



Wind-E-News

Your PUC Commissioners



Bob Sahr



Dusty Johnson



Gary Hanson

Proposed transmission lines make room for wind

Inside this issue:

Three new major transmission line projects have been announced in South Dakota, each with the stated purpose of assisting the development of wind power in our state. These new lines will have hundreds of megawatts of capacity, which could be used for the transmission of wind power.

All three applications are being reviewed by the South Dakota Public Utilities Commission.

Buffalo Ridge/Brookings County Transmission Lines

In early December 2005, Xcel Energy submitted an application for the

construction of transmission lines and a new substation in Brookings County and improvements to Western's White substation near to accommodate wind development in eastern South Dakota. Two of the transmission lines, less than half-mile each, would connect the substations. The third line, a 9.65-mile 115-kilovolt line would run from Xcel Energy's proposed Brookings County substation to the Minnesota border. The transmission lines would potentially carry power generated by wind turbines erected within the western, or South Dakota, portion of the Buffalo Ridge geologic formation, to market for Xcel

Energy. Buffalo Ridge runs through portions of Iowa, Minnesota, South Dakota and North Dakota. The ridge rises into winds blowing from Canada and the central Rocky Mountains.

A public hearing on the application was held in White, S.D., in December. Pamela Rasmussen, a member of Xcel Energy's permitting and siting team, explained the new lines are needed to facilitate future, possible wind energy. "The transmission system, as it exists now cannot support any additional wind transmission tied into the system. The system is at its capacity and there is not

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Regional Wind Conference in South Dakota draws 260

More than 260 attended the Regional Wind Conference at the Swiftel Center in Brookings, S.D. Sept. 11-13, 2005, hosted by the South Dakota Public Utilities Commission and the United States Department of Energy.

A total of 31 experts representing various wind energy organizations presented research and their perspectives to attendees.

South Dakota PUC Commissioner Dusty Johnson - who chaired the event - dubbed the conference a success. "We had 12 states represented as well as Washington, D.C.," Johnson said. "Attendees hailed from Colorado, Florida, Iowa, Indiana, Minnesota, Montana, North Dakota, Illinois, Nebraska, Wisconsin, Massachusetts and South Dakota. We're finding that the



interest in wind energy in the state, as well as in the entire region, has grown tremendously."

U.S. DOE Wind Powering America National Coordinator Phil Dougherty addressed the crowd at the Sept. 12 luncheon. Dougherty told the audience how the energy challenges our country faced in the '70s are similar to those faced now, 30 years later. One of the biggest challenges is getting the wind power produced to the marketplace.

Xcel Energy CEO Dick Kelly gave an update on his company's wind energy development at the Sept. 13 luncheon.

Click [here](#) to view Web casts and PowerPoint presentations from the conference.

Xcel Energy CEO urges changes for wind development

Utilities are ready and willing to be bigger players in the wind game, but some rules need to change. That was the message from Xcel Energy's president and chief executive officer, Dick Kelly, who delivered a keynote presentation at the Regional Wind Conference in Brookings, S.D., in September.

"Right now, we're the second largest retail provider of wind energy in the nation," Kelly said. He forecast the company would have 2,500 megawatts of wind capacity by 2012.

Kelly identified the Buffalo Ridge Wind Power Plant in southwestern Minnesota as a major producer for the company. Buffalo Ridge is located in Lincoln County, Minn., near the South Dakota border. The facility hosts 450 wind turbines that are activated by average wind speeds of 16.1 miles per hour.

Kelly addressed the audience of wind developers, utility representatives, state lawmakers, engineers, analysts, rural development officials, students and community leaders. He described three changes he desired be made regarding utilities and wind energy production.

The first is the risk that wind energy poses to utilities' capital structure. Kelly said that as wind farms and utilities' purchasing capacity both continue to grow, his company may

experience a negative effect. Wind producers that have a contract with a company like Xcel Energy use that contract when arranging financing. Because of the contractual relationship, bond rating agencies consider the wind producer's debt when rating Xcel Energy, Kelly said. "We're now suffering a lower bond rating than we would have if we didn't purchase the power," he said.

Secondly, Kelly stressed the need for utilities to have the same opportunity to benefit from wind development that private developers have.

Part of that solution is finding a way for utilities to reap a return on their investment in a manner that is more consistent with private developers, he said. According to Kelly, an independent developer begins to earn a return as soon as the wind project comes online because the utility begins paying them when the project starts producing electricity. Utilities, on the other hand, have to wait until the next rate case before the regulatory commission before they are able to earn a return. "Historically, there's been a long time in between each rate case, so we'd have to finance that purchase for a long time," he said. "As these industries progress, be it wind, solar or hydrogen, you're going to need utilities as players."



The final change Kelly advocated for utilities is the existence of a coherent, cohesive energy policy. "Each state has different mandates; some don't have mandates. Then, you put the federal government on top of it and it's very difficult for us to plan and do things when the rules keep changing," he said.

Kelly said utilities in general and Xcel Energy in particular are supportive of renewable energies. "You don't have to drag Xcel kicking and screaming into this side," he said. "We'll deliver what you need. We are very sensitive to what the customers need and we're very sensitive to the environment ourselves," he remarked.

Xcel Energy Ranks No. 1

Xcel Energy purchases the most wholesale wind power among national utility companies, according to a report released by the American Wind Energy Association (AWEA).

As of Dec. 31, 2005, Xcel Energy purchases the output from 1,048 megawatts of wind power. The report notes that Xcel Energy and its closest competitor, Southern California Edison, will likely contend for the top spot this year. Both companies have plans to boost their wind purchase capacity in 2006.

South Dakota legislation adds value to renewable energy

A bill sponsored by the Public Utilities Commission and signed by the Governor boosts the value of South Dakota wind, biomass and other renewable energies. The act allows the PUC to participate in the establishment of the Midwest Renewable Energy Tracking System (M-RETS), a program designed to track the trade and sale of renewable energy credits (RECs).

"The new law creates a marketplace

for the environmental benefits of clean renewable energies like wind power," explained PUC Chairman Bob Sahr. "This added value should lead to more South Dakota wind and renewable energy projects becoming realities."

Commissioner Dusty Johnson explained why the M-RETS legislation is important. "South Dakota is one of the windiest states in the country. Hundreds of

companies, including Toyota, Kinkos, and Ben & Jerry's, have committed to buying large amounts of renewable energy, and M-RETS makes it much easier for South Dakota wind power producers to sell their product," he said.

M-RETS allows South Dakota wind producers to sell two products. The first is the power created by their wind turbines that is sold to area

(Legislation cont'd on pg 4)

Transmission lines *cont'd*

enough room on the system for anyone else to build wind turbines to tie them in without us building additional transmission lines," she said.

Representatives of the company who have a pending agreement with Xcel Energy to purchase the wind-generated power spoke in support of the application. Tim Seck, a business developer with PPM Energy, said that his company has planned a 150-megawatt project, called Minn-Dakota Wind that will straddle the South Dakota-Minnesota border. The project will use the proposed transmission lines in Brookings County, S.D., and Lincoln County, Minn. "We expect it will meet annual energy needs of about 45,000 homes. It's a pretty significant-sized wind project," he said. About 50 to 75 megawatts of the project would be in Brookings County.

Click [here](#) for more information about Xcel Energy's application.

Big Stone Transmission Lines

In January 2006, Otter Tail Power Company filed an application on behalf of seven regional utilities to construct three new transmission lines and associated facilities in Grant and Deuel counties. The transmission lines are related to the proposed Big Stone II project. One of the lines is planned to accommodate future generation that may include wind projects.

The proposed line would run from a new Big Stone 345-kilovolt Substation, also being considered as part of the application, to the Granite Falls Substation in Granite Falls,

Minn. This corridor is within Buffalo Ridge, known for its potential for wind energy production. The 345-kilovolt line would initially be operated at 230-kilovolt.

A representative from Otter Tail Power Company explained the transmission project at a public hearing in Reville, S.D., in March 2006. "We feel that by routing this line through this high wind resource area, we will allow for new wind generation to develop and connect into this line," said Jason Weiers, transmission and distributions studies engineer for Otter Tail Power Company.

Weiers told South Dakota Public Utilities Commissioners Bob Sahr, Dusty Johnson and Gary Hanson that initially operating the transmission line at 230-kilovolt leaves the potential for wind projects to come online later. "What we're doing is looking to optimize opportunities for further wind development on the Buffalo Ridge area," he said.

The regional utilities that join Otter Tail Power Company in the application include Central Minnesota Municipal Power Agency, Great River Energy, Heartland Consumers Power District, Montana-Dakota Utilities Co., Southern Minnesota Municipal Power Agency and Western Minnesota Municipal Power Agency.

For more information about the application, click [here](#).

Splitrock Transmission Line

In August 2005, Xcel Energy submitted an application to construct a nearly 10-mile transmission line from the Split Rock substation near

Brandon, S.D., to the Minnesota border. The 345-kilovolt line would continue into a substation near Lakefield, Minn. The total length of the project is 86 miles, most of it located in Minnesota.

A public hearing was held in September 2005, in Brandon to hear presentations by Xcel Energy and gather input from landowners and other interested parties. Xcel Energy's Pamela Rasmussen explained that the additional line will enhance the company's ability to transport more power, including wind power, to the grid. "Wind energy is important in this area. People are building a lot of turbines," Rasmussen said. "Part of our job is to make sure our transmission system can support that growth. Our system right now can only handle approximately 425 megawatts to be transported out into the grid for people to use for energy in their homes," she said.

Click [here](#) to find more information about Xcel Energy's application.

Did you know?

The Wind Resource Assessment Network is a network of instrument stations across South Dakota. Locations are up or are being planned near Leola, Crandall, Summit, Fort Thompson, Crow Lake, Gettysburg, Murdo, Faith, Buffalo and Martin. These stations collect data about the quality of South Dakota wind. This information is of value to citizens and developers and puts into real terms our state's tremendous wind power potential. Visit the WRAN website at SDWind.com.

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A huge THANK YOU to the U.S. Department of Energy for its support of the following projects: the Wind-E-Newsletter, the town meetings on wind power that have been conducted in South Dakota, the Wind Video (available NOW!) and the Wind Resource Assessment Network (WRAN). Without the expertise and financial support of the Department of Energy, all of this would have been difficult to accomplish. THANK YOU!

Resources & Links:

- *SD Wind Resource Assessment Network (WRAN)*
www.SDWind.com
- *Small Wind Toolbox*
www.awea.org/smallwind/toolbox/default.asp
- *Powering the Plains*
www.eerc.und.nodak.edu/wind
- *Wind on the Wires*
www.WindOnTheWires.org
- *Windustry*
www.windustry.org

SIGN
our on-line
[Production Tax Credit Petition](#)
for more wind
power
development!

Legislation cont'd

utilities. The second product is renewable energy credits that can be sold to utilities, businesses or individuals interested in supporting renewable energy.

"M-RETS doubles the crop for our state's wind producers," said Commissioner Gary Hanson. "In addition, it provides a tracking mechanism that verifies the generator is producing renewable energy that meets the definition of an REC. That ensures the integrity of the RECs."

The M-RETS legislation received unanimous support in both the South Dakota House of Representatives and the Senate. South Dakota joins M-RETS participants Iowa, Illinois, Minnesota, North Dakota, Wisconsin and the Canadian province of Manitoba.

Click [here](#) for more information about MRETS.

Dakotas Wind Study shows promise

Interest in wind generation is increasing throughout the territory serviced by the Western Area Power Administration. New insight gained from Western's recently completed Dakotas Wind Transmission Study will identify improvements to the energy grid to help deliver renewable resources to consumers.

The study examined how the addition of 500 megawatts of wind generation in North Dakota and South Dakota would affect the region's transmission system.

Four of the seven wind sites studied were in South Dakota near Rapid City, Mission, Fort Thompson and Summit/Watertown/Toronto/White/Brookings/Flandreau. For the wind sites studied, major conclusions are that under normal system intact conditions, non-firm transmission is available most of the time across three monitored areas for up to 500 megawatts of new wind generation. However, some of the sites are limited to less than 500 megawatts without additional system enhancements. The study indicated that some overloads and dynamic stability problems resulted when wind generation was added, but

dynamic line rating and reconductoring could mitigate those problems without adding new transmission lines to the system.

The final report is available at <http://www.wapa.gov/ugp/study/DakotasWind/>.

The study addressed four tasks:

- Analyze nonfirm transmission potential relative to new wind generation
- Assess transmission technology potential relative to new wind generation
- Study interconnection of new wind generation
- Study delivery to market of new wind generation

For more information about the Dakotas Wind Study or to receive a copy of the final study results, visit Western's Web site or call or e-mail Sam Miller at (406) 247-7466 or csmiller@wapa.gov.