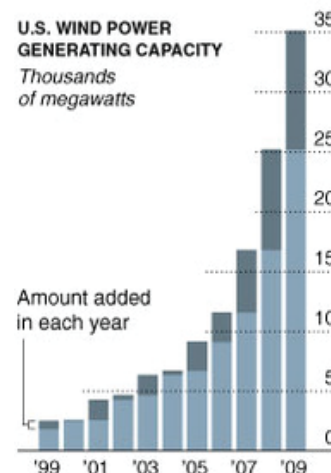


Another Record Year for Wind Energy

In early 2009, a yearly review of 2008 revealed figures of record growth for wind energy in the United States. In terms of new installed capacity, new project announcements, project expansions, and manufacturing capability, 2008 was *the* banner year for wind power. 8,350 megawatts of new wind

A Rising Force

Almost 10,000 megawatts of wind power generating capacity were added to the U.S. total last year.



Source: American Wind Energy Association

energy connected to the grid — a 50% increase on 2007 — and employment by the wind sector grew by 35,000. At the time, with the recession deepening, most analysts expected 2009 to fall well short of the previous year's figures with equally dismal job losses to match. Surprisingly, things didn't quite turn out that way.

Aided by the American Recovery and Reinvestment Act, the wind energy sector grew by 39% in 2009. With an additional 9,992 megawatts, wind generated enough new electricity to power over 2.4 million homes and cut back on millions of cubic tons of carbon emissions. Wind was also one of the biggest contributors of new energy capacity last year, closely

matching growth in natural gas. The two energy options combined for 80% of all new electricity generation in the country in 2009.

Stimulus money from the ARRA came in the form of cash grants that helped dislodge wind projects that had become stuck in development, unable to raise capital in the soured investment climate. Without these new investment options, wind may have seen a dramatic blowback in production. The American Wind Energy Association had predicted up to a 50% slowdown in growth but cited government action as a critical preventative measure in their quarterly release:

"The clear commitment by the President to create clean energy jobs and the swift implementation of ARRA incentives by the Administration in mid-summer reversed the [worsening economic] situation. Recovery Act incentives spurred the growth of construction, operations and maintenance, and management jobs, helping the industry to save and create jobs in those sectors and shine as a bright spot in the economy."

Growth in 2009 lifted output from wind energy over 35,000 megawatts and has brought the U.S. close to generating 2 percent of its electricity from wind turbines. That may sound marginal, but output has increased seven-fold from 2002 levels and is becoming an ever larger presence in the country's energy portfolio. It could be difficult for wind to top 2009's figures in 2010, but the same was said after 2008. Here's hoping 2010 will again surpass expectations.

C-BED Petition: Update and Thanks

We would like to extend a warm thank you to all Norfolk Wind Energy participants who sent a letter to the Minnesota Public Utilities Commission (MPUC). The MPUC received 220 letters voicing opposition to changes in the C-BED standards. The letters made a strong impact and we greatly appreciate your efforts.

Existing interpretation of C-BED law requires that 51 percent of the revenue generation from the sale of wind-generated electricity flow to qualified owners or other local entities. All previous interpretations have defined these local entities as any Minnesota-based company, including subcontractors and any professional service provider that participates in the project. All C-BED projects have been evaluated under this definition to date.

However, questions raised by some have encouraged the Office of Energy Security (OES) to suggest unfeasible modifications. These modifications would skew the characterization of a local entity to only include those vendors directly located in the county where the wind project is situated. While that sounds good, it makes it practically impossible to build C-BED wind projects because finance providers, experienced general contractors, and turbine maintenance contractors, do not exist in every county. If C-BED interpretations were significantly changed to reflect these limitations, most Minnesota community projects, including Norfolk, may no longer qualify for C-BED designation.

The Minnesota Senate recently passed a positive amendment to current C-BED legislation, that if passed would eliminate the interpretation raised by OES. The Minnesota House of Representatives will vote on this amendment within the next few weeks. The bill enhances the existing policy that has defined qualified recipients as any entity in the State of Minnesota. The bill provides common sense changes in the current statute that reduce ambiguity, and clarify how C-BED benefits are calculated. We are encouraged with the broad legislative support to date and we are hopeful that this legislation will pass both houses in its current form.

National Wind will continue to monitor the legislative and permitting efforts to help coordinate effective responses to those who want to change the C-BED law and stop wind growth. We appreciate your support for our projects and for renewable energy.

If you are interested in taking a more active role to support C-BED and the growth of wind energy in Minnesota, please complete the enclosed survey!



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Norfolk Wind Energy
NEWSLETTER

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Norfolk
Wind Energy LLC

Upcoming Wind Farm Bus Tour:

Interested in learning what a wind turbine looks and sounds like up close? Norfolk Wind is planning a bus tour to visit the Jeffers wind farm in July of this upcoming summer. This will be an event for residents in the Norfolk footprint. If you are interested in joining us for this trip, please let us know by contacting David Scheibel at 320-365-3744. Space will be limited so get in touch soon!

Do you have questions, comments or feedback about the Norfolk Wind Energy project? Contact our field staff:

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Site Control Process Completed

An important achievement on the development timeline has wrapped up for the Norfolk Wind project. Earlier this year, the land-leases signed to develop Norfolk surpassed 9,000 acres, the targeted allotment needed to develop 40 megawatts of wind energy. The 9,000 contiguous acres has created the boundaries for the project's footprint and effectively completes the land acquisition, or site control, process. The footprint lies roughly northwest of the intersection of County Roads 50 and 71 in Norfolk Township and southeast of the 795th Ave and 420th St intersection in Melville Township.

"The people of Bird Island, Minnesota are uniquely progressive-minded," says Brian Stuart, field special-

ist for Norfolk, "and they have been very supportive of this wind energy project." Stuart has worked extensively with the residents of Renville County and has personally acquired land-lease agreements with many in the area. "They embrace change and are excited to play a part in reaching Minnesota's renewable energy goals."

David Scheibel, a member of Norfolk's advisory board, has still been at work inside the footprint area. Although no more land is necessary to effectively develop the project, additional land beyond the 9,000 acre threshold may still be signed in a few areas. Please contact Brian Stuart if you are interested in Norfolk but haven't yet signed a lease.

Met Tower Gathers Full Year of Data

The arrival of Spring in the Bird Island area marks an important milestone for the Norfolk Wind project. Not only has the snow melted, but the area meteorological tower, or met tower, has been installed and collecting data on local wind values for a full year. In most cases, one year of wind data is necessary for a wind project to move through the development and permitting process.

National Wind Assessments, the wind resource analysis division of National Wind, has been busy analyzing meteorological data since the tower was installed in April of 2009. Kevin Romuld, President of National Wind Assessments, describes the initial results as “better than expected,” and is optimistic of the site’s wind resources.

“Early on, we based our annual energy production estimates on a Windlogics virtual met tower,” Romuld explains. “The data from our own met tower so far indicates that the wind regime may be more energetic than those initial projections” Although optimistic about Norfolk’s strong numbers, he remarked that more time is needed to analyze the complete year of data before any revisions can be made to the original annual energy production estimates.

The met tower data will help the project developers make important decisions regarding how to proceed. Depending on the quality of the wind, certain turbines may be better suited for Norfolk than others. Estimates can be made pertaining to the best placement of wind turbines throughout the footprint and energy production expectations can be calculated.



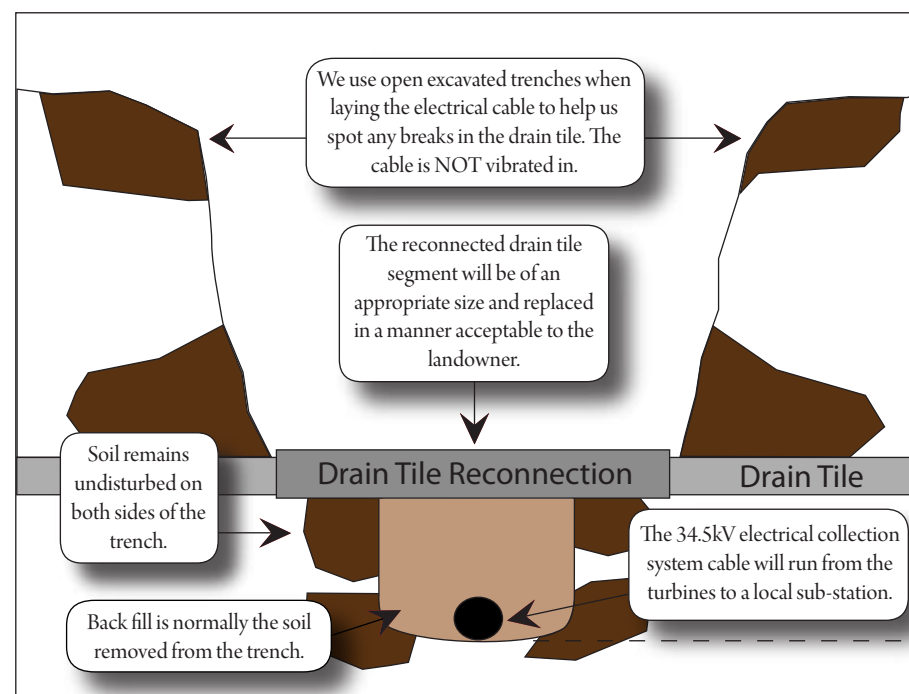
The Construction Process

With any new wind energy project, residents within the footprint want to know how wind turbines will affect the way they use their land. Particular concerns for landowners include the overall land consumption, the access roads and the collector lines. With community wind development projects, the development company works directly with landowners to ensure the location of the turbine and access road are in a location to both capture the strongest wind speeds and minimize disturbances to land or farming practices.

Each turbine including its access road consumes about ½-1 acre of crop land after construction. This is a surprisingly small amount of actual land consumption given the thousands of acres needed to permit a site and provide setbacks from homes. During construction, about 3-4 acres of land is disturbed for the turbine delivery and assembly. As with any foundation, a wider hole is dug than the foundation itself in order to slope the sides of the hole and to pour the concrete. Once the foundation cures, it is covered with enough topsoil so that most of the excavated area can be farmed. Similarly, large cranes are needed to handle the tower components and to raise the rotor assembly. During construction, they disturb a wider area than the eventual access road, but after construction, the road shoulders are restored to crop land. Typically wind developers provide crop damage payments that account for compaction and other effects of disturbed cropland.

Each turbine needs an access road so that maintenance crews can inspect and service the machine for optimum performance. The roads are typically 16 feet across, engineered to performance standards, and surfaced with gravel. Community wind companies, including Norfolk Wind, will coordinate with the landowner on road placement so that the access road is in a location preferable for farming. For example, the road is often along a property line and the farmer can enjoy the use of the road to unload a combine hopper.

The turbines in a wind project need to be electrically connected in order to deliver power to the grid. A collector line is trenched in about 4-6 feet below ground to provide this electrical connection. At the time of trenching, any drain tile disturbance is flagged. Landowners are offered the opportunity to walk the trench and inspect their tile lines. Either the landowner’s preferred contractor or the construction company’s drain tile specialist can be used for repairs at the expense of the developer. It is easiest to repair the lines while the trench is open, but the developer will also cover the expense if a problem is detected after construction.



at a rate of \$.0012 per kilowatt hour. This tax is paid for by the wind developer and is allocated to separate community entities; 80% goes to the county and 20% goes to cities and townships. The revenue from this tax can be used to fund schools, improve roads, and build essential infrastructure with tangible and long-lasting community benefits.

An average, large-scale wind farm with 100 megawatts in nameplate capacity generates 346,020,000 kilowatt hours of electricity per year. Norfolk is being developed as a 40 megawatt wind project and using the rates described above, the tax base for the community increases by an annual \$166,090.

Over a project lifetime of 30 years, the tax benefit reaches a total of \$ 4,982,688. With counties across the nation facing record deficits, wind farms can help drive budgets back into the black.

Wind farms also help rural economies by creating new job opportunities and increasing the revenues of area businesses. A recent study conducted by the National Renewable Energy Laboratory (NREL), *Wind Energy Guide for County Commissioners*, shows that a typical 100 megawatt wind project would create 40-140 jobs during the construction phase and create 6-10 new jobs during the operational phase. Local businesses will be stimulated by all of the related economic activity. Hotels, restaurants, stores, suppliers, and many other Main Street businesses will see a positive impact on their bottom line.

Norfolk Wind, being a community-based wind project, also has inherent benefits that traditional, corporate-owned developments don’t have. Another NREL study, *Economic Development Impacts of Community Wind Projects*, recently concluded that operations-period economic impacts are greater for community wind projects than corporate wind projects. They also concluded that the jobs impacts are usually 1.5 to 3.4 times greater than those of corporate wind. This creates a clear advantage for community-based projects that most traditional developers simply cannot match.

Wind Project Economics

Norfolk Wind, like all wind farms, will provide an enormous economic boost to the residents and farmers of Renville County. To examine the impact wind energy can make on a small amount of land, consider a hypothetical farmer who grows corn on 100 acres of land. 100 acres of corn at \$60.13 per acre (average profit from corn according to Riverland Community College Farm Business Management 2008 Annual Report) returns a profit of \$6,013 per year. This is the farmer’s return on labor and management after investing capital and taking commodity and weather risks.

Now, imagine that the farmer has two turbines on his land, occupying two of his cropping acres, leaving him with 98 acres of corn. Under the same farming conditions he’ll make \$5,892 in profit from the corn. But add in the revenue from the turbines and acreage payments—\$15,000 total assuming \$7,000 per turbine and \$10 per acre signed—and his total profits increase to \$20,892 per year. This would be an increase of more than four times his profits from growing only corn without turbines. These revenues would help to buffer against droughts, floods, storms and price volatilities. They allow the farmer a simple way to diversify his income and reduce risk.

Wind farms benefit their host communities by increasing the tax base of their respective counties, cities, townships, and school districts. Wind farms larger than 12 megawatts are taxed

