

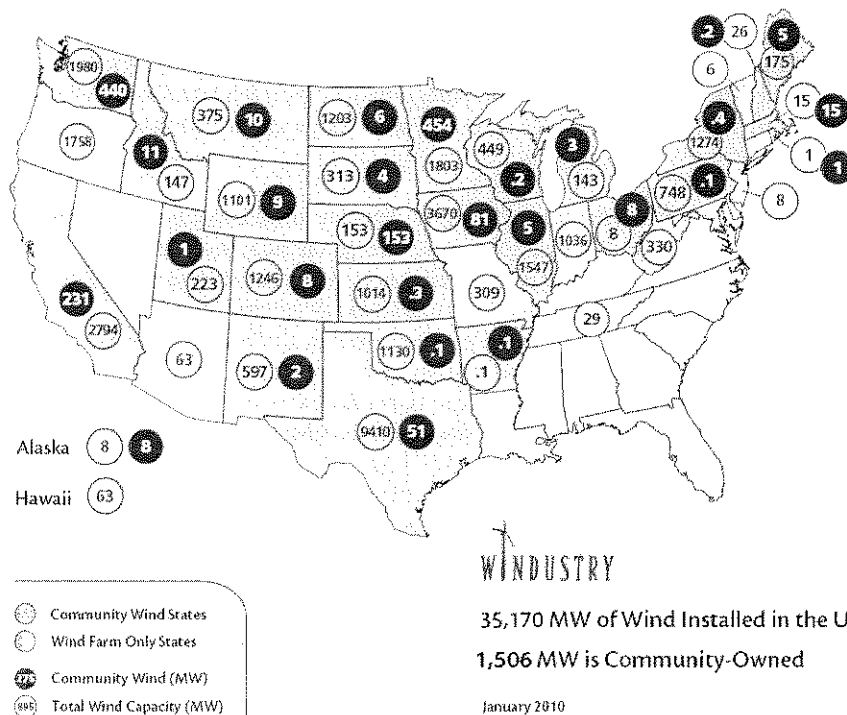
## Community Options for Renewable Energy (CORE)

### Background and Context of CORE

Over the past several years, renewable energy has emerged as a vehicle to promote economic development and to create jobs, as a source of energy security, and as a key to reducing air pollution and greenhouse gas emissions. Minnesota has long been a leader in supporting a domestic renewable energy economy. We currently generate a larger proportion of electricity from wind than any other state after Iowa and rank 4<sup>th</sup> in the nation in terms of installed wind energy capacity. Minnesota can maintain this leadership role, as interconnection queue data from the Midwest Independent System Operator shows over 37,000 MW of renewable energy projects under consideration in Minnesota alone as of September 2009. However, to realize this potential to the greatest extent, supportive policies are needed to overcome costly interconnection barriers and ensure that Minnesota communities will benefit from future wind development.

A growing body of literature shows that local ownership in wind energy projects create more jobs and offer much greater economic benefits to host communities than projects under absentee corporate ownership.<sup>1</sup> Community ownership of a variety of other renewable energy technologies, such as solar and biomass, would likely yield similar economic advantages. In 2005, Minnesota passed the Community-Based Energy Development (C-BED) legislation with the intention to create opportunities for local communities to participate in, and benefit from, renewable energy development. This policy has unfortunately not lived up to its expectations. At the time, Governor Pawlenty announced a goal of achieving 800 MW of C-BED projects by 2010. However, according to the MN Office of Energy Security, only 131.4 MW of C-BED projects have come online as of January 15, 2010. It is time for Minnesota to explore other innovative approaches to encourage community ownership of renewable energy and to maintain our leadership role in the Midwest and the nation.

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



In order to deploy the amount of renewable energy generation necessary to meet state mandates, lawmakers must also address grid constraints. Phase II of the Dispersed Renewable Generation Transmission Study, prepared for the MN Office of Energy Security, found that the transmission system is congested and operates at its design capacity. Few "free" opportunities remain to connect new generation to the grid, and the study concluded that \$121 million of system upgrades stand in the way of 600MW of dispersed generation. With no clear, consistent and equitable way to finance grid upgrades, projects increasingly face prohibitively expensive barriers to interconnection.

CORE offers a new set of tools to promote renewable energy development in a way that not only strengthens the economic vitality of host communities but also constructively engages segments of the

electric utility sector that have historically lagged behind. Minnesota is in an ideal position to champion such a policy. As the figure to the left illustrates, Minnesota currently leads the nation in installed capacity of community wind projects; and, with the exception of Nebraska (a public power state), Minnesota boasts the highest percentage community wind relative to total installed capacity of wind energy. These numbers indicate that the nation looks to Minnesota for leadership in providing opportunities for community participation in renewable energy. This proposal builds on the momentum of C-BED and the Minnesota Renewable Energy Production Incentive (REPI) and offers a new model that can be adapted in other states and even at the federal level.

<sup>1</sup> See Kildegaard, A. and Meyers-Kuykindall, J. "Community v. Corporate Wind: Does it Matter Who Develops the Wind in Big Stone County, MN?", September 2006. <http://cda.mrs.umn.edu/~kildgac/CV/Papers/IRFE.pdf>; Bolinger, M. and Wiser, R. "A Comparative Analysis of Business Structures Suitable for Farmer-Owned Wind Power Projects in the United States", November 2004. <http://www-library.lbl.gov/docs/LBNL/567/03/PDF/LBNL-56703.pdf>; Lantz, E. and Tegan, S. "Economic Development Impacts of Community Wind Projects: A Review and Empirical Evaluation", April 2009. <http://www.nrel.gov/docs/fy09osti/45555.pdf>

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## **Details of CORE**

*This legislative proposal, "Community Options for Renewable Energy (CORE)," offers financial incentives to promote community owned renewable energy projects. CORE targets a large share of community energy stakeholders by extending financial incentives to utilities for the purpose of updating their electrical distribution infrastructure and by providing a standard offer for eligible community owned projects. The standard offer guarantees interconnection to the local utility and a power purchase rate sufficient to cover the cost of the investment plus a reasonable rate of return. By removing interconnection and financing uncertainties, the standard offer helps overcome barriers that have a disproportionate impact on community energy projects. It is therefore a powerful mechanism for increasing dispersed renewable energy and local ownership. These attributes in turn promote economic growth and energy security. As a result, a standard offer for community projects heightens the economic benefits of achieving renewable energy goals.*

*Eligible projects will*

- *Be 7MW or less of wind, 500kW or less of solar.*
- *Be owned by MN entities (at least 51%): MN residents, units of state or local government, tribal communities, local utilities, MN-based non-profits, and/or LLC's comprised of MN members.*
  - i. *Every eligible entity can own 100% of one project. Starting with a second eligible project and beyond, no entity can have more than 15% ownership.*
- *Receive guaranteed interconnection, a 20-year power purchase agreement and an overall standard offer rate that is equal to the cost of renewable energy generation plus a reasonable profit. Akin to the REPI model, the standard offer will consist of three potential revenue streams: utility CORE rate, CORE Fund production payment, and applicable federal/state incentives. Utilities and developers may have the option to finance the rest with CORE revolving loan funds.*
  - i. *Standard offer rates vary by technology, size and resource class and are periodically reviewed.*
  - ii. *The CORE fund may contain carve-outs for various technologies and class sizes.*

## **Source of Funds & Ratepayer Impact**

*Program funds will come from a state-wide renewable system benefits charge on electric customers. This surcharge will be mandatory for all utilities, whether an investor owned utility, a rural electric cooperative or municipal utility. A certain percentage of the revenue will fund the administration of the program, however the majority will fund the standard offer for eligible projects. In this respect, the amount of money raised by the surcharge will determine the program's overall capacity limit.*

*In order to provide these incentives and to minimize the impact on individual ratepayers, broad cost-allocation spreads the financial impact of this proposal among all consumers of electricity. Because renewable energy services such as energy security, energy independence, and reducing greenhouse gas emissions and air pollution are public goods in nature, these benefits extend beyond service territory boundaries. This provides the rationale for a statewide program. Moreover, expensive grid upgrades remain a key barrier to bringing more renewable energy projects online, and requiring project developers to pay the majority of costs for interconnection upgrades would render many of these projects financially unviable. Since renewable energy benefits the public and also meets Minnesota's aggressive R.E.S. obligation, an equitable cost-allocation for grid upgrades would facilitate interconnection while placing a negligible burden on any ratepayer.*

- *A \$0.001/kWh surcharge on all electricity consumed in Minnesota could raise up to \$68 million per year for this program. Under this program, the electricity bill of an average Minnesota homeowner would increase by less than \$1/month. An identical program in Connecticut generates over \$25 million per year for its Clean Energy Fund based on electricity sales half the size of Minnesota's.*
- *Low income ratepayers may qualify for an exemption to the surcharge and large industrial customers may qualify for a cap on their total contribution.*

## **Clean Energy Job Creation**

*CORE programs will maximize new employment opportunities for Minnesota. The Minnesota Green Energy Taskforce projects that full compliance with the state's renewable portfolio standard and local industry capturing green market opportunities can create over 72,000 green jobs by 2020.<sup>2</sup> Furthermore, community ownership offers a greater boost to the local economy than corporate, absentee-owned renewable energy projects. A National Renewable Energy Lab model prepared for the U.S. Government Accountability Office found that 40MW worth of small community owned projects creates more than twice as many jobs and three-times as much income as a 40MW absentee owned project.<sup>3</sup> A UMN analysis of a 10.5 MW project suggests that community wind has 5 times the economic impact on local value added, and 3.4 times the impact on local job creation, relative to a corporate-owned development.<sup>4</sup> In addition, the development of renewable energy*

<sup>2</sup> Green Jobs Taskforce, "Green Jobs in Minnesota: Market Analysis."

[http://www.mngreenjobs.com/sites/default/files/downloads/MN%20Green%20Jobs%20Report\\_0.pdf](http://www.mngreenjobs.com/sites/default/files/downloads/MN%20Green%20Jobs%20Report_0.pdf)

<sup>3</sup> U.S. GAO, "Wind Power's Contribution to Electric Power Generation and Impact on Farms and Rural Communities." Sept. 2004.

<sup>4</sup> Kildegaard, Arne and Josephine Myers-Kuykindall. "Community vs. Corporate Wind: Does it Matter Who Develops the Wind in Big Stone County, MN?" University of Minnesota, Sept. 2006.

projects will create jobs in electrical engineering, construction, law, accounting, finance, among other fields. By renewing Minnesota's commitment to community ownership and a clean energy economy, CORE will ensure that more job and economic benefits remain in state.

### **Incentives to Utilities**

The CORE program will help utilities meet their renewable energy requirements and invest in system upgrades that lay the foundation for a smart grid. Utilities will receive the renewable energy credits associated with projects they interconnect using CORE program funds. They may use these credits toward complying with Minnesota's renewable electricity standards or the federal standard that has been proposed in the recent energy and climate change bill (the American Clean Energy and Security Act as passed in the House of Representatives). Credits should be registered with an appropriate tracking and verification system to prevent double counting (e.g. the MRETS system that facilitates compliance with Minnesota's renewable energy standards and utility green pricing programs).

### **Proven Record of Success**

This initiative combines, in a unique and innovative manner, tested policies that have been broadly applied in other states and in other countries. Strong standard offer laws stand behind the success of countries with the highest renewable energy penetration rates in the world. Examples include Germany, which met 15.1% of its electricity consumption with renewable sources in 2008; and Denmark, which supplied roughly 20% of its electricity in 2008 from wind alone.<sup>5</sup> Renewable energy standard offers have also been recently been adopted in Gainesville, FL; Sacramento, CA; Ontario, Vermont, and Maine. Additionally, several states including Connecticut, Massachusetts and New York, have established clean energy funds and capitalize them via a system benefits charge. These three programs have been successful for a number of years, driving over \$100 million per state into renewable energy development.

### **Additional Considerations**

While this multi-faceted proposal has elements that can exist separately from each other (such as the standard offer, the surcharge, and the incentives derived from a clean energy fund to promote renewable public power) they are stronger when combined. Together they provide an innovative approach to attain the energy goals set by the state and to move towards a robust domestic renewable energy economy. Nevertheless, these policies and programs separately each constitute elements that are vital to building this new clean and democratic energy economy. Furthermore, although this document targets Minnesota policy, it may also be effective at the national level especially if Minnesota provides a successful model of implementation.

CORE also supports efforts to create a cleaner and more efficient transportation system. Putting in place distributed renewable energy and investing in the electric grid play an integral part in laying down the infrastructure necessary for plug-in hybrids and electric vehicles which are just one or two more technology generations away from mass market. For example, Tesla Motors originally came out with a \$109,000 model and will soon offer a \$49,000 all-electric vehicle. Additionally, Chevrolet is expected to launch its plug-in hybrid electric Volt in 2010 at a cost of roughly \$40,000.

In sum, the policies suggested here take a comprehensive view of community owned renewable energy – one that not only supports increasing the megawatts of renewable energy installed, but one that also prioritizes local ownership of renewable energy generation projects. CORE provides a mechanism to ensure that as utilities are working to meet their renewable energy obligations, they embrace policies that support clean energy jobs and dispersed renewable energy projects that have value-added components for Minnesota communities. Doing so will promote economic growth and stability, job creation, local energy security and contribute to Minnesota's overall reduction in greenhouse gas emissions.

## **CORE Proposal Summary**

<b>CORE Standard Offer for Eligible Projects</b>	<b>CORE Fund for Distributed Renewable Energy</b>	<b>Utility CORE Incentives</b>
a) guaranteed interconnection	Minimal surcharge on electricity consumed in MN: Year 1: \$0.00025/kwh Year 2: \$0.0005/kwh Year 3: \$0.00075/kwh Year 4+: \$0.001/kwh	Renewable Energy Credits count towards MN or Federal RES
b) power purchase agreement (20 yrs)		
c) qualifying RE projects ≤ 7 MW (wind) or 500kw (solar)		
d) no individual or entity having more than 15% ownership in more than 1 CORE project (per technology)		

<sup>5</sup> For Germany, see Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, "Development of renewable energy sources in Germany in 2008." June 2008. [http://www.erneuerbare-energien.de/files/pdfs/allgemein/application/pdf/ee\\_zahlen\\_2008\\_en.pdf](http://www.erneuerbare-energien.de/files/pdfs/allgemein/application/pdf/ee_zahlen_2008_en.pdf)  
For Denmark, see Wiser, R. and Bolinger M. "2008 Wind Technologies Market Report," Lawrence Berkeley National Laboratory. July 2009. <http://eetd.lbl.gov/ea/cms/reports/2008-wind-technologies.pdf>

