation. This incentive was originally enacted in 1997 and was limited to the first 100 MW of projects. The first round took five years to be fully subscribed and the program was expanded by another 100 MW in 2003. Six months later, the second 100 MW was fully subscribed as well. The first round was funded out of general fund appropriations, while the second round was funded by the Xcel Energy's Renewable Energy Fund.<sup>12</sup> At least 25 MW in addition to this – 225 MW in all – will be funded through REPI.<sup>13</sup>

Wind energy disbursements for this year are expected to be around \$8.8 million (there is a \$9.4 million cap, which also includes ~\$500,000 for three hydro plants and \$80,000 for two biogas projects), and this level of disbursement is expected to continue for the next several years before dropping off, as the incentive sunsets on some of the early subscribers. The total cost of the program is expected to be around \$125 million over the 20 years of the project.<sup>14</sup> While REPI successfully kick-started CW projects in Minnesota, there are no plans for future production incentives as the C-BED program is viewed as the future for CW in the state.<sup>15</sup>

***Minnesota Department of Commerce Grants***

The Minnesota Department of Commerce, which houses the state energy office, has released at least \$600,000 in oil overcharge grants to fund three community wind projects. The projects consisted of a total of 5.3 MW of wind projects on three college campuses in the state. The solicitation had a goal of diversifying wind development geographically in the state. While the program did get some projects in the ground, it both ran out of money and was deemed inefficient at jump-starting an industry.<sup>16</sup>

***Community-Based Energy Development (C-BED)***

In 2005, the Minnesota legislature passed an energy bill known as Community-Based Energy Development (C-BED), which is intended to make it easier for community wind projects to be successful without putting an excessive burden on utilities.

In essence, the legislation does two things. First, it stipulates that “qualified owners” be local: “Minnesota residents, nonprofits, LLCs, non-electric co-ops, local governments and school systems, and tribal councils.”<sup>17</sup> Qualified owners must own a majority stake in the project and non-qualified owners are not eligible for tariff benefits.

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<sup>12</sup> Bolinger, p. 5.

<sup>13</sup> Minnesota Department of Commerce Energy Info Center web-site, “Renewable and Efficiency Incentives”, <http://www.state.mn.us/portal/mn/jsp/content.do?subchannel=-536881511&id=-536881350&agency=Commerce>.

<sup>14</sup> De Fiebre, Jeremy, State Energy Program Manager, Minnesota Department of Commerce, personal communication, May 2007.

<sup>15</sup> Trudeau, Lise, engineer, Minnesota Department of Commerce, personal communication, May 2007.

<sup>16</sup> Trudeau, 2007.

<sup>17</sup> Minnesota's Community-Based Energy Development (C-BED), Windustry, <http://www.windustry.com/community/cbed.htm> and Minnesota House File 1344, 2005 <http://www.revisor.leg.state.mn.us/bin/bldbill.php?bill=H1344.3&session=ls84>, last viewed May 23, 2007.

Further, no qualified owner can own more than 15% of the project, except for one- or two-turbine projects. Every project must obtain approval from the county board or commission where it is located. When new transmission lines need to be built, any landowner for which the transmission line crosses their property must be given a chance to invest in the project. All of these rules have the goal of broadening the number of people with a stake in the project, and therefore broadening support for it.<sup>18</sup>

Second, all public utilities are required to create C-BED tariffs. The original tariff allow for a net present value of up to 2.7 cents per kwh over the life of the project (20 years). This cap was recently removed by the Minnesota Legislature after it was found to be too low due to current high prices for wind turbines.<sup>19</sup> It also must allow for a higher rate in the first ten years than the second ten years, to account for the high capital costs of wind projects. The Community-Based Energy Development web-site refers to this as ensuring “levelized cash flow.”<sup>20</sup> The higher levelized rates make it easier for projects to obtain financing, without jeopardizing the utilities bottom line. While utilities are required to file tariff rates, they are not obligated to enter into C-BED contracts.

The goals of C-BED are quite ambitious. Minnesota Gov. Tim Pawlenty has set a goal of 800 MW of locally owned wind projects. The state’s largest utility, Xcel, has committed to buying 500 MW of C-BED projects.<sup>21</sup> As of March 20, 2007, a total of 166.85 MW of C-BED projects were under contract, with an additional 350 MW of C-BED projects in final negotiations.<sup>22</sup>

### ***Renewable Energy Objectives***

In 2001, the Minnesota Legislature enacted a Renewable Energy Objective that encourages utilities to add renewable energy to their generation mix. The Objective is not binding (except for Xcel Energy, of which the final 300 MW is mandated) and requires utilities to make a “good faith effort” to have 1% of their retail sales come from renewables by 2005 with a 1% increase each year until they reach 10% by 2015.<sup>23</sup>

### ***Xcel Energy Renewable Energy Fund***

This fund is also the result of the legislation from the early 1990’s dealing with nuclear waste storage. The fund was established to provide grants to renewable energy development and has released two solicitations to fund innovative renewable projects of which several were community wind. In 2003 the Minnesota Legislature required Xcel to

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<sup>18</sup> Minnesota’s Community-Based Energy Development (C-BED), Windustry, <http://www.windustry.com/community/cbed.htm>.

<sup>19</sup> Blackburn, Paul, Senior Policy Analyst, Windustry, personal communication, May 2007. H.F. No. 2253 passed the Minnesota legislature on May 20, 2007 and removes the cap of 2.7 cents per kwh,

<sup>20</sup> Community-Based Energy Development web-site, [http://www.c-bed.org/key\\_elements.html](http://www.c-bed.org/key_elements.html).

<sup>21</sup> *The Next Generation: Renewable Energy Objective 2007*, Minnesota Department of Commerce, 2007, [http://www.state.mn.us/mn/externalDocs/Commerce/The\\_Next\\_Generation\\_Renewable\\_Energy\\_Objective\\_2007\\_012207111157\\_REO%20Report2007.pdf](http://www.state.mn.us/mn/externalDocs/Commerce/The_Next_Generation_Renewable_Energy_Objective_2007_012207111157_REO%20Report2007.pdf).

<sup>22</sup> Community-Based Energy Development web-site, [http://www.c-bed.org/c-bed\\_projects.html](http://www.c-bed.org/c-bed_projects.html).

<sup>23</sup> Bolinger, 2004, p. 5.

double their annual contribution to the fund to \$6 million and required \$4.5 million go toward small wind projects.<sup>24</sup>

### ***Other Activities***

Minnesota also plans to complete a study of its electric grid to determine the amount and location of large-scale wind that can be interconnected without requiring significant transmission upgrades. Minnesota electric utilities are required to analyze the distributed wind energy potential by looking at substations, transmission capacity, and wind potential.<sup>25</sup>

## **Iowa Incentives**

Currently, Iowa has 22 MW of community-scale wind, with another 40-50 MW under construction or ready to come on-line soon.<sup>26</sup> To date, most CW projects have been behind-the-meter installations at schools.<sup>27</sup> There are several incentives that have driven CW development in the state.<sup>28</sup>

### ***Renewable Energy Tax Credits***

The Iowa renewable energy tax credits apply to several renewable and alternative energy sources. For wind, there are two levels of tax credits for different sized projects.

For smaller projects, there is a 1.5¢/kwh tax credit called the Renewable Energy Tax Credit or Statute 476C. The tax credits for these projects are competitive with an application process that goes through the Iowa Utilities Board. These tax credits are limited to 180 MW total and no project owner may own more than 2.5 MW. This credit is available to any of the following: “resident of Iowa; farm corporation; limited liability company; authorized trust; family farm corporation; family farm limited liability company; family, revocable, or testamentary trust; small business; electric cooperative association; cooperative corporation; or school district.”<sup>29</sup>

To be eligible for these credits, a project must be initially placed into service between July 1, 2005 and Jan. 1, 2012.<sup>30</sup> The tax credits are renewable each year for the first ten years of operation and are disbursed based on actual energy sold (net energy rather than

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<sup>24</sup> Bolinger, 2004, p. 5-6.

<sup>25</sup> Blackburn, 2007. A study that is similar to what Minnesota is planning was performed by Wind Utility Consulting, *Distributed Wind Generation Study For Northeast Colorado*, December 2005, <http://www.colorado.gov/oemc/programs/renewable/windenergy/study/report.pdf>.

<sup>26</sup> Antioch, Brian, Small Wind Program Analyst, Windustry, personal communication, May 2007.

<sup>27</sup> Bolinger, 2004, p. 4.

<sup>28</sup> Most of these incentives are outlined on the Iowa Department of Natural Resources wind energy page: <http://www.iowadnr.com/energy/renewable/incentives/wind.html>

<sup>29</sup> Iowa Dept. of Natural Resources, “Financial Assistance and Incentives: Wind Energy,” <http://www.iowadnr.com/energy/renewable/incentives/wind.html> has summary information.

<sup>30</sup> Pearce, John, Iowa Utilities Board, personal communication, May 2007. The sunset time-frame was pushed back by one year from the original legislation (and what is noted on the DNR web-site) due to projects’ inability to obtain wind turbines.

gross energy). As of May 2006, though the program is fully subscribed, there have been no applications for the tax credit due to delays in getting turbines for the project. Total cost for this incentive is expected to be around \$7 million per year (\$0.015/kwh x 8760 hours/year x 180,000 kw x 0.30 – capacity factor).<sup>31</sup> Each facility is required to have at least one owner for every 2.5 MW of nameplate capacity and an eligible owner cannot be an owner of more than two projects. Projects can be of any size, so long as qualified ownership requirements are met.<sup>32</sup>

The second tax credit, the Wind Energy Tax Credit or Statute 476B, is geared toward larger projects and is not as likely to be used by CW. This tax credit is available to the first 450 MW of qualified projects and is valued at 1¢/kwh. These projects must be initially placed into service between July 1, 2005 and January 1, 2009. As of May 2007, this tax credit was not fully subscribed, though when it is, it's expected to cost the state \$11 million annually in lost revenue.<sup>33</sup> An Iowa official with the Department of Revenue noted that this incentive was not currently utilized, though he was unsure whether it would be<sup>34</sup>. These credits are renewable for 10 years and are based on the actual energy sold. Projects that took advantage of the special property tax valuation or the sales tax exemption are not eligible.<sup>35</sup>

### ***Low Cost Financing***

Low cost financing for installing cost-effective energy efficiency and renewable energy improvements was set up through the Iowa Energy Bank in 1989.<sup>36</sup> The Iowa Energy Bank is an energy management program, which provides technical and financial assistance by using energy cost savings to repay the financing for energy management improvements. This program serves both public and non-profit facilities, including public schools, hospitals, private colleges, private schools, and local governments. More than \$130 million in energy improvements have been made possible through the program, since its inception. The Energy Bank uses private funds in combination with “minimal state and federal support.” It is not clear how much of these funds have been used for community wind projects.<sup>37</sup>

### ***Alternate Energy Revolving Loan Program***

The Alternate Energy Revolving Loan Program is administered by the Iowa Energy Center in Ames. Funding for the program came from the state's investor-owned utilities (IOUs) in a one-time, three-year assessment on utility bills (in the form of a public benefits charge, valued at 85/1000<sup>th</sup> of 1%). The initial capitalization of the program took

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<sup>31</sup> Pearce, 2007.

<sup>32</sup> More information is available from both Windustry and the State of Iowa.

<sup>33</sup> Pearce, 2007. The sunset date on this incentive was also moved back by recent legislation.

<sup>34</sup> Harding, Alan, Iowa Department of Revenue, personal communication, May 2007.

<sup>35</sup> Iowa Dept. of Natural Resources, “Financial Assistance and Incentives: Wind Energy,” <http://www.iowadnr.com/energy/renewable/incentives/wind.html> has summary information.

<sup>36</sup> Iowa Energy Bank, <http://www.iowadnr.com/energy/ebank/index.html>. General info is also available at the Iowa Dept. of Natural Resources web-site, “Financial Assistance and Incentives: All Technologies,” <http://www.iowadnr.com/energy/renewable/incentives/all.html>.

<sup>37</sup> Bolinger, 2004, p. 12.

place between 1996 and 1999 and resulted in \$5.9 million. No new funds have flowed into the program since then.

The program offers interest-free loans for up to half of the project cost (with a maximum of \$250,000 per project). Residential, commercial, and industrial sectors are eligible. Application for projects seeking less than \$50,000 can be made at any time; awards are made based on merit and availability of funds. Applications for projects seeking more than \$50,000 can be made on a quarterly basis; awards of these funds are also made based on merit and availability. If sufficient funds are not available for all projects, then applications are treated competitively.

To date, more than \$13 million in loans have been awarded. Money from repaid loans is used to fund new projects. In a given year, up to \$1.5 million is available to loan out.

The Iowa Energy Bank defines CW as “projects with multiple turbines and multiple owners”. So far, two projects meeting this definition have received money. Many other projects that involve one individual installing a commercial-sized wind turbine on their land have also been awarded (they don’t define this as CW). At least 20% of their funds are available to wind projects, though at least one seven-turbine project received \$1.75 million dollars in loans.<sup>38</sup>

### ***Net Metering***

Net metering in Iowa is known as net billing. Any net excess generation created by the renewable energy can be carried forward as a credit against consumption in future months. Until recently, the Iowa net billing law did not limit turbine size. This allowed several utility-sized wind turbines to be installed behind-the-meter at schools and other large institutions in the service area of the state’s two largest investor-owned utilities, MidAmerican Energy and Interstate Power and Light, the only two utilities affected by the rule.<sup>39</sup> The law was recently changed to cap the size of eligible renewable energy projects at 500 kw. This change will make it more difficult for utility-sized wind installations to take advantage of this incentive, due to the increasing size of utility-size wind turbines.

### ***Wind Energy Replacement Generation Tax Exemption***

Electricity generated from wind energy systems is exempt from the replacement generation tax in Iowa. This tax is equivalent of six hundredths of a cent per kWh. An Iowa Department of Revenue official was not sure what the cost to the state was, since the information did not have to be filed. Based on generation data, the value to the state is a revenue loss of over \$1 million in 2005 ( $\$0.0006/\text{kwh} * 1,763,977,000 \text{ kwh}$ ).<sup>40</sup>

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<sup>38</sup> Kutz, Keith, Iowa Energy Center, personal communication, May 2007 was the source of most of this information. Other info came from the Iowa Dept. of Natural Resources “Financial Assistance and Incentives for All Renewable technologies” web-page, <http://www.iowadnr.com/energy/renewable/incentives/all.html> and the Iowa Energy Center web-site, <http://www.energy.iastate.edu/funding/aerlp-index.html>.

<sup>39</sup> Bolinger, 2004, p. 11.

<sup>40</sup> Harding, 2007, and Iowa Dept. of Natural Resources, “Financial Assistance and Incentives: Wind Energy,” <http://www.iowadnr.com/energy/renewable/incentives/wind.html>.

***Local Option Special Assessment of Wind Energy Devices***

Any city or county can pass an ordinance to assess wind energy conversion equipment at a special valuation for property tax purposes, beginning at zero percent of the net acquisition cost in the first assessment year and increasing annually by five percentage points to a maximum of thirty percent in the seventh and succeeding years. If this ordinance is not adopted, the assessable and taxable value of property does not increase for five full years.

***Wind Energy Sales Tax Exemption***<sup>41</sup>

Wind energy equipment and materials are completely exempt from the Iowa state sales tax. All materials used to manufacture, install, or construct wind energy systems are exempt. The exemption does not apply to equipment purchased to construct a wind energy system manufacturing plant. To date, the Iowa Department of Revenue has not determined the cost to the state, since the valuations are done locally. The Iowa Department of Revenue assumes this is being used, since the large wind farm tax credit (as noted above) has not been used and a wind farm can not use both.<sup>42</sup>

**Kansas Incentives**

Kansas does not currently have any incentives that are designed specifically for CW projects.

***Property Tax Exemption***

Kansas has a property tax exemption that would be of value to CW and other renewable energy projects that are not already tax-exempt. The value of this exemption is hard to track down, as any property tax depends on several factors: millage value of property, depreciation, and taxable value of property, which is a percentage of actual value. In Kansas, it can be assumed that the value of the property tax exemption for the existing wind farms is some multiple of the Payment in Lieu of Taxes (PILT) that each project has volunteered or negotiated with the local government.

The value of PILT's for the Elk River, Spearville, and Gray County wind farms range from \$1,000 to \$3,200 per MW for the year 2007.<sup>43</sup> A technical report from the National Renewable Energy Laboratory (NREL) noted that the Gray County wind farm paid more

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<sup>41</sup> Iowa Dept. of Natural Resources, "Financial Assistance and Incentives: Wind Energy," <http://www.iowadnr.com/energy/renewable/incentives/wind.html>

<sup>42</sup> Harding, 2007. More information on this incentive is available at the Iowa Dept. of Natural Resources, "Financial Assistance and Incentives: Wind Energy," <http://www.iowadnr.com/energy/renewable/incentives/wind.html>.

<sup>43</sup> Johnson, Wes, "Windfall for Montezuma," *The Hutchinson News*, Aug. 5, 2001, Smith, Steve, "Wind farm money plan," *The El Dorado Times*, July 3, 2006, Vandenack, Tim, "Wind farm, company to energize county with \$9.73M," *The Hutchinson News*, June 10, 2006.

than \$300,000 in PILT's in 2002, but would have paid \$4.5 million in property taxes had there not been an exemption.<sup>44</sup>

### ***Other Activities***

Additional incentives may benefit CW projects, such as accelerated cost recovery, or depreciation, a sales tax exemption on certain property [K.S.A. 79-3606(cc)], and the job creation tax credit [K.S.A. 79-32,160a], if the project produces at least five new jobs. It is unlikely that a CW project would create five new jobs and it is not clear whether such a project would be able to take advantage of the accelerated depreciation; a CW project owned by a school or municipality would not.

In 2006, the Kansas Energy Office collaborated with the Department of Commerce to develop a Community Wind Toolkit to help individuals or organizations better understand the issues associated with developing a CW project in Kansas.<sup>45</sup>

The 2007 legislature also passed a bill that would allow two community colleges to establish a wind generation education pilot project and allows the Kansas Development Finance Authority to finance the construction and installation of the project.<sup>46</sup>

## **Other States Incentives**

### ***Oregon Incentives***

In March, 20002, The Energy Trust of Oregon, Inc., began operation, charged by the Oregon Public Utility Commission (OPUC) with "investing in cost-effective energy conservation, helping to pay the above-market costs of renewable energy resources, and encouraging energy market transformation in Oregon." The Energy Trust is funded through a 3% "public purposes charge" on the customers of the states' two largest utilities.<sup>47</sup> Through these funds, the Energy Trust runs several programs that encourage and benefit CW farms in the state.

### ***Anemometer Loan Program***

Touted as the "first step" in providing support for community wind projects, the anemometer loan program includes 16 anemometers that are loaned out free of charge to landowners who meet initial screening characteristics by going through an application process. This process includes noting the type of project desired (small wind or Community Wind), the use of the electric power (on-site use, sale to utility, net-metering), a description of the land, and proof of land-ownership and local utility. The applicant must be a customer of either Portland General Electric or Pacific Power electric

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<sup>44</sup> Bird, Lori, *et. al.*, *Policies and Market Factors Driving Wind Power Development in the United States* 15 (July 2003), <http://eetd.lbl.gov/ea/EMS/reports/53554.pdf> (last accessed May 2007).

<sup>45</sup> This toolkit is available both on CD-ROM and from the Kansas Corporation Commission web-site ([http://www.kcc.state.ks.us/energy/comm\\_wind/cw\\_toolkit.htm](http://www.kcc.state.ks.us/energy/comm_wind/cw_toolkit.htm)).

<sup>46</sup> HB 2145, see the original bill at: <http://www.kslegislature.org/bills/2008/2145.pdf>.

<sup>47</sup> "Energy Trust of Oregon, Inc. - Who We Are." Accessed April 2007, <http://www.energytrust.org/who/index.html>.

utilities in the state of Oregon. The program is administered by Oregon State University's Energy Resource Research Laboratory (ERRL). The total cost of the program is unclear, as it falls under general renewable energy programs in the budget.<sup>48</sup>

#### *Community Wind Guidebook*

The Community Wind Guidebook was put together by the Energy Trust and introduces the user to the basic concepts of wind energy and CW with the expressed goal of providing enough background and details to allow the user to communicate with experts, project partners, and community members. The book includes information on assessing a wind resource, siting, permitting, ownership models, interconnection, financing, and sources of financial assistance. Copies are available on-line or via CD.<sup>49</sup>

#### *Community Wind Incentive Funding*

The Energy Trust issues an RFP and projects compete to win funding to offset the costs of constructing a CW project. The inaugural RFP was held in 2006; 17 projects applied, but only two will be funded. Up to \$3.5 million is available to the winning projects, which will go toward off-setting all or some of the "above market costs" of the project. The Energy Trust will own the green tags from the project.<sup>50</sup> The total CW budget was \$2 million in 2006, \$1.4 million in 2007, and projected to be around \$5 million in 2008.<sup>51</sup>

#### *Other States*

New York, through the New York State Energy Research and Development Authority (NYSERDA) provides financial assistance for the development of CW projects. The State of Massachusetts through their Renewable Energy Trust Fund in 2003, launched a \$4 million "Community Wind Collaborative" to help facilitate small municipally owned wind projects on the community wind scale. Among the services provided are detailed wind maps for each county and technical expertise available at no-cost to the local communities.<sup>52</sup>

Likewise, the State of Wisconsin has a Public Benefit's Fund (PBF) called the Focus on Energy Fund, which funded the "Wisconsin Community Based Windpower Project Business Plan", a new finance model for CW projects. This model was based on the Minnesota-Flip model, and allows the local owners to team with an entity (large company usually) that has a large-enough tax-appetite to fully utilize the Federal Production Tax Credit. The local owners own 10% of the project and the partner owns 90%. After 10 years, the model goes, the owner structure "flips" (90% local owners/10% tax partner).

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<sup>48</sup> Energy Trust of Oregon web-site, <http://www.energytrust.org/library/financial/index.html>.

<sup>49</sup> *Community Wind: An Oregon Guidebook*, The Energy Trust of Oregon, ca. 2005, [http://www.energytrust.org/RR/wind/community/oregon\\_wind\\_guidebook.pdf](http://www.energytrust.org/RR/wind/community/oregon_wind_guidebook.pdf).

<sup>50</sup> Energy Trust of Oregon, I. (2006, 3 March). "2006 Request for Proposals for the Community Wind Program." Accessed April 2007, <http://www.energytrust.org/RR/wind/community/index.html>.

<sup>51</sup> Energy Trust of Oregon 2006 Budget, [http://www.energytrust.org/library/financial/06\\_Budget/2006\\_SFE.pdf](http://www.energytrust.org/library/financial/06_Budget/2006_SFE.pdf), 2007 Revised Budget, p. 14, [http://www.energytrust.org/library/financial/07\\_BudgetRevised\\_ActionPlan.pdf](http://www.energytrust.org/library/financial/07_BudgetRevised_ActionPlan.pdf), and 2008 proposed budget, [http://www.energytrust.org/library/financial/2008\\_Projection.pdf](http://www.energytrust.org/library/financial/2008_Projection.pdf).

<sup>52</sup> Bolinger, 2004, p. 15.

This model, however, may no longer be usable as there are some questions about its validity.<sup>53</sup>

The Illinois Clean Energy Community Foundation (ILCECF) is a public benefit fund in that state, that has supported at least two CW projects by awarding grants for feasibility studies and construction grants.<sup>54</sup>

The Montana legislature adopted a Renewable Energy Standard (RES) in 2005, that requires the state to have 15% renewable energy by 2015. The RES includes a set aside for at least 75 MW of community-based renewable energy projects, that have a nameplate capacity of 5 MW or less, have local owners with a controlling interest, and be interconnected on the utility's side of the meter.<sup>55</sup>

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<sup>53</sup> Vickerman, Michael, Renew Wisconsin, personal communication, May 2007.

<sup>54</sup> Bolinger, Mark, 2004, p. 12.

<sup>55</sup> Windustry, Community Wind Energy - Public Policy web-page.