



A part of Vermont's Energy Future

Kingdom Community Wind (KCW) is being proposed by Vermonters for Vermonters. Several Vermont utilities, working with area residents and landowners, are investigating the development of this clean, in-state renewable generation resource to serve our customers and neighbors. The wind farm being considered in Lowell, VT holds the potential to meet the annual electrical needs of approximately 15,000 average households, that's about 36,000 Vermonters! By harnessing the power of the wind locally, KCW will keep more of our electric dollars local and will contribute to stabilizing electric prices for generations to come. Kingdom Community Wind will help reduce the need to import power and will reduce pollution in our wider community.

What is being proposed?

In southwest Orleans County, a 2.5 mile section of ridgeline along the southern Lowell Mountain range is being evaluated by the Kingdom Community Wind team. This ridgeline, which is part of a much larger 1800 acre privately owned property, could potentially accommodate between twelve and seventeen wind turbines. The wind turbines represent the newest generation of wind technology, with an electrical rating of 1.5 to 3.0 megawatts. Each turbine would stand approximately 420 feet from ground level to the tip of the rotor blade in its highest position, and incorporate features to reduce sound emissions while improving overall generation efficiency. The final selection and configuration of the project components will reflect the outcome of engineering and environmental assessments, as well as ongoing meetings with neighbors, communities, state agencies and other stakeholders. Given the limited length of ridgeline to be used and the size of the newer turbines, a total project size in the range of 30 to 42 megawatts is envisioned. KCW will connect to the existing electrical system by upgrading the current VEC

roadside distribution system and interconnecting at the substation north of the intersection of Vermont state highways, Rt. 100 and Rt. 58 in Lowell.

Who is proposing KCW?

Kingdom Community Wind is being proposed, supported and developed locally maximizing Vermont labor resources, technical expertise and funding where possible. Local landowner, Ben ("Trip") Wileman is conducting initial investigations to determine the feasibility of the project itself, along with coordinating Vermont contractors and funding sources. Green Mountain Power (GMP) is evaluating the benefits of partnering in this local Vermont renewable generation project and Vermont Electric Co-op (VEC) is very interested in securing a reliable, long-term electrical supply to help bring price stability to its Northeast Vermont members/customers. This community wind project – with a focus on Vermont control, participation, jobs, and sharing of the benefits -- is unusual among wind projects proposed in Vermont over the last several years.

Vermont Community Benefits

Wind electric generation average installed cost is on the order of \$2.75 million per megawatt. The Kingdom Community Wind project will represent a local investment of approximately \$80 to \$125 million dollars. KCW will produce approximately 90,000 to 115,000 megawatt-hours of emission-free electricity per year. This is more than the annual electrical use of approximately 12,000 to 15,000 average households in Vermont - or to put it in perspective, more households than are located in Orleans County. A substantial portion of the construction costs will be dispersed through many facets of the local economy for labor, services, and construction materials. In addition to generating carbon free electricity and helping stabilize electrical prices for generations of Vermonters, KCW will

send hundreds of thousands of dollars annually to Vermont's education fund and to Lowell's community budget. Substantially reduced property taxes will be enjoyed by Lowell taxpayers since KCW would have minimal if any additional demand on town services such as schools, and assuming town spending stays consistent with the recent previous years.

When will this happen?

Developing a wind power project is a slow and thoughtful process in Vermont. Experience has shown that conducting environmental, electrical interconnection and other technical assessments and studies can take over a year, with additional time needed for integration with information gained from public participation and input from state and federal agencies. Subsequent review by Vermont regulators, under the Vermont Title 30, Section 248 process can then be expected to take at least 12 additional months. Once approved, construction is estimated to take up to one year. It is possible KCW will be generating electricity in the late 2012 timeframe.

Consistent with Vermont's electric plan

In 2008, research conducted by the Vermont Department of Public Service found that Vermonter's value "minimizing air pollution, getting electricity from resources that will never be used up" and "reducing the emission of gases that may contribute to climate change". This report also states "90% supported (74% strongly) a wind farm's being built if it were visible from where they live" and "69% wanted to see the electricity used by Vermonters produced mostly or entirely inside Vermont." *Kingdom Community Wind* will help accomplish these desires. (<http://www.vermontenergyfuture.info/Deliberative%20poll%20results.pdf>)

"It is the goal of the state by 2025 to produce 25% of the energy consumed within the state through the use of renewable energy resources particularly from Vermont farms and forests", states Vermont law effective July 1, 2008. It also requires Vermont utilities to support the Sustainably Priced Energy Enterprise Development (SPEED) program by securing stable pricing of long-term renewable energy resources and increasing the amount of renewable energy resources that Vermont utilities acquire for their customers.

Did you know?

Vermont is part of the New England electrical grid, comprised of many types of generation sources: nuclear, coal, hydro, wind – and especially natural gas (+/- 40%)

A generator's **capacity factor** is the measure of its output over the course of a year stated as a percentage of what would be theoretically possible if it was running at full capacity all of the time. KCW expects a capacity

factor of 25% to 38% depending on turbine selected, which is comparable to the 27% capacity factor of the TransCanada Deerfield and Connecticut River Dams, based upon the 2003 Vermont Renewable Power Supply Acquisition Authority Report.

The US Department of Energy estimates that meeting 20% of the US electrical needs nationwide with wind "could reduce the electricity sector's natural gas requirements by about 50% and its coal requirements by about 18%."

More Information

As the development of Kingdom Community Wind progresses, more information will become available from a variety of sources including updated factsheets like this, the website of www.kingdomcommunitywind.com, and project partners. If you have a question in the meantime please feel free to contact:

Dorothy Schnure, GMP 802-655-8418
schnure@greenmountainpower.biz

Dave Hallquist, VEC 800-832-2667
dhallquist@vermontelectric.coop

Martha Staskus, VERA 802-244-7522
marthas@northeastwind.com

Trip Wileman, KCW 802-744-2786
trip@kingdomcommunitywind.com

